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LONDON PARAMOUNT ENTERTAINMENT RESORT

FACTUAL REPORT ON GROUND INVESTIGATION

Prepared for LONDON RESORT COMPANY
HOLDINGS LTD

Report Ref: 30766

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LONDON PARAMOUNT ENTERTAINMENT RESORT

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Prepared for LONDON RESORT COMPANY HOLDINGS LTD

Report Ref: 30766

PROJECT: Proposed Entertainment Resort

CONSULTANT: Atkins Ltd

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ORIGINATOR			APPROVER					
E LEIVERS			E CRIMP					
Senior Engineering Geo	logist		Senior Geotechnical Engineer					

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1. INTRODUCTION

It is proposed to construct a new entertainment resort on the Swanscombe Peninsula, north Kent. Geotechnical Engineering Limited (GEL) was instructed by Atkins Ltd (the Consultant) acting on behalf of London Resort Company Holdings Ltd (the Client) to act as Principle Contractor and carry out an investigation to determine the ground conditions.

The scope of works and terms and conditions of appointment were specified by the Consultant and GEL correspondence reference T20991. Amendments were made to the original scope of works primarily due to access issues. The investigation was carried out under the direction and supervision of the Consultant.

This report describes the investigation and presents the findings.

2. SITE LOCATION AND GEOLOGY

The site is situated on the south bank of the River Thames at Swanscombe Marshes, 7 kilometres east of Dartford, Kent and is centered on approximate National Grid co-ordinates TQ 603 753.

British Geological Survey (BGS) England and Wales (Sheet No. 271, Dartford, Solid and Drift (1998), 1:50,000) and the BGS online geology (1:50,000) indicate the site is generally underlain by Worked Ground and Made Ground overlying Alluvium. The underlying solid geology comprises the Seaford Chalk Formation and Newhaven Chalk Formation. Superficial deposits of Head and Boyn Hill Gravel are shown to be present in the southern area of the site.

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3. GROUND INVESTIGATION

3.1 Fieldwork

The fieldwork was carried out in general accordance with BS5930:1999+A2:2010 during the period 9th June to 3rd July 2015 and comprised twenty-seven boreholes and five machine dug trial pits.

The exploratory hole locations were selected and set out by the Consultant and are shown on Figures 01, 02 and 03. The ground level and co-ordinates at each exploratory hole were established by this Company using GPS techniques.

The site is considered to be in an area that was subjected to significant historic bombing and therefore required an Unexploded Ordnance (UXO) survey. A preliminary risk assessment undertaken by 6 Alpha was provided by the Consultant. The survey comprised on site monitoring by a UXO specialist from 1st Line Defence Ltd. Down-hole magnetometry was undertaken at fifteen borehole locations. A UXO watching brief was provided for all trial pit locations. The use of the magnetometer and the extent of the down-hole survey is described on the relevant exploratory hole records in Appendix A.

Cable Percussion with Pioneer follow-on

The boreholes, referenced BH101, BH202, BH203 and BH204 (Appendix A), were formed using a light cable tool (shell and auger) rig utilising 300mm (or 200mm in BH203) tools and casing, reducing to 200mm (or 150mm in BH203) as the boreholes were advanced. Initially, an inspection pit was hand excavated at each borehole location to a depth of 1.20m to check for buried services. The boreholes were advanced using a clay cutter and bailer with the occasional use of a heavy chisel to assist boring.

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Clean drilling techniques were required to protect the underlying formation in boreholes BH101, BH202 and BH204. In each case, the borehole was initially advanced through Made Ground using 300mm diameter tools and casing. A 250mm diameter sacrificial plastic casing was then installed to the base of the hole with a cement:bentonite grout surround and the 300mm casing withdrawn. Once the grout had cured, the borehole was then continued using 200mm diameter tools and casing. Details are presented on the relevant borehole logs in Appendix A.

Disturbed samples of the arisings were taken and retained in plastic bags and airtight containers. Undisturbed samples of 100mm nominal diameter were taken in suitable cohesive soils using a thin walled, open drive sampler (UT100). Samples were wax sealed and capped on site to prevent moisture loss.

On instruction from the Consultant, boreholes BH101 and BH204 were then advanced using heavy duty dynamic sampling techniques to produce continuous disturbed samples of 112mm diameter (BH204) and 97mm diameter (BH101). The samples were recovered in semi-rigid plastic liner.

On refusal to dynamic sampling, BH101 was advanced using wireline rotary coring techniques utilising a double-tube swivel core barrel with a semi-rigid plastic liner to recover continuous cores of 102mm diameter.

On refusal to dynamic sampling, BH202 was advanced by conventional rotary core drilling techniques utilising a double-tube swivel core barrel with a semi-rigid plastic liner to recover continuous cores of 120mm nominal diameter as described in Appendix A.

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Dynamic sampling with rotary follow-on

The boreholes, referenced BH201, BH501, BH502 and BH703 to BH708 (Appendix A), were formed using a track-mounted Geotechnical Pioneer Rig. Initially, an inspection pit was hand excavated at each borehole location to a maximum depth of 1.20m to check for buried services. Disturbed samples were taken and retained in a combination of plastic tubs, bags and glass jars. Heavy duty dynamic sampling techniques were then employed to produce a continuous disturbed sample of 112mm nominal diameter reducing to 97mm (except BH201) as the borehole was advanced. The samples were recovered in semi-rigid plastic liner.

On refusal to dynamic sampling the boreholes BH201, BH501, BH502, BH706 and BH708 were continued by rotary core drilling techniques utilising a water or polymer flush. A double-tube swivel core barrel with a semi-rigid plastic liner was utilised to recover continuous cores of 90mm diameter (or 120mm in BH201). Where appropriate, dynamic sampling techniques were carried out to recover dropped core or where rotary core drilling was not suitable.

The dynamic samples and rotary cores were extracted horizontally from the sampler and core barrel respectively, the semi-rigid liner was cut to length and caps placed at each end to retain moisture. All samples and core were retained in sequence in labelled, wooden coreboxes.

Undisturbed samples of 100mm nominal diameter were taken in suitable cohesive soils using a thin walled, open drive sampler (UT100). Samples were wax sealed and capped on site to prevent moisture loss.

Undisturbed samples of suitable materials were also sub-sampled from the rotary cores. Samples were cleaned and trimmed to remove extraneous material and drilling fluid, wrapped in foil and cling film, and wax sealed to prevent moisture loss.

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Dynamic sampling

The boreholes, referenced WS101, WS102, WS201G, WS202, WS203, WS204, WS301 and WS301C (Appendix A), were formed using a Terrier 2000 rig. Initially, an inspection pit was hand excavated at each borehole location to a maximum depth of 1.20m to check for buried services. The inspection pits WS201, WS201A to WS201F, WS301A and WS301B were terminated due to obstructions. Disturbed samples were taken and retained in a combination of plastic tubs, bags and glass jars. Dynamic sampling techniques were then employed to produce a continuous disturbed sample of 97mm or 70mm diameter reducing to 70mm or 50mm respectively as described on the relevant borehole log. The samples were recovered in semi-rigid plastic liner.

The samples were extracted horizontally from the sampler, labelled and caps placed each end to retain moisture.

Undisturbed samples of 70mm nominal diameter were taken in suitable cohesive soils using an open drive sampler (U70). Samples were wax sealed and capped on site to prevent moisture loss.

In Situ Testing

Standard penetration tests (SPT) were carried out in all boreholes in general accordance with BS EN ISO 22476-3:2005+A1:2011. A split barrel or a solid cone was used depending upon the materials encountered and the split barrel samples retained in airtight jars. The SPT N value was taken as the number of blows to penetrate the 300mm test drive following a 150mm seating drive. Where low penetration was recorded the seating drive was terminated at 25 blows and the test drive completed after a further 100 blows. Detailed SPT results, together with the energy ratio (E_r), are presented in Appendix A and summarised as uncorrected N values on the borehole logs.

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Variable head permeability tests were carried out in BH202 to BH204 in general accordance with the procedures given in BS5930:1999+A2:2010. Falling head tests were carried out by topping up the borehole with clean water. Coefficients of permeability were calculated using the BS5930:1999+A2:2010 general approach/time lag method (after Hvorslev) and the results are presented in Appendix A.

Groundwater Ingress

Boreholes were monitored for groundwater ingress as drilling proceeded. Upon encountering water, sampling was temporarily stopped to allow the level to stabilise and, where possible, water samples to be taken. Water levels were also recorded at the start and finish of each day's work and are presented on the relevant log.

Gas/Groundwater Monitoring

On completion gas/water monitoring standpipes were installed in selected boreholes as instructed by the Consultant. Each installation consisted of a 50mm ID HDPE slotted tube set in a filter response zone of non-calcareous pea gravel. The installation was sealed above and below with a bentonite plug (WS102 and WS204 were sealed above only) and accessed via a valve assembly. The installations were protected at the surface by a lockable, galvanised steel borehole helmet cover or flush cover (boreholes BH705 and BH708) set in concrete. Selected boreholes were further protected by a 900mm diameter concrete ring placed around the headworks. Installation details are given on the relevant borehole log.

On completion, all other boreholes were backfilled with a combination of arisings and bentonite pellets and the surface reinstated.

The installations were tested for carbon dioxide, methane, oxygen, hydrogen sulphide and carbon monoxide using a Gas Analyser GFM 435. Installations were monitored for gas flow using a flow pod attached to the instrument and reported as gas flow in litres/hour. Subsequent readings are presented in Appendix A.

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The installations were also monitored for Volatile Organic Compounds (VOC's) using a MiniRAE 2000 Portable Photo-Ionisation Detector (PID) with a 10.6eV gas discharge lamp. The detector uses an ultra violet light source to break down the chemicals into positive and negative ions (ionisation). The detector measures the charge of the ionised gas and converts the signal into current. The current is then amplified and displayed as "ppm"; after

Prior to water sampling, the water monitoring standpipes were developed by bailing and then purged until at least three well volumes of water had been removed.

measurement the ions reform the original gas or vapour allowing it to be sampled.

Surface water samples were collected at five locations, referenced SW01 to SW05, as directed by the Consultant.

The trial pits, referenced TP201, TP301, TP302, TP701 and TP702 (Appendix A), were formed by a wheeled excavator with a 0.60m wide backactor bucket.

Representative disturbed samples were taken and retained in sealed plastic bags and airtight containers to retain moisture content.

Hand vane and pocket penetrometer tests were carried out in suitable cohesive material. The results are presented on the trial pit logs and tabulated in Appendix A.

Photographs of the trial pit profile and spoil heap were taken and are presented separately.

Samples for chemical analyses were dispatched directly to i2 Analytical Ltd under a Chain of Custody. The remaining samples were brought to this Company's laboratory for testing and storage.

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3.2 Logging

The logging of soils and rocks was carried out by an Engineering Geologist in general accordance with BS5930:1999+A2:2010 and CIRIA C574. A key to the exploratory hole logs is presented in Appendix A.

Detailed descriptions of the core and samples are given in the borehole logs, Appendix A, along with details of sampling, in situ testing, groundwater ingress and relevant comments on drilling techniques.

Prior to logging, photographs of the core were taken and are presented separately.

The trial pits were logged in situ to a depth of approximately 1.20m and thereafter from the surface. Detailed descriptions are given in the trial pit logs, Appendix A, along with details of sampling and in situ testing, groundwater ingress and relevant comments on stability.

Samples taken for contamination testing were monitored for Volatile Organic Compounds (VOC's) using a MiniRAE 2000 Portable Photo-Ionisation Detector (PID) with a 10.6eV gas discharge lamp. The detector uses an ultra violet light source to break down the chemicals into positive and negative ions (ionisation). The detector measures the charge of the ionised gas and converts the signal into current. The current is then amplified and displayed as "ppm"; after measurement the ions reform the original gas or vapour allowing it to be sampled. The readings are presented on the borehole logs in Appendix A.



3.3 Laboratory Testing

A schedule of laboratory tests was prepared by the Consultant, the following tests being carried out in accordance with BS1377:1990, unless stated otherwise. The number in brackets refers to the test number given in that standard. The results are presented in Appendix B.

The natural water content was determined on eighty-one selected samples in accordance with BS EN ISO 17892-1:2014.

The natural moisture content [Part 2:3.2] was determined on forty-seven selected samples.

The saturated moisture content [Part 2:3.3] was determined on nineteen selected samples.

Liquid limit, plastic limit and plasticity index tests [Part 2:4.3, 5.3 and 5.4] were carried out on seventy-four selected samples. Atterberg line plots have also been presented.

The linear shrinkage tests [Part 2:6.5] was carried out on one selected cohesive sample.

The bulk density was determined on three samples by the linear measurement method in accordance with BS EN ISO 17892-2:2014-5.1.

The bulk density was determined on two samples by the immersion in fluid method in accordance with BS EN ISO 17892-2:2014-5.2.

The bulk density was determined on two samples by the linear measurement method [Part 2:7.2].

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Particle size distributions were determined for eighty-four samples by wet sieving [Part 2:9.2]. The fine fractions of thirty of these samples were further analysed by sedimentation using the pipette method [Part 2:9.4]. The fine fractions of twenty-eight samples were further analysed by sedimentation using the hydrometer method [Part 2:9.5]. The results are presented as grading curves.

The compaction characteristics of three selected soil samples were investigated using a 2.5kg rammer [Part 4:3.2 and 3.3/3.4]. The results are presented as a plot of dry density against moisture content.

The one-dimensional consolidation properties [Part 5:3] were determined in the oedometer on two 63.5mm diameter by 19mm thick specimens prepared from UT100 samples. The results are presented in tabular form and also as graphs of void ratio versus log (effective pressure).

Four specimens were prepared from dynamic samples remoulded at received moisture content. Three sub-specimens, each 63.5mm diameter in plan were tested at different normal stresses, specified by the Consultant, in the small shear box apparatus [Part 7:4].

Two selected samples were subsampled to provide specimens which had their permeability determined in the triaxial cell [Part 6:6]. The specimens were of nominal sizes 100mm in diameter by 100mm in height. The specimens were installed in the cell and were saturated by increments of cell pressure and back pressure applied alternatively. The specimen was then consolidated to the required effective stress and then subjected to a pressure difference to cause water to flow downward through the specimen. The permeability was determined once steady state conditions were achieved, i.e. the flow of water into the specimen equals the flow of water out. The results of one of these tests are to follow.

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Unconsolidated undrained triaxial compression tests were carried out under a single cell pressure on seven specimens prepared from full diameter U70 or UT100 samples [Part 7:8]. A cell pressure specified by the Consultant was used. Fully saturated, $\phi_u = 0$, conditions were assumed and the undrained cohesion, cu was taken as half the deviator stress at failure.

A single unconsolidated undrained multistage triaxial compression test was carried out on one specimen prepared from a full diameter UT100 sample [Part 7:9]. The cell pressures for each stage of the test were specified by the Consultant. Fully saturated, $\phi_u = 0$, conditions were assumed and the undrained cohesion, cu, for each stage was taken as half the maximum deviator stress.

Consolidated drained triaxial compression tests with measurement of volume change [Part 8:4, 5, 6, 8 and Head (1986)] were carried out on four full diameter specimens prepared from UT100 samples.

A single consolidated undrained multistage triaxial compression test with pore-water pressure measurements [Part 8:4, 5, 6, 7 and Head (1986)] was carried out on one set of three 38mm diameter specimens prepared from a UT100 sample.

Seven rock cores were tested for their unconfined compressive strength in accordance with ISRM (1981).

Point load index tests were carried out on thirty-one selected lengths of core in accordance with ISRM (1985).

Five undisturbed samples were extruded, split, photographed and described in accordance with BS5930:2010.

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The BRE SD1 (2005) suite of tests was carried out on one sample by Chemtest Limited using in-house methods.

The BRE SD1 (2005) reduced suite; water soluble sulphate, total sulphate and total sulphur, together with pH were determined for six soil samples by i2 Analytical Limited using in-house methods.

The organic matter content was determined for seven selected samples by i2 Analytical Limited using in-house methods, three samples by Chemtest Limited and two samples by ESG.

GEOTECHNICAL ENGINEERING LIMITED



4. REFERENCES

British Standards Institution (2010): Code of practice for site investigations. BS 5930 incorporating Amendments No. 1 & 2. BS5930: 1999+A2:2010. Amendment 1 removes text superseded by BS EN ISO 14688-1:2002, BS EN ISO 14688-2:2004 and BS EN ISO 14689-1:2003, and makes reference to the relevant standard for each affected sub clause. Amendment 2 removes text superseded by BS EN 22475-1:2006 and makes reference to the relevant standard for each affected sub clause.

British Standards Institution (1990): Methods of tests for soils for civil engineering purposes. BS 1377 Parts 1-9.

British Standards Institution (2014): Geotechnical investigation and testing – Laboratory testing of soil. Part 1: Determination of water content. BS EN ISO 17892-1:2014.

British Standards Institution (2014): Geotechnical investigation and testing – Laboratory testing of soil. Part 2: Determination of bulk density. BS EN ISO 17892-1:2014.

British Standards Institution (2012): Geotechnical investigation and testing. Field testing. Standard penetration test. BS EN ISO 22476-3:2005+A1:2011.

Building Research Establishment (2005): Concrete in aggressive ground. BRE Special Digest 1. Third Edition.

CIRIA Publication C574 (2002): The engineering properties of chalk.

ISRM (1981). Suggested methods for rock characterisation, testing and monitoring, edited by E T Brown. Pergamon Press.

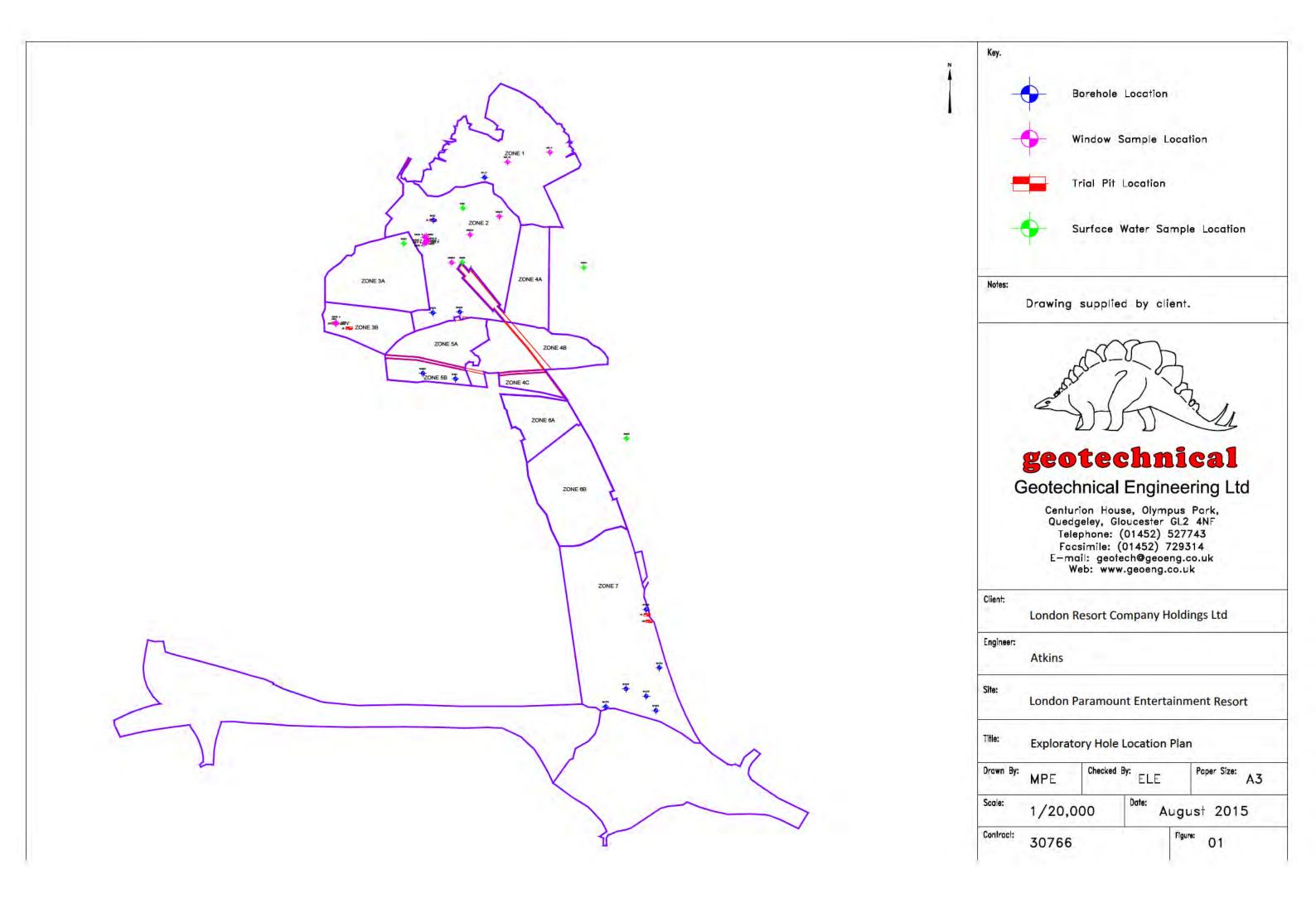
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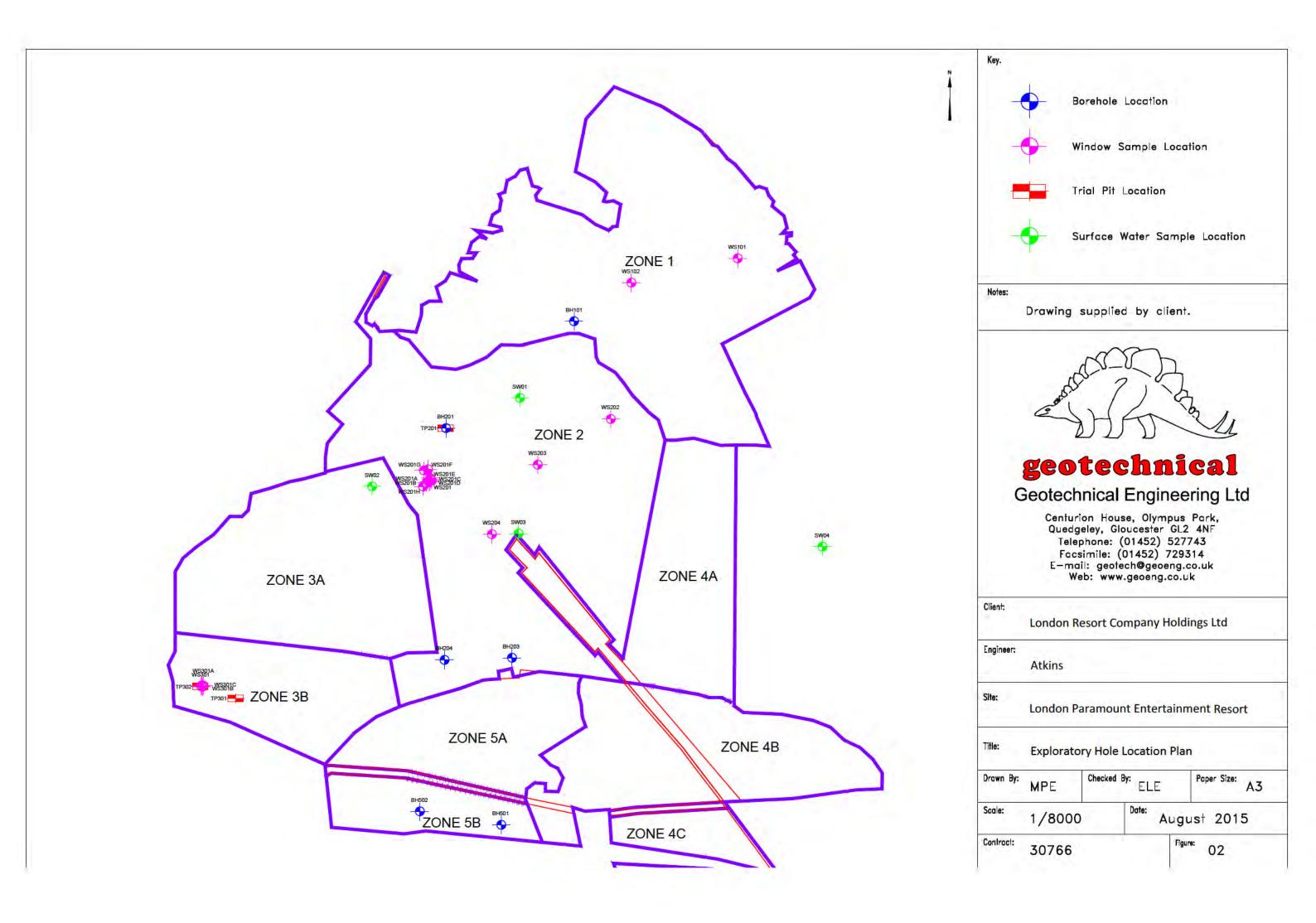


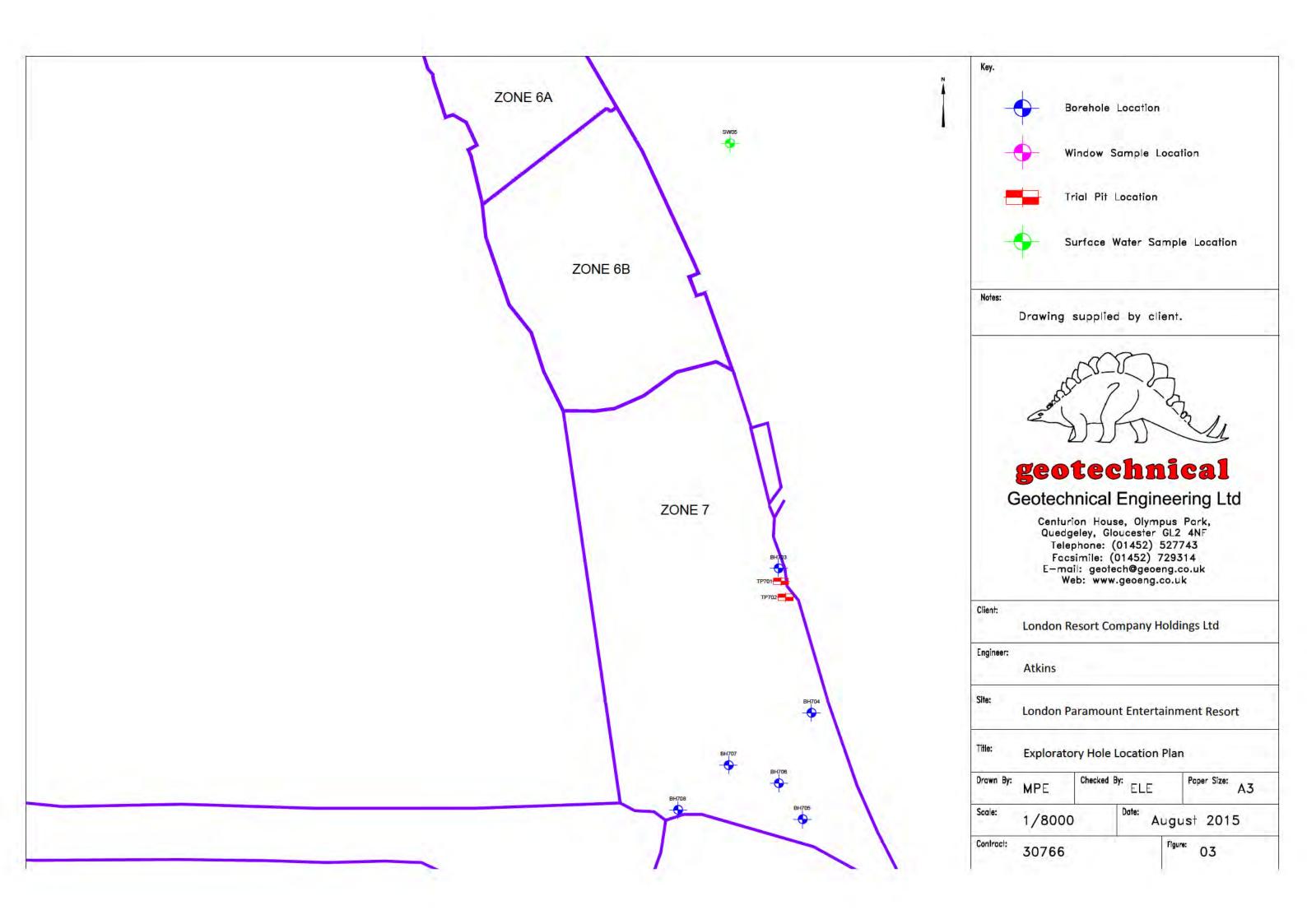
ISRM Suggested method for determining point load strength, revision to ISRM suggested method (1985). Pergamon Press.

Head K H (1986): Manual of Soil Laboratory Testing. Volume 3 – Effective Stress Tests. Pentech Press.

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APPENDIX A

FIELDWORK DATA

KEY TO EXPLORATORY HOLE LOGS

Sample type

D Sma d sturbed D* Contam nat on X Dynam c C Core

B Bu k d sturbed U Und sturbed

LB Large bu k d sturbed UT Und sturbed th n wa

W Water P P ston Cs Core subsamp e (prepared)
Xs Dynam c subsamp e (prepared)

Test type

S SPT Sp t spoon samp er fo owed by uncorrected SPT 'N' Va ue

C SPT So d cone fo owed by uncorrected SPT 'N' Va ue

(*250 Where full test drive not completed, inearly extrapolated 'N' value reported, ** Denotes no effective penetration)

- H Hand vane direct reading in kPa inot corrected for BS1377 (1990). Re* denotes refusa
- M Mack ntosh probe number of b ows to ach eve 100mm penetrat on
- PP Pocket penetrometer direct reading in kg/sq.cm
- Vo Headspace vapour reading, uncorrected peak values in ppm, using a PID (call brated with Isobuty ene, using a 10.6eV bulb)

Sample/core range/l₁

- Dynam c samp e
- Und sturbed samp e open dr ve nc ud ng th n wa . Symbo ength ref ects recovery
- x x = Tota Core Recovery (TCR) as percentage of core run
- y = So d Core Recovery (SCR) as percentage of core run. Assessment of core s based on fu d ameter.
- z = Rock Qua ty Designation (RQD). The amount of soid core greater than 100mm expressed as percentage of core run.

Where SPT has been carr ed out at beg nn ng of core run, d sturbed sect on of core exc uded from SCR and RQD assessment.

I_r fracture spac ng the average fracture spac ng (mm) over the nd cated ength of core. Where spac ng var es s gnf cant y, the m n mum, average and max mum va ues are g ven. NI = non ntact core NA = not app cab e

Instrumentation

ł	Porou
	to

Perforated stands pe



Granu ar response zone



Cement

benton te

arout

So Backf Concrete

Stratum boundaries

Est mated boundary

Grad ng boundary

Logging

The ogg ng of so s and rocks has been carried out in general accordance with BS 5930:1999 incorporating Amendments 1 (2006) & 2 (2010). Amendment 1 removes text superceded by BS ENO ISO 14688 1:2002, BS EN ISO 14688 2:2004 and BS EN ISO 14689 1:2003, and makes reference to the relevant standard for each affected subic ause. Amendment 2 removes text superceded by BS EN ISO 22475 1:2006 and makes reference to the relevant standard for each affected subic ause.

Chak s ogged n genera accordance with Lord et a (2002) CIRIA C574. Where possible, dynamic samples nichak have been ogged n accordance with CIRIA C574; descriptions and gradings should be treated with caution given the potential for sample disturbance.

For rocks the term fracture has been used to dent fy a mechan ca break within the core. Where possible incident of more incident of more fractures have been excluded from the assessment of fracture state. Where doubt exists, a note has been made in the descriptions. A fractures are considered to be continuous unless otherwise reported.

Made Ground is read yildentifiable when, within the material make up, man made constituents are evident. Where Made Ground appears to be reworked natural material the differentiation between in situ natural deposits and Made Ground is much more difficult to ascertain. The interpretation of Made Ground within the logistic should be therefore be treated with caution.

The descriptors "topso" and "tarmacadam" are used as generic terms and do not imply conformation to any particular standard or composition.

General Comments

The process of dr ng and samp ng w nev tab y ead to d sturbance, mxng or oss of mater a n some so and rocks.

Indicated water levels are those recorded during the process of dring or excavating exploratory holes and may not represent standing water levels.

Legends are drawn in accordance with BS 5930:1999 incorporating Amendment 2.

A depths are measured a ong the ax s of the boreho e and are re ated to ground eve at the point of entry.

Doc. No. A01 Rev No. 14 Revision date: 01/07/13

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

BHIU

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet

Scale

1 of 7

1:50

Start Date

End Date

18 June 2015

30 June 2015

Easting

Northing

560528.1

176118.8 Ground level

5.05mOD

Depth 60.20 m

progress depth (m) casing test instru depth educed legend samp date/time depth /core description no & type & -ment (m) level water depth type from (m) value range (m) 18/06/15 0730hrs 0.00 - 0.40m: Driller notes rags, wood and concrete.
Firm friable brown mottled black, reddish brown, white and **1B** 0.30 2D* 0.30 Vo 0.0 grey slightly sandy slightly gravelly CLAY with frequent 0.50 **3B** rootlets (up to 1mm diameter). Gravel is subangular and 4D* 0.50 Vo 0.0 subrounded fine and medium flint, chalk, rarely brick and charcoal, (MADE GROUND) 4.05 1.00 **5B** 1.00 6D 1.00 Vo 0.0 Soft brown mottled grey and orangish brown slightly sandy 1.20 - 1.65 gravelly CLAY with rare rootlets (up to 1mm diam). Gravel Nil C 7 1.40 3.65 1.20 - 1.30 is subangular to rounded fine to coarse flint and rare brick **7B** 8B 1.40 - 1.60 and concrete. (MADE GROUND) 1.20 - 1.40m: Poorly cemented Cement Kiln Dust (CKD). 9D* Vo 0.0 1.40 Vo 3.5 10D* 1.50 Very soft to soft dark brown mottled brown slightly sandy silty CLAY with cobble sized piece of clay piping. 2.00 Vo 2.0 11D' Hydrocarbon odour. (MADE GROUND) 2.20 - 2.65 2.20 **12UT** 2.40 - 2.60 13B Vo 0.0 2.40 14D* 15D 2.65 2.65 - 2.80m: Strong odour (drillers' description). 16W 2.80 2.05 3.00 3.00 - 3.20 17B Loose off-white and dark brownish grey mottled orange 18D* 3.00 Vo 0.0 brown slightly sandy GRAVEL. Gravel is angular to 3.20 - 3.653.00 C 2 subangular fine to coarse clinker, ash and cemented Cement Kiln Dust (CKD). (MADE GROUND) 19B 4.00 - 4.20 20D* 4.00 Vo 0.0 4.20 - 4.65 4.20 C<1 21D* 4.50 Vo 0.0 4.70 0.35 Very soft dark greyish brown gravelly silty CLAY with frequent fibrous partially decomposed organic material. 22B 5.00 - 5.20 Gravel is subangular and subrounded fine and medium 23D* 5.00 Vo 0.0 white flint. (ALLUVIUM) **24UT** 5.20 - 5.65 5.20 Vo 0.0 25D* 5.50 5.60 -0.5518/06/15 26D 5.65 Plastic brownish grey pseudofibrous PEAT. (ALLUVIUM 1730hrs 0.00m 27B 6.00 - 6.20 (PEAT)) 11/ Vo 0.0 28D* 6.00 19/06/15 11, 11 0730hrs 0.00m 29D 6.20 - 6.65 6.00 S2 11/ 11, 11 11/ 6.90 -1.85Very soft greyish brown silty CLAY with frequent part 30B 7.00 - 7.20decomposed fibrous organic fragments. (ALLUVIUM Vo 0.0 31D* 7.00 (PEAT)) 7.20 - 7.65 **32UT** 7.20

EQUIPMENT: Light cable percussive (shell and auger) rig and Geotechnical Pioneer rig.

METHOD: Hand dug inspection pit 0.00-1.20m. Cable percussion (300mm) 1.20-6.00m and (200mm) 6.00-22.50m. Dynamic sampled (113mm) 22.50-26.20m. Rotary core drilled (146mm wireline) 26.20-60.20m using a water flush.

Continued Next Page

CASING: 300mm diam to 6.00m, 250m diam HDPE sacrificial grouted in to 6.00m (300mm diam withdrawn), 200mm diam to 22.50m, 168mm diam to 27.50m and 140mm diam to 60.20m.

BACKFILL: On 30/06/2015, borehole backfilled with bentonite pellets 60.20-40.50m. A slotted standpipe (50mm) with geosock was installed to 40.00m, granular response zone 40.50-24.50m, bentonite seal 24.50-0.30m, concrete and raised helmet cover 0.30-0.00m.

REMARKS: Downhole magnetometry for UXO risk mitigation undertaken 0.00-10.65m. No anomalies encountered. Driller notes reduced flush returns 28.50-45.20m (65-75% returned) and 45.20-60.20m (10-20% returned). Chalk grade based on CIRIA C574 (2002). Stratum names provided by the Engineer.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE IS

water strike (m) casing (m) rose to (m) time to rise (min) remarks

1.10 Nil 0.80 20 Fast inflow.

AGS

CONTRACT

(8.00)

CHECKED

30766 EC

cal Engineering Ltd el 01452 527743 30766 MAS ER GPJ R ALJH GPJ GEO ECH M25 GLB 19/10/2015 1045 34 RS/WG/DA

33D

34B

7.65

8.00 - 8.20

S

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

1:50

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet 2 of 7

Scale

Start Date 18 June 2015 Easting 560528.1

60.20 m **End Date** 30 June 2015 176118.8 Ground level 5.05mOD Northing Depth progress depth (m) casing test instru depth educed legend date/time depth type & /core description (m) level no & -ment value water depth type (m) range (m) 35D* 8.00 Vo 0.0 36D 8.20 - 8.65 8.00 S 1 8.50 -3.4537D 8.20 38D* 8.50 Vo 0.0 Very soft brownish grey mottled black peaty silty CLAY. (ALLUVIUM (PEAT)) 11/ 9.00 -3.9511/ 11/ 39B 9.00 - 9.20 Dark brown pseudofibrous PEAT with rare pockets (up to 40D* 9.00 Vo 0.0 40mm) of soft grey silty clay. (ALLUVIUM (PEAT)) 11/11/ **41UT** 9.20 - 9.65 9.20 11, 11, 11 111 42D 9.65 11, 11, 43D' 10.00 Vo 0.0 4 14 44B 10.20 - 10.40 10.50 - 10.95 14 41 10.50 S 1 45D 10.50 46D 11 11/ 10.90 -5.85Very soft light grey mottled brown and black peaty silty 47B 11.00 - 11.20 CLAY. (ALLUVIUM (PEAT)) 11/ Va 0.0 48D* 11.00 E 12.00 **50UT** 12.00 - 12.45 49B 12.00 - 12.20 52D* 12.00 Vo 0.3 53D 12.45 13.00 -7.95 51B 13.00 - 13.20 Plastic grey and brown pseudofibrous PEAT. (ALLUVIUM 13.30 -8.2554D* 13.00 Vo 0.0 (PEAT)) 55B 13.30 - 13.50 Firm brown and black fibrous PEAT with pockets (up to 56D* 13.30 Vo 0.1 60mm) of very soft light grey silty clay. (ALLUVIUM 13.00 S 6 57D 13.50 - 13.95 13.90 -8.85 58D 13.50 Soft brown and grey very sandy peaty silty CLAY. (ALLUVIUM (PEAT)) 59B 14.00 60D* 14.00 Vo 0.1 61D* 14.80 Vo 0.0 15.00 -9.95 64B 15.00 Soft greyish brown slightly gravelly sandy silty CLAY. UT 15.00 - 15.45 Gravel is subangular to rounded fine to coarse flint. 15.00 - 15.45 62B Vo 0.0 (ALLUVIUM (PEAT)) 63D 15.00 65B 16.00 - 16.20 16.00 -10.95Vo 0.2 66D* 16.00 Loose brownish grey gravelly silty SAND. Gravel is 19/06/15 1730hrs 7.10m subangular and subrounded fine and medium flint. 0 (RIVER TERRACE DEPOSITS) 22/06/15 0730hrs 4.80m 0 16.50 - 16.95 16.50 C 7 0 17.00 -11.9567B 17.00 - 17.20 68D* 17.00 Vo 0.0 Dense greyish brown locally yellowish brown slightly silty 0.0 sandy GRAVEL. Gravel is subangular to rounded fine to 0.0 coarse flint. (RIVER TERRACE DEPOSITS) 0. 0 18.00 - 18.45 _ 18.00 C 35 Continued Next Page AGS CONTRACT water strike (m) casing (m) rose to (m) time to rise (m) remarks CHECKED 13.90 10.50 10.40 20 30766 EC

ECH M25 GLB 19/10/2015 10 45 34 RS/WG/DA R ALJH GPJ GEO ER GPJ 30766 MAS el 01452 527743 **Engineering Ltd**

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

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SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet 3 of 7

Start Date 18 June 2015

Easting 560528.1

Scale 1:50

End Date 30 June 2015 Northing 176118.8 Ground level 5.05mOD Depth 60.20 m

progress date/time water depth	sample no & type	depth (m) from to	depth (m)	test type & value	samp. /core range	lf	instru -men		depth (m)	reduced level (m)	legen
	69B 70D*	18.00 - 18.20 18.00		Vo 0.4					40.00	40.75	0000
	71B 72D*	19.00 - 19.20 19.00		Vo 0.4				Dense brownish grey slightly gravelly fine to coarse SAND. Gravel is subangular to rounded fine to coarse flint. (RIVER TERRACE DEPOSITS)	18.80	-13.75	, o
	705	19.50 - 19.95	-	C 40					20.00	14.05	00 0
	73B 74D*	20.00 - 20.20 20.00		Vo 0.3				Brown locally orangish brown and white sandy GRAVEL. Gravel is subangular to rounded fine to coarse flint. (RIVER TERRACE DEPOSITS)	20.00	-14.95	0000
	75D 76B 77D 78D*	21.00 - 21.45 21.00 - 21.20 21.00 21.00	21.00	S 7 Vo 0.3				White CHALK recovered as sandy silty subangular to rounded fine to coarse chalk and rare flint GRAVEL.	20.80	-15.75	
2/06/15 730hrs	79B 80D* 81D	22.00 - 22.20 22.00 22.50 - 22.95	22.50	Vo 0.2 S 5					22.50	-17.45	
5/06/15 200hrs .60m	82D 83X	22.50 22.50 - 24.00			***************************************			Structureless CHALK composed of white and off-white slightly sandy gravelly SILT. Gravel is angular to subrounded fine to coarse very weak medium density white chalk. (Probably CIRIA Grade Dm) 22.90 - 23.00m: Subangular chalk cobble.		-17.40	
	84D* 85D* 86D 87X	23.40 - 23.50 23.90 - 24.00 24.00 - 24.45 24.00 - 25.50	22.50	Vo 0.0 Vo 0.0 S 26	-						
	88D*	25.00 - 25.10		Vo 0.0	***************************************						
	89D 90X	25.50 - 25.95 25.50 - 26.20		S 53				25.40m: Tabular grey flint.	1		T I
	91D* 92C	26.00 - 26.10 26.20 - 27.00	-	Vo 0.0	53 0 0			26.00 - 26.10m: Gravel sized flint.	26.65	-21.60	h h h
	93C	27.00 - 28.50	27.00		99 0 0			Structureless CHALK composed of white slightly sandy silty angular to subrounded fine to coarse GRAVEL. Clasts are extremely weak low and medium density. Matrix is white. (CIRIA Grade Dc) 27.00 - 27.10m: Cobble sized black nodular flint.	27.10		
								Extremely weak medium density white with rare brown specks CHALK. Fractures are subhorizontal to 30° and 75° to subvertical extremely closely and very closely			
				15 11	2 - 10		-	Continued Next Page	{28.00}	-	

Geotechnical Engineering Ltd el 01452 527743 30766 MAS ER GPJ RALJH GPJ GEO ECH M25 GLB 19/10/2015 1045 34 RS/WG/DA

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BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Start Date

18 June 2015

560528.1 Easting

Scale

1:50

4 of 7

End Date 30 June 2015 176118 8 Ground level 60 20 m

progress date/time water depth	no & type	depth (m	dept	h type 8	4 3 3 3	lf.	instru -ment	description	depth (m)	reduced level (m)	legen
	94D 95C	28.50 - 28. 28.50 - 30.		50 S 84	97			spaced undulating smooth locally stained with light grey marl rarely stained orange. (CIRIA Grade B5 to B4) 27.20 - 27.30m: Cobble sized black nodular flint. 27.70 - 27.75m: Coarse gravel sized rinded nodular flint.	28.20	-23.15	
25/06/15 1730hrs					ŏ			Structureless CHALK recovered as slightly sandy gravelly angular to subrounded COBBLES. Clasts are extremely and very weak medium density white with rare grey marl staining. Matrix is white and light greyish white. (CIRIA Grade Dc) 28.20 - 28.25m: Coarse gravel sized rinded nodular flint. 28.50 - 28.55m: Coarse gravel sized rinded nodular flint.			
9.85m	1255	70 ST - TY	<u> </u>		07			28.95m: Medium gravel sized rinded nodular flint.	30.10	-25.05	
26/06/15 0815hrs 9.80m	96C 97Cs	30.00 - 31. 30.20	00 - 30.0	00	67 29 18	N 140 190		Extremely and very weak medium density white CHALK. Fractures are subhorizontal to 15° and 70° to subvertical closely spaced planar smooth infilled (up to 15mm) with angular fine chalk gravel and white silt frequently with a veneer of grey marl, rare orange staining. (CIRIA Grade	90.10	20.00	
	98C	31.00 - 31.	70 - 31.0	00	47 40 33			C3) 31.00 - 31.15m: Cobble sized nodular black flint recovered non-intact.	1		
	99Cs	31.45	B					31.25 - 32.30m: Subvertical fractures not observed. 31.40m: Calcite band (up to 2mm thick).	5		
	100C	31.70 - 31. 31.70 - 33.		70 C*222	96 65 65			31.60m: Fracture surface with a veneer of greyish green	2		
			-		65			marl (up to 2mm). 31.90 - 41.10m: Flint gravel recovered non-intact.			
			Ė			70			32.30	-27.25	1
- 11	101Cs	32.70 - 32.	95 -			70 170 320		Very weak medium density white CHALK with frequent thin laminae and wisps of light grey marl. Fractures are subhorizontal to 20° closely and medium spaced planar striated infilled (up to 2mm) with grey marl. (CIRIA Grade	1		
	102Cs	33.05	112					B3 to B2)	-		
	103C	33.20 - 34.	70 - 33.2	20	100 67			32.40 - 32.45m: Flint gravel recovered non-intact.	1		
					40			33.40 - 33.50m: Flint gravel recovered non-intact. 33.55 - 33.70m: 60° fracture planar smooth with light grey marl veneer.	1		
			E					33.90m: Medium flint gravel.	1		T
	104Cs	34.20	Ė					34.05m: Gravel sized flint.	34.35	-29.30	ŢĮ.
	105Cs			70 0+400		170 490		Very weak low and medium density white CHALK with rare wisps of grey marl. Fractures are subhorizontal to 15°	1		1
	106C	34.70 - 34. 34.70 - 36.	A	70 C*400	100 89	400		closely and medium spaced undulating smooth infilled (up	-		1
	1.00		E		79			to 3mm) with a veneer of grey and dark grey marl. Rare fine to coarse gravel sized rinded nodular flint. (CIRIA	=		
			Ē					Grade B3 to B2) 35.00m: Subhorizontal fracture surface stained grey with	-	h []	Ţ
			E.					up to 4mm penetrative discolouration.	1		4
	107Cs	35.70	Ē						-		T
	108Cs	35.95 - 36.	20						=		H
	109C	36.20 - 37.	70 - 36.2	20	59 49 0			36.20 - 37.70m: Limited recovery, core loss presumed to be chalk, not recovered due to flint jamming in the core barrel.	-		
	110Cs	37.40 - 37.	60					36.55m: Cobble sized nodular black flint recovered non-intact. 36.75m: Cobble sized black nodular flint recovered non-intact. 37.05m: Cobble sized black nodular flint recovered non-intact.	The state of the s		
- 11	111C	37.70 - 37. 37.70 - 39.	88 37.	70 C*316	93 74			Assessed Total	1		
		37.10 - 00.	5		74			19. (-		
water strike	1	L- d	e to (m)	time to ri		1-11-1		Continued Next Page CONTR	{38.00}	CHE	

Geotechnical Engineering Ltd el 01452 527743 30766 MAS ER GPJ RALJH GPJ GEO ECH M25 GLB 19/10/2015 1045 35 RS/WG/DA

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30766

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BOREHOLE LOG



LONDON RESORT COMPANY HOLDINGS LTD CLIENT

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet 5 of 7

Start Date 18 June 2015 Easting 560528.1 Scale 1:50

30 June 2015 **End Date**

Northing

176118.8 Ground level

5.05mOD

Depth 60.20 m

progress date/time water depth	no & type	depth	to	depth (m)	test type & value	samp. /core range	lf	instru -ment	description	depth (m)	level (m)	leger
					1=4	69			37.75 - 39.90m: Cobble sized black nodular flint recovered	2	- 1	
									non-intact.	1		1
				-						3		
	112Cs	38.85 -	39.20	2						-		
	1120	20.20	40.70	- 39.20		96				-		
	113C	39.20 -	40.70	- 39.20		96 74 69				3		
	114Cs	39.65							39.50 - 39.65m: Flint gravel recovered non-intact. 39.60 - 39.70m: Wisps of rare black staining (up to 1mm).	- 6		
	4 45-31			<u>.</u>					oc.oo oc. rom. Wape of fare black stalling (up to minn).	=		1
	1.000								40.00 - 40.15m: Cobble sized black nodular flint recovered non-intact.	Ž		
	115Cs	40.25 -		-	14, 4				flint recovered non-intact.	1		T
	116C	40.70 - 40.70 -		40.70	C*500	93				1		
	1100	40.70	42.20	1		93 75 64		//////	40.80 - 40.90m: Cobble sized nodular rinded flint	_		
									recovered non-intact.	1		
	4470	44.50	44.00	á					41.40m: Fine gravel sized pocket of yellowish brown clay	- 8		
	11/Cs	41.50 -	41.90						with yellowish orange staining. 41.50 - 41.55m: Subhorizontal fracture infilled (up to	-		
				5					50mm) with subangular and subrounded fine to coarse	-		
	118Cs 119C	42.10 42.20 -	43.70	- 42.20		76			marly chalk gravel with grey marl on fracture surface. 42.20 - 42.35m: Cobble sized rinded nodular flint	2		T P
	2,445					67 59			recovered non-intact.	7		T
				3					42.45 - 42.90m: Rare orange staining.	1		T I
				Ė						=		1
										3		T
-	1.51	71.51			J					5		T P
	120C	43.70 - 43.70 -		43.70	C*400	100 77 66				2		T
						66				=		1
										2	0 1 2	1
				P .					44.30 - 44.75m: Flint recovered non-intact.	- 5		
26/06/15	121Ce	44.80							44.75 - 44.95m: Frequent angular fine to coarse flint	-		
1345hrs 9.00m	12105	44.00		Ê					gravel.	=		
29/06/15 1210hrs	122C	45.20 -	46.70	45.20		99 55 42				2		1
8.60m	- 1					42						1
										45.95	-40.90	T.
				Ė			60 230 370		Very weak medium and high density white CHALK with	-		1
							3/0		frequent closely and medium spaced wisps and laminae of light grey marl. Fractures are subhorizontal to 30°			1
			J. U						closely and medium spaced undulating smooth infilled (up to 7mm) with white silt and a veneer of grey marl (up to	7		T p
	123C	46.70 -	48.20	46.70		94 67 47			2mm). (CIRIA Grade C3 to C2)	-		1
						4/			46.05 - 46.25m: Frequent orange staining. 46.25 - 46.30m: Flint gravel recovered non-intact.	=		1
				5						1		l l
										2		1
										4		1
						1		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Continued Next Page	{48.00}		
water strike	(m) casi	na (m)	rose to	(m) ti	me to ris	e (m)	rem	arks	AGS CONTR	ACT	CHE	CKE

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Scale

6 of 7 1:50

Start Date

18 June 2015

Easting

560528.1

progress date/time water depth	sample no & type	from	pth	(m) to	casing depth (m)	test type & value	samp. /core range	lf	instru -ment	description	depth (m)	reduced level (m)	legend
	124C	48.2	20 -	49.70	- - 48.20		100 71 71			48.15 - 48.20m: Flint gravel recovered non-intact. 48.45m: 10° fracture infilled (up to 5mm) with grey marl.	the substant		
										48.90 - 48.95m: Intersecting subhorizontal and 60-65° fractures undulating smooth infilled (up to 10mm) with white silt and with up to 4mm grey and dark grey marl.	and he reason		
	125C	49.7	0 -	51.20	49.70		92 71 59			49.65 - 49.80m: Cobble sized rinded nodular flint recovered non-intact.	state Parage		" " " " " " " " " " " " " " " " " " "
										50.55m: Fracture stained light grey with up to 5mm penetrative discolouration. 51.00m: Thin lamination (5mm) of grey marl.	Heren		
	126C	51.2	20 -	52.70	51.20		100 80 60			51.10 - 51.20m: Flint gravel recovered non-intact. 51.25 - 51.30m: Flint gravel recovered non-intact. 51.35 - 51.45m: Cobble sized nodular black flint recovered non-intact. 51.70m: Fracture locally stained greyish brown with a veneer of grey marl (up to 2mm). 51.90 - 51.95m: Flint gravel recovered non-intact.	a a Lean and a constant		
	127C	52.7	0 -	54.20	52.70		100 81 62			52.40 - 52.55m: Cobble sized rinded nodular flint recovered non-intact.	range (a)		
										53.25 - 53.45m: Frequent orange laminae and staining. 53.50 - 53.55m: Flint gravel recovered non-intact.	53.80	-48.75	
	128C	54.2	20 -	55.70	54.20		100 93 89			Very weak high density locally medium density white with rare orange staining CHALK with rare thin laminae and wisps of light grey marl. Fractures are subhorizontal to 20° closely and medium spaced undulating smooth infilled (up to 5mm) with white silt or grey marl. Rare angular and subangular fine to coarse flint gravel. (CIRIA Grade C3 to C2) 54.65m: Subhorizontal fracture infilled (up to 30mm) with	a [rasa a a rata a a]		
	129C	55.7	'O -	57 20	55.70		99			white angular and subangular fine and medium chalk gravel. Possibly drilling disturbed. 54.95 - 55.10m: Frequent orange staining.	E 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
	1290	55.7	0 -	37.20	_ 33.70		71 71			56.20 - 56.30m: Cobble sized rinded nodular flint	27 43 43		
	130Cs	56.5	60							recovered non-intact.	7		
	131C	57.2	20 -	58.70	57.20		99 75 59						
	11 - 1								111111	Continued Next Page	{58.00 }		n -

BOREHOLE LOG



LONDON RESORT COMPANY HOLDINGS LTD CLIENT

1:50

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet 7 of 7

Start Date

18 June 2015

Easting 560528.1 Scale

End Date

30 June 2015

176118 8 Ground level

60 20 m

progress date/time water depth	sample no & type	depth	to	casing depth (m)	test type & value	samp. /core range	l _f	instru -ment	description	depth (m)	reduced level (m)	leger
	132Cs 133C			58.70		100 73 43	N 50 200		Very weak high density white with rare orange staining CHALK. Fractures are subhorizontal to 10° closely spaced undulating rough infilled (up to 10mm) with white silt	58.90	-53.85	
29/06/15 1445hrs 6.95m	134Cs	60.00 -	60.20		10				locally with a veneer of dark grey marl and light brown clay. (CIRIA Grade C3) Borehole completed at 60.20m.	60.20	-55.15	
										114		
										Treat		
										- Plantage		
				_						{68.00}		

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Scale

1 of 2

1:50

Start Date

29 June 2015

Easting

560202.1

3 July 2015 **End Date** Northing 175846.7 Ground level 5.20mOD Depth 9.70 m

progress date/time water depth	no & type	depth (m)	depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	leger
29/06/15 1035hrs						/ /	Off-white and light grey silty very sandy subangular fine to coarse poorly cemented silt (CKD?), chalk, flint and concrete GRAVEL. (MADE GROUND)	0.35	4.85	
	x	0.00 - 1.50	Ė				Poorly cemented light brown mottled white sandy SILT. Material CKD. (MADE GROUND)	0.70	4.50	$\overset{\times\times}{\times}$
	х	1.50 - 1.70				200	Reddish brown, light grey, yellowish brown, black and white very sandy subangular fine to coarse brick, concrete, sandstone and clinker GRAVEL with a high brick cobble content. Rare fragments (up to 160mm) of ceramic, glass, metal and plastic. (MADE GROUND)	1.20	4.00	
	1C	1.70 - 2.02 1.70 - 2.20	1.50	C*140	100		COBBLES and BOULDERS of reddish brown brickwork. Gravel is angular and subangular fine to coarse brick. Frequent wood fragments. (MADE GROUND)	2.20	3.50	\bigotimes
	2X 3D*	2.20 - 2.70 2.40 - 2.50	Ē	V= 0.0			MADE GROUND comprising grey CONCRETE.	2.20	-	
	4D 5X	2.40 - 2.50 2.50 - 2.60 2.70 - 3.15 2.70 - 3.70	2.70	Vo 0.0 C 95			Very dense grey with black and dark blue specks slightly sandy angular to subrounded fine to coase flint, brick and poorly cemented CKD GRAVEL. (MADE GROUND)	2.70	2.50	\bigotimes
	6D* 7D	2.90 - 3.00 3.00 - 3.10	Ē	Vo 0.0			2.00m: Flint cobble.	1		\otimes
	8D* 9D	3.50 - 3.60 3.60 - 3.70	270	Vo 0.0			Dark blue with brown specks sandy silty angular to subrounded fine to coarse flint GRAVEL with rare flint cobbles. Matrix is brown poorly cemented sandy CKD.			\otimes
	10X	3.70 - 4.11 3.70 - 4.05	3.70	C 115			(MADE GROUND) Very dense well cemented dark brown with black specks			\otimes
	11C	4.05 - 4.45	4.00		100		slightly sandy angular and subrounded fine to coarse flint, clinker and poorly cemented CKD GRAVEL. (MADE	4.05	1.15	\boxtimes
	12D* 13X	4.45 - 4.55 4.45 - 4.70	E	Vo 0.0			GROUND) 3.05 - 3.25m: 2mm fibrous material.	4.45	0.75	\bigotimes
	14D 15X	4.55 - 4.65 4.70 - 5.15	4.70	C 11	+		3.10 - 3.25m: Dark brown mottled light brown clay. 3.70 - 4.05m: Clay matrix.			\otimes
	16D* 17D	4.70 - 5.70 5.05 - 5.15 5.15 - 5.25	E	Vo 0.0			Off-white gravelly COBBLES of strongly cemented silt with rare clinker. Material CKD. (MADE GROUND)			\bowtie
	.,,	5.70 - 6.15	5.70	C 7	1		Medium dense light brown with white and black specks sandy angular to subrounded fine to coarse flint, red brick	5.60	-0.40	\bowtie
	18X 19D*	5.70 - 6.70 5.80 - 5.90	E	Vo 0.0			and poorly cemented CKD GRAVEL with low flint cobble content. (MADE GROUND) 4.90 - 5.60m: Brown sandy silt CKD matrix.			\bigotimes
	20D	5.90 - 6.00	E				Loose poorly cemented greyish brown with white specks slighly sandy SILT. Material CKD. (MADE GROUND)	6.50	-1.30	\otimes
	21D* 22D 23UT	6.50 - 6.60 6.60 - 6.70 6.70 - 7.15	6.70	Vo 0.0			5.70 - 5.90m: Rare black specks. 6.05m: Orange fibrous material.	0.50	-1.30	×××
	24X 25D	6.70 - 7.70 7.15 - 7.30	Ė			/////	6.50m: Orange fibrous material. Stiff dark brown mottled bluish grey slightly sandy SILT	-	G I e	× .×
29/06/15 1830hrs 3.70m	26D* 27D	7.15 - 7.30 7.20 - 7.30 7.30 - 7.40	E	Vo 0.0			with a strong organic odour. (REWORKED ALLUVIUM?) 7.20m: Orange fibrous material.			× ×
30/06/15 0800hrs	28D 29X	7.70 - 8.15 7.70 - 8.70	6.70	S 22				7.70	-2.50	· ×·
3.67m			-		-	//////	Continued Next Page	{8.00}		C

EQUIPMENT: Geotechnical Pioneer rig.

METHOD: Dynamic sampled (128mm) 0.00-1.70m (through previously excavated machine dug trial pit (TP201), 2.20-4.05m and 4.45-9.70m. Waterflush rotary core drilled (146mm) 1.70-2.20m and 4.05-4.45m.

CASING: 168mm diam to 9.70m.

BACKFILL: On completion, borehole backfilled with bentonite cement grout (2:1 mix) 9.70-7.00m and bentonite pellets 7.00-6.50m. A slotted standpipe (50mm) with geosock was installed to 6.00m, granular response zone 6.50-1.40m, bentonite seal 1.40-0.30m, concrete and raised helmet cover 0.30-0.00m.

REMARKS: Borehole installed on 03/07/2015. Downhole magnetometry for UXO risk mitigation undertaken 0.00-9.70m. Stratum names provided by the

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE S

water strike (m) casing (m) rose to (m) time to rise (min) remarks

Groundwater not encountered prior to use of water flush.



CONTRACT

CHECKED

30766 EC

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

BH201

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet 2 of 2

Start Date 29 June 2015

Easting 560202.1

Scale 1:50

End Date 3 July 2015 Northing 175846.7 Ground level 5.20mOD Depth 9.70 m

progress date/time vater depth	no & type	depth	(m) to	casing depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	legen
80/06/15 145hrs 3.57m	30D* 31D 32D 33X 34D* 35D	8.15 - 8 8.25 - 8 8.70 - 9 8.70 - 9 9.20 - 9 9.30 - 9	9.35 9.15 9.70 9.30 9.40	8.70	Vo 0.0			Loose dark blue with white specks and rare grey staining angular to subrounded fine to coarse flint GRAVEL with low flint cobble content. (RIVER TERRACE DEPOSITS) 8.90m: Coarse gravel sized pocket of light brown fine sand. Borehole completed at 9.70m.	9.70	-4.50	000000000000000000000000000000000000000
									ilanen naturatura		
										100 100 100 100 100	
									. Insurentante		
									{18.00}		
/ater strike (m) casi	ng (m)	rose to	o (m) ti	me to ris		remarks Groundwat flush.	er not encountered prior to use of water 307	RACT	CHE	CKE

Geotechnical Engineering Ltd el 01452 527743 30766 MAS ER GPJ R ALJH GPJ GEO ECH M25 GLB 19/10/2015 10 45 38 RS/A

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BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

BHZU2

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet

Scale

1 of 4

1:50

Start Date

End Date

9 June 2015

17 June 2015

Easting

Northing

560333.2

175813.1

Ground level

4.25mOD

Depth 32.00 m

depth (m) casing instru depth educed legend progress test samp date/time depth /core description no & type & -ment (m) level water depth type from (m) value range (m) 09/06/15 0730hrs 1B 0.30 Grass over soft light grey sandy clayey SILT with rare subangular fine to coarse sandstone gravel and rare 3.80 0.45 2D* 0.30 Vo 0.0 rootlets (up to 1mm). Material Cement Kiln Dust (CKD). (MADE GROUND) 3D* 0.50 Vo 0.0 0.80 3.45 Soft light grey and white sandy gravelly clayey SILT. 0.50 **4B** Gravel is subangular and subrounded fine and medium 5B 1.00 flint and sandstone. Material Cement Kiln Dust (CKD). 7UT 1.00 - 1.20 Nil 2.95 1.30 (MADE GROUND) Vo 0.0 6D 1.00 Soft and firm grey slightly sandy gravelly clayey SILT. 8D 1.20 - 1.65 Nil S4 Gravel is subangular to well rounded fine and medium flint 9B 1.30 - 1.50 10D* 1.50 Vo 0.0 and sandstone. Material Cement Kiln Dust (CKD). (MADE GROUND) 2.00 - 2.20 11B 2.00 Vo 0.0 12D' Loose light brown mottled white and grey slightly sandy slightly gravelly SILT. Gravel is angular and subangular fine to coarse flint and rare chalk. Material Cement Kiln 2.20 - 2.60 Nil **13UT** Dust (CKD). (MADE GROUND) Vo 0.0 14D* 2.50 1.80 - 2.20m: With frequent cobble sized pockets of very 15D 2.60 soft brown slightly sandy slightly gravelly clay. Gravel is 3.00 - 3.20 16B angular and subangular fine and medium flint and Cement Vo 0.0 17D* 3.00 Kiln Dust (CKD). 3.00 18D 3.20 - 3.65S4 19D* 3 50 Vo 0.0 3.70 0.55 3.70 - 4.0020B Grey, greenish grey and light brown sandy subangular locally angular fine to coarse mudstone, flint and vitreous 21D* 4.00 Vo 0.0 clinker GRAVEL with a medium cobble content. Cobbles 09/06/15 1730hrs 1.10m are flint and vitreous material. Rare wood fragments (up to 20mm). (MADE GROUND) 10/06/15 22D* 4.50 Vo 0.0 0730hrs 4.90 -0.652.00m Locally poorly cemented light brown sandy SILT. Material 24D* 5.00 Vo 0.0 Cement Kiln Dust (CKD). (MADE GROUND) 23B 5.00 - 5.20 5.20 - 5.65 5.20 S 1 25D 27D* Vo 0.0 6.00 26B 6.00 - 6.20 **28UT** 6.20 - 6.60 6.20 29D 6.60 7.00 -2.75

EQUIPMENT: Light cable percussive (shell and auger) rig and Geotechnical Pioneer rig.

7.00 S 1

Vo 1.5

METHOD: Hand dug inspection pit 0.00-1.20m. Cable percussion (300mm) 1.20-9.00m and (200mm) 9.00-21.00m. Dynamic sampled (128mm) 21.00-29.00m. Waterflush rotary cored (146mm) 29.00-32.00m.

(MADE GROUND)

Continued Next Page

Very loose light grey mottled orangish brown and black

fibrous organic material. Gravel is subangular fine and

medium sandstone. Material Cement Kiln Dust (CKD).

sandy slightly gravelly SILT with frequent fine gravel sized

CASING: 300mm diam to 9.00m, sacrificial 250mm diam HDPE to 9.00m. Cement:bentonite (3:1 mix) grout 9.00-5.00m and bentonite pellets 5.00-0.00m. 300mm diam casing withdrawn. 200mm diam to 21.00m and 168mm diam to 29.50m.

BACKFILL: On 17/06/2015, borehole backfilled with bentonite pellets 32.00-31.50m. A slotted standpipe (50mm) with geosock was installed to 31.00m, granular response zone 31.50-20.50m, bentonite seal 20.50-0.50m, granular surround 0.50-0.30m, concrete and raised helmet cover 0.30-0.00m.

REMARKS: Downhole magnetometry for UXO risk mitigation undertaken 0.00-32.00m. Permeability test undertaken 23.00-24.00m. Chalk grade based on CIRIA C574 (2002). Stratum names provided by the Engineer.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE IS

7.00 - 7.20

7.20 - 7.65

7.00

30B

31D

water strike (m) casing (m) rose to (m) time to rise (min) remarks 3.20 1.50 3.20 20

AGS

CONTRACT

CHECKED

30766 EC

(8.00)

Geotechnical Engineering Ltd el 01452 52.7743 30766 MAS ER GPJ R ALJH GPJ GEO ECH M25 GLB 19/10/2015 1045 40

Ele/EC

P/RS/DA

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD **BH202**

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

2 of 4

Start Date 9 June 2015 Easting 560333.2 Scale

1:50

17 June 2015 Northing **End Date** 175813.1 Ground level 4.25mOD Depth 32.00 m

progress date/time vater depth	no & type	depth (m) from to	depth (m)	test type & value	/core range	lf	instru -ment	description	(m)	reduced level (m)	legen
	32B	8.00 - 8.20		J. A.T.			HE		8.20	-3.95	XXX
	33D* 34UT	8.10 8.20 - 8.60	7.00	Vo 1.4	1			Soft grey alluvium (Driller's description). (ALLUVIUM)	8.60	-4.35	x
0/06/15 730hrs).60m	35D 36B	8.60 8.70 - 9.00			•			Spongy brown fibrous PEAT. (PEAT)			777
1/06/15	37D*	9.00	Ē.	Vo 0.0			ĦĦ				11 1
730hrs).60m	38D	9.20 - 9.65	9.20	S 2			ĦΕ				1/ 1/
	39B	9.50 - 9.60	-								11/1
	40B 41D*	10.00 - 10.20 10.00	5	Vo 0.0	М						77 77
	42UT	10.20 - 10.60	10.20	10.00							1111
	43D*	10.50		Vo 0.0			ĦĦ		10.60	-6.35	717
	44B	10.60 - 10.80		2.0 5.3			ĦĦ	Very soft grey mottled brown silty CLAY with rare partly decomposed fibrous organic material (up to 5mm).			×
			-				ĦĦ	(ALLUVIUM (PEAT))	-		<u>x _</u> ×
	45B	11.30 - 11.50	Đ l				ĦĦ				<u>x</u>
	46D		11.00	S 2							×
	47D*	11.50		Vo 0.0			ĦĒ		3		×
			-								×
			-				ĦĒ				x
	48D*	12.50	8	Vo 0.0							×
	49B	12.80 - 13.00	-				ĦĒ				_ ×
	50UT	13.00 - 13.45	13.00		1		ĦĦ		100		
					ы						x
	51D 52D*	13.45 13.50	Ē	Vo 0.0				13.50 - 14.30m: Light grey mottled brown.			×
	JED	10.00	É	VO 0.0							×
	53B	14.00 - 14.20	Ξ	10.1					44.20	10.05	×
	54D* 55B	14.20 14.30 - 14.50	Ż	Vo 0.0			ĦE	Spongy brown and black fibrous PEAT with frequent	14.30	-10.05	11 1
	56D	14.50 - 14.95	13.50	S 6			ĦĒ	pockets (up to 30mm) of soft brown silty clay. (PEAT)			1/ 1/1
			7	15.0							10 1
			E								4 14
		-	-				HE		15.50	-11.25	11/11/11
	57B	15.50 - 15.70	Ē				ĦĦ	Soft grey mottled brown silty CLAY with frequent partly			×
	58D*	15.50	=	Vo 0.0				decomposed fibrous organic material (up to 15mm). (ALLUVIUM (PEAT))			x
	59UT	16.00 - 16.45	16.00		1		ĦĦ	V	1		x
	60D	16.45					BE				×
	61B	16.50 - 16.70	E	V- 00			E	16.50 - 17.50m: Rare wood fragments (up to 40mm).			×
	62D*	16.50		Vo 0.0			ĦΕ		100		×
	5.5		=				HE		1		×
	63B	17.30 - 17.50		100				17.30 - 17.50m: Rare subangular fine to coarse flint			x
	64D	17.50 - 17.95	13.50				ĦĒ	gravel. 17,50 - 18.00m: Rare wood fragments (up to 80mm).			xx
	65D* 66B	17.50 17.70 - 18.00	2	Vo 0.0				17.50 - 10.00111. Naile wood fragments (up to domm).			x
								Continued Next Page	{18.00}		_
vater strike	(m) casi	ng (m) rose to	o (m) ti	me to ris	se (m)	rem	arks	AGS CONT		CHE	CKE

Geotechnical Engineering Ltd el 01452 527743 30766 MAS ER GPJ RALJH GPJ GEO ECH M25 GLB 19/10/2015 10 45 40 P/RS/DA

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

BH202

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet

3 of 4

Start Date

9 June 2015

Easting 560333.2

Scale

1:50

End Date

17 June 2015

Northing

175813.1 Ground level

4.25mOD

Depth 32.00 m

progress date/time water depth	no & type	from	to	depth (m)	test type & value	/core range	lf	instru -ment	The state of the s	depth (m)	reduced level (m)	legen
11/06/15 1730hrs	67D*	18.40	- 18.60		Vo 0.0				Loose greyish brown locally light grey slightly silty sandy GRAVEL. Gravel is subangular and subrounded fine to coarse flint and quartzite. (RIVER TERRACE DEPOSITS)	18.10	-13.85	0000
2.10m 12/06/15 0730hrs 3.30m	69B	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 20.00 - 19.45	19.00	C 8							0000000
	70D*	19.80		11111	Vo 0.0				19.70 - 20.00m: Driller notes gravel of chalk. CHALK recovered as white silty subangular fine to coarse	20.00	-15.75	0.00
12/06/15	71D	20.50	- 20.95	- - - 20.50	S 4			99 90	gravel.			T P
0900hrs 6.70m	72B	21.00								21.00	-16.75	
15/06/15 1500hrs 4.24m	73X	21.00	- 22.50	21.00					Structureless CHALK composed of slightly sandy silty subangular and subrounded fine to coarse GRAVEL with medium subangular and subrounded cobble content.	21.00	-10.70	I I
	74D* 75D		- 21.70 - 21.80		Vo 0.0				Clasts are very weak low and medium density white with frequent wisps of light grey marl. Rare angular to rounded coarse flint gravel. Matrix is white. (Probably CIRIA Grade Dc)			
		00.50	00.05							-		
	76X		- 22.95 - 24.00	22.50	S8	-			22.50m: Cobble sized rinded black nodular flint.	9		
	77D* 78D	23.10 - 23.20 -	- 23.20 - 23.30		Vo 0.0					200		III
5/06/15	79D*	100	- 23.90	3	Vo 0.0				23.35m: Cobble sized rinded black nodular flint, recovered non-intact.	-		ľ
715hrs 5.80m 6/06/15 0820hrs 3.59m	80D 81X	24.00	- 24.00 - 24.45 - 25.50	24.00 	S 15							
	82Xs 83D* 84D		- 25.10 - 25.20		Vo 0.0	***************************************						
	85U	25.50	- 25.95	25.50		I				1		
	87X 86D		- 27.00 - 26.00						25.75 - 25.80m: Cobble sized rinded black nodular flint, recovered non-intact.			T i
	88D* 89D	26.30	- 26.40 - 26.50		Vo 0.0					4 4 4		
	90Xs 91D 92X		- 27.45 - 28.50	27.00 	S 10					Para Janes		
	93D	27.70	- 27.80			.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			27.70 - 28.50m: Low subangular chalk cobble content.	1		
water strike	-					H.			Continued Next Page CONTF	{28.00}	CHE	

Geotechnical Engineering Ltd el 01452 527743 30766 MAS ER GPJ RALJH GPJ GEO ECH M25 GLB 19/10/2015 1045 40 P/RS/DA El

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Start Date 9 June 2015

Easting 560333.2 Scale

1:50

4 of 4

End	Date	17 June	2015
	Date	I / Julio	2010

Northing

175813.1 Ground level

4.25mOD

Depth 32.00 m

é	94D 95Xs 96D 97X 98C 99Cs	28.40 - 28.50 28.45 28.50 - 28.95 28.50 - 29.00 29.00 - 30.50 29.75 - 30.00 30.50 - 32.00	28.50	S 55	100 91 35	N 140 270	27.90 - 28.00m: Cobble sized rinded black nodular flint, recovered non-intact. 28.70 - 28.80m: Stained yellowish orange. 29.00 - 29.15m: Frequent orange staining on matrix. Very weak and weak high density white CHALK. Fractures are subhorizontal to 25° and 55° to subvertical closely to medium spaced undulating smooth infilled with white fine and medium gravel sized chalk and white silt locally stained orange and dark brown. (CIRIA Grade C4) 29.35m: Flint band (30mm), recovered non-intact. 30.00 - 30.00m: Cobble sized black nodular flint. 30.60 - 30.75m: Cobble sized rinded black nodular flint, recovered non-intact. 30.80 - 31.00m: Frequent black and brown specks on fracture surface. 31.20m: Tabular seam of calcite (5x70mm). 31.40 - 31.60m: Rinded black nodular flint, recovered non-intact. 31.80 - 31.85m: Fine to coarse gravel sized nodular flint. Veneer of light grey marl on fracture surfaces.	29.15		
545hrs							30.80 - 31.00m: Frequent black and brown specks on fracture surface. 31.20m: Tabular seam of calcite (5x70mm). 31.40 - 31.60m: Rinded black nodular flint, recovered non-intact. 31.80 - 31.85m: Fine to coarse gravel sized nodular flint. Veneer of light grey marl on fracture surfaces.	32.00	-27.75	
			Ē				Borehole completed at 32.00m.	1 4 6 6		
) in all the same of the same		
								{38.00}		

Geotechnical Engineering Ltd el 01452 527743 30766 MAS ER GPJ R ALJH GPJ GEO ECH M25 GLB 19/10/2015 1045 40 P/RS/DA

BOREHOLE LOG



LONDON RESORT COMPANY HOLDINGS LTD CLIENT

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Scale

1 of 5

1:50

Start Date

End Date

25 June 2015

3 July 2015

Easting

Northing

560370.3

175261.8 Ground level

3.80mOD

Depth 40.65 m

progress date/time water depth	sample no & type	fron		(m) to	casi dep (m	th	test type & value	samp. /core range	lf	instru- men	3.1	description	depth (m)	reduced level (m)	leger
25/06/15 0730hrs	1B 2D* 3B 4D*	0.30 0.30 0.50 0.50					Vo 0.0 Vo 0.0		Ī	/	▋	Grey slightly silty sandy angular and subangular fine to coarse flint, cement (possible cement kiln dust) and concrete GRAVEL. Rare wood fragments (up to 5x20x40mm) and rare 1mm diam x 30mm metal wire fragments. (MADE GROUND)	0.60	3.20 3.00	
	5B 6D*	1.00		1.20	E		Vo 0.5			H	∄\	Driller reports concrete slab. (MADE GROUND)	-		\bowtie
		1.20) - 1	1.65	1.	20	C 8					Loose brown, yellowish brown and grey slightly sandy clayey subangular and subrounded fine to coarse brick, concrete and flint GRAVEL. Rare rootlets (up to 2mm diam), rare cloth rag fragments (up to 1x20x20mm) and rare wood fragments (up to 5x20x50mm). (MADE			
	7B 8D*	2.00)	2.20	- 2.	20	Vo 0.7 C 6					GROUND)	2.40	1.40	\otimes
	9B	2.40) - 2	2.60								Soft slightly sandy gravelly CLAY with a medium cobble content. Gravel is subangular fine to coarse brick and concrete. Cobbles are subangular brick and concrete. (MADE GROUND)	3.00	0.80	${\otimes}$
	10B 11D* 12D	3.00)	3.20	3.	20	Vo 0.5 S 5					Soft grey mottled reddish brown and brown slightly sandy slightly gravelly silty CLAY. Gravel is angular and subangular fine to coarse chalk and flint. Rare subangular fine to coarse gravel sized fragments of brick and concrete. (MADE GROUND)	3.80	0.00	
25/06/15 1730hrs	13B 14D* 15UT	4.00)	4.20 4.50	4	20	Vo 1.0					Very soft greyish brown mottled black silty CLAY with a slight organic/hydrocarbon odour?	4.20	-0.40	 ×
Dry 26/06/15 0730hrs Dry	16D	4.50		1.00				l				Very soft grey CLAY with a slight organic odour. (ALLUVIUM)	1		
o.,	17B 18D* 19D	5.00)	5.20	- 5.	20	Vo 0.6 S 25						5.40	-1.60	
	20B 21D* 22D 23B 24D*	6.00 6.20 6.50 6.50)) - 6) - 6)	6.20 6.65 6.70 7.65			Vo 0.4 S 29 Vo 0.5					Firm light grey mottled off-white slightly sandy gravelly CLAY with low subangular flint cobble content. Gravel is subangular fine to coarse chalk and flint. (ALLUVIUM)			
	26B	8.00) - 8	3.20								Continued Next Page	{8,00}		

EQUIPMENT: Light cable percussive (shell and auger) rig and Geotechnical Pioneer rig.

METHOD: Hand dug inspection pit 0.00-0.60m and 0.80-1.20m. Cable percussion (300mm) 0.60-0.80m, 1.20-4.50m and (150mm) 4.50-13.50m. Dynamic sampled (128mm) 13.50-22.70m. Waterflush rotary core drilled (146mm) 22.70-40.20m.

CASING: 300mm diam to 4.50m, 150mm diam to 13.50m, 168mm diam to 22.70m.

BACKFILL: On completion, borehole backfilled with bentonite cement grout (2:1 mix) 40.65-12.10m and bentonite pellets 12.10-11.50m. A slotted standpipe (50mm) with geosock was installed to 11.40m, granular response zone 11.50-8.70m, bentonite seal 8.70-0.30m, concrete and raised helmet cover 0.30-0.00m. REMARKS: Hole advanced by chiselling 0.60-0.80m (1hr). Borehole installed on 03/07/2015. Downhole magnetometry for UXO risk mitigation undertaken 0.00-13.50m. Chalk grade based on CIRIA C574 (2002). Stratum names provided by the Engineer.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE IS

water strike (m) casing (m) rose to (m) time to rise (min) remarks 8.00 7.20 6.40 20 Fast inflow.



CONTRACT CHECKED 30766

EC

30766 MAS ER GPJ R ALJH GPJ GEO ECH M25 GLB 19/10/2015 10 45 42 RS/A Geotechnical Engineering Ltd

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD **BH203**

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet 2 of 5

Start Date

25 June 2015

Easting 560370.3 Scale

1:50

3 July 2015 **End Date**

Northing

175261.8 Ground level

3.80mOD

Depth 40.65 m

progress date/time water depth	no & type	depth (r	m) to	casing depth (m)	test type & value	samp. /core range	lf	instru -ment	description	depth (m)	reduced level (m)	lege
\exists	27D*	8.00 8.20 - 8.6	35	8.20	Vo 0.4 C 33		Ī			8.70	-4.90	
	28B 29D*	9.00 - 9.2 9.00 9.20 - 9.6		9.00	Vo 0.5 C 19				Medium dense off-white and light grey silty sandy angular and subangular fine to coarse chalk and flint GRAVEL. (RIVER TERRACE DEPOSITS)	- 6.70	-4.90	100000000
	30B 31D*	10.00 - 10 10.00 10.20 - 10		10.00	Vo 0.5 C 15					1-		0000000
	32B 33D*	11.00 - 1 11.00	1.20		Vo 0.3				11.00 - 11.60m: Medium cobble content. Cobbles are subangular flint.	-		10000
	34B 35D*	11.60 - 1 11.60	1.80	-1	Vo 0.1				11.60 - 11.80m: High cobble content. Cobbles are subangular flint.	11.60	-7.80	-
		12.00 - 12	2.45	12.00	C 4				CHALK recovered as loose off-white subangular fine to coarse gravel sized fragments.	-		
26/06/15 1730hrs	36B 37D*	13.00 - 13 13.00	3.20		Vo 0.0							1
8.40m 80/06/15 1455hrs 8.01m	38X	13.50 - 13 13.50 - 14		13.50	S 5				Structureless CHALK composed of white locally stained orange slightly sandy gravelly SILT. Gravel is angular to	13.50	-9.70	I
3.01111	39X 40D* 41Xs 42Xs	14.00 - 19 14.20 - 19 14.35 14.40			Vo 0.0				subrounded fine to coarse extremely and very weak medium density white chalk. (Probably CIRIA Grade Dm) 13.50 - 14.10m: Frequent coarse gravel sized pockets of fine sand. 14.35 - 14.45m: Cobbles of white chalk (up to 50x105x110mm).			
	43D* 44D 45X	15.30 - 15 15.50 - 15 15.50 - 15	5.95	15.50	Vo 0.0 S 12				15.00 - 15.15m: Rare angular fine and medium flint gravel.			II II
	46D*	16.20 - 10	6.30		Vo 0.0				15.70m: Rare angular medium flint gravel.	-		J.
	47Xs 48D				S 15				16.60m: Cobble sized rinded black nodular flint.	-		
	48D 17.00 - 17.45 16.00 S 1 49X 17.00 - 18.50 17.00	Vo 0.0	ined this see			17.00m: Cobble sized rinded black nodular flint.			T			
						1			17.75 - 18.10m: Rare subangular coarse flint gravel.	-		I
water strike			ose to		me to ris			narks	Continued Next Page CONTR	{18.00}	CHE	

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

3 of 5

Start Date

25 June 2015

560370.3 Easting

Scale

1:50

progress date/time water depth	no & type	depth	to	depth (m)	test type & value	samp. /core range	lf	instru -ment	description	depth (m)	reduced level (m)	legen
30/06/15 1840hrs 2.86m 01/07/15 0810hrs 2.76m	51Xs 52D 53X	18.50	- 18.30 - 18.95 - 20.00	18.50	S 12				18.20 - 18.30m: Cobble of white rarely stained orange chalk (95x95x120mm). 18.75 - 18.85m: Rare angular fine flint gravel. 19.10 - 19.25m: Pocket of fine and medium chalk and flint	19.40	-15.60	
	54D 55X		- 20.45 - 21.50	18.50	S 18				gravel. Structureless CHALK composed of white slightly sandy slightly gravelly SILT. Gravel is subangular fine and medium rarely coarse extremely weak low and medium density white chalk. (Probably CIRIA Grade Dm) 20.10 - 20.20m: Gravelly.	13.40	-10.00	
	56X		- 21.84 - 22.70	21.50	S*158				21.15m: Cobble sized rinded black nodular flint. 21.25m: 3mm subhorizontal orange staining. 21.55m: Cobble sized rinded black nodular flint. 21.80 - 21.90m: Rare subangular coarse flint gravel. 22.00 - 22.50m: Rare yellow staining.	- Internation		
	57D 22.70 - 23.15 22.70 - 24.20	22.70	S 33	100 38 0	N 150 190		22.55m: 5mm suborizontal light grey marl lense. 22.60 - 22.70m: Gravelly. Very weak to weak medium density white with rare black specks locally orange stained CHALK with frequent closely spaced wisps of light grey marl. Fractures are	22.70	-18.90			
	59Cs 60C	24.00 24.20	- 25.70	22.70		100 50 39			50-70° and subhorizontal to 20° closely spaced planar rough clean. Medium spaced bands of angular fine and medium flint gravel. (CIRIA Grade B3) 24.00m: Cobble sized rinded black nodular flint.			
	61Cs 62D 63C 64Cs 65Cs	25.70	- 25.70 - 26.06 - 27.20	22.70	S*146	96 63 47	N 170 360		Extremely weak and very weak low and medium density white with rare black specks locally yellow stained CHALK with frequent closely and medium spaced wisps of light grey marl. Fractures are subhorizontal to 20° closely and medium spaced planar and undulating rough infilled (up to 2mm) with white silt. Rare angular fine to coarse flint gravel and low flint cobble content. (CIRIA Grade B2 and B3)	25.15	-21.35	
	66Cs 67Cs 68C		- 27.10 - 28.70	22.70		95 48 40				Territoria I		
vater strike			rose to		me to ris		rem	100	Continued Next Page CONTR	{28.00}	CHEC	

Geotechnical Engineering Ltd el 01452 527743 30766 MAS ER GPJ RALJH GPJ GEO ECH M25 GLB 19/10/2015 1045 43 RS/A

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

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SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet 4 of 5

Start Date 25 June 2015

Easting 560370.3

Scale 1:50

End Date 3 July 2015

175261.8 Ground level

progress date/time vater depth	no & type	depth	(m) to	depth (m)	test type & value	samp. /core range	1 _f	instru -ment	description	depth (m)	reduced level (m)	legen
	69Cs	27.90 -	28.15									
	70Cs 71D 72C	28.50 28.70 - 28.70 -		22.70	S 32	100 69 69						
	73Cs	29.50 -	29.75							-		H
1	74Cs	29.80		Ž						1		
- 14	75C	30.20 -	31.60	22.70		95 43 33				-		
	76Cs	30.60							30.60m: Cobble sized rinded black nodular flint. 30.70 - 30.90m: Subvertical unduating clean fracture.	1		
11	77Cs	30.95 -	31.30						50.76 - 50.50m. Subvertical undusting clean macture.	1		
	78Cs 79D 80C	31.30 31.60 - 31.60 -		22.70	S 64	100 53 48				32.05	-28.25	
1/07/15 330hrs	81Cs 82Cs	32.30 32.50 -	32.80				N 190 310		Very weak medium density off-white with rare black specks CHALK. Fractures are subhorizontal to 10° closely rarely medium spaced planar rough with a veneer of white silt and light grey marl. Rare angular to subrounded fine to coarse flint gravel. (CIRIA Grade C3 and C2)	32.00	-20.23	
76m 2/07/15	83C	33.10 -	34.60	22.70		100 64 48				7		
310hrs 76m	84Cs 85Cs	33.40 33.45 -	33.65			48						
	86Cs 87D 88C	34.30 34.60 - 34.60 -	35.05 36.10	22.70	S 42	97	N		Very weak low and medium density white with rare black	34.60	-30.80	
	000	54.00	30.10	1		97 33 24	N 140 220		specks locally stained orange CHALK. Fractures are subhorizontal closely rarely medium spaced planar and	1		
- 1	89Cs	35.15		2					undulating smooth and rough infilled (up to 2mm) with white silt. Low medium spaced flint cobble content recovered non-intact. (CIRIA Grade C3 and C2)	-		Ė
	90Cs	35.70 -	35.85							1		
	91Cs 92C 93Cs	36.00 36.10 - 36.20	37.20	22.70		91 37 30						
	94Cs	36.75 -	37.00							1		ļ.
	95D 96C	37.20 - 37.20 -		22.70	S*111	100 43 39				4		
						39	N 170 230		Very weak to weak medium to high density white with rare black specks locally stained yellow CHALK with rare	37.55	-33.75	
	97Cs	37.80		5					Continued Next Page	{38.00}		T p

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BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

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SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet 5 of 5

Start Date 25 June 2015

Easting 560370.3

Scale 1:50

End Date 3 July 2015 Northing 175261.8 Ground level 3.80mOD Depth 40.65 m

progress date/time water depth	no & type	depth (m)	depth		samp. /core range	lf	instru -ment	description	depth (m)	reduced level (m)	legen
	98Cs 99C	38.10 - 38. 38.70 - 39.	Ē	o	97 30 0			closely to medium spaced wisps of light grey marl. Fractures are subhorizontal to 20° very closely to medium spaced undulating rough with veneer of white silt. Rare angular to subrounded fine to coarse flint gravel and low medium spaced flint cobble content recovered non-intact. (CIRIA Grade C3 and C2)			
	100Cs	39.40									
		39.70 - 40. 39.80 - 40.	20 - 22.70)	100 20 13						
02/07/15 1345hrs 2.74m	103Cs 104D	40.05 40.20 - 40.	22.70	S 100					40.65	-36.85	
								Borehole completed at 40.65m.			
			Ė				101		{48.00}		
water strike ((m) casi	ng (m) ros	e to (m)	time to ris	se (m)	rem	arks	AGS 307	RACT	CHE	CKEE

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CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Scale

1 of 3

1:50

Start Date

End Date

23 June 2015

26 June 2015

Easting 560198.5

Northing

175256.3 Ground level

3.95mOD

Depth 20.10 m

progress date/time water depth	sample no & type	depth (m) from to	casing depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	leger
23/06/15 0730hrs	1D* 2B 3D* 4B	0.20 0.30 0.40 0.50		Vo 0.4 Vo 0.5		· 滋	Brown and grey clayey sandy subangular to rounded fine to coarse flint, brick and concrete GRAVEL. (MADE GROUND) 0.20 - 1.20m: Rare fine fibrous textile fragments (up to 1x15x15mm).	0.80	3.15	
	5B 6D*	1.00 - 1.20 1.00 1.20 - 1.65	1.00	Vo 0.8 C 48			Grey and brown sandy angular and subangular fine to coarse limestone GRAVEL. (MADE GROUND) Dense grey and greyish brown slightly sandy clayey angular and subangular fine to coarse concrete, brick and	0.90	3.05	
	7B 8D* 9D* 10B 11D*	2.00 - 2.20 2.00 2.20 - 2.65 2.60 3.00 - 3.30 3.00 3.20 - 3.65	2.00	Vo 0.6 Vo 0.5			flint GRAVEL. (MADE GROUND) Soft and firm dark brown mottled grey and black slightly sandy slightly gravelly silty CLAY with a low cobble content. Gravel is angular and subangular fine and medium flint and chalk. Cobbles are angular and subangular flint. (ALLUVIUM)	2.30	1.65	
23/06/15 1730hrs Dry 24/06/15 0730hrs Dry	12UT 13B 14D* 15D 16B 17D* 18D	3.30 - 3.75 3.30 - 3.40 3.30 3.75 4.00 - 4.20 4.00 4.20 - 4.65	3.30	Vo 0.6 Vo 0.0 S 5	1		Soft brownish grey peaty CLAY with a slight organic odour. (ALLUVIUM (PEAT))	3.30	0.65	
	19B 20UT 21D* 22D 23B 24D*	5.00 - 5.20 5.20 - 5.65 5.00 5.65 6.00 - 6.20 6.00 6.20 - 6.65	5.20	Vo 0.0	l		6.00 - 6.70m: Rare wood fragments 5x30x30mm. 6.20 - 7.30m: Sandy.			15 141/1
	25D 26D* 27B 28D*	6.70 7.00 - 7.20 7.00 7.20 - 7.65		Vo 0.1 Vo 0.1 C 20			Very soft becoming soft brownish grey and light grey	7.30	-3.35	
		25 7.30	E	2.0			slightly sandy gravelly CLAY with a medium cobble content. Gravel is angular and subangular fine to coarse chalk and flint. Cobbles are angular and subangular flint. Continued Next Page	{8.00}		4 4

EQUIPMENT: Light cable percussive (shell and auger) rig and Geotechnical Pioneer rig.

METHOD: Hand dug inspection pit 0.00-1.20m. Cable percussion (300mm) 1.20-4.00m and (200mm) 4.00-13.50m, Dynamic sampled (128mm) 13.50-20.10m. CASING: 300mm diam to 4.00m, 250mm diam HDPE sacrificial grouted in to 4.00m (300mm diam withdrawn), 250mm diam to 13.50m, 168mm diam to

BACKFILL: On completion, borehole backfilled with bentonite pellets 20.10-12.20m. A slotted standpipe (50mm) with geosock was installed to 12.00m, granular response zone 12.20-6.80m, bentonite seal 6.80-0.40m, granular surround 0.40-0.30m, concrete and raised helmet cover 0.30-0.00m.

REMARKS: Bentonite seal for aquifier protection installed 3.00-4.00m prior to reduction in casing diameter. Downhole magnetometry for UXO risk mitigation undertaken 0.00-13.50m. Falling head permeability test carried out in borehole 14.00-15.00m. Borehole installed on 26/06/2015. Chalk grade based on CIRIA C574 (2002). Stratum names provided by the Engineer.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE S

water strike (m) casing (m) rose to (m) time to rise (min)

Groundwater not encountered prior to use of water flush.



CONTRACT 30766

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BOREHOLE LOG



LONDON RESORT COMPANY HOLDINGS LTD CLIENT

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet 2 of 3

Start Date

23 June 2015

Easting 560198.5 Scale

EC

1:50

26 June 2015 **End Date**

Northing

175256.3 Ground level

3.95mOD

20.10 m Depth

progress date/time water depth	no & type	depth (m) from to	depth (m)	test type & value	/core range	instru -ment	description	depth (m)	reduced level (m)	leger
	29B	8.00 - 8.20					(RIVER TERRACE DEPOSITS)			2 0
	30B 31D*	9.00 - 9.20 9.00 - 9.65	9.20	C 17 Vo 0.1 C 5			9.00 - 10.00m: Tending to clayey sandy gravel with a high cobble content			
	32UT 33B 34D* 35D	10.00 - 10.45 10.00 - 10.20 10.00 10.45		Vo 0.0	1					
	36B 37D*	11.00 - 11.20 11.00		Vo 0.0				1		
	38D	11.50 - 11.95	11.50	S 5				11.80	-7.85	-
	39B 40D* 41B	11.80 - 12.00 11.80 12.00 - 12.20		Vo 0.0 Vo 0.0			CHALK recovered as light grey and off white, sandy subangular fine to coarse GRAVEL with medium cobble content.	12.20		
- 11	42D*	12.00					CHALK recovered as off-white locally stained yellow silty subangular fine to coarse chalk GRAVEL.	1 4 0 0 6		
24/06/15	43B	13.00 - 13.20	B					- 2		Į,
1730hrs 5.40m	44D* 45D	13.00 13.50 - 13.95	12.50	Vo 0.4	10			13.50	-9.55	T I
25/06/15 1220hrs	46X 47D*	13.50 - 15.00 13.50 - 13.60	-	Vo 0.0			Structureless CHALK composed of off-white slightly gravelly slightly sandy SILT. Gravel is angular to	10.00	0.00	#
3.09m	48D*	13.90 - 14.00		Vo 0.0	1		subrounded fine to coarse extremely and very weak low density white with rare brown and black specks chalk. (Probably CIRIA Grade Dm)	1		Ħ
	49Xs	14.40					14.30 - 14.45m: Gravelly. 14.40m: Cobble of white chalk (65x75x75mm). 14.60 - 14.70m: Yellow stained.			
	50D 51X	15.00 - 15.45 15.00 - 16.50		S 3				=		
	52D*	15.15 - 15.25		Vo 0.0	i			2		
			É				15.40 - 15.70m: Gravelly.	2		
			E				15.60 - 15.95m: Grey mottled. 15.65 - 15.70m: Coarse gravel sized pocket of soft orangish brown clay.	15.95	-12.00	
	53D* 54D	16.20 - 16.30 16.50 - 16.95	16.50	Vo 0.0 S 12			Structureless CHALK composed of cream with orange staining slightly sandy gravelly SILT. Gravel is angular and subangular fine to coarse very weak low and medium	1 1 1 1		Į Į
	55X	16.50 - 18.00					and subangular line to coarse very weak low and medium density cream with rare black specks chalk, rarely angular medium flint. (Probably CIRIA Grade Dm) 16.40 - 16.75m: Medium spaced cobbles of chalk.	1		
	56Xs	17.55	-				10.40 10.70m, modulii apaded cobbies di criain.	7		
	57Xs 58Xs	17.65 17.70		2.25				17.80	-13.85	
	59D* 60D	17.80 - 17.90 18.00 - 18.45		Vo 0.0 S 14				- 17.80	-13.03	1
water strike			-		100		Continued Next Page	{18.00}	CHE	

flush.

BOREHOLE LOG



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SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet 3 of 3

Start Date 23 June 2015

Easting 560198.5

Scale

progress date/time water depth	no & type	depth (m) from to	depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	legend
	61X 62D*	18.00 - 19.50 18.90 - 19.00		Vo 0.0			CHALK recovered as off-white with rare yellow staining slightly sandy gravelly SILT. Gravel is angular to subrounded fine to coarse very weak medium density white with rare black specks chalk, rarely subangular fine and medium flint. (Probably CIRIA Grade Dc)			
25/06/15 1740hrs	63D 64X	19.50 - 19.95 19.50 - 20.10		S7			19.30m: Cobble sized rinded black nodular flint.			
1740hrs 2.86m	65Xs	19.90					19.95m: Cobble of white chalk (90x90x105mm). 19.95 - 20.10m: Slightly gravelly.	20.10	-16.15	T P
			on transcuttura contra contra esta esta esta esta esta esta esta est							
water strike (m) casi	ng (m) rose	to (m) t	ime to ris	se (m) re	marks	CONTI	{28.00}	CHE	CKE

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CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet 1 of 3

Start Date

18 June 2015

Easting 560342.9 Scale

1:50

End Date

23 June 2015

Northing

174836.3 Ground level

13.05mOD

Depth 20.45 m

progress date/time water depth	no & type	depth (m) from to	depth (m)	test type & value	samp. /core range	lf	instru- mer	3.1	description	depth (m)	reduced level (m)	lege
18/06/15 1400hrs	1B 2D* 3B	0.30 - 0.40 0.30 - 0.40 0.50 - 0.70		Vo 0.0		ĺ	/ 15		Firm dark grey mottled white slightly sandy gravelly SILT. Gravel is subangular to rounded fine to coarse flint, chalk sandstone and crystalline. (MADE GROUND)	5		
	4D*	0.50 - 0.70	Ē	Vo 0.0			目目			3		\otimes
	5B 6D*	1.00 - 1.20 1.00 - 1.20	E .	Vo 0.0			Ħ			2		\bowtie
	7D	1.20 - 1.65	Nil	S7			目目	1		1.20	11.85	\otimes
	8X	1.20 - 2.20	Ė.		1		目目		Loose and medium dense white and cream slightly gravelly slightly sandy SILT. Gravel is subangular to	3		\otimes
	9D*	1.60 - 1.70	E	Vo 0.1	3		目目	=	rounded fine to coarse chalk, rarely angular to rounded	3		\bowtie
	10D	1.70 - 1.80	Ė				目目		fine to coarse black and brown flint. (MADE GROUND)	-		\bowtie
	11D	2.20 - 2.65	Nil	S 9	13					-		\otimes
	12X	2.20 - 3.20	E	1,1,1						3		\otimes
	13D*	2.50 - 2.60		Vo 0.2	3		Ħ			1		\otimes
	14D 15D*	2.60 - 2.70 3.00 - 3.10	E	Vo 0.4	1		目目					\otimes
	16D 17D	3.10 - 3.20 3.20 - 3.65	- Nil	S 7	1		目目			-		\otimes
	18X	3.20 - 4.20	- INII	37			Ħ		3.15m: Medium gravel sized pocket of brownish grey fine	-		\otimes
	19D*	3.50 - 3.60	В	Vo 0.7	3		Ħ		sand. 3.45 - 3.65m: Frequent pockets (up to 20mm) of light grey	1		\bowtie
18/06/15	20D 21D*	3.60 - 3.70 4.00 - 4.10	ŧ.	Vo 0.9			Ħ		and brownish grey sandy silt.	3		\bowtie
1730hrs 0.00m	22D	4.10 - 4.20	Ē.,	1544	1		目目					\otimes
19/06/15	23D 24X	4.20 - 4.65 4.20 - 5.20	Nil	S 15			目目	Ⅎ		3		\otimes
0800hrs 1.76m	25D*	4.70 - 4.80	E	Vo 1.5			Ħ			1		\otimes
1.10	26D	4.80 - 4.90	P		ĵ.		Ħ		1		\otimes	
	27D* 28D	5.00 - 5.10 5.10 - 5.20	<u> </u>	Vo 1.8	3		目目			-		\otimes
	29D 30X	5.20 - 5.65 5.20 - 6.20	4.20	S 13	1				5.10 - 5.20m: Cobble sized black flint, recovered	3		\otimes
	31D*	5.50 - 5.60		Vo 2.4	3		H		non-intact. 5.40 - 5.55m: Frequent medium and coarse gravel sized	1		\otimes
	32D	5.60 - 5.70	E		1		Ħ		pockets of light grey sandy silt.	3		\otimes
	33D* 34D	6.00 - 6.10 6.10 - 6.20	E	Vo 1.5	1		目		5.60 - 5.80m: Non-intact, recovered as fine to coarse gravel sized angular black and brown flint. Drilling	-		\otimes
	35D	6.20 - 6.65	6.20	S 14	j		目目		disturbed.			\otimes
	36X	6.20 - 7.20	E		3		目目					\otimes
			Ē		3		Ħ			1		\otimes
	37D*	6.80 - 6.90		Vo 2.3	3					3		\otimes
	38D 39D	6.90 - 7.00 7.20 - 7.65	7.20	S 26	1		目			7.20	5.85	\otimes
	40X	7.20 - 8.20	Ė	17			目目		Firm grey and white mottled orangish brown slighty sandy gravelly clayey SILT with frequent fine to coarse gravel			\bowtie
	1,223	244	E	A 25.	3		Ħ	3	sized pockets of black ash, rare rootlets (up to 3mm diam)			\otimes
	41D* 42D	7.70 7.80 - 7.90	E	Vo 2.8	1		目	Ξ,	and rare wood fragments (up to 45mm). Gravel is subangular to rounded fine to coarse flint, chalk, coal,			\otimes
	,,,,,	1.50							Continued Next Page	{8.00}		(X)

EQUIPMENT: Geotechnical Pioneer rig.

METHOD: Hand dug inspection pit 0.00-1.20m. Dynamic sampled (128mm) 1.20-4.20m and (113mm) 4.20-17.70m and 17.90-18.50m. Waterflush rotary core drilled (116mm) 17.70-17.90m and 18.50-20.00m.

CASING: 140mm diam to 17.00m.

BACKFILL: On 23/06/2015, borehole backfilled with bentonite pellets 20.45-19.50m. A slotted standpipe (50mm) with geosock was installed to 19.00m, granular response zone 19.50-12.50m, bentonite seal 12.50-0.40m, gravel 0.40-0.30m, concrete and raised helmet cover 0.30-0.00m.

REMARKS: Downhole magnetometry for UXO risk mitigation undertaken 0.00-15.70m.

Chalk grade based on CIRIA C574 (2002).

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE IS

water strike (m) casing (m) rose to (m) time to rise (min) remarks

> Groundwater not encountered prior to use of water flush.



CONTRACT

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BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

2 of 3

Start Date 18 June 2015 Easting 560342.9 Scale

1:50

End Date 23 June 2015 Northing

174836.3 Ground level

13.05mOD

Depth 20.45 m

progress date/time water depth	sample no & type	depth (m)	depth (m)	test type & value	samp. /core range	lf	instr -me	 description	depth (m)	reduced level (m)	leger
	43D 44X	8.20 - 8.65 8.20 - 9.20	7.20	S 11				brick, rarely ceramic. (MADE GROUND) 7.70m: Metal fragment (2mmx15mmx20mm).	8.25	4.80	\bigotimes
	45D* 46D	8.50 8.60 - 8.70		Vo 0.0				Soft light grey and greyish white locally brown slightly sandy gravelly silty CLAY. Gravel is angular to rounded fine to coarse flint, chalk and brick. (MADE GROUND)	9.00	4.05	$\overset{\otimes}{\otimes}$
	47D 48X	9.20 - 9.65 9.20 - 10.20	7.20					Very loose brown and orangish brown sandy very clayey subangular to rounded fine to coarse flint and chalk GRAVEL. (MADE GROUND)			
	49D* 50D 51D*	9.60 - 9.70 9.70 - 9.80 10.00 - 10.10		Vo 0.0				9.15 - 9.20m: Gravel is angular and subangular coarse concrete.	9.95	3.10	\bigotimes
	52D 53D 54X 55D*	10.10 - 10.20 10.20 - 10.65 10.20 - 11.70 10.40 - 10.50	7.20	S 1 Vo 0.0				Very soft grey with frequent black specks slightly sandy gravelly clayey SILT. Gravel is subangular to rounded fine to coarse flint. (MADE GROUND)			\bigotimes
	56D	10.50 - 10.60		VO 0.0				Brown sandy subangular to rounded fine to coarse flint	10.70	2.35	\bigotimes
	57D*	11.50 - 11.60		Vo 0.0				GRAVEL rarely concrete and chalk. (MADE GROUND)	1		$\overset{\otimes}{\otimes}$
	58D 59D 60X	11.60 - 11.70 11.70 - 12.15 11.70 - 13.00	11.70	S 6				11.45 - 11.90m: Becoming clayey. Very sandy.	44.00		\otimes
	61D*	12.30		Vo 0.0				Structureless CHALK composed of white slightly sandy gravelly SILT. Gravel is angular to subrounded fine to coarse extremely weak medium density white with rare orange staining chalk. (Probably CIRIA Grade Dm)	11.90	1.15	
9/06/15 435hrs 1.22m	62D* 63D	12.80 13.00 - 13.45	13.00	Vo 0.0 S 44					-		
2/06/15 120hrs 1.47m	64X	13.00 - 14.50	Ē					13.10 - 13.25m: Non-intact, recovered as angular and subangular fine to coarse gravel sized rinded black	1		T T
	65D*	13.50		Vo 0.0				nodular flint. Drilling disturbed. 13.70 - 13.80m: Frequent orange staining.	1		
	66D* 67D	14.40 14.50 - 14.95	13.00	Vo 0.0 S 26					113333		
	68X	14.50 - 15.70							2		
			Ē					14.95 - 15.05m: Frequent orange staining. 15.20 - 15.30m: Cobble sized rinded black flint, recovered	15.25	-2.20	Ŧ
	69D* 70D 71X	15.40 - 15.50 15.70 - 16.15 15.70 - 17.00	13.00	Vo 0.0 S 42				non-intact. Structureless CHALK composed of white slightly sandy silty angular to subrounded fine to coarse GRAVEL.	1		1
			Ē					Clasts are extremely weak low and medium density white with rare orange staining chalk. (Probably CIRIA Grade Dc)	-		
	72D*	16.40 - 16.50		Vo 0.0					21-14		T I
	73D 74X	17.00 - 17.45 17.00 - 17.70		S 41					The latest		
	С	17.70 - 17.90	17.00		0						I I I
vater strike	(ng (m) rose t	- (=-) ···	me to ris	- /		narks	Continued Next Page CONTR	{18.00}	CHE	21/5

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BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet 3 of 3

Start Date

18 June 2015

Easting 560342.9 Scale

1:50

End Date

23 June 2015

Northing

174836.3 Ground level

13.05mOD

Depth 20.45 m

progress date/time rater depth	no & type	depth (m) from to	depth (m)	test type & value	samp. /core range	lf	instru -ment	description	depth (m)	reduced level (m)	legen
	75X	17.90 - 18.50	Ē			N 140 160		17.70 - 17.90m: Core run attempted through flint. No recovery.	18.20	-5.15 -5.45	
	76C 77Cs 78Cs 79Cs	18.50 - 20.00 18.60 18.65 18.70 - 18.90			95 56 38			orange staining CHALK. Fractures are subhorizontal to 10° extremely closely spaced planar smooth infilled (up to 4mm) with white silt. (CIRIA Grade C5)			
								Extremely weak low and medium density white with rare black specks and rare orange staining CHALK. Fractures are subhorizontal to 10° and 70° to subvertical to 20° closely spaced undulating smooth infilled (up to 8mm) with	5		
2/06/15 720hrs	80Cs 81Cs 82D	19.85 19.95 20.00 - 20.45	17.00	S 81				subangular to subrounded fine and medium white chalk gravel and white silt. (CIRIA Grade C3) 18.50 - 18.60m: Cobble sized rinded black nodular flint, recovered non-intact.			T P
1.71m			Ē					18.90 - 19.00m: Frequent orange and brownish orange staining.	20.45	-7.40	
3/06/15 815hrs 1.65m	5hrs				18.95 - 19.00m: Cobble sized rinded black nodular flint, recovered non-intact. 19.60 - 19.65m: Cobble sized rinded black nodular flint, recovered non-intact.	1					
								Borehole completed at 20.45m.			
									all er i i i i i i i i i i i i i i i i i i		
									(OB 00)		
ater strike	(m) casi	ng (m) rose	to (m) ti	me to ris	se (m)	rem	arks	CONTR	{28.00} RACT	CHE	CKE
						Gro		er not encountered prior to use of water 307		111	C

ELe/JH Geotechnical Engineering Ltd el 01452 527743 30768 MAS ER GPJ R ALJH GPJ GEO ECH M25 GLB 19/10/2015 1045 47 P/DA



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Scale

1 of 3

1:50

Start Date

End Date

23 June 2015

25 June 2015

Easting Northing 560135.4

174870.5 Ground level

13.25mOD

Depth 20.45 m

instru depth educed legend progress sample depth (m) casing test samp date/time depth /core description no & type & -ment (m) level water depth type from (m) value range (m) 23/06/15 1500hrs Firm dark grey mottled white slightly sandy gravelly SILT. **1B** 0.30 - 0.50Gravel is subangular to rounded fine to coarse flint, chalk, 2D* 0.30 - 0.50sandstone and crystalline. (MADE GROUND) 0.50 - 0.80**3B** 4D* 0.50 - 0.80**5B** 1.00 - 1.20 6D 1.00 - 1.20 1.00m: Grey plastic sheet. 7D 1.20 - 1.65 Nil S 41 1.20 12.05 1.20 - 1.758X Off-white slightly gravelly sandy SILT. Gravel is 1.50 11.75 9D* 1.60 - 1.70 Vo 0.0 subrounded fine white rarely angular fine and medium flint 10D 1.70 - 1.80and chalk. (MADE GROUND) 1.80 11.45 11X 1.80 - 2.20Light greyish brown gravelly SILT. Gravel is angular and 12D* 2.10 - 2.20 Vo 0.1 subangular fine to coarse grey and white chalk and rare 2.20 - 2.65 Nil S 15 13D angular to subangular fine and medium flint. Frequent fine to coarse gravel sized pockets of dark brown and grey clay. (MADE GROUND) 14X 2.20 - 3.2015D' 2.70 - 2.80 Vo 0.3 White and cream slightly gravelly sandy SILT. Gravel is subangular and subrounded fine white chalk and angular 16D 2.80 - 2.90to rounded fine to coarse flint. (MADE GROUND) Nil S 5 3.20 - 3.6517D 18X 3.20 - 4.2019D* 3.20 - 3.30Vo 0.3 20D* 3.70 - 3.80Vo 0.8 21D 3.80 - 3.903.90 - 4.05m: Dark greyish brown very gravelly fine to 22D 4.20 - 4.65 Nil S8 coarse sand. Gravel is subangular to rounded fine and S 23X 4.20 - 5.20 medium flint and crystalline. 4.10m: Rounded medium red flint gravel. 4.30 - 4.40m: Frequent pockets (up to 10mm) of brownish grey gravelly sand. Gravel is angular and subangular fine 24D* 4.70 - 4.80 Vo 0.0 25D 4.80 - 4.90 26D 5.20 - 5.65 Nil S 25 5.20 - 6.20 27X 5.25m: 45mm pocket of light brown gravelly silt. Gravel is 7.75 5.50 angular fine brick. 28D* 5.60 - 5.70 Vo 0.4 White slightly gravelly slightly sandy SILT. Gravel is 29D 5.70 - 5.80 subangular to rounded fine and medium white locally 6.00 - 6.10 30D* Vo 0.0 stained orange chalk and rare angular to subrounded fine 31D 6.20 - 6.65 Nil S 6 to coarse flint. (MADE GROUND) 6.20 - 7.20 32X 33D 6.60 - 6.70 Vo 0.2 34D* 6.60 - 6.70 23/06/15 1825hrs Dry 35D* 7.00 - 7.20Vo 0.2 Nil S7 36D 7.20 - 7.6524/06/15 37X 7.20 - 8.200810hrs Dry 7.35 - 7.40m: Frequent grey clay. 7.40 - 7.50m: Subangular chalk cobble (65x90x90mm). Vo 0.0 38D* 7.70 - 7.807.50 - 7.60m: Grey clay. Cement odour. 7.90 5.35 39D 7.80 - 7.90{8.00} Continued Next Page

EQUIPMENT: Geotechnical Pioneer rig.

METHOD: Hand dug inspection pit 0.00-1.20m. Dynamic sampled (128mm) 1.20-1.80m and (113mm) 1.80-15.50m. Waterflush rotary cored (116mm) 15.50-20.00m.

CASING: 140mm diam to 17.00m.

BACKFILL: On completion, borehole backfilled with bentonite pellets 20.45-19.50m. A slotted standpipe (50mm) with geosock was installed to 19.00m, granular response zone 19.50-11.00m, bentonite seal 11.00-0.45, gravel drain 0.45-0.35m, concrete and raised helmet cover 0.35-0.00m.

Borehole installed on 24/06/15 and 25/06/2015.

REMARKS: Driller notes loss of flush 15.50-20.00m. Downhole magnetometry for UXO risk mitigation undertaken 0.00-16.80m. No anomolies encountered. Chalk grade based on CIRIA C574 (2002).

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE IS

water strike (m) casing (m) rose to (m) time to rise (min) remarks

> Groundwater not encountered prior to use of water flush.



CONTRACT

CHECKED

30766 EC

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BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Start Date

23 June 2015

Easting 560135.4 Scale

1:50

2 of 3

End Date 25 June 2015 Northing

174870.5 Ground level

13.25mOD

Depth 20.45 m

ACC S.20 S.85	progress date/time water depth	no & type	from	th (m)	depth (m)	test type & value	samp. /core range	lf	instru -ment	description	depth (m)	reduced level (m)	lege
### Sundant	= 1	41X	8.20 -	9.20	Nil			Ŧ		subangular fine to coarse brick and cement GRAVEL with	270	1.55	\bigotimes
A9D 9.50 - 9.60 9.50 - 9		44D* 45D 46D	9.00 - 9.10 - 9.20 -	9.10 9.20 9.65	- - - Nil					SAND. Gravel is angular to subrounded fine to coarse brick, coal and rare black slate and chalk. (MADE			
Section 10.20 - 10.86 10.20 S 9		48D*	9.40	9.50		Vo 0.5				9.05 - 9.15m: Angular brick and mortar (20x60x110mm). Very soft brown slightly gravelly sandy CLAY. Gravel is	144.01		\otimes
S2D* 10.70 - 10.80 10.80 - 10.90 10.70 - 10.80 10.80 - 10.90 10.75 m. Coarse gravel of purple stained quartzile. 10.90 2.35 11.10 - 11.30 - 11.40 10.75 m. Coarse gravel of purple stained quartzile. 11.15 2.10 10.75 m. Coarse gravel of purple stained quartzile. 11.15 2.10 10.75 m. Coarse gravel of purple stained quartzile. 11.15 2.10 10.75 m. Coarse gravel of purple stained quartzile. 11.15 2.10 10.75 m. Coarse gravel of purple stained quartzile. 11.15 2.10 10.75 m. Coarse gravel of purple stained quartzile. 11.15 2.10 10.75 m. Coarse gravel of purple stained quartzile. 11.15 2.10 10.75 m. Coarse gravel of purple stained quartzile. 11.15 2.10 10.75 m. Coarse gravel of purple stained quartzile. 11.15 2.10 10.75 m. Coarse gravel of purple stained quartzile. 11.15 11.15 m. Coarse gravel of purple stained quartzile. 11.15 11.15 m. Coarse gravel of purple stained quartzile. 11.15 11.15 m. Coarse gravel of purple stained quartzile. 11.15 11.15 m. Coarse gravel of purple stained quartzile. 11.15 11.15 m. Coarse gravel of purple stained quartzile. 11.15 11.15 m. Coarse gravel of purple stained quartzile. 11.15 11.15 m. Coarse gravel of purple stained quartzile. 11.15 11.15 m. Coarse gravel of purple stained quartzile. 11.15 11.15 m. Coarse gravel of purple stained quartzile. 11.15 11.15 m. Coarse gravel of purple stained purple staine						S 9				subangular to rounded fine to coarse flint. (MADE GROUND)	11/40/1		×
Write and prown siny very starter (ADE (RAVEL (MADE GROUND) 11.15		52D*	10.70	- 10.80		Vo 0.3							\bigotimes
Subrounded fine to coarse flint and rare chalk GRAVEL 11.75 1.50 11.70 13.20 11.70 13.20 11.70 13.20 11.70 13.20 11.70 13.20 11.70 13.20 13.20 13.20 13.20 13.65 13.20 13.20 14.50 13.20 14.50 14.50 14.50 15.50 15.50 15.50 15.50 15.50 17.00 15.50 17.00 15.50 17.00 18.50 18.50										fine to coarse flint GRAVEL. (MADE GROUND)			
11.15 - 11.25m: Subrounded coarse flint gravel.		55D 56D	11.40 11.70	- 11.50 - 12.15	11.70	100				subrounded fine to coarse flint and rare chalk GRAVEL with rare medium gravel sized pockets of black (ashy) silt.	11.75	1.50	
Structureless CHALK composed of slightly sandy silty angular and subangular fine to coarse GRAVEL. Clasts are extremely weak and very weak medium density white. Matrix is white with rare orange staining. (Probably CIRIA Grade Dc.) 12.10 - 12.20m: Frequent orange staining. (Probably CIRIA Grade Dc.) 12.10 - 12.20m: Cobble sized black flint, recovered non-intact. 13.60 - 13.70m: Cobble sized ninded black nodular flint, recovered non intact. 13.60 - 13.70m: Cobble sized ninded black nodular flint, recovered non intact. 14.50 - 15.50 15.10 - 15.20 Vo 0.6 Extremely weak medium density white CHALK. Fractures are subhorizontal extremely closely spaced, planar smooth infilled (up to 5mm) with white silt. (Probably CIRIA Grade C5) 15.00m: Rare orangish brown staining. 15.45 - 15.50m: Frequent orange staining. 15.45 - 15.50m: Frequent orange staining. 15.75 -2.50 15.75 -2.50 15.00 - 17.00 - 18.50 17.00		2.5.				Vo 0.5				11.15 - 11.25m: Subrounded coarse flint gravel. Soft light and dark brown slightly sandy gravelly CLAY. Gravel is angular to subrounded fine to coarse flint and chalk. (MADE GROUND)	1		I I
14.10 - 14.20		60D	13.20	- 13.65	13.20	Vo 0.7 13.20 S 30				Structureless CHALK composed of slightly sandy silty angular and subangular fine to coarse GRAVEL. Clasts are extremely weak and very weak medium density white. Matrix is white with rare orange staining. (Probably CIRIA Grade Dc) 12.10 - 12.20m: Frequent orange staining.	1 1 1 1 1 1 1 1 1 1		
Extremely weak medium density white CHALK. Fractures are subhorizontal extremely closely spaced, planar smooth infilled (up to 5mm) with white silt. (Probably CIRIA Grade C5) 15.10 - 15.20 Vo 0.6 15.50 - 17.00 - 15.50 Vo 0.6 15.50 - 17.00 - 15.50 Vo 0.6 15.60		13.24			b					non-intact. 13.60 - 13.70m: Cobble sized rinded black nodular flint,	44.50	1.05	
66C 15.50 - 17.00 - 15.50		A STATE OF THE STA			_					are subhorizontal extremely closely spaced, planar smooth infilled (up to 5mm) with white silt. (Probably	14.50	-1.25	I
Very weak low to medium density white with rare orange staining CHALK. Fractures are subhorizontal to 10° closely and medium spaced undulating smooth infilled with white silt rarely stained orange with rare black specks (up to 6mm). (CIRIA Grade C3 to C2) 17.00 - 17.45		65D*	15.10	- 15.20		Vo 0.6				15.00m: Rare orangish brown staining.			
67D 17.00 - 17.45 17.00 S 40 91 17.00 - 18.50 - 17.00 S 40 17.00 - 18.50m: Locally drilling disturbed.		19 29	N 190 290		Very weak low to medium density white with rare orange staining CHALK. Fractures are subhorizontal to 10° closely and medium spaced undulating smooth infilled with white silt rarely stained orange with rare black specks (up to 6mm). (CIRIA Grade C3 to C2) 16.50 - 16.60m: Cobble sized rinded black nodular flint,	15.75	-2.50						
Continued Next Page (18.00)			17.00 - 17.45 - 17.00 S 40 17.00 - 18.50 - 17.00 S 40				- Alimentija						
water strike (m) casing (m) rose to (m) time to rise (m) remarks		+ +					h			Continued Next Page	{18.00}		

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet 3 of 3

Start Date 23 June 2015

Easting

Scale

1:50

End Date 25 June 2015 Northing 174870.5 Ground level 13.25mOD Depth 20.45 m progress sample depth (m) instru depth educed legend date/time type & /core description no & depth -ment (m) level water depth (m) value range (m) type from 69Cs 18.20 - 18.45 100 75 75 18.40 - 19.00m: Fractures subhorizontal to 20° undulating 70C 18.50 - 20.00 17.00 smooth. 18.85m: Fracture surface stained orange with rare black specks. 71Cs 19.20 - 19.45 19.50 - 20.00m: Frequent 70° to subvertical fractures undulating smooth infilled (up to 8mm) with angular and subangular fine and medium chalk gravel and silt. 24/06/15 72D 19.95 - 20.00m: Grey marl seam locally stained orange. 20.00 - 20.45 - 17.00 S 49 1640hrs 12.01m 20.45 -7.20 Borehole completed at 20.45m. S AGS remarks CONTRACT CHECKED water strike (m) casing (m) rose to (m) time to rise (m) Groundwater not encountered prior to use of water 30766 EC

flush.

560135.4

30766 MAS ER GPJ RALJH GPJ GEO ECH M25 GLB 19/10/2015 10 45 50 DA el 01452 527743 Geotechnical Engineering Ltd



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

1 of 2

Start Date

9 June 2015

Easting 561557.1 Scale

1:50

End Date

10 June 2015

Northing

173367.0 Ground level

7.05mOD

Depth

10.20 m

progress date/time water depth	sample no & type	depth (m) from to	casing depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	lege
09/06/15 1445hrs	1B 2D* 3B 4D*	0.30 - 0.40 0.30 - 0.40 0.50 - 0.70 0.50 - 0.70		Vo 0.0 Vo 0.0		/ /	Grass over firm dark grey sandy gravelly clayey SILT with frequent rootlets (up to 1mm diam). Gravel is subangular and subrounded fine to coarse sandstone. (MADE GROUND)	0.80	6.25	
	5B 6D* 7D 8X	1.00 - 1.20 1.00 - 1.20 1.20 - 1.65 1.20 - 2.20	Nil	Vo 0.0 S 8			Dark brown mottled white sandy gravelly SILT. Gravel is subangular and subrounded fine to coarse chalk and flint. (MADE GROUND)	1.20	5.85	\bigotimes
	9D 10D*	1.20 - 1.30 1.20 - 1.30		Vo 0.0			Soft to firm yellowish brown slightly sandy slightly gravelly CLAY with rare rootlets (up to 2mm diam) and rare wood fragments (up to 5mm diam). Gravel is angular to	1.60	5.45	
	11D 12D* 13D 14X	1.90 - 2.10 1.90 - 2.10 2.20 - 2.65 2.20 - 3.20	Nil	Vo 0.0 S 7			subrounded fine to coarse chalk and flint. (MADE GROUND) Soft to firm yellowish brown slighty gravelly sandy CLAY			\bigotimes
	15D 16D* 17D	2.80 - 2.90 2.80 - 2.90 3.20 - 3.65	Nil	Vo 0.0 S 12			with rare rootlets (up to 2mm diam). Gravel is angular to rounded fine to coarse chalk and flint. (MADE GROUND) 1.60 - 2.20m: Mottled brown. 2.45 - 2.60m: Band of angular to subrounded fine and medium chalk gravel. 2.70 - 2.85m: Decomposed roots (up to 7mm diam).	3.25	3.80	
	18X	3.20 - 4.20 3.80 - 3.90	4.20 3.90 3.90 V 4.65 Nil S 5.20 4.80 4.90 V 5.65 Nil S				Medium dense light yellowish brown slightly sandy to sandy SILT. (RIVER TERRACE DEPOSITS) 3.50 - 3.60m: Clayey.			× × × × × × ×
	20D* 21D 22X	3.80 - 3.90 4.20 - 4.65 4.20 - 5.20		Vo 0.0 S 7			3.90 - 4.05m: Band of subangular and subrounded fine and medium flint and chalk gravel. 4.10 - 4.20m: Clayey. 4.20 - 4.65m: Loose.			× × × × × ×
	23D 24D*	4.70 - 4.80 4.80 - 4.90		Vo 0.0			4.90 - 5.00m: Clayey.	1		. × × ×
	25D 26X	5.20 - 5.65 5.20 - 6.20		S 16			4.50 - 5.60m. Grayey.			× × ×
	27D 28D* 29D 30X	5.90 - 6.00 6.00 - 6.10 6.20 - 6.65 6.20 - 7.20	6.20	Vo 0.0 6.20 S 38 Vo 0.0 7.20 S 42			5.85 - 5.95m: Flint cobble 5.95 - 6.05m: Band of subangular and subrounded fine to coarse flint and chalk gravel.	6.05	1.00	× × × ×
	31D	6.90 - 7.00					Dense dark grey slightly sandy angular to subrounded fine to coarse flint and rare chalk GRAVEL. (RIVER TERRACE DEPOSITS)	200		00000
	32D* 33X	7.00 - 7.10 7.20 - 7.65 7.20 - 8.20	7.20				Dense off-white locally grey mottled orangish brown slightly sandy gravelly SILT. Gravel is angular to subrounded fine to coarse chalk and flint. (RIVER	7.10	-0.05	× × ×
	34D 35D*	7.65 - 7.75 7.75 - 7.85		Vo 0.0			TERRACE DEPOSITS)	7.80	-0.75	×0
							Continued Next Page	{8.00}		

EQUIPMENT: Geotechnical Pioneer rig.

METHOD: Hand dug inspection pit 0.00-1.20m. Dynamic sampled (128mm) 1.20-4.20m and (113mm) 4.20-10.20m.

CASING: 140mm diam to 10.20m.

BACKFILL: On completion, borehole backfilled with bentonite 10.20-9.50m. A slotted standpipe (50mm) with geosock was installed to 9.30m, granular response zone 9.50-7.00m, bentonite seal 7.00-0.30m, concrete and raised helmet cover 0.30-0.00m.

Borehole installed on 10/06/2015.

REMARKS: Downhole magnetometry for UXO risk mitigation undertaken 0.00-10.20m. Chalk grade based on CIRIA C574 (2002). Stratum names provided by

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE IS

water strike (m) casing (m) rose to (m) time to rise (min) remarks

> Groundwater not encountered prior to use of water flush.



CONTRACT

CHECKED

30766 EC

30766 MAS ER GPJ RALJH GPJ GEO ECH M25 GLB 19/10/2015 10 45 51 Geotechnical Engineering Ltd

BOREHOLE LOG



LONDON RESORT COMPANY HOLDINGS LTD CLIENT

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet 2 of 2

Start Date

9 June 2015

Easting 561557.1 Scale

1:50

End Date 10 June 2015 Northing 173367.0 Ground level 7.05mOD Depth 10.20 m

progress date/time water depth	no & type	depth (m) from to	depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	legeno
	36X 37X	8.20 - 8.65 8.20 - 9.20 9.20 - 9.65 9.20 - 10.20	9.20	S 11			Firm orangish brown mottled grey and white slightly sandy gravelly CLAY. Gravel is angular to subrounded fine to coarse chalk and flint. (RIVER TERRACE DEPOSITS) 8.20 - 9.20m: Limited Recovery. Structureless CHALK composed of white slightly gravelly SILT. Gravel is subangular and subrounded fine to coarse very weak medium density white chalk, rarely angular fine	8.85	-1.80	
09/06/15 1730hrs 1.64m	38D 39D*	9.60 - 9.70 9.70 - 9.80 10.20 - 10.65	10.20	Vo 0.0			and medium flint. (Probably CIRIA Grade Dm)	10.20	-3.15	II
10/06/15 1830hrs 1.83m										
water strike							CONTR	[18.00]	CHE	

Geotechnical Engineering Ltd el 01452 527743 30766 MAS ER GPJ R ALJH GPJ GEO ECH M25 GLB 19/10/2015 1045 51 P/A

ELe/EC



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Scale

4.90

5.70

(8.00)

1.90

1.10

1 of 3

1:50

Start Date

End Date

17 June 2015 19 June 2015 Easting

561641.4

6.80mOD

Depth 20.65 m

172996.5 Ground level Northing progress depth (m) casing instru depth educed legend test samp date/time depth /core description no & type & -ment (m) level water depth type from (m) value range (m) 17/06/15 1225hrs Firm dark brown slightly gravelly clayey SILT with rare **1B** 0.30 - 0.50 rootlets (up to 1mm diam). Gravel is subangular to 2D* 0.30 - 0.50Vo 0.0 rounded fine and medium flint. (MADE GROUND) 0.50 - 0.60**3B** 4D* 0.50 - 0.60Vo 0.0 **5B** 1.00 - 1.20 6D 1.00 - 1.20 Vo 0.0 5.60 7D 1.20 - 1.65 Nil S4 1.20 1.20 - 2.20 8X Very loose brown slightly gravelly very clayey fine and medium SAND with rare rootlets (up to 1mm diam). Gravel is subangular to rounded fine and medium flint, rarely white chalk. (ALLUVIUM) 9D* 1.80 - 1.90 Vo 0.0 10D 2.05 4.75 1.90 - 2.00 2.20 - 2.65 Nil S 3 11D Very soft brown slighty gravelly sandy CLAY. Gravel is 12X 2.20 - 3.20subangular to rounded fine and medium flint, rarely white chalk. (ALLUVIUM) 13D 2.60 - 2.70 Vo 0.0 14D 2.70 - 2.802.90 3.90 Soft light greyish brown and orangish brown slightly gravelly sandy CLAY with frequent black pockets (up to Nil **15UT** 3.20 - 3.654mm) and rare rootlets (up to 1mm diam). (ALLUVIUM) 17X 3.20 - 4.20Vo 0.0 18D* 3.60 - 3.7016D 3.65 - 3.8019D 3.80 - 3.90Ele/EC \$ 5 20D 4.20 - 4.65 Nil 4.25 2.55 21X 4.20 - 5.20Soft grevish brown and dark purplish brown slightly Vo 0.0 22D* 4.50 - 4.60 gravelly organic CLAY with rare fine and medium gravel 4.60 - 4.70 23D sized pockets of dark brown and black peat. Gravel is

subangular and subrounded fine and medium flint, rarely white chalk. (ALLUVIUM) 4.75 - 4.90m: Very soft brown gravelly clay with frequent orange staining and frequent decomposed organic material. Gravel is subangular fine to coarse chalk. Structureless CHALK composed of white and cream

locally stained orange slightly gravelly SILT. Gravel is subrounded and rounded fine to coarse very weak medium and high density white with rare brown specks chalk. (Probably CIRIA Grade Dm) 5.10m: Coarse gravel sized rinded black nodular flint. 5.20 - 5.30m: Cobble sized rinded black flint, recovered

non-intact Structureless CHALK composed of white and light cream slightly sandy gravelly SILT. Gravel is subangular and subrounded fine to coarse extremely weak and very weak low and medium density white with rare orange staining and rare brown specks chalk. (Probably CIRIA Grade Dm)

5.70m: Coarse gravel sized rinded black nodular flint.

5.75 - 6.20m: Frequent orange staining.

Continued Next Page

EQUIPMENT: Geotechnical Pioneer rig.

5.20 - 5.65

5.20 - 6.20

5.70 - 5.80

5.80 - 5.90

6.20 - 6.65

6.20 - 7.20

6.70 - 6.80

6.80 - 6.90

7.20 - 7.65

7.20 - 8.20

7.80 - 7.90

7.90 - 8.00

24X

25D*

26D

27X

28D*

29D

30D

31X

32D'

33D

5.20 S4

6.15 S 10

7.20 S 8

Vo 0.0

Vo 0.0

Vo 0.0

METHOD: Hand dug inspection pit 0.00-1.20m. Dynamic sampled (128mm) 1.20-5.20m and (113mm) 5.20-20.20m.

CASING: 140mm diam to 19.20m.

BACKFILL: On completion, borehole backfilled with cement:bentonite grout (2:1 mix) 20.65-5.30m and bentonite pellets 5.30-4.70m. A slotted standpipe (50mm) with geosock was installed to 4.60m, granular response zone 4.70-1.20m, bentonite seal 1.20-0.40m, gravel 0.40-0.30m, concrete and raised helmet cover 0.30-0.00m.

Borehole installed on 19/06/2015.

REMARKS: Downhole magnetometry for UXO risk mitigation undertaken 0.00-11.70m. Chalk grade based on CIRIA C574 (2002). Stratum names provided by the Engineer.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE, S.

water strike (m) casing (m) rose to (m) time to rise (min) remarks

4.20 Nil 4.10 20

Water strike following run 3.20-4.20m.

AGS

CONTRACT

CHECKED

30766 EC

P/DA ECH M25 GLB 19/10/2015 10 45 53 GEO R ALJH GPJ GPJ ER MAS 30766 527743 01452 0

PIT

BOREHOLE LOG



LONDON RESORT COMPANY HOLDINGS LTD CLIENT

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

2 of 3

Start Date

17 June 2015

Easting 561641.4 Scale

30766

EC

1:50

19 June 2015 End Date

172006 5

Denth 20 65 m

4.17m	progress date/time water depth	no & type	depth (m) from to	depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	leger
3.25m Coarse gravel sized rinded black nodular fills, 3.25m 2.35m 2.				8.20	S 14	1421				7 - 7	1
38D 300 - 9.10 300 9.10 300 9.10 300 9.10 300 9.00 9.80		35X	8.20 - 9.20	E					Ì		1
380 3.00 9.10 9.10 3.10 9.20 3.10 3.00 9.20 9.85 9.20				F		3			1 2		
17/06/15 39X 9.20 - 9.56 9.20 S 14 9.20 - 10.20 10.20		36D*	9.00 - 9.10	E	Vo 0.0	1			Ž.		I
17/08/15 400° 9.80 - 9.90 9.80 - 9.90 4.00 4.17m 40D 10.20 - 10.65 10.20 \$ 8 10.20 - 11.70 10.20 10.65 10.20 \$ 8 10.20 - 11.70 10.20 \$ 10.20 10.65 10.20 \$ 8 10.20 - 11.70 10.20 \$ 10.20 10.65 10.20 \$ 8 10.20 - 11.70 10.20 \$ 10.20 10.65 10.20 \$ 8 10.20 - 11.70 10.20 \$ 10.20 10.65 10.20 \$				<u> </u>		1			-		H I
17/08/15 400° 9.80 - 9.90 10.2				9.20	S 14			9.10 - 9.45m: Cobble sized rinded black nodular flint,	1 5		T.
1805hms		39X	9.20 - 10.20	8				recovered non-intact.	3		- P
1805hms				B.		1			1		1
1805hms	17/06/15	40D*	9.80 - 9.90	P	Vo 0.0	1		9.75 - 9.95m: Localised grange staining	1 2		T
1908/15 43X 10.20 - 10.70 10.20 3 8 10.20 - 10.70 10.20 - 10.35m; Cobble sized rinded black flint, recovered non-intact. 10.80 - 10.45m; Orange staining. 11.50 4.70 12.40 - 12.15 10.20 5 6 11.70 - 13.20 11.70 - 13.20 11.70 - 13.20 11.50 12.40 - 12.50 12.40 - 12.50 12.40 - 12.50 12.40 - 12.50 12.40 - 12.50 12.40 - 12.50 13.20 - 14.70 13.20 - 14.70 13.20 - 14.70 13.20 - 14.70 13.20 - 14.70 13.20 - 14.70 13.20 - 14.70 13.20 - 14.70 13.90 - 13.95m; Frequent lenses of reddish brown slifty clay. 13.20 - 13.55m; Frequent lenses of reddish brown slightly sandy slily clay (up to 45mm). 13.30 - 13.95m; Frequent pockets of reddish brown slightly sandy slily clay (up to 45mm). 13.30 - 13.95m; Frequent pockets of reddish brown slightly ream slightly sandy slily clay (up to 45mm). 13.30 - 13.95m; Frequent pockets of reddish brown slightly ream slightly sandy slity clay (up to 45mm). 13.30 - 13.95m; Frequent subhorizontal and locally cream slightly sandy slity clay (up to 45mm). 14.70 - 16.20 14.70 - 16.20 14.70 - 16.20 14.70 - 16.20 14.70 - 16.20 15.50 - 15.50 15.70	1805hrs	1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	9.90 - 10.00	E	100	1		on o order 200m 200m gr			TI,
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angular to subrounded fine to coarse GRAVEL with a low subangular cobble content. Clasts are extremely weak and very weak medium density white with rare black specks chalk. Matrix is white locally cream. (Probably CIRIA Grade Dc) 15.85 - 15.90m: Brown gravelly clay. 16.10 - 16.20m: Rare orange staining. Structureless CHALK composed of white slightly sandy slightly gravelly SILT. Gravel is angular to subrounded fine and medium white with rare black specks chalk. (Probably		100			3 10				.0.20	5.40	T,
and very weak medium density white with rare black specks chalk. Matrix is white locally cream. (Probably CIRIA Grade Dc) 15.85 - 15.90m: Brown gravelly clay. 15.85 - 15.90m: Rare orange staining. Structureless CHALK composed of white slightly sandy slightly gravelly SILT. Gravel is angular to subrounded fine and medium white with rare black specks chalk. (Probably		2.33	A 45.00	-		1			1		1
specks chalk. Matrix is white locally cream. (Probably CIRIA Grade Dc) 15.85 - 15.90m: Brown gravelly clay. 16.10 - 16.20m: Rare orange staining. Structureless CHALK composed of white slightly sandy slightly gravelly SILT. Gravel is angular to subrounded fine and medium white with rare black specks chalk. (Probably						1			1		
15.85 - 15.90m: Brown gravelly clay. 16.10 - 16.20m: Rare orange staining. Structureless CHALK composed of white slightly sandy slightly gravelly SILT. Gravel is angular to subrounded fine and medium white with rare black specks chalk. (Probably			20.00			1		specks chalk. Matrix is white locally cream. (Probably			T p
59D 17.70 - 18.15 17.70 S 27 S 27 S 17.70 - 19.20 17.70 17.70 - 19.20 17.70 17.70 17.70 17.70 - 19.20 17.70		58D	16.90 - 17.00	Ξ.		1			-		1
59D 17.70 - 18.15 17.70 S 27 Structureless CHALK composed of white slightly sandy slightly gravelly SILT. Gravel is angular to subrounded fine and medium white with rare black specks chalk. (Probably				ā.		3			2		1
59D 17.70 - 18.15 17.70 S 27 slightly gravelly SILT. Gravel is angular to subrounded fine and medium white with rare black specks chalk. (Probably					6	1			1		T T
and medium white with rare black specks chalk. (Probably	-0			17.70	S 27	1					
Continued Next Page (18 00)		60X	17.70 - 19.20			3			Ţ		1
					1	10-7-10	"""	Continued Next Page	(18 00)		

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

DI1/04

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet

3 of 3

1:50

Start Date

17 June 2015

Easting 561641.4

Scale

300.22

End Date 19 June 2015 Northing 172996.5 Ground level 6.80mOD Depth 20.65 m progress sample depth (m) instru depth educed legend date/time type & /core description depth -ment (m) level no & water depth value (m) type from (m) range CIRIA Grade Dm) 61Xs 18.10 16.80 - 17.20m: Gravelly. 17.30 - 17.50m: Frequent orange staining.
18.30 - 18.35m: Cobble sized rinded black nodular flint, 62D 18.30 - 18.40 recovered non-intact. 18.50 - 18.60m: Gravel absent. Possibly drilling disturbed. 18.95m: Subhorizontal brown clay band (2mm). 63D 19.20 - 19.65 19.20 S 24 19.10 - 19.20m: Rare orange staining. 64X 19.20 - 20.20 19.70 19.55 - 19.65m: Cobble sized rinded black flint, recovered 65D 19.80 - 19.90 Structureless CHALK composed of white slightly sandy gravelly SILT. Gravel is angular to subrounded fine to 18/06/15 66D - 19.20 S 21 20.20 - 20.65 coarse extremely weak low and medium density white with 1420hrs 4.10m rare black specks chalk. (Probably CIRIA Grade Dm) 20.65 -13.8519.75 - 19.80m: Rare orange staining. Borehole completed at 20.65m. AGS CONTRACT CHECKED water strike (m) casing (m) rose to (m) time to rise (m) 30766 EC

Geotechnical Engineering Ltd el 01452 527743 30766 MAS ER GPJ R ALJH GPJ GEO ECH M25 GLB 19/10/2015 1045 53 P/DA



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Scale

1 of 3

1:50

Start Date

17 June 2015

Easting

561618.7

18 June 2015 **End Date** Northing 172723.4 Ground level 5.60mOD Depth 20.25 m

progress date/time water depth	no & type	depth (m) from to	casing depth (m)	test type & value	samp. /core range	745	tru ent	description	depth (m)	reduced level (m)	legend
17/06/15 0830hrs	1B 2D*	0.30 - 0.40 0.30 - 0.40		Vo 0.0		1	1	Dark brown mottled grey gravelly clayey SILT. Gravel is subangular to well rounded fine to coarse flint, sandstone and brick. (MADE GROUND)	0.50	5.10	
	3B 4D*	0.50 - 0.70 0.50 - 0.70	E	Vo 0.0			E	0.50m: Geotextile membrane across pit.			$\times\!\!\times\!\!\times$
	5B 6D* 7D	1.00 - 1.20 1.00 - 1.20 1.20 - 1.65	Nil	Vo 0.0 S 23				Firm light yellowish brown slightly sandy silty CLAY with rare subangular and subrounded fine and medium sandstone and flint gravel. (MADE GROUND)	1.20	4.40	
	8X	1.20 - 2.20	Ē	lar model				Medium dense dark grey, brown and white silty sandy angular to subrounded fine to coarse flint and rare chalk GRAVEL. (HEAD DEPOSITS)			0000
	9D* 10D	1.80 - 1.90 1.90 - 2.00	E	Vo 0.0	1		E		1.32		0. 0
	11D	2.20 - 2.65	Nil	S 16	192	E	E		2.20	3.40	200
	12X	2.20 - 3.20						2.20 - 2.50m: Brown. Medium dense yellowish brown mottled light brown silty gravelly fine and medium SAND. Gravel is subangular to rounded fine to coarse flint and chalk. (HEAD DEPOSITS)			0
	13D* 14D	2.90 - 3.00 3.00 - 3.10 3.20 - 3.65	- Nii	Vo 0.0 S 14			E		3.20	2.40	0.0.0
	15X	3.20 - 4.20		0 14			ATTITUTE OF	Structureless CHALK composed of white mottled cream slightly sandy slightly gravelly SILT. Gravel is subangular to rounded fine to coarse extremely weak and very weak	9.20		
	16D* 17D	3.80 - 3.90 3.90 - 4.00		Vo 0.0				medium density with rare black specks chalk and rare angular coarse flint. (Probably CIRIA Grade Dm) 3.50m: Coarse gravel sized pocket of brown clay. 3.80m: 5mm subhorizontal band of brown clay.	4.20	1.40	
								NO RECOVERY. Casing jammed over barrel during advancing.			
		5.20 - 5.65	4.20	S 4		E			5.20	0.40	
	18X	5.20 - 6.20						Structureless CHALK composed of white mottled cream with orange staining slightly sandy slightly gravelly SILT. Gravel is angular to subrounded fine to coarse very weak medium density white with rare black specks chalk and			
	19D* 20D	5.90 - 6.00 6.00 - 6.10 6.20 - 6.65	- 6.00	Vo 0.0				rare subangular medium flint. (Probably CIRIA Grade Dm) 5,60 - 5,75m: Orange and yellow stained.			
	21X	6.20 - 7.20	0.20	S 4				5.70m: Coarse gravel sized pocket of brown clay, 6.20m: Cobble sized rinded black nodular flint.			
	22D* 23D	6.80 - 6.90 6.90 - 7.00		Vo 0.0	1			6.65m: Coarse gravel sized pocket of brown clay.			
	24X	7.20 - 7.65 7.20 - 8.20	7.20	S 5							
	25D*	7.80 - 7.90	E	Vo 0.0				7.55m: Coarse gravel sized pocket of brown clay.			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	26D	7.90 - 8.00	E		1	N.		7.80 - 8.20m: Gravelly. Continued Next Page	{8,00}		1111

EQUIPMENT: Geotechnical Pioneer rig.

METHOD: Hand dug inspection pit 0.00-1.20m. Dynamic sampled (128mm) 1.20-3.20m and (113mm) 3.20-19.80m.

CASING: 140mm diam to 19.80m.

BACKFILL: On completion, borehole backfilled with bentonite 20.25-19.50m. A slotted standpipe (50mm) with geosock was installed to 19.50m, granular response zone 19.50-3.70m, bentonite seal 3.70-0.30m, concrete and traffic rated cover 0.30-0.00m.

REMARKS: Downhole magnetometry for UXO risk mitigation undertaken 0.00-20.25m. Chalk grade based on CIRIA C574 (2002). Stratum names provided by the Engineer.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE S

remarks water strike (m) casing (m) rose to (m) time to rise (min)

> Groundwater not encountered prior to use of water flush.



CONTRACT 30766

CHECKED EC

30766 MAS ER GPJ RALJH GPJ GEO ECH M25 GLB 19/10/2015 10 45 54 Geotechnical Engineering Ltd el 01452 527743

ELe/EC

P/A

BOREHOLE LOG



LONDON RESORT COMPANY HOLDINGS LTD CLIENT

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SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Start Date

17 June 2015

Easting 561618.7 Scale

18 June 2015 **End Date** Northing 172723.4 Ground level 5.60mOD

Depth 20.25 m

progress date/time water depth	no & type	depth (m) from to	depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	leger
	74111	8.20 - 8.65	8.20	S7	1421,00	NH.	7.90m: Orange stained.	- 5		1
	27X	8.20 - 9.20					8.20 - 9.20m: Limited Recovery (65%)	1		1
	2.71		Ē		3		Structural and CHALK companyed of white mostled arrange	8.55	-2.95	
	28D*	8.80 - 8.90	Ė	Vo 0.0	1		Structureless CHALK composed of white mottled cream with yellow staining slightly sandy slightly gravelly SILT.	1 2		1
	29D	8.90 - 9.00	-	100	1	NH.	Gravel is subangular and subrounded fine and medium rarely coarse very weak medium density white with rare	-		
	30X	9.20 - 9.65 9.20 - 10.20	9.20	S 12	-		black specks chalk. (Probably CIRIA Grade Dm)	1		
			E		1		8.65m: Coarse gravel sized pocket of brown clay. 8.80 - 8.95m: Closely spaced thin laminae of light brown	1 2		T
	1		8		j		clay.	5		T p
	31D	9.80 - 9.90	-			NE.	9.00 - 9.15m: Cobble sized rinded black nodular flint, recovered non-intact.	=		1
	001	10.20 - 10.65		S 10			9.60m: Cobble of chalk (60x65x80mm).	Ė		1
	32X	10.20 - 11.70	Ē				10.20 - 10.60m: Gravelly.	2		1
	U0700 N		E				10.40 - 10.50m: Yellow stained.	2		1
	33D	10.70 - 10.80	Ī					44.05	5.45	T I
			3		3		Structureless CHALK composed of slightly sandy silty	11.05	-5.45	1
					1		angular to subrounded fine to coarse GRAVEL. Clasts are	2		
	34D	11.70 - 12.15	11 70	S 14			very weak and weak low and medium density white with rare black specks and orange and yellow staining chalk.	1		7
	35X	11.70 - 13.20	-	3 14			Matrix is white stained yellow. (Probably CIRIA Grade Dc)	3		
	36D	11.80 - 11.90	-		3	H	11.10m: Cobble sized rinded black nodular flint. 11.50m: Cobble sized rinded black nodular flint, recovered	4		
							non-intact.	1		
			þ		1			4		
• • 6-1			8		3			12.80	-7.20	ال
	37D	13.00 - 13.10	2		3		Structureless CHALK composed of white with orange	1		
	38D	13.20 - 13.65	13.20	S 12	19		staining slightly sandy slightly gravelly SILT. Gravel is angular to subrounded fine to coarse weak medium	-		1
	39X	13.20 - 14.70			3		density white with rare black specks chalk and rare	2		
			6		1		subangular fine and medium flint. (Probably CIRIA Grade Dm)	2		T,
-	40D	13.80 - 13.90	Ė		1		13.25m: Coarse gravel sized pocket of light brown clay. 13.30m: Orange stained.	à		
	1		Ē		i		13.50 - 13.70m: Gravelly.			1
					3		14.10 - 14.30m: Gravelly.	4		1
	41D	14.70 - 15.15	14 70	S 17						1
4	42X	14.70 - 16.20	-					-		p p
	15.11		-		3		15.00 - 15.10m: Gravelly.	=		i l
41	43D	15.20 - 15.30	-			I		1		j ji
			2		3		15.30m: 2mm subhorizontal band of brown clay.	1		T I
			Ė		3		15.50m: Cobble sized rinded black nodular flint. 15.60 - 15.80m: Yellow stained.	-		T I
			<u> </u>	17.11	3			2		1
	44D 45X	16.20 - 16.65 16.20 - 17.70	16.20	S 23			16.10m: Orange stained.	1		1
	407	10.20 - 17.70			1		16.30m: Coarse gravel sized pocket of orange staining.	-		1
	46D	16.60 - 16.70	Ė		3		16.60 - 16.70m: Sandy.	-		1
	171				1		16.80 - 17.20m: Gravelly.	W.		1
17/06/45			_					1		
17/06/15 1800hrs	475	47.50 47.55	Þ		3			1		T,
2.54m 18/06/15	47D 48D	17.50 - 17.60 17.70 - 18.15		S 27				1		7
0800hrs	49X	17.70 - 18.30		7.36			17.70 - 18.30m: Gravelly.	1		T P
2.46m			-			[A]—[A]	Continued Next Page	{18.00}		- 11
water strike	(m) casi	ng (m) rose t	o (m) ti	me to ris	se (m) rei	marks	CONTRACT Page CONTRACT		CHE	CKE
					Gr	coundwat	er not encountered prior to use of water 307		77	915

BOREHOLE LOG



LONDON RESORT COMPANY HOLDINGS LTD CLIENT

1:50

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet 3 of 3

Start Date

17 June 2015

Easting

561618.7

Scale

progress date/time water depth	sample no & type	depth (m) from to	casing depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	legen
	50X	18.30 - 18.68 18.30 - 19.80	- 17.70 -	C 39			18.30 - 18.50m: Gravelly. 18.40m: Orange stained. 18.50 - 18.60m: Cobble sized rinded black nodular flint,			
- il	51D	19.00 - 19.10					recovered non-intact. 19.00 - 19.10m: Orange stained. 19.00 - 19.25m: Gravelly. 19.50m: 2mm subvertical orange staining.			T T
18/06/15 1000hrs 2.20m	52D	19.80 - 20.25	- 19.80	S 21	1		19.70m: Orange stained. Borehole completed at 20.25m.	20.25	-14.65	
							Boreliole completed at 20.25m.			
			-							
								{28.00}		
water strike	(m) casi	ng (m) rose to	(m) ti	me to ris	se (m) re	marks	CONT	RACT	CHE	CKE



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Scale

1 of 4

1:50

Start Date

End Date

11 June 2015 16 June 2015 Easting

Northing

561557.8

172815.6 Ground level

9.15mOD

Depth 29.80 m

progress date/time water depth	sample no & type	depth	(m) to	casing depth (m)	test type & value	samp. /core range	lf	instru -ment		depth (m)	reduced level (m)	lege
11/06/15 1500hrs	1B	0.30 - 0		Ē. 1			T	1	Grass over soft dark brown sandy clayey SILT with rare rootlets (up to 2mm diam). (MADE GROUND)	0.05	9.10	
	2D* 3B 4D* 5B	0.30 - 0 0.50 - 0 0.50 - 0 1.00 - 1	.70 .70		Vo 0.0				Firm dark brown mottled light brown sandy clayey SILT with rare rootlets (up to 2mm diam) and rare subangular fine sandstone gravel. (MADE GROUND)	1		\bigotimes
	6D* 7D	1.00 - 1 1.20 - 1	.20	Nil	Vo 0.0 S 9			B		1.20	7.95	\otimes
	8X 9D 10D*	1.20 - 2 1.40 - 1 1.40 - 1	.50		Vo 0.0				Firm yellowish brown slightly gravelly slightly sandy silty CLAY with rare rootlets (up to 2mm diam). Gravel is			× _
	11D	2.00 - 2	.10						subangular and subrounded fine and medium chalk. (RIVER TERRACE DEPOSITS)	1.95	7.20	
	12D* 13D 14X	2.00 - 2 2.20 - 2 2.20 - 3	.65	Nil	Vo 0.0 S 12				Medium dense yellowish brown with rare black specks slightly gravelly sandy SILT with rare rootlets (up to 2mm			
		2.20		Ē		7994			diam). Gravel is subangular fine chalk. (RIVER TERRACE DEPOSITS)			
11/06/15 1730hrs	15D 16D*	2.80 - 2 2.80 - 2			Vo 0.0							<u>x</u>
Dry 12/06/15 0800hrs	17D 18X	3.20 - 3	.20	Nil	S 15					3.40	5.75	×
Dry	19D 20D*	3.40 - 3 3.40 - 3			Vo 0.0				Stiff orangish brown slightly gravelly slightly sandy slity CLAY. Gravel is subrounded fine chalk. (RIVER TERRACE DEPOSITS)	190		<u>x</u>
	22D 23X	4.20 - 4 4.20 - 5		Nil	S 17							×
	21D 24D*	4.20 - 4 4.30 - 4	5.20 4.30	Vo 0.0				4.55 - 5.05m: Gravel is fine and medium.	4.55	4.60	× _	
				Ē					Dense and medium dense dark grey, brown and white slightly slity slightly sandy subangular and subrounded			000
	25D 26X 27D 28D*	5.20 - 5 5.20 - 6 5.30 - 5 5.40 - 5	6.20 5.40	S 35				fine to coarse flint and rare chalk GRAVEL with low flint cobble content. (RIVER TERRACE DEPOSITS)			0.000	
2 2 3 3 3	29D 30D* 31D 32X	6.00 - 6 6.00 - 6 6.20 - 6 6.20 - 7	.10 i.65	E	Vo 0.0 S 27				5.90 - 6.20m: Yellowish brown slightly gravelly silty fine and medium sand. Gravel is subangular and subrounded fine and medium fint and chalk.			
									6.40 - 6.55m: Grey mottled brown slightly gravelly fine and medium sand. Gravel is angular to subrounded fine and			000
	33D 34D* 35D 36X	6.80 - 6.90 6.90 - 7.00 7.20 - 7.65 7.20 - 8.20	Vo 0.0 S 27				medium flint and chalk.	19				
	37D 38D*	8.00 - 8 8.00 - 8			Vo 0.0	7						0000
									Continued Next Page	{8.00}		^

EQUIPMENT: Geotechnical Pioneer rig.

METHOD: Hand dug inspection pit 0.00-1.20m. Dynamic sampled (128mm) 1.20-3.20m and (113mm) 3.20-26.80m. Waterflush rotary core drilled (116mm) 26.80-29.80m.

CASING: 140mm diam to 26.60m.

BACKFILL: On completion, borehole backfilled with bentonite pellets 29.80-29.30m. A slotted standpipe (50mm) with geosock was installed to 29.30m, granular response zone 29.30-8.50m, bentonite seal 8.50-0.30m, concrete and raised helmet cover 0.30-0.00m.

REMARKS: Downhole magnetometry for UXO risk mitigation undertaken 0.00-29.80m. Driller notes loss of flush 26.80-29.80m. Chalk grade based on CIRIA C574 (2002). Stratum names provided by the Engineer.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE IS

water strike (m) casing (m) rose to (m) time to rise (min) remarks

Groundwater not encountered prior to use of water flush.



CONTRACT 30766

CHECKED EC

30766 MAS ER GPJ RALJH GPJ GEO ECH M25 GLB 19/10/2015 1045 57 Geotechnical Engineering Ltd

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet 2 of 4

Start Date

11 June 2015

Easting 561557.8 Scale

1:50

16 June 2015 **End Date**

Northing

172815.6 Ground level

9.15mOD

Depth 29.80 m

progress date/time water depth	no & type	depth	(m) to	depth (m)	test type & value	samp. /core range	lf	instru -ment	description	depth (m)	reduced level (m)	leger
	100,00	8.20 - 8	.65	8.20	S2	i ś <u>c</u> i				8.25	0.90	0.0
	39X	8.20 - 9	.20		11			ĦΕ	Structureless CHALK composed of cream mottled white	-		1
				2		1			slightly gravelly sandy SILT. Gravel is subangular and	2		21
	40D	8.90 - 9	00	3		3			subrounded fine to coarse very weak medium density white with rare black specks chalk and rare angular to	7		1
	41D*	8.90 - 9	.00		Vo 0.0	- {			subrounded fine and medium flint. (Probably CIRIA Grade	-		l li
	42D 43X	9.20 - 9 9.20 - 1		9.20	S 9	+			Dm)	=		
	437	9.20 - 1	0.20	8		1				2		T.
						3			9.55 - 9.70m: Closely spaced cobble sized rinded black	1 2		1 1
	44D	10.00 -		1		1			nodular flints.	9.95	-0.80	
	45D* 46D	10.00 - 10.20 -		10.20	Vo 0.0 S 13	1			Structureless CHALK composed of white locally stained	-		1
	47X	10.20 -		- 10.20	3 13	1			orange and yellow slightly sandy slightly gravelly SILT. Gravel is subangular and subrounded fine to coarse	1		T I
		4.00		3		1			extremely weak and very weak low and medium density	2		T.
	48D	10.70 -	10.80			3			white with rare black specks chalk and rare angular to	1		1
	49D*	10.70 -			Vo 0.0	1			subrounded fine to coarse flint. (Probably CIRIA Grade Dm)	-		1
				Ė		1		H	10.30m: Cobble sized rinded black nodular flint, recovered	-		1
12/06/15				7		1			non-intact. 11.05m: 20mm bivalve.	8		1
1300hrs 3.93m		11.70 -	12.15	11.70	S 11	1			11.10m: Possible relict fracture infilled with up to 5mm	Ī		T I
5/06/15	50X	11.70 -	13.20	- 11.70	011	10			light brown clay. 11.30 - 12.00m: Closely spaced cobble sized rinded black	7		1
100hrs 3.24m	51D 52D*	11.90 - 12.00 -		₽	Vo 0.0	3			nodular flints.	4		
	320	12.00 -	12.10		VU U.U	3				2		1
				Ó		3				1		T I
			2		3				- 9			
		13.20 - 13.65 [13.20]			3				1		T	
			S 8	18				10-		T P		
	53X	13.20 -	14.70				3		1			
- 1	54D 55D*	13.30 - 13.40 -				ĵ				3		1
	000	10.10	10.00	V	***************************************	1			13.70m: Cobble sized rinded black nodular flint.	3		
				1		1			Total Coppe Sized Hiller Sizes House Hills			
		F	-	7		1				7		T P
	56D	14.30 -	14.40	5		1				3		1
		14.70 -	15.15	14.70	S 15	1			100 100 100 100 100 100 100 100 100 100			r p
	57X	14.70 -	16.20	Ξ.		1						1
				F		ğ.				=		1
						1				=		
- 1	2.51			E		3		KH.	45 50 40 00 00 00 15 00 15	±		T.
	58D	15.55 -	15.65			3:		KE.	15.50 - 18.90m: Gravel is angular to subrounded.	- 5		
				ž.		3				2		P
	59D	16.20 -		16.20	S 12					- 4		
	60X	16.20 -	17.70	Ĭ.								Ţ
				E		1				7		1
						3		E		1		1
	61D	17.00 -	17 10	Ė		1			16.90m: Cobble sized rinded black nodular flint.	=		
	7.5			2		1				2		T
		100			r Court	8		KH.	and the state of t	1 3		H I
	62D			17.70	S 17	1			17.50 - 17.60m: Cobble sized rinded black nodular flint, recovered non-intact.	7		Ŧ
	63X	17.70 -	19.20			3		H	100078160 Holl-Illidot.	-		
								-	Continued Next Page	{18.00}		
entor etriko	(m) casi	ng (m)	rose to	(m) ti	me to ris	e (m)	rem	arks	AGS CONTR		CHE	CKE

ELe/EC P/A Geotechnical Engineering Ltd el 01452 527743 30766 MAS ER GPJ R ALJH GPJ GEO ECH M25 GLB 19/10/2015 1045 57

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

LONDON PARAMOUNT ENTERTAINMENT RESORT SITE

Sheet

3 of 4

Start Date

11 June 2015

Easting

561557.8

Scale

1:50

172815.6 Ground level **End Date** 16 June 2015 Northing 9.15mOD 29.80 m Depth progress sample depth (m) casing instru depth educed legend date/time depth type & /core description (m) level no & -ment water depth type from to (m) value range (m) 64D 18.10 - 18.20 18.20m: Possible relict fracture infilled with up to 5mm light brown clay. 18.90 -9.75Structureless CHALK composed of white locally stained 65D 19.20 - 19.65 19.20 S 21 orange, yellow and cream slightly gravelly sandy SILT. 19.20 - 20.70 66X Gravel is subangular and subrounded fine to coarse very weak medium density white with rare black specks chalk 67D 19.50 - 19.60 and rare angular fine and medium flint. (Probably CIRIA Grade Dm) 20.05 - 20.50m: Light orange stained. 20.10 - 20.40m: Closely spaced cobble sized rinded black nodular flints. 68D 20.50 - 20.60 20.70 - 21.15 20.70 S 30 69D 20.70 - 22.20 70X 21.40m: Cobble sized rinded black nodular flint, recovered non-intact. 71D 21.60 - 21.70 15/06/15 1730hrs 6.59m 72D 22.20 S 60 22.20 - 22.65 16/06/15 73X 22.20 - 23.20 22.20 - 22.50m: Cobble sized rinded black nodular flint, 0800hrs recovered non-intact. 6.74m 74D 22.70 - 22.80 23.00 - 23.25m: Gravelly. 75X 23.20 - 24.00 76D 23.60 - 23.70 23.65 - 24.00m: Gravelly. 77D 24.00 - 24.45 24.00 S 45 24.00 - 25.50 78X 24.10m: Cobble sized rinded black nodular flint. 79D 24.65 - 24.75 24.70 - 24.90m: Gravelly. 25.30 - 26.10m: Gravelly. 80D 25.50 - 25.95 25.50 S 47 81X 25.50 - 26.60 26.10 -16.95 Structureless CHALK composed of slightly sandy silty subangular and subrounded fine to coarse GRAVEL with 82D 26.30 - 26.40 low subangular cobble content. Clasts are weak medium density white. Matrix is white. Very closely spaced bands 83X 26.60 - 26.80 26,60 26.80 -17.65 of cobble sized rinded nodular flint. (Probably CIRIA 84C 26.80 - 28.30 Grade Dc) Limited recovery (13%) of rinded dark grey nodular FLINT, recovered non-intact. Core loss presumed to be chalk, not recovered due to flint jamming in core barrel. Continued Next Page AGS CONTRACT water strike (m) casing (m) rose to (m) time to rise (m) remarks CHECKED

Groundwater not encountered prior to use of water

flush.

30766

EC

ELe/EC P/A ECH M25 GLB 19/10/2015 10 45 57 R ALJH GPJ GEO ER GPJ 30766 MAS el 01452 527743 **Engineering Ltd**

Geotechnical

BOREHOLE LOG



LONDON RESORT COMPANY HOLDINGS LTD CLIENT

4 of 4

1:50

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Start Date

11 June 2015

Easting 561557.8 Scale

End Date

16 June 2015

172815.6 Ground level

29 80 m

progress date/time water depth	sample no & type	depth	(m) to	casing depth (m)	test type & value	samp. /core range	lf	instru -ment	description	depth (m)	reduced level (m)	lege
	85C	28.30 - 28.30 -			S 25	83 35 15			Structureless CHALK composed of slightly sandy silty subangular and subrounded fine to coarse GRAVEL.	28.30	-19.15 -19.50	
	86Cs	28.70 -	28.95				N 115 230		Clasts are very weak and weak low and medium density white. Matrix is white. (CIRIA Grade Dc) Extremely weak and very weak medium density white with	20.03	-19.50	
16/06/15 1420hrs	H								rare black specks CHALK. Fractures are 50-70° closely rarely medium spaced planar rough locally stained orange with veneer of white and yellow silt. (CIRIA Grade B3)	1		
6.24m		29.80 -	30.25	_ _ 26.60 _	S 27				28.75m: Cobble sized rinded black nodular flint, recovered non-intact. 29.25m: Cobble sized rinded black nodular flint, recovered non-intact.	29.80	-20.65	1
									29.35 - 29.55m: Orange stained. Borehole completed at 29.80m.	1		
				11.111						1		
										3		
										-		
							8					
										15		
										120		
										1		
							2					
										8		
				-						{38.00}		
water strike	(m) casi	ing (m)	rose to	o (m) ti	me to ris	se (m)	Gro		er not encountered prior to use of water 307		CHE	CKE C

flush.



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Scale

1 of 3

1:50

Start Date

End Date

10 June 2015

11 June 2015

Easting

561428.9

14.35mOD

Depth 20.20 m

172862.1 Ground level Northing progress depth (m) casing instru depth educed legend sample test samp date/time depth /core description no & type & -ment (m) level water depth type from (m) value range (m) 10/06/15 1215hrs 14.25 Grass over soft dark brown slightly gravelly sandy clayey 0.10 **1B** 0.30 - 0.40SILT. Gravel is subangular to well rounded fine and 2D* 0.30 - 0.40 Vo 0.0 medium sandstone, flint, crystalline, brick and tile. (MADE 0.50 - 0.70**3B** GROUND) 4D* 0.50 - 0.70Vo 0.0 Firm dark brown slightly gravelly sandy clayey SILT. **5B** 1.00 - 1.20 Gravel is subangular to well rounded fine to coarse 6D 1.00 - 1.20 Vo 0.0 sandstone, flint, granite, tile and chalk. (MADE GROUND) 7D 1.20 - 1.65 Nil S 10 1.20 13.15 Firm dark brown mottled brown slightly sandy slightly **8X** 1.20 - 2.20 9D 1.30 - 1.45 gravelly CLAY with rare rootlets (up to 2mm diam) and 10D* Vo 0.0 1.30 - 1.45 rare fine and medium gravel sized pockets of ash. Gravel is angular to subrounded fine to coarse chalk, flint, rare 11D 1.85 - 1.95 brick and concrete. (MADE GROUND) 12D* 1.85 - 1.95 Vo 0.0 1.55 - 1.65m: Cobble of concrete (115x115x115mm). 2.20 - 2.65 Nil S 4 13D 14X 2.20 - 3.202.20 - 2.55m: Soft. 15D 2.35 - 2.45 11.80 2.55 Vo 0.0 16D* 2.35 - 2.45 Firm grey mottled dark grey gravelly CLAY with rare wood fragments (up to 5mm), rootlets (up to 2mm diam) and 17D 2.80 - 2.90 rare fine and medium gravel sized pockets of ash. Gravel 18D* Vo 0.0 2.90 - 3.00 is subangular and subrounded fine to coarse chalk, flint 3.20 - 3.65Nil S 4 19D and brick. (MADE GROUND) 20X 3.20 - 4.203.20 - 3.65m: Soft. 21D 3.30 - 3.40Vo 0.0 22D* 3.40 - 3.503.70 10.65 Stiff dark brown mottled orangish brown and black slightly 23D 3.85 - 3.95ELe/C sandy slightly gravelly CLAY with rare roots (up to 20mm 24D* 3.85 - 3.95Vo 0.0 diam), rootlets (up to 2mm diam) and rare fine and Nil S 24 25D 4.20 - 4.65 medium gravel sized pockets of ash. Gravel is subangular 26X 4.20 - 5.20 and subrounded fine to coarse chalk and rare flint. (MADE 27D 4.40 - 4.50 P/A 28D* 4.50 - 4.60 Vo 0.0 4.70 9.65 20 Firm brown slightly sandy slightly gravelly silty CLAY with 29D 5.00 - 5.10 ECH M25 GLB 19/10/2015 10 45 rare roots (up to 5mm diam) and rootlets (up to 2mm 30D* 5.10 - 5.20 Vo 0.0 diam). Gravel is subangular and subrounded fine and 31D 5.20 - 5.65 Nil S 8 coarse chalk and flint. (MADE GROUND) 5.20 - 6.20 33D 5.60 - 5.70 34D* 5.60 - 5.70 Vo 0.0 6.20 - 6.65 6.20 S 10 35X 6.20 - 7.2036D 6.55 - 6.65 6.40 - 6.50m: Cobble of concrete (45x100x105mm). 37D 6.55 - 6.65 Vo 0.0 38D 7.20 - 7.657.20 S 17 39X 7.20 - 8.207.20 - 7.65m: Stiff. 6.65 40D 8.00 - 8.10 00 Vo 0.0 41D* 8.00 - 8.10{8.00} Continued Next Page

EQUIPMENT: Geotechnical Pioneer rig.

METHOD: Hand dug inspection pit 0.00-1.20m. Dynamic sampled (128mm) 1.20-4.20m and (113mm) 4.20-20.20m.

CASING: 140mm diam to 19.20m.

BACKFILL: On completion, borehole backfilled with bentonite pellets 20.20-19.50m. A slotted standpipe (50mm) with geosock was installed to 19.50m, granular response zone 19.50-10.50m, bentonite seal 10.50-0.30m, concrete and raised helmet cover 0.30-0.00m.

REMARKS: Downhole magnetometry for UXO risk mitigation undertaken 0.00-20.20m. Chalk grade based on CIRIA C574 (2002). Stratum names provided by the Engineer.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE IS

water strike (m) casing (m) rose to (m) time to rise (min) remarks

Groundwater not encountered prior to use of water flush.



CONTRACT

CHECKED

R ALJH GPJ GEO GPJ ER MAS 30766 el 01452 527743 Engineering Ltd

30766

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

2 of 3

Start Date

10 June 2015

Easting 561428.9 Scale

1:50

End Date 11 June 2015 Northing

172862.1 Ground level

14.35mOD

Depth 20.20 m

- 1	type	from	to	depth (m)	type & value	/core range	-10	ent	description	(m)	(m)	£.
	42D 43X	8.20 - 8.6 8.20 - 9.2		8.20	S 41				Dense (?) dark grey stained brown slightly silty subangular to rounded fine to coarse flint rarely chalk GRAVEL with rare fine gravel sized shell fragments.	8.40	5.95	X
	44D 45D* 46D	8.90 - 9.0 8.90 - 9.0 9.20 - 9.6	00	9.20	Vo 0.0 S 47				Firm brown slightly sandy slightly gravelly silty CLAY. Gravel is subangular and subrounded fine to coarse flint and chalk. (RIVER TERRACE DEPOSITS)	9.20	5.15	x
	47X 48D	9.20 - 10 9.20 - 10	.20	9.20	341				Dense dark grey slightly silty subangular to rounded fine to coarse flint GRAVEL with rare fine gravel sized shell fragments. (RIVER TERRACE DEPOSITS)	5.20	0.10	0000
	49D*	9.70 - 9.8			Vo 0.0	1				=		000
	50X	10.20 - 1 10.20 - 1		10.20	S 25			Ħ		10.30	4.05	000
	501	10.20 - 1	1.70				9.5	100	Structureless CHALK composed of white slightly sandy slightly gravelly SILT. Gravel is subangular to rounded fine	=		
6	51D 52D*	10.70 - 1 10.80 - 1			Vo 0.0				and medium white with frequent black specks chalk, rare subangular medium flint. (Probably CIRIA Grade Dm) 10.75 - 10.90m: Coarse gravel sized pocket of brown fine and medium sand.	- International		
0/06/15 800hrs 16m	25.1	11.70 - 1	2.15	11.70	S 3					3		
1/06/15 750hrs 60m	53X 54D	11.70 - 1 11.90 - 1	2.00	÷						4		
	55D*	11.90 - 1	2.00		Vo 0.0					-		Ħ
						1						H
	56D 57D*	12.80 - 1 12.80 - 1			Vo 0.0					1		
	58UT 59X	13.20 - 1 13.20 - 1		13.20						1		
	COX	10.20	70			1			13.60 - 14.20m: Orange stained.	3		
						1			13.80 - 13.90m: Coarse gravel sized pocket of brown fine and medium sand.	=		H
	60D	14.30 - 1							Ass. 115 E. C. 1	14.30	0.05	Ħ
	61D*	14.30 - 1 14.70 - 1		14.70	Vo 0.0 S 11				Structureless CHALK composed of slightly sandy silty subrounded and rounded fine to coarse GRAVEL. Clasts are very weak medium density white with orange stained	1		
	62X	14.70 - 1	6.20						chalk. Matrix is white and light grey. (Probably CIRIA	- 3		H
	63D	15.20 - 1			A 7.5				15.20m: Cobble sized flint.	=		H
	64D*	15.20 - 1	5.30		Vo 0.0	3			Control of the Contro	1		‡r
	46-								15.70m: Cobble of chalk.	1		H
	65D	15.90 - 1										
	66UT 67X	16.20 - 1 16.20 - 1		16.20					Annual Section Control of the Contro	16.50	-2.15	
	68D	16.90 - 1	7.00						Structureless CHALK composed of white locally stained orange sandy gravelly SILT. Gravel is angular to rounded fine to coarse very weak medium density white stained orange chalk, rarely angular to subrounded fine to coarse flint. (Probably CIRIA Grade Dm)	1111111111		
	69X	17.70 - 1 17.70 - 1		17.70	S 21				16.90 - 17.10m: Slightly sandy silty gravel. 17.50m: Cobble sized flint.	11111		I I
	ш.)		1	5.31		Continued Next Page	{18.00}	3	

ELe/C P/A

Geotechnical Engineering Ltd el 01452 527743 30766 MAS ER GPJ R ALJH GPJ GEO ECH M25 GLB 19/10/2015 1045 59

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet 3 of 3

Start Date 10 June 2015 Easting 561428.9 Scale 1:50

progress date/time water depth	3.77	depth (m) from to	casing depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	legen
date/time	no &		depth (m)	type & value	/core		Structureless CHALK composed of slightly sandy silty angular to subrounded fine to coarse GRAVEL. Clasts are weak medium density white with orange staining. Matrix is white and light grey. (Probably CIRIA Grade Dc) Borehole completed at 20.20m.		level (m)	
water strike							CONTRACT CONTRACT	{28.00}		



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Scale

1 of 4

1:50

Start Date

10 June 2015

Easting

561299.3

15 June 2015 **End Date** Northing 172747.4 Ground level 19.80mOD Depth 29.95 m

progress date/time water depth	sample no & type	depth (m)	casing depth (m)	test type & value	samp. /core range	lf	instru -ment		depth (m)	reduced level (m)	leger	
11D 12D 13D 14X 15D 16D 17W 18D 20D 21X 22D 23D 24D 25D	2D*	0.30 - 0.50 0.30 - 0.50		Vo 0.0		ľ	2 2	Grass over soft dark brown sandy clayey SILT. (MADE GROUND)	0.05	19.75		
	4D*	0.50 - 0.70 0.50 - 0.70		Vo 0.0				Firm dark brown slightly sandy gravelly silty CLAY. Gravel is subangular to well rounded fine to coarse sandstone,			\otimes	
	6D*	1.00 - 1.20 1.00 - 1.20 1.20 - 1.65	-	Vo 0.0 S 8				flint, crystalline, tile and chalk. (MADE GROUND)	1.20	18.60	\otimes	
	8X	1.20 - 1.65 1.20 - 2.20 1.35 - 1.45	- NII	30	1			Soft dark greyish brown locally stained red slighty sandy gravelly CLAY with rare fine and medium gravel sized	1.20	10.00		
	10D* 11D	1.35 - 1.45 1.80 - 2.00		Vo 0.0	1			pockets of light brown clayey fine to coarse sand. Gravel is angular to subrounded fine to coarse chalk and flint, rarely sandstone and ceramic. Organic odour. (MADE GROUND) 1.65m: Pocket (50mm) of dark brown peaty clay.	1.70	18.10	$\stackrel{\times}{\times}$	
	13D	1.80 - 2.00 2.20 - 2.65	Nil	Vo 0.0 S 6	1						\otimes	
	15D 16D*	2.20 - 3.20 2.40 - 2.50 2.40 - 2.50		Vo 0.0				Soft dark brown locally stained reddish brown slightly sandy gravelly organic CLAY. Gravel is angular to	1 1		$\overset{\times}{\otimes}$	
	17W 18D	2.72 2.80 - 3.00 2.80 - 3.00	=	Va 0 0	rounded fine to coarse chalk and flint and rare concrete and brick. Organic odour. (MADE GROUND)			\otimes				
	20D 21X	3.20 - 3.65 3.20 - 4.20	Nil	S 13				2.10 - 2.20m: Subangular concrete cobble.	3.40	16.40	\otimes	
	22D 23D*	3.50 - 3.70 3.50 - 3.70	Ē	Vo 0.0	1			Medium dense brown slightly gravelly clayey fine SAND. Gravel is subangular and subrounded fine and medium				
	24D 25D*	4.00 - 4.20 4.00 - 4.20	Nil	Vo 0.0	1			sandstone and flint, rarely ceramic. (MADE GROUND)	Ė		\otimes	
	26D 27X	4.20 - 4.65 4.20 - 5.20		S 21				4.35 - 4.40m: Stiff reddish brown gravelly clay. Gravel is			\otimes	
	28D 29D*	4.60 - 4.70 4.60 - 4.70		Vo 0.0				angular to rounded fine and medium flint. 4.55 - 4.60m: Pocket (40mm) of grey fine and medium sand.	4.70	15.10	<u>≪</u> ∷:	
	30UT	5.20 - 5.65	- Nil					Soft brown slightly gravelly sandy CLAY with frequent medium gravel sized pockets of grey and greenish blue			-	
	31X 32D	5.20 - 6.20 5.70 - 5.90	E					sandy clay. Gravel is subangular to rounded fine to coarse flint. (HEAD DEPOSITS)			==	
	33D*	5.70 - 5.90	Ē	Vo 0.0	1			Firm brownish orange mottled light grey slightly sandy	5.90	13.90	-	
	34D 35X 36D	6.20 - 6.65 6.20 - 7.20 6.50 - 6.70	Nil	S 16	1			gravelly CLAY. Gravel is angular to rounded fine to coarse flint. Organic odour. (HEAD DEPOSITS)	6.50	13.30	- E	
	37D*	6.50 - 6.70	Ē	Vo 0.0				Soft brown slightly gravelly sandy CLAY. Gravel is subangular to rounded fine and medium flint, rarely chalk.	0.00	10.00	-	
	38D 39D* 40D	6.90 - 7.10 6.90 - 7.10 7.20 - 7.65		Nil	Vo 0.0 S 9				(HEAD DEPOSITS) 6.70m: Lens of red fine and medium sand (10mmx15mm).	-		7
	41X	7.20 - 8.20	7.20								:: ::	
			Ē		1				7.75	12.05		
					111			Continued Next Page	{8.00}			

EQUIPMENT: Geotechnical Pioneer rig.

METHOD: Hand dug inspection pit 0.00-1.20m. Dynamic sampled (128mm) 1.20-7.20m and (113mm) 7.20-25.00m and 26.50-29.50m. Waterflush rotary core drilled (116mm) 25.00-26.50m.

CASING: 140mm diam to 29.50m.

BACKFILL: On completion, a slotted standpipe (50mm) with geosock was installed to 29.00m, granular response zone 29.95-10.00m, bentonite seal 10.00-0.40m, gravel drain 0.40-0.30m, concrete and stop cock cover 0.30-0.00m.

Borehole installed on 15/06/2015.

REMARKS: Downhole magnetometry for UXO risk mitigation undertaken 0.00-12.80m. No anomalies encountered. Driller notes loss of flush 25.00-26.50m. Chalk grade based on CIRIA C574 (2002). Stratum names provided by the Engineer.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE IS

water strike (m) casing (m) rose to (m) time to rise (min) remarks AGS CONTRACT CHECKED 3.05 Strike following run 2.20-3.20m. 2.72 30766 EC

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

2 of 4

Start Date

10 June 2015

Easting 561299.3 Scale

30766

EC

1:50

End Date

15 June 2015

Northing

172747.4 Ground level

19.80mOD

Depth 29.95 m

progress date/time water depth	no & type	depth (m)	depth (m)	test type & value	samp. /core range	lf	instru -ment	description	depth (m)	reduced level (m)	lege
	42D 43X 44D 45D* 46D 47D*	8.20 - 8.65 8.20 - 9.20 8.30 - 8.50 8.30 - 8.50 9.00 - 9.20 9.00 - 9.20	- 7.20 - - -	S 7 Vo 0.0 Vo 0.0				Firm locally stiff brown CLAY with rare subrounded fine chalk and flint gravel. (HEAD DEPOSITS)	8.90	10.90	
	48UT 50X	9.20 - 9.65 9.20 - 10.20	9.20		Ī			Soft brown slightly gravelly sandy CLAY. Gravel is subangular to rounded fine and medium flint and rare chalk. (HEAD DEPOSITS)	14444		
10/06/15 1730hrs 6.05m	49D 51D 52D* 53D 54X	9.65 - 9.80 10.00 - 10.20 10.00 - 10.20 10.20 - 10.65 10.20 - 11.50		Vo 0.0 S 54				Structureless CHALK composed of slightly sandy silty angular to rounded fine to coarse GRAVEL. Clasts are	9.90	9.90 9.70	
0825hrs 6.35m 5 5	55D	11.00 - 11.20						very weak low density white and cream chalk. Matrix is light brown and brown. Frequent rounded and subrounded fine to coarse flint gravel. (Probably CIRIA Grade Dc) Structureless CHALK composed of cream and light brown sandy gravelly SILT. Gravel is subangular to rounded fine to coarse very weak medium density white with rare orange specks chalk and subangular to rounded fine and medium flint. (Probably CIRIA Grade Dm) 10.85 - 10.95m: Subvertical relict fracture, infilled (20mm) with brown clay. 11.20 - 11.40m: Orangish brown. Clayey. 11.40 - 11.50m: Gravelly. Pocket (45mm) of reddish brown fine and medim sand.	110000		1
	56D*	11.00 - 11.20 11.00 - 11.20 11.50 - 11.95 11.50 - 12.80	11.50	Vo 0.0 S 13					10000		
	58D 59D*	12.20 - 12.40 12.20 - 12.40		Vo 0.0					1111111		
	60D 61X	12.80 - 13.23 12.80 - 14.30						Structureless CHALK composed of white sandy gravelly SILT. Gravel is angular to rounded fine to coarse weak medium density white with rare black specks chalk.	12.50	7.30	
	62D 63D*	13.20 - 13.40 13.20 - 13.40		Vo 0.0				(Probably CIRIA Grade Dm). 13.40 - 13.55m: Locally stained orange.	101111		
	64D 65D* 66D 67X	14.00 - 14.20 14.00 - 14.20 14.30 - 14.75 14.30 - 15.80	11.50	Vo 0.0 S 6				13.80m: Chalk cobble, speckled black. 14.10m: Cobble sized black nodular flint.			
	68D 69D*	15.00 - 15.20 15.00 - 15.20	-	Vo 0.0				Structureless CHALK composed of slightly sandy silty angular to rounded fine to coarse GRAVEL. Clasts are weak medium density white with rare black specks. Matrix is white. Rare angular fine gravel of flint. (Probably CIRIA Grade Dc)	14.95	4.85	T
	70D 71X	15.80 - 16.25 15.80 - 17.30		S7					15.90	3.90	
1 7	700	17.00 47.40						Structureless CHALK composed of slightly sandy silty angular and subangular fine to coarse GRAVEL. Clasts are weak medium and high density white with black specks locally stained orange chalk. Rare angular and subangular coarse flint gravel. Matrix is white and cream. (Probably CIRIA Grade Dc)	1111111		
	73D 74X		- 17.75 11.50	S 13					111000111		
			-		_ i			Continued Next Page	{18.00}		T.

BOREHOLE LOG



LONDON RESORT COMPANY HOLDINGS LTD CLIENT

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

3 of 4

Start Date

10 June 2015

Easting 561299.3 Scale

1:50

End Date

15 June 2015

172747 4

29 95 m

progress date/time water depth	sample no & type	depth	to	casing depth (m)	test type & value	samp. /core range	lf	instru -ment	description	depth (m)	reduced level (m)	lege
	75D		- 18.60	14.50	0.00	in division in	Ī		18.20 - 18.40m: Slightly sandy gravelly silt.			
	76D 77X		20.30	11.50	5 29				18.70m: Pocket (30mm) of light orangish brown silty clay.	1		
	78D	19.50	19.60						19.45 - 19.50m: Flint, recovered non-intact.	19.90	-0.10	Ė
	79D 80X			11.50 - 20.20	S 28	-			Structureless CHALK composed of white gravelly sandy SILT. Gravel is angular to subrounded fine to coarse very weak medium and high density white with rare grey marl seams, rare black specks and rare orange staining chalk. Rare angular medium gravel of flint. (Probably CIRIA Grade Dm)	20.80	-1.00	
	81D 82D 83X	21.50	- 21.50 - 21.95 - 22.80	20.20	S 44				Structureless CHALK composed of slightly sandy silty angular to subrounded fine and medium GRAVEL. Clasts are white with abundant orange staining. Matrix is white. Rare medium gravel sized pockets of orangish red clay. (Probably CIRIA Grade Dc) 21,70 - 21,95m: Cobble sized black nodular flint,			
									recovered non intact.	22.35	-2.55	
	84D 85D 86X	22.80	- 22.80 - 23.25 - 24.30	20.20	S 31				Structureless CHALK composed of white gravelly locally very gravelly SILT. Gravel is subangular and subrounded fine to coarse very weak low and medium density white with abundant orange staining chalk. (Probably CIRIA Grade Dm)			II II
									23.50m: 40mm subangular flint gravel.	23.70	-3.90	
11/06/15 1750hrs 15.55m	87D 88D		- 24.30 - 24.75	22.80	S 33				Structureless CHALK composed of slightly sandy silty angular to subrounded fine and medium GRAVEL. Clasts are white with rare orange staining chalk. Matrix is white. (Probably CIRIA Grade Dc)			
12/06/15 0820hrs 15.55m	89X	24.30	- 25.00						24.10 - 24.15m: Cobble sized flint, recovered non-intact. 24.35 - 24.50m: Flint, recovered non-intact.	25.00	5.00	T
	90C	25.00	- 26.50	24.95		27 4 0	N 40 60		Limited recovery (27%) of very weak medium density white with black specks and orange staining CHALK. Fractures are subhorizontal and subvertical to 80° very closely spaced planar smooth infilled (up to 5mm) with white silt locally stained orangish brown. (Probably CIRIA Grade C4)	25.00	-5.20	
	91D		26.20						25.30 - 25.40m: Cobble sized black nodular flint. 25.40 - 26.50m: Assessed zone of core loss.	00.50	0.70	I
	92D 93X		- 26.95 - 28.00	24.95 - - - -	53/				Structureless CHALK composed of slightly sandy silty subangular and subrounded fine to coarse GRAVEL. Clasts are very weak medium density white with orange staining chalk. Matrix is white and cream locally orange stained. (CIRIA Grade Dc)	26.50	-6.70 -7.60	
	94D	27.50 · 28.00 ·			S 63				Structureless CHALK composed of white slightly sandy gravelly SILT. Gravel is angular to subrounded fine and medium white with orange staining chalk and rare angular		-7.00	T T
		W 75 18 18			1 550	10 1		1	Continued Next Page	{28.00}		,,,

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

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SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet 4 of 4

Start Date 10 June 2015

Easting 561299.3

Scale 1:50

End Date 15 June 2015 Northing 172747.4 Ground level 19.80mOD Depth 29.95 m

progress date/time water depth	no & type	depth (m) from to	depth (m)	test type & value	samp. /core range	lf	instru -ment	description	depth (m)	reduced level (m)	legend
12/06/15 1325hrs 15.55m 15/06/15 1100hrs 15.55m	95X 96D 97D	29.00 - 29.10 29.50 - 29.95						and subangular fine to coarse flint. (Probably CIRIA Grade Dm) 28.20 - 28.30m: Cobble sized black nodular flint, recovered non-intact. 28.75 - 29.05m: Cobble sized black nodular flint, recovered non-intact. 29.25 - 29.45m: Cobble sized black nodular flint, recovered non-intact. Borehole completed at 29.95m.	29.95	-10.15	
									{38.00}		

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CLIENT LONDON RESORT COMPANY HOLDINGS LTD

1 of 1

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SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Scale

Start Date

22 June 2015

Easting

560945.0

End Date 22 June 2015 Northing 176278.9 Ground level 9.10mOD Depth 6.45 m

progress date/time water depth	sample no & type	depti	to	casing depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	leger
22/06/15 1050hrs	1B 2D* 3B	0.20 - 0.20 - 0.50 -	0.40 0.70		Vo 0.0		/ /	Brown slightly gravelly silty fine to coarse SAND with frequent roots (up to 5mm diam) and rootlets (up to 2mm diam). Gravel is angular to subrounded fine to coarse flint and sandstone. (MADE GROUND)	0.50	8.60	
	4D* 5B 6D*	0.50 - 1.00 - 1.00 - 1.20 -	1.20 1.20	- Nil	Vo 0.0 Vo 0.0 S 16			Brown and dark brown very silty very gravelly fine to coarse SAND with rare rootlets (up to 2mm diam) and rare subangular fine to coarse flint gravel. (MADE GROUND)	1.20	7.90	\bigotimes
8X 9D* 10D 11U 12X 13D* 14D 15D* 16D 17D 18X 19D* 20D 21D* 22D 23U	1.20 -	2.00		Vo 0.0			Medium dense locally poorly cemented greyish brown mottled orangish brown sandy SILT with rare rootlets (up to 2mm diam) and rare angular to subrounded fine to	,,_0			
	10D	1.60 - 2.00 -	1.70	2.00				coarse flint and sandstone gravel. Material Cement Kiln Dust (CKD). (MADE GROUND) 1.50 - 1.60m: Rare black specks.	1.95	7.15	
	12X 13D* 14D	2.00 - 2.20 - 2.30 - 2.70 -	3.00 2.30 2.40	2.00	Vo 0.0			Loose locally poorly cemented greyish brown mottled orangish brown silty fine and medium SAND. Material Cement Kiln Dust (CKD). (MADE GROUND)			
	16D 17D	2.80 - 3.00 - 3.00 -	2.90 3.45 4.00	3.00	S 4	#	6 1 105.4—105.4	2.55 - 2.60m: White stained. 2.80m: Angular coarse sandstone gravel.	-		\bigotimes
		3.20 - 3.30 -		Ē	Vo 0.5			3.20 - 4.00m: Slightly gravelly.			\bigotimes
	22D 23U	3.70 - 3.80 - 4.00 - 4.00 -	3.90 4.45	4.00	Vo 1.4				-		\bigotimes
	24D	4.45 -	4.90	4.00	S 15			4.45 - 4.90m: Medium dense.			\bigotimes
	26D* 27X	4.90 - 5.00 -			Vo 5.6				5.30	3.80	\bigotimes
	28D* 29D	5.60 - 5.70 -			Vo 4.5	***************************************		Well cemented thinly laminated greyish brown silty fine and medium SAND. Material Cement Kiln Dust (CKD). (MADE GROUND)			
22/06/15	30U	6.00 -		- 6.00			233-233	6.00 - 6.45m: CKD into alluvium (Drillers Description).	6.20	2.90	\bowtie
1545hrs 5.74m						L		Dark brown slightly sandy organic SILT (laboratory description).	6.45	2.65	××
								Borehole completed at 6.45m.			
				E					{8.00}		

EQUIPMENT: Geotechnical Terrier 2000 rig.

METHOD: Hand dug inspection pit 0.00-1.20m. Dynamic sampled (113mm) 1.20-4.00m and (84mm) 4.00-6.00m.

CASING: 128mm diam to 6.00m.

BACKFILL: On completion, borehole backfilled with bentonite 6.45-6.00m. A slotted standpipe (50mm) with geosock was installed to 6.00m, granular response zone 6.00-1.30m, bentonite seal 1.30-0.30m, concrete and raised helmet cover 0.30-0.00m.

REMARKS: Downhole magnetometry for UXO risk mitigation undertaken 0.00-6.45m. No anomalies encountered.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE S

water strike (m) casing (m) rose to (m) time to rise (min) remarks

4.00

4.05

Water strike following U70 4.00-4.45m.

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CLIENT LONDON RESORT COMPANY HOLDINGS LTD

WS102

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet 1 of 1

Start Date 22 June 2015

Easting 560674.2

Scale 1:50

End Date

23 June 2015

Northing

176217.1 Ground level

8.45mOD

Depth 5.22 m

progress date/time water depth	no & type	depth (m)	depth	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	legen
22/06/15 1615hrs	1B 2D* 3B 4D*	0.20 - 0.40 0.20 - 0.40 0.50 - 0.70 0.50 - 0.70		Vo 0.0 Vo 0.0			Brown with white and black specks slightly gravelly fine to coarse SAND with frequent roots (up to 3mm diam) and rootlets (up to 1mm diam). Gravel is angular to subrounded fine to coarse flint, sandstone and chalk. (MADE GROUND)	0.50	7.95	
	5B 6D* 7D 8X 9D*	1.00 - 1.20 1.00 - 1.20 1.20 - 1.65 1.20 - 2.00 1.35 - 1.45	Nil	Vo 0.0 S 15 Vo 0.0			Locally poorly cemented brown slightly gravelly fine to coarse SAND with rare rootlets (up to 1mm diam). Gravel is subangular and subrounded fine to coarse sandstone and rare chalk. Material Cement Kiln Dust (CKD). (MADE GROUND)	1.20	7.25 7.05	
	10D* 11D 12U 13X 14D*	1.70 - 1.80 1.80 - 1.90 2.00 - 2.45 2.00 - 3.00 2.20 - 2.30	2.00	Vo 0.0	I		Locally poorly cemented grey mottled greyish brown with rare medium gravel sized black pockets slightly gravelly silty fine SAND. Gravel is angular to subrounded fine and medium sandstone. Material Cement Kiln Dust (CKD). (MADE GROUND)			$\overset{\otimes}{\otimes}$
22/06/15 1800hrs Dry 23/06/15 0800hrs Dry	15D 16D* 17D 18D 19X 20D*	2.30 - 2.40 2.70 - 2.80 2.80 - 2.90 3.00 - 3.45 3.00 - 4.00 3.20 - 3.30	3.00	Vo 0.0 S 8 Vo 0.0			Locally poorly cemented greyish brown slightly gravelly sandy SILT. Gravel is subangular and subrounded fine and medium sandstone. Material Cement Kiln Dust (CKD). (MADE GROUND) 1.70 - 2.00m: Mottled grey. 2.65 - 2.85m: Gravelly.	3.40	5.05	
	21D 22D* 23D 24U 25X 26D*	3.30 - 3.40 3.70 - 3.80 3.80 - 3.90 4.00 - 4.45 4.00 - 5.00 4.20 - 4.30	4.00	Vo 0.0			3.00 - 3.15m: Gravelly. 3.10 - 3.40m: Mottled grey. Locally poorly cemented greyish brown silty fine SAND. Material Cement Kiln Dust (CKD). (MADE GROUND)	_		
0915hrs 290	28D* 29D 30D	4.30 - 4.40 4.70 - 4.80 4.80 - 4.90 5.00 - 5.22	5.00	Vo 0.0 S*429			Well cemented greyish brown with rare fine and medium gravel sized black pockets silty fine SAND. Material Cement Kiln Dust (CKD). (MADE GROUND)	5.22	3.75	
							Borehole completed at 5.22m.	-		
			Ē					{8.00}		

EQUIPMENT: Geotechnical Terrier 2000 rig

METHOD: Hand dug inspection pit 0.00-1.20m. Dynamic sampled (113mm) 1.20-5.00m.

CASING: 128mm diam to 5.00m.

BACKFILL: On completion, a slotted standpipe (50mm) with geosock was installed to 5.00m, granular response zone 5.22-1.30m, bentonite seal 1.30-0.30m, concrete and raised helmet cover 0.30-0.00m.

REMARKS: Downhole magnetometry for UXO risk mitigation undertaken 0.00-5.22m. Hole terminated at 5.22m due to refusal of sampler barrel.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE S

water strike (m) casing (m) rose to (m) time to rise (min) remarks
3.90 4.00 3.99 20 Water strike following run 3.00-4.00m.

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BOREHOLE LOG



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SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet 1 of 1

Start Date 25 June 2015

Easting 560160.2

Scale 1:50

End Date 25 June 2015 Northing 175710.2 Ground level 4.10mOD Depth 0.15 m

progress date/time water depth	no & type	depth (m) from to	casing depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	legend
25/06/15 1000hrs 25/06/15 1030hrs Dry							Well cemented light grey slightly gravelly fine SAND. Gravel is angular to subangular fine to coarse well cemented CKD. Material Cement Kiln Dust (CKD). (MADE GROUND)	0.15	3.95	XXX
Diy							Borehole completed at 0.15m.			
		echnical Terrie						{8.00}		

EQUIPMENT: Geotechnical Terrier 2000 rig.

METHOD: Hand dug inspection pit 0.00-0.15m.

CASING: None used.

BACKFILL: On completion, hole backfilled with local materials.

REMARKS: Inspection pit terminated at 0.15m due to hard strata and reattempted as WS201A approximately 2.00m to the west.

EXPLORA ORYHOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE S

water strike (m) casing (m) rose to (m) time to rise (min) remarks

Groundwater not encountered.



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SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet 1 of 1

Start Date 25 June 2015

Easting 560157.1

Scale 1:50

End Date 25 June 2015 Northing 175710.3 Ground level 4.05mOD Depth 0.10 m

progress date/time water depth	no & type	depth (m) to	casing depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	level (m)	legend
25/06/15 1030hrs 25/06/15 1045hrs Dry								Well cemented light grey slightly gravelly fine SAND. Gravel is angular to subangular fine to coarse well cemented CKD. Material Cement Kiln Dust (CKD). (MADE GROUND)	0.10	3.95	XXXX
								Borehole completed at 0.10m.			
									=		

EQUIPMENT: Geotechnical Terrier 2000 rig.

METHOD: Hand dug inspection pit 0.00-0.10m.

CASING: None used.

BACKFILL: On completion, hole backfilled with local materials.

REMARKS: Inspection pit terminated at 0.10m due to hard strata and reattempted as WS201B approximately 4.00m to the west.

EXPLORA ORYHOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE S

water strike (m) casing (m) rose to (m) time to rise (min) remark

Groundwater not encountered.



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SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet 1 of 1

Start Date 25 June 2015

Easting 560152.3

Scale 1:50

End Date 25 June 2015 Northing 175706.9 Ground level 3.75mOD Depth 0.10 m

progress date/time water depth	no & type	depth (m) to	casing depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	legend
25/06/15 1045hrs 25/06/15 1100hrs Dry								Well cemented light grey slightly gravelly fine SAND. Gravel is angular to subangular fine to coarse well cemented CKD. Material Cement Kiln Dust (CKD). (MADE GROUND)	0.10	3.65	XXXX
								Borehole completed at 0.10m.			
									{8.00}		

EQUIPMENT: Geotechnical Terrier 2000 rig.

METHOD: Hand dug inspection pit 0.00-0.10m.

CASING: None used.

BACKFILL: On completion, hole backfilled with local materials.

REMARKS: Inspection pit terminated at 0.10m due to hard strata and reattempted as WS201C approximately 8.00m to the east.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE IS

water strike (m) casing (m) rose to (m) time to rise (min) remark

Groundwater not encountered.



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BOREHOLE LOG



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SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet 1 of 1

Scale

Start Date 25 June 2015

560163.5 Easting

> Depth 0.10 m

1:50

progress date/time water depth	sample no & type	depth	to	casing depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	legend
25/06/15 1400hrs 25/06/15 1415hrs Dry			1					Well cemented light grey slightly gravelly fine SAND. Gravel is angular to subangular fine to coarse well cemented CKD. Material Cement Kiln Dust (CKD). (MADE GROUND)	0.10	4.10	XXXX
								Borehole completed at 0.10m.	_		

EQUIPMENT: Geotechnical Terrier 2000 rig. METHOD: Hand dug inspection pit 0.00-0.10m.

CASING: None used.

BACKFILL: On completion, hole backfilled with local materials.

REMARKS: Inspection pit terminated at 0.10m due to hard strata and reattempted as WS201D approximately 2.00m to the south.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE IS

water strike (m) casing (m) rose to (m) time to rise (min)

Groundwater not encountered.

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BOREHOLE LOG



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WS201L

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet 1 of 1

Start Date 25 June 2015

Easting 560165.9

Scale 1:50

End Date 25 June 2015 Northing 175713.1 Ground level 4.10mOD Depth 0.10 m

progress date/time water depth	no & type	depth (m)	depth	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	
25/06/15 1415hrs 25/06/15 1430hrs Dry							Well cemented light grey slightly gravelly fine SAND. Gravel is angular to subangular fine to coarse well cemented CKD. Material Cement Kiln Dust (CKD). (MADE GROUND)	0.10	4.00	XXXX
			<u>andamanahanahananahana</u>				Borehole completed at 0.10m.			
			than man al tananana					(8.00)		

EQUIPMENT: Geotechnical Terrier 2000 rig.

METHOD: Hand dug inspection pit 0.00-0.10m.

CASING: None used.

BACKFILL: On completion, hole backfilled with local materials.

REMARKS: Inspection pit terminated at 0.10m due to hard strata and reattempted as WS201E approximately 4.00m to the north.

EXPLORA ORYHOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE S

water strike (m) casing (m) rose to (m) time to rise (min) remark

Groundwater not encountered.



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BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

WS201E

1 of 1

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet

Start Date 25 June 2015

Easting 560161.5

Scale 1:50

End Date 25 June 2015 Northing 175719.7 Ground level 4.25mOD Depth 0.10 m

progress date/time water depth	no & type	depth (m) from to	casing depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	
25/06/15 1430hrs 25/06/15 1445hrs Dry							Well cemented light grey slightly gravelly fine SAND. Gravel is angular to subangular fine to coarse well cemented CKD. Material Cement Kiln Dust (CKD). (MADE GROUND)	0.10	4.15	XXXX
5			and an annual mannar an annual mannar and an annual mannar an				Borehole completed at 0.10m.			
			a annual turnant					{8.00}		

EQUIPMENT: Geotechnical Terrier 2000 rig.

METHOD: Hand dug inspection pit 0.00-0.10m.

CASING: None used.

BACKFILL: On completion, hole backfilled with local materials.

REMARKS: Inspection pit terminated at 0.10m due to hard strata and reattempted as WS201F approximately 20.00m to the north.

EXPLORA ORYHOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE S

water strike (m) casing (m) rose to (m) time to rise (min) remark

Groundwater not encountered.



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BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

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SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet 1 of 1

Scale

Start Date 25 June 2015

Easting 560156.3

1:50

End Date 25 June 2015 Northing 175741.8 Ground level 4.25mOD Depth 0.10 m

25/06/15	type	from to	depth (m)	type & value	samp. /core range	instru -ment	description	(m)	level (m)	legend
25/06/15 1445hrs 25/06/15 1500hrs Dry							Well cemented light grey slightly gravelly fine SAND. Gravel is angular to subangular fine to coarse well cemented CKD. Material Cement Kiln Dust (CKD). (MADE GROUND)	0.10	4.15	XXX
			entrementalista entremente en				Borehole completed at 0.10m.			
			edu mandanana							

EQUIPMENT: Geotechnical Terrier 2000 rig.

METHOD: Hand dug inspection pit 0.00-0.10m.

CASING: None used.

BACKFILL: On completion, hole backfilled with local materials.

REMARKS: Inspection pit terminated at 0.10m due to hard strata and reattempted as WS201G approximately 5.00m to the west.

EXPLORA ORYHOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE S

water strike (m) casing (m) rose to (m) time to rise (min) remark

Groundwater not encountered.



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BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

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SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet 1 of 1

Start Date 25 June 2015

560145.6 Easting

Scale

End Date

25 June 2015

Northing

175738.9 Ground level

3.70mOD

Depth 0.10 m

progress date/time water depth	no & type	depth (m) from to	casing depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	legen
25/06/15 1515hrs 25/06/15 1530hrs Dry							Well cemented light grey slightly gravelly fine SAND. Gravel is angular to subangular fine to coarse well cemented CKD. Material Cement Kiln Dust (CKD). (MADE GROUND)	0.10	3.60	XXX
Ury							Borehole completed at 0.10m.			
			hamalaman					{8.00}		

EQUIPMENT: Geotechnical Terrier 2000 rig.

METHOD: Hand dug inspection pit 0.00-0.10m.

CASING: None used.

BACKFILL: On completion, hole backfilled with local materials. REMARKS: Inspection pit terminated at 0.10m due to hard strata.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE S

water strike (m) casing (m) rose to (m) time to rise (min)

Groundwater not encountered.

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BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Start Date

24 June 2015

Easting 560621.9 Scale

1:50

1 of 2

End Date

25 June 2015

Northing

175869.8 Ground level

9.40mOD

Depth 12.00 m

progress date/time water depth	sample no & type	depth (m) from to	casing depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	lege
24/06/15 1115hrs	1B 2D*	0.20 - 0.40 0.20 - 0.40		Vo 0.0		/ /	Stiff dark brown slightly sandy silty CLAY with rare subangular and subrounded fine and medium flint and sandstone gravel. (MADE GROUND)	0.50	8.90	X
	3B 4D* 5B 6D*	0.50 - 0.70 0.50 - 0.70 1.00 - 1.20 1.00 - 1.20		Vo 0.0			Light grey sandy SILT with rare subrounded fine and coarse CKD gravel. Material Cement Kiln Dust (CKD). (MADE GROUND)			$\overset{\times}{\otimes}$
	7D 8X	1.20 - 1.65 1.20 - 2.00	Nil	S 24	H		Medium dense locally poorly cemented greyish brown with	1.20	8.20	$\stackrel{\circ}{\otimes}$
	9D*	1.65 - 1.75	1	Vo 0.0			black specks gravelly very silty fine SAND. Gravel is subangular and subrounded fine to coarse poorly cemented CKD and rare flint. Material Cement Kiln Dust	1.60	7.80	\bigotimes
	10D 11U 12X	1.75 - 1.85 2.00 - 2.45 2.00 - 3.00	2.00				(CKD). (MADE GROUND) Plastic black with rare brown specks slightly gravelly	2.10	7.30	\bigotimes
	13D* 14D 15D*	2.25 - 2.35 2.35 - 2.45 2.70 - 2.80		Vo 0.0			amorphous PEAT. Gravel is angular to subrounded fine to coarse coal and poorly cemented CKD. (MADE GROUND)			\bigotimes
	16D	2.80 - 2.90 3.00 - 3.45	3.00	C 29			1.80 - 1.90m: Frequent brown specks. Medium dense locally poorly cemented greyish brown with	-		\otimes
	17X	3.00 - 3.40	E				white specks gravelly very silty fine SAND. Gravel is angular to subrounded fine to coarse poorly cemented CKD. Material Cement Kiln Dust (CKD). (MADE			\bigotimes
	18X 19D* 20D	3.40 - 4.00 3.70 - 3.80 3.80 - 3.90	Ē	Vo 0.0	1		GROUND) 2.35 - 2.50m: Coarse gravel sized pocket of peat. 2.55m: Orange stained.	1		\otimes
1, 1	21D 22X	4.00 - 4.45 4.00 - 5.00	3.00	S 29			2.80 - 3.00m: Very gravelly with frequent orange specks. 3.10 - 3.20m: Coarse gravel sized pocket of peat. 3.35m: Cobbles of poorly cemented CKD (60x65x65mm).			\bigotimes
	220*	470 400		V- 0.0			Very dense well cemented greyish brown slightly gravelly fine SAND. Gravel is angular to subrounded fine to coarse	4.45	4.95	
	23D* 24X	4.70 - 4.90 5.00 - 5.45 5.00 - 6.00	3.00	Vo 0.0 C 56			poorly cemented CKD. Material Cement Kiln Dust (CKD). (MADE GROUND) 5.10 - 5.45m: Thinly laminated.			\bigotimes
: 11			Ē					-		\bigotimes
-	25D* 26D 27X	5.70 - 5.90 6.00 - 6.45 6.00 - 7.00	3.00	Vo 0.0 S 16			5.90 - 5.95m: Reddish brown stained. 6.00 - 6.45m: Medium dense.			\otimes
			Ē					6.45	2.95	\bigotimes
	28D* 29D 30X	6.70 - 6.90 7.00 - 7.45 7.00 - 8.00	3.00	Vo 0.5 S 10			Medium dense locally poorly cemented greyish brown gravelly silty fine SAND. Gravel is subangular and subrounded fine and medium rarely coarse poorly cemented CKD. Material Cement Kiln Dust (CKD). (MADE GROUND)			
	31D*	7.50 - 7.80	Ē	Vo 1.3			7,50m: Medium gravel sized white staining.			\bigotimes
	32D	8.00 - 8.45	3.00	S 22	1		Continued Next Page	{8.00}		\otimes

EQUIPMENT: Geotechnical Terrier 2000 rig.

METHOD: Hand dug inspection pit 0.00-1.20m. Dynamic sampled (1113mm) 1.20-3.40m and 9.00-10.00m, (98mm) 3.40-4.00m and 10.00-11.00m, (84mm) 4.00-5.00m, 8.00-9.00m and 11.00-12.00m, (74mm) 5.00-6.00m, (64mm) 6.00-8.00m.

CASING: 113mm diam to 9.00m.

BACKFILL: On completion, borehole backfilled with bentonite 12.00-11.00m. A slotted standpipe (50mm) with geosock was installed to 10.50m, granular response zone 11.00-2.80m, bentonite seal 2.80-0.30m, concrete and raised helmet cover 0.30-0.00m.

REMARKS: Downhole magnetometry for UXO risk mitigation undertaken 0.00-12.00m. Stratum names provided by the Engineer.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE IS

water strike (m) casing (m) rose to (m) time to rise (min) remarks



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BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet 2 of 2

24 June 2015 Start Date

Easting 560621.9 Scale 1:50

End Date 25 June 2015 Northing 175869.8 Ground level 9.40mOD Depth 12.00 m

	type	from to	depth (m)	type & value	/core range	-ment	description	(m)	(m)	
	33X	8.00 - 9.00			9.1			8.20	1.20	$\otimes\!$
24/06/15 1700hrs 9.21m 25/06/15	34D* 35D 36X	8.70 - 8.80 8.80 - 8.90 9.00 - 9.45 9.00 - 10.00	3.00	Vo 0.8 C 74			Medium dense locally poorly cemented greyish brown slightly gravelly silty fine SAND. Gravel is subangular and subrounded fine and medium poorly cemented CKD. Material Cement Kiln Dust (CKD). (MADE GROUND) 8.20 - 8.40m: Thinly laminated. 8.70m: Greenish grey staining.	9.00_	0.40	
25/06/15 0810hrs 7.71m	37D* 38D 39D	9.70 - 9.80 9.80 - 9.90 10.00 - 10.45	9.00	Vo 1.5 S 27			Very dense well cemented thinly laminated greyish brown slightly gravelly very silty fine SAND. Gravel is subangular and subrounded fine to coarse poorly cemented CKD, Material Cement Kiln Dust (CKD). (MADE GROUND)			
	40X 41D* 42D	10.00 - 11.00 10.70 - 10.80 10.80 - 10.90		Vo 0.0			Medium dense locally poorly cemented greyish brown slightly gravelly very silty fine SAND. Gravel is subangular and subrounded fine and coarse poorly cemented CKD. Material Cement Kiln Dust (CKD). (MADE GROUND)	10.20	-0.80	
25/06/15 1400hrs	43U 44X 45D*	11.00 - 11.45 11.00 - 12.00	9.00	Vo 0.0			Firm thinly laminated dark greenish grey CLAY with rare rootlets (up to 1mm diam), rare subrounded fine and medium chalk gravel and rare coarse gravel sized lenses of peat. (ALLUVIUM)	11.10	-1.70	<u> </u>
10.85m	46D	11.80 - 11.90	<u>-</u>	1	1		Called the result of the second of	12.00	-2.60	5
]		
water strike	(m) casi	ing (m) rose to	- - o (m) ti	ime to ris	e (m) ro	emarks	ed following SPT 9 00-9 45m	{18.00}	CHE	CKE

BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet 1 of 1

Start Date 23 June 2015 Easting

560435.9

Scale

1:50

24 June 2015 175753.6 Ground level 2.60mOD **End Date** Northing Depth 4.50 m progress depth (m) casing instru depth educed legend sample test samp date/time depth /core description no & type & -ment (m) level water depth type from (m) value range (m) 23/06/15 1600hrs Grass over dark brown mottled dark grey silty subangular **1B** 0.20 - 0.40and subrounded fine and medium flint, sandstone, red 2D* 0.20 - 0.40 Vo 0.6 brick and concrete GRAVEL. (MADE GROUND) 0.50 2.10 0.50 - 0.70**3B** MADE GROUND comprising light grey concrete. 4D* 0.50 - 0.70Vo 0.0 0.85 1.75 **5B** 1.00 - 1.20 Locally poorly cemented dark grey SILT. Material Cement 6D 1.00 - 1.20 Vo 0.0 7D 1.20 - 1.65 Nil S 9 Kiln Dust (CKD). (MADE GROUND) 1.20 1.40 1.20 - 2.008X Loose locally poorly cemented greyish brown slightly silty fine SAND. Material Cement Kiln Dust (CKD). (MADE GROUND) Vo 0.0 9D* 1.65 - 1.75 1.45m: Coarse gravel sized pocket of soft brown clay. 10D 1.75 - 1.85 1.55m: Coarse gravel sized pocket of soft brown clay. 2.00 - 2.45 2.00 1.85m: Cobble sized poorly cemented CKD (up to 11U 2.25 0.35 2.00 - 3.00 50x80x90mm) 12X 2.25 - 2.35 Vo 0.3 13D* Medium dense locally poorly cemented greyish brown with 23/06/15 1730hrs rare fine and medium gravel sized black pockets slightly 14D* silty slightly gravelly fine SAND. Gravel is subangular and 2.75 - 2.85 Vo 0.5 Dry subrounded fine chalk. Material Cement Kiln Dust (CKD). 3.00 - 3.45 3.00 15D S 17 (MADE GROUND) 24/06/15 16X 3.00 - 4.000800hrs 2.41m 2.40m: Coarse gravel sized pocket of soft brown clay. 17D 3.20 - 3.30Vo 0.3 18D 3.30 - 3.4019D 3.70 - 3.80Vo 0.5 20D 3.80 - 3.90 3.70 - 4.00m: Gravelly. S<1 ELe/C 21D 4.00 - 4.45 4.00 4.10 -1.5022X 4.00 - 4.50 24/06/15 Plastic black slightly sandy amorphous PEAT. 0955hrs 11/ 3.88m 4.50 -1.90Borehole completed at 4.50m. R ALJH GPJ GEO ECH M25 GLB 19/10/2015 1046 09

EQUIPMENT: Geotechnical Terrier 2000 rig.

METHOD: Hand dug inspection pit 0.00-1.20m. Dynamic sampled (113mm) 1.20-2.00m and 3.00-4.50m and (84mm) 2.00-3.00m.

CASING: 128mm diam to 4.50m.

BACKFILL: On completion, borehole backfilled with bentonite 4.50-4.00m. A slotted standpipe (50mm) with geosock was installed to 4.00m, granular response zone 4.00-1.30m, bentonite seal 1.30-0.30m, concrete and raised helmet cover 0.30-0.00m.

REMARKS: Downhole magnetometry for UXO risk mitigation undertaken 0.00-4.50m.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEETS

remarks water strike (m) casing (m) rose to (m) time to rise (min) 2.00 2.00 1.71 20 Overnight strike.

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(8.00)

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BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

1:50

Start Date 25 June 2015 Easting 560318.8 Scale

1 of 2

25 June 2015 **End Date** Northing 175576.6 Ground level 12.35mOD Depth 8.90 m

progress date/time water depth	no & type	depth	to	casing depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	lege
25/06/15 1400hrs	1B	0.20 -					11	Grass over soft dark brown clayey SILT. (MADE GROUND)	0.10	12.25	\bigotimes
	2D* 3B 4D*	0.20 - 0.50 - 0.50 -	0.70	Ē	Vo 1.2			Soft to firm dark brown slighty sandy silty CLAY. (MADE GROUND)	0.50	11.85	\bigotimes
	5B 6D*	1.00 - 1.00 -	1.20 1.20	Ė	Vo 0.8			Poorly cemented light grey slightly sandy SILT. Material Cement Kiln Dust (CKD). (MADE GROUND)			\otimes
	7D 8X	1.20 -		Nil	S 15			Medium dense locally poorly cemented greyish brown with rare white specks very silty fine SAND. Material Cement	1.20	11.15	$\stackrel{\times}{\times}$
	9D* 10D	1.45 - 1.55 -			Vo 0.0			Kiln Dust (CKD). (MADE GROUND) 1.55 - 1.75m: Rare fine to coarse gravel sized black			\otimes
	11D*	1.90 -	2.00	Lan	Vo 0.0	1		pockets.	2.00	10.35	$\times\!\!\times$
	U 12X	2.00 - 2.00 -		2.00				Medium dense well cemented brown with rare grey specks very silty fine SAND. Material Cement Kiln Dust			\bigotimes
	13D*	2.45 -	-	E 19	Vo 0.0			(CKD). (MADE GROUND)			\otimes
	14D	2.55 -		F	1/- 00	3		2.65 - 3.00m: Brownish grey mottled light grey.			\otimes
	15D* 16D	2.90 -		200	Vo 0.0 S 23	3		2.80m: Coarse gravel sized black staining.	100		\otimes
	17X	3.00 -		2.00	3 23	132			Ī		\otimes
	18D* 19D	3.45 - 3.55 -		Ē	Vo 0.0			3.50 - 3.70m: Greyish brown sandy silt.			\otimes
	20D*	3.90 -	4.00	F	Vo 0.0	1		A STATE OF THE STA			\times
	21D 22X	4.00 - 4.00 -		2.00	S 13				-		\bigotimes
	23D*	4.45 -		E	Vo 0.0	1					\bigotimes
	24D 25D*	4.55 -		=	Vo 0.0						\bigotimes
	26U 27X	5.00 - 5.00 -		2.00					5.25	7.10	\bigotimes
	28D*	5.45 -	5.75		Vo 0.0			Medium dense well cemented greyish brown with rare white and grey specks sandy SILT. Material Cement Kiln Dust (CKD). (MADE GROUND)			\bigotimes
	29D 30X	6.00 - 6.00 -		2.00	S 16						$\overset{\times}{\otimes}$
	31D*	6.45 -	6.75		Vo 0.0				4.23		\bigotimes
	32X	7.00 - 7.00 -		2.00	C 20			Medium dense well cemented locally thinly laminated greyish brown with rare black and light grey specks slightly sandy SILT. Material Cement Kiln Dust (CKD).	6.90	5.45	${\otimes}$
	33D* 34D	7.45 - 7.55 -			Vo 0.0	1		(MADE GROUND)			\bigotimes
	35D*	7.90 -	8.00	-	Vo 0.0	- 15		Continued Next Page	{8.00}		\bowtie

EQUIPMENT: Geotechnical Terrier 2000 rig.

METHOD: Hand dug inspection pit 0.00-1.20m. Dynamic sampled (113mm) 1.20-3.00m, (98mm) 3.00-4.00m and 7.00-8.00, (84mm) 4.00-5.00m and 8.00-8.90, (74mm) 5.00-6.00m, (64mm) 6.00-7.00m.

CASING: 128mm diam to 2.00m.

BACKFILL: On completion, a slotted standpipe (50mm) with geosock was installed to 8.90m, granular response zone 8.90-1.50m, bentonite seal 1.50-0.30m, concrete and raised helmet cover 0.30-0.00m.

REMARKS: Downhole magnetometry for UXO risk mitigation undertaken 0.00-8.90m. Hole terminated at 8.90m due to refusal of sampler barrel.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE S

water strike (m) casing (m) rose to (m) time to rise (min) remarks

Groundwater not encountered.



CONTRACT

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BOREHOLE LOG



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SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet 2 of 2

Start Date 25 June 2015

Easting 560318.8

Scale 1:50

End Date 25 June 2015 Northing 175576.6 Ground level 12.35mOD Depth 8.90 m

progress sam date/time no water depth typ	&	depth (m) from to	casing depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	degend
36 25/06/15 1830hrs Dry 38	X	8.00 - 8.45 8.00 - 8.90 8.55 - 8.65 8.70 - 8.80 8.90 - 9.07	- 2.00	S 27 Vo 0.0 C*333	ialige		8.80 - 8.90m: Slightly gravelly. Gravel is angular to subrounded fine to coarse flint. Borehole completed at 8.90m.	8.90	3.45	
								{18.00}		

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BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Start Date

23 June 2015

Easting 559578.2 Scale

1:50

1 of 1

End Date 23 June 2015

Northing

175188.9 Ground level

8.20mOD

Depth 1.65 m

1950hrs 18	progress date/time water depth	no & type	depth (m) to	depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	legend
1.65 - 1.87 Nil C*195 Well cemented light grey with with rare black specks, rare medium gravel sized black pockets and rare orange staining sandy SILT with rare rootlets (up to 1mm diam) and rare angular fine to coarse flint gravel. Material Cement Kiln Dust (CKD). (MADE GROUND)	23/06/15 1250hrs	2D* 3B 4D* 5B 6D* 7D	0.30 - 0.5 0.50 - 0.7 0.50 - 0.7 1.00 - 1.2 1.20 - 1.6	50 70 70 20 20 65	Nil	Vo 0.0			SAND with rare black fine gravel sized pockets of ash and rare rootlets (up to 1mm diam). Gravel is angular to subrounded fine to coarse flint, chalk and rare sandstone. (MADE GROUND) 0.30 - 0.50m: Rare coarse gravel sized glass fragments. 0.50 - 1.20m: Rare fragments of organic material. Gravel is flint, chalk, poorly cemented silt (Cemented Kiln Dust) and rare sandstone.			
Borehole completed at 1.65m.	2.,		1.65 - 1.8	87	Nil	C*195	1		medium gravel sized black pockets and rare orange staining sandy SILT with rare rootlets (up to 1mm diam) and rare angular fine to coarse flint gravel. Material	1.05	6.55	~~

EQUIPMENT: Geotechnical Terrier 2000 rig.

METHOD: Hand dug inspection pit 0.00-1.20m. Dynamic sampled (84mm) 1.20-1.65m.

CASING: None used.

BACKFILL: On completion, hole backfilled with bentonite 1.65-0.90m and arisings 0.90-0.00m.

REMARKS: Downhole magnetometry for UXO risk mitigation undertaken 0.00-1.65m. Borehole terminated at 1.65m due to hard strata and reattempted as

WS301A approximately 1.50m southwest.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE S

water strike (m) casing (m) rose to (m) time to rise (min) remarks

Groundwater not encountered.

AGS

CONTRACT 30766

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BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet 1 of 1

Start Date 23 June 2015

559580.0 Easting

Scale

1:50

End Date 23 June 2015 Northing

175191.5 Ground level

8.40mOD

Depth 0.36 m

progress date/time water depth	no & type	depth (m) to	depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	legend
23/06/15 1255hrs 23/06/15 1400hrs Dry								Brownish grey slightly silty slightly gravelly fine to coarse SAND with rare black fine gravel sized pockets of ash and rare rootlets (up to 1mm diam). Gravel is angular to subrounded fine to coarse flint, chalk and rare sandstone. (MADE GROUND)	0.36	8.04	***
								Borehole completed at 0.36m.			
									{8.00}		

EQUIPMENT: Geotechnical Terrier 2000 rig.

METHOD: Hand dug inspection pit 0.00-0.36m.

CASING: None used.

BACKFILL: On completion, hole backfilled with arisings.

REMARKS: Inspection pit terminated at 0.36m due to hard strata and reattempted as WS301B approximately 1.50m to the north.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE S

water strike (m) casing (m) rose to (m) time to rise (min)

Groundwater not encountered.

AGS

CONTRACT 30766

CHECKED EC

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BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

WS301E

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet 1 of 1

Start Date 23 June 2015

Easting 559582.5

Scale 1:50

End Date 23 June 2015

Northing 175188.6 Ground level

8.20mOD

Depth 0.31 m

progress date/time water depth	no & type	depth (m	depth	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	legend
23/06/15 1400hrs 23/06/15 1430hrs Dry							Brownish grey slightly silty slightly gravelly fine to coarse SAND with rare black fine gravel sized pockets of ash and rare rootlets (up to 1mm diam). Gravel is angular to subrounded fine to coarse flint, chalk and rare sandstone. (MADE GROUND)	0.31	7.89	
			harran ha				Borehole completed at 0.31m.			
								{8.00}		

EQUIPMENT: Geotechnical Terrier 2000 rig.

METHOD: Hand dug inspection pit 0.00-0.31m.

CASING: None used.

BACKFILL: On completion, hole backfilled with arisings.

REMARKS: Inspection pit terminated at 0.31m due to hard strata and reattempted as WS301C approximately 1.50m to the southeast.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE IS

water strike (m) casing (m) rose to (m) time to rise (min) remark

Groundwater not encountered.



30766

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Geotechnical Engineering Ltd el 01452 527743 30766 MAS ER GPJ R ALJH GPJ GEO ECH M25 GLB 19/10/2015 1046 12

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BOREHOLE LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

1 of 1

1:50

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Start Date

23 June 2015

Easting 559584.0 Scale

End Date

23 June 2015

Northing

175191.0 Ground level

8.35mOD

Depth 0.33 m

progress date/time water depth	no & type	depth (m)	casing depth (m)	test type & value	samp. /core range	instru -ment	description	depth (m)	reduced level (m)	legen
23/06/15 1430hrs 23/06/15 1515hrs Dry							Brownish grey slightly silty slightly gravelly fine to coarse SAND with rare black fine gravel sized pockets of ash and rare rootlets (up to 1mm diam). Gravel is angular to subrounded fine to coarse flint, chalk and rare sandstone. (MADE GROUND)	0.33	8.02	XX
							Borehole completed at 0.33m.	=		
								_		

EQUIPMENT: Geotechnical Terrier 2000 rig.

METHOD: Hand dug inspection pit only 0.00-0.0.33m.

CASING: None used.

BACKFILL: On completion, hole backfilled with arisings.

REMARKS: Inspection pit terminated at 0.33m due to hard strata.

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE S

water strike (m) casing (m) rose to (m) time to rise (min)

Groundwater not encountered.

AGS

CONTRACT 30766

CHECKED EC

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STANDARD PENETRATION TEST



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

ooreho e	boreho e	bottom	cas ng	water		seat n	g dr ve					test	dr ve				test		energ
no.	depth (m)	depth (m)	depth (m)	eve (m)	bo	ws	pe (m			bo	ws			pe (mi			type	N	rat o
BH101	1.20	1.65	N	0.80	1	0	75	75	1	2	2	2	75	75	75	75	С	7	81
BH101	3.20	3.65	3.00	0.80	1	1	75	75	1	0	0	1	75	75	75	75	С	2	81
BH101	4.20	4.65	4.20	3.10	1	0	75	75	0	0	0	0	75	75	75	75	С	<1	81
BH101	6.20	6.65	6.00	Dry	1	0	75	75	1	0	1	0	75	75	75	75	s	2	81
BH101	8.20	8.65	8.00	Dry	1	0	75	75	0	1	0	0	75	75	75	75	s	1	81
BH101	10.50	10.95	10.50	Dry	1	0	75	75	0	1	0	0	75	75	75	75	s	1	81
BH101	13.50	13.95	13.00	Dry	- 1	0	75	75	1	0	1	4	75	75	75	75	s	6	81
BH101	16.50	16.95	16.50	9.60	1	1	75	75	2	2	2	1	75	75	75	75	С	7	81
BH101	18.00	18.45	18.00	3.10	1	3	75	75	4	6	10	15	75	75	75	75	С	35	81
BH101	19.50	19.95	19.50	3.30	4	5	75	75	8	9	13	10	75	75	75	75	С	40	81
BH101	21.00	21.45	21.00	5.80	1	1	75	75	2	1	2	2	75	75	75	75	s	7	81
BH101	22.50	22.95	22.50	5.00	1	0	75	75	1	1	2	1	75	75	75	75	s	5	81
BH101	24.00	24.45	22.50	2.98	3	5	75	75	5	6	7	8	75	75	75	75	s	26	68
BH101	25.50	25.95	23.30	9.80	3	6	75	75	6	9	17	21	75	75	75	75	s	53	68
BH101	28.50	28.95	28.50	9.85	9	9	75	75	10	18	27	29	75	75	75	75	s	84	68
BH101	31.70	31.93	31.70	9.80	18	7	75	20	58	42			75	60			С	222	68
BH101	34.70	34.82	34.70	8.00	25		40		85	15			75	0			С	400	68
BH101	37.70	37.88	37.70	8.50	16	9	75	10	69	31			75	20			С	316	68
BH101	40.70	40.84	40.70	8.20	25		75		100				60				С	500	68
BH101	43.70	43.85	43.70	9.00	25		75		100				75				С	400	68
BH201	1.70	2.02	1.50	Dry	17	8	75	30	40	38	22		75	75	65		С	140	73
BH201	2.70	3.15	2.70	2.00	11	12	75	75	69	16	7	3	75	75	75	75	С	95	73
BH201	3.70	4.11	3.70	2.99	4	3	75	75	8	14	42	36	75	75	75	35	С	115	73
BH201	4.70	5.15	4.70	3.10	5	2	75	75	4	3	1	3	75	75	75	75	С	11	73

notes

- 1 Test carried out in general accordance with BS EN SO 22476-3 2005 + A1 2011
- 2 N values have not been subjected to any correction
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STANDARD PENETRATION TEST



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

boreho e	boreho e	bottom	cas ng	water	8	eat n	g dr ve					test	dr ve				test		energ
no.	depth (m)	depth (m)	depth (m)	eve (m)	bo	ws	(m			b o	ws			(mi			type	N	(%)
BH201	5.70	6.15	5.70	3.74	5	4	75	75	3	2	1	1	75	75	75	75	С	7	73
BH201	7.70	8.15	6.70	3.68	1	3	75	75	6	4	5	7	75	75	75	75	s	22	73
BH201	8.70	9.15	8.70	3.76	3	4	75	75	3	2	2	2	75	75	75	75	s	9	73
BH201	9.70	10.15	9.70	3.57	3	5	75	75	3	3	2	1	75	75	75	75	s	9	73
BH202	1.20	1.65	N	Dry	1	0	75	75	1	1	1	1	75	75	75	75	s	4	81
BH202	3.20	3.65	3.00	3.20	1	2	75	75	1	1	1	i	75	75	75	75	s	4	81
BH202	5.20	5.65	5.20	4.50	1	0	75	75	0	1	0	0	75	75	75	75	s	1	81
BH202	7.20	7.65	7.00	5.80	1	1	75	75	0	0	1	0	75	75	75	75	s	1	81
BH202	9.20	9.65	9.20	4.40	1	0	75	75	0	1	0	1	75	75	75	75	s	2	81
BH202	11.50	11.95	11.00	10.20	1	0	75	75	1	0	1	0	75	75	75	75	s	2	81
BH202	14.50	14.95	13.50	Dry	2	2	75	75	1	2	1	2	75	75	75	75	s	6	81
BH202	17.50	17.95	13.50	17.00	1	0	75	75	1	1	1	5	75	75	75	75	s	8	81
BH202	19.00	19.45	19.00	19.00	2	2	75	75	2	2	2	2	75	75	75	75	С	8	81
BH202	20.50	20.95	20.50	6.30	2	2	75	75	1	1	1	1	75	75	75	75	s	4	81
BH202	22.50	22.95	22.50	5.42	3	2	75	75	2	2	2	2	75	75	75	75	s	8	73
BH202	24.00	24.45	24.00	0.27	3	3	75	75	3	4	4	4	75	75	75	75	s	15	73
BH202	27.00	27.45	27.00	4.04	1	3	75	75	3	2	3	2	75	75	75	75	s	10	73
BH202	28.50	28.95	28.50	3.71	1	2	75	75	8	8	17	22	75	75	75	75	s	55	73
BH203	1.20	1.65	1.20	Dry	1	3	75	75	3	0	3	2	75	75	75	75	С	8	81
BH203	2.20	2.65	2.20	Dry	1	0	75	75	1	1	2	2	75	75	75	75	С	6	81
BH203	3.20	3.65	3.20	Dry	1	0	75	75	1	1	1	2	75	75	75	75	s	5	81
BH203	5.20	5.65	5.20	Dry	1	3	75	75	4	4	8	9	75	75	75	75	s	25	81
BH203	6.20	6.65	6.00	Dry	1	4	75	75	5	6	9	9	75	75	75	75	s	29	81
BH203	7.20	7.65	7.20	Dry	3	6	75	75	7	8	8	9	75	75	75	75	s	32	81

notes:

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STANDARD PENETRATION TEST



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

ooreho e	boreho e	bottom	cas ng	water	s	seat n	g dr ve	-				test	dr ve				test		energ
no.	depth (m)	depth (m)	depth (m)	eve (m)	bo	ws	pe (mi			bo	ws			pe (mi			type	N	rat o
BH203	8.20	8.65	8.20	8.00	7	7	75	75	7	9	9	8	75	75	75	75	С	33	81
BH203	9.20	9.65	9.00	8.10	1	2	75	75	3	4	6	6	75	75	75	75	С	19	81
BH203	10.20	10.65	10.00	9.40	2	2	75	75	3	3	4	5	75	75	75	75	С	15	81
BH203	12.00	12.45	12.00	9.30	1	0	75	75	1	1	1	1	75	75	75	75	С	4	81
BH203	13.50	13.95	13.50	4.10	1	1	75	75	1	1	1	2	75	75	75	75	s	5	81
BH203	15.50	15.95	15.50	2.96	3	1	75	75	2	4	4	2	75	75	75	75	s	12	73
BH203	17.00	17.45	16.00	2.68	2	2	75	75	4	4	3	4	75	75	75	75	s	15	73
BH203	18.50	18.95	18.50	2.82	1	3	75	75	3	2	3	4	75	75	75	75	s	12	73
BH203	20.00	20.45	18.50	2.80	4	5	75	75	4	5	4	5	75	75	75	75	s	18	73
BH203	21.50	21.84	21.50	2.70	8	15	75	75	30	37	33		75	75	40		s	158	73
BH203	22.70	23.15	22.70	2.34	4	7	75	75	7	6	8	12	75	75	75	75	s	33	73
BH203	25.70	26.06	22.70	3.42	7	15	75	75	28	44	28		75	75	55		s	146	73
BH203	28.70	29.15	22.70	2.86	7	10	75	75	7	9	7	9	75	75	75	75	s	32	73
BH203	31.60	32.05	22.70	2.73	7	12	75	75	13	18	18	15	75	75	75	75	S	64	73
BH203	34.60	35.05	22.70	2.74	4	5	75	75	7	9	12	14	75	75	75	75	S	42	73
BH203	37.20	37.62	22.70	2.74	6	8	75	75	12	21	40	27	75	75	75	45	S	111	73
BH203	40.20	40.65	22.70	2.76	7	10	75	75	19	27	27	27	75	75	75	75	S	100	73
BH204	1.20	1.65	1.00	Dry	1	6	75	75	8	11	13	16	75	75	75	75	С	48	81
BH204	2.20	2.65	2.00	Dry	1	1	75	75	2	2	1	2	75	75	75	75	С	7	81
BH204	3.20	3.65	3.20	Dry	1	0	75	75	1	2	2	2	75	75	75	75	С	7	81
BH204	4.20	4.65	4.00	Dry	0	1	75	75	1	1	1	2	75	75	75	75	s	5	81
BH204	6.20	6.65	6.20	Dry	0	1	75	75	1	1	1	1	75	75	75	75	S	4	81
BH204	7.20	7.65	7.20	6.80	2	2	75	75	4	4	4	8	75	75	75	75	С	20	81
BH204	8.20	8.65	8.20	6.80	4	6	75	75	6	4	4	3	75	75	75	75	С	17	81

notes:

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STANDARD PENETRATION TEST



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

ooreho e	boreho e	bottom	cas ng	water		seat n	g dr ve				test	dr ve				test		energ
no.	depth (m)	depth (m)	depth (m)	eve (m)	bo	ws	pen (mm)		bo	ws			pe (mi			type	N	rat o (%)
BH204	9.20	9.65	9.00	Dry	1	0	75 75	1	1	1	2	75	75	75	75	С	5	81
BH204	11.50	11.95	11.50	8.80	1	2	75 75	2	1	1	1	75	75	75	75	s	5	81
BH204	13.50	13.95	13.50	5.40	1	2	75 75	1	1	2	2	75	75	75	75	s	6	81
BH204	15.00	15.45	15.00	2.90	1	0	75 75	1	0	1	1	75	75	75	75	s	3	73
BH204	16.50	16.95	16.50	3.05	1	1	75 75	2	2	3	5	75	75	75	75	S	12	73
BH204	18.00	18.45	18.00	2.87	3	3	75 75	3	3	4	4	75	75	75	75	s	14	73
BH204	19.50	19.95	18.00	2.87	3	3	75 75	2	1	1	3	75	75	75	75	s	7	73
BH501	1.20	1.65	N	Dry	5	1	75 75	2	2	1	2	75	75	75	75	s	7	79
BH501	2.20	2.65	N	Dry	1	1	75 75	1	2	3	3	75	75	75	75	S	9	79
BH501	3.20	3.65	N	Dry	1	1	75 75	1	2	2	2	75	75	75	75	s	7	79
BH501	4.20	4.65	N	Dry	1	2	75 75	3	4	4	4	75	75	75	75	s	15	79
BH501	5.20	5.65	4.20	2.14	3	3	75 75	3	3	3	4	75	75	75	75	s	13	79
BH501	6.20	6.65	6.20	1.59	2	3	75 75	3	3	4	4	75	75	75	75	s	14	79
BH501	7.20	7.65	7.20	1.34	4	5	75 75	6	6	7	7	75	75	75	75	s	26	79
BH501	8.20	8.65	7.20	3.21	3	4	75 75	3	3	3	2	75	75	75	75	s	11	73
BH501	9.20	9.65	7.20	Dry	1	0	75 75	0	0	1	1	75	75	75	75	s	2	73
BH501	10.20	10.65	7.20	Dry	1	0	75 75	0	0	1	0	75	75	75	75	s	1	73
BH501	11.70	12.15	11.70	11.30	2	2	75 75	2	2	1	1	75	75	75	75	s	6	73
BH501	13.00	13.45	13.00	11.78	2	4	75 75	12	11	9	12	75	75	75	75	s	44	73
BH501	14.50	14.95	13.00	11.70	2	3	75 75	5	6	7	8	75	75	75	75	s	26	73
BH501	15.70	16.15	13.00	12.35	13	10	75 75	8	9	10	15	75	75	75	75	s	42	73
BH501	17.00	17.45	15.70	11.57	3	6	75 75	8	8	9	16	75	75	75	75	s	41	73
BH501	20.00	20.45	17.00	11.10	3	3	75 75	7	18	38	18	75	75	75	75	s	81	73
BH502	1.20	1.65	N	Dry	2	3	75 75	5	9	12	15	75	75	75	75	s	41	73

notes

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STANDARD PENETRATION TEST



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

ooreho e	boreho e	bottom	cas ng	water		seat n	g dr ve					test	dr ve				test		energ
no.	depth (m)	depth (m)	depth (m)	eve (m)	bo	ws	pe (m	en m)		bo	ws			pe (mi			type	N	rat o
BH502	2.20	2.65	N	Dry	1	2	75	75	2	4	4	5	75	75	75	75	s	15	73
BH502	3.20	3.65	N	Dry	1	1	75	75	1	1	1	2	75	75	75	75	s	5	73
BH502	4.20	4.65	N	Dry	1	1	75	75	1	2	3	2	75	75	75	75	s	8	73
BH502	5.20	5.65	N	Dry	4	8	75	75	7	7	6	5	75	75	75	75	s	25	73
BH502	6.20	6.65	N	Dry	2	2	75	75	1	1	2	2	75	75	75	75	s	6	73
BH502	7.20	7.65	N	Damp	1	0	75	75	1	2	2	2	75	75	75	75	s	7	73
BH502	8.20	8.65	N	Dry	2	2	75	75	1	2	2	2	75	75	75	75	s	7	73
BH502	9.20	9.65	N	Dry	1	0	75	75	1	0	0	0	75	75	75	75	s	1	73
BH502	10.20	10.65	10.20	9.34	17	8	75	75	3	2	2	2	75	75	75	75	s	9	73
BH502	11.70	12.15	11.70	Dry	3	4	75	75	6	7	7	8	75	75	75	75	s	28	73
BH502	13.20	13.65	13.20	11.95	5	6	75	75	8	8	6	8	75	75	75	75	s	30	73
BH502	14.50	14.95	13.20	11.78	5	18	75	75	13	12	19	18	75	75	75	75	s	62	73
BH502	17.00	17.45	17.00	11.96	5	8	75	75	9	9	10	12	75	75	75	75	s	40	73
BH502	20.00	20.45	17.00	12.00	3	5	75	75	8	9	13	19	75	75	75	75	s	49	73
BH703	1.20	1.65	N	Dry	2	1	75	75	2	2	2	2	75	75	75	75	s	8	79
BH703	2.20	2.65	N	Dry	2	1	75	75	2	2	1	2	75	75	75	75	s	7	79
BH703	3.20	3.65	N	Dry	2	2	75	75	3	3	3	3	75	75	75	75	s	12	79
BH703	4.20	4.65	N	Dry	1	1	75	75	1	2	2	2	75	75	75	75	s	7	79
BH703	5.20	5.65	N	Dry	2	2	75	75	3	3	5	5	75	75	75	75	s	16	79
BH703	6.20	6.65	6.20	1.84	5	9	75	75	9	10	10	9	75	75	75	75	s	38	79
BH703	7.20	7.65	7.20	2.14	4	4	75	75	17	11	6	8	75	75	75	75	s	42	79
BH703	8.20	8.65	8.20	4.17	3	4	75	75	3	3	3	2	75	75	75	75	s	11	79
BH703	9.20	9.65	9.20	4.46	1	1	75	75	1	1	1	1	75	75	75	75	s	4	79
BH703	10.20	10.65	10.20	4.37	2	1	75	75	2	2	2	2	75	75	75	75	s	8	79

notes

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STANDARD PENETRATION TEST



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

boreho e	boreho e	bottom	cas ng	water	8	seat n	gdrve				test	dr ve				test		energ
no.	depth (m)	depth (m)	depth (m)	eve (m)	bo	ws	pen (mm)		b o	ws			pe (mr			type	N	rat o (%)
BH704	1.20	1.65	N	Dry	1	1	75 75	1	1	1	1	75	75	75	75	s	4	79
BH704	2.20	2.65	N	Dry	1	1	75 75	1	1	0	1	75	75	75	75	s	3	79
BH704	4.20	4.65	N	4.10	1	1	75 75	1	1	1	2	75	75	75	75	s	5	79
BH704	5.20	5.65	5.20	4.10	2	2	75 75	1	1	1	1	75	75	75	75	s	4	79
BH704	6.20	6.65	6.15	3.31	2	3	75 75	4	2	2	2	75	75	75	75	s	10	79
BH704	7.20	7.65	7.20	4.11	2	2	75 75	2	2	2	2	75	75	75	75	s	8	79
BH704	8.20	8.65	8.20	4.20	1	2	75 75	3	3	4	4	75	75	75	75	s	14	79
BH704	9.20	9.65	9.20	3.61	4	4	75 75	4	3	3	4	75	75	75	75	s	14	79
BH704	10.20	10.65	10.20	3.30	2	2	75 75	2	2	2	2	75	75	75	75	s	8	79
BH704	11.70	12.15	10.20	3.37	1	0	75 75	1	1	2	2	75	75	75	75	s	6	79
BH704	13.20	13.65	13.20	2.61	3	3	75 75	3	5	5	5	75	75	75	75	s	18	79
BH704	14.70	15.15	14.70	1.47	3	3	75 75	5	5	6	8	75	75	75	75	s	24	79
BH704	16.20	16.65	16.20	3.38	2	3	75 75	3	5	5	5	75	75	75	75	s	18	79
BH704	17.70	18.15	17.70	5.14	4	5	75 75	7	7	6	7	75	75	75	75	s	27	79
BH704	19.20	19.65	19.20	4.34	1	2	75 75	4	6	7	7	75	75	75	75	s	24	79
BH704	20.20	20.65	19.20	4.28	2	5	75 75	5	6	5	5	75	75	75	75	s	21	79
BH705	1.20	1.65	N	Dry	4	6	75 75	8	6	5	4	75	75	75	75	s	23	79
BH705	2.20	2.65	N	Dry	5	5	75 75	5	4	4	3	75	75	75	75	s	16	79
BH705	3.20	3.65	N	Dry	3	3	75 75	4	4	3	3	75	75	75	75	s	14	79
BH705	5.20	5.65	4.20	1.04	1	1	75 75	0	1	1	2	75	75	75	75	s	4	79
BH705	6.20	6.65	6.20	1.09	1	0	75 75	1	1	1	1	75	75	75	75	s	4	79
BH705	7.20	7.65	7.20	1.06	1	1	75 75	1	1	1	2	75	75	75	75	s	5	79
BH705	8.20	8.65	8.20	1.34	1	1	75 75	2	2	1	2	75	75	75	75	s	7	79
BH705	9.20	9.65	9.20	1.24	3	2	75 75	3	3	3	3	75	75	75	75	s	12	79

notes

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STANDARD PENETRATION TEST



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

boreho e	boreho e	bottom	cas ng	water	S	eat n	g dr ve				test	dr ve				test		energ
no.	depth (m)	depth (m)	depth (m)	eve (m)	b o	ws	pen (mm)		bo	ws			pe (mi			type	N	rat o (%)
BH705	10.20	10.65	10.20	1.54	3	3	75 75	2	3	3	2	75	75	75	75	s	10	79
BH705	11.70	12.15	11.70	1.45	4	4	75 75	4	3	3	4	75	75	75	75	s	14	79
BH705	13.20	13.65	13.20	1.59	2	2	75 75	3	3	3	3	75	75	75	75	s	12	79
BH705	14.70	15.15	14.70	1.61	4	4	75 75	5	4	4	4	75	75	75	75	s	17	79
BH705	16.20	16.65	16.20	1.74	7	7	75 75	7	5	6	5	75	75	75	75	s	23	79
BH705	17.70	18.15	17.70	2.17	6	6	75 75	7	7	6	7	75	75	75	75	s	27	79
BH705	18.30	18.68	17.70	2.14	25		75	10	10	10	9	75	75	75	75	С	39	79
BH705	19.80	20.25	19.80	2.20	4	4	75 75	4	4	7	6	75	75	75	75	s	21	79
BH706	1.20	1.65	N	Dry	2	2	75 75	2	2	2	3	75	75	75	75	s	9	79
BH706	2.20	2.65	N	Dry	2	3	75 75	3	3	3	3	75	75	75	75	s	12	79
BH706	3.20	3.65	N	Dry	3	3	75 75	3	3	4	5	75	75	75	75	s	15	79
BH706	4.20	4.65	N	Dry	3	3	75 75	4	4	5	4	75	75	75	75	s	17	79
BH706	5.20	5.65	N	Dry	7	9	75 75	9	9	9	8	75	75	75	75	s	35	79
BH706	6.20	6.65	6.20	1.59	2	2	75 75	6	8	6	7	75	75	75	75	s	27	79
BH706	7.20	7.65	7.20	4.16	4	6	75 75	7	6	7	7	75	75	75	75	s	27	79
BH706	8.20	8.65	8.20	4.57	1	1	75 75	0	1	1	0	75	75	75	75	s	2	79
BH706	9.20	9.65	9.20	4.36	2	1	75 75	2	2	3	2	75	75	75	75	s	9	79
BH706	10.20	10.65	10.20	4.71	2	4	75 75	3	3	4	3	75	75	75	75	s	13	79
BH706	11.70	12.15	11.70	4.87	2	2	75 75	4	2	2	3	75	75	75	75	s	11	79
BH706	13.20	13.65	13.20	5.24	2	2	75 75	1	2	3	2	75	75	75	75	s	8	79
BH706	14.70	15.15	14.70	6.44	2	2	75 75	3	4	4	4	75	75	75	75	s	15	79
BH706	16.20	16.65	16.20	6.18	1	1	75 75	2	1	5	4	75	75	75	75	s	12	79
BH706	17.70	18.15	17.70	6.53	3	4	75 75	5	4	4	4	75	75	75	75	s	17	79
BH706	19.20	19.65	19.20	6.41	4	4	75 75	5	5	5	6	75	75	75	75	s	21	79

notes

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- 3 Test carried out using split spoon S solid cone C
- Where full test drive not completed linearly extrapolated N value reported
- 5 <1 Denotes hammer self weight penetration (sank under own weight)
- 6 ** Denotes no effective penetration

STANDARD PENETRATION TEST



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

ooreho e	boreho e	bottom	cas ng	water		seat n	g dr ve					test	dr ve				test		energ
no.	depth (m)	depth (m)	depth (m)	eve (m)	bo	ws	pe (m	4.47		bo	ws			pe (mi			type	N	rat o (%)
BH706	20.70	21.15	20.70	6.74	2	3	75	75	5	7	8	10	75	75	75	75	s	30	79
BH706	22.20	22.65	22.20	6.61	8	9	75	75	10	13	16	21	75	75	75	75	s	60	79
BH706	24.00	24.45	24.00	7.45	4	5	75	75	8	10	14	13	75	75	75	75	s	45	79
BH706	25.50	25.95	25.45	7.36	6	7	75	75	8	11	14	14	75	75	75	75	s	47	79
BH706	28.30	28.75	26.60	6.21	6	5	75	75	6	7	6	6	75	75	75	75	s	25	79
BH706	29.80	30.25	26.60	6.24	6	6	75	75	7	7	6	7	75	75	75	75	s	27	79
BH707	1.20	1.65	N	Dry	2	4	75	75	3	2	3	2	75	75	75	75	s	10	79
BH707	2.20	2.65	N	Dry	1	1	75	75	1	1	1	1	75	75	75	75	s	4	79
BH707	3.20	3.65	N	Dry	1	1	75	75	া	1	1	1	75	75	75	75	s	4	79
BH707	4.20	4.65	N	Dry	1	1	75	75	4	8	7	5	75	75	75	75	s	24	79
BH707	5.20	5.65	N	Dry	2	2	75	75	2	2	2	2	75	75	75	75	s	8	79
BH707	6.20	6.65	6.20	1.14	2	2	75	75	2	2	2	4	75	75	75	75	s	10	79
BH707	7.20	7.65	7.20	1.59	2	2	75	75	3	4	4	6	75	75	75	75	s	17	79
BH707	8.20	8.65	8.20	2.41	6	8	75	75	8	10	10	13	75	75	75	75	s	41	79
BH707	9.20	9.65	9.20	1,41	10	11	75	75	11	12	12	12	75	75	75	75	s	47	79
BH707	10.20	10.65	10.20	4.58	6	6	75	75	10	6	5	4	75	75	75	75	s	25	79
BH707	11.70	12.15	11.70	5.69	- 1	0	75	75	1	1	0	1	75	75	75	75	s	3	79
BH707	14.70	15.15	14.70	5.60	1	1	75	75	1	2	3	5	75	75	75	75	s	11	79
BH707	17.70	18.15	17.70	9.63	4	5	75	75	5	6	5	5	75	75	75	75	s	21	79
BH707	19.20	19.65	19.20	8.58	2	2	75	75	4	5	5	5	75	75	75	75	s	19	79
BH708	1.20	1.65	N	Dry	1	2	75	75	2	2	2	2	75	75	75	75	s	8	73
BH708	2.20	2.65	N	Dry	1	1	75	75	2	2	1	1	75	75	75	75	s	6	73
BH708	3.20	3.65	N	2.72	1	2	75	75	2	2	4	5	75	75	75	75	s	13	73
BH708	4.20	4.65	N	3.23	1	3	75	75	4	5	5	7	75	75	75	75	s	21	73

notes

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- Where full test drive not completed linearly extrapolated N value reported
- 5 <1 Denotes hammer self weight penetration (sank under own weight)</p>
- ** Denotes no effective penetration

STANDARD PENETRATION TEST



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

boreho e	boreho e	bottom	cas ng	water		seat n	g dr ve					test	dr ve				test		energ
no.	depth (m)	depth (m)	depth (m)	eve (m)	bo	ows	pe (m			bo	ws			(mi			type	N	rat o
BH708	6.20	6.65	N	4.21	2	2	75	75	4	3	4	5	75	75	75	75	s	16	73
BH708	7.20	7.65	N	5.04	1	1	75	75	2	2	2	3	75	75	75	75	s	9	73
BH708	8.20	8.65	7.20	3.30	1	1	75	75	1	2	2	2	75	75	75	75	s	7	73
BH708	10.20	10.65	9.20	5.36	5	9	75	75	13	12	14	15	75	75	75	75	s	54	73
BH708	11.50	11.95	11.50	1.06	7	5	75	75	4	2	3	4	75	75	75	75	s	13	73
BH708	12.80	13.23	11.50	6.08	18	7	75	50	10	6	4	4	75	75	75	75	s	24	73
BH708	14.30	14.75	11.50	9.96	2	2	75	75	1	1	2	2	75	75	75	75	s	6	73
BH708	15.80	16.25	11.50	12.74	1	1	75	75	1	2	2	2	75	75	75	75	s	7	73
BH708	17.30	17.75	11.50	15.58	2	3	75	75	3	2	4	4	75	75	75	75	s	13	73
BH708	18.80	19.25	11.50	15.55	4	4	75	75	5	7	8	9	75	75	75	75	s	29	73
BH708	20.30	20.75	11.50	15.55	7	7	75	75	8	6	7	7	75	75	75	75	s	28	73
BH708	21.50	21.95	20.20	15.50	5	13	75	75	9	14	12	9	75	75	75	75	s	44	73
BH708	22.80	23.25	20.20	15.50	6	5	75	75	5	7	9	10	75	75	75	75	s	31	73
BH708	24.30	24.75	22.80	15.55	5	8	75	75	8	7	9	9	75	75	75	75	s	33	73
BH708	26.50	26.95	24.95	14.98	2	6	75	75	8	9	10	10	75	75	75	75	s	37	73
BH708	28.00	28.45	24.95	15.55	5	3	75	75	10	16	18	19	75	75	75	75	s	63	73
BH708	29.50	29.95	29.50	15.50	5	9	75	75	12	13	19	15	75	75	75	75	s	59	73
WS101	1.20	1.65	N	Dry	2	5	75	75	4	4	4	4	75	75	75	75	s	16	73
WS101	3.00	3.45	3.00	Dry	1	0	75	75	1	1	1	1	75	75	75	75	s	4	73
WS101	4.45	4.90	4.00	4.10	3	3	75	75	3	4	4	4	75	75	75	75	s	15	73
WS102	1.20	1.65	N	Dry	2	3	75	75	3	3	3	6	75	75	75	75	s	15	73
WS102	3.00	3.45	3.00	Dry	1	1	75	75	1	1	2	4	75	75	75	75	s	8	73
WS102	5.00	5.22	5.00	4.68	2	4	75	75	100				70				s	429	73
WS202	1.20	1.65	N	Dry	4	6	75	75	6	8	5	5	75	75	75	75	s	24	73

notes

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STANDARD PENETRATION TEST



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

boreho e	boreho e	bottom	cas ng	water		seat n	g dr ve					test	dr ve				test		energ
no.	depth (m)	depth (m)	depth (m)	eve (m)		ws	pe (m	en		bo	ws			pe (mi			type	N	rat c (%)
WS202	3.00	3.45	3.00	Dry	8	8	75	75	6	6	8	9	75	75	75	75	С	29	73
WS202	4.00	4.45	3.00	Dry	4	6	75	75	6	6	8	9	75	75	75	75	s	29	73
WS202	5.00	5.45	3.00	Dry	10	14	75	75	19	13	12	12	75	75	75	75	С	56	73
WS202	6.00	6.45	3.00	Dry	2	7	75	75	4	4	4	4	75	75	75	75	s	16	73
WS202	7.00	7.45	3.00	Dry	- 1	2	75	75	2	2	3	3	75	75	75	75	s	10	73
WS202	8.00	8.45	3.00	Dry	6	6	75	75	7	4	5	6	75	75	75	75	S	22	73
WS202	9.00	9.45	3.00	9.21	7	14	75	75	12	18	22	22	75	75	75	75	С	74	73
WS202	10.00	10.45	9.00	Dry	7	8	75	75	8	6	7	6	75	75	75	75	S	27	73
WS203	1.20	1.65	N	Dry	1	2	75	75	2	3	2	2	75	75	75	75	S	9	73
WS203	3.00	3.45	3.00	2.41	1	4	75	75	4	4	5	4	75	75	75	75	s	17	73
WS203	4.00	4.45	4.00	3.66	0	0	75	75	0	0	0	0	75	75	75	75	S	<1	73
WS204	1.20	1.65	N	Dry	2	2	75	75	3	2	4	6	75	75	75	75	S	15	73
WS204	3.00	3.45	2.00	Dry	2	5	75	75	4	5	5	9	75	75	75	75	S	23	73
WS204	4.00	4.45	2.00	Dry	2	3	75	75	4	3	3	3	75	75	75	75	S	13	73
WS204	6.00	6.45	2.00	Dry	3	5	75	75	4	5	3	4	75	75	75	75	S	16	73
WS204	7.00	7.45	2.00	Dry	8	9	75	75	7	6	3	4	75	75	75	75	С	20	73
WS204	8.00	8.45	2.00	Dry	2	6	75	75	6	6	7	8	75	75	75	75	S	27	73
WS204	8.90	9.07	2.00	Dry	21	4	75	5	56	44			75	15			С	333	73
WS301	1.20	1.65	N	Dry	4	8	75	75	6	9	10	20	75	75	75	75	S	45	73
WS301	1.65	1.87	N	Dry	25		70		45	46	9		75	75	4		С	195	73

notes

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- 5 <1 Denotes hammer self weight penetration (sank under own weight)
- ** Denotes no effective penetration

TRIAL PIT LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

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SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

Sheet

1 of 1

Start Date

25 June 2015

Easting 560201.2

Scale

1:25

End Date

25 June 2015

Northing

175846.8 Ground level

5.25mOD

Depth 1.90 m

water		sample/te	est	description	depth	level	lege
record	no/type	result	depth (m)	description	(m)	(m)	iege
	1D*	Vo 0 0	0 30	Off-white and light grey silty very sandy subangular fine to coarse poorly cemented silt (Possible Cement Kiln Dust) chalk flint and concrete GRAVEL (MADE GROUND)	0 35	4 90	
	2B		0 50	Poorly cemented light brown mottled white sandy S LT Material Cement Kiln Dust (CKD) (MADE GROUND)	0 35	4 90	
	3D 4D*	Vo 0 0	0 50		070	4 55	\bigotimes
	5D	1000	1 00	Reddish brown mottled light grey yellowish brown black and white very sandy angular and subangular fine to coarse brick concrete sandstone and clinker	-		\bigotimes
	6D*	Vo 0 1	1 00	GRAVEL with a high brick cobble content Rare angular and subangular fine to coarse gravel sized ceramic glass and metal fragments Rare fragments of grey plastic ducting (up to 2x50x160mm) (MADE GROUND)	=		\otimes
	7B		1 00		1 20	4 05	
	8B		1 50	Reddish brown yellowish brown and grey COBBLES and BOULDERS of brick and brick masonry with much angular and subangular fine to coarse brick gravel Frequent wood fragments (up to 5x10x120mm) (MADE GROUND)	1		
	9D 10D*	Vo 0 0	1 50	(-F to 5.1.5.1.1.1) (11.1.5.2 51.55.1.5)	1 60	3 65	\bigotimes
	11B	V000	1 80	Strongly cemented grey mottled off white rough CONCRETE with rare angular and subangular fine and medium flint sandstone and concrete gravel (MADE	-		\otimes
y.	12D	-	1 80	GROUND) Trial pit completed at 1 90m	1 90	3 35	\otimes
	13D*	Vo 0 3	1 80				

Notes

Trapt excavated by JCB 3CX mechanica excavator.

Groundwater not encountered.

Trapts des remaned stabe and vert ca.

Tra pt term nated at 1.90m due to concrete obstruct on. 30 m ns attempted to excavate through wth 300mm penetration.

Tra ptd mens ons 0.60x3.20x1.90m.

On comp et on, the trapt was backfed with materas arsing. Ground protect on measures employed comprising plastic sheeting and wooden boards. On completion of traptiplastic sheeting and wooden boards washed down.

Sketch of Foundat on Not to sca e. A d mens ons n metres.



CONTRACT CHECKED

30766 EC

EXPLORA ORY HOLE LOGS SHOULD BE READ IN CONJUNC ON WITH KEY SHEE S

Geotechnical Engineering Ltd

TRIAL PIT LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

1 of 1

Start Date

24 June 2015

Easting 559666.2 Scale

1:25

End Date

24 June 2015

Northing

175158.2 Ground level

7.55mOD

Depth 2.40 m

water		sample/te		description	depth	level	lege
record	no/type	result	depth (m)	doorprior	(m)	(m)	logi
	1D*	Vo 0 4	0 30	Poorly cemented light grey locally dark grey and reddish brown sandy very gravelly S LT with medium cobble and boulder content of brick brick masonry and concrete Gravel is angular and subangular fine to coarse chalk flint and brick (Material possible Cement Kiln Dust) (MADE GROUND)			
	2B		0 50		- 9		\otimes
	3D		0 50				$\otimes \otimes$
	4D*	Vo 0 0	0 50		9		
	5D		1 00		-		\otimes
	6D*	Vo 0 0	1 00		- 8		\otimes
	7B		1 00		-		
	8B		1 50		- 9	Ш	
	9D	CA 5.5	1 50		4.70		\otimes
	10D*	Vo 0 0	1 50	Dark brown black orangish brown and off white very sandy angular and subangular fine to coarse concrete flint and siltstone GRAVEL with a high cobble and boulder content of concrete and flint Frequent fragments (up to	170_	5 85	
	11D	V- 0.0	2 00	0 50x40x40mm) of black plastic coated fibrous textile Rare angular fine and medium gravel sized glass fragments plastic coated electric cable (up to 7mm			
	12D* 13B 14B	Vo 0 0	2 00 2 40 2 40	diam) plastic (up to 1x20x160mm) and wood (up to 5x10x70mm) (MADE GROUND) 2 10m 2 no fragments of carpet (up to 5x200x300mm)	2 20	5 35	
Dry	15D 16D*	Vo 0 0	2 40 2 40	White and dark brown sandy silty subangular fine to coarse chalk GRAVEL (MADE GROUND) 2 40m Concrete slab	2 40	5 15	\times
				Trial pit completed at 2 40m			
Notes				Sketch of Foundation Not to scale. A id me	ens ons	n metr	es.

Geotechnical Engineering Ltd

Groundwater not encountered.

Trapts des remaned stabe and vert ca.

Tr a pt term nated at 2.40m due to concrete obstruct on.

Tra ptd mens ons 0.60x3.50x2.40m.

On comp et on, the trapt was backfed with materas arsing. Ground protect on measures emp oyed compr s ng p ast c sheet ng and wooden boards. On compet on of trapt past c sheeting and wooden boards washed down.



CONTRACT CHECKED 30766 EC

TRIAL PIT LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Scale

1 of 1

1:25

Start Date

End Date

24 June 2015 24 June 2015 Easting 559576.3

Northing

175188.8 Ground level

8.25mOD

Depth 3.50 m

water		sample/te		description	depth	level	lege
record	no/type	result	depth (m)	description	(m)	(m)	log
				Orangish brown grey mottled white slightly silty very sandy subangular fine to			\otimes
				coarse flint chalk and weakly cemented sandy silt GRAVEL (Material possible Cement Kiln Dust) (MADE GROUND)			\otimes
			2.3	0 20m Steel reinforcement bar (12mm diamx600mm) and scaffold tube with			\otimes
	1D*	Vo 0 1	0 30	square plate footing at one end (50mm diamx800mm)	17		\times
	1.0	1001	0.00	square plate looting at one end (somm diamxocomm)	+		\otimes
	2B		0 50		- 8		\otimes
	3D		0 50		=		\otimes
	4D*	Vo 0 2	0 50		Ī		\otimes
			3.3		-		\otimes
	5D	44.44	1 00				\otimes
	6D*	Vo 0 6	1 00		1 20	7 05	\otimes
			77	Poorly cemented grey mottled white locally reddish brown silty very sandy subangular fine to coarse brick concrete flint chalk and weakly cemented sandy	7		
				silt GRAVEL with rare wood fragments (up to 2x5x10mm) (Material possible			\otimes
			5.000	Cement Kiln Dust) (MADE GROUND)			\otimes
	7B		1 50		1 60	6 65	\otimes
	8B		1 50	Poorly cemented off-white and light grey mottled black and orangish brown silty			\otimes
	9D	100	1 50	very sandy subangular fine to coarse chalk poorly cemented silt rarely brick			\times
	10D*	Vo 0 4	1 50	sandstone and flint GRAVEL Rare wood fragments (up to 5x10x30mm) and rare polythene fragments (up to 1x20x20mm) (Material Possible Cement Kiln Dust) (MADE GROUND)	_		\otimes
	11D		2 00	(MADE GROUND)	-		\otimes
	12D*	Vo 0 1	2 00		3 7	1000	\otimes
	120	27.50	2 00		2 20	6 05	\otimes
				White silty subangular fine to coarse chalk GRAVEL with a high cobble and boulder content of chalk (MADE GROUND)			\otimes
			0.00	2 30m Fence post in side of pit (probable 100mm diam)	-		\otimes
	13B		2 50	2.50 Steel plates (up to 20-240-240)	-		X
	14B		2 50	2 50m Steel plates (up to 30x240x240mm)	-		\otimes
	15D		2 50		_		\otimes
	16D*	Vo 0 1	2 50				\otimes
	160		2 50	2 80m Wooden fence post fragment (75x75x300mm)			\otimes
	17D		3 00		-		\bigotimes
	18D*	Vo 0 0	3 00		1		
	100		0.00		- 8		
	19B		3 50		-		\otimes
	20D		3 50		3 50	4 75	X
Dry	21D*	Vo 0 0	3 50	Trial pit completed at 3 50m	-		~~
e.A.	2.10	34.707	000	30.00 - 610 VANA_CIETA E - 47.2 E 5.111			

Notes

Trapt excavated by JCB 3CX mechanica excavator.

Groundwater not encountered.

Trapts des remaned stabe and vert ca.

Tra ptd mens ons 0.60x2.80x3.50m.

On compet on, the trapt was backfed with materas arsing. Ground protect on measures emp oyed compr s ng p ast c sheet ng and wooden boards. On compet on of trapt past c sheeting and wooden boards washed down.

Sketch of Foundat on Not to sca e. A d mens ons n metres.



CONTRACT CHECKED 30766 EC

TRIAL PIT LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

Start Date

25 June 2015

Easting 561563.1 Scale

1:25

End Date

25 June 2015

Northing

173333.8 Ground level

6.00mOD

Depth 3.30 m

water		sample/te	est	description	depth	level	lege
record	no/type	result	depth (m)	description	(m)	(m)	loge
	1D 2D*	Vo 0 5	0 30 0 30	Firm friable brown mottled grey and white slightly sandy gravelly silty CLAY Gravel is subangular and subrounded fine to coarse flint rarely subangular fine and medium chalk and brick Rare polythene sheeting (up to 1x5x5mm) (MADE GROUND) Stiff brown mottled grey and white slightly sandy gravelly silty CLAY Gravel is	0 40	5 60	
	3B 4D 5D*	Vo 0 3	0 50 0 50 0 50	subangular and subrounded fine to coarse flint rarely subangular fine and medium chalk and brick (MADE GROUND)			
	6D 7D*	PP 1 9 Vo 0 1	1 00 1 00	Firm friable reddish brown mottled black yellowish brown white and grey slightly sandy slightly gravelly CLAY Gravel is angular to subrounded fine to coarse flint chalk and rare brick Rare cobbles of flint and brick Rare polythene fragments (up to 1x20x20mm) (MADE GROUND) 0 90m Green packing tape in side of pit (1x15mm)	0 90 _ - - -	5 10	
	8B 9B 10D 11D*	Vo 0 5	1 50 1 50 1 50 1 50		-		
	12D	H 42	2 00		2 00	4 00	\otimes
	13D*	Vo 0 2 PP 1 7	200	Firm reddish brown slightly sandy slightly gravelly silty CLAY Gravel is angular and subangular fine to coarse flint and chalk (MADE GROUND/REWORKED NATURAL DEPOS TS)	-		\otimes
				Firm friable reddish brown slightly sandy silty CLAY (MADE GROUND/REWORKED NATURAL DEPOS TS)	2 30 _	3 70	
	14B 15B 16D 17D*	Vo 0 2	2 50 2 50 2 50 2 50 2 50	2 50 - 2 80m East side of pit Reddish brown and grey subangular fine and medium crystalline gravel surrounding black ribbed plastic drainage pipe Pipe undamaged running roughly north-south adjacent to east face of pit	-		
	18D 19D*	Vo 0 1	3 00 3 00		3 10	2 90	\bigotimes
	20B 21D	Vo 0 0	3 20 3 20	Soft orangish brown mottled grey slightly sandy silty CLAY (ALLUV UM)	3 30	270	
Dry	22D*		3 20	Trial pit completed at 3 30m	3.45		×
Notes				Sketch of Foundation Not to scale. A id me	ens ons	n metr	es.

Geotechnical Engineering Ltd

Groundwater not encountered.

Trapts dewas spang 1.00 3.30m

Tra ptd mens ons 0.60x2.90x3.30m.

On comp et on, the trapt was backfed with materas arsing. Ground protect on measures emp oyed compr s ng p ast c sheet ng and wooden boards. On compet on of trapt past c sheeting and wooden boards washed down.

Stratum names provided by the Engineer.



CONTRACT CHECKED 30766 EC

TRIAL PIT LOG



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT Sheet

1 of 1

Start Date

25 June 2015

Easting 561575.0 Scale

1:25

End Date

25 June 2015

Northing

173292.5 Ground level

5.55mOD

Depth

3.40 m

water		sample/te		description			lege
record	no/type	result	depth (m)	description	(m)	(m)	loge
				Firm friable orangish brown slightly sandy silty CLAY with frequent rootlets			XX
				(MADE GROUND)	Ť		$\Diamond \Diamond$
					- 8		\otimes
	40+	V- 00	0.00		-		\times
	1D*	Vo 0 2	0 30	the state of the s	4		$\Diamond \Diamond$
				0 40 - 0 70m Reddish brown with rare subangular fine and medium chalk and flint			\otimes
	2B		0 50	gravel			\otimes
	3D		0 50		-		\otimes
	4D*	Vo 0 1	0 50	0 70 - 0 80m Slightly gravelly Gravel is subangular fine to coarse chalk	i i		\otimes
				o to com ongray gratory orator to casarigatal into to ocales oralic	2420	7.1	\otimes
					0 90 _	4 65	\times
	4.52		22.7	Orangish brown silty gravelly fine SAND Gravel is subangular fine to coarse			\otimes
	5D	Car 18-20	1 00	crystalline (MADE GROUND)	1 10	4 45	XX
	6D*	Vo 0 2	1 00	Firm dark grey mottled orangish brown and light grey slightly sandy slightly			XX
			141	gravelly silty CLAY with a medium brick cobble content. Gravel is subangular fine	+		$\langle \rangle \rangle$
				to coarse flint and brick Frequent tree branches (up to 70 diam x 800mm) Strong	7		\times
				hydrocarbon odour (MADE GROUND)	- 8		\times
	70		4.50		5.40		\times
	7B		1 50		1 60	3 95	XX
	8B		1 50	Firm friable reddish brown slightly sandy slightly gravelly silty CLAY Gravel is			$\langle \rangle \langle$
	9D	Vo 0 1	1 50	subangular and subrounded fine and medium chalk Frequent roots (up to 3mm			\otimes
	10D*	1001	1 50	diam) (MADE GROUND)			\otimes
					2 00	3 55	\times
	11D		2 00	Firm reddish brown slightly sandy silty CLAY (MADE GROUND/REWORKED	200_	3 33	XX
	12D*	Vo 0 0	2 00	NATURAL DEPOS TS)	-		\times
	120	100	200	1411011122230010/	+		\times
					- 9		\otimes
				2.40 2.70m Foot and of sit Raddish brown and grow subangular fine and	1		\otimes
	400		0.50	2 40 - 2 70m East end of pit Reddish brown and grey subangular fine and medium crystalline gravel surrounding black ribbed plastic drainage pipe Pipe	4		\otimes
	13B		2 50	undamaged running roughly north-south adjacent to east end of pit	4		$\langle \times \rangle$
	14B		2 50	andamaged raming reaging from event adjacent to each one of pic			\otimes
	15D	Vo 0 0	2 50		2 80	275	\otimes
	16D*	V0 0 0	2 50	Firm orangish brown mottled grey slightly sandy silty CLAY Rare roots (up to	7.03%	-	X
				4mm diam) (ALLUV UM)	- 8		
	17B	H 43	3 00		1 -		X
	1/B 18D	PP 18	3 00		4		
				7.35.35.35.30.3			×
	19D*	Vo 0 0	3 00 3 40	3 20 - 3 40m Friable			×
	20B	100	F-5055		3 40	2 15	
Dry	21D	Vo 0 0	3 40	Trial pit completed at 3 40m	- 10	0	
7.	22D*	1200	3 40				
				Total professional and the same			1
Notes				Sketch of Foundat on Not to sca e. A d me	ens ons	n metr	es.

Geotechnical Engineering Ltd

Groundwater not encountered.

Trapts des remaned stabe and vert ca.

Tra ptd mens ons 0.60x3.40x3.40m.

On compet on, the trapt was backfed with materas arsing. Ground protect on measures emp oyed compr s ng p ast c sheet ng and wooden boards. on comp et on of traptpastc sheeting and wooden boards washed down.

Stratum names provided by the Engineer.



CONTRACT CHECKED 30766 EC

PERMEABILITY TEST - VARIABLE HEAD

LONDON PARAMOUNT ENTERTAINMENT RESORT



LONDON PARAMOUNT RESORT HOLDINGS LTD

BOREHOLE

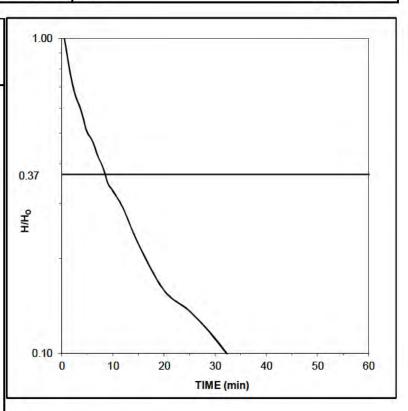
BH202

DEPTH RECORD

SITE

DEPTH OF BOREHOLE	24.00 m	BOREHOLE DIAMETER IN TEST SECTION	0.13 m
DEPTH TO BASE OF CASING	23.00 m	DIAMETER OF CASING	0.15 m
TEST INTERVAL	1.00 m		
HEIGHT OF DATUM ABOVE GROUND LEVEL	0.65 m	TYPE OF TEST	FALLING
DEPTH TO STANDING WATER BELOW DATUM	4.25 m	DATE	15/06/2015

0.50 0.75 1.00 1.50	DEPTH TO WATER BELOW DATUM (m) 0.65 0.83 1.03 1.37	HEAD (m) H 3.60 3.42	<u>Н</u> Но
(min) 0.50 0.75 1.00	0.65 0.83 1.03	н 3.60	1.00
0.50 0.75 1.00	0.65 0.83 1.03	3.60	
0.75 1.00	0.83 1.03		
1.00	1.03	3.42	0.05
			0.95
1.50	4 27	3.22	0.89
	1.57	2.88	0.80
2.00	1.63	2.62	0.73
2.50	1.83	2.42	0.67
3.00	1.96	2.29	0.64
3.50	2.06	2.19	0.61
4.00	2.19	2.06	0.57
4.50	2.33	1.92	0.53
5.00	2.44	1.81	0.50
6.00	2.55	1.70	0.47
7.00	2.72	1.53	0.43
8.00	2.84	1.41	0.39
9.00	3.00	1.25	0.35
10.00	3.07	1.18	0.33
12.00	3.21	1.04	0.29
15.00	3.45	0.80	0.22
20.00	3.68	0.57	0.16
25.00	3.76	0.49	0.14
30.00	3.85	0.40	0.11
35.00	3.94	0.31	0.09
40.00	4.02	0.23	0.06
45.00	4.07	0.18	0.05
50.00	4.11	0.14	0.04
55.00	4.12	0.13	0.04
60.00	4.13	0.12	0.03



Time lag method

$$k = \frac{A}{FT}$$

General approach method

$$k = \frac{A}{F(t_2 - t_1)} \log_e \frac{H_1}{H_2}$$

BS 5930 Fig 6, intake factor based on case B

RESULTS

Permeability, k	NIL ms ⁻¹	Permeability, k		NIL ms
		Variable head, H ₂	m at time, t2	s
Time lag, T	S	Variable head, H₁	m at time, t ₁	S
Intake factor, F	0.352 m	Intake factor, F		0.352 m
Cross sectional area of casing, A	0.0181 m ²	Cross sectional area of	casing, A	0.0181 m ²
TIME LAG METHOD		GENERAL APPROACH ME	THOD	

REMARKS

CONTRACT	CHECKED
30766	

PERMEABILITY TEST - VARIABLE HEAD



LONDON RESORT COMPANY HOLDINGS LTD

BOREHOLE

BH203

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

DEPTH RECORD

DEPTH OF BOREHOLE	17.00 m	BOREHOLE DIAMETER IN TEST SECTION	0.13 m
DEPTH TO BASE OF CASING	16.00 m	DIAMETER OF CASING	0.15 m
TEST INTERVAL	1.00 m		
HEIGHT OF DATUM ABOVE GROUND LEVEL	0.55 m	TYPE OF TEST	FALLING
DEPTH TO STANDING WATER BELOW DATUM	3.23 m	DATE	30/06/2015

TEST DECORD

ELAPSED TIME	DEPTH TO WATER BELOW	HEAD (m)	<u>Н</u> Но	1.00 T							
(min)	DATUM (m)	Н									
0.00	0.00	3.23	1.00	1 1							
0.25	0.83	2.40	0.74	1 1							
0.50	1.25	1.98	0.61								
0.75	1.72	1.51	0.47	1							
1.00	2.12	1.11	0.34	4							
1.25	2.45	0.78	0.24	0.37	1						_
1.50	2.68	0.55	0.17		1						
1.75	2.83	0.40	0.12	۰	1						
2.00	3.00	0.23	0.07	H/H _o							
2.25	3.08	0.15	0.05		1						
2.50	3.15	0.08	0.02	1							
2.75	3.20	0.03	0.01		1						
3.00	3.23	0.00	0.00		1						
3.25	3.23	0.00	0.00		1						
3.50	3.23	0.00	0.00		1						- 4
4.50	3.23	0.00	0.00	25.50	4						
5.50	3.23	0.00	0.00	0.10 +		5	10	15	20	25	30
10.00	3.23	0.00	0.00			3	10			23	3(
15.00	3.23	0.00	0.00					TIME (mi	n)		
20.00	3.23	0.00	0.00								
25.00	3.23	0.00	0.00					4			
30.00	3.23	0.00	0.00	Tim	e lag	metho	d k	$r = \frac{A}{FT}$			

method

$$k = \frac{A}{F(t_2 - t_1)} \log_e \frac{H_1}{H_2}$$

BS 5930 Fig 6, intake factor based on case D

RESULTS

TIME LAG METHOD		GENERAL APPROACH	METHOD	
Cross sectional area of casing, A	0.0177 m ²	Cross sectional area	of casing, A	0.0177 m ²
Intake factor, F	2.282 m	Intake factor, F	100 miles	2.282 m
Time lag, T	80 s	Variable head, H ₁	2.40 m at time, t ₁	15 s
		Variable head, H ₂	0.23 m at time, t2	120 s
Permeability, k	9.68E-05 ms ⁻¹	Permeability, k		1.73E-04 ms-1

REMARKS

Borehole open to 17.00m following test.

Approximate tide height during test period: 2.30 ebbing to 2.00m.

Source: http://tides.willyweather.co.uk/london-and-south-east-england/kent/river-thames---broadness.html

CONTRACT CHECKED 30766

PERMEABILITY TEST - VARIABLE HEAD



CLIENT LONDON RESORT COMPANY HOLDINGS LTD BOREHOLE

BH204

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

DEPTH RECORD

DEPTH OF BOREHOLE	15.00 m	BOREHOLE DIAMETER IN TEST SECTION	0.13 m
DEPTH TO BASE OF CASING	14.00 m	DIAMETER OF CASING	0.15 m
TEST INTERVAL	1.00 m		
HEIGHT OF DATUM ABOVE GROUND LEVEL	0.52 m	TYPE OF TEST	FALLING
DEPTH TO STANDING WATER BELOW DATUM	4.04 m	DATE	25/06/2015

EST RECO	RD			1
ELAPSED	DEPTH TO	HEAD	H	4.00
TIME	WATER BELOW	(m)	Ho	1.00
(min)	DATUM (m)	Н		
0.25	0.62	3.42	1.00	1 1
0.50	1.21	2.83	0.83	1)
0.75	1.61	2.43	0.71	
1.00	1.87	2.17	0.63	
1.25	2.08	1.96	0.57	4 \
1.50	2.21	1.83	0.54	0.37
1.75	2.60	1.44	0.42	
2.00	2.75	1.29	0.38	ا و
2.25	2.89	1.15	0.34	Å \
2.50	3.01	1.03	0.30	
2.75	3.10	0.94	0.27	
3.00	3.18	0.86	0.25	
3.25	3.21	0.83	0.24	
3.50	3.25	0.79	0.23	
3.75	3.26	0.78	0.23	
4.00	3.27	0.77	0.23	
4.50	3.27	0.77	0.23	0.10
5.00	3.28	0.76	0.22	
6.00	3.29	0.75	0.22	TIME (min)
7.00	3.29	0.75	0.22	
8.00	3.30	0.74	0.22	4 A - 1 A -
9.00	3.31	0.73	0.21	Time lag method $k = \frac{A}{FT}$
10.00	3.31	0.73	0.21	FT
15.00	3.31	0.73	0.21	
20.00	3.31	0.73	0.21	$A H_1$

General approach method

$$k = \frac{A}{F(t_2 - t_1)} \log_e \frac{H_1}{H_2}$$

BS 5930 Fig 6, intake factor based on case D

RESULTS

25.00

30.00

TIME LAG METHOD		GENERAL APPROACH	METHOD	
Cross sectional area of casing, A	0.0181 m ²	Cross sectional area	of casing, A	0.0181 m ²
Intake factor, F	2.282 m	Intake factor, F		2.282 m
Time lag, T	120 s	Variable head, H ₁	3.42 m at time, t ₁	15 s
		Variable head, H ₂	0.79 m at time, t2	210 s
Permeability, k	6.63E-05 ms ⁻¹	Permeability, k		5.97E-05 ms ⁻¹

REMARKS

Borehole open to 14.80m following test.

3.31

3.31

0.73

0.73

Tide height during test period: 1.60m.

Source: http://tides.willyweather.co.uk/london-and-south-east-england/kent/river-thames---broadness.html

0.21

0.21

CONTRACT CHECKED 30766

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Itrial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH101	15/07/15 09:00:00	1019	0.28								0.0	20		
BH101	15/07/15 09:01:00										0.0			
BH101	15/07/15 09:02:00										0.0			
BH101	15/07/15 09:03:00	11 , 1									0.0			
BH101	15/07/15 09:04:00	-				-					0.0			
BH101	15/07/15 09:05:00			0.0	0.3	20.4	5.0	0	2	3.5				
BH101	15/07/15 09:06:00			0.0	0.3	20.4	4.0	0	3	3.1				
BH101	15/07/15 09:07:00			0.0	0.2	20.4	3.0	0	4	2.9				
BH101	15/07/15 09:08:00			0.0	0.2	20.4	3.0	0	6	2.8				
BH101	15/07/15 09:09:00			0.0	0.1	20.4	2.0	0	6	2.5				
BH101	15/07/15 09:10:00			0.0	0.1	20.4	1.0	0	7	2.3				
BH101	15/07/15 09:11:00			0.0	0.1	20.3	1.0	0	7	2.2				
BH101	15/07/15 09:12:00			0.0	0.1	20.3	1.0	0	8	2.2				
BH101	15/07/15 09:13:00			0.0	0.1	20.3	1.0	0	7	2.2				
BH101	15/07/15 09:14:00			0.0	0.1	20.3	1.0	0	8	2.1			5.26	
BH101	29/07/15 12:45:00	1009	0								0.0	18		
BH101	29/07/15 12:46:00	1 4 4									0.0			
BH101	29/07/15 12:47:00										0.0			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

30766

CHECKED EC

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH101	29/07/15 12:48:00										0.0			
BH101	29/07/15 12:49:00										0.0			
3H101	29/07/15 12:50:00			0.6	5.3	18.5	>>>	0	0	0.0				
BH101	29/07/15 12:51:00			0.4	3.5	19.0	70.0	0	0	0.0				
BH101	29/07/15 12:52:00			0.4	3.2	19.1	64.0	0	0	0.0				
BH101	29/07/15 12:53:00			0.4	2.9	19.2	58.0	0	0	0.0				
BH101	29/07/15 12:54:00			0.3	2.4	19.3	48.0	0	0	0.0				
BH101	29/07/15 12:55:00			0.3	2.3	19.3	46.0	0	0	0.0				
BH101	29/07/15 12:56:00			0.3	2.3	19.3	44.0	0	0	0.0				
BH101	29/07/15 12:57:00					74 (3.99	
BH101	12/08/15 09:30:00	1020	0								0.0	19		
BH101	12/08/15 09:31:00										0.0			
BH101	12/08/15 09:32:00										0.0			
BH101	12/08/15 09:33:00										0.0			
BH101	12/08/15 09:34:00										0.0			
BH101	12/08/15 09:35:00			0.0	0.0	20.5	0.0	0	0	1.8				
BH101	12/08/15 09:36:00			0.0	0.0	20.5	0.0	0	0	1.6				
BH101	12/08/15 09:37:00			0.0	0.0	20.5	0.0	0	0	1.4				

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

30766

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
3H101	12/08/15 09:38:00			0.0	0.0	20.5	0.0	0	0	1.2				
BH101	12/08/15 09:39:00			0.0	0.0	20.5	0.0	0	0	1.2				
3H101	12/08/15 09:40:00			0.0	0.0	20.5	0.0	0	0	1.1				
3H101	12/08/15 09:41:00			0.0	0.0	20.5	0.0	0	0	1.1				
BH101	12/08/15 09:42:00			0.0	0.0	20.5	0.0	0	0	1.0				
3H101	12/08/15 09:43:00			0.0	0.0	20.5	0.0	0	0	0.9				
3H101	12/08/15 09:44:00			0.0	0.0	20.5	0.0	0	0	0.9			4.98	
3H101	26/08/15 16:15:00	999						11771				17		
3H101	26/08/15 16:16:00		0								0.0			
3H101	26/08/15 16:17:00	1199	2								0.6			
3H101	26/08/15 16:18:00		1								0.3			
3H101	26/08/15 16:19:00		0								0.0			
3H101	26/08/15 16:20:00		0								0.0			
3H101	26/08/15 16:21:00			0.0	0.0	20.6	0.0	0	0	0.0				
3H101	26/08/15 16:22:00			0.0	0.0	20.6	0.0	0	0	0.0				
3H101	26/08/15 16:23:00			0.0	0.0	20.6	0.0	0	0	0.0				
3H101	26/08/15 16:24:00			0.0	0.0	20.6	0.0	0	0	0.0				
3H101	26/08/15 16:25:00			0.0	0.0	20.6	0.0	0	0	0.0				Stab e read ngs

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

30766

EC

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
3H101	26/08/15 16:26:00												5.04	

denotes result exceeding capacity of gas monitoring equipment VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT 30766

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH201	15/07/15 12:45:00	1016	0.63								0.0	23		
BH201	15/07/15 12:46:00										0.0			
3H201	15/07/15 12:47:00										0.0			
BH201	15/07/15 12:48:00										0.0			
BH201	15/07/15 12:49:00										0.0			
BH201	15/07/15 12:50:00			0.0	0.1	15.7	1.0	0	1	4.9				
BH201	15/07/15 12:51:00			0.0	0.0	15.7	0.0	0	0	4.7				
BH201	15/07/15 12:52:00			0.0	0.0	15.7	0.0	0	1	4.5				
BH201	15/07/15 12:53:00			0.0	0.0	15.7	0.0	0	0	4.3				
BH201	15/07/15 12:54:00			0.0	0.0	15.7	0.0	0	0	4.1				
BH201	15/07/15 12:55:00			0.0	0.0	15.7	0.0	0	0	3.9				
BH201	15/07/15 12:56:00			0.0	0.0	15.8	0.0	0	0	3.5				
BH201	15/07/15 12:57:00			0.0	0.0	15.8	0.0	0	0	3.2				
BH201	15/07/15 12:58:00			0.0	0.0	15.9	0.0	0	0	3.0			2	
BH201	15/07/15 12:59:00			0.0	0.0	15.9	0.0	0	0	2.8			3.83	
BH201	29/07/15 09:30:00	1002										16		
BH201	29/07/15 09:31:00										0.0			
BH201	29/07/15 09:32:00										0.0			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT 30766

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH201	29/07/15 09:33:00										0.4			
BH201	29/07/15 09:34:00										0.0			
BH201	29/07/15 09:35:00										0.0			
BH201	29/07/15 09:36:00			0.0	0.0	15.4	0.0	0	0	0.0				
BH201	29/07/15 09:37:00			0.0	0.0	15.2	0.0	0	0	0.0				
BH201	29/07/15 09:38:00			0.0	0.0	15.1	0.0	0	0	0.0				
BH201	29/07/15 09:39:00			0.0	0.0	15.0	0.0	0	0	0.0				
BH201	29/07/15 09:40:00			0.0	0.0	15.1	0.0	0	0	0.0				
BH201	29/07/15 09:41:00			0.0	0.0	15.4	0.0	0	0	0.0				
BH201	29/07/15 09:42:00			0.0	0.0	15.3	0.0	0	0	0.0				
BH201	29/07/15 09:43:00			0.0	0.0	15.4	0.0	0	0	0.0				
BH201	29/07/15 09:44:00			0.0	0.0	15.3	0.0	0	0	0.0				
BH201	29/07/15 09:45:00			0.0	0.0	15.4	0.0	0	0	0.0				
BH201	29/07/15 09:46:00												3.81	
BH201	12/08/15 13:00:00	1020	0								0.0	19		
BH201	12/08/15 13:01:00										0.0			
BH201	12/08/15 13:02:00										0.0			
BH201	12/08/15 13:03:00										0.0			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH201	12/08/15 13:04:00			7.			U			-1	0.0			
BH201	12/08/15 13:05:00			0.0	0.0	19.9	0.0	0	0	1.6				
BH201	12/08/15 13:06:00			0.0	0.0	16.8	0.0	0	0	1.6				
BH201	12/08/15 13:07:00			0.0	0.0	16.6	0.0	0	0	1.6				
BH201	12/08/15 13:08:00			0.0	0.0	16.5	0.0	0	0	1.6				
BH201	12/08/15 13:09:00			0.0	0.0	16.4	0.0	0	0	1.6				
BH201	12/08/15 13:10:00			0.0	0.0	16.3	0.0	0	0	1.6				
BH201	12/08/15 13:11:00			0.0	0.0	16.3	0.0	0	0	1.6				
BH201	12/08/15 13:12:00			0.0	0.0	16.2	0.0	0	0	1.6				
BH201	12/08/15 13:13:00			0.0	0.0	15.9	0.0	0	0	1.5				
BH201	12/08/15 13:14:00			0.0	0.0	16.1	0.0	0	0	1.5			3.92	
BH201	26/08/15 14:40:00	1000	0									17		
BH201	26/08/15 14:41:00		0								0.0			
BH201	26/08/15 14:42:00		1								0.3			
BH201	26/08/15 14:43:00		0								0.0			
BH201	26/08/15 14:44:00		0								0.0			
BH201	26/08/15 14:45:00		0								0.0			
BH201	26/08/15 14:46:00			0.0	0.0	15.9	0.0	0	0	0.0				

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H₂O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH201	26/08/15 14:47:00			0.0	0.0	15.9	0.0	0	0	0.0				
BH201	26/08/15 14:48:00			0.0	0.0	15.8	0.0	0	0	0.0				
BH201	26/08/15 14:49:00			0.0	0.0	15.8	0.0	0	0	0.0				
BH201	26/08/15 14:50:00			0.0	0.0	15.7	0.0	0	0	0.0				
BH201	26/08/15 14:51:00			0.0	0.0	15.6	0.0	0	0	0.0				
BH201	26/08/15 14:52:00			0.0	0.0	15.6	0.0	0	0	0.0				
BH201	26/08/15 14:53:00			0.0	0.0	15.5	0.0	0	0	0.0				
BH201	26/08/15 14:54:00			0.0	0.0	15.5	0.0	0	0	0.0				
BH201	26/08/15 14:55:00			0.0	0.0	15.5	0.0	0	0	0.0			1 400	
BH201	26/08/15 14:56:00				100				-				3.90	
121														

denotes result exceeding capacity of gas monitoring equipment VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH202	25/06/15 11:30:00												3.39	
BH202	14/07/15 14:20:00	1019									0.0	20		
3H202	14/07/15 14:21:00										0.0	100		
BH202	14/07/15 14:22:00										0.0			
BH202	14/07/15 14:23:00										0.0			
BH202	14/07/15 14:24:00										0.0			
BH202	14/07/15 14:25:00			0.0	0.1	18.8	0.0	0	0	4.5				
BH202	14/07/15 14:26:00			0.0	0.1	18.7	0.0	0	0	4.5				
BH202	14/07/15 14:27:00			0.0	0.1	18.7	0.0	0	0	4.0				
BH202	14/07/15 14:28:00			0.0	0.1	18.6	0.0	0	0	3.6				
BH202	14/07/15 14:29:00			0.0	0.1	18.7	0.0	0	0	3.3				
BH202	14/07/15 14:30:00			0.0	0.1	18.7	0.0	0	0	3.1				
BH202	14/07/15 14:31:00			0.0	0.1	18.7	0.0	0	0	2.9				
BH202	14/07/15 14:32:00			0.0	0.1	18.7	0.0	0	0	2.7				
BH202	14/07/15 14:33:00			0.0	0.1	18.7	0.0	0	0	2.6				
BH202	14/07/15 14:34:00			0.0	0.1	18.7	0.0	0	0	2.5				
BH202	14/07/15 14:35:00												3.39	
BH202	29/07/15 09:45:00	1010	0								0.0	18		

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH202	29/07/15 09:46:00										0.0			
BH202	29/07/15 09:47:00										0.0			
3H202	29/07/15 09:48:00										0.0			
BH202	29/07/15 09:49:00										0.0			
BH202	29/07/15 09:50:00			0.0	0.0	19.6	0.0	0	0	0.0		la.		
BH202	29/07/15 09:51:00			0.0	0.0	19.6	0.0	0	0	0.0				
BH202	29/07/15 09:52:00			0.0	0.0	19.7	0.0	0	0	0.0				
BH202	29/07/15 09:53:00			0.0	0.0	19.7	0.0	0	0	0.0				
BH202	29/07/15 09:54:00			0.0	0.0	19.7	0.0	0	0	0.0				
BH202	29/07/15 09:55:00				100	1							3.85	
BH202	12/08/15 10:00:00	1018	0.23								0.0	21		
BH202	12/08/15 10:01:00										0.0			
BH202	12/08/15 10:02:00										0.0			
BH202	12/08/15 10:03:00										0.0			
BH202	12/08/15 10:04:00										0.0			
BH202	12/08/15 10:05:00			0.0	0.0	20.5	0.0	0	0	2.1				
BH202	12/08/15 10:06:00			0.0	0.0	20.5	0.0	0	0	1.9				
BH202	12/08/15 10:07:00			0.0	0.0	20.5	0.0	0	0	1.9				

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH202	12/08/15 10:08:00			0.0	0.0	20.5	0.0	0	0	1.7				
BH202	12/08/15 10:09:00			0.0	0.0	20.5	0.0	0	0	1.5				
BH202	12/08/15 10:10:00			0.0	0.0	20.5	0.0	0	0	1.4				
BH202	12/08/15 10:11:00			0.1	0.0	20.5	0.0	0	1	1.4				
BH202	12/08/15 10:12:00			0.1	0.0	20.5	0.0	0	1	1.4				
BH202	12/08/15 10:13:00			0.1	0.0	20.5	0.0	0	1	1.3				
BH202	12/08/15 10:14:00			0.0	0.0	20.5	0.0	0	0	1.3			3.29	
BH202	26/08/15 15:00:00	1002	0								0.0	13		
BH202	26/08/15 15:01:00										0.0			
BH202	26/08/15 15:02:00										0.0			
BH202	26/08/15 15:03:00										0.0			
BH202	26/08/15 15:04:00					741					0.0			
BH202	26/08/15 15:05:00			0.0	0.0	19.7	0.0	0	0	0.0	100			
BH202	26/08/15 15:06:00			0.0	0.0	19.7	0.0	0	0	0.0				
BH202	26/08/15 15:07:00			0.0	0.0	19.7	0.0	0	0	0.0				
BH202	26/08/15 15:08:00			0.0	0.0	19.7	0.0	0	0	0.0				
BH202	26/08/15 15:09:00			0.0	0.0	19.7	0.0	0	0	0.0				STABLE READINGS
BH202	26/08/15 15:10:00												3.69	

denotes result exceeding capacity of gas monitoring equipment VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH203	15/07/15 11:45:00	1017	0.32								0.0	23		
BH203	15/07/15 11:46:00										0.0			
BH203	15/07/15 11:47:00										0.0			
BH203	15/07/15 11:48:00										0.0			
BH203	15/07/15 11:49:00										0.0			
BH203	15/07/15 11:50:00			0.4	0.0	17.9	0.0	0	19	6.5				
BH203	15/07/15 11:51:00			0.4	0.0	18.0	0.0	0	18	6.6				
BH203	15/07/15 11:52:00			0.4	0.0	18.2	0.0	0	17	6.1				
BH203	15/07/15 11:53:00			0.4	0.0	18.2	0.0	0	17	6.2				
BH203	15/07/15 11:54:00			0.3	0.0	18.1	0.0	0	16	6.1				
BH203	15/07/15 11:55:00			0.3	0.0	18.1	0.0	0	15	6.0				
BH203	15/07/15 11:56:00			0.3	0.0	18.1	0.0	0	15	5.9				
BH203	15/07/15 11:57:00			0.3	0.0	18.1	0.0	0	14	5.7				
BH203	15/07/15 11:58:00			0.3	0.0	18.1	0.0	0	13	5.3				
BH203	15/07/15 11:59:00			0.3	0.0	18.1	0.0	0	13	5.6			2.37	
BH203	29/07/15 08:30:00	1008	0								0.0	18		
BH203	29/07/15 08:31:00										0.0			
BH203	29/07/15 08:32:00										0.0			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH203	29/07/15 08:33:00										0.0			
BH203	29/07/15 08:34:00										0.0			
BH203	29/07/15 08:35:00			0.1	0.0	17.1	0.0	0	0	0.0				
BH203	29/07/15 08:36:00			0.1	0.0	17.2	0.0	0	0	0.0				
BH203	29/07/15 08:37:00			0.1	0.0	17.2	0.0	0	0	0.0				
BH203	29/07/15 08:38:00			0.1	0.0	16.9	0.0	0	0	0.0				
BH203	29/07/15 08:39:00			0.1	0.0	16.5	0.0	0	0	0.0				
BH203	29/07/15 08:40:00			0.0	0.0	16.2	0.0	0	0	0.0				
BH203	29/07/15 08:41:00			0.0	0.0	15.6	0.0	0	0	0.0				
BH203	29/07/15 08:42:00			0.0	0.0	15.2	0.0	0	0	0.0				
BH203	29/07/15 08:43:00			0.0	0.0	14.9	0.0	0	0	0.0				
BH203	29/07/15 08:44:00			0.0	0.0	14.7	0.0	0	0	0.0				
BH203	29/07/15 08:45:00										-		2.86	
BH203	13/08/15 10:30:00	1012	0								0.0	19		
BH203	13/08/15 10:31:00										0.0			
BH203	13/08/15 10:32:00										0.0			
BH203	13/08/15 10:33:00										0.0			
BH203	13/08/15 10:34:00										0.0			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH203	13/08/15 10:35:00			0.0	0.0	20.2	0.0	0	0	2.5				
BH203	13/08/15 10:36:00			0.0	0.0	20.2	0.0	0	0	2.2				
BH203	13/08/15 10:37:00			0.0	0.0	20.2	0.0	0	0	2.0				
BH203	13/08/15 10:38:00			0.0	0.0	20.3	0.0	0	0	1.6				
BH203	13/08/15 10:39:00			0.0	0.0	20.3	0.0	0	0	1.5				
BH203	13/08/15 10:40:00			0.0	0.0	20.3	0.0	0	0	1.4				
BH203	13/08/15 10:41:00			0.0	0.0	20.3	0.0	0	0	1.3				
BH203	13/08/15 10:42:00			0.0	0.0	20.3	0.0	0	0	1.2				
BH203	13/08/15 10:43:00			0.0	0.0	20.4	0.0	0	0	1.1				
BH203	13/08/15 10:44:00			0.0	0.0	20.4	0.0	0	0	1.0			2.82	
BH203	26/08/15 13:15:00	1004									0.0	13		
BH203	26/08/15 13:16:00										0.0			
BH203	26/08/15 13:17:00										0.0			
BH203	26/08/15 13:18:00										0.0			
BH203	26/08/15 13:19:00										0.0			
BH203	26/08/15 13:20:00			0.2	0.0	19.4	0.0	0	0	0.0				
BH203	26/08/15 13:21:00			0.2	0.0	19.4	0.0	0	0	0.0				
3H203	26/08/15 13:22:00			0.2	0.0	19.4	0.0	0	0	0.0				

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH203	26/08/15 13:23:00			0.1	0.0	19.4	0.0	0	0	0.0				
BH203	26/08/15 13:24:00			0.1	0.0	19.4	0.0	0	0	0.0				STABLE READINGS
BH203	26/08/15 13:25:00												2.89	

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH204	15/07/15 11:00:00	1018	0.92								0.0	21		
BH204	15/07/15 11:01:00										0.0			
BH204	15/07/15 11:02:00										0.0			
BH204	15/07/15 11:03:00										0.0			
BH204	15/07/15 11:04:00										0.0			
BH204	15/07/15 11:05:00			1.2	0.5	18.1	10.0	0	4	4.7				
BH204	15/07/15 11:06:00			1.2	0.5	18.1	9.0	0	4	4.2				
BH204	15/07/15 11:07:00			1.2	0.5	18.1	9.0	0	4	3.8				
BH204	15/07/15 11:08:00			1.1	0.5	18.2	9.0	0	4	3.6				
BH204	15/07/15 11:09:00			1.1	0.5	18.2	9.0	0	4	3.5				
BH204	15/07/15 11:10:00			1.1	0.5	18.2	9.0	0	4	3.4				
BH204	15/07/15 11:11:00			1.1	0.5	18.2	9.0	0	4	3.1				
BH204	15/07/15 11:12:00			1.0	0.4	18.3	8.0	0	3	2.7				
BH204	15/07/15 11:13:00			1.0	0.4	18.3	8.0	0	4	2.7				
BH204	15/07/15 11:14:00			1.0	0.4	18.3	8.0	0	3	2.8			2.50	
BH204	29/07/15 08:32:00	990										16		
BH204	29/07/15 08:33:00										0.0			
BH204	29/07/15 08:34:00										0.0			

denotes result exceeding capacity of gas monitoring equipment VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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EC

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH204	29/07/15 08:35:00										0.0			
BH204	29/07/15 08:36:00										0.0			
BH204	29/07/15 08:37:00										0.0			
BH204	29/07/15 08:38:00			0.8	0.0	18.9	0.0	0	0	7.0				
BH204	29/07/15 08:39:00			0.5	0.0	19.7	0.0	0	0	6.3				
BH204	29/07/15 08:40:00			0.5	0.0	19.7	0.0	0	0	6.1				
BH204	29/07/15 08:41:00			0.7	0.0	19.3	0.0	0	0	6.1				
BH204	29/07/15 08:42:00			0.8	0.0	19.2	0.0	0	0	6.0				
BH204	29/07/15 08:43:00			0.2	0.0	20.2	0.0	0	0	5.9				
BH204	29/07/15 08:44:00			0.3	0.0	20.2	0.0	0	0	5.8				
BH204	29/07/15 08:45:00			0.4	0.0	20.0	0.0	0	0	5.7				
BH204	29/07/15 08:46:00			0.7	0.0	19.5	0.0	0	0	5.4				
BH204	29/07/15 08:47:00			0.7	0.0	19.5	0.0	0	0	5.3				
BH204	29/07/15 08:48:00					7							2.80	
BH204	13/08/15 09:45:00	1012	0								0.0	19		
BH204	13/08/15 09:46:00										0.0			
BH204	13/08/15 09:47:00										0.0			
BH204	13/08/15 09:48:00										0.0			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH204	13/08/15 09:49:00			7			W				0.0			
BH204	13/08/15 09:50:00			0.0	0.0	20.1	0.0	0	0	3.0				
BH204	13/08/15 09:51:00			0.0	0.0	20.1	0.0	0	0	2.2				
BH204	13/08/15 09:52:00			0.0	0.0	20.2	0.0	0	0	1.8				
BH204	13/08/15 09:53:00			0.0	0.0	20.2	0.0	0	0	1.5				
BH204	13/08/15 09:54:00			0.0	0.0	20.2	0.0	0	0	1.4				
BH204	13/08/15 09:55:00			0.0	0.0	20.3	0.0	0	0	1.2				
BH204	13/08/15 09:56:00			0.0	0.0	20.3	0.0	0	0	1.1				
BH204	13/08/15 09:57:00			0.0	0.0	20.3	0.0	0	0	0.9				
BH204	13/08/15 09:58:00			0.0	0.0	20.3	0.0	0	0	0.8				
BH204	13/08/15 09:59:00			0.0	0.0	20.4	0.0	0	0	0.7			3.08	
BH204	26/08/15 13:35:00	1004									0.0	13		
BH204	26/08/15 13:36:00										0.0			
BH204	26/08/15 13:37:00										0.0			
BH204	26/08/15 13:38:00										0.0			
BH204	26/08/15 13:39:00										0.0			
BH204	26/08/15 13:40:00			0.4	0.0	19.1	0.0	0	0	0.0				
BH204	26/08/15 13:41:00			0.4	0.0	19.2	0.0	0	0	0.0				

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT 30766

GAS AND GROUNDWATER LEVELS

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SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H₂O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH204	26/08/15 13:42:00			0.3	0.0	19.2	0.0	0	0	0.0				
H204	26/08/15 13:43:00			0.3	0.0	19.3	0.0	0	0	0.0				
BH204	26/08/15 13:44:00			0.3	0.0	19.3	0.0	0	0	0.0				STABLE READINGS
3H204	26/08/15 13:45:00					- 11							2.88	

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH501	15/07/15 13:45:00	1016	0.33								0.0	23		
BH501	15/07/15 13:46:00										0.0			
BH501	15/07/15 13:47:00										0.0			
BH501	15/07/15 13:48:00										0.0			
BH501	15/07/15 13:49:00					+					0.0			
BH501	15/07/15 13:50:00			0.1	0.0	19.1	0.0	0	3	3.4				
BH501	15/07/15 13:51:00			0.1	0.0	19.1	0.0	0	3	4.0				
BH501	15/07/15 13:52:00			0.1	0.0	19.0	0.0	0	3	4.2				
BH501	15/07/15 13:53:00			0.1	0.0	19.0	0.0	0	4	4.3				
BH501	15/07/15 13:54:00			0.1	0.0	19.0	0.0	0	4	4.4				
BH501	15/07/15 13:55:00			0.1	0.0	18.4	0.0	0	3	4.7				
BH501	15/07/15 13:56:00			0.1	0.0	17.9	0.0	0	3	4.6				
BH501	15/07/15 13:57:00			0.0	0.0	17.1	0.0	0	2	4.2				
BH501	15/07/15 13:58:00			0.0	0.0	16.1	0.0	0	2	3.6				
BH501	15/07/15 13:59:00			0.0	0.0	15.0	0.0	0	1	3.0			11.73	
BH501	28/07/15 13:20:00	1004									0.0	18		
BH501	28/07/15 13:21:00	1 7 7									0.0			
BH501	28/07/15 13:22:00										0.0			

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GAS AND GROUNDWATER LEVELS

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Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH501	28/07/15 13:23:00										0.0			
BH501	28/07/15 13:24:00										0.0			
BH501	28/07/15 13:25:00			0.2	0.0	18.2	0.0	0	0	0.0				
BH501	28/07/15 13:26:00			0.2	0.0	18.2	0.0	0	0	0.0				
BH501	28/07/15 13:27:00			0.2	0.0	18.2	0.0	0	0	0.0				
BH501	28/07/15 13:28:00			0.2	0.0	18.1	0.0	0	0	0.0				
BH501	28/07/15 13:29:00			0.2	0.0	18.1	0.0	0	0	0.0				
BH501	28/07/15 13:30:00					-77								
BH501	28/07/15 13:31:00													
BH501	28/07/15 13:32:00												11.76	
BH501	13/08/15 11:20:00	1012	0								0.0	20		
BH501	13/08/15 11:21:00										0.0			
BH501	13/08/15 11:22:00										0.0			
BH501	13/08/15 11:23:00										0.0			
BH501	13/08/15 11:24:00										0.0			
BH501	13/08/15 11:25:00			0.0	0.0	20.2	0.0	0	0	1.8				
BH501	13/08/15 11:26:00			0.0	0.0	20.2	0.0	0	0	1.6				
BH501	13/08/15 11:27:00			0.0	0.0	20.2	0.0	0	0	1.6				

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GAS AND GROUNDWATER LEVELS

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SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH501	13/08/15 11:28:00			0.0	0.0	20.2	0.0	0	0	1.6				
BH501	13/08/15 11:29:00			0.0	0.0	20.2	0.0	0	0	1.6				
BH501	13/08/15 11:30:00			0.0	0.0	20.2	0.0	0	0	1.6				
BH501	13/08/15 11:31:00			0.0	0.0	20.2	0.0	0	0	1.7				
BH501	13/08/15 11:32:00			0.0	0.0	20.2	0.0	0	0	1.7				
BH501	13/08/15 11:33:00			0.0	0.0	20.2	0.0	0	0	1.7				
BH501	13/08/15 11:34:00			0.0	0.0	20.2	0.0	0	0	1.7			4.73	
BH501	26/08/15 11:45:00	1002	0						- 1		0.0	13		
BH501	26/08/15 11:46:00										0.0			
BH501	26/08/15 11:47:00										0.0			
BH501	26/08/15 11:48:00										0.0			
BH501	26/08/15 11:49:00										0.0			
BH501	26/08/15 11:50:00			0.4	0.0	19.2	0.0	0	0	0.0				
BH501	26/08/15 11:51:00			0.4	0.0	19.2	0.0	0	0	0.0				
BH501	26/08/15 11:52:00			0.4	0.0	19.2	0.0	0	0	0.0				
BH501	26/08/15 11:53:00			0.3	0.0	19.2	0.0	0	0	0.0				
BH501	26/08/15 11:54:00			0.3	0.0	19.2	0.0	0	0	0.0				STABLE READINGS
BH501	26/08/15 11:55:00												11.73	

denotes result exceeding capacity of gas monitoring equipment
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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH502	15/07/15 13:30:00	1018		7							0.0	24		
BH502	15/07/15 13:31:00										0.0			
BH502	15/07/15 13:32:00										0.0			
BH502	15/07/15 13:33:00										0.0			
BH502	15/07/15 13:34:00										0.0			
BH502	15/07/15 13:35:00			0.0	0.8	16.8	0.0	0	0	0.0				
BH502	15/07/15 13:36:00			0.0	1.2	15.4	0.0	0	0	0.0				
BH502	15/07/15 13:37:00			0.0	1.4	14.3	0.0	0	0	0.0				
BH502	15/07/15 13:38:00			0.0	1.5	13.9	0.0	0	0	0.0				
BH502	15/07/15 13:39:00			0.0	1.5	13.8	0.0	0	0	0.0				
BH502	15/07/15 13:40:00			0.0	1.5	13.8	0.0	0	0	0.0				
BH502	15/07/15 13:41:00			0.0	1.5	13.8	0.0	0	0	0.0				
BH502	15/07/15 13:42:00			0.0	1.5	13.8	0.0	0	0	0.0				
BH502	15/07/15 13:43:00			0.0	1.5	13.8	0.0	0	0	0.0				
BH502	15/07/15 13:44:00			0.0	1.5	13.8	0.0	0	0	0.0				
BH502	15/07/15 13:45:00												12.22	
BH502	28/07/15 13:15:00	1000										17	100	
BH502	28/07/15 13:16:00							-			0.0		1	

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GAS AND GROUNDWATER LEVELS

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SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



In the state of th	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH502	28/07/15 13:17:00										0.0			
BH502	28/07/15 13:18:00										0.0			
BH502	28/07/15 13:19:00										0.0			
BH502	28/07/15 13:20:00										0.0			
BH502	28/07/15 13:21:00			1.0	0.0	17.4	0.0	0	0	0.0				
BH502	28/07/15 13:22:00			0.8	0.0	18.0	0.0	0	0	0.0				
BH502	28/07/15 13:23:00			0.3	0.0	19.4	0.0	0	0	0.0				
BH502	28/07/15 13:24:00			0.5	0.0	19.0	0.0	0	0	0.0				
BH502	28/07/15 13:25:00			0.8	0.0	17.9	0.0	0	0	0.0				
BH502	28/07/15 13:26:00			0.6	0.0	18.6	0.0	0	0	0.0				
BH502	28/07/15 13:27:00			0.7	0.0	18.0	0.0	0	0	0.0				
BH502	28/07/15 13:28:00			0.8	0.0	18.2	0.0	0	0	0.0				
BH502	28/07/15 13:29:00			0.8	0.0	17.5	0.0	0	0	0.0				
BH502	28/07/15 13:30:00			8.0	0.0	17.3	0.0	0	0	0.0				
BH502	28/07/15 13:31:00												12.02	
BH502	13/08/15 11:30:00	1015	0.48								0.0	21		
BH502	13/08/15 11:31:00										0.0			
BH502	13/08/15 11:32:00										0.0			

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GAS AND GROUNDWATER LEVELS

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Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH502	13/08/15 11:33:00										0.0			
BH502	13/08/15 11:34:00										0.0			
BH502	13/08/15 11:35:00			0.0	1.8	13.9	0.0	0	0	1.9				
BH502	13/08/15 11:36:00			0.0	1.8	13.9	0.0	0	0	1.6				
BH502	13/08/15 11:37:00			0.0	1.8	13.9	0.0	0	0	1.6				
BH502	13/08/15 11:38:00			0.0	1.8	13.9	0.0	0	0	1.6				
BH502	13/08/15 11:39:00			0.0	1.8	13.9	0.0	0	0	1.5				
BH502	13/08/15 11:40:00			0.0	1.8	13.9	0.0	0	0	1.5				
BH502	13/08/15 11:41:00			0.0	1.8	13.9	0.0	0	0	1.5				
BH502	13/08/15 11:42:00			0.0	1.8	13.9	0.0	0	0	1.4				
BH502	13/08/15 11:43:00			0.0	1.8	13.9	0.0	0	0	1.4				
BH502	13/08/15 11:44:00			0.0	1.8	13.9	0.0	0	0	1.4			12.09	
BH502	26/08/15 12:20:00	1002	0								0.0	13		
BH502	26/08/15 12:21:00										0.0			
BH502	26/08/15 12:22:00										0.0			
BH502	26/08/15 12:23:00										0.0			
BH502	26/08/15 12:24:00										0.0			
BH502	26/08/15 12:25:00			1.3	0.0	14.3	0.0	0	0	0.0				

denotes result exceeding capacity of gas monitoring equipment
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GAS AND GROUNDWATER LEVELS

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SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
3H502	26/08/15 12:26:00			1.4	0.0	13.9	0.0	0	0	0.0				
3H502	26/08/15 12:27:00			1.4	0.0	13.7	0.0	0	0	0.0				
3H502	26/08/15 12:28:00			1.5	0.0	13.5	0.0	0	0	0.0				
3H502	26/08/15 12:29:00			1.6	0.0	13.4	0.0	0	0	0.0				
3H502	26/08/15 12:30:00			1.6	0.0	13.2	0.0	0	0	0.0				
3H502	26/08/15 12:31:00			1.5	0.0	13.2	0.0	0	0	0.0				
3H502	26/08/15 12:32:00			1.6	0.0	13.3	0.0	0	0	0.0				
3H502	26/08/15 12:33:00			1.5	0.0	13.2	0.0	0	0	0.0				
3H502	26/08/15 12:34:00			1.5	0.0	13.2	0.0	0	0	0.0				
3H502	26/08/15 12:35:00				100								11.59	

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

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SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH703	20/07/15 08:30:00	1011	0								0.0	19		
BH703	20/07/15 08:31:00										0.0			
BH703	20/07/15 08:32:00										0.0			
BH703	20/07/15 08:33:00										0.0			
BH703	20/07/15 08:34:00	-									0.0			
BH703	20/07/15 08:35:00			0.4	0.0	14.1	0.0	0	0	7.4				
BH703	20/07/15 08:36:00			0.4	0.0	14.0	0.0	0	0	7.5				
BH703	20/07/15 08:37:00			0.4	0.0	14.0	0.0	0	0	7.5				
BH703	20/07/15 08:38:00			0.4	0.0	14.0	0.0	0	0	6.9				
BH703	20/07/15 08:39:00			0.4	0.0	13.9	0.0	0	0	7.0				
BH703	20/07/15 08:40:00			0.4	0.0	13.9	0.0	0	0	6.8				
BH703	20/07/15 08:41:00			0.4	0.0	13.9	0.0	0	0	6.6				
BH703	20/07/15 08:42:00			0.4	0.0	13.9	0.0	0	0	6.4				
BH703	20/07/15 08:43:00			0.4	0.0	13.9	0.0	0	0	6.7				
BH703	20/07/15 08:44:00			0.4	0.0	13.8	0.0	0	0	6.8			4.77	
BH703	28/07/15 09:57:00	986							77			16		
BH703	28/07/15 09:58:00										0.0			
BH703	28/07/15 09:59:00								+ +		0.0			

denotes result exceeding capacity of gas monitoring equipment
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CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH703	28/07/15 10:00:00										0.0			
BH703	28/07/15 10:01:00										0.0			
BH703	28/07/15 10:02:00										0.0			
BH703	28/07/15 10:03:00			0.1	0.0	20.2	0.0	0	0	0.0				
BH703	28/07/15 10:04:00			0.1	0.0	20.2	0.0	0	0	0.0				
BH 7 03	28/07/15 10:05:00			0.1	0.0	20.2	0.0	0	0	0.0				
BH703	28/07/15 10:06:00			0.1	0.0	20.2	0.0	0	0	0.0				
BH703	28/07/15 10:07:00			0.1	0.0	20.2	0.0	0	0	0.0				Stab e read ngs
BH703	28/07/15 10:08:00				-	M.							4.67	
BH703	13/08/15 11:20:00	1012	0								0.0	19		
BH703	13/08/15 11:21:00										0.0			
BH703	13/08/15 11:22:00										0.0			
BH703	13/08/15 11:23:00										0.0			
BH703	13/08/15 11:24:00					1					0.0			
BH703	13/08/15 11:25:00			0.0	0.0	20.2	0.0	0	0	1.8				
ВН703	13/08/15 11:26:00			0.0	0.0	20.2	0.0	0	0	1.6				
BH703	13/08/15 11:27:00			0.0	0.0	20.2	0.0	0	0	1.6				
BH703	13/08/15 11:28:00			0.0	0.0	20.2	0.0	0	0	1.6				

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

30766

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH703	13/08/15 11:29:00		71	0.0	0.0	20.2	0.0	0	0	1.6				
BH703	13/08/15 11:30:00			0.0	0.0	20.2	0.0	0	0	1.6				
BH703	13/08/15 11:31:00			0.0	0.0	20.2	0.0	0	0	1.7				
BH703	13/08/15 11:32:00			0.0	0.0	20.2	0.0	0	0	1.7				
BH703	13/08/15 11:33:00			0.0	0.0	20.2	0.0	0	0	1.7				
BH703	13/08/15 11:34:00			0.0	0.0	20.2	0.0	0	0	1.7			4.73	
BH703	26/08/15 09:10:00	1005	0								0.0	13		
BH703	26/08/15 09:11:00										0.0			
BH703	26/08/15 09:12:00										0.0			
BH703	26/08/15 09:13:00										0.0			
BH703	26/08/15 09:14:00										0.0			
BH703	26/08/15 09:15:00			0.3	0.0	19.2	0.0	0	0	0.0				
BH703	26/08/15 09:16:00			0.3	0.0	19.2	0.0	0	0	0.0				
BH703	26/08/15 09:17:00			0.3	0.0	19.4	0.0	0	0	0.0				
BH703	26/08/15 09:18:00			0.2	0.0	19.4	0.0	0	0	0.0				
BH703	26/08/15 09:19:00			0.2	0.0	19.4	0.0	0	0	0.0				STABLE READINGS
BH703	26/08/15 09:20:00												4.74	depth 9.43m

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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EC

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH704	20/07/15 10:15:00	1015	0								0.0	19		
BH704	20/07/15 10:16:00										0.0			
BH704	20/07/15 10:17:00										0.0			
BH704	20/07/15 10:18:00										0.0			
BH704	20/07/15 10:19:00										0.0			
BH704	20/07/15 10:20:00			6.9	0.0	14.6	0.0	0	0	1.5				
BH704	20/07/15 10:21:00			7.2	0.0	14.3	0.0	0	0	1.5				
BH704	20/07/15 10:22:00			7.3	0.0	14.1	0.0	0	0	1.4				
BH704	20/07/15 10:23:00			7.4	0.0	14.0	0.0	0	0	1.3				
BH704	20/07/15 10:24:00			7.5	0.0	13.9	0.0	0	0	1.2				
BH704	20/07/15 10:25:00			7.7	0.0	13.6	0.0	0	0	1.0				
BH704	20/07/15 10:26:00			7.8	0.0	13.7	0.0	0	0	8.0				
BH704	20/07/15 10:27:00			8.0	0.0	13.6	0.0	0	0	0.7				
BH704	20/07/15 10:28:00			8.1	0.0	13.6	0.0	0	0	0.5				
BH704	20/07/15 10:29:00			8.1	0.0	13.6	0.0	0	0	0.5			4.33	
BH704	28/07/15 10:44:00	992												
BH704	28/07/15 10:45:00										0.0			
BH704	28/07/15 10:46:00										0.0			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT 30766

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H₂O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH704	28/07/15 10:47:00										0.0			
BH704	28/07/15 10:48:00										0.0			
BH704	28/07/15 10:49:00										0.0			
BH704	28/07/15 10:50:00			2.2	0.0	18.3	0.0	0	0	0.4				
BH704	28/07/15 10:51:00			2.0	0.0	18.7	0.0	0	0	0.3				
BH704	28/07/15 10:52:00			1.9	0.0	18.8	0.0	0	0	0.4				
BH704	28/07/15 10:53:00			1.9	0.0	18.8	0.0	0	0	0.3				
BH704	28/07/15 10:54:00			1.9	0.0	18.8	0.0	0	0	0.1				
BH704	28/07/15 10:55:00			1.9	0.0	18.8	0.0	0	0	0.1				
BH704	28/07/15 10:56:00		tab e read ngs	1.9	0.0	18.8	0.0	0	0	0.1				Stab e read ngs
BH704	28/07/15 10:57:00												4.21	
BH704	14/08/15 10:30:00	1006	3.35								0.0	21		
BH704	14/08/15 10:31:00										0.0			
BH704	14/08/15 10:32:00										0.0			
BH704	14/08/15 10:33:00										0.0			
BH704	14/08/15 10:34:00										0.0			
BH704	14/08/15 10:35:00			4.2	0.0	17.1	0.0	0	0	0.0				
BH704	14/08/15 10:36:00			5.0	0.0	16.5	0.0	0	0	0.3				

denotes result exceeding capacity of gas monitoring equipment
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CONTRACT

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH704	14/08/15 10:37:00		71	5.3	0.0	16.2	0.0	0	0	0.5				
BH704	14/08/15 10:38:00			5.9	0.0	15.7	0.0	0	0	0.6				
BH704	14/08/15 10:39:00			6.6	0.0	15.2	0.0	0	0	0.6				
BH704	14/08/15 10:40:00			7.1	0.0	14.7	0.0	0	0	0.6				
BH704	14/08/15 10:41:00			7.7	0.0	14.2	0.0	0	0	0.6				
BH704	14/08/15 10:42:00			8.2	0.0	13.8	0.0	0	0	0.6				
BH704	14/08/15 10:43:00			8.5	0.0	13.7	0.0	0	0	0.5				
BH704	14/08/15 10:44:00	11 - 01		8.5	0.0	13.6	0.0	0	0	0.5			4.29	Insuff c ent water to obta n samp e.
BH704	26/08/15 09:15:00	1001							7 + 1			16		Ra n throughout day
BH704	26/08/15 09:16:00	100									0.0			
BH704	26/08/15 09:17:00										0.0			
BH704	26/08/15 09:18:00										0.0			
BH704	26/08/15 09:19:00										0.0			
BH704	26/08/15 09:20:00								-		0.0			
BH704	26/08/15 09:21:00			7.2	0.0	14.0	0.0	0	0	1.0				
BH704	26/08/15 09:22:00			7.1	0.0	14.1	0.0	0	0	0.4				
BH704	26/08/15 09:23:00			7.4	0.0	13.7	0.0	0	0	0.3				
BH704	26/08/15 09:24:00			7.7	0.0	13.5	0.0	0	0	0.0				

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH704	26/08/15 09:25:00			7.8	0.0	13.4	0.0	0	0	0.0				
BH704	26/08/15 09:26:00			8.1	0.0	13.2	0.0	0	0	0.0				
3H704	26/08/15 09:27:00			8.4	0.0	12.9	0.0	0	0	0.0				
3H704	26/08/15 09:28:00			8.8	0.0	13.1	0.0	0	0	0.0				
3H704	26/08/15 09:29:00			9.2	0.0	12.5	0.0	0	0	0.0				
BH704	26/08/15 09:30:00			8.9	0.0	12.5	0.0	0	0	0.0				
BH704	26/08/15 09:31:00	1											4.24	Insuff c ent water to obta n samp e.

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH705	20/07/15 09:15:00	1011	0								0.0	19		
BH705	20/07/15 09:16:00										0.0			
BH705	20/07/15 09:17:00										0.0			
BH705	20/07/15 09:18:00										0.0			
BH705	20/07/15 09:19:00					-					0.0			
BH705	20/07/15 09:20:00			0.6	0.0	17.4	0.0	0	0	4.2				
BH705	20/07/15 09:21:00			0.6	0.0	17.7	0.0	0	0	3.2				
BH705	20/07/15 09:22:00			0.6	0.0	18.0	0.0	0	0	2.5				
BH705	20/07/15 09:23:00			0.6	0.0	18.2	0.0	0	0	2.1				
BH705	20/07/15 09:24:00			0.6	0.0	18.4	0.0	0	0	1.6				
BH705	20/07/15 09:25:00			0.6	0.0	18.5	0.0	0	0	1.5				
BH705	20/07/15 09:26:00			0.7	0.0	18.6	0.0	0	0	1.3				
BH705	20/07/15 09:27:00			0.7	0.0	18.6	0.0	0	0	1.2				
BH705	20/07/15 09:28:00			0.7	0.0	18.7	0.0	0	0	1.1				
BH705	20/07/15 09:29:00			0.7	0.0	18.7	0.0	0	0	1.1			2.76	
BH705	28/07/15 10:40:00	1005	0								0.0	18		
BH705	28/07/15 10:41:00										0.0			
BH705	28/07/15 10:42:00										0.0			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH705	28/07/15 10:43:00										0.0			
BH705	28/07/15 10:44:00										0.0			
BH705	28/07/15 10:45:00			0.5	0.0	17.5	0.0	0	0	0.0				
BH705	28/07/15 10:46:00			0.5	0.0	16.9	0.0	0	0	0.0				
BH705	28/07/15 10:47:00			0.6	0.0	16.0	0.0	0	0	0.0				
BH705	28/07/15 10:48:00			0.7	0.0	15.7	0.0	0	0	0.0				
BH705	28/07/15 10:49:00			0.8	0.0	15.6	0.0	0	0	0.0				
BH705	28/07/15 10:50:00			0.9	0.0	15.7	0.0	0	0	0.0				
BH705	28/07/15 10:51:00			0.9	0.0	15.7	0.0	0	0	0.0				
BH705	28/07/15 10:52:00				100								2.71	
BH705	14/08/15 10:30:00	1007	0								0.0	19		
BH705	14/08/15 10:31:00										0.0			
BH705	14/08/15 10:32:00										0.0			
BH705	14/08/15 10:33:00										0.0			
BH705	14/08/15 10:34:00										0.0			
BH705	14/08/15 10:35:00			0.0	0.3	18.5	0.0	0	0	1.7				
BH705	14/08/15 10:36:00			0.0	0.3	18.5	0.0	0	0	1.4				
BH705	14/08/15 10:37:00			0.0	0.3	18.7	0.0	0	0	1.2				

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT 30766

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH705	14/08/15 10:38:00			0.0	0.3	18.8	0.0	0	0	1.1				
BH705	14/08/15 10:39:00			0.0	0.3	18.9	0.0	0	0	1.0				
BH705	14/08/15 10:40:00			0.0	0.3	18.8	0.0	0	0	0.9				
BH705	14/08/15 10:41:00			0.0	0.4	18.8	0.0	0	0	0.8				
BH705	14/08/15 10:42:00			0.0	0.4	18.8	0.0	0	0	0.8				
BH705	14/08/15 10:43:00			0.0	0.4	18.7	0.0	0	0	0.8				
BH705	14/08/15 10:44:00			0.0	0.5	18.7	0.0	0	0	0.8			2.77	
BH705	26/08/15 09:48:00	1001										16		
BH705	26/08/15 09:49:00										0.0			
BH705	26/08/15 09:50:00										0.0			
BH705	26/08/15 09:51:00										0.0			
BH705	26/08/15 09:52:00										0.0			
BH705	26/08/15 09:53:00					1_11					0.0			
BH705	26/08/15 09:54:00			0.0	0.0	20.4	0.0	0	0	0.0				
BH705	26/08/15 09:55:00			0.0	0.0	20.4	0.0	0	0	0.0				
BH705	26/08/15 09:56:00			0.0	0.0	20.4	0.0	0	0	0.0				
BH705	26/08/15 09:57:00			0.0	0.0	20.4	0.0	0	0	0.0				
BH705	26/08/15 09:58:00			0.0	0.0	20.4	0.0	0	0	0.0				Stab e read ngs

denotes result exceeding capacity of gas monitoring equipment VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
3H705	26/08/15 09:59:00												2.77	

denotes result exceeding capacity of gas monitoring equipment VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH706	20/07/15 11:00:00	1012	0								0.0	19		
BH706	20/07/15 11:01:00										0.0			
BH706	20/07/15 11:02:00										0.0			
BH706	20/07/15 11:03:00										0.0			
BH706	20/07/15 11:04:00					+ 1					0.0			
BH706	20/07/15 11:05:00			0.0	0.0	20.4	0.0	0	0	0.9				
BH706	20/07/15 11:06:00			0.0	0.0	20.5	0.0	0	0	0.9				
BH706	20/07/15 11:07:00			0.0	0.0	20.4	0.0	0	0	0.9				
BH706	20/07/15 11:08:00			0.0	0.0	20.4	0.0	0	0	0.9				
BH706	20/07/15 11:09:00			0.0	0.0	20.5	0.0	0	0	1.0				
BH706	20/07/15 11:10:00			0.0	0.0	20.4	0.0	0	0	1.2				
BH706	20/07/15 11:11:00			0.0	0.0	20.4	0.0	0	0	1.3				
BH706	20/07/15 11:12:00			0.0	0.0	20.3	0.0	0	0	1.5				
BH706	20/07/15 11:13:00			0.0	0.0	20.3	0.0	0	0	1.6				
BH706	20/07/15 11:14:00			0.0	0.0	20.3	0.0	0	0	1.6			6.43	
BH706	28/07/15 11:40:00	1005	0								0.0	18		
вн706	28/07/15 11:41:00										0.0			
BH706	28/07/15 11:42:00										0.0			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT 30766

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH706	28/07/15 11:43:00										0.0			
BH706	28/07/15 11:44:00										0.0			
BH706	28/07/15 11:45:00			0.2	0.0	19.7	0.0	0	0	0.0				
BH706	28/07/15 11:46:00			0.1	0.0	19.7	0.0	0	0	0.0				
BH706	28/07/15 11:47:00			0.0	0.0	19.8	0.0	0	0	0.0				
BH706	28/07/15 11:48:00			0.0	0.0	19.8	0.0	0	0	0.0				
BH706	28/07/15 11:49:00			0.0	0.0	19.8	0.0	0	0	0.0				
BH706	28/07/15 11:50:00													
BH706	28/07/15 11:51:00													
BH706	28/07/15 11:52:00										-		6.40	
BH706	14/08/15 09:00:00	1007	2.25								0.0	19		
BH706	14/08/15 09:01:00										0.0			
BH706	14/08/15 09:02:00										0.0			
BH706	14/08/15 09:03:00										0.0			
BH706	14/08/15 09:04:00										0.0			
BH706	14/08/15 09:05:00			0.0	0.1	20.7	0.0	0	0	0.0				
BH706	14/08/15 09:06:00			0.0	0.0	20.7	0.0	0	0	0.0				
BH706	14/08/15 09:07:00			0.0	0.0	20.7	0.0	0	0	0.3				

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT 30766

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



In the state of th	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH706	14/08/15 09:08:00			0.0	0.0	20.7	0.0	0	0	0.4				
BH706	14/08/15 09:09:00			0.0	0.0	20.7	0.0	0	0	0.5				
3H706	14/08/15 09:10:00			0.0	0.0	20.7	0.0	0	0	0.5				
BH706	14/08/15 09:11:00			0.0	0.0	20.7	0.0	0	0	0.6				
BH706	14/08/15 09:12:00	-		0.0	0.0	20.7	0.0	0	0	0.7				
BH706	14/08/15 09:13:00			0.0	0.0	20.7	0.0	0	0	0.5				
BH706	14/08/15 09:14:00	1 -		0.0	0.0	20.7	0.0	0	0	0.7			6.46	
BH706	26/08/15 09:50:00	1004									0.0	13		
BH706	26/08/15 09:51:00										0.0			
BH706	26/08/15 09:52:00										0.0			
BH706	26/08/15 09:53:00										0.0			
BH706	26/08/15 09:54:00					74.1					0.0			
BH706	26/08/15 09:55:00			0.1	0.0	19.7	0.0	0	0	0.0				
BH706	26/08/15 09:56:00			0.1	0.0	19.6	0.0	0	0	0.0				
BH706	26/08/15 09:57:00			0.0	0.0	19.7	0.0	0	0	0.0				
BH706	26/08/15 09:58:00			0.0	0.0	19.7	0.0	0	0	0.0				
BH706	26/08/15 09:59:00			0.0	0.0	19.7	0.0	0	0	0.0				STABLE READINGS
BH706	26/08/15 10:00:00												6.43	

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH707	20/07/15 12:00:00	1012	0								0.0	19		
BH707	20/07/15 12:01:00										0.0			
BH707	20/07/15 12:02:00										0.0			
BH707	20/07/15 12:03:00	11									0.0			
BH707	20/07/15 12:04:00	-									0.0			
BH707	20/07/15 12:05:00			1.4	0.0	5.7	0.0	0	0	1.7				
BH707	20/07/15 12:06:00			1.2	0.0	7.1	0.0	0	0	1.5				
BH707	20/07/15 12:07:00			1,1	0.0	8.0	0.0	0	0	1.4				
BH707	20/07/15 12:08:00			1.1	0.0	8.1	0.0	0	0	1.4				
BH707	20/07/15 12:09:00			1.1	0.0	8.1	0.0	0	0	1.4				
BH707	20/07/15 12:10:00			1.1	0.0	8.1	0.0	0	0	1.4				
BH707	20/07/15 12:11:00			1.1	0.0	8.0	0.0	0	0	1.4				
BH707	20/07/15 12:12:00			1.1	0.0	7.8	0.0	0	0	1.4				
BH707	20/07/15 12:13:00			1.1	0.0	7.8	0.0	0	0	1.4				
BH707	20/07/15 12:14:00			1.1	0.0	7.8	0.0	0	0	1.3			11.03	
BH707	28/07/15 12:15:00	1004									0.0	18		
BH707	28/07/15 12:16:00										0.0			
BH707	28/07/15 12:17:00							-			0.0			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH707	28/07/15 12:18:00										0.0			
BH707	28/07/15 12:19:00										0.0			
BH707	28/07/15 12:20:00			0.8	0.0	18.3	0.0	0	0	0.0				
BH707	28/07/15 12:21:00			0.8	0.0	18.2	0.0	0	0	0.0				
BH707	28/07/15 12:22:00			0.7	0.0	18.2	0.0	0	0	0.0				
BH 7 07	28/07/15 12:23:00			0.7	0.0	18.1	0.0	0	0	0.0				
BH707	28/07/15 12:24:00			0.7	0.0	18.1	0.0	0	0	0.0				
BH707	28/07/15 12:25:00													
BH707	28/07/15 12:26:00												100	
BH707	28/07/15 12:27:00												11.02	
BH707	14/08/15 09:25:00	1007	0								0.0	19		
BH707	14/08/15 09:26:00										0.0			
BH707	14/08/15 09:27:00										0.0			
BH707	14/08/15 09:28:00										0.0			
BH707	14/08/15 09:29:00										0.0			
BH707	14/08/15 09:30:00			0.0	4.9	7.7	0.0	0	0	2.3				
BH707	14/08/15 09:31:00			0.0	4.9	7.7	0.0	0	0	2.2				
BH707	14/08/15 09:32:00			0.0	3.6	7.6	0.0	0	0	1.8			1	

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH707	14/08/15 09:33:00			0.0	3.7	7.7	0.0	0	0	18.0				
BH707	14/08/15 09:34:00			0.0	3.7	7.5	0.0	0	0	1.7				
BH707	14/08/15 09:35:00			0.0	3.7	7.4	0.0	0	0	1.7				
BH707	14/08/15 09:36:00			0.0	3.7	7.5	0.0	0	0	1.7				
BH707	14/08/15 09:37:00			0.0	3.7	7.2	0.0	0	0	1.7				
BH707	14/08/15 09:38:00			0.0	3.8	7.4	0.0	0	0	1.6				
BH707	14/08/15 09:39:00			0.0	3.8	7.5	0.0	0	0	1.6			11.03	
BH707	26/08/15 10:15:00	1004									0.0	13		
BH707	26/08/15 10:16:00										0.0			
BH707	26/08/15 10:17:00										0.0			
BH707	26/08/15 10:18:00										0.0			
BH707	26/08/15 10:19:00					. 1					0.0			
BH707	26/08/15 10:20:00			2.5	0.0	10.8	0.0	0	0	0.0				
BH707	26/08/15 10:21:00			2.8	0.0	10.1	0.0	0	0	0.0				
BH707	26/08/15 10:22:00			3.0	0.0	9.5	0.0	0	0	0.0				
BH707	26/08/15 10:23:00			3.1	0.0	9.3	0.0	0	0	0.0				
BH707	26/08/15 10:24:00			3.1	0.0	9.1	0.0	0	0	0.0				
BH707	26/08/15 10:25:00			3.1	0.0	9.1	0.0	0	0	0.0				

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
H707	26/08/15 10:26:00			3.1	0.0	9.1	0.0	0	0	0.0				
H707	26/08/15 10:27:00			3.1	0.0	9.1	0.0	0	0	0.0				
H707	26/08/15 10:28:00			3.1	0.0	9.1	0.0	0	0	0.0				
BH707	26/08/15 10:29:00	11		3.1	0.0	9.1	0.0	0	0	0.0				
H707	26/08/15 10:30:00				4	1111							11.05	depth 19.22m

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH708	20/07/15 13:00:00	1012	0								0.0	20		
BH708	20/07/15 13:01:00										0.0			
BH708	20/07/15 13:02:00										0.0			
BH708	20/07/15 13:03:00										0.0			
BH708	20/07/15 13:04:00										0.0			
BH708	20/07/15 13:05:00			0.3	0.0	19.0	0.0	0	4	2.1				
BH708	20/07/15 13:06:00			0.3	0.0	19.1	0.0	0	4	2.0				
BH708	20/07/15 13:07:00			0.3	0.0	19.1	0.0	0	4	2.1				
BH708	20/07/15 13:08:00			0.3	0.0	19.0	0.0	0	4	2.3				
BH708	20/07/15 13:09:00			0.3	0.0	19.0	0.0	0	4	2.4				
BH708	20/07/15 13:10:00			0.3	0.0	19.0	0.0	0	4	2.4				
BH708	20/07/15 13:11:00			0.3	0.0	19.0	0.0	0	4	2.5				
BH708	20/07/15 13:12:00			0.3	0.0	18.9	0.0	0	3	2.5				
BH708	20/07/15 13:13:00			0.3	0.0	18.9	0.0	0	4	2.5				
BH708	20/07/15 13:14:00			0.3	0.0	18.9	0.0	0	3	2.5			16.03	
BH708	28/07/15 11:36:00	992										16		
BH708	28/07/15 11:37:00										0.0			
BH708	28/07/15 11:38:00										0.0			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT 30766

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH708	28/07/15 11:39:00			3.							0.0			
BH708	28/07/15 11:40:00										0.0			
BH708	28/07/15 11:41:00										0.0			
BH708	28/07/15 11:42:00			2.3	0.0	12.1	0.0	0	0	5.8				
BH708	28/07/15 11:43:00			2.3	0.0	11.9	0.0	0	0	4.3				
BH708	28/07/15 11:44:00			2.3	0.0	11.9	0.0	0	0	4.1				
BH708	28/07/15 11:45:00			2.3	0.0	11.9	0.0	0	0	5.4				
BH708	28/07/15 11:46:00			2.2	0.0	11.7	0.0	0	0	3.5				
BH708	28/07/15 11:47:00			2.3	0.0	12.0	0.0	0	0	2.7				
BH708	28/07/15 11:48:00			2.3	0.0	11.7	0.0	0	0	3.3				
BH708	28/07/15 11:49:00			2.3	0.0	11.8	0.0	0	0	3.1				
BH708	28/07/15 11:50:00			2.3	0.0	11.6	0.0	0	0	2.0				
BH708	28/07/15 11:51:00			2.3	0.0	11.6	0.0	0	0	2.0				
BH708	28/07/15 11:52:00												16.02	
BH708	13/08/15 12:15:00	1007	0.02								0.0	18		
BH708	13/08/15 12:16:00										0.0			
BH708	13/08/15 12:17:00										0.0			
BH708	13/08/15 12:18:00										0.0			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Itrial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
BH708	13/08/15 12:19:00						IJ				0.0			
BH708	13/08/15 12:20:00			1.2	0.0	16.3	0.0	0	0	2.5				
BH708	13/08/15 12:21:00			1.2	0.0	16.2	0.0	0	0	2.5				
BH708	13/08/15 12:22:00			1.2	0.0	16.2	0.0	0	0	2.4				
BH708	13/08/15 12:23:00			1.2	0.0	16.2	0.0	0	0	2.5				
BH708	13/08/15 12:24:00			1.2	0.0	16.1	0.0	0	0	2.4				
BH708	13/08/15 12:25:00			1.2	0.0	16.1	0.0	0	0	2.4				
BH708	13/08/15 12:26:00			1.3	0.0	16.1	0.0	0	0	2.3				
BH708	13/08/15 12:27:00			1.3	0.0	16.1	0.0	0	0	2.2				
BH708	13/08/15 12:28:00			1.3	0.0	16.0	0.0	0	0	2.2				
BH708	13/08/15 12:29:00			1.3	0.0	16.0	0.0	0	0	2.1			16.12	
BH708	26/08/15 11:05:00	1000										16		
BH708	26/08/15 11:06:00		0								0.0			
BH708	26/08/15 11:07:00		9								0.6			
BH708	26/08/15 11:08:00		16								0.5			
BH708	26/08/15 11:09:00		4								1.6			
BH708	26/08/15 11:10:00		2								0.6			
BH708	26/08/15 11:11:00			4.1	0.0	8.7	0.0	0	0	0.0	1400			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
3H708	26/08/15 11:12:00			4.0	0.0	9.1	0.0	0	0	0.3				
3H708	26/08/15 11:13:00			4.1	0.0	8.6	0.0	0	0	0.0				
3H708	26/08/15 11:14:00			4.1	0.0	8.6	0.0	0	0	0.0				
3H708	26/08/15 11:15:00			4.1	0.0	8.6	0.0	0	0	0.0				
3H708	26/08/15 11:16:00			4.0	0.0	8.6	0.0	0	0	0.0				
3H708	26/08/15 11:17:00			4.1	0.0	8.5	0.0	0	0	0.0				
3H708	26/08/15 11:18:00			4.0	0.0	8.9	0.0	0	0	0.8				
3H708	26/08/15 11:19:00			4.0	0.0	9.0	0.0	0	0	0.7				
3H708	26/08/15 11:20:00			4.0	0.0	9.0	0.0	0	0	0.9				
3H708	26/08/15 11:21:00				100	1.5			-				15.93	
									w 7					

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks	
SW01	12/08/15 10:30:00														
								17.7							

denotes result exceeding capacity of gas monitoring equipment VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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EC

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
SW02	12/08/15 11:40:00													
Ш						1								

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
SW03	12/08/15 10:00:00													
remarks														CONTRACT

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks	
SW04	12/08/15 11:30:00														
4															

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remark	ss
SW05	12/08/15 11:10:00					+	-								
								11 71							
emarks	sult exceeding capacity													CONTRACT	CHECK

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT 30766

EC

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
WS101	15/07/15 10:00:00	1018	0.02								0.0	20		
WS101	15/07/15 10:01:00										0.0			
WS101	15/07/15 10:02:00										0.0			
WS101	15/07/15 10:03:00										0.0			
WS101	15/07/15 10:04:00										0.0			
WS101	15/07/15 10:05:00			0.0	0.1	19.2	2.0	0	0	3.6				
WS101	15/07/15 10:06:00			0.0	0.1	19.3	2.0	0	0	3.7				
WS101	15/07/15 10:07:00			0.0	0.1	19.3	2.0	0	0	3.7				
WS101	15/07/15 10:08:00			0.0	0.1	19.3	2.0	0	0	3.6				
WS101	15/07/15 10:09:00			0.0	0.1	19.3	2.0	0	0	3.6				
WS101	15/07/15 10:10:00			0.0	0.1	19.3	2.0	0	0	3.5				
WS101	15/07/15 10:11:00			0.0	0.1	19.3	2.0	0	0	3.4				
WS101	15/07/15 10:12:00			0.0	0.1	19.4	2.0	0	0	3.3				
WS101	15/07/15 10:13:00			0.0	0.1	19.4	1.0	0	0	3.3			0.0	
WS101	15/07/15 10:14:00			0.0	0.1	19.4	1.0	0	0	3.3			3.31	
WS101	29/07/15 12:10:00	1009	0			***					0.0	18		
WS101	29/07/15 12:11:00										0.0			
WS101	29/07/15 12:12:00										0.0			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

30766

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H₂O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
WS101	29/07/15 12:13:00										0.0			
WS101	29/07/15 12:14:00										0.0			
WS101	29/07/15 12:15:00			0.0	0.0	18.8	0.0	0	0	0.0				
WS101	29/07/15 12:16:00			0.0	0.0	18.8	0.0	0	0	0.0				
WS101	29/07/15 12:17:00			0.0	0.0	18.8	0.0	0	0	0.0				
WS101	29/07/15 12:18:00			0.0	0.0	18.7	0.0	0	0	0.0				
WS101	29/07/15 12:19:00			0.0	0.0	18.7	0.0	0	0	0.0				
WS101	29/07/15 12:20:00												3.65	
WS101	12/08/15 10:00:00	1026	0								0.0	17		
WS101	12/08/15 10:01:00										0.0			
WS101	12/08/15 10:02:00										0.0			
WS101	12/08/15 10:03:00										0.0			
WS101	12/08/15 10:04:00										0.0			
WS101	12/08/15 10:05:00			0.0	0.2	19.9	3.0	0	0	1.8				
WS101	12/08/15 10:06:00			0.0	0.2	19.9	3.0	0	0	1.6				
WS101	12/08/15 10:07:00			0.0	0.2	19.8	3.0	0	0	1.5				
WS101	12/08/15 10:08:00			0.0	0.2	19.8	3.0	0	0	1.3				
WS101	12/08/15 10:09:00			0.0	0.2	19.8	3.0	0	0	1.3				

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT 30766

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
WS101	12/08/15 10:10:00			0.0	0.2	19.8	3.0	0	0	1.3				
WS101	12/08/15 10:11:00			0.0	0.2	19.7	3.0	0	0	1.3				
WS101	12/08/15 10:12:00			0.0	0.2	19.8	3.0	0	0	1.3				
WS101	12/08/15 10:13:00			0.0	0.2	19.7	3.0	0	0	1.2				
WS101	12/08/15 10:14:00		-	0.0	0.2	19.7	3.0	0	0	1.2		1.0	3.66	
WS101	26/08/15 16:00:00	1003	0		1150	7					0.0	13		
WS101	26/08/15 16:01:00										0.0			
WS101	26/08/15 16:02:00										0.0			
WS101	26/08/15 16:03:00										0.0			
WS101	26/08/15 16:04:00					9 1					0.0			
WS101	26/08/15 16:05:00			0.0	0.0	18.8	0.0	0	0	0.0				
WS101	26/08/15 16:06:00			0.0	0.0	18.7	0.0	0	0	0.0				
WS101	26/08/15 16:07:00			0.0	0.0	18.7	0.0	0	0	0.0				
WS101	26/08/15 16:08:00			0.0	0.0	18.6	0.0	0	0	0.0				
WS101	26/08/15 16:09:00			0.0	0.0	18.6	0.0	0	0	0.0				STABLE READINGS
WS101	26/08/15 16:10:00												3.78	Shulling.

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
WS102	14/07/15 10:00:00	1018	0.23								0.0	21		
WS102	14/07/15 10:01:00										0.0			
WS102	14/07/15 10:02:00										0.0			
WS102	14/07/15 10:03:00	11									0.0			
WS102	14/07/15 10:04:00	-				-					0.0			
WS102	14/07/15 10:05:00			0.0	0.0	18.0	0.0	0	1	4.3				
WS102	14/07/15 10:06:00			0.0	0.0	18.0	0.0	0	0	4.0				
WS102	14/07/15 10:07:00			0.0	0.0	18.0	0.0	0	0	3.8				
WS102	14/07/15 10:08:00			0.0	0.0	18.0	0.0	0	0	3.6				
WS102	14/07/15 10:09:00			0.0	0.0	18.0	0.0	0	0	3.0				
WS102	14/07/15 10:10:00			0.0	0.0	18.0	0.0	0	0	3.0				
WS102	14/07/15 10:11:00			0.0	0.0	18.0	0.0	0	0	3.0				
WS102	14/07/15 10:12:00			0.0	0.0	18.0	0.0	0	0	2.9				
WS102	14/07/15 10:13:00			0.0	0.0	18.1	0.0	0	0	2.8				
WS102	14/07/15 10:14:00			0.0	0.0	18.1	0.0	0	0	2.7			3.29	
WS102	29/07/15 12:10:00	1002										17		
WS102	29/07/15 12:11:00										0.0			
WS102	29/07/15 12:12:00										0.0			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT 30766

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
WS102	29/07/15 12:13:00			7							0.0			
WS102	29/07/15 12:14:00										0.0			
WS102	29/07/15 12:15:00					(0.0			
WS102	29/07/15 12:16:00			0.0	0.0	19.2	0.0	0	0	0.0				
WS102	29/07/15 12:17:00			0.0	0.0	18.7	0.0	0	0	0.0				
WS102	29/07/15 12:18:00			0.0	0.0	18.6	0.0	0	0	0.0				
WS102	29/07/15 12:19:00			0.0	0.0	18.7	0.0	0	0	0.0				
WS102	29/07/15 12:20:00			0.0	0.0	18.7	0.0	0	0	0.0				
WS102	29/07/15 12:21:00			0.0	0.0	18.7	0.0	0	0	0.0				
WS102	29/07/15 12:22:00			0.0	0.0	18.7	0.0	0	0	0.0				
WS102	29/07/15 12:23:00			0.0	0.0	18.7	0.0	0	0	0.0				
WS102	29/07/15 12:24:00												3.49	
WS102	12/08/15 11:00:00	1020	0								0.0	19		
WS102	12/08/15 11:01:00										0.0		1,6	
WS102	12/08/15 11:02:00										0.0			
WS102	12/08/15 11:03:00										0.0			
WS102	12/08/15 11:04:00										0.0			
WS102	12/08/15 11:05:00			0.0	0.0	20.6	0.0	0	0	1.9				

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT 30766

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
WS102	12/08/15 11:06:00			0.0	0.0	20.5	0.0	0	0	1.3				
WS102	12/08/15 11:07:00			0.0	0.0	20.4	0.0	0	0	1.1				
WS102	12/08/15 11:08:00			0.0	0.0	20.4	0.0	0	0	1.0				
WS102	12/08/15 11:09:00			0.0	0.0	20.3	0.0	0	0	0.9				
WS102	12/08/15 11:10:00			0.0	0.0	20.1	0.0	0	0	0.9				
WS102	12/08/15 11:11:00			0.0	0.0	20.0	0.0	0	0	0.8				
WS102	12/08/15 11:12:00			0.0	0.0	19.9	0.0	0	0	0.8				
WS102	12/08/15 11:13:00			0.0	0.0	19.8	0.0	0	0	0.8				
WS102	12/08/15 11:14:00			0.0	0.0	19.7	0.0	0	0	0.7			3.98	
WS102	26/08/15 15:53:00	1000										17		
WS102	26/08/15 15:54:00					9					0.0			
WS102	26/08/15 15:55:00										0.0			
WS102	26/08/15 15:56:00										0.0			
WS102	26/08/15 15:57:00										0.0			
WS102	26/08/15 15:58:00										0.0			
WS102	26/08/15 15:59:00			0.0	0.0	18.4	0.0	0	0	0.0				
WS102	26/08/15 16:00:00			0.0	0.0	18.3	0.0	0	0	0.0				
WS102	26/08/15 16:01:00			0.0	0.0	18.3	0.0	0	0	0.0				

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
WS102	26/08/15 16:02:00			0.0	0.0	18.1	0.0	0	0	0.0				
WS102	26/08/15 16:03:00			0.0	0.0	18.1	0.0	0	0	0.0				
WS102	26/08/15 16:04:00			0.0	0.0	18.0	0.0	0	0	0.0				
WS102	26/08/15 16:05:00			0.0	0.0	18.0	0.0	0	0	0.0				
WS102	26/08/15 16:06:00			0.0	0.0	18.0	0.0	0	0	0.0				
WS102	26/08/15 16:07:00			0.0	0.0	18.0	0.0	0	0	0.0				
WS102	26/08/15 16:08:00			0.0	0.0	18.0	0.0	0	0	0.0				
WS102	26/08/15 16:09:00							lui"					3.54	
marka														

denotes result exceeding capacity of gas monitoring equipment VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
WS202	14/07/15 13:15:00	1017	0.01								0.0	20		
WS202	14/07/15 13:16:00										0.0			
WS202	14/07/15 13:17:00										0.0			
WS202	14/07/15 13:18:00										0.0			
WS202	14/07/15 13:19:00										0.0			
WS202	14/07/15 13:20:00			0.0	0.3	15.9	5.0	0	6	3.8				
WS202	14/07/15 13:21:00			0.0	0.3	15.9	5.0	0	6	3.9				
WS202	14/07/15 13:22:00			0.0	0.3	15.9	5.0	0	6	4.0				
WS202	14/07/15 13:23:00			0.0	0.3	16.0	5.0	0	6	3.9				
WS202	14/07/15 13:24:00			0.0	0.3	16.0	5.0	0	6	3.8				
WS202	14/07/15 13:25:00			0.0	0.3	16.1	5.0	0	6	3.8				
WS202	14/07/15 13:26:00			0.0	0.3	16.2	5.0	0	6	3.7				
WS202	14/07/15 13:27:00			0.0	0.3	16.3	5.0	0	6	3.6				
WS202	14/07/15 13:28:00			0.0	0.2	16.5	4.0	0	5	3.5				
WS202	14/07/15 13:29:00			0.0	0.2	16.6	4.0	0	5	3.5			7.65	
WS202	29/07/15 10:30:00	1009	0								0.0	18		
WS202	29/07/15 10:31:00										0.0			
WS202	29/07/15 10:32:00										0.0			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

30766

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
WS202	29/07/15 10:33:00										0.0			
WS202	29/07/15 10:34:00										0.0			
WS202	29/07/15 10:35:00			0.0	0.0	16.3	0.0	0	0	0.0				
WS202	29/07/15 10:36:00			0.0	0.0	16.2	0.0	0	0	0.0				
WS202	29/07/15 10:37:00			0.0	0.0	16.2	0.0	0	0	0.0				
WS202	29/07/15 10:38:00			0.0	0.0	16.3	0.0	0	0	0.0				
WS202	29/07/15 10:39:00			0.0	0.0	16.3	0.0	0	0	0.0				
WS202	29/07/15 10:40:00												7.26	
WS202	12/08/15 12:00:00	1023	0.12								0.0	18		
WS202	12/08/15 12:01:00										0.0			
WS202	12/08/15 12:02:00										0.0			
WS202	12/08/15 12:03:00										0.0			
WS202	12/08/15 12:04:00										0.0			
WS202	12/08/15 12:05:00			0.3	0.0	17.7	0.0	5	5	2.5				
WS202	12/08/15 12:06:00			0.3	0.0	17.8	0.0	55	5	2.5				
WS202	12/08/15 12:07:00			0.3	0.0	17.8	0.0	5	5	2.5				
WS202	12/08/15 12:08:00			0.3	0.0	17.8	0.0	5	5	2.6				
WS202	12/08/15 12:09:00			0.3	0.0	17.9	0.0	5	5	2.6				

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT 30766

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
WS202	12/08/15 12:10:00			0.3	0.0	17.9	0.0	5	5	2.5				
WS202	12/08/15 12:11:00			0.3	0.0	17.9	0.0	5	5	2.6				
WS202	12/08/15 12:12:00			0.3	0.0	18.0	0.0	6	5	2.6				
WS202	12/08/15 12:13:00			0.2	0.0	18.1	0.0	5	4	2.6				
WS202	12/08/15 12:14:00			0.2	0.0	18.2	0.0	5	4	2.8			7.95	
WS202	26/08/15 15:15:00	1002	0		1001	1 1					0.0	13		
WS202	26/08/15 15:16:00										0.0			
WS202	26/08/15 15:17:00										0.0			
WS202	26/08/15 15:18:00										0.0			
WS202	26/08/15 15:19:00										0.0			
WS202	26/08/15 15:20:00			0.0	0.0	16.9	0.0	0	0	0.0				
WS202	26/08/15 15:21:00			0.0	0.0	16.8	0.0	0	0	0.0				
WS202	26/08/15 15:22:00			0.0	0.0	16.7	0.0	0	0	0.0				
WS202	26/08/15 15:23:00			0.0	0.0	16.6	0.0	0	0	0.0				
WS202	26/08/15 15:24:00			0.0	0.0	16.6	0.0	0	0	0.0				STABLE READINGS
WS202	26/08/15 15:25:00					1 6 4							7.16	1

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
WS203	14/07/15 12:15:00	1019	0.17								0.0	20		
VS203	14/07/15 12:16:00										0.0			
WS203	14/07/15 12:17:00										0.0			
NS203	14/07/15 12:18:00										0.0			
WS203	14/07/15 12:19:00										0.0			
WS203	14/07/15 12:20:00			0.0	2.4	19.6	45.0	0	16	2.0				
WS203	14/07/15 12:21:00			0.0	2.0	19.7	39.0	0	14	1.9				
WS203	14/07/15 12:22:00			0.0	1.8	19.8	35.0	0	12	1.8				
WS203	14/07/15 12:23:00			0.0	1.6	19.8	31.0	0	11	1.9				
WS203	14/07/15 12:24:00			0.0	1.4	19.9	28.0	0	10	1.9				
WS203	14/07/15 12:25:00			0.0	1.3	19.9	25.0	0	8	2.1				
WS203	14/07/15 12:26:00			0.0	1.2	19.9	24.0	0	8	2.7				
WS203	14/07/15 12:27:00			0.0	1.2	19.9	23.0	0	7	3.0				
WS203	14/07/15 12:28:00			0.0	1.1	19.9	20.0	0	6	3.0				
WS203	14/07/15 12:29:00			0.0	1.0	20.0	19.0	0	5	2.9			1.14	
NS203	29/07/15 10:45:00	1004										17		
WS203	29/07/15 10:46:00										0.0			
WS203	29/07/15 10:47:00										0.0			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

30766

EC

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
WS203	29/07/15 10:48:00										0.0			
WS203	29/07/15 10:49:00										0.0			
WS203	29/07/15 10:50:00										0.0			
WS203	29/07/15 10:51:00	11												
WS203	29/07/15 10:52:00	-		0.0	1.3	20.1	29.3	0	0	0.0				Peak CH4 = 2%
WS203	29/07/15 10:53:00			0.1	1.2	20.1	28.4	0	0	0.0				
WS203	29/07/15 10:54:00			0.1	0.6	20.3	13.7	0	0	0.0				
WS203	29/07/15 10:55:00			0.1	0.0	20.4	1.8	0	0	0.0				
WS203	29/07/15 10:56:00			0.1	0.0	20.4	0.0	0	0	0.0				
WS203	29/07/15 10:57:00			0.1	0.0	20.4	0.0	0	0	0.0				
WS203	29/07/15 10:58:00			0.1	0.0	20.4	0.0	0	0	0.0				
WS203	29/07/15 10:59:00			0.1	0.0	20.4	0.0	0	0	0.0				
WS203	29/07/15 11:00:00			0.1	0.0	20.4	0.0	0	0	0.0				
WS203	29/07/15 11:01:00			0.1	0.0	20.5	0.0	0	0	0.0				
WS203	29/07/15 11:02:00												1.23	
WS203	12/08/15 12:00:00	1020	0								0.0	20		
WS203	12/08/15 12:01:00										0.0			
WS203	12/08/15 12:02:00										0.0			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
WS203	12/08/15 12:03:00										0.0			
WS203	12/08/15 12:04:00										0.0			
WS203	12/08/15 12:05:00			0.0	0.0	20.7	0.0	0	0	2.2				
WS203	12/08/15 12:06:00			0.0	0.0	20.6	0.0	0	0	1.9				
WS203	12/08/15 12:07:00			0.0	0.0	20.6	0.0	0	0	1.8				
WS203	12/08/15 12:08:00			0.0	0.0	20.6	0.0	0	0	1.7				
WS203	12/08/15 12:09:00			0.0	0.0	20.6	0.0	0	0	1.6				
WS203	12/08/15 12:10:00			0.0	0.0	20.6	0.0	0	0	1.6				
WS203	12/08/15 12:11:00			0.0	0.0	20.6	0.0	0	0	1.5				
WS203	12/08/15 12:12:00			0.0	0.0	20.5	0.0	0	0	1.4				
WS203	12/08/15 12:13:00			0.0	0.0	20.5	0.0	0	0	1.5				
WS203	12/08/15 12:14:00			0.0	0.0	20.6	0.0	0	0	1.5			1.56	
WS203	26/08/15 15:20:00	1000				- 1						17		
WS203	26/08/15 15:21:00										0.0			
WS203	26/08/15 15:22:00										0.0			
WS203	26/08/15 15:23:00										0.0			
WS203	26/08/15 15:24:00										0.0			
WS203	26/08/15 15:25:00										0.0			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
WS203	26/08/15 15:26:00			0.0	5.7	18.7	#	0	0	0.0				
WS203	26/08/15 15:27:00			0.0	4.2	19.2	96.5	0	0	0.0				
WS203	26/08/15 15:28:00			0.0	4.2	19.2	96.5	0	0	0.0				
WS203	26/08/15 15:29:00			0.0	4.3	19.2	97.8	0	0	0.0				
WS203	26/08/15 15:30:00			0.0	4.4	19.2	#	0	0	0.0				
WS203	26/08/15 15:31:00			0.0	2.9	19.5	64.0	0	0	0.0				
WS203	26/08/15 15:32:00			0.0	3.1	19.5	67.3	0	0	0.0				
WS203	26/08/15 15:33:00			0.0	3.3	19.4	72.0	0	0	0.0				
WS203	26/08/15 15:34:00			0.0	3.4	19.4	76.1	0	0	0.0				
WS203	26/08/15 15:35:00			0.0	3.4	19.4	78.9	0	0	0.0				
WS203	26/08/15 15:36:00				- 1								1.27	
4														

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT 30766

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
WS204	15/07/15 12:30:00	1016	0.56								0.0	23		
WS204	15/07/15 12:31:00										0.0			
WS204	15/07/15 12:32:00										0.0			
WS204	15/07/15 12:33:00										0.0			
WS204	15/07/15 12:34:00										0.0			
WS204	15/07/15 12:35:00			0.0	0.1	15.5	2.0	0	3	5.0				
WS204	15/07/15 12:36:00			0.0	0.1	15.4	2.0	0	3	5.2				
WS204	15/07/15 12:37:00			0.0	0.1	15.4	2.0	0	3	5.2				
WS204	15/07/15 12:38:00			0.0	0.1	15.5	2.0	0	3	5.0				
WS204	15/07/15 12:39:00			0.0	0.1	15.6	2.0	0	2	4.8				
WS204	15/07/15 12:40:00			0.0	0.1	15.9	2.0	0	2	4.6				
WS204	15/07/15 12:41:00			0.0	0.1	16.5	2.0	0	2	4.2				
WS204	15/07/15 12:42:00			0.0	0.1	17.7	1.0	0	1	3.6				
WS204	15/07/15 12:43:00			0.0	0.1	18.9	1.0	0	0	3.0			9-	
WS204	15/07/15 12:44:00			0.0	0.1	19.0	1.0	0	0	3.0			Dry	
WS204	29/07/15 09:30:00	1009	0								0.0	18		
WS204	29/07/15 09:31:00										0.0			
WS204	29/07/15 09:32:00							-			0.0			

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

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GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	LEL (%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
WS204	29/07/15 09:33:00										0.0			
WS204	29/07/15 09:34:00										0.0			
WS204	29/07/15 09:35:00			0.0	0.0	17.8	0.0	0	0	0.0				
WS204	29/07/15 09:36:00			0.0	0.0	17.8	0.0	0	0	0.0				
WS204	29/07/15 09:37:00			0.0	0.0	17.8	0.0	0	0	0.0				
WS204	29/07/15 09:38:00			0.0	0.0	17.7	0.0	0	0	0.0				
WS204	29/07/15 09:39:00			0.0	0.0	17.7	0.0	0	0	0.0				
WS204	29/07/15 09:40:00												Dry	
WS204	13/08/15 09:30:00	1016	0.69								0.0	20	700	
WS204	13/08/15 09:31:00										0.0	-		
WS204	13/08/15 09:32:00										0.0			
WS204	13/08/15 09:33:00					6 1					0.0			
WS204	13/08/15 09:34:00					-					0.0			
WS204	13/08/15 09:35:00			0.2	0.0	14.0	0.0	4	3	2.1				
WS204	13/08/15 09:36:00			0.2	0.0	13.3	0.0	4	4	1.8				
WS204	13/08/15 09:37:00			0.2	0.0	12.8	0.0	5	4	1.8				
WS204	13/08/15 09:38:00			0.2	0.0	12.3	0.0	5	4	1.8				
WS204	13/08/15 09:39:00			0.2	0.0	11.8	0.0	5	4	1.9				

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

30766

GAS AND GROUNDWATER LEVELS

CLIENT: LONDON RESORT COMPANY HOLDINGS LTD

SITE: LONDON PARAMOUNT ENTERTAINMENT RESORT



Borehole /trial pit no.	date and time	barometric pressure (mb)	pressure differentiation (mm H ₂ O)	carbon dioxide (%)	methane (%)	oxygen (%)	(%)	hydrogen sulphide (ppm)	carbon monoxide (ppm)	VOC (ppm)	gas flow (ltr/hr)	temperature (°C)	water level (m - bgl)	remarks
WS204	13/08/15 09:40:00			0.3	0.0	11.0	0.0	5	5	1.9				
WS204	13/08/15 09:41:00			0.3	0.0	10.8	0.0	5	5	2.0				
WS204	13/08/15 09:42:00			0.3	0.0	10.6	0.0	5	5	2.0				
WS204	13/08/15 09:43:00			0.3	0.0	11.7	0.0	4	4	2.0				
WS204	13/08/15 09:44:00			0.2	0.0	13.2	0.0	2	4	1.9			DRY	
WS204	26/08/15 14:30:00	1002	0						100		0.0	13		nta fow: 1.1
WS204	26/08/15 14:31:00										0.0			
WS204	26/08/15 14:32:00										0.0			
WS204	26/08/15 14:33:00										0.0			
WS204	26/08/15 14:34:00					4.1					0.0			
WS204	26/08/15 14:35:00			0.0	0.0	15.2	0.0	0	0	0.0				
WS204	26/08/15 14:36:00			0.0	0.0	14.2	0.0	0	0	0.0				
WS204	26/08/15 14:37:00			0.0	0.0	14.1	0.0	0	0	0.0				
WS204	26/08/15 14:38:00			0.0	0.0	14.0	0.0	0	0	0.0				
WS204	26/08/15 14:39:00			0.0	0.0	14.0	0.0	0	0	0.0				STABLE READINGS
WS204	26/08/15 14:40:00					7.1							DRY	depth: 8.57m

denotes result exceeding capacity of gas monitoring equipment
VOC - Photoionisation Detector Mini RAE 2000 measures VOC vapours with 10.6eV lamp calibrated against isobutylene.

CONTRACT

30766

APPENDIX B

LABORATORY TESTING



2718



GEOTECHNICAL ENGINEERING LIMITED

Version No.

1

For the attention of Chris Yates/Emma Leivers

Page No. 1 of 191

Date of Issue 13/10/2015

TEST REPORT

PROJECT/SITE	London Paramount Entertainment Resort	Samples received	15/07/2015
GEL REPORT NUMBER	30766	Schedule received	15/07/2015
Your ref/PO:	0	Testing commenced	04/08/2015
Test report refers to	All schedules combined	Status	Final

SUMMARY OF RESULTS ATTACHED

TEST METHOD & DESCRIPTION	QUANTITY	ACCREDITED TEST
BS1377: Part 2: 1990:3.3, Saturation Moisture Content	17	YES
BS1377: Part 2: 1990:3.3, Saturation Moisture Content (Subcontracted)	2	YES
BS EN ISO 17892-1: 2014:5. Water Content	81	YES
BS1377: Part 2: 1990:3.2, Moisture Content (Subcontracted)	47	YES
BS1377: Part 2: 1990:4.2-4.4&5.2-5.4, Liquid & Plastic Limits	51	YES
BS1377: Part 2: 1990:4.5-4.6&5.2-5.4, Liquid (Casagrande Method) & Plastic Limits	1	YES
BS1377: Part 2: 1990:4.2-4.4&5.2-5.4, Liquid & Plastic Limits (Subcontracted)	22	YES
BS EN ISO 17892-2: 2014:5.1 Density - Linear Measurement	2	YES
BS EN ISO 17892-2: 2014:5.2 Density - Immersion	2	YES
BS1377: Part 2: 1990:7.2, Density - Linear Measurement (Subcontracted)	3	YES
BS1377: Part 2: 1990:9.2, Particle Size Distribution - Wet Sieve	46	YES
BS1377: Part 2: 1990:9.4, Particle Size Distribution - Pipette	30	YES
BS1377: Part 2: 1990:9.2, Particle Size Distribution - Wet Sieve (Subcontracted)	38	YES
BS1377: Part 2: 1990:9.5, Particle Size Distribution - Hydrometer (Subcontracted)	28	YES

Remarks

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Approved Signatories:

S Robinson (Client Manager) C Andrew (Client Manager)

W Jones (Technical Support) J Hanson (Director) C Thomas (Consultant)



Doc TR01

Rev No. 7

Revision date 12/02/15

DC:JH

Geotechnical Engineering Ltd

Centurion House Olympus Park, Quedgeley Gloucester GL2 4NF

Registered number: 00700739 VAT Number: 682 5857 89 www.geoeng.co.uk

geotech@geoeng.co.uk TEL: 01452 527743 Fax: 01452 729314

Payments: Geotechnical Engineering Limited Sort code: 30-15-99 Bank account: 00072116







GEOTECHNICAL ENGINEERING LIMITED

Version No.

1

For the attention of Chris Yates/Emma Leivers

Page No. 2 of 191

Date of Issue 13/10/2015

TEST REPORT

PROJECT/SITE	London Paramount Entertainment Resort	Samples received	15/07/2015
GEL REPORT NUMBER	30766	Schedule received	15/07/2015
Your ref/PO:	0	Testing commenced	04/08/2015
Test report refers to	All schedules combined	Status	Final

SUMMARY OF RESULTS ATTACHED

TEST METHOD & DESCRIPTION	QUANTITY	ACCREDITED TEST
BS1377: Part 4: 1990:3, Dry Density/Moisture Content Relationship	2	YES
BS1377: Part 4: 1990:3, Dry Density/Moisture Content Relationship (Subcontracted)	1	YES
BS1377: Part 5: 1990:3, Consolidation	2	NO
BS1377: Part 6: 1990:6, Constant Head Permeability (Subcontracted)	2	YES
BS1377: Part 7: 1990:4.5, Determination of Shear Strength by Direct Shear (Subcontracted)	4	YES
BS1377: Part 7: 1990:8&9, Undrained Triaxial Compression	4	NO
BS1377: Part 7: 1990:8&9, Undrained Triaxial Compression (Subcontracted)	4	YES
BS1377: Part 8: 1990: Effective Stress Testing (Subcontracted)	5	YES
ISRM: Suggested Methods: 2007 Edition: Uniaxial Compressive Strength of Rock	6	NO
ISRM: Suggested Methods: 2007 Edition: Uniaxial Compressive Strength of Rock (Subcontracted)	1	NO
ISRM: Suggested Methods 2007 Edition: Point Load Strength Test	31	NO
ISRM: Suggested Methods 2007 Edition: Point Load Strength Test (Subcontracted)	1	YES
Split and Describe	5	NO
Organic Matter Content (subcontracted)	12	YES

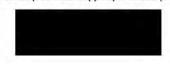
Remarks

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GEOTECHNICAL ENGINEERING LIMITED

Version No.

1

For the attention of Chris Yates/Emma Leivers

Page No. 3 of 191

Date of Issue 13/10/2015

TEST REPORT

PROJECT/SITE	London Paramount Entertainment Resort	Samples received	15/07/2015
GEL REPORT NUMBER	30766	Schedule received	15/07/2015
Your ref/PO:	0	Testing commenced	04/08/2015
Test report refers to	All schedules combined	Status	Final

SUMMARY OF RESULTS ATTACHED

TEST METHOD & DESCRIPTION	QUANTITY	ACCREDITED TEST
BRE Suite C	6	YES
BRE SD1 Suite (Subcontracted)	1	YES/NO

Remarks

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SATURATION MOISTURE CONTENT OF CHALK



BS.1377: Part 2: 1990: 3.3

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

borehole	sam	ple	specimen	natural	bulk	dry	saturation		
/trial pit no	no /type	depth (m)	depth (m)	moisture content (%)	(Mg/m ³)	density (Mg/m³)	moisture content (%)	porosity (%)	description and remarks
BH101	99Cs	31.45	31.45	20	2.01	1.68	23	38	Wh te CHALK
BH101	108Cs	35.95	36.20	27	1.93	1.53	29	43	Wh te CHALK
BH101	114Cs	39.65	39.65	20	1.80	1.50	30	44	White CHALK
BH101	130Cs	56.50	56.50	8.5	1.75	1.61	25	40	White CHALK
BH203	41Xs	14.35	14.40	29	1.93	1.50	30	44	White CHALK
BH203	51Xs	18.20	18.20	28	1.95	1.52	29	44	Wh te CHALK
BH203	61Cs	25.45	25.50	21	2.02	1.67	23	38	Wh te CHALK
BH203	64Cs	25.75	25.80	22	2.01	1.65	24	39	Wh te CHALK
BH203	70Cs	28.50	28.50	26	1.95	1.54	28	43	Wh te CHALK
BH203	78Cs	31.30	31.30	32	1.88	1.43	33	47	Wh te CHALK
BH203	84Cs	33.40	33.40	29	1.93	1.50	30	44	Wh te CHALK
BH203	93Cs	36.20	36.20	29	1.92	1.49	30	45	White CHALK
BH203	103Cs	40.05	40.10	26	1.92	1.53	29	43	White CHALK
BH204	49Xs	14.40	14.40	31	1.92	1.47	31	46	Wh te CHALK
BH204	57Xs	17.65	17.70	28	1.95	1.52	29	44	Wh te CHALK
BH501	81Cs	19.95	19.95	27	1.97	1.55	28	43	Off wh te CHALK
BH502	69Cs	18.20	18.20	26	1.92	1.53	28	43	Wh te CHALK

general remarks

Geotechnical Engineering Ltd Centunion House Olympus Park Quedgeley Gloucester GL2 4NF el 01452 527743 30766 MAS ER GPJ 13/10/2015 09 35 09

natural moisture content determined in accordance with BS1377 Part 2 1990 3 2 (unless specified) # denotes sample tested is smaller than that which is recommended in accordance with BS1377

test method immersion in water (test 3 3)

30766

CHECKED

SATURATED MOISTURE CONTENT OF CHALK - SUMMARY OF RESULTS Project No **Project Name** N5110-15 LONDON PARAMOUNT ENTERTAINMENT RESORT Specimen details Sample Porosity Moisture Saturation Bulk Dry (4) Remarks Hole No. Content Moisture density (2) density Depth (m) (1) Content (3) No. type % to Mg/m³ Mg/m³ from % % BH202 82 25.00 26 1.98 1.57 27 42 XS BH202 28.45 28 1.96 1.52 29 44

Notes: Test Specification : British Standard 1377 : Part 2 : 1990 clause 3.3

(1) Specimen dried at 105 - 110 °C

(2) Derived as part of standard test by immersion in water (buoyancy)

(3) SMC derived using particle density 2.70 Mg/m³

(4) Porosity (%) = 100 x (1 - (dry density / particle density))

above notes apply unless annotated otherwise in the remarks **Table**

Ref CLR 1 Rev 20 Mar 12



Printed:02/09/2015 11:27

SMCSUM 1

LIQUID AND PLASTIC LIMITS

BS.1377: Part 2: 1990: 4 and 5

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT



borehole	san	nple	specimen	natural	specimen	fraction	liquid	plastic	plasticity	
/trial pit no	no /type	depth (m)	depth (m)	water content (%)	preparation and test method	>0 425 mm (%)	limit (%)	limit (%)	index (%)	description and remarks
BH101	29D	6.20	6.20	155	E					Dark brown s ght y sandy s ght y grave y organ c CLAY
BH101	32UT	7.20	7.35	80.9	BXE	1	75	34	41	Brown sh grey s ght y sandy organ c CLAY
BH101	37D	8.20	8.20	75.5	BXE	0	91	42	49	Grey sh brown s ght y sandy organ c CLAY
BH101	46D	10.50	10.50	111	BXE	0	209	100	109	Grey sh b ack s ght y sandy organ c CLAY
BH101	50UT	12.00	12.10	70.9	BXE	0	77	34	43	Grey sh brown s ghty sandy organ c CLAY
BH101	57D	13.50	13.50	20.2	E					Grey sh brown sandy s ght y grave y CLAY
BH101	64B	15.00	15.00	17.0	BXE	28	24	NP		Grey sh brown s ght y grave y s ty SANE
BH203	12D	3.20	3.20	31.4	BXE	26	56	28	28	Brown s ght y sandy s ght y grave y CLAY
BH203	17B	5.00	5.00	59.1	E					Brown s ght y sandy CLAY
BH203	20B	6.00	6.00	20.5	BXE	19	22	12	10	Greys ty very sandy GRAVEL
BH203	25D	7.20	7.20	11.8	E					L ght brown s ght y sandy s ght y grave y
BH204	16B	4.00	4.00	94.4	BXE	8	88	36	52	Brown s ght y sandy s ght y grave y organ c CLAY
BH204	25D	6.20	6.20	35.1	BXE	3	47	20	27	Brown s ght y sandy CLAY
BH204	29B	8.00	8.00	14.8	E					Grey sh brown s ght y sandy s ght y grave y CLAY
BH204	30B	9.00	9.00	12.3	BXE	64	23	14	9	Grey sh brown s ty sandy GRAVEL w th med um cobb e content
BH204	32UT	10.00	10.00	20.3	BXE	4	28	19	9	Brown s ght y sandy s ght y grave y CLAY
BH204	36B	11.00	11.00	20.6	BXE	31	26	16	10	Brown s ght y sandy s ght y grave y CLAY
BH501	7D	1.20	1.20	37.8	E					White sight y sandy sight y grave iy SILT Grave sight CHALK

el 01452 527743 30766 MAS ER GPJ 19/10/2015 09 09 42

Geotechnical Engineering Ltd Centurion House Olympus Park Quedgeley Gloucester GL2 4NF

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D - oven dried (60°C)

E - oven dried (105°C)

F - not known

test method

X - cone penetrometer (test 4 3)

Y - one point cone penetrometer (test 4 4)

Z - Casagrande apparatus (test 4 5)

CONTRACT 30766

CHECKED

LIQUID AND PLASTIC LIMITS

BS.1377: Part 2: 1990: 4 and 5

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT



borehole	san	nple	specimen	natural	specimen	fraction	liquid	plastic	plasticity	
/trial pit no	no /type	depth (m)	depth (m)	water content (%)	preparation and test method	>0 425 mm (%)	limit (%)	limit (%)	index (%)	description and remarks
BH501	10D	1.70	1.70	39.4	BXE#	16	41	29	12	White sightly sandy sightly grave is SILT Grave is CHALK
BH501	16D	3.10	3.10	35.5	BXE#	19	41	32	9	White sight y sandy sight y grave y SILT Grave s CHALK
BH501	20D	3.60	3.60	30.8	E					White sight y sandy sight y grave y SILT Grave s CHALK
BH501	22D	4.10	4.10	35.6	BXE#	36	38	31	7	White sight y sandy sight y grave y SILT Grave s CHALK
BH501	28D	5.10	5.10	34.0	E					White sight y sandy sight y grave y SILT Grave is CHALK
BH501	34D	6.10	6.10	29.6	E					White sight y sandy sight y grave y SILT Grave sight CHALK
BH501	38D	6.90	6.90	24.7	BXE#	47	41	29	12	White sight y sandy sight y grave y SILT Grave is CHALK
BH501	46D	8.60	8.60	13.4	E#					Brown s ty s ght y sandy GRAVEL
BH502	5B	1.00	1.00	28.1	BXE#	23	34	23	11	Off white sight y sandy sight y grave y CHALK
BH502	10D	1.70	1.70	19.4	E					Off wh te CHALK putty
BH502	13D	2.20	2.20	33.5	BXE#	21	36	31	5	Off white sight y sandy sight y grave y CHALK
BH502	22D	4.20	4.20	27.1	BXE	18	32	23	9	Off white CHALK
BH502	29D	5.70	5.70	22.3	E					Off white CHALK
BH502	36D	7.20	7.20	19.0	BXE#	16	31	21	10	Off white sight y sandy sight y grave y CHALK
BH502	43D	8.70	8.70	15.3	E#					Brown mott ed wh te s ght y c ayey sandy GRAVEL
BH502	46D	9.20	9.20	16.2	BXE	5	29	17	12	Brown s ght y sandy s ght y grave y CLAY
BH502	55D	11.40	11.40	13.5	BXE	62	43	17	26	Brown s ght y sandy grave y CLAY
BH703	15D	2.80	2.80	17.5	AXE	0	39	20	19	Orang sh brown s ght y sandy s ty CLAY

el 01452 527743 30766 MAS ER GPJ 19/10/2015 09 09 42

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CONTRACT 30766

CHECKED

LIQUID AND PLASTIC LIMITS

BS.1377: Part 2: 1990: 4 and 5

LONDON RESORT COMPANY HOLDINGS LTD CLIENT

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT



borehole	sam	ple	specimen	natural	specimen	fraction	liquid	plastic	plasticity	The state of the s
/trial pit no	no /type	depth (m)	depth (m)	water content (%)	preparation and test method	>0 425 mm (%)	limit (%)	limit (%)	index (%)	description and remarks
вн703	19D	3.80	3.80	20.5	E					Orang sh brown s ght y sandy c ayey SILT
BH703	23D	4.70	4.70	23.7	E					Orang sh brown s ght y sandy c ayey SILT
BH704	7D	1.20	1.20	16.0	Е					Brown s ght y sandy s ght y grave y c ayey SILT
BH704	11D	2.20	2.20	17.5	BXE	4	33	19	14	Brown s ght y sandy s ght y grave y CLAY
BH704	15UT	3.20	3.20	24.1	BXE	4	35	20	15	Brown s ght y sandy s ght y grave y CLAY w th rare root ets
BH704	19D	3.80	3.80	24.6	BXE	3	33	19	14	Brown s ght y sandy s ght y grave y CLAY
BH705	5B	1.00	1.00	11.0	BXE	24	28	19	9	Ye ow sh brown s ght y sandy grave y s ty CLAY
BH705	10D	1.90	1.90	10.1	E					Ye ow sh brown s ght y c ayey sandy GRAVEL
BH705	14D	3.00	3.00	11.7	BXE#	63	25	15	10	L ght brown s ght y sandy grave y CLAY
BH706	9D	1.40	1.40	18.2	BXE	1	35	21	14	Orang sh brown s ght y sandy CLAY
BH707	44D	8.90	8.90	17.4	E					Brown c ayey SILT
BH708	3В	0.50	0.50	10.2	BXE	35	38	17	21	Brown s ght y sandy s ght y grave y CLAY
BH708	11D	1.80	1.80	26.4	BXE	32	52	25	27	Brown sh b ack mott ed ye ow s ght y sandy s ght y grave y CLAY
BH708	15D	2.40	2.40	21.1	BXE	19	35	17	18	Brown s ght y sandy s ght y grave y CLAY
BH708	18D	2.80	2.80	27.7	E					Brown s ght y sandy s ght y grave y CLAY
BH708	26D	4.20	4.20	20.3	E					L ght brown s ght y sandy s ght y grave y CLAY
BH708	30UT	5.20	5.30	24.2	AXE	0	38	24	14	Brown sh green and grey s ght y sandy CLAY
BH708	32D	5.70	5.70	15.5	BXE	17	35	20	15	Brown s ght y sandy s ght y grave y CLAY

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Centurion House Olympus Park Quedgeley Gloucester GL2 4NF

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SITE LONDON PARAMOUNT ENTERTAINMENT RESORT



borehole	sam	ple	specimen	natural	specimen	fraction	liquid	plastic	plasticity	E CVT CUT COURT
/trial pit no	no /type	depth (m)	depth (m)	water content (%)	preparation and test method	>0 425 mm (%)	limit (%)	limit (%)	index (%)	description and remarks
BH708	38D	6.90	6.90	16.3	BXE	12	30	18	12	Brown s ght y sandy s ght y grave y CLAY
BH708	42D	8.20	8.20	24.1	BXE	4	36	18	18	L ght brown s ght y sandy s ght y grave g
BH708	44D	8.30	8.30	24.6	Е					Brown s ght y sandy s ght y grave y CLAY
TP301	11D	2.00	2.00	25.7	E					B ack mott ed off white c ayey grave y SAND
TP301	15D	2.40	2.40	24.1	E					Off white motted brown shigrey's ty grave y SAND
TP302	15D	2.50	2.50	20.7	E					Grey s ght y sandy s ght y grave y CLAY Grave s CHALK
TP302	20D	3.50	3.50	21.6	BXE	2	27	23	4	Off white sight y sandy sight y grave y CHALK
TP701	4D	0.50	0.50	8.8	E					Brown s ght y sandy s ght y grave y CLAY w th rare root ets
TP701	6D	1.00	1.00	19.3	BXE	7	37	17	20	Brown s ght y sandy s ght y grave y CLAY
TP701	12D	2.00	2.00	18.9	E					Brown s ght y sandy CLAY
TP701	16D	2.50	2.50	17.2	BXE	6	34	18	16	Brown s ght y sandy s ght y grave y CLAY
TP701	21D	3.20	3.20	22.5	AXE	0	30	22	8	L ght brown s ght y sandy CLAY
TP702	5D	1.00	1.00	6.7	E					Ye ow sh brown s ght y c ayey s ght y grave y SAND
TP702	9D	1.50	1.50	17.4	BXE	36	39	20	19	Grey sh brown s ght y sandy s ght y grave y CLAY
TP702	11D	2.00	2.00	15.6	E					Orang sh brown s ght y sandy s ght y grave y CLAY
TP702	15D	2.50	2.50	19.0	BXE	7	32	18	14	Brown s ght y sandy s ght y grave y s ty CLAY
TP702	18D	3.00	3.00	24.2	E					Brown s ght y sandy s ght y grave y CLAY
TP702	21D	3.40	3.40	22.6	BXE	3	32	20	12	Brown s ght y sandy s ght y grave y CLAY

Centurion House Olympus Park Quedgeley Gloucester GL2 4NF el 01452 527743 30766 MAS ER GPJ 19/10/2015 09 94 22

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CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT



borehole	san	nple	specimen	natural	specimen	fraction	liquid	plastic	plasticity	The cover and consists
/trial pit no	no /type	depth (m)	depth (m)	water content (%)	preparation and test method	>0 425 mm (%)	limit (%)	limit (%)	index (%)	description and remarks
WS101	110	2.00	2.00	79.2	BYE	44	86	NP		Grey sh brown and orang sh brown s ght y sandy s ght y grave y SILT
WS101	23U	4.00	4.00	75.1	BYE	71	83	65	18	Greysh brown s ght y sandy s ght y grave y SILT
WS101	30U	6.00	6.00	62.3	BYE	25	50	NP		Dark brown s ght y sandy organ c SILT
WS102	12U	2.00	2.20	66.9	BYE	65	97	NP		Grey sh brown sandy s ght y grave y SILT
WS102	24U	4.00	4.25	81.1	BYE	61	89	NP		Greysh brown s tys ght y grave y SILT
WS202	17X	3.00	3.00	31.4	BZE#	35	55	46	9	Greysh brown s ght y sandy s ght y grave y SILT
WS202	43U	11.00	11.30	60.0	BXE	1.	82	33	49	Grey sh brown s ght y sandy CLAY
WS203	11U	2.00	2.00	57.9	BXE	45	65	NP		Grey sh brown sandy s ght y grave y SILT
WS204	27X	5.00	5.00	33.8	BXE	63	51	40	11	Brown sh white sightly sandy sightly grave y SILT

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SUMMARY OF GEOTECHNICAL TESTING

			Sample	details		Class	ification	n Tests	5	Densit	ty Tests	Undraine	d Triaxial Co	mpression	C	hemical Te	ests	
Borehole / Trial Pit	Sample Ref	Depth (m)	Туре	Description	MC (%)	m	PL (%)	Pi (%)	<425 µm (%)	Bulk Mg/m³	Dry Mg/m³	Cell Pressure kPa	Deviator Stress kPa	Shear Stress kPa	рН	2:1 W/S SO4 (g/L)	W/S Mg (mg/L)	Other tests and comments
101		5 20-5.65	UT	Soft grey organic silty CLAY with rare fine gravel.	102	108	34	74	100		12			117				Effective stress Triaxial
101		9 20-9.65	UT	Soft to firm black fibrous PEAT.	474		NP		100					11				Effective stress Triaxial
			-4								1.4					l. II		
					L			L										
					-													
					i i													
														1 11				
		-									1.4.			1.1				

Sample type: B (Bulk disturb.) BLK (Block) C (Core) D (Disturbed) LB (Large Bulk dist.) U (Undisturbed)

NP=Non Plastic

Ch	ecked and Approved b	y
	Senior Technician	
	09/10/2015	

Project Number:

GEO / 23014

Project Name:

LONDON PARAMOUNT ENTERTAINMENT RESORT 30766

GEOLABS "

SUMMARY OF GEOTECHNICAL TESTING

			Sample	details		Class	ification	Tests	S	Densit	y Tests	Undraine	d Triaxial Co	mpression	CI	hemical Te	ests	
Borehole / Trial Pit	Sample Ref	Depth (m)	Туре	Description	MC (%)	LL (%)	PL (%)	PI (%)	<425 µm (%)	Bulk Mg/m³	Dry Mg/m³	Cell Pressure kPa	Deviator Stress kPa	Shear Stress kPa	pН	2:1 W/S SO4 (g/L)	W/S Mg (mg/L)	Other tests and comments
BH204	UT21	5 20-5.65	U	Soft to firm grey CLAY with rare fine sand and some patches of black organic rich material.	60	78	34	44	100	1.69	1.06	110	51	26				Triaxial Permeability

Sample type: B (Bulk disturb.) BLK (Block) C (Core) D (Disturbed) LB (Large Bulk dist.) U (Undisturbed)



Project Number:

Project Name:

GEO / 22927

LONDON PARAMOUNT ENTERTAINMENT RESORT 30766

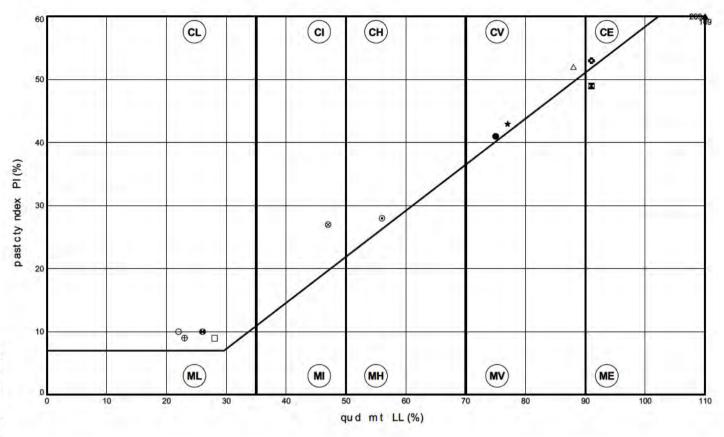
GEOLABS "

ATTERBERG LINE PLOT



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT



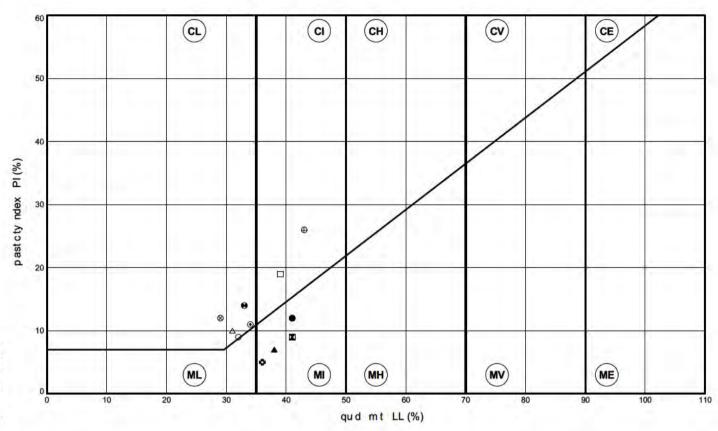
	BH/TP No.	depth (m)	LL	PL	PI	remarks
•	BH101	7.35	75	34	41	
×	BH101	8.20	91	42	49	
•	BH101	10.50	209	100	109	
*	BH101	12.10	77	34	43	
•	BH203	3.20	56	28	28	
۰	BH203	4.20	91	38	53	
0	BH203	6.00	22	12	10	
Δ	BH204	4.00	88	36	52	
8	BH204	6.20	47	20	27	
Ф	BH204	9.00	23	14	9	
	BH204	10.00	28	19	9	
0	BH204	11.00	26	16	10	

ATTERBERG LINE PLOT



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT



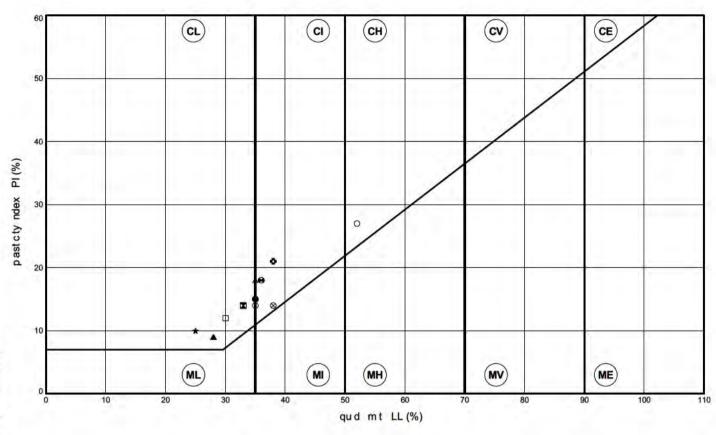
	BH/TP No.	depth (m)	LL	PL	PI	remarks
•	BH501	1.70	41	29	12	
x	BH501	3.10	41	32	9	
•	BH501	4.10	38	31	7	
*	BH501	6.90	41	29	12	
0	BH502	1.00	34	23	11	
۰	BH502	2.20	36	31	5	
0	BH502	4.20	32	23	9	
Δ	BH502	7.20	31	21	10	
8	BH502	9.20	29	17	12	
Φ	BH502	11.40	43	17	26	
	BH703	2.80	39	20	19	
0	BH704	2.20	33	19	14	

ATTERBERG LINE PLOT



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT



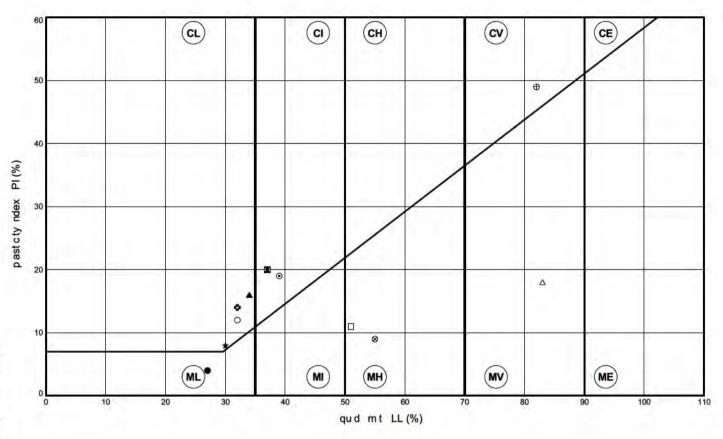
	BH/TP No.	depth (m)	LL	PL	PI	remarks
•	BH704	3.20	35	20	15	
×	BH704	3.80	33	19	14	
•	BH705	1.00	28	19	9	
*	BH705	3.00	25	15	10	
•	BH706	1.40	35	21	14	
۰	BH708	0.50	38	17	21	
0	BH708	1.80	52	25	27	
Δ	BH708	2.40	35	17	18	
8	BH708	5.30	38	24	14	
Ф	BH708	5.70	35	20	15	
	BH708	6.90	30	18	12	
0	BH708	8.20	36	18	18	

ATTERBERG LINE PLOT



CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT



	BH/TP No.	depth (m)	ш	PL	PI	remarks
•	TP302	3.50	27	23	4	
×	TP701	1.00	37	17	20	
	TP701	2.50	34	18	16	
*	TP701	3.20	30	22	8	
0	TP702	1.50	39	20	19	
۰	TP702	2.50	32	18	14	
0	TP702	3.40	32	20	12	
Δ	WS101	4.00	83	65	18	
8	WS202	3.00	55	46	9	
Ф	WS202	11.30	82	33	49	
	WS204	5.00	51	40	11	

INDEX PROPERTIES - SUMMARY OF RESULTS

N5110-15	LONDO	N PAR	MOLIN	IT FN	TERTAINMENT RESORT									
145710-15	LONDO				TETTAINWENT NEOOTT									
	Sample			p	p_d	W	< 425	\mathbf{W}_{L}	$\mathbf{W}_{\mathbf{P}}$	l _p	ps			
Hole No.	No.	Dept	h (m)	type	Soil Description				µm sieve					Remarks
	110.	from	to	уро		Mg	/m³	%	%	%	%		Mg/m ³	
BH101	12	2.20	2.65	UT	Firm dark brown mottled black organic CLAY.	1.39	0.66	109	100 n	137 a	59	78		
BH101	17	3.00	3.20	В	Grey sandy GRAVEL.			24	28 s	35 b	27	8	Tri di	
BH101	19	4.00	4.20	В	Brown slightly sandy slightly gravelly CLAY.			100					E F	
BH201	23	6.70	7.15	UT	Stiff brownish grey slightly sandy clayey SILT.	1.60	0.95	69	100 n	73 a	60	13	1010	
BH201	27	7.30	7.40	D	Brown slightly sandy CLAY.	-		111	7				11 7	
BH202	7	1.00	1.20	UT	Brown slightly sandy slightly gravelly CLAY.	-		39	56 s	57 a	44	13		
BH202	.11	2.00	2.20	В	Stiff light greyish brown sandy CHALK.			88	43 s	83 b	NP			
BH202	18	3.20	3.65	D	Brown slightly sandy CLAY.			58	66 s	113 b	94	19		
BH202	25	5.20	5.65	D	Greyish brown slightly sandy silty CLAY.			119						
BH202	28	6.20	6.60	UT	Grey slightly sandy SILT.				100 n	131 a	95	36		
BH202	32	8.00	8.20	В	Grey slightly sandy slightly gravelly CLAY.			100	100 n	101 a	69	32	1 - 1	
BH202	38	9.20	9.65	D	Black slightly gravelly slightly clayey PEAT.			186						
BH202	46	11.50	11.95	D	Greenish grey CLAY with rare shell			80						
BH202	56	14.50	14.95	D	tragments and plant remains. Dark brownish grey clayey PEAT.			290						
BH202	64	17,50	17.95	D	Grey sandy gravelly CLAY.			21	29 s	52 b	29	23		
BH204	9	3.00	3.30	В	Brown slightly sandy slightly gravelly CLAY.			52	90 s	68 a	31	37		
BH204	13	3.30	3.75	U				- JE	500	00 0	01	0,		
BH703	9	1.20	1.30	D	Light brown slightly gravelly CLAY.			17	92 s	27 a	18	9		
BH707	9	1.30	1.45	D	Brown slightly sandy slightly gravelly CLAY.			100	80 s	35 a	19	16		
BH707			12.45	D	Brown slightly sandy slightly gravelly CLAY.			16	80.5	JU a	19	10	4-9/-	
BH707	15	2.35	2.45	1000	Browish black slightly sandy slightly gravelly			23	00 -	40 -	00	10		
	21	3.30	3.40	D	CLAY. Brown slightly sandy slightly gravelly CLAY.			102	66 s	49 a	33	16		
BH707	27	4.40	4.50	D	Brown slightly sandy CLAY.			17						
BH707	31	5.20	5.65	D				20						
BH707	33	5.60	5.70	D										
BH707	44	8.90	9.00	D	White CHALK composed of slightly gravelly									
TP301	5	1.00		D	clay.			20	86 s	28 a	20	8	11.0	
TP302	3	0.50		D	Brown slightly sandy slightly gravelly CLAY.			11	36 s	38 b	NP			
TP302	9	1.50		D	Brown slightly sandy slightly gravelly CLAY.			21						
TP302	11	2.00		D	White gravelly CHALK.			20	ΙĒΪ					
WS101	7	1.20	1.65	D	Light brown sandy CLAY.			60						
WS101	16	2.80	2.90	D	Light brown sandy CLAY.			76						
WS102	7	1.20	1.65	D	Brown sandy CLAY.			56	100 n	69 b	NP			

General notes:

All above tests carried out to BS1377: 1990 unless annotated otherwise. See individual test reports for further details.

Key:

p bulk density, linear

W_L Liquid limit

W_P Plastic limit

<425um preparation

ps particle density

dry density

a 4 point cone test

NP non - plastic n from natural soil

-g = gas jar

Table

b 1 point cone test moisture content

Plasticity Index

s sieved specimen

-p = small pyknometer

QA Ref

SLR₁ Rev 91 Mar 12



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INDX 1

INDEX PROPERTIES - SUMMARY OF RESULTS

Project No N5110-15 LONDON PARAMOUNT ENTERTAINMENT RESORT Sample W W W - 425 μm Depth (m) Hole No. Soil Description Remarks No. type from to Mg/m³ 9/2 % Mg/m % Brown slightly sandy CLAY. WS102 17 2.80 2.90 D 85 Brown slightly sandy slightly gravelly CLAY. WS102 21 3.30 3.40 D 92 Brown slightly sandy CLAY. WS102 29 4.80 4.90 D 60 Light brown clayey SAND. WS202 16 2.80 2.90 D 49 Light brown clayey SAND. WS202 20 3.80 D 55 Light brown clayey SAND. WS202 26 6.00 6.45 D 55 Light brown sandy CLAY. WS202 29 7.00 7.45 D 58 Light brown clayey SAND. WS202 35 8.80 8,90 D 74 Brown slightly sandy CLAY. WS203 7 1.20 1.65 D 57 Brown slightly sandy CLAY. WS203 20 3.80 3.90 D 69 Brown very sandy silty GRAVEL. WS204 5 1.00 1.20 В 65 27 s 82 a 66 16 WS204 1.55 10 1.65 D Light brown sandy CLAY. WS204 16 3.00 3.45 D 46 76 s 73 a 57 16 Brown slightly sandy CLAY. WS204 19 3.55 3.65 D 45 Brown slightly sandy CLAY. WS204 57 29 6.00 6.45 D Light brown slightly sandy CLAY. WS204 7.55 34 7.65 D 53 Grey very gravelly very silty SAND. WS301 5 1.00 1.20 В 14 28 a 20 8 55 s

General notes: All above tests carried out to BS1377: 1990 unless annotated otherwise. See individual test reports for further details.

Key: bulk density, linear p

W_L Liquid limit

Plastic limit

Plasticity Index

<425um preparation

ps particle density

 $p_{\rm d}$ dry density

a 4 point cone test

non - plastic

Wp

n from natural soil

-g = gas jar

Table

moisture content

Project Name

b 1 point cone test

s sieved specimen

-p = small pyknometer

QA Ref

SLR₁ Rev 91 Mar 12



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INDX 2

DENSITY - LABORATORY



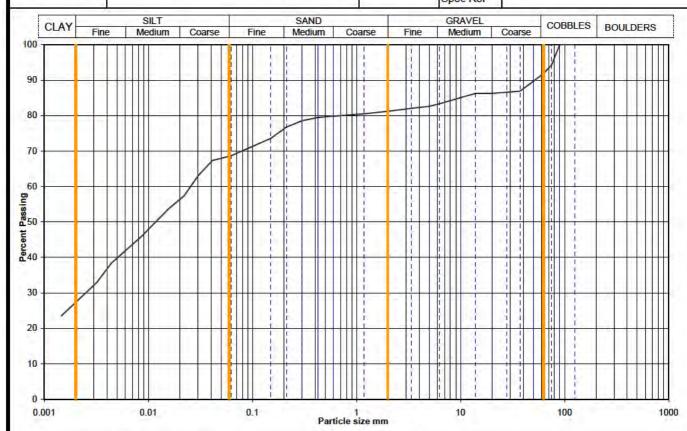
CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT



borehole	san	nple	specimen	test	natural	bulk	dry	1	
/trial pit no	no /type	depth (m)	depth (m)	method	water content (%)	density (Mg/m³)	density (Mg/m³)	description and remarks	
3H708	30UT	5.20	5.30	Α	24.2	1.96	1.58	Brown sh green and grey s ght y sand	y CLAY
WS102	12U	2.00	2.20	В	66.9	1.45	0.87	Grey sh brown sandy s ght y grave y	SILT
WS102	24U	4.00	4.25	В	81.1	1.47	0.81	Grey sh brown s ty s ght y grave y Sl	LŢ
WS202	44X	11.00	11.60	Α	68.4	1.44	0.86	Brown s ght y sandy s ght y grave y 0	CLAY
general remark # denotes sam		smaller th	an that which	n is recomn	nended in a	accordance	with BS EN	SO 17892 - 2 2014	
test method A - linear meas B - immersion								30766	T CHECK

Particle Size Distribution Analysis



Sievin	g	Sediment	ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	69
90	100	0.0413	67
75	94	0.0300	63
63	92	0.0219	57
50	90	0.0158	54
37.5	87	0.0085	46
28	87	0.0044	38
20	86	0.0032	33
14	86	0.0015	23
10	85		
6.3	83		
5.0	83		
3.35	82		
2.00	81		
1.18	80	Doutiele de it	Made: 2
0.600	80	Particle density	y, ivig/m3
0.425	79	2.65 a	ssumed
0.300	79	Daymana of a	ample les
0.212	77	Dry mass of sa	ampie, kg
0.150	74	88	
0.063	69	8.8	

Soil description	Brown slightly sandy slightly	y gravelly CL	AY.
Preparation / Pretreatment	Sieve: natural material H	ydro: as BS	1377
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	8	0
			0
Proportions	Gravel	-11	12
Proportions	Sand	11 13	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Sand		12

Uniformity Coefficient	D ₆₀ / D ₁₀	Not applicable

	BS 1377 : Pa	art 2 : 1990	
Test Method	Sieving	9.2 wet sieve	
-	Sedimentation	9.5 hydrometer	

QA Ref

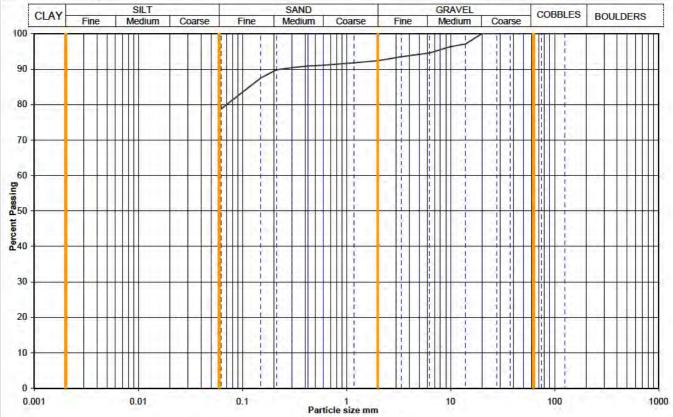
SLR 2,9 Rev 88 Aug 11





Figure

Particle Size Distribution Analysis N5110-15 Sample Details: Hole No Project No BH101 2.40 Depth (m BGL) Project Name LONDON PARAMOUNT ENTERTAINMENT RESORT Samp No 13 В Type ID MASTER3239 Spec Ref



Sievin	ıg	Sediment	ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	97		
10	96		
6.3	95		
5.0	.94		
3.35	93		
2.00	92		
1.18	92		
0.600	91		
0.425	91		
0.300	90	Dayman of a	ample lea
0.212	90	Dry mass of sa	ampie, kg
0.150	- 88		
0.063	79	5.5	

Soil description	Black slightly sandy slightl	y gravelly CLA	Y.
Preparation / Pretreatment	Sieve: natural material		
Remarks			7
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
Proportions	Gravel	8	8
	Sand	14	14
*<60mm values to aid description only		14 silt+clay =	14

Uniformity Coefficient	D ₆₀ / D ₁₀	Not applicable
------------------------	-----------------------------------	----------------

	BS 1377 : Part 2 : 1990				
Test Method	Sieving	9.2 wet sieve			
A	Sedimentation	none			

QA Ref

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Figure

PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

DESCRIPTION

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

LONDON PARAMOUNT ENTERTAINMENT RESORT

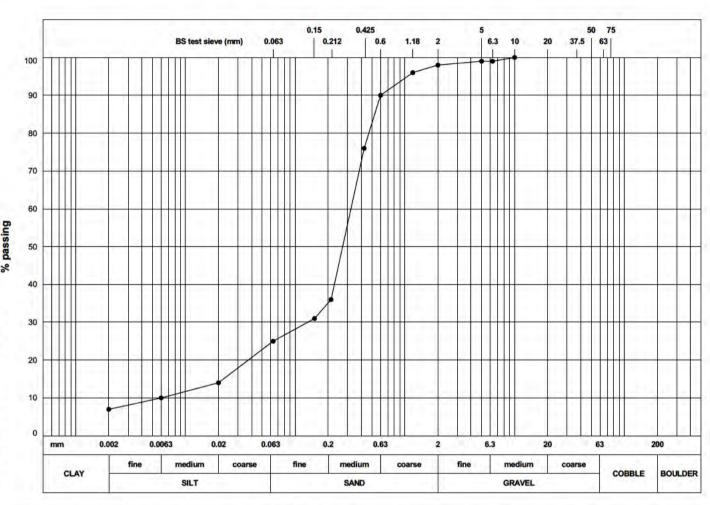
Greyish brown very silty slightly gravelly SAND

BH/TP No. BH101

SAMPLE No./TYPE 59B

SAMPLE DEPTH (m) 14.00

SPECIMEN DEPTH (m) 14.00



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY	7	450		5	99	20	44
SILT	18	150		5	99	20	14
SILT & CLAY	25	75		2	98	6	10
SAND	73			770		1.2	
GRAVEL	2	63		1.18	96	2	7
COBBLE & BOULDER	0						
test method(s)	9.2&9.4	50		0.6	90		
test method(s)	9.209.4	37.5		0.425	76		
test method:							
9.2 wet seving		20		0.212	36		
9.3 drysevng		10	100	0.15	31		
9.4 sed mentat on by p pette				7.5			
9.5 sed mentat on by hydron		6.3	99	0.063	25		

remarks:

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

DESCRIPTION

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

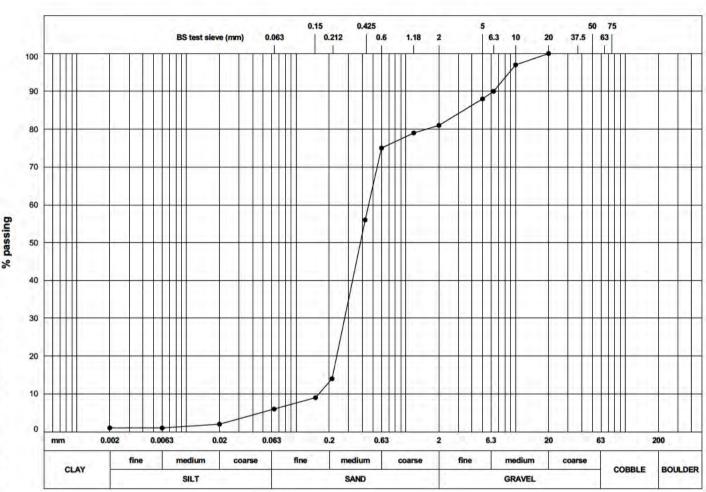
Greyish brown silty gravelly SAND

BH/TP No. **BH101**

SAMPLE No./TYPE 65B

SAMPLE DEPTH (m) 16.00

SPECIMEN DEPTH (m) 16.00



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY	1	3,000		1.5	-2		
SILT	5	150		5	88	20	2
SILT & CLAY	6	75		2	81	6	1
SAND	75	/3		2	01		
GRAVEL	19	63		1.18	79	2	1
COBBLE & BOULDER	0			1110	, ,	5	
44	0.080.4#	50		0.6	75		
test method(s)	9.2&9.4#	37.5		0.425	56		
test method:							
9.2 wet seving		20	100	0.212	14		
			201	2.52	10.0		
9.3 dry s ev ng		10	97	0.15	9		
9.4 sed mentat on by p pette		6.2	00	0.063	6		
9.5 sed mentat on by hydron	neter	6.3	90	0.003	0		

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

DESCRIPTION

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

Brown sandy GRAVEL

LONDON PARAMOUNT ENTERTAINMENT RESORT

BH/TP No.

BH101

SAMPLE No./TYPE

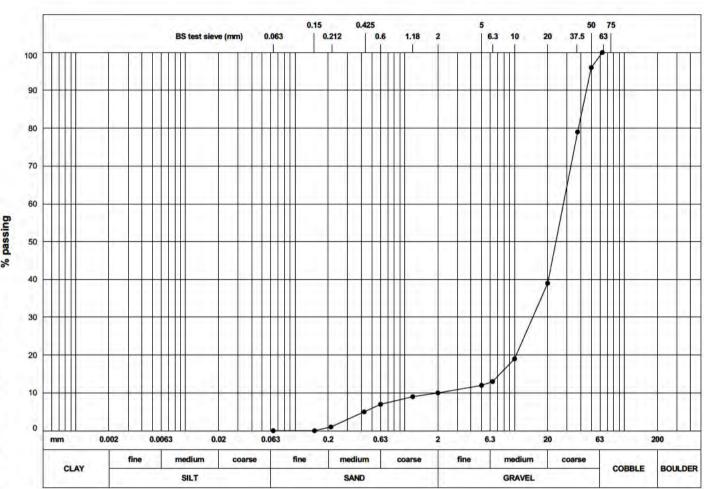
69B

SAMPLE DEPTH (m)

18.00

SPECIMEN DEPTH (m)

18.00



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY SILT		150		5	12	20	
SILT & CLAY SAND	0	75		2	10	6	
GRAVEL COBBLE & BOULDER	89	63	100	1.18	9	2	
test method(s)	9.2#	50	96	0.6	7		
	2,20	37.5	79	0.425	5		
est method: 9.2 wet s ev ng		20	39	0.212	1		
9.3 drysevng		10	19	0.15	0		
9.4 sed mentat on by p pette 9.5 sed mentat on by hydron		6.3	13	0.063	0		

remarks:

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

DESCRIPTION

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

LONDON PARAMOUNT ENTERTAINMENT RESORT

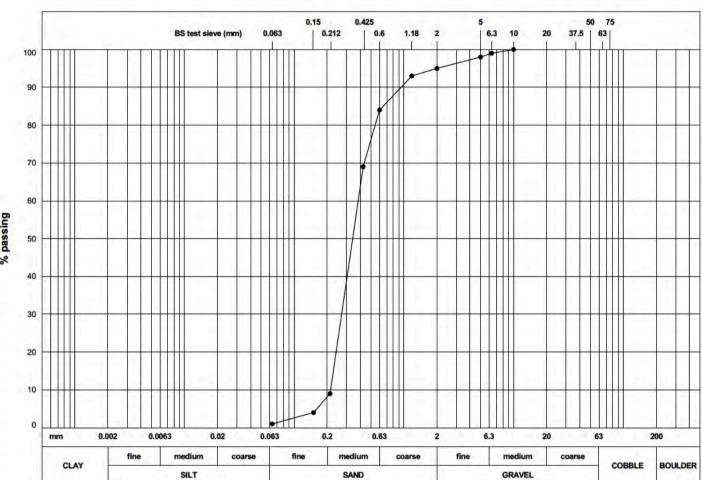
Yellow brown slightly clayey slightly gravelly SAND

BH/TP No. BH101

SAMPLE No./TYPE 71B

SAMPLE DEPTH (m) 19.00

SPECIMEN DEPTH (m) 19.00



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% fner
CLAY		150		5	98	20	
SILT & CLAY	1 94	75		2	95	6	
GRAVEL COBBLE & BOULDER	94 5 0	63		1.18	93	2	
est method(s)	9.2	50		0.6	84		
		37.5		0.425	69		
est method: 9.2 wet s ev ng		20		0.212	9		
9.3 drysevng		10	100	0.15	4		
9.4 sed mentat on by p pette9.5 sed mentat on by hydrom		6.3	99	0.063	1		

remarks:

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

30766

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

DESCRIPTION

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

Yellow brown sandy GRAVEL

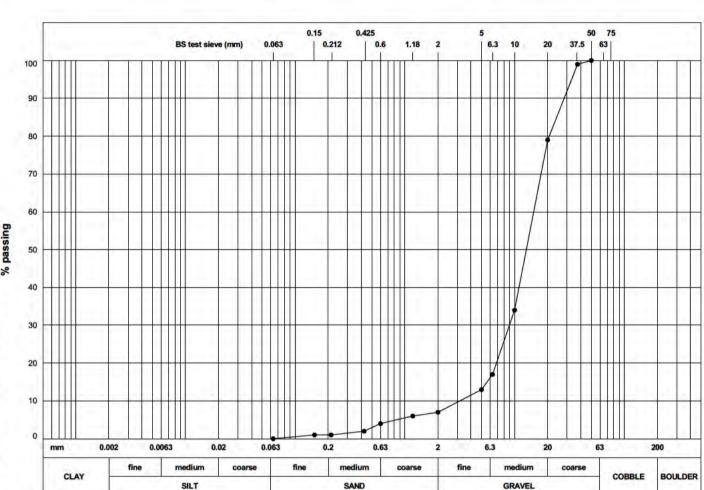
LONDON PARAMOUNT ENTERTAINMENT RESORT

BH/TP No. BH101

SAMPLE No./TYPE 73B

SAMPLE DEPTH (m) 20.00

SPECIMEN DEPTH (m) 20.00



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY		3,542		1.5	1.00		
SILT		150		5	13	20	
SILT & CLAY	0	75		2	7	6	
SAND	7			574		1	
GRAVEL COBBLE & BOULDER	93	63		1.18	6	2	
COBBLE & BOOLDER	U			30.00			
test method(s)	9.2	50	100	0.6	4		
tost moulos(s)	0.2	37.5	99	0.425	2		
test method:		1	40	0.602		-	
9.2 wet sev ng		20	79	0.212	1		
9.3 dry s ev ng		10	34	0.15	1		
9.4 sed mentat on by p pette	1		100				
9.5 sed mentat on by hydron	neter	6.3	17	0.063	0		

remarks:

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

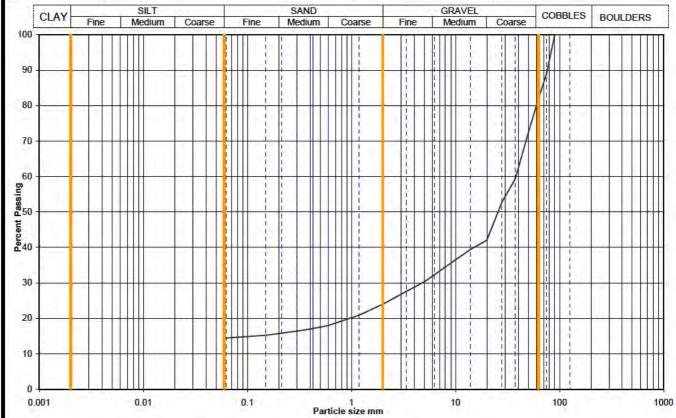
30766

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el 01452 527743 30766 MAS ER GPJ 13/10/2015 10 08 34 Geotechnical Engineering Ltd Centurion House Olympus Park Quedgeley Gloucester GL24NF

Particle Size Distribution Analysis N5110-15 Sample Details: Hole No Project No BH201 2.20 Depth (m BGL) Project Name LONDON PARAMOUNT ENTERTAINMENT RESORT Samp No Х Type ID MASTER3242 Spec Ref



Sievin	g	Sediment	ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	89		
63	82		
50	72		-
37.5	59		
28	53		
20	42		
14	39		See a
10	36		
6.3	32		
5.0	30		
3.35	28		
2.00	24		
1.18	21		
0.600	18		
0.425	17		
0.300	16	Daymaga -f -	amala I
0.212	16	Dry mass of sa	ampie, kg
0.150	15	7.0	
0.063	14	7.8	

Soil description	Grey slightly sandy gravell	ly SILT.	
Preparation / Pretreatment	Sieve: natural material		
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	18	0
Proportions	Gravel	58	71
	Sand	10	12
*<60mm values to aid	Silt	silt+clay =	
description only	Silt		

Uniformity Coefficient	D ₆₀ / D ₁₀	Not applicable

	art 2 : 1990	
Test Method	Sieving	9.2 wet sieve
-	Sedimentation	none

QA Ref

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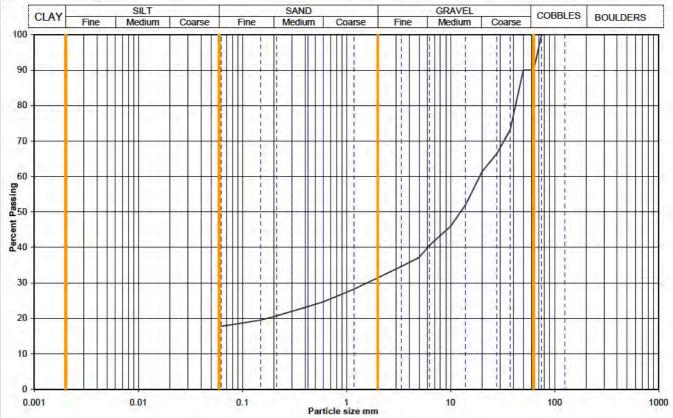




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Figure

Particle Size Distribution Analysis N5110-15 Sample Details: Hole No Project No BH201 3.70 Depth (m BGL) Project Name LONDON PARAMOUNT ENTERTAINMENT RESORT Samp No 10 Х Type ID MASTER3243 Spec Ref SILT GRAVEL SAND



Sievin	g	Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	90		
50	90		
37.5	73		
28	67		
20	61		
14	52		5111
10	46		
6.3	41		
5.0	37		
3.35	35		
2.00	31		
1.18	28		
0.600	25		
0.425	23		
0.300	22	D	and the
0.212	21	Dry mass of sa	ampie, kg
0.150	20		
0.063	18	4.8	

Soil description	Grey slightly sandy gravell	y SILT.	
Preparation / Pretreatment	Sieve: natural material		
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	10	0
Duamantiana	0	59	00
Proportions	Gravel	33	66
	Sand	14	16
*<60mm values to aid description only	Sand	10.7	1.00

Uniformity Coefficient	D ₆₀ / D ₁₀	Not applicable

	BS 1377 : Part 2 : 1990		
Test Method	Sieving	9.2 wet sieve	
-	Sedimentation	none	

QA Ref

SLR 2,9 Rev 88 Aug 11

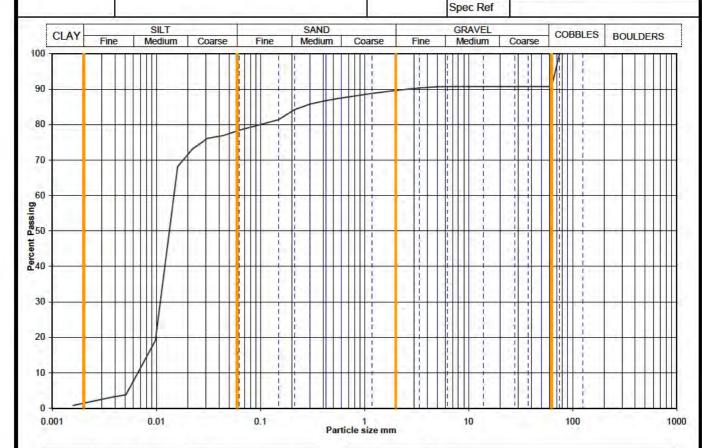




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Figure

Particle Size Distribution Analysis N5110-15 LONDON PARAMOUNT ENTERTAINMENT RESORT Samp No 18 Type X ID MASTER3245



Sievin	g	Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	78
90	100	0.0437	77
75	100	0.0310	76
63	91	0.0222	73
50	91	0.0160	68
37.5	91	0.0098	19
28	91	0.0051	4
20	91	0.0036	3
14	91	0.0016	1
10	91		
6.3	91		
5.0	.91		
3.35	90		
2.00	90		
1.18	89	Destroy describ	
0.600	88	Particle density	y, Mg/m3
0.425	87	2.65 a	ssumed
0.300	86	Dayman of a	ample ka
0.212	84	Dry mass of sa	ampie, kg
0.150	81	5.0	
0.063	78	5.6	

Soil description	Grey slightly sandy slightly	gravelly SIL	ř.
Preparation / Pretreatment	Sieve: natural material H	lydro: as BS	1377
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	9	0
Proportions	Gravel	1	1
	Sand	11	12
Brue and a real way			
*<60mm values to aid description only	Silt	11	85

D ₆₀ / D ₁₀	2
	D ₆₀ / D ₁₀

	BS 1377 : Pa	art 2 : 1990
Test Method	Sieving	9.2 wet sieve
-	Sedimentation	9.5 hydrometer

QA Ref

Project No

Project Name

SLR 2,9 Rev 88 Aug 11

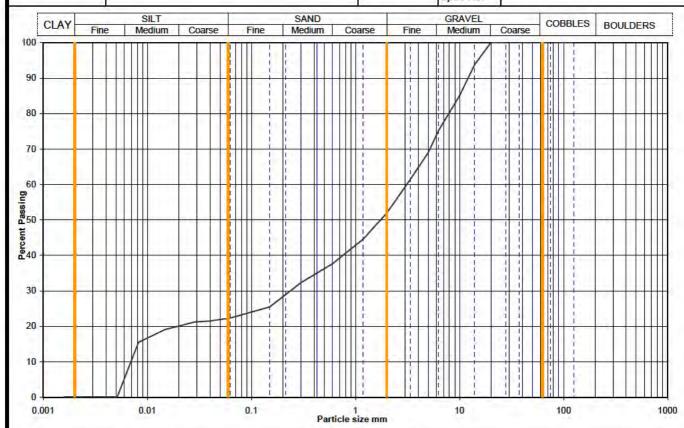




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Figure

Particle Size Distribution Analysis



Sievin	Sieving		ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	22
90	100	0.0398	21
75	100	0.0283	21
63	100	0.0205	20
50	100	0.0148	19
37.5	100	0.0082	15
28	100	0.0051	.0
20	100	0.0036	0
14	94	0.0016	0
10	85		
6.3	75		
5.0	69		
3.35	61		
2.00	52		
1.18	44	Destinte describ	
0.600	38	Particle densit	y, ivig/m3
0.425	35	2.65 a	ssumed
0.300	32	Daymana of a	ample les
0.212	29	Dry mass of sa	ampie, kg
0.150	25	51	
0.063	22	5.1	

Soil description	Brown slightly sandy gravel	ly SILT.	
Preparation / Pretreatment	Sieve: natural material H	ydro: as BS	1377
Remarks			-
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
Dunan - Minar	C	48	40
Proportions	Gravel	10	48
	Sand	30	30
*<60mm values to aid description only	Sand		

Uniformity Coefficient	D ₆₀ / D ₁₀	447	

	BS 1377 : Pa	art 2 : 1990
Test Method	Sieving	9.2 wet sieve
-	Sedimentation	9.5 hydrometer

QA Ref

SLR 2,9 Rev 88 Aug 11

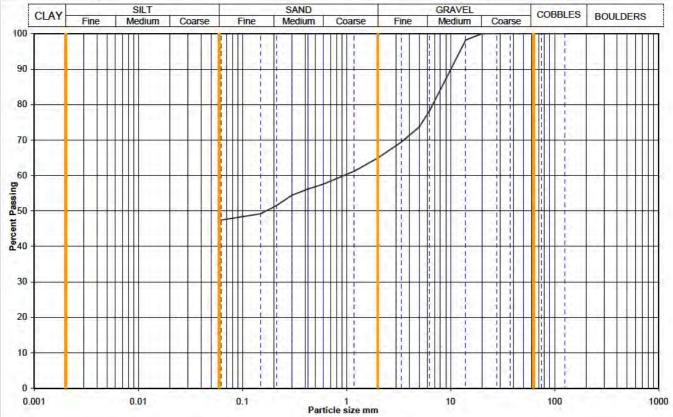




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Figure

Particle Size Distribution Analysis N5110-15 Sample Details: Hole No Project No BH202 3.00 Depth (m BGL) Project Name LONDON PARAMOUNT ENTERTAINMENT RESORT Samp No 16 В Type MASTER3175 ID Spec Ref



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	98		
10	90		
6.3	78		
5.0	74		
3.35	69		
2.00	65		
1.18	61		
0.600	58		
0.425	56		
0.300	54	Dayman of a	ample lea
0.212	51	Dry mass of sa	ampie, kg
0.150	49	0.0	
0.063	47	9.2	

Soil description	Brown slightly sandy grave	elly SILT.	
Preparation / Pretreatment	Sieve: natural material		
Remarks			7
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
Proportions	0	35	
Proportions	Gravel	30	35
	Sand	17	35 17
*<60mm values to aid description only	Sand		

Uniformity Coefficient	D ₆₀ / D ₁₀	Not applicable

	BS 1377 : Part 2 : 1990	
Test Method	Sieving	9.2 wet sieve
-	Sedimentation	none

QA Ref

SLR 2,9 Rev 88 Aug 11

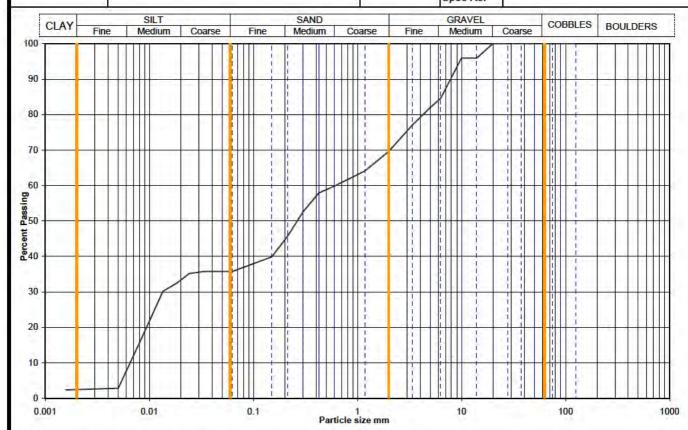




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Figure

Particle Size Distribution Analysis



Sievin	g	Sediment	ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	36
90	100	0.0337	36
75	100	0.0242	35
63	100	0.0183	32
50	100	0.0135	30
37.5	100	0.0086	17
28	100	0.0050	3
20	100	0.0036	3
14	96	0.0016	2
10	96		
6.3	85		
5.0	82		
3.35	77		
2.00	70		
1.18	64	Particle density, Mg/m3	
0.600	60		
0.425	58		
0.300	53	Dayman of a	amala ka
0.212	46	Dry mass of sa	ampie, kg
0.150	40		
0.063	36	5.5	

Soil description	Grey slightly sandy slightly	gravelly SIL	Γ.,
Preparation / Pretreatment	Sieve: natural material H	lydro: as BS	1377
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	Whole 0	*<63mm
Sample Proportions	Cobbles / boulders Gravel		7-4-9
Proportions	Gravel Sand	0	0
	Gravel Sand	30	0 30

Uniformity Coefficient	D ₆₀ / D ₁₀	94	

	BS 1377 : Part 2 : 1990	
Test Method	Sieving	9.2 wet sieve
Acettaleanea	Sedimentation	9.5 hydrometer

QA Ref

SLR 2,9 Rev 88 Aug 11





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Figure

Particle Size Distribution Analysis

Project No N5110-15

Project Name LONDON PARAMOUNT ENTERTAINMENT RESORT

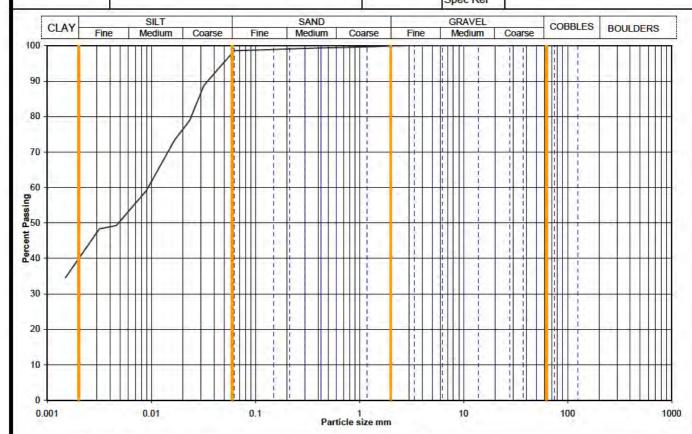
Sample Details: Hole No BH202

Depth (m BGL) 15.50

Samp No 57 Type B

ID MASTER3222

Spec Ref



Sievin	g	Sediment	ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	99
90	100	0.0446	94
75	100	0.0320	89
63	100	0.0233	79
50	100	0.0168	73
37.5	100	0.0090	59
28	100	0.0046	49
20	100	0.0032	48
14	100	0.0015	35
10	100		
6.3	100		
5.0	100		
3.35	100		
2.00	100		
1.18	100	Particle density, Mg/m3	
0.600	99		
0.425	99	2.65 a	ssumed
0.300	99	D	Casalla Maa
0.212	99	Dry mass of sa	ampie, kg
0.150	99	2.0	
0.063	99	2.0	

Soil description	Grey CLAY with rare plant fragments.	remains and	shell
Preparation / Pretreatment	Sieve: natural material H	ydro: as BS	1377
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
Proportions	Gravel	0	0
	Sand	2	2
*<60mm values to aid description only	Silt	58	58
description only	Clay	40	40

Uniformity Coefficient D ₆₀ / D ₁₀ Not applicable

	BS 1377 : Part 2 : 1990	
Test Method	Sieving	9.2 wet sieve
C. 41.17.411.64.1	Sedimentation	9.5 hydrometer

QA Ref

SLR 2,9 Rev 88 Aug 11

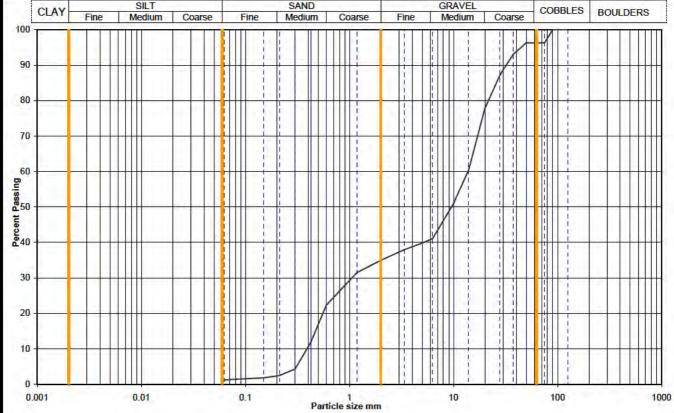




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Figure

Particle Size Distribution Analysis N5110-15 Sample Details: Hole No Project No BH202 18.40 Depth (m BGL) Project Name LONDON PARAMOUNT ENTERTAINMENT RESORT Samp No 68 В Type ID MASTER3225 Spec Ref SILT GRAVEL SAND



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	96		
63	96		7
50	96		
37.5	93		
28	87		
20	78		
14	60		5111
10	51		
6.3	41		
5.0	40		
3.35	38		
2.00	35		
1.18	31		
0.600	22		
0.425	12		
0.300	4	D	Carrier and
0.212	2	Dry mass of sa	ampie, kg
0.150	2	240	
0.063	1	24.9	

Soil description	Brown very sandy GRAVE	L with one col	bble.
Preparation / Pretreatment	Sieve: natural material		
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	4	0
Proportions	Gravel	61	64
	Sand	34	35
*<60mm values to aid	Silt	silt+clay =	
description only			

Uniformity Coefficient	D ₆₀ / D ₁₀	35

	BS 1377 : Part 2 : 1990		
Test Method	Sieving	9.2 wet sieve	
	Sedimentation	none	

QA Ref

SLR 2,9 Rev 88 Aug 11





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Figure

PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

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LONDON PARAMOUNT ENTERTAINMENT RESORT

DESCRIPTION Brown silty very sandy GRAVEL

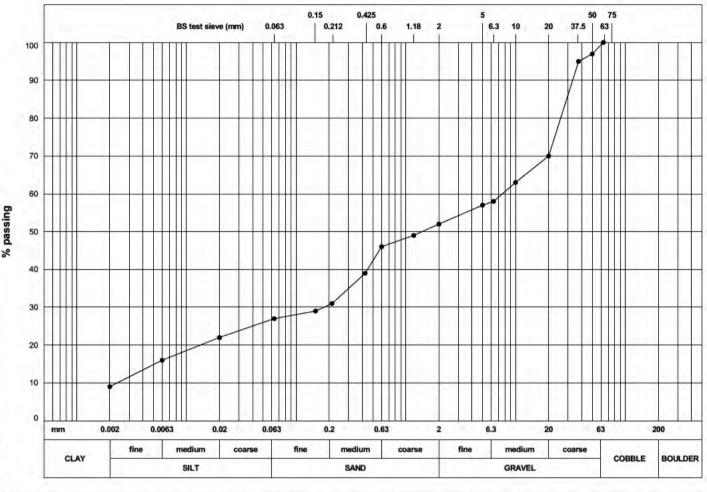


BH203 BH/TP No.

SAMPLE No./TYPE 9B

SAMPLE DEPTH (m) 2.40

SPECIMEN DEPTH (m) 2.40



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY	9	450			-	00	00
SILT	18	150		5	57	20	22
SILT & CLAY	27	75		2	52	6	16
SAND	25	1,0		-			10
GRAVEL	47	63	100	1.18	49	2	9
COBBLE & BOULDER	1		1.55	1110		21	
10.00017	5524	50	97	0.6	46		
test method(s)	9.2 & 9.4	27.5	05	0.405	00		
		37.5	95	0.425	39		
test method:		20	70	0.212	31		
9.2 wet sev ng				0.212			
9.3 dry s ev ng		10	63	0.15	29		
9.4 sed mentat on by p pette	t and the second			0.000	07		
9.5 sed mentat on by hydron	neter	6.3	58	0.063	27		

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

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LONDON PARAMOUNT ENTERTAINMENT RESORT

DESCRIPTION Grey silty very sandy GRAVEL

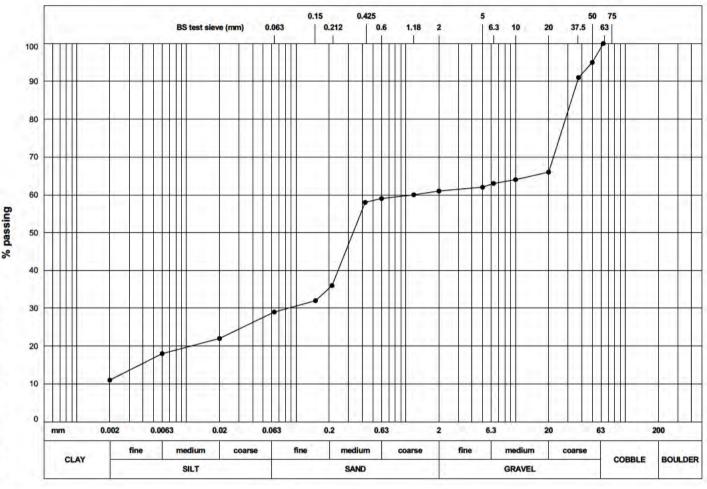


BH/TP No. **BH203**

SAMPLE No./TYPE 20B

SAMPLE DEPTH (m) 6.00

SPECIMEN DEPTH (m) 6.00



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY	11	3,542					- 44
SILT	18	150		5	62	20	22
SILT & CLAY	29	75		2	61	6	18
SAND	32	75		2	01	.0	10
GRAVEL	38	63	100	1.18	60	2	11
COBBLE & BOULDER	1		100	1,10	00		4.
1 1 1 1 / - \	00004	50	95	0.6	59		
test method(s)	9.2 & 9.4	37.5	91	0.425	58		
test method:		2.2	- 2	12.502			
9.2 wetseving		20	66	0.212	36		
9.3 drysevng		10	64	0.15	32		
9.4 sed mentat on by p pette		6.3	63	0.063	29		
9.5 sed mentat on by hydrome	eter	0.5	00	0.000	20		

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

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LONDON PARAMOUNT ENTERTAINMENT RESORT

DESCRIPTION Grey silty very sandy GRAVEL

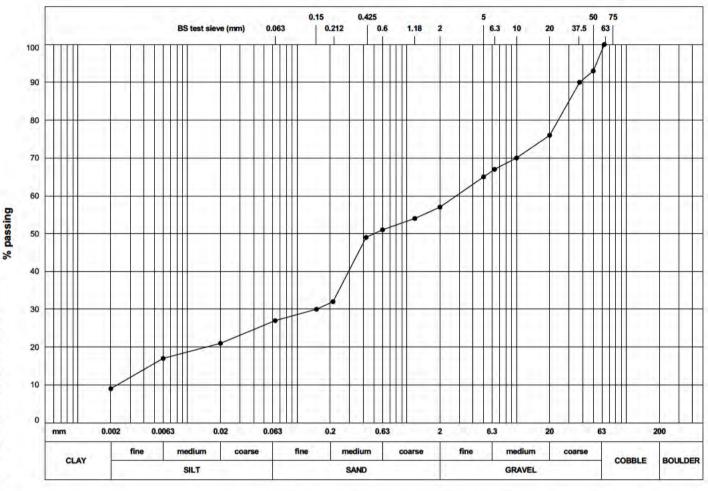


BH/TP No. BH203

SAMPLE No./TYPE 28B

SAMPLE DEPTH (m) 9.00

SPECIMEN DEPTH (m) 9.00



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (µm)	% fner
CLAY	9	450			0.5	00	0.4
SILT	18	150		5	65	20	21
SILT & CLAY	27	75		2	57	6	17
SAND	30	75		2	5/		11
GRAVEL	42	63	100	1.18	54	2	9
COBBLE & BOULDER	(1)	03	100	1.10	34	2	3
to at an att and (a)	9.2# & 9.4	50	93	0.6	51		
test method(s)	9.2# & 9.4	37.5	90	0.425	49		
test method:							
9.2 wetseving		20	76	0.212	32		
9.3 dry s ev ng		10	70	0.15	30		
9.4 sed mentat on by p pette		6.3	67	0.063	27		
9.5 sed mentat on by hydron	neter	0.3	O/	0.003	21		

remarks:

denotes sample tested is smaller than that which is recommended in accordance with BS1377

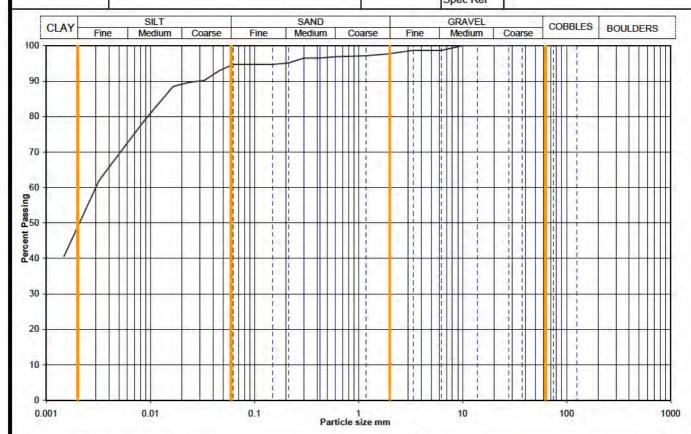
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Particle Size Distribution Analysis



Sievin	g	Sediment	ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	95
90	100	0.0463	93
75	100	0.0330	90
63	100	0.0234	90
50	100	0.0166	88
37.5	100	0.0088	79
28	100	0.0045	68
20	100	0.0032	62
14	100	0.0015	41
10	100		
6.3	99		
5.0	99		
3.35	99		
2.00	98		
1.18	97	Particle density, Mg/m 2.65 assumed	
0.600	97		
0.425	97		
0.300	97	Dayman -f -	ample I
0.212	95	Dry mass of sa	ampie, kg
0.150	95	7.0	
0.063	95	7.0	

Soil description	Black slightly sandy slightly	gravelly CL	AY.
Preparation / Pretreatment	Sieve: natural material H	lydro: as BS	1377
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	Whole 0	*<63mm
Sample Proportions	Cobbles / boulders Gravel	10.00	*<63mm 0 2
Proportions	Gravel Sand	0	0
	Gravel Sand	0 2	0 2

Uniformity Coefficient	D ₆₀ / D ₁₀	Not applicable

	BS 1377 : Pa	art 2 : 1990
Test Method	Sieving	9.2 wet sieve
V 224 / 1/2-41/-41	Sedimentation	9.5 hydrometer

QA Ref

SLR 2,9 Rev 88 Aug 11





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Figure

PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

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CLIENT LONDON RESORT COMPANY HOLDINGS LTD

BH/TP No. BH204

LONDON PARAMOUNT ENTERTAINMENT RESORT

SAMPLE DEPTH (m) 9.00

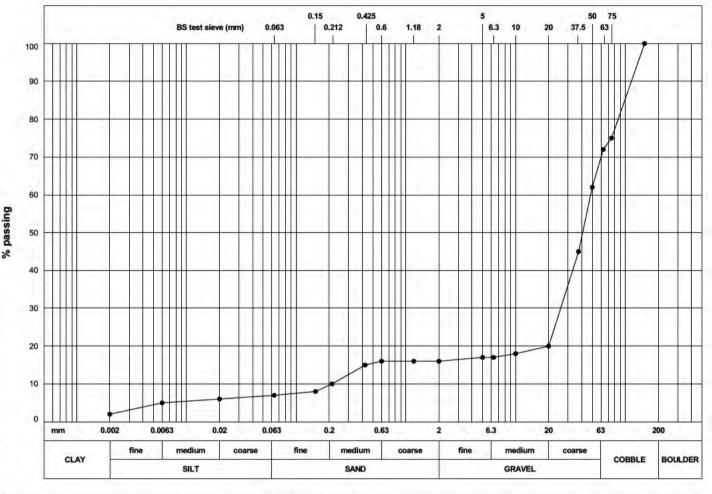
30B

DESCRIPTION Greyish brown silty sandy GRAVEL with medium cobble

SPECIMEN DEPTH (m) 9.00

SAMPLE No./TYPE

content



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY	2 5	450	100		47	00	
SILT	5	150	100	5	17	20	6
SILT & CLAY	7	75	75	2	16	6	5
SAND	9	75	75	2	10	.0	3
GRAVEL	54	63	72	1.18	16	2	2
COBBLE & BOULDER	30			1.10	10	-	-
15.535.17	- Same con	50	62	0.6	16		
test method(s)	9.2# & 9.4	37.5	45	0.425	15		
test method:	4	75.5			17		
		20	20	0.212	10		
9.2 wet sev ng		67					
9.3 dry s ev ng		10	18	0.15	8		
9.4 sed mentat on by p pette		0.0		0.000	-		
9.5 sed mentat on by hydron	neter	6.3	17	0.063	7		

remarks:

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

BH/TP No. BH204

SAMPLE No./TYPE 39B

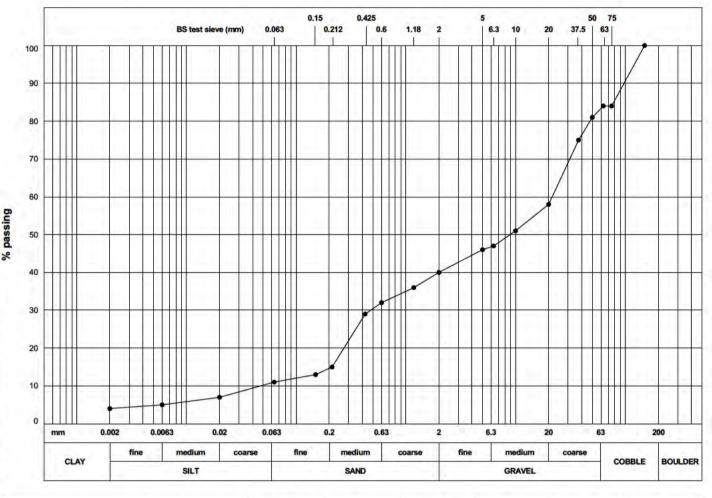
SAMPLE DEPTH (m) 11.80

DESCRIPTION Light brown silty very sandy GRAVEL with medium cobble

LONDON PARAMOUNT ENTERTAINMENT RESORT

content

SPECIMEN DEPTH (m) 11.80



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% fner
CLAY	4	150	100	5	46	20	7
SILT	7	150	100	5	46	20	-
SILT & CLAY SAND	11 29	75	84	2	40	6	5
GRAVEL COBBLE & BOULDER	43 17	63	84	1.18	36	2	4
test method(s)	9.2# & 9.4	50	81	0.6	32		
test metrod(s)	3.2# Q 3.4	37.5	75	0.425	29		
test method: 9.2 wet s ev ng		20	58	0.212	15		
9.3 drysevng		10	51	0.15	13		
9.4 sed mentat on by p pette9.5 sed mentat on by hydron		6.3	47	0.063	11		

remarks:

denotes sample tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

LONDON RESORT COMPANY HOLDINGS LTD

BH/TP No. **BH501**

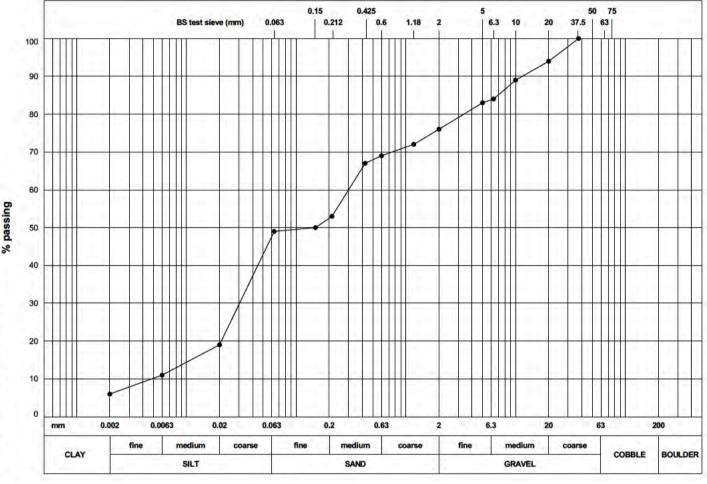
SAMPLE No./TYPE

LONDON PARAMOUNT ENTERTAINMENT RESORT

SAMPLE DEPTH (m) 1.00

5B

DESCRIPTION White slightly sandy slightly gravelly SILT. Gravel is CHALK SPECIMEN DEPTH (m) 1.00



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY	6	1000		1.0			100
SILT	43	150		5	83	20	19
SILT & CLAY	49	75		2	70	6	44
SAND	27	75		2	76	ь	11
GRAVEL	24	63		1.18	72	2	6
COBBLE & BOULDER	0	05		1.10	12	2	6
test method(s)	9.2&9.4	50		0.6	69		
tost moulou(o)	0.200.4	37.5	100	0.425	67		
test method:			0.4	0.040	50		
9.2 wet sev ng		20	94	0.212	53		
9.3 dry s ev ng		10	89	0.15	50		
9.4 sed mentat on by p pette	9	6.2	84	0.063	49		
9.5 sed mentat on by hydror	meter	6.3	04	0.063	49		
remarks:				10.000		CONTRACT	CHECKE

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

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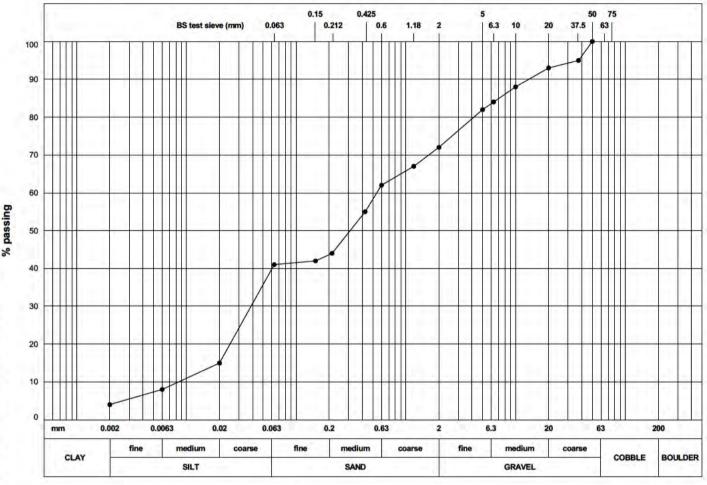
BH/TP No. BH501

LONDON PARAMOUNT ENTERTAINMENT RESORT SAMPLE No./TYPE

SAMPLE DEPTH (m) 2.20

12X

DESCRIPTION White slightly sandy slightly gravelly SILT. Gravel is CHALK SPECIMEN DEPTH (m) 2.30



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY	4	3,545		1		11.5	1
SILT	37	150		5	82	20	15
SILT & CLAY	41	75		2	72		
SAND	31	75		2	12	6	8
GRAVEL	28	63		1.18	67	2	4
COBBLE & BOULDER	0	00		1.10	0,	-	7
test method(s)	9.2&9.4	50	100	0.6	62		
test method(s)	9.209.4	37.5	95	0.425	55		
test method:				200			
9.2 wet sev ng		20	93	0.212	44		
9.3 drysevng		10	88	0.15	42		
9.4 sed mentat on by p pette9.5 sed mentat on by hydron		6.3	84	0.063	41		

remarks:

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

BH/TP No. BH501

SAMPLE No./TYPE

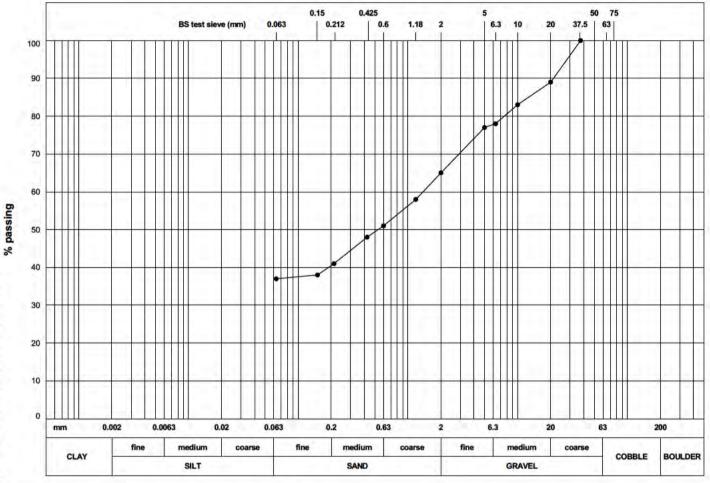
SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

SAMPLE DEPTH (m) 4.20

24X

DESCRIPTION White slightly sandy slightly gravelly SILT. Gravel is CHALK

SPECIMEN DEPTH (m) 4.40



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY		450		5	77	20	
SILT	2.50	150		5	11	20	
SILT & CLAY SAND	37 28	75		2	65	6	
GRAVEL COBBLE & BOULDER	35 0	63		1.18	58	2	
test method(s)	9.2	50		0.6	51		
test metrod(s)	3.2	37.5	100	0.425	48		
test method:		20	89	0.212	41		
9.2 wet sev ng		20	00	0.212	7.		
9.3 drysevng		10	83	0.15	38		
9.4 sed mentat on by p pette 9.5 sed mentat on by hydron		6.3	78	0.063	37		

remarks:

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

DESCRIPTION

LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

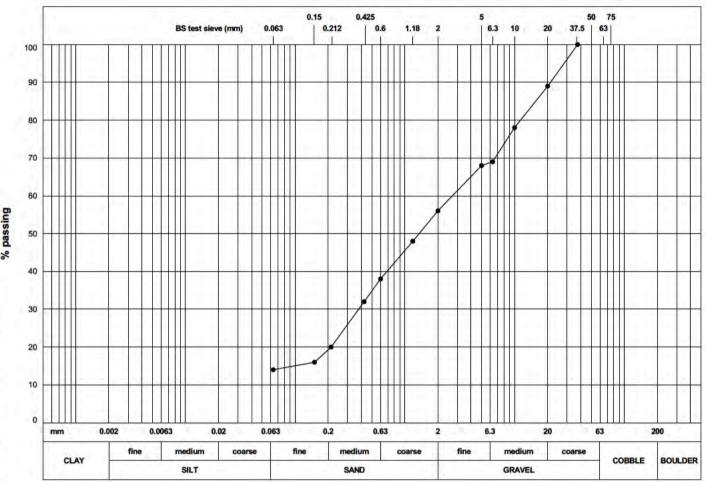
White silty sandy GRAVEL. Gravel is CHALK

BH/TP No. **BH501**

SAMPLE No./TYPE 36X

SAMPLE DEPTH (m) 6.20

SPECIMEN DEPTH (m) 6.50



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY		450		5	60	20	
SILT	200	150		5	68	20	
SILT & CLAY SAND	14 42	75		2	56	6	
GRAVEL	44	63		1.18	48	2	
COBBLE & BOULDER	0					1 - 194	
test method(s)	9.2	50		0.6	38		
teat metriod(s)	5.2	37.5	100	0.425	32		
test method:		20	89	0.212	20		
9.2 wet sev ng		20	00	0.212	20		
9.3 drysevng		10	78	0.15	16		
9.4 sed mentat on by p pette		6.3	69	0.063	14		
9.5 sed mentat on by hydrom	eter	0.0	00	0.000	1.4		

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

LONDON RESORT COMPANY HOLDINGS LTD

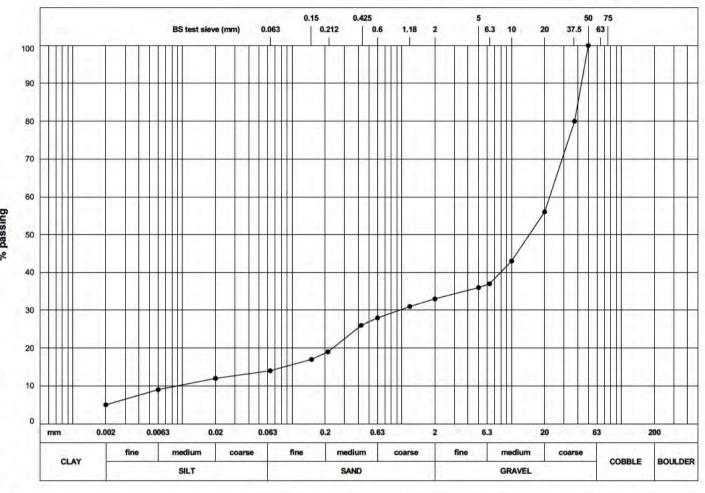
SAMPLE No./TYPE 44X SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

> SAMPLE DEPTH (m) 8.20

BH/TP No.

BH501

DESCRIPTION Brown mottled white silty sandy GRAVEL SPECIMEN DEPTH (m) 8.25



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (µm)	% fner
CLAY	5	150		5	36	20	12
SILT & CLAY SAND	14 19	75		2	33	6	9
GRAVEL COBBLE & BOULDER	67 0	63		1.18	31	2	5
est method(s)	9.2&9.4#	50	100	0.6	28		
	0.2007.00	37.5	80	0.425	26		
est method: 9.2 wet s ev ng		20	56	0.212	19		
9.3 drysevng		10	43	0.15	17		
9.4 sed mentat on by p pette 9.5 sed mentat on by hydrom		6.3	37	0.063	14		

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

DESCRIPTION Off white slightly sandy slightly gravelly CHALK

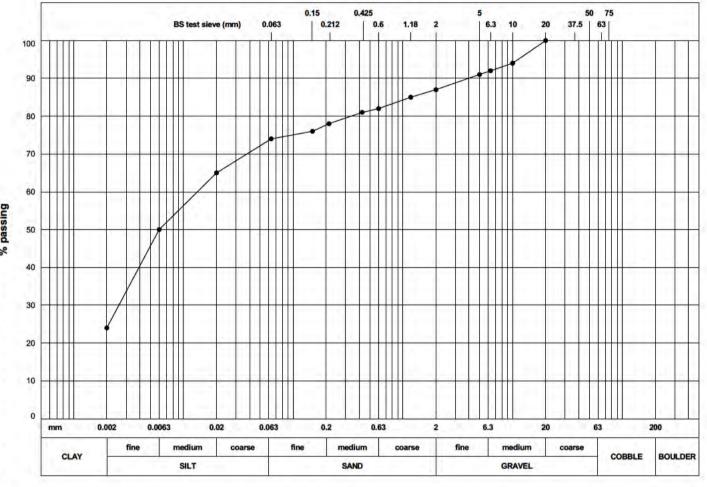
A Production

BH/TP No. BH502

SAMPLE No./TYPE 5B

SAMPLE DEPTH (m) 1.00

SPECIMEN DEPTH (m) 1.00



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% fner
CLAY	24	5.22		1500	25.		125
SILT	50	150		5	91	20	65
SILT & CLAY SAND	74 13	75		2	87	6	50
GRAVEL COBBLE & BOULDER	13 0	63		1.18	85	2	24
		50		0.6	82		
test method(s)	9.2 & 9.4	37.5		0.425	81		
test method:		20	100	0.212	78		
9.2 wetsevng 9.3 drysevng		10	94	0.15	76		
9.4 sed mentat on by p pette				100			
9.5 sed mentat on by hydrom	eter	6.3	92	0.063	74		

remarks:

denotes sample tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

DESCRIPTION Off white slightly sandy slightly gravelly CHALK

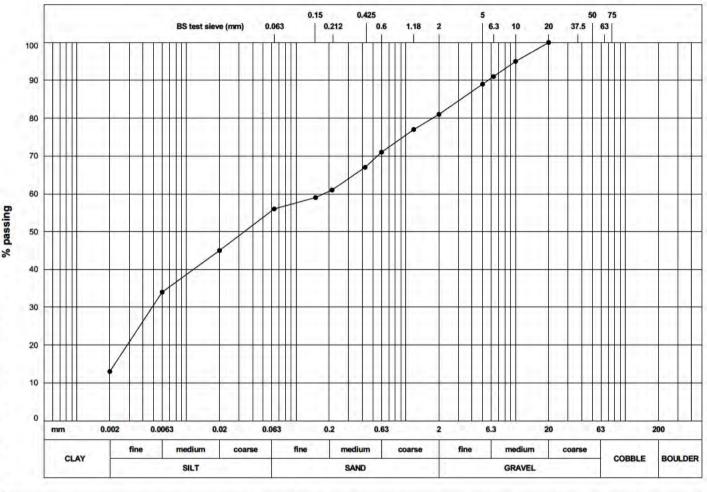
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BH/TP No. BH502

SAMPLE No./TYPE 11X

SAMPLE DEPTH (m) 1.80

SPECIMEN DEPTH (m) 2.00



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% fner
CLAY	13	450					ae.
SILT	43	150		5	89	20	45
SILT & CLAY	56	75		2	81	6	34
SAND GRAVEL	25 19	1 1 00					
COBBLE & BOULDER	0	63		1.18	77	2	13
test method(s)	9.2 & 9.4	50		0.6	71		
test metriod(s)	9.2 & 9.4	37.5		0.425	67		
test method:		5.2	122	2.652			
9.2 wet sev ng		20	100	0.212	61		
9.3 drysevng		10	95	0.15	59		
9.4 sed mentat on by p pette		6.2	01	0.063	56		
9.5 sed mentat on by hydron	neter	6.3	91	0.063	56		

remarks:

denotes sample tested is smaller than that which is recommended in accordance with BS1377

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BS.1377: Part 2: 1990: 9

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

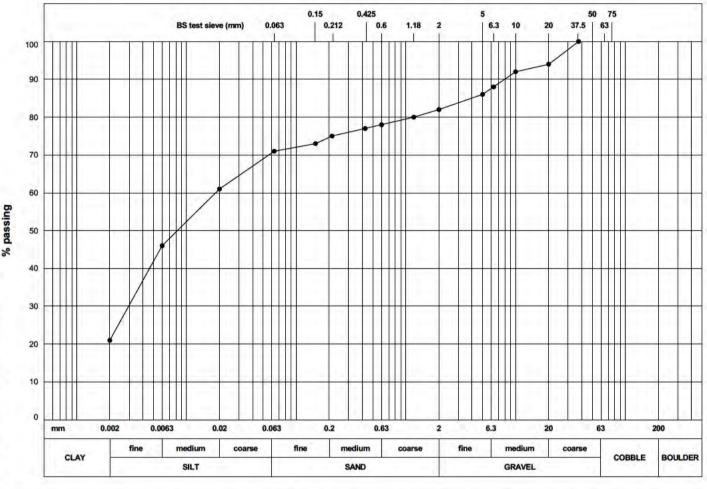
Off white slightly sandy slightly gravelly CHALK DESCRIPTION

BH502 BH/TP No.

SAMPLE No./TYPE 27X

SAMPLE DEPTH (m) 5.20

SPECIMEN DEPTH (m) 5.60



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY	21	3,542					120
SILT	50	150		5	86	20	61
SILT & CLAY	71	142					46
SAND	11	75		2	82	6	46
GRAVEL	18	63		1.18	80	2	21
COBBLE & BOULDER	0	03		1.10	00	2	21
test method(s)	9.2 &9.4	50		0.6	78		
test metriod(s)	5.2 05.4	37.5	100	0.425	77		
test method:				2010			
9.2 wet seving		20	94	0.212	75		
9.3 dry s ev ng		10	92	0.15	73		
9.4 sed mentat on by p pette		6.3	88	0.063	71		
9.5 sed mentat on by hydron	neter	0.3	00	0.003	61		

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BS.1377: Part 2: 1990: 9

SITE

DESCRIPTION

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LONDON PARAMOUNT ENTERTAINMENT RESORT

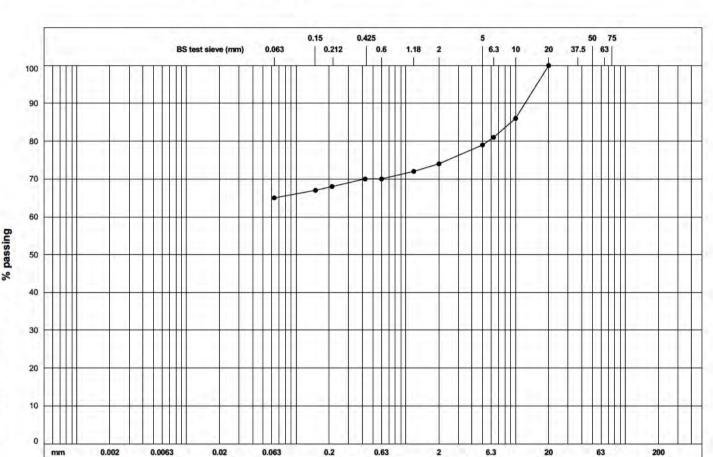
Off white slightly sandy slightly gravelly CHALK

BH502 BH/TP No.

SAMPLE No./TYPE 37X

SAMPLE DEPTH (m) 7.20

SPECIMEN DEPTH (m) 7.40



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (µm)	% f ner
CLAY		150		5	79	20	
SILT	441	150		3	15	20	
SILT & CLAY SAND	65 9	75		2	74	6	
GRAVEL	26			4.74			
COBBLE & BOULDER	0	63		1.18	72	2	
1.000		50		0.6	70		
test method(s)	9.2	37.5		0.425	70		
test method:							
9.2 wetsevng		20	100	0.212	68		
9.3 drysevng		10	86	0.15	67		
9.4 sed mentat on by p pette		6.2	04	0.062	65		
9.5 sed mentat on by hydrom	eter	6.3	81	0.063	00		

medium

SAND

coarse

fine

medium

GRAVEL

coarse

COBBLE

BOULDER

fine

coarse

medium

SILT

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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LONDON PARAMOUNT ENTERTAINMENT RESORT

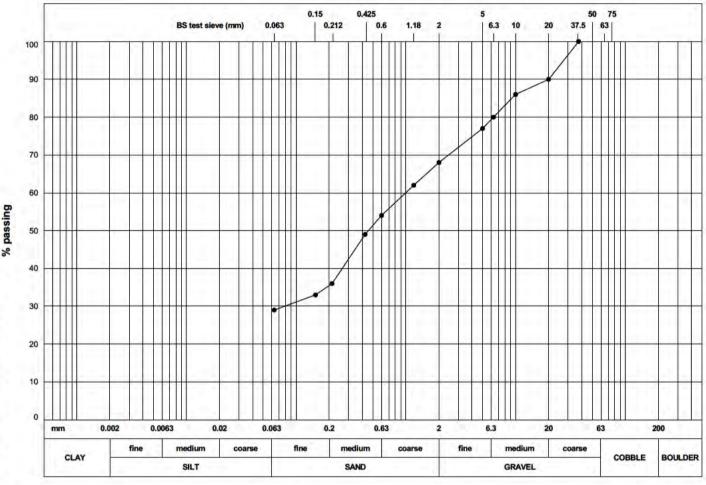
Brown very clayey very gravelly SAND

BH/TP No. BH502

SAMPLE No./TYPE 41X

SAMPLE DEPTH (m) 8.20

SPECIMEN DEPTH (m) 8.70



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY		450			77	00	
SILT		150		5	-11	20	
SILT & CLAY SAND	29 39	75		2	68	6	
GRAVEL COBBLE & BOULDER	32 0	63		1.18	62	2	
test method(s)	9.2#	50		0.6	54		
iour mourou(o)	0.2.0	37.5	100	0.425	49		
test method:		20	90	0.212	36		
9.2 wet sev ng		20	30	0.212	30		
9.3 dry s ev ng		10	86	0.15	33		
9.4 sed mentat on by p pette		6.3	80	0.063	29		
9.5 sed mentat on by hydrome	eter	0.3	00	0.003	25		

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

LONDON PARAMOUNT ENTERTAINMENT RESORT

ACUNT ENTEDTAINMENT DECORT

DESCRIPTION Brown sandy slightly gravelly SILT

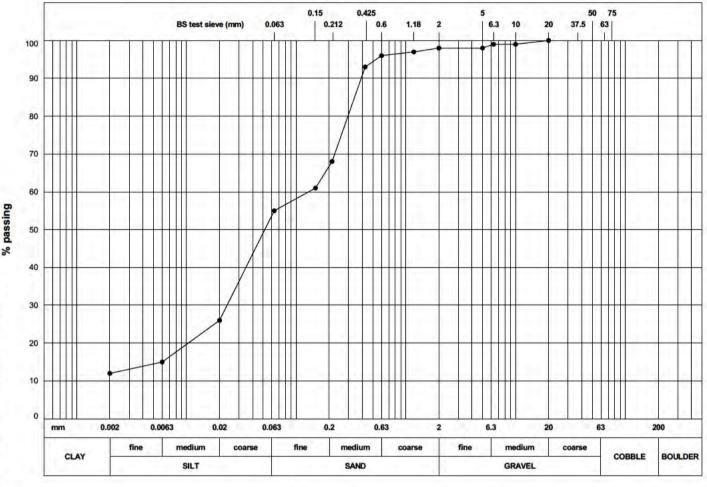


BH/TP No. BH502

SAMPLE No./TYPE 49D

SAMPLE DEPTH (m) 9.50

SPECIMEN DEPTH (m) 9.50



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (µm)	% f ner
CLAY	12	400		1,000	4		
SILT	43	150		5	98	20	26
SILT & CLAY	55	75		2	98	6	15
SAND	43	75		2	98	6	15
GRAVEL	43 2	63		1.18	97	2	12
COBBLE & BOULDER	0	00		1.10	01	-	12
to at an other disc.	00004	50		0.6	96		
test method(s)	9.2 & 9.4	37.5		0.425	93		
test method:				0.00 v		-	
9.2 wet sev ng		20	100	0.212	68		
9.3 drysevng		10	99	0.15	61		
9.4 sed mentat on by p pette		6.3	99	0.063	55		
9.5 sed mentat on by hydron	neter	0.3	33	0.003	55		

remarks:

denotes sample tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

LONDON PARAMOUNT ENTERTAINMENT RESORT

EGIDONI 711V MIGGINI ENTENTIAMENT REGON

DESCRIPTION Reddish brown slightly clayey very sandy GRAVEL

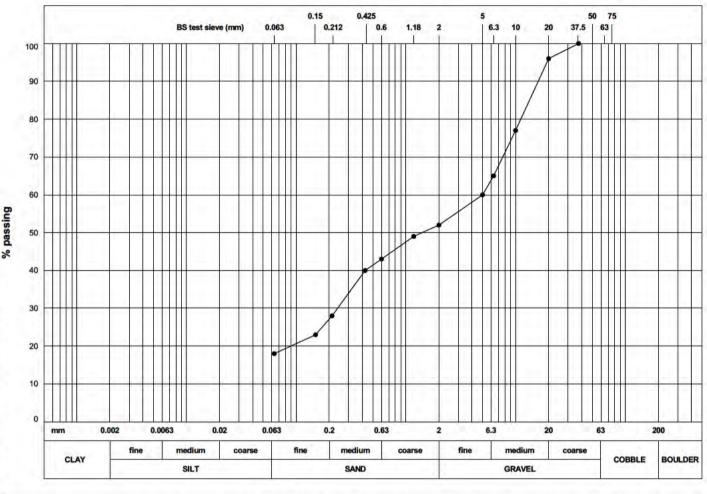
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BH/TP No. BH502

SAMPLE No./TYPE 53D

SAMPLE DEPTH (m) 10.80

SPECIMEN DEPTH (m) 10.80



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY		150		5	60	20	
SILT		150		9	60	20	
SILT & CLAY SAND	18 34	75		2	52	6	
GRAVEL	48	63		1.18	49	2	
COBBLE & BOULDER	0	03		1.10	43	2	
test method(s)	9.2#	50		0.6	43		
test metrod(s)	3.211	37.5	100	0.425	40		
test method:		20	96	0.212	28		
9.2 wet sev ng		20	30	0.212	20		
9.3 dry s ev ng		10	77	0.15	23		
9.4 sed mentat on by p pette		6.3	65	0.063	18		
9.5 sed mentat on by hydrome	eter	0.3	0.5	0.003	10		

remarks:

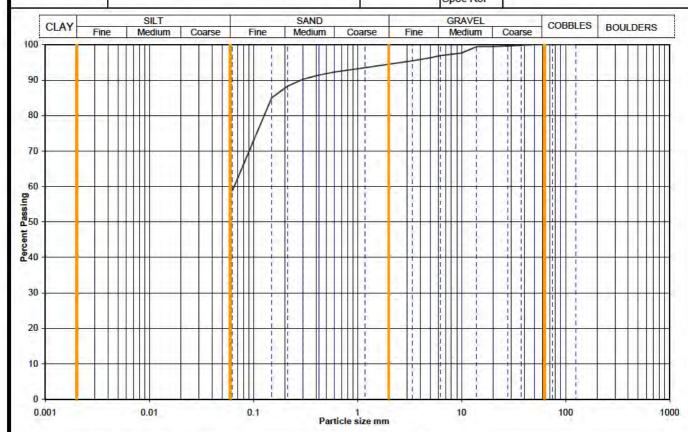
denotes sample tested is smaller than that which is recommended in accordance with BS1377

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Particle Size Distribution Analysis N5110-15 Sample Details: Hole No Project No BH703 0.50 Depth (m BGL) Project Name LONDON PARAMOUNT ENTERTAINMENT RESORT Samp No В Type ID MASTER3402 Spec Ref



Sievin	g	Sediment	ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		-
37.5	100		
28	100		
20	99		
14	99		See -
10	98		
6.3	97		
5.0	.96		
3.35	95		
2.00	95		
1.18	94		
0.600	92		
0.425	91		
0.300	90	Dayman of a	ample ka
0.212	88	Dry mass of sa	ampie, kg
0.150	85	400.0	
0.063	59	190.2	

Soil description	Brown slightly sandy slight occasional rootlets	lly gravelly Cl	LAY with
Preparation / Pretreatment	Sieve: natural material		
Remarks		7.2	
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
Proportions	Gravel	5	5
	Sand	36	36
*<60mm values to aid description only	Silt	silt+clay =	- F
description only	Clay	59	59

Uniformity Coefficient	D ₆₀ / D ₁₀	Not applicable

	BS 1377 : Part 2 : 1990			
Test Method	Sieving	9.2 wet sieve		
-	Sedimentation	none		

QA Ref

SLR 2,9 Rev 88 Aug 11



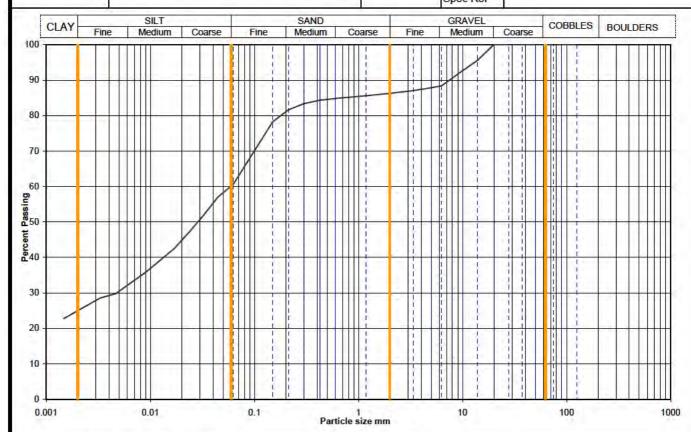


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Figure

PSD

Particle Size Distribution Analysis



Sievin	g	Sediment	ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	61
90	100	0.0446	57
75	100	0.0324	52
63	100	0.0235	47
50	100	0.0170	42
37.5	100	0.0090	36
28	100	0.0046	30
20	100	0.0033	29
14	96	0.0015	23
10	93		
6.3	88		
5.0	88		
3.35	87		
2.00	86		
1.18	86	Destrict descrip	
0.600	85	Particle densit	y, wg/m3
0.425	84	2.65 a	ssumed
0.300	83	Dayman -f -	ample I
0.212	82	Dry mass of sa	ampie, kg
0.150	78	0.0	
0.063	61	6.6	

Soil description	Brown slightly sandy slightly	y gravelly CL	AY.
Preparation / Pretreatment	Sieve: natural material H	lydro: as BS1	1377
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	Whole 0	*<63mm
Sample Proportions	Cobbles / boulders Gravel		7-3-1
Proportions	Gravel Sand	0	0
	Gravel Sand	0 14	0 14

Uniformity Coefficient	D ₆₀ / D ₁₀	Not applicable
Teaming seaments	- 00 10	

Test Method	BS 1377 : Part 2 : 1990				
Test Method	Sieving	9.2 wet sieve			
	Sedimentation	9.5 hydrometer			

QA Ref

SLR 2,9 Rev 88 Aug 11





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Figure

PSD

PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

DESCRIPTION

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

Orangish brown sandy SILT

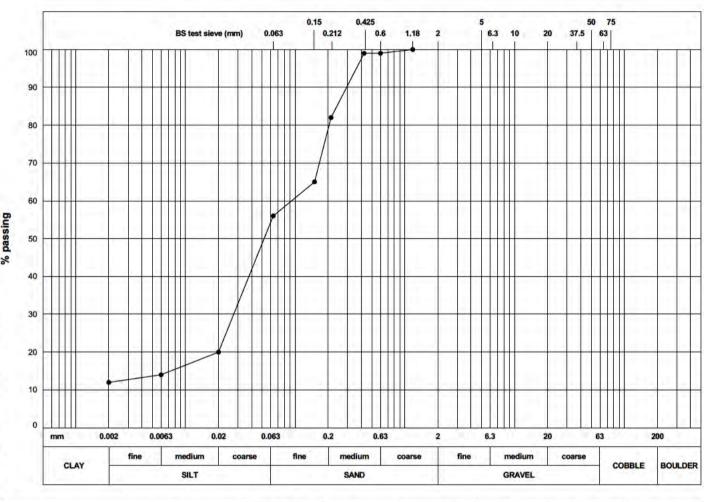
LONDON PARAMOUNT ENTERTAINMENT RESORT

BH/TP No. BH703

SAMPLE No./TYPE 22X

SAMPLE DEPTH (m) 4.20

SPECIMEN DEPTH (m) 4.50



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% fner
CLAY	12	400					
SILT	44	150		5		20	20
SILT & CLAY SAND	56 44	75		2		6	14
GRAVEL	0	63		1.18	100	2	12
COBBLE & BOULDER	0						
test method(s)	9.2 & 9.4	50		0.6	99		
25 C 20 C	A.C. 11.0-D	37.5		0.425	99		
test method:		20		0.040	00		
9.2 wet sev ng		20		0.212	82		
9.3 dry s ev ng		10		0.15	65		
9.4 sed mentat on by p pette		6.3		0.063	56		
9.5 sed mentat on by hydrom	neter	0.3		0.003	30		

remarks:

denotes sample tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

DESCRIPTION

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LONDON PARAMOUNT ENTERTAINMENT RESORT

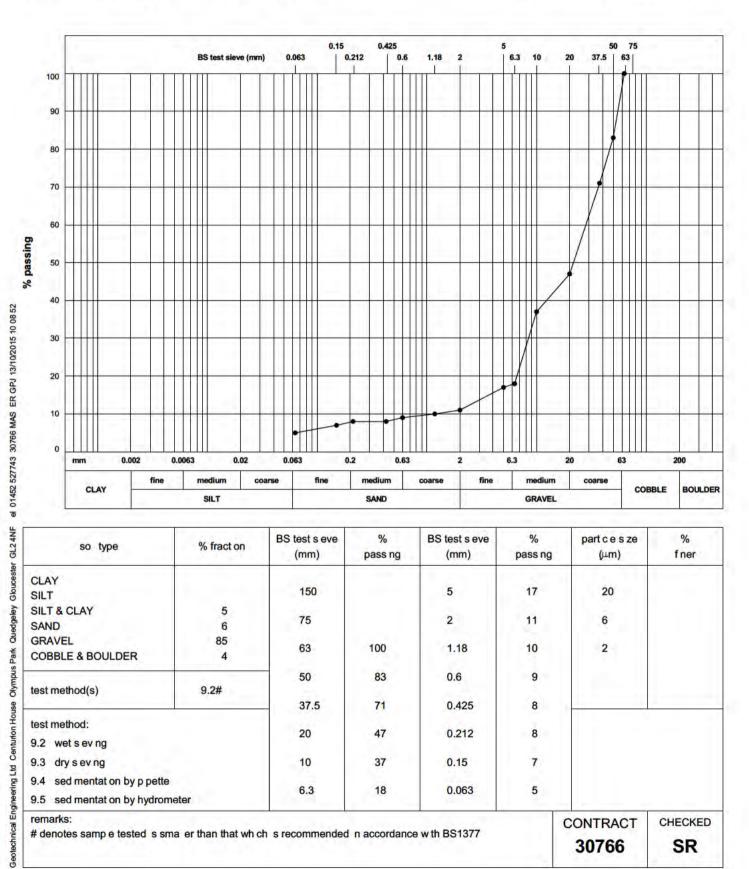
Light brown silty sandy GRAVEL

BH703 BH/TP No.

SAMPLE No./TYPE 30X

SAMPLE DEPTH (m) 6.20

SPECIMEN DEPTH (m) 6.20



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (µm)	% f ner
CLAY		150		5	17	20	
SILT		130		3	17	20	
SILT & CLAY SAND	5 6	75		2	11	6	
GRAVEL COBBLE & BOULDER	85 4	63	100	1.18	10	2	
	0.0#	50	83	0.6	9		
test method(s)	9.2#	37.5	71	0.425	8		
test method:		20	47	0.212	8		
9.2 wet sev ng		20	41	0.212			
9.3 dry s ev ng		10	37	0.15	7		
9.4 sed mentat on by p pette		6.3	18	0.063	5		
9.5 sed mentat on by hydrome	ter		-				

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SITE

DESCRIPTION

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LONDON PARAMOUNT ENTERTAINMENT RESORT

Brown sandy slightly gravelly clayey SILT

SAMPLE No./TYPE

BH/TP No.

8X

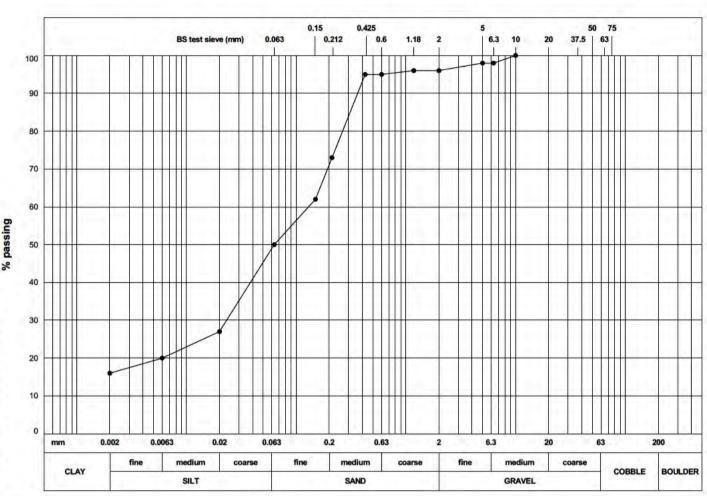
BH704

SAMPLE DEPTH (m)

1.20

SPECIMEN DEPTH (m)

1.80



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY	16	450			98		07
SILT	34	150		5	98	20	27
SILT & CLAY SAND	50 46	75		2	96	6	20
GRAVEL	4	1.00		3 2 2 3			
COBBLE & BOULDER	0	63		1.18	96	2	16
test method(s)	9.2 & 9.4	50		0.6	95		
test metriod(s)	5.2 & 5.4	37.5		0.425	95		
test method:				2.202	44		
9.2 wetsevng		20		0.212	73		
9.3 drysevng		10	100	0.15	62		
9.4 sed mentat on by p pette		6.3	98	0.063	50		
9.5 sed mentat on by hydrom	neter	0.3	90	0.003	50		

remarks:

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

DESCRIPTION

LONDON RESORT COMPANY HOLDINGS LTD

Light brown sandy clayey SILT

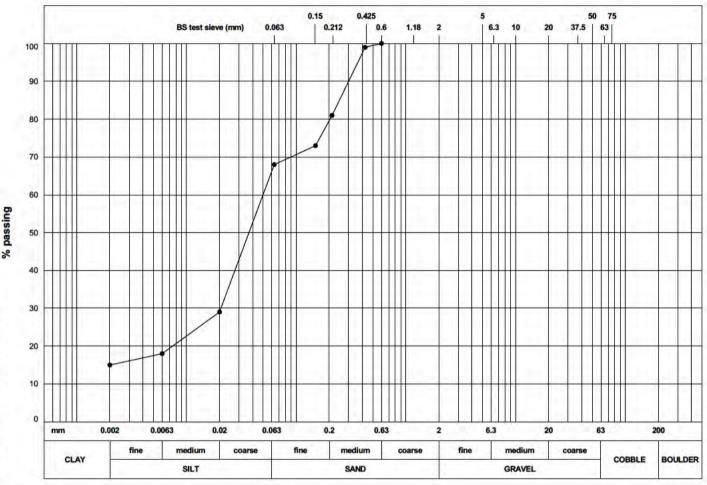
LONDON PARAMOUNT ENTERTAINMENT RESORT

BH/TP No. **BH704**

SAMPLE No./TYPE 17X

SAMPLE DEPTH (m) 3.20

SPECIMEN DEPTH (m) 3.50



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (µm)	% f ner
CLAY	15	100					64
SILT	53	150		5		20	29
SILT & CLAY SAND	68 32	75		2		6	18
GRAVEL	0	63		1.18		2	15
COBBLE & BOULDER	0						
test method(s)	9.2 & 9.4	50		0.6	100		
	4,4,1,4,1,1	37.5		0.425	99		
test method:		20		0.212	81		
9.2 wetsevng		20		0.212	01		
9.3 drysevng		10		0.15	73		
9.4 sed mentat on by p pette		6.3		0.063	68		
9.5 sed mentat on by hydrom	eter	0.5		0.003	00		
remarks:						CONTRACT	CHECK

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rem	ıa	N.	٠.

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

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LONDON PARAMOUNT ENTERTAINMENT RESORT

DESCRIPTION Yellowish brown slightly sandy slightly gravelly CLAY

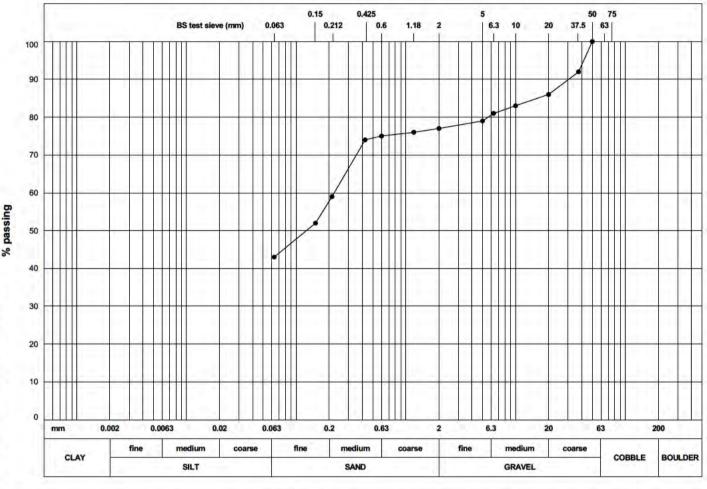
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BH/TP No. BH705

SAMPLE No./TYPE 3B

SAMPLE DEPTH (m) 0.50

SPECIMEN DEPTH (m) 0.50



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY		450		5	70	00	
SILT		150		5	79	20	
SILT & CLAY SAND	43 34	75		2	77	6	
GRAVEL COBBLE & BOULDER	23 0	63		1.18	76	2	
test method(s)	9.2	50	100	0.6	75		
teat method(a)	5.2	37.5	92	0.425	74		
test method:		20	00	0.242	50		
9.2 wet sev ng		20	86	0.212	59		
9.3 dry s ev ng		10	83	0.15	52		
9.4 sed mentat on by p pette 9.5 sed mentat on by hydron		6.3	81	0.063	43		

remarks:

denotes sample tested is smaller than that which is recommended in accordance with BS1377

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BS.1377: Part 2: 1990: 9

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LONDON PARAMOUNT ENTERTAINMENT RESORT

DESCRIPTION Light brown silty very sandy GRAVEL

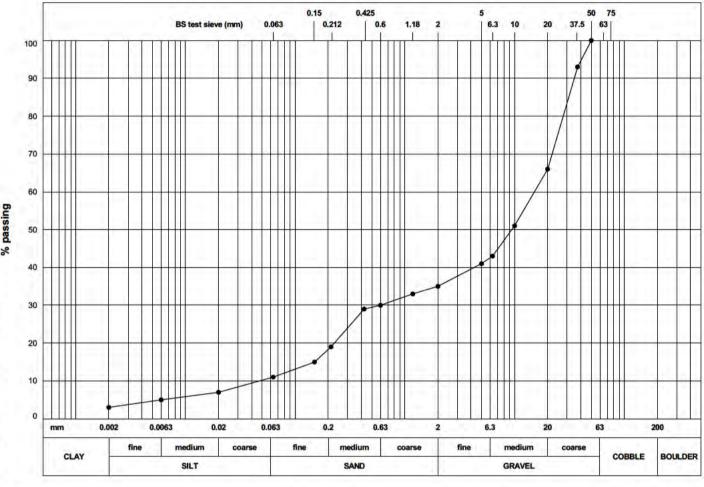


BH705 BH/TP No.

SAMPLE No./TYPE 8X

SAMPLE DEPTH (m) 1.20

SPECIMEN DEPTH (m) 1.50



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY	3				-50		-
SILT	8	150		5	41	20	7
SILT & CLAY	11	75		2	35		5
SAND	24	75		2	35	6	5
GRAVEL	65	63		1.18	33	2	3
COBBLE & BOULDER	0	00		1.10	30	-	
15.53117	1844.00	50	100	0.6	30		
test method(s)	9.2# & 9.4	37.5	93	0.425	29		
. Charles and a second		37.5	93	0.425	29		
test method:		20	66	0.212	19		
9.2 wet seving		1 2 6 7					
9.3 drysevng		10	51	0.15	15		
9.4 sed mentat on by p pette			40	0.000	11		
9.5 sed mentat on by hydrometer		6.3	43	0.063	11		

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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BS.1377: Part 2: 1990: 9

SITE

DESCRIPTION

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LONDON PARAMOUNT ENTERTAINMENT RESORT

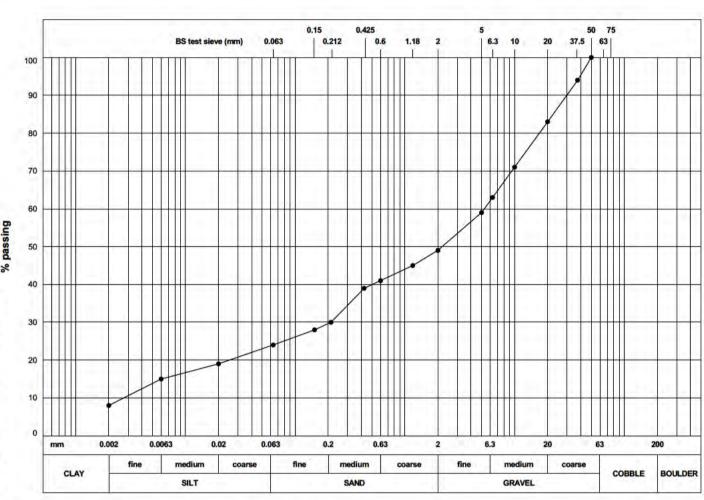
Light brown silty very sandy GRAVEL

BH/TP No. BH705

SAMPLE No./TYPE 12X

SAMPLE DEPTH (m) 2.20

SPECIMEN DEPTH (m) 2.50



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY	8	150		5	59	20	19
SILT	16	150		3	33	20	13
SILT & CLAY SAND	24 25	75		2	49	6	15
GRAVEL	51			200			
COBBLE & BOULDER	0	63		1.18	45	2	8
A 40 40 40 47A	- 132a ac	50	100	0.6	41		
test method(s)	9.2# & 9.4	37.5	94	0.425	39		
	1	37.5	94	0.425	39		
test method:		20	83	0.212	30		
9.2 wetseving							
9.3 drysevng		10	71	0.15	28		
9.4 sed mentat on by p pette				0.000			
9.5 sed mentat on by hydrometer		6.3	63	0.063	24		

remarks:

denotes sample tested is smaller than that which is recommended in accordance with BS1377

30766

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

LONDON PARAMOUNT ENTERTAINMENT RESORT

ORT SAMPLE No./TYPE

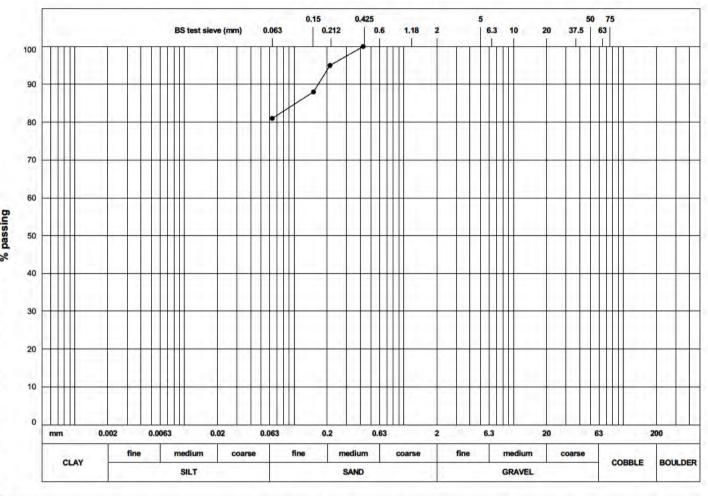
BH/TP No.

SAMPLE DEPTH (m) 1.20

BH706

8X

DESCRIPTION Brown slightly sandy silty CLAY SPECIMEN DEPTH (m) 1.50



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% fner
CLAY		150		5		20	
SILT		150		5		20	
SILT & CLAY SAND	81 19	75		2		6	
GRAVEL COBBLE & BOULDER	0	63		1.18		2	
test method(s)	9.2	50		0.6			
test metrod(s)	5.2	37.5		0.425	100		
test method:		20		0.212	95		
9.2 wet sev ng							
9.3 drysevng		10		0.15	88		
9.4 sed mentat on by p pette9.5 sed mentat on by hydrom		6.3		0.063	81		

remarks:

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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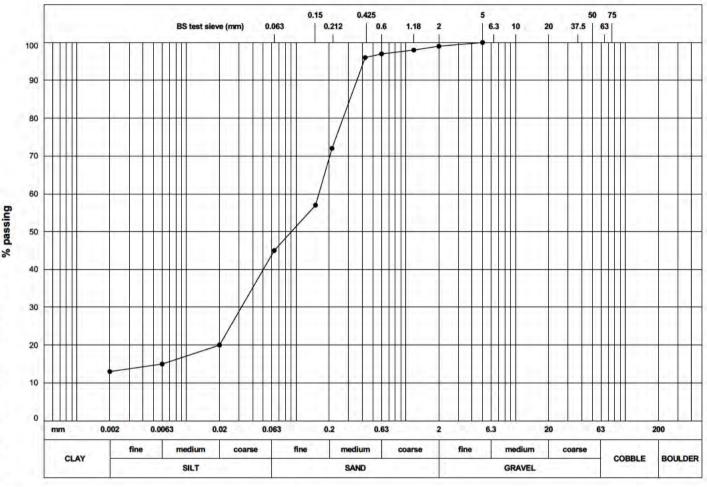
PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

CLIENT LONDON RESORT COMPANY HOLDINGS LTD BH/TP No. **BH706**

SPECIMEN DEPTH (m)





so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY	13	150		5	100	20	20
SILT	32	130		3	100	20	20
SILT & CLAY	45	75		2	99	6	15
SAND	54	1,0		-	00		,,,
GRAVEL	1	63		1.18	98	2	13
COBBLE & BOULDER	0				100		
A1	00004	50		0.6	97		
test method(s)	9.2 & 9.4	37.5		0.425	96		
test method:						1 +	
9.2 wet sev ng		20		0.212	72		
		1.0		2.2	1		
9.3 dry s ev ng		10		0.15	57		
9.4 sed mentat on by p pette		6.3		0.063	45		
.5 sed mentat on by hydrometer		6.3		0.003	45		

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

DESCRIPTION

LONDON RESORT COMPANY HOLDINGS LTD

LONDON PARAMOUNT ENTERTAINMENT RESORT

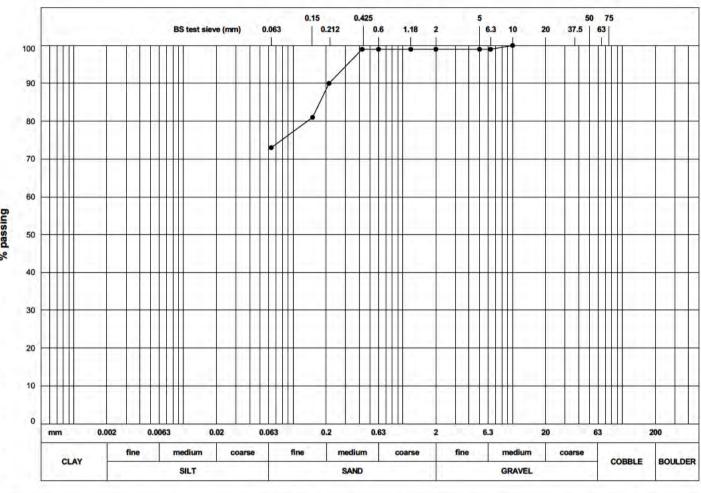
Orangish brown slightly sandy CLAY

BH/TP No. **BH706**

SAMPLE No./TYPE 18X

SAMPLE DEPTH (m) 3.20

SPECIMEN DEPTH (m) 4.00



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (jim)	% f ner
CLAY		450		1,000	99		
SILT		150		5	99	20	
SILT & CLAY	73	75		2	99	6	
SAND	26			5.46		1 1 2 1 1	
GRAVEL COBBLE & BOULDER	0	63		1.18	99	2	
	-	50		0.6	99		
test method(s)	9.2	30		0.0	33		
		37.5		0.425	99		
test method:		20		0.212	90		
9.2 wetseving		20		0.212	90		
9.3 drysevng		10	100	0.15	81		
9.4 sed mentat on by p pette		0.0	00	0.000	70		
9.5 sed mentat on by hydron	neter	6.3	99	0.063	73		

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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Geotechnical Engineering Ltd Centurion House Olympus Park Quedgeley Gloucester GL24NF el 01452 527743 30766 MAS ER GPJ 13/10/2015 10 09 00

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

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DESCRIPTION

LONDON RESORT COMPANY HOLDINGS LTD

LONDON PARAMOUNT ENTERTAINMENT RESORT

Orangish brown clayey sandy GRAVEL

BH706

SAMPLE No./TYPE

BH/TP No.

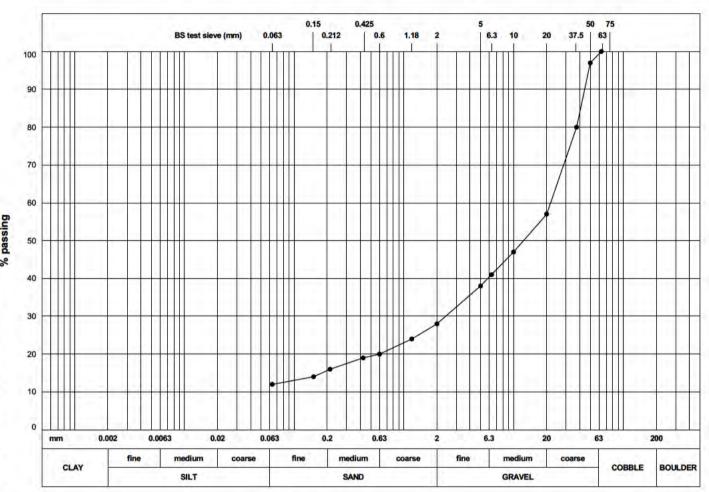
26X

SAMPLE DEPTH (m)

5.20

SPECIMEN DEPTH (m)

5.50



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% fner
CLAY		150		5	38	20	
SILT & CLAY SAND	12 16	75		2	28	6	
GRAVEL COBBLE & BOULDER	71 1	63	100	1.18	24	2	
test method(s)	9.2#	50	97	0.6	20		
		37.5	80	0.425	19		
est method: 9.2 wet s ev ng		20	57	0.212	16		
9.3 drysevng		10	47	0.15	14		
9.4 sed mentat on by p pette 9.5 sed mentat on by hydron		6.3	41	0.063	12		

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

LONDON PARAMOUNT ENTERTAINMENT RESORT

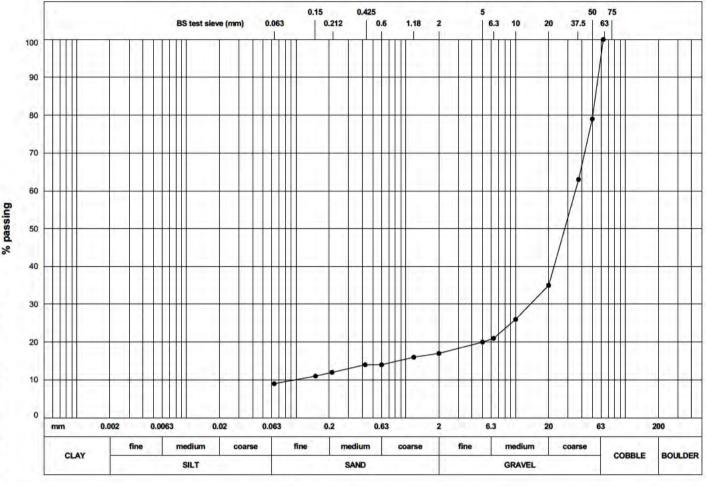
BH/TP No. **BH706**

SAMPLE No./TYPE 32X

SAMPLE DEPTH (m) 6.20

6.80

DESCRIPTION Yellowish brown clayey sandy GRAVEL SPECIMEN DEPTH (m)



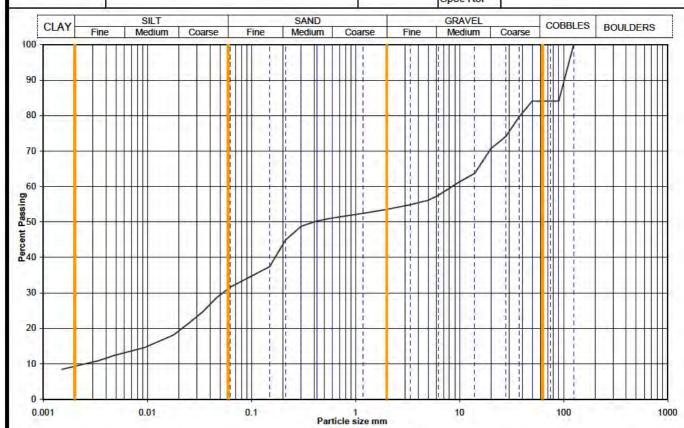
so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY		150		5	20	20	
SILT		150			20	20	
SILT & CLAY SAND	9	75		2	17	6	
GRAVEL	8 79			3.4			
COBBLE & BOULDER	4	63	100	1.18	16	2	
3 PK A E SP 10/8E ST 18		50	79	0.6	14		
test method(s)	9.2#						
		37.5	63	0.425	14		
test method:			25	0.040	40		
9.2 wet sev ng		20	35	0.212	12		
9.3 drysevng		10	26	0.15	11		
9.4 sed mentat on by p pette	i.				- 2		
9.5 sed mentat on by hydron	neter	6.3	21	0.063	9		

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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Particle Size Distribution Analysis



Sievin	g	Sediment	ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	32
90	84	0.0465	29
75	84	0.0339	25
63	84	0.0246	21
50	84	0.0178	18
37.5	80	0.0094	15
28	74	0.0048	12
20	71	0.0034	11
14	64	0.0015	8
10	61		
6.3	58		
5.0	56		
3.35	55		
2.00	54		
1.18	52	Doctiolo donoit	Malm2
0.600	51	Particle densit	y, ivig/m3
0.425	50	2.65 assum	
0.300	49		
0.212	45	Dry mass of sa	ampie, kg
0.150	37	7.4	
0.063	32	7.4	

Soil description	Grey slightly sandy slightly chalk fragments.	gravelly silty	CLAY with
Preparation / Pretreatment	Sieve: natural material H	lydro: as BS	1377
Remarks			311
		Whole	*<63mm
Sample	Cobbles / boulders	16	0
Proportions	Gravel	30	36
*<60mm values to aid	Sand	22	26
	0.14	22	20
description only	Silt	22	26

D ₁₀ 3350	
	D ₁₀ 3350

	BS 1377 : Part 2 : 1990			
Test Method	Sieving	9.2 wet sieve		
	Sedimentation	9.5 hydrometer		

QA Ref

SLR 2,9 Rev 88 Aug 11





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Figure

PSD

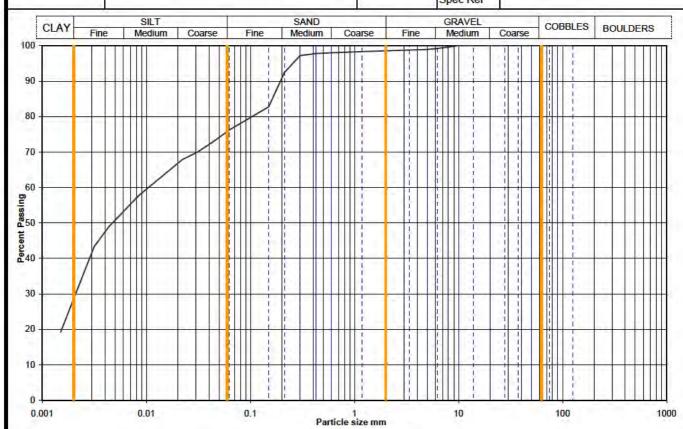
Particle Size Distribution Analysis

 Project No
 N5110-15
 Sample Details:
 Hole No
 BH707

 Project Name
 LONDON PARAMOUNT ENTERTAINMENT RESORT
 Samp No
 32
 Type
 X

 ID
 MASTER3190

 Spec Ref
 Spec Ref



Sievin	g	Sedimentation		
Particle Size mm	% Passing	Particle Size mm	% Passing	
125	100	0.0630	76	
90	100	0.0433	73	
75	100	0.0310	70	
63	100	0.0222	68	
50	100	0.0159	64	
37.5	100	0.0085	58	
28	100	0.0044	49	
20	100	0.0032	43	
14	100	0.0015	19	
10	100			
6.3	99			
5.0	99			
3.35	99			
2.00	99			
1.18	98	Destrict Janea		
0.600	98	Particle densit	y, ivig/m3	
0.425	98	2.65 assumed		
0.300	97	Daymana -f -	amala I	
0.212	92	Dry mass of sa	ampie, kg	
0.150	83	40.0		
0.063	76	10.6		

Soil description	Light brown slightly sandy s	silty CLAY.	
Preparation / Pretreatment	Sieve: natural material H	lydro: as BS	1377
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
Proportions	Gravel	1	1
	Sand	23	23
	P. Series	47	47
*<60mm values to aid description only	Silt	47	47

Uniformity Coefficient	D ₆₀ / D ₁₀	Not applicable

	BS 1377 : Part 2 : 1990			
Test Method	Sieving	9.2 wet sieve		
Tool motifica	Sedimentation	9.5 hydrometer		

QA Ref

SLR 2,9 Rev 88 Aug 11





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Figure

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

DESCRIPTION

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

Brown silty sandy GRAVEL

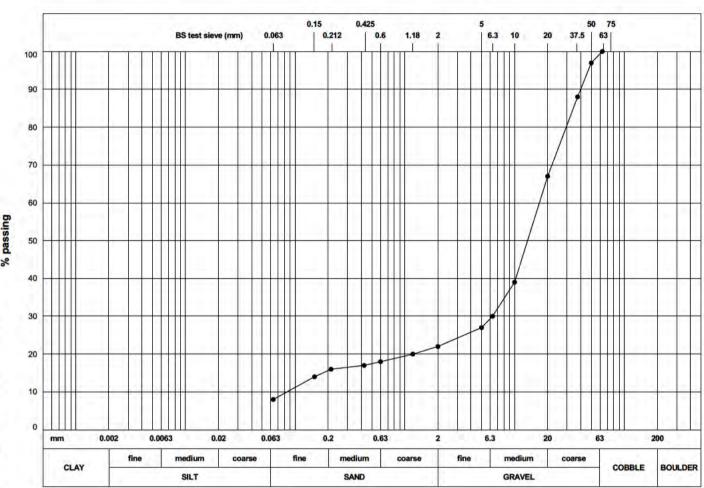
LONDON PARAMOUNT ENTERTAINMENT RESORT

BH/TP No. BH707

SAMPLE No./TYPE 47X

SAMPLE DEPTH (m) 9.20

SPECIMEN DEPTH (m) 9.20



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY SILT		150		5	27	20	
SILT & CLAY SAND	8 14	75		2	22	6	
GRAVEL COBBLE & BOULDER	77 1	63	100	1.18	20	2	
test method(s)	9.2#	50	97	0.6	18		
		37.5	88	0.425	17		
test method: 9.2 wet s ev ng		20	67	0.212	16		
9.3 drysevng		10	39	0.15	14		
9.4 sed mentat on by p pette9.5 sed mentat on by hydron		6.3	30	0.063	8		

remarks:

denotes sample tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

DESCRIPTION Brown silty very sandy GRAVEL

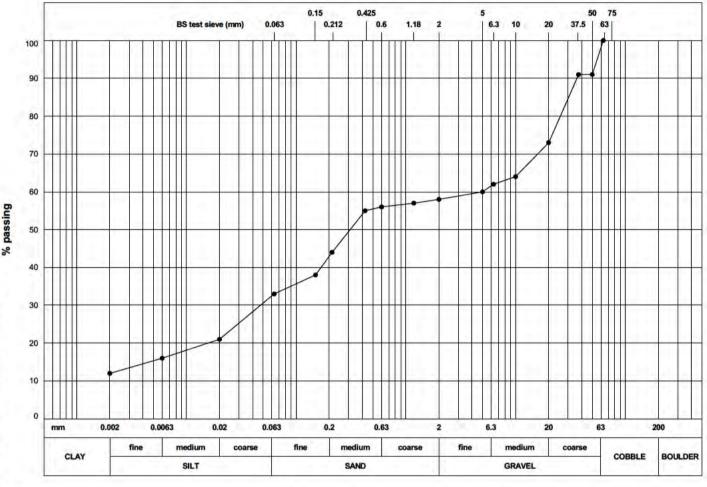


BH/TP No. BH708

SAMPLE No./TYPE 5B

SAMPLE DEPTH (m) 1.00

SPECIMEN DEPTH (m) 1.00



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY	12	450		1.5			-
SILT	21	150		5	60	20	21
SILT & CLAY	33	75		2	58	6	16
SAND	25	75		2	30	.0	10
GRAVEL	40	63	100	1.18	57	2	12
COBBLE & BOULDER	2	00	100	1.10	01	-	12
4 - 4 t 4 t - 4 (-)	00004	50	91	0.6	56		
test method(s)	9.2 & 9.4	37.5	91	0.425	55		
test method:		5.4	40	2.652			
9.2 wet sev ng		20	73	0.212	44		
9.3 drysevng		10	64	0.15	38		
9.4 sed mentat on by p pette9.5 sed mentat on by hydron		6.3	62	0.063	33		

remarks:

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

DESCRIPTION

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

LONDON PARAMOUNT ENTERTAINMENT RESORT

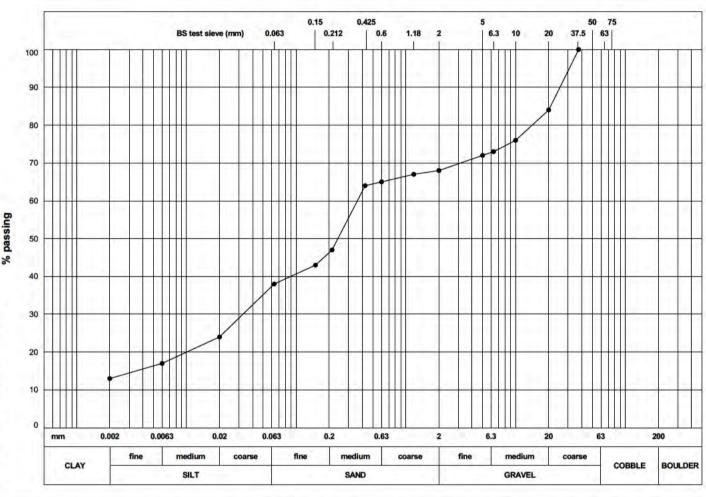
Brownish green slightly sandy slightly gravelly silty CLAY

BH/TP No. BH708

SAMPLE No./TYPE 14X

SAMPLE DEPTH (m) 2.20

SPECIMEN DEPTH (m) 2.40



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (µm)	% fner
CLAY	13	3,542		1.5	-2.		29
SILT	25	150		5	72	20	24
SILT & CLAY	38	75		2	68	6	17
SAND	30	75		2	00	6	17
GRAVEL	32	63		1.18	67	2	13
COBBLE & BOULDER	0	00		1.10	0,		13
test method(s)	9.2 & 9.4	50		0.6	65		
teat metriod(s)	3.2 0 3.4	37.5	100	0.425	64		
test method:		20	0.4	0.212	47		
9.2 wet seving		20	84	0.212	47		
9.3 dry s ev ng		10	76	0.15	43		
9.4 sed mentat on by p pette		6.3	73	0.063	38		
9.5 sed mentat on by hydron	neter	0.5	7.5	0.003	55		

remarks:

denotes sample tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

DESCRIPTION

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

LONDON PARAMOUNT ENTERTAINMENT RESORT

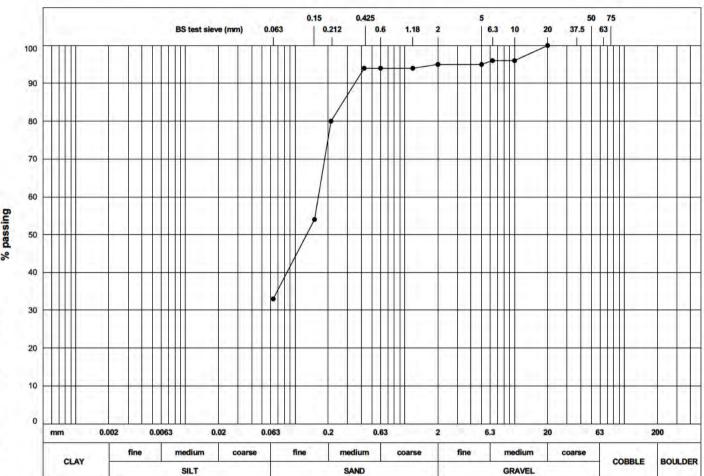
Light brown very clayey slightly gravelly SAND

BH708 BH/TP No.

SAMPLE No./TYPE 21X

SAMPLE DEPTH (m) 3.20

SPECIMEN DEPTH (m) 3.50



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY		150		5	95	20	
SILT	20	150		3	33	100	
SILT & CLAY SAND	33 62	75		2	95	6	
GRAVEL	62 5	63		1.18	94	2	
COBBLE & BOULDER	0					1 - 1	
test method(s)	9.2	50		0.6	94		
tour moulou(o)	0.2	37.5		0.425	94		
test method:			400	2010			
9.2 wet sev ng		20	100	0.212	80		
9.3 dry s ev ng		10	96	0.15	54		
9.4 sed mentat on by p pette		6.2	06	0.063	33		
9.5 sed mentat on by hydrom	eter	6.3	96	0.063	33		

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

LONDON PARAMOUNT ENTERTAINMENT RESORT

DESCRIPTION Brown sandy slightly gravelly silty CLAY

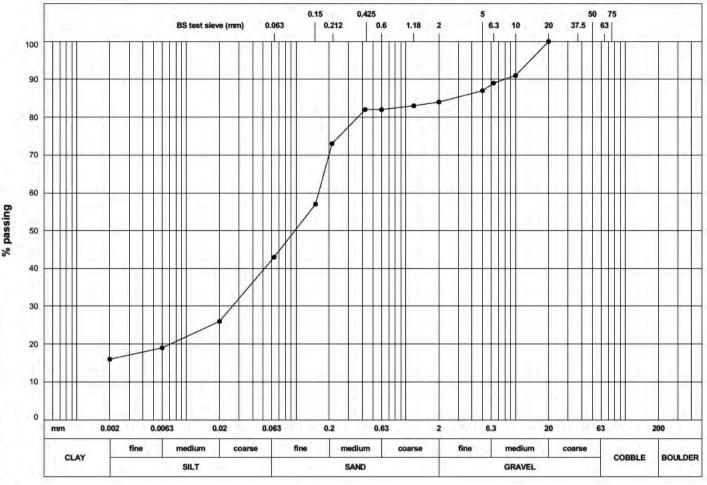


BH708 BH/TP No.

SAMPLE No./TYPE 35X

SAMPLE DEPTH (m) 6.20

SPECIMEN DEPTH (m) 6.60



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY	16	150		1.5	-		
SILT	27	150		5	87	20	26
SILT & CLAY	43	75		2	84	6	19
SAND	41	/3		2	04		13
GRAVEL	16	63		1.18	83	2	16
COBBLE & BOULDER	0				-		, ,
		50		0.6	82		
test method(s)	9.2 & 9.4	37.5		0.425	82		
to the same to the		37.3		0.423	02		
test method:		20	100	0.212	73		
9.2 wet sev ng							
9.3 drysevng		10	91	0.15	57		
9.4 sed mentat on by p pette		0.0	.00	0.000	40		
9.5 sed mentat on by hydrom	neter	6.3	89	0.063	43		

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

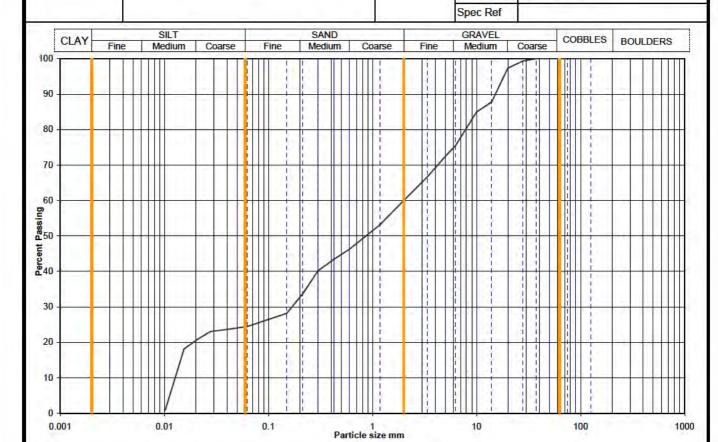
CONTRACT 30766

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Particle Size Distribution Analysis Sample Details: Hole No TP201 0.50 Depth (m BGL) LONDON PARAMOUNT ENTERTAINMENT Samp No В Type

ID

MASTER3193



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	24
90	100	0.0391	24
75	100	0.0279	23
63	100	0.0207	21
50	100	0.0155	18
37.5	100	0.0102	1
28	99		
20	97		
14	88		5000
10	85		
6.3	76		
5.0	72		
3.35	67		
2.00	60		
1.18	53	Particle density, Mg/m3 2.65 assumed	
0.600	46		
0.425	43		
0.300	40	Dry mass of sample, kg	
0.212	34		
0.150	28		
0.063	24		

N5110-15

RESORT

Project No

Project Name

Soil description	Light brown very sandy ver	y silty GRAV	EL.
Preparation / Pretreatment	Sieve: natural material H	lydro: as BS	1377
Remarks			-1
		Whole	*<63mm
Sample	Cobbles / boulders	Whole 0	*<63mm
Sample Proportions	Cobbles / boulders Gravel		7-1-17-10
Proportions	Gravel Sand	0	0
- 40 CO - CO	Gravel Sand	0 40	0 40

Uniformity Coefficient	D ₆₀ / D ₁₀	157
The state of the s	-0010	

	BS 1377 : Part 2 : 1990		
Test Method	Sieving	9.2 wet sieve	
	Sedimentation	9.5 hydrometer	

QA Ref

SLR 2,9 Rev 88 Aug 11



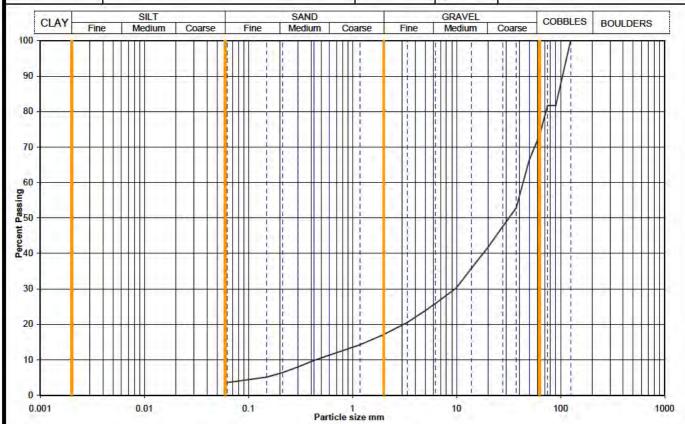


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Figure

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Particle Size Distribution Analysis N5110-15 Sample Details: Hole No Project No TP201 1.00 Depth (m BGL) Project Name LONDON PARAMOUNT ENTERTAINMENT RESORT Samp No В Type ID MASTER3194 Spec Ref



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	82		
75	82		
63	73		
50	66		-
37.5	53		
28	48		
20	42		
14	36		See a
10	30		
6.3	26		
5.0	24		
3.35	21	(= 5	
2.00	17		
1.18	14		
0.600	11		
0.425	10		
0.300	8	Dayman of a	ample ka
0.212	6	Dry mass of sa	ampie, kg
0.150	5	45.4	
0.063	4	15.1	

Soil description	Brown sandy GRAVEL wit	h six cobbles.	
Preparation / Pretreatment	Sieve: natural material		
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	27	0
Proportions	Gravel	56	77
	Sand	14	19
Street the service was			
*<60mm values to aid description only	Silt	silt+clay =	

Uniformity Coefficient	D ₆₀ / D ₁₀	98
	-6010	00

Test Method	BS 1377 : Part 2 : 1990		
	Sieving	9.2 wet sieve	
	Sedimentation	none	

QA Ref

SLR 2,9 Rev 88 Aug 11

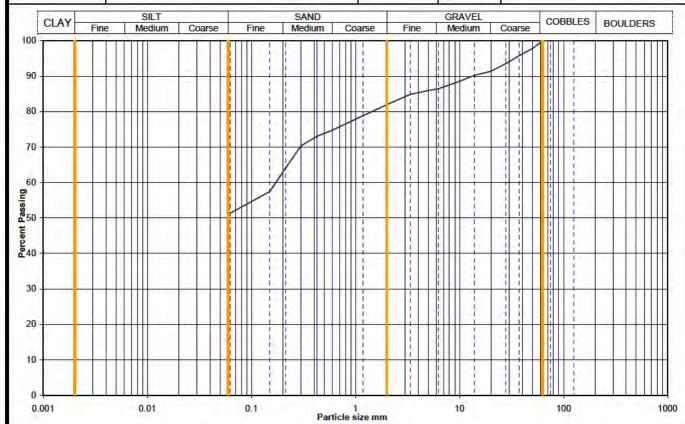




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Figure

Particle Size Distribution Analysis N5110-15 Sample Details: Hole No Project No TP301 0.50 Depth (m BGL) Project Name LONDON PARAMOUNT ENTERTAINMENT RESORT Samp No В Type ID MASTER3399 Spec Ref



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		7
50	98		
37.5	96		
28	94		
20	91		
14	90		See a
10	89		
6.3	86		
5.0	86		
3.35	85		
2.00	82		
1.18	79		
0.600	75		
0.425	73		
0.300	70	Dayman of a	ample lea
0.212	64	Dry mass of sa	ampie, kg
0.150	57	20.5	
0.063	51	20.5	

Soil description	White CHALK composed of gravelly clay.	of slightly sand	dy slightly
Preparation / Pretreatment	Sieve: natural material		
Remarks			7
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
Proportions	Gravel	18	18
	Sand	31	31
*<60mm values to aid description only	Silt	silt+clay =	, -
description of the	Clay	51	51

Uniformity Coefficient	D ₆₀ / D ₁₀	Not applicable

Test Method	BS 1377 : Part 2 : 1990		
	Sieving	9.2 wet sieve	
	Sedimentation	none	

QA Ref

SLR 2,9 Rev 88 Aug 11





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Figure

PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

DESCRIPTION

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

LONDON PARAMOUNT ENTERTAINMENT RESORT

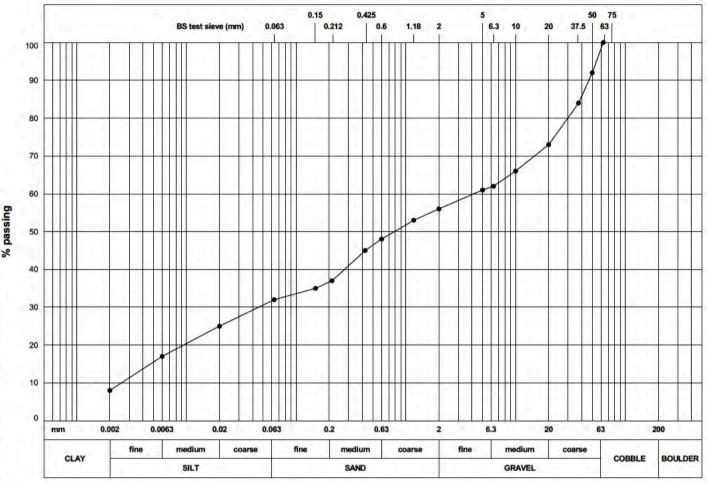
Off white mottled brownish grey silty very sandy GRAVEL

TP301 BH/TP No.

SAMPLE No./TYPE 14B

SAMPLE DEPTH (m) 2.40

SPECIMEN DEPTH (m) 2.40



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% fner
CLAY	8 24	150		5	61	20	25
SILT & CLAY SAND	32 24	75		2	56	6	17
GRAVEL COBBLE & BOULDER	42 2	63	100	1.18	53	2	8
test method(s)	9.2# & 9.4	50	92	0.6	48		
		37.5	84	0.425	45		
est method: 9.2 wet s ev ng		20	73	0.212	37		
9.3 drysevng		10	66	0.15	35		
9.4 sed mentat on by p pette9.5 sed mentat on by hydron		6.3	62	0.063	32		

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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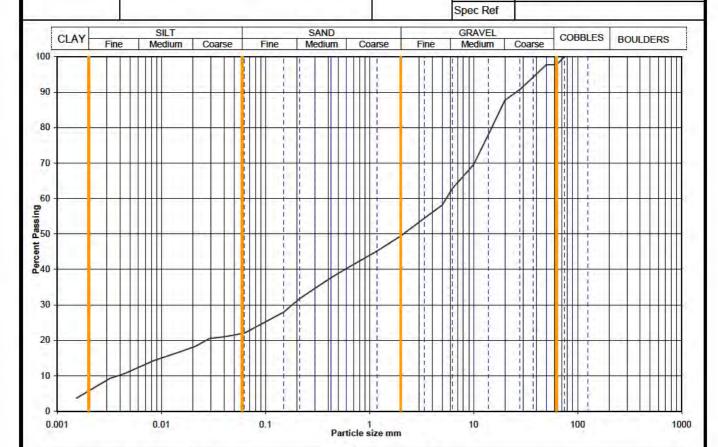
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Particle Size Distribution Analysis Sample Details: Hole No TP302 1.50 Depth (m BGL) LONDON PARAMOUNT ENTERTAINMENT Samp No В Type MASTER3249

ID



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	22
90	100	0.0404	21
75	100	0.0289	20
63	98	0.0214	18
50	98	0.0156	17
37.5	94	0.0084	14
28	91	0.0045	11
20	88	0.0032	9
14	78	0.0015	4
10	69		
6.3	63		
5.0	58		
3.35	54		
2.00	49		
1.18	45	Doctiolo donoit	Malm2
0.600	40	Particle densit	y, ivig/m3
0.425	38	2.65 a	ssumed
0.300	35	Dayman of a	amala ka
0.212	32	Dry mass of sa	ampie, kg
0.150	28	446	
0.063	22	14.8	

N5110-15

RESORT

Project No

Project Name

Soil description	Grey very sandy silty GRA\	/EL.	
Preparation / Pretreatment	Sieve: natural material H	ydro: as BS	1377
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	2	0
- 40 CO - 170 A			
Proportions	Gravel	49	50
	Sand	49 28	50 29
Proportions *<60mm values to aid description only	Sand	1	

Uniformity Coefficient	D ₆₀ / D ₁₀	1434	

	BS 1377 : Part 2 : 1990				
Test Method	Sieving	9.2 wet sieve			
Secretary and the second	Sedimentation	9.5 hydrometer			

QA Ref

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Figure

PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE

LONDON PARAMOUNT ENTERTAINMENT RESORT

Off white slightly gravelly slightly sandy SILT DESCRIPTION

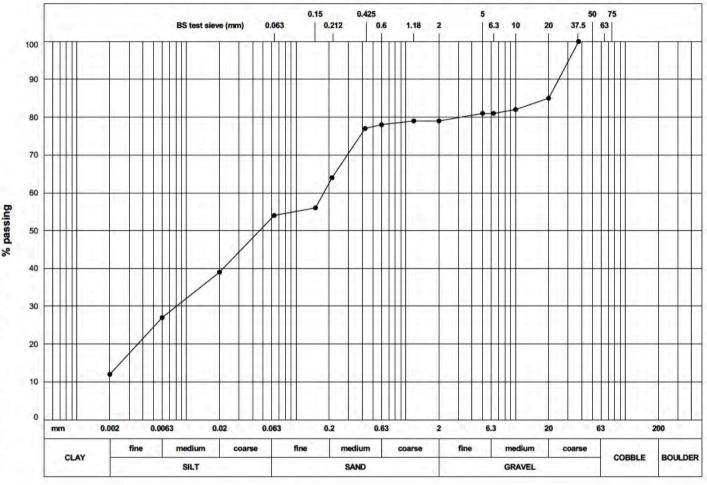


BH/TP No. **TP302**

SAMPLE No./TYPE 19B

SAMPLE DEPTH (m) 3.50

SPECIMEN DEPTH (m) 3.50



% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (µm)	% fner
12	100		1.0			
42	150		5	81	20	39
54 25	75		2	79	6	27
21 0	63		1.18	79	2	12
9 2#89 4	50		0.6	78		
0.2//00.4	37.5	100	0.425	77		
	20	85	0.212	64		
	10	82	0.15	56		
	6.3	81	0.063	54		
	12 42 54 25 21	% fraction (mm) 12 42 150 54 25 21 0 63 50 9.2#&9.4 37.5 20 10	% fraction (mm) passing 12 42 150 54 25 21 0 63 50 9.2#&9.4 37.5 100 20 85 10 82	% fraction (mm) passing (mm) 12 42 150 5 54 75 2 21 63 1.18 0 50 0.6 9.2#&9.4 37.5 100 0.425 20 85 0.212 10 82 0.15	% fraction (mm) passing (mm) passing 12 42 150 5 81 54 75 2 79 21 63 1.18 79 9.2#&9.4 50 0.6 78 9.2#&9.4 37.5 100 0.425 77 20 85 0.212 64 10 82 0.15 56	% fraction (mm) passing (mm) passing (μm) 12 42 150 5 81 20 54 75 2 79 6 21 63 1.18 79 2 9.2#&9.4 50 0.6 78 9.2#&9.4 37.5 100 0.425 77 20 85 0.212 64 10 82 0.15 56

ren	າລເ	rks	•
			•

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

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CLIENT LONDON RESORT COMPANY HOLDINGS LTD

TP701 BH/TP No.

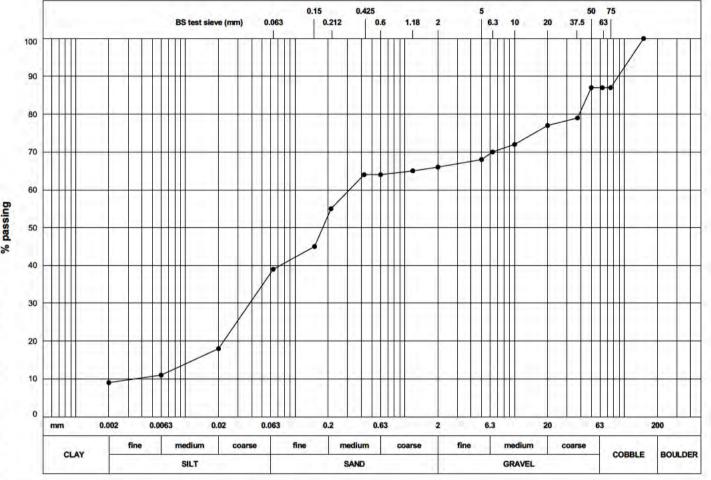
SAMPLE No./TYPE LONDON PARAMOUNT ENTERTAINMENT RESORT

> SAMPLE DEPTH (m) 1.50

8**B**

DESCRIPTION Brown slightly sandy slightly gravelly SILT with medium SPECIMEN DEPTH (m) 1.50

cobble content



% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (µm)	% f ner
9	150	100	5	68	20	18
	100	100				10
27	75	87	2	66	6	11
21 13	63	87	1.18	65	2	9
9.2 & 9.4	50	87	0.6	64		
2.43	37.5	79	0.425	64		
	20	77	0.212	55		
	10	72	0.15	45		
eter	6.3	70	0.063	39		
	9 30 39 27 21 13	9 30 150 39 27 75 21 63 13 50 9.2 & 9.4 37.5 20 10 6.3	% fract on (mm) pass ng 9 30 150 100 39 27 75 87 21 63 87 9.2 & 9.4 50 87 20 77 10 72 6.3 70	% fract on (mm) pass ng (mm) 9 30 150 100 5 39 27 75 87 2 21 63 87 1.18 13 50 87 0.6 9.2 & 9.4 37.5 79 0.425 20 77 0.212 10 72 0.15 6.3 70 0.063	% fract on (mm) pass ng (mm) pass ng 9 30 150 100 5 68 39 75 87 2 66 21 63 87 1.18 65 13 50 87 0.6 64 9.2 & 9.4 37.5 79 0.425 64 20 77 0.212 55 10 72 0.15 45 6.3 70 0.063 39	% fract on (mm) pass ng (mm) pass ng (μm) 9 30 150 100 5 68 20 39 27 75 87 2 66 6 21 63 87 1.18 65 2 13 50 87 0.6 64 9.2 & 9.4 37.5 79 0.425 64 20 77 0.212 55 10 72 0.15 45 6.3 70 0.063 39

denotes samp e tested is smaller than that which is recommended in accordance with BS1377

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

DESCRIPTION

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

LONDON PARAMOUNT ENTERTAINMENT RESORT

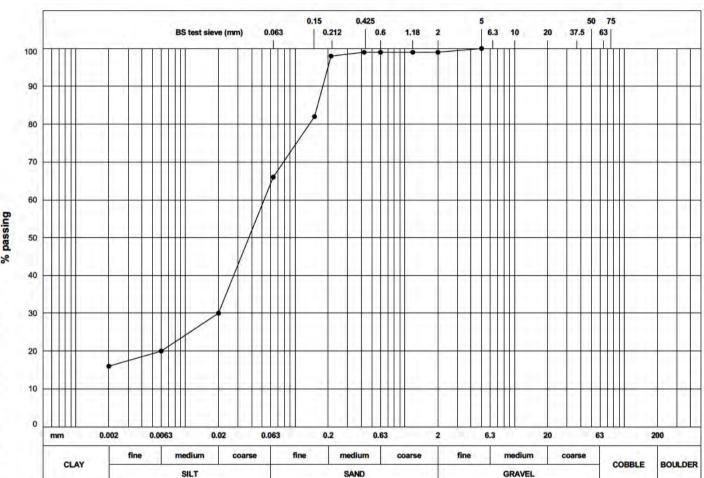
Light brown slightly sandy slightly gravelly SILT

TP701 BH/TP No.

SAMPLE No./TYPE 20B

SAMPLE DEPTH (m) 3.20

SPECIMEN DEPTH (m) 3.20



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY	16	3,500		1000	2.2	11.5	- 22
SILT	50	150		5	100	20	30
SILT & CLAY	66	75		2	00		20
SAND	33	75		2	99	6	20
GRAVEL	1	63		1.18	99	2	16
COBBLE & BOULDER	0	00		1.10	55	-	10
-1-1-11	11001	50		0.6	99		
test method(s)	9.2 & 9.4	37.5		0.425	99		
test method:		3.00				11	
		20		0.212	98		
9.2 wet seving							
9.3 dry s ev ng		10		0.15	82		
9.4 sed mentat on by p pette	è -			0.000	00		
9.5 sed mentat on by hydron	neter	6.3		0.063	66		

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE

LONDON PARAMOUNT ENTERTAINMENT RESORT

DESCRIPTION Brown slightly sandy slightly gravelly silty CLAY

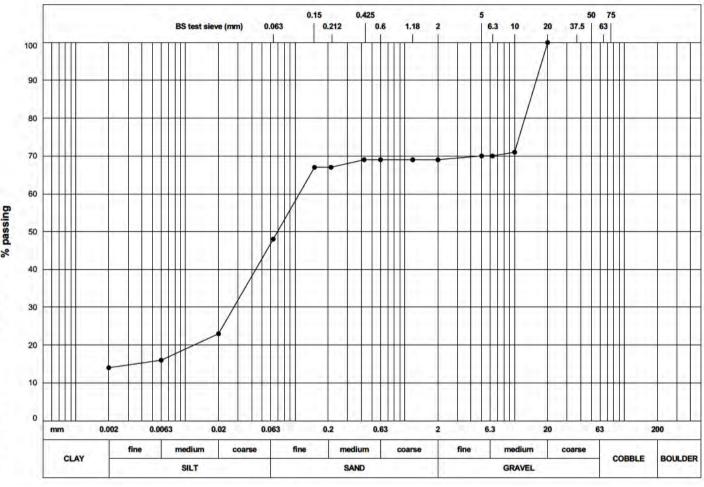


TP702 BH/TP No.

SAMPLE No./TYPE **7B**

SAMPLE DEPTH (m) 1.50

SPECIMEN DEPTH (m) 1.50



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (µm)	% fner
CLAY	14					11.5	- 4
SILT	34	150		5	70	20	23
SILT & CLAY SAND	48 21	75		2	69	6	16
GRAVEL COBBLE & BOULDER	31 0	63		1.18	69	2	14
test method(s)	9.2 & 9.4	50		0.6	69		
test metriod(s)	9.2 & 9.4	37.5		0.425	69	4	
test method:		20	100	0.212	67		
9.2 wetsevng 9.3 drysevng		10	71	0.15	67		
9.4 sed mentat on by p pette 9.5 sed mentat on by hydron		6.3	70	0.063	48		

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BS.1377: Part 2: 1990: 9

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DESCRIPTION

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LONDON PARAMOUNT ENTERTAINMENT RESORT

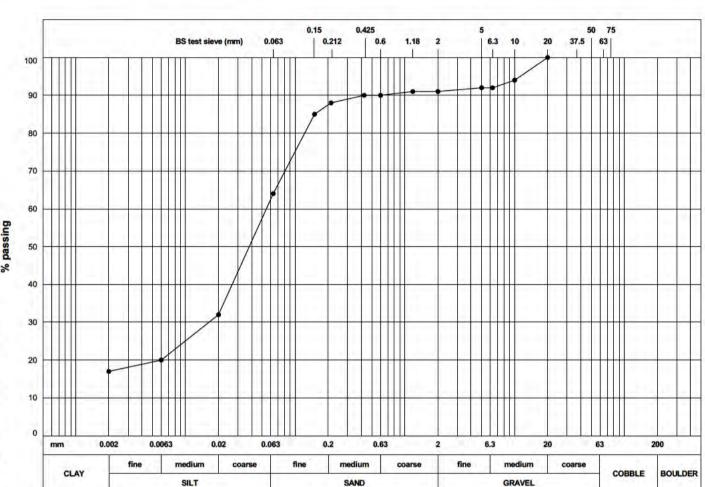
Brown slightly gravelly sandy silty CLAY

TP702 BH/TP No.

SAMPLE No./TYPE 13B

SAMPLE DEPTH (m) 2.50

SPECIMEN DEPTH (m) 2.50



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (μm)	% f ner
CLAY	17	1000		1 27		11.50.5111	100
SILT	47	150		5	92	20	32
SILT & CLAY	64	75		2	91	6	20
SAND	27	/5		2	91	6	20
GRAVEL	9	63		1.18	91	2	17
COBBLE & BOULDER	0			1.10	01	5	10
test method(s)	9.2 &9.4	50		0.6	90		
cost moulou(o)	5.E GO.4	37.5		0.425	90		
test method:		20	100	0.212	88		
9.2 wetsevng		20	100	0.212	00		
9.3 drysevng		10	94	0.15	85		
9.4 sed mentat on by p pette		6.3	92	0.063	64		
9.5 sed mentat on by hydron	neter	0.3	92	0.003	04		

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PARTICLE SIZE DISTRIBUTION

BS.1377: Part 2: 1990: 9

SITE

DESCRIPTION

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

LONDON PARAMOUNT ENTERTAINMENT RESORT

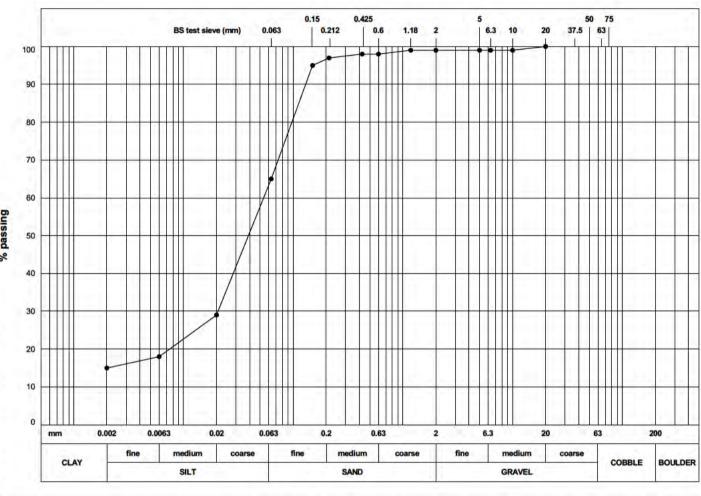
Brown slightly sandy slightly gravelly silty CLAY

BH/TP No. TP702

SAMPLE No./TYPE 20B

SAMPLE DEPTH (m) 3.40

SPECIMEN DEPTH (m) 3.40



so type	% fract on	BS test s eve (mm)	% pass ng	BS test s eve (mm)	% pass ng	part c e s ze (µm)	% f ner
CLAY	15	450			99		
SILT	50	150		5	99	20	29
SILT & CLAY	65	75		2	99	6	18
SAND	34	75		2	99	6	10
GRAVEL	1	63		1.18	99	2	15
COBBLE & BOULDER	0	00		1.10	33	1 252	15
test method(s)	9.2 & 9.4	50		0.6	98		
tour mounday)	0.2 0.4	37.5		0.425	98	4	
test method:			400	200			
9.2 wet sev ng		20	100	0.212	97		
9.3 drysevng		10	99	0.15	95		
9.4 sed mentat on by p pette		6.3	99	0.063	65		
9.5 sed mentat on by hydrom	eter	0.3	99	0.003	03		

remarks:

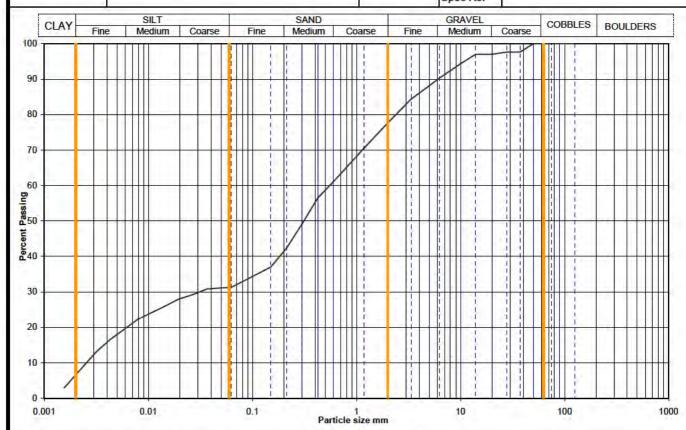
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Sievin	Sieving		ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	31
90	100	0.0369	31
75	100	0.0270	29
63	100	0.0196	28
50	100	0.0144	26
37.5	98	0.0079	22
28	98	0.0043	17
20	97	0.0032	13
14	97	0.0015	3
10	94		
6.3	90		
5.0	88		
3.35	84		
2.00	78		
1.18	70	Dodialo de	Malaza
0.600	61	Particle densit	y, ivig/m3
0.425	56	2.65 a	ssumed
0.300	49	D	
0.212	42	Dry mass of sa	ampie, kg
0.150	37	4.0	
0.063	31	4.6	

Soil description	Brown very gravelly SAND.		
Preparation / Pretreatment	Sieve: natural material H	ydro: as BS	1377
Remarks			- T
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
	Central	22	22
Proportions	Gravel		22
	Sand	46	46
*<60mm values to aid description only	Sand		777

Uniformity Coefficient	D ₆₀ / D ₁₀	218
	00 10	

	BS 1377 : Part 2 : 1990			
Test Method	Sieving	9.2 wet sieve		
Access of the second	Sedimentation	9.5 hydrometer		

QA Ref

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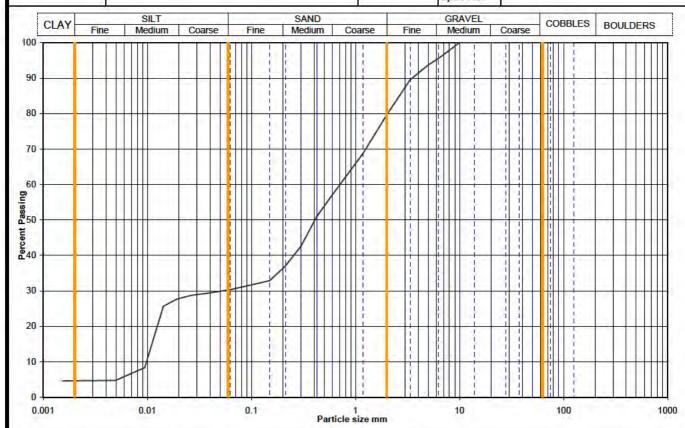




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Figure

N5110-15 Sample Details: Hole No Project No WS101 3.00 Depth (m BGL) Project Name LONDON PARAMOUNT ENTERTAINMENT RESORT Samp No 18 Х Type ID MASTER3200 Spec Ref



Sievin	g	Sediment	ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	30
90	100	0.0374	29
75	100	0.0267	29
63	100	0.0193	28
50	100	0.0142	26
37.5	100	0.0095	- 8
28	100	0.0049	5
20	100	0.0035	5
14	100	0.0015	5
10	100		
6.3	96		
5.0	.94		
3.35	90		
2.00	80		
1.18	69		
0.600	57	Particle densit	y, ivig/m3
0.425	51	2.65 assumed	
0.300	43	Dayman of a	amala ka
0.212	37	Dry mass of sa	ampie, kg
0.150	33	2.0	
0.063	30	3.6	

Soil description	Brown slightly gravelly sand	ty SILT.	
Preparation / Pretreatment	Sieve: natural material H	ydro: as BS	1377
Remarks			
		Whole	*<63mm
Commis	Cobbles / boulders	0	0
Sample	CODDICS / DOUIGOIS		U
Proportions	Gravel	20	20
Proportions	Gravel Sand	20 49	
1 - 40 - C - C - C - C - C - C - C - C - C -	Gravel Sand		20

Uniformity Coefficient	D ₆₀ / D ₁₀	72

	BS 1377 : Pa	art 2 : 1990
Test Method	Sieving	9.2 wet sieve
Cold of any and	Sedimentation	9.5 hydrometer

QA Ref

SLR 2,9 Rev 88 Aug 11





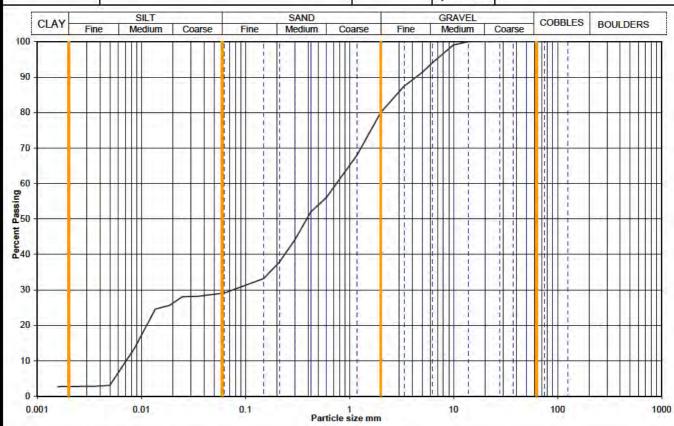
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Figure

Particle Size Distribution Analysis Sample Details: Hole No WS101 4.00 Depth (m BGL) LONDON PARAMOUNT ENTERTAINMENT

Samp No Х Type ID MASTER3202

Spec Ref



Sievin	g	Sediment	ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	29
90	100	0.0351	28
75	100	0.0249	28
63	100	0.0188	26
50	100	0.0136	25
37.5	100	0.0086	14
28	100	0.0050	3
20	100	0.0035	3
14	100	0.0016	3
10	99		
6.3	94		
5.0	91		
3.35	87		
2.00	80		
1.18	68	Particle density, Mg/m	
0.600	56	Particle densit	y, wg/ms
0.425	52	2.65 a	ssumed
0.300	44	Day many of o	omple ka
0.212	38	Dry mass of sa	апіріе, кд
0.150	33	0.9	
0.063	29	0.9	

N5110-15

RESORT

Project No

Project Name

Soil description	Brown slightly gravelly sand	dy SILT.	
Preparation / Pretreatment	Sieve: natural material H	ydro: as BS	1377
Remarks			
		Whole	*<63mm
	Cobbles / boulders	0	0
Sample	Copples / podicers		
Sample Proportions	Gravel	20	20
Proportions	Gravel Sand	20 51	20 51
	Gravel Sand		77.

Uniformity Coefficient	D ₆₀ / D ₁₀	105

	BS 1377 : Pa	art 2 : 1990
Test Method	Sieving	9.2 wet sieve
-	Sedimentation	9.5 hydrometer

QA Ref

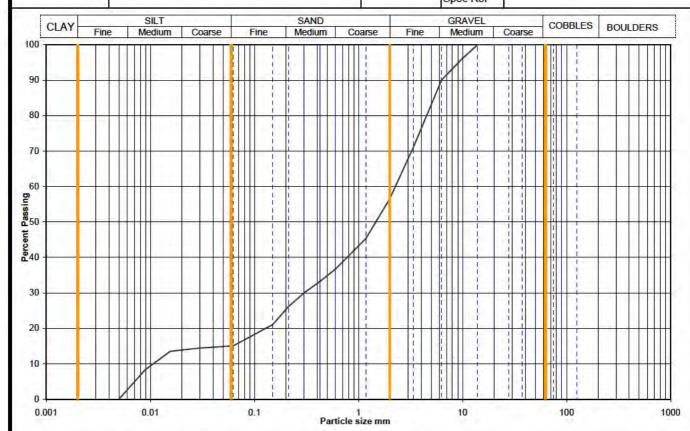
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Figure



Sievin	g	Sediment	ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	15
90	100	0.0426	15
75	100	0.0304	14
63	100	0.0217	14
50	100	0.0155	14
37.5	100	0.0090	8
28	100	0.0051	0
20	100		
14	100		
10	96		
6.3	90		
5.0	83		
3.35	71		
2.00	57		
1.18	45	Doctiolo donoit	Malm2
0.600	37	Particle density, Mg/m 2.65 assumed	
0.425	33		
0.300	30	Dayman of a	amala ka
0.212	26	Dry mass of sa	ampie, kg
0.150	21	2.5	
0.063	15	2.5	

Soil description	Brown silty SAND AND GR	AVEL.	
Preparation / Pretreatment	Sieve: natural material H	lydro: as BS	1377
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	Whole 0	*<63mm
Sample Proportions	Cobbles / boulders Gravel	10 00 00 00 00 00 00 00 00 00 00 00 00 0	
Proportions	Gravel Sand	0	0
- 40 CT - 170/4 -	Gravel Sand	0 43	0 43

₆₀ / D ₁₀ 212
¢

	BS 1377 : Part 2 : 1990	
Test Method	Sieving	9.2 wet sieve
Valentia II	Sedimentation	9.5 hydrometer

QA Ref

SLR 2,9 Rev 88 Aug 11

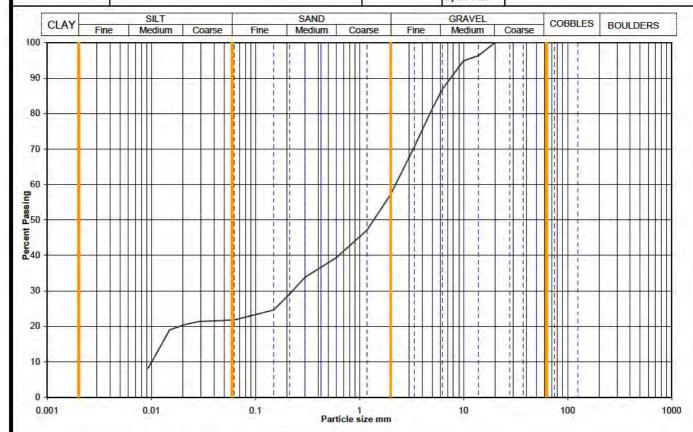




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Figure

N5110-15 Sample Details: Hole No Project No WS102 2.00 Depth (m BGL) Project Name LONDON PARAMOUNT ENTERTAINMENT RESORT Samp No Х 13 Type ID MASTER3255 Spec Ref



Sieving		Sediment	ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	22
90	100	0.0400	22
75	100	0.0284	21
63	100	0.0205	20
50	100	0.0150	19
37.5	100	0.0093	8
28	100		
20	100		
14	96		See
10	95		
6.3	87		
5.0	81		-
3.35	71		
2.00	57		
1.18	47	Dortinla danait	Malm2
0.600	39	Particle densit	y, wg/ma
0.425	37	2.65 assumed	
0.300	34	Dayman of a	ample les
0.212	29	Dry mass of sa	ampie, kg
0.150	25	26	
0.063	22	3.6	

Soil description	Grey sandy gravelly SILT.		
Preparation / Pretreatment	Sieve: natural material H	lydro: as BS	1377
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
Proportions	Gravel	43	43
	Sand	35	35
*<60mm values to aid	Silt	22	22
description only	SIIL		22

Uniformity Coefficient D ₆	/ D ₁₀ 220
---------------------------------------	-----------------------

	BS 1377 : Part 2 : 1990		
Test Method	Sieving	9.2 wet sieve	
	Sedimentation	9.5 hydrometer	

QA Ref

SLR 2,9 Rev 88 Aug 11





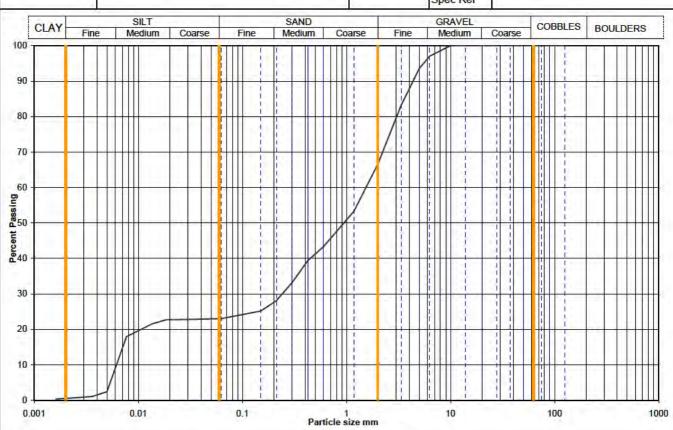
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Figure

Particle Size Distribution Analysis Sample Details: Hole No WS102 3.00 Depth (m BGL) LONDON PARAMOUNT ENTERTAINMENT Samp No Х Type

ID MASTER3257

Spec Ref



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	23
90	100	0.0373	23
75	100	0.0265	23
63	100	0.0188	23
50	100	0.0137	22
37.5	100	0.0077	18
28	100	0.0050	2
20	100	0.0036	1
14	100	0.0016	0
10	100		
6.3	97		
5.0	94		
3.35	83		
2.00	67		
1.18	53	Dodialo de it	Males
0.600	43	Particle density	y, ivig/m3
0.425	39	2.65 assumed	
0.300	33	Dayman of a	amala ka
0.212	28	Dry mass of sa	ampie, kg
0.150	25	2.0	
0.063	23	2.9	

N5110-15

RESORT

Project No

Project Name

Soil description	Light brown slightly gravelly	sandy SILT	1
Preparation / Pretreatment	Sieve: natural material H	lydro: as BS	1377
Remarks			-11
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
Proportions	Gravel	33	33
	Sand	44	44
*<60mm values to aid description only		22	44 22

Uniformity Coefficient D₆₀ / D₁₀ 250

	BS 1377 : Part 2 : 1990		
Test Method	Sieving	9.2 wet sieve	
	Sedimentation	9.5 hydrometer	

QA Ref

SLR 2,9 Rev 88 Aug 11

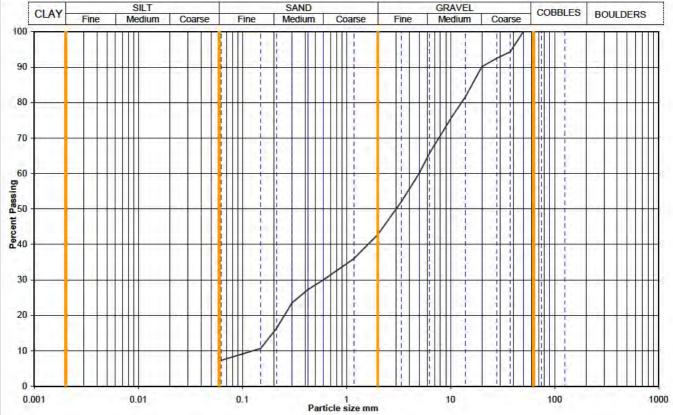




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Figure

Particle Size Distribution Analysis N5110-15 Sample Details: Hole No Project No WS202 1.00 Depth (m BGL) Project Name LONDON PARAMOUNT ENTERTAINMENT RESORT Samp No В Type ID MASTER3261 Spec Ref SILT GRAVEL SAND CLAY BOULDERS Medium Coarse Fine Medium Coarse Fine Medium



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		-
37.5	94		
28	93		
20	90		
14	82		See a
10	75		
6.3	66		
5.0	60		
3.35	52		
2.00	43		
1.18	36		
0.600	30		
0.425	27		
0.300	24	Dayman of a	amala ka
0.212	16	Dry mass of sa	ampie, kg
0.150	11	2.0	
0.063	7	2.0	

Soil description	Brown very sandy silty GR	AVEL.	
Preparation / Pretreatment	Sieve: natural material		
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
Proportions	Gravel	57	57
	Sand	35	35
*<60mm values to aid description only	Silt	silt+clay =	

Uniformity Coefficient	D ₆₀ / D ₁₀	39

	BS 1377 : Part 2 : 1990	
Test Method	Sieving	9.2 wet sieve
	Sedimentation	none

QA Ref

SLR 2,9 Rev 88 Aug 11

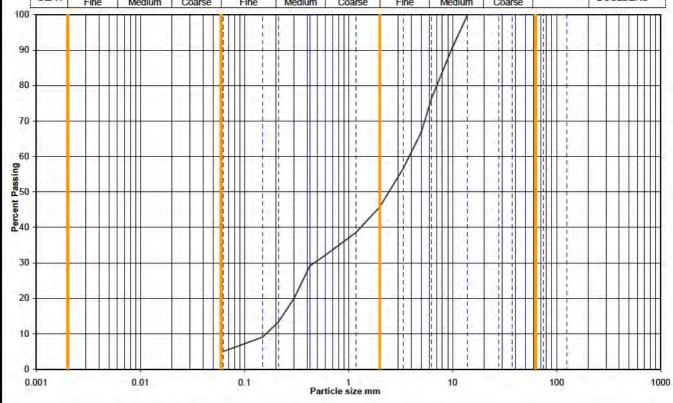




Printed:07/09/2015 12:37

Figure

Particle Size Distribution Analysis N5110-15 Sample Details: Hole No Project No WS202 3.40 Depth (m BGL) Project Name LONDON PARAMOUNT ENTERTAINMENT RESORT Samp No 18 Х Type ID MASTER3265 Spec Ref SILT GRAVEL SAND CLAY BOULDERS Medium Coarse Fine Medium Coarse Fine Medium 100 90 80 70



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		2
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	91		
6.3	76		
5.0	67		
3.35	57		
2.00	46		
1.18	39		
0.600	32		
0.425	29		
0.300	20	Dayman -f -	ample I
0.212	13	Dry mass of sa	ampie, kg
0.150	9	0.7	
0.063	5	0.7	

Soil description	Grey sandy gravelly SILT.		
Preparation / Pretreatment	Sieve: natural material		
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
Proportions	Gravel	54	54
	Sand	41	41
*<60mm values to aid description only		silt+clay =	

Uniformity Coefficient	D ₆₀ / D ₁₀	24

	BS 1377 : Pa	art 2 : 1990
Test Method	Sieving	9.2 wet sieve
	Sedimentation	none

QA Ref

SLR 2,9 Rev 88 Aug 11





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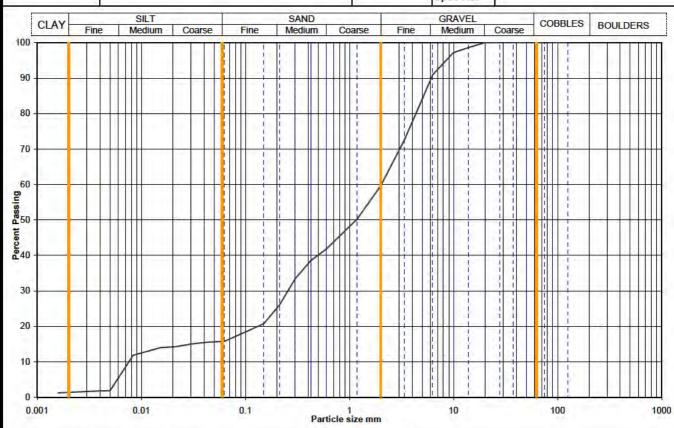
Figure

Particle Size Distribution Analysis Sample Details: Hole No WS202 6.00 Depth (m BGL) LONDON PARAMOUNT ENTERTAINMENT Samp No Х Type

ID

Spec Ref

MASTER3268



Sievin	g	Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	16
90	100	0.0418	15
75	100	0.0299	15
63	100	0.0216	14
50	100	0.0154	14
37.5	100	0.0083	12
28	100	0.0050	2
20	100	0.0036	2
14	99	0.0016	1
10	97		
6.3	91		
5.0	84		
3.35	72		
2.00	60		
1.18	50	Destrict descrip	
0.600	42	Particle densit	y, ivig/m3
0.425	39	2.65 a	ssumed
0.300	33	Daymana -f -	amala I
0.212	26	Dry mass of sa	ampie, kg
0.150	21	0.0	
0.063	16	0.3	

N5110-15

RESORT

Project No

Project Name

Soil description	Brown very gravelly silty SA	AND.	
Preparation / Pretreatment	Sieve: natural material H	lydro: as BS	1377
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	Whole 0	*<63mm 0
Sample Proportions	Cobbles / boulders Gravel		
Proportions	Gravel Sand	0	0
	Gravel Sand	0 40	0 40

Uniformity Coefficient	D ₆₀ / D ₁₀	267	

	BS 1377 : Pa	art 2 : 1990
Test Method	Sieving	9.2 wet sieve
-	Sedimentation	9.5 hydrometer

QA Ref

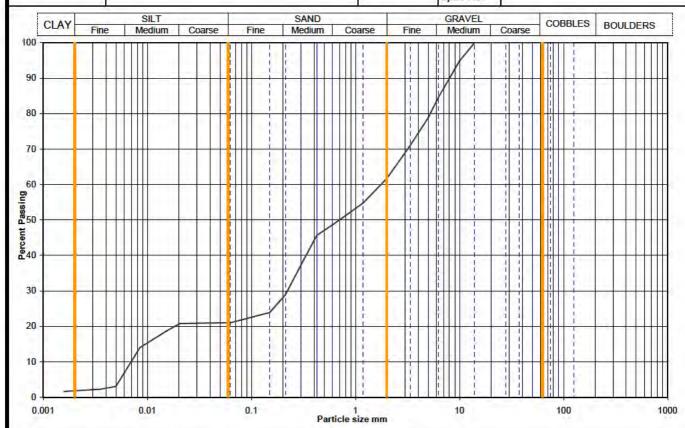
SLR 2,9 Rev 88 Aug 11





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Figure



Sievin	g	Sediment	ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	21
90	100	0.0407	21
75	100	0.0289	21
63	100	0.0204	21
50	100	0.0151	19
37.5	100	0.0085	14
28	100	0.0050	3
20	100	0.0035	2
14	100	0.0016	2
10	95		
6.3	85		
5.0	79		
3.35	71		
2.00	62		
1.18	55	Destroy descrip	
0.600	49	Particle densit	y, Mg/m3
0.425	46	2.65 a	ssumed
0.300	37	D	Carrier Man
0.212	29	Dry mass of sa	ampie, kg
0.150	24	5.0	
0.063	21	5.0	

Soil description	Light brown and cream san	dy gravelly S	SILT.
Preparation / Pretreatment	Sieve: natural material H	ydro: as BS	1377
Remarks			371
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
Proportions	Gravel	38	38
Toportions	Oluvoi		- 00
	Sand	41	41
*<60mm values to aid description only	Sand	41 19	1000

Uniformity Coefficient	D ₆₀ / D ₁₀	252	

	BS 1377 : Part 2 : 1990	
Test Method	Sieving	9.2 wet sieve
	Sedimentation	9.5 hydrometer

QA Ref

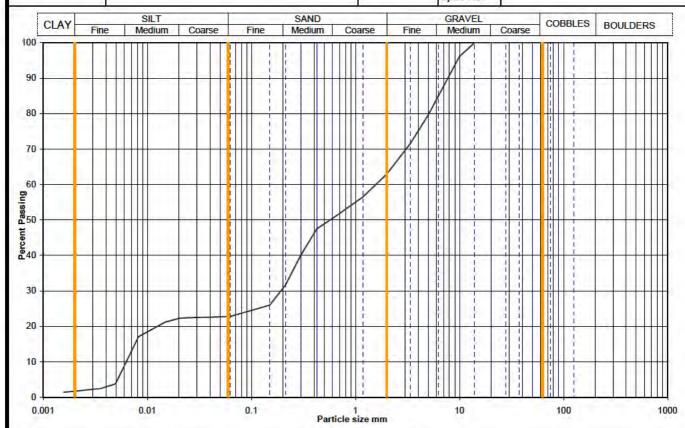
SLR 2,9 Rev 88 Aug 11





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Figure



Sievin	g	Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	23
90	100	0.0408	23
75	100	0.0289	23
63	100	0.0205	22
50	100	0.0148	21
37.5	100	0.0082	17
28	100	0.0049	4
20	100	0.0035	2
14	100	0.0016	1
10	96		
6.3	85		
5.0	80		
3.35	71		
2.00	63		
1.18	56	Doctiolo donoit	Malm2
0.600	50	Particle densit	y, ivig/m3
0.425	48	2.65 a	ssumed
0.300	40	Dayman of a	amala ka
0.212	32	Dry mass of sa	ampie, kg
0.150	26	0.0	
0.063	23	2.3	

Soil description	Brown sandy gravelly SILT.		
Preparation / Pretreatment	Sieve: natural material H	ydro: as BS	1377
Remarks			371
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
Dunan - Minar	Carrott	37	37
Proportions	Gravel	0,	31
	Sand	40	40
*<60mm values to aid description only	Sand	٠.	

251

	BS 1377 : Pa	art 2 : 1990
Test Method	Sieving	9.2 wet sieve
	Sedimentation	9.5 hydrometer

QA Ref

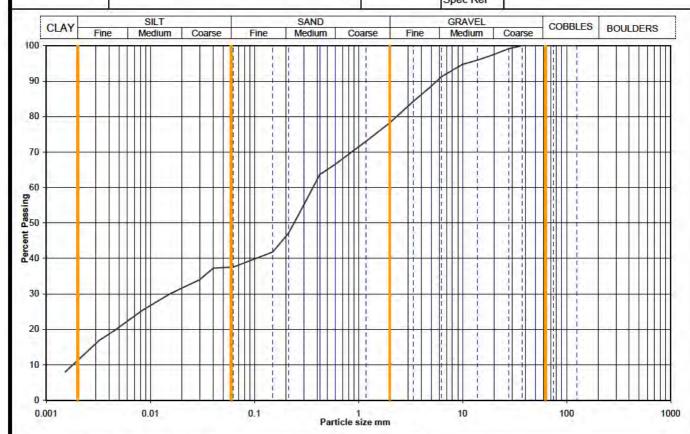
SLR 2,9 Rev 88 Aug 11





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Figure



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	38
90	100	0.0403	37
75	100	0.0297	34
63	100	0.0215	32
50	100	0.0155	30
37.5	100	0.0084	25
28	99	0.0044	20
20	98	0.0032	17
14	96	0.0015	8
10	95		
6.3	91		
5.0	89		
3.35	84		
2.00	78		
1.18	73	Doctiolo donoit	. Malm2
0.600	67	Particle densit	y, wg/m3
0.425	64	2.65 a	ssumed
0.300	55	Dayman of a	ample ka
0.212	47	Dry mass of sa	ampie, kg
0.150	42	4.5	
0.063	38	4.5	

Soil description	Brown slightly gravelly sand	dy CLAY.	
Preparation / Pretreatment	Sieve: natural material H	lydro: as BS	1377
Remarks			3
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
Proportions	Gravel	22	22
	Sand	41	41
Delication of the second			
*<60mm values to aid description only	Silt	26	26

Uniformity Coefficient	D ₆₀ / D ₁₀	202	

	BS 1377 : Pa	art 2 : 1990
Test Method	Sieving	9.2 wet sieve
3000	Sedimentation	9.5 hydrometer

QA Ref

SLR 2,9 Rev 88 Aug 11

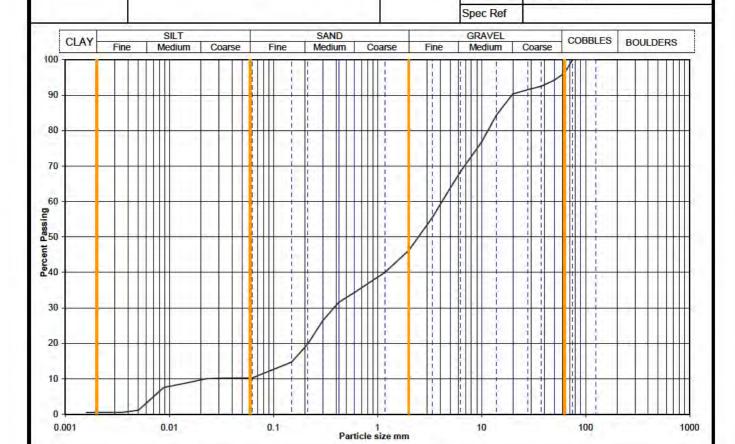




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Figure

Particle Size Distribution Analysis N5110-15 LONDON PARAMOUNT ENTERTAINMENT RESORT Samp No 8 Type X ID MASTER3276



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size % mm Pass	
125	100	0.0630	10
90	100	0.0452	10
75	100	0.0320	10
63	96	0.0227	10
50	94	0.0164	9
37.5	93	0.0088	8
28	92	0.0051	1
20	90	0.0036	1
14	84	0.0016 1	
10	77		
6.3	68		
5.0	64		
3.35	55		
2.00	46		
1.18	40	Dortigle descrit	Malma
0.600	34	Particle densit	y, ivig/m3
0.425	32	2.65 assumed	
0.300	26	Dayman of a	ample les
0.212	20	Dry mass of sa	ampie, kg
0.150	15	4.0	
0.063	10	4.6	

Soil description	Light brown sandy gravelly	SILT.	
Preparation / Pretreatment	Sieve: natural material H	lydro: as BS	1377
Remarks			. T.
		Whole	*<63mm
Sample	Cobbles / boulders	4	0
Proportions	Gravel	50	52
	Sand	36	38
*<60mm values to aid			
*<60mm values to aid description only	Silt	10	10

Uniformity Coefficient	D ₆₀ / D ₁₀	185
Uniformity Coefficient	D ₆₀ / D ₁₀	185

	BS 1377 : Pa	art 2 : 1990
Test Method	Sieving	9.2 wet sieve
200 To 100 To 10	Sedimentation	9.5 hydrometer

QA Ref

Project No

Project Name

SLR 2,9 Rev 88 Aug 11

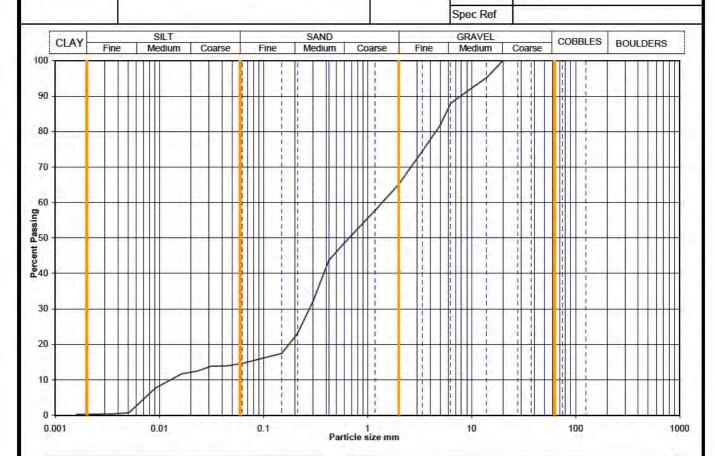




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Figure

Particle Size Distribution Analysis N5110-15 LONDON PARAMOUNT ENTERTAINMENT RESORT Samp No 12 Type X ID MASTER3278



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size % Pass	
125	100	0.0630	15
90	100	0.0445	14
75	100	0.0315	14
63	100	0.0230	12
50	100	0.0165	12
37.5	100	0.0092	- 8
28	100	0.0051	1
20	100	0.0036	0
14	95	0.0016 0	
10	92		
6.3	88		
5.0	82		
3.35	74		
2.00	65		
1.18	58	Dortigle descrit	Malm2
0.600	49	Particle density	y, ivig/m3
0.425	44	2.65 assumed	
0.300	32	Daymana of a	ample les
0.212	23	Dry mass of sa	ampie, kg
0.150	17	0.0	
0.063	15	8.0	

Soil description	Brown very gravelly silty SA	AND.	
Preparation / Pretreatment	Sieve: natural material H	ydro: as BS	1377
Remarks			371
		T	
		Whole	*<63mm
Sample	Cobbles / boulders	Whole 0	*<63mm 0
Sample Proportions	Cobbles / boulders Gravel		
Proportions	Gravel Sand	0	0
- 40 CT - 10 C	Gravel Sand	0 35	0 35

Uniformity Coefficient	D ₆₀ / D ₁₀	108
Telegraph of the property of t		

	BS 1377 : Part 2 : 1990	
Test Method	Sieving	9.2 wet sieve
-	Sedimentation	9.5 hydrometer

QA Ref

Project No

Project Name

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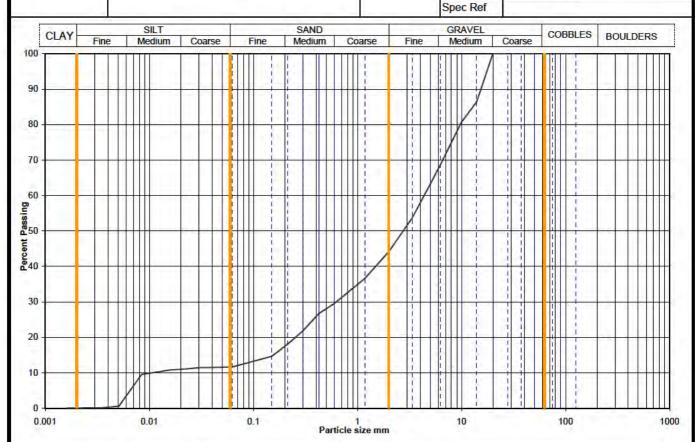
Figure

Particle Size Distribution Analysis | Sample Details: | Hole No | WS204 |

Project Name LONDON PARAMOUNT ENTERTAINMENT RESORT

N5110-15

Project No



Sievin	g	Sediment	ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	12
90	100	0.0438	12
75	100	0.0310	11
63	100	0.0222	11
50	100	0.0158	11
37.5	100	0.0084	10
28	100	0.0051	1
20	100	0.0036	0
14	86	0.0016	0
10	81		
6.3	69		
5.0	63		
3.35	54		
2.00	44		
1.18	37	Destrict descrip	
0.600	30	Particle densit	y, ivig/m3
0.425	27	2.65 assumed	
0.300	22	Dayman of a	amala ka
0.212	18	Dry mass of sa	ampie, kg
0.150	15	6.0	
0.063	12	6.3	

Soil description	Brown very sandy silty GRA	AVEL.	
Preparation / Pretreatment	Sieve: natural material H	lydro: as BS	1377
Remarks			, T.
		1 000	
		Whole	*<63mm
Sample	Cobbles / boulders	0 vynole	*<63mm 0
Sample Proportions	Cobbles / boulders Gravel		2000
Proportions	Gravel Sand	0	0
- 40 CO 4000 4 H	Gravel Sand	0 56	0 56

Uniformity Coefficient	D ₆₀ / D ₁₀	406

	BS 1377 : Part 2 : 1990	
Test Method	Sieving	9.2 wet sieve
-	Sedimentation	9.5 hydrometer

QA Ref

SLR 2,9 Rev 88 Aug 11





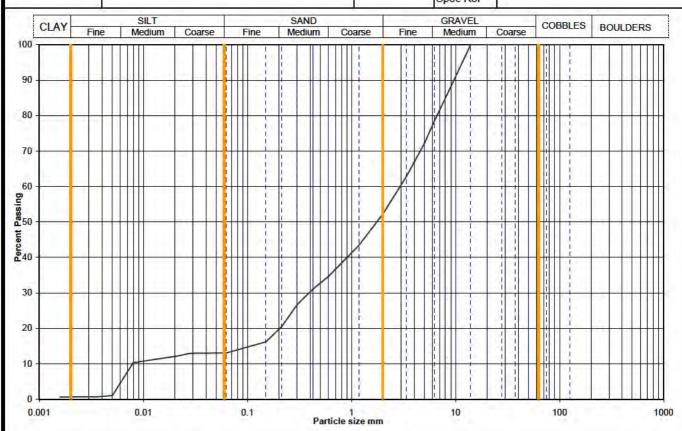
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Figure

Particle Size Distribution Analysis Sample Details: Hole No WS204 2.00 Depth (m BGL) LONDON PARAMOUNT ENTERTAINMENT Samp No Х Type

ID

MASTER3206 Spec Ref



Sievin	g	Sediment	ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	13
90	100	0.0400	13
75	100	0.0283	13
63	100	0.0206	12
50	100	0.0149	11
37.5	100	0.0080	10
28	100	0.0051	1
20	100	0.0036	1
14	100	0.0016	1
10	91		
6.3	79		
5.0	72		
3.35	63		
2.00	52		
1.18	43	Doctiolo donoit	Malm2
0.600	35	Particle density, Mg/m3 2.65 assumed	
0.425	31		
0.300	27	Dayman of a	amala ka
0.212	20	Dry mass of sa	ampie, kg
0.150	16	2.4	
0.063	13	3.4	

N5110-15

RESORT

Project No

Project Name

Soil description	Brownish sandy gravelly SI	LT.	
Preparation / Pretreatment	Sieve: natural material H	lydro: as BS	1377
Remarks			7
		Whole	*<63mm
Sample	Cobbles / boulders	Whole 0	*<63mm 0
Sample Proportions	Cobbles / boulders Gravel		
Proportions	Gravel Sand	0	0
- 40 CT - 170 K - 1	Gravel Sand	0 48	0 48

Uniformity Coefficient	D ₆₀ / D ₁₀	372	

	BS 1377 : Pa	art 2 : 1990
Test Method	Sieving	9.2 wet sieve
-	Sedimentation	9.5 hydrometer

QA Ref

SLR 2,9 Rev 88 Aug 11

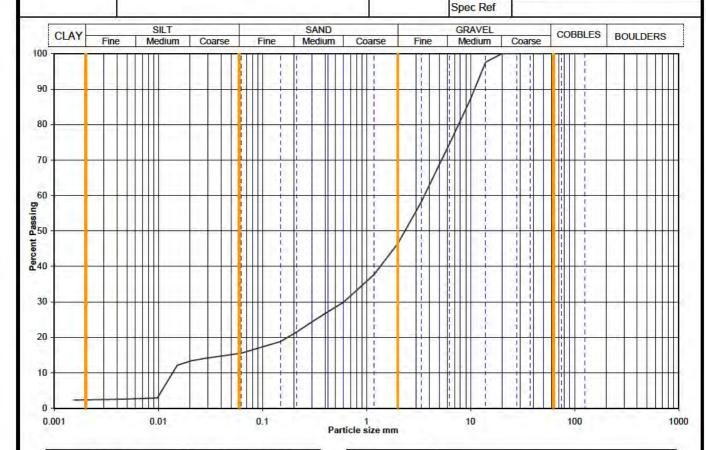




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Figure

Particle Size Distribution Analysis N5110-15 LONDON PARAMOUNT ENTERTAINMENT RESORT Samp No | 22 | Type | X | ID | MASTER3209



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	16
90	100	0.0395	15
75	100	0.0285	14
63	100	0.0207	13
50	100	0.0152	12
37.5	100	0.0098	3
28	100	0.0049	3
20	100	0.0035	2
14	98	0.0015	2
10	87		
6.3	75		
5.0	69		
3.35	58		
2.00	46		
1.18	38	Doctiolo donoit	Malm2
0.600	30	Particle densit	y, ivig/m3
0.425	27	2.65 assumed	
0.300	24	Dayman of a	amala ka
0.212	21	Dry mass of sa	ampie, kg
0.150	19	0.0	
0.063	16	0.8	

Soil description	Brown very sandy silty GRA	AVEL.	
Preparation / Pretreatment	Sieve: natural material H	ydro: as BS	1377
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
Proportions	Gravel	54	54
. repertients	0.0.0.		
	Sand	31	31
*<60mm values to aid description only	Sand	31 13	31 13

Uniformity Coefficient	D ₆₀ / D ₁₀	262	

	BS 1377 : Pa	art 2 : 1990				
Test Method	Sieving 9.2 wet siev				Sieving	9.2 wet sieve
C. 21 . 2 . 4 . 4 . 4 . 4 . 4 . 4 . 4 . 4 . 4	Sedimentation	9.5 hydrometer				

QA Ref

Project No

Project Name

SLR 2,9 Rev 88 Aug 11





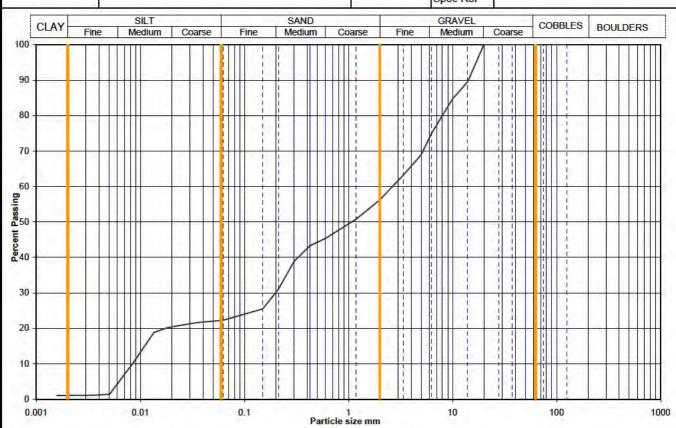
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Figure

Particle Size Distribution Analysis Sample Details: Hole No WS204 8.00 LONDON PARAMOUNT ENTERTAINMENT

Depth (m BGL) Samp No Х Type ID MASTER3213

Spec Ref



Sievin	g	Sediment	ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	22
90	100	0.0347	22
75	100	0.0252	21
63	100	0.0183	20
50	100	0.0135	19
37.5	100	0.0086	10
28	100	0.0051	1
20	100	0.0036	1
14	90	0.0016	1
10	85		
6.3	75		
5.0	69		
3.35	63		
2.00	56		
1.18	51	Doctiolo donoit	Malm2
0.600	45	Particle density, Mg/m3	
0.425	43	2.65 a	ssumed
0.300	39	Dayman of a	ample ka
0.212	31	Dry mass of sa	ampie, kg
0.150	25	0.0	
0.063	22	0.9	

N5110-15

RESORT

Project No

Project Name

Soil description	Grey slightly sandy gravelly	SILT.	
Preparation / Pretreatment	Sieve: natural material H	lydro: as BS	1377
Remarks			
		T 100 1	
		Whole	*<63mm
Sample	Cobbles / boulders	0 vvnole	*<63mm 0
Sample Proportions	Cobbles / boulders Gravel		
Proportions	Gravel Sand	0	0
- 40 CO - 170 A - 1	Gravel Sand	0 44	0 44

Uniformity Coefficient D₆₀ / D₁₀ 315

	art 2 : 1990			
Test Method	Sieving 9.2 wet sieve			
	Sedimentation	9.5 hydrometer		

QA Ref

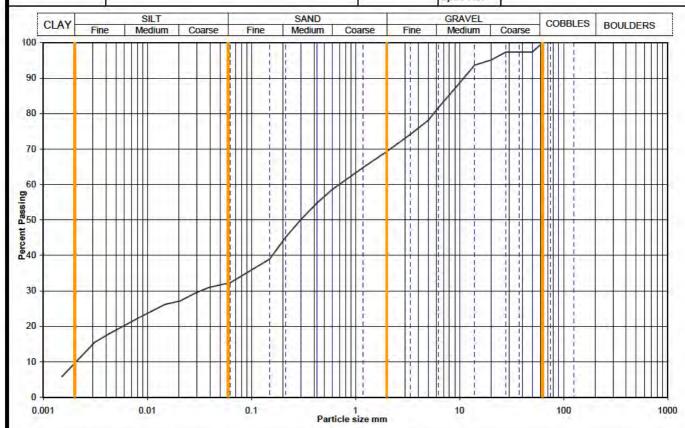
SLR 2,9 Rev 88 Aug 11





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Figure



Sievin	g	Sediment	ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	32
90	100	0.0387	31
75	100	0.0282	29
63	100	0.0206	27
50	97	0.0148	26
37.5	97	0.0081	22
28	97	0.0043	18
20	95	0.0031	15
14	94	0.0015	6
10	89		
6.3	82		
5.0	78		
3.35	74		
2.00	69		
1.18	65	Dodialo de	Maln-2
0.600	59	Particle densit	y, wg/m3
0.425	55	2.65 a	ssumed
0.300	50	Dayman -f -	ample I
0.212	45	Dry mass of sa	аптріе, кд
0.150	39	0.0	
0.063	32	6.8	

Soil description	Grey very gravelly very silty	SAND.	
Preparation / Pretreatment	Sieve: natural material H	lydro: as BS	1377
Remarks			311
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
Proportions	Gravel	31	31
	Sand	37	37
*<60mm values to aid	Silt	23	23
description only			

Uniformity Coefficient	D ₆₀ / D ₁₀	337	

	BS 1377 : Part 2 : 1990			
Test Method	Sieving 9.2 wet sieve			
-	Sedimentation	9.5 hydrometer		

QA Ref

SLR 2,9 Rev 88 Aug 11





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Figure

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP BS1377: PART 4: 1990: LIGHT COMPACTION, 2.5 kg rammer N5110-15 Sample Details: Hole No Project No 1.50 Depth (m BGL) LONDON PARAMOUNT ENTERTAINMENT Project Name RESORT Samp No Type MASTER3249 Spec Ref zero, 5% and 10% air voids 2.2 2.1 2.0 1.9 DRY DENSITY Mg/m3 1.7 1.6 1.5 1.4 8 32 12 20 24 28 16 MOISTURE CONTENT % Derived Parameters + Soil description Grey very sandy silty GRAVEL. BS 1377:part 4:1990: clause 3.4, 2.5 kg rammer in a CBR mould Test method Maximum dry density, Mg/m3 Preparation Original material was natural, single sample tested 1.58 Material > 37.5mm 6 Material < 37.5mm > 20mm 6 Optimum moisture content, % % Particle density, Mg/m3 2.65 assumed 25 Remarks **Figure QA Ref** SLD 4, 3.3/4 COMPL 1 Printed:02/09/2015 10:23 Rev 66 Aug 11 Environmental Scientifics Group

DRY DENSITY/MOISTURE CONTENT RELATIONSHIP



8**B**

BS.1377: Part 4: 1990: 3

SITE

CLIENT LONDON RESORT COMPANY HOLDINGS LTD BH/TP No. **TP701**

LONDON PARAMOUNT ENTERTAINMENT RESORT

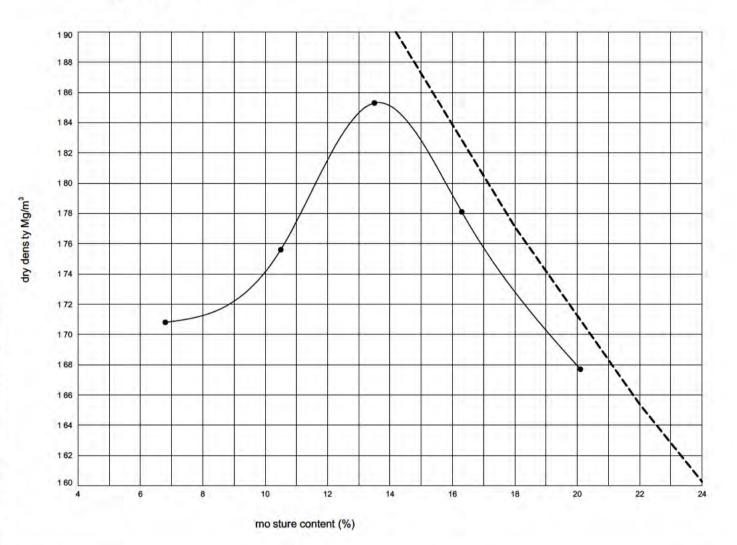
SAMPLE DEPTH (m) 1.50

DESCRIPTION Brown slightly sandy slightly gravelly SILT with medium cobble content

SPECIMEN DEPTH (m)

SAMPLE No./TYPE

1.50



preparat on procedure samp e preparat on	3.4.4.1 2.5kg dynam c compact on CBR mou d 3.2.5.1 (grad ng zone 3) C,R			
proport on reta ned on 37.5mm s eve (%) proport on reta ned on 20mm s eve (%) part c e dens ty (Mg/m³)	0	n ta mo sture content	(%)	17
	5.32	max mum dry dens ty	(Mg/m³)	1.85
	#2.60	opt mum mo sture content	(%)	14

remarks:

represents 0% a r vo ds curve

denotes part c e dens ty has been ass gned an assumed va ue

C denotes samp e has been chopped to pass 20mm s eve S denotes samp e has been shredded to pass 20mm s eve

R denotes samp e mater a has been recyc ed between/for po nts

Samp e comb ned w th 9D @1.5m

CONTRACT 30766

CHECKED SR

Geotechnical Engineering Ltd., Centurion House, Olympus Park, Quedgeley, Gloucester. GL2 4NF. Tel. 01452 527743 30766 MASTER.GPJ 19/10/2015 09:18:34

DRY DENSITY/MOISTURE CONTENT RELATIONSHIP



13B

BS.1377: Part 4: 1990: 3

CLIENT LONDON RESORT COMPANY HOLDINGS LTD BH/TP No. **TP702**

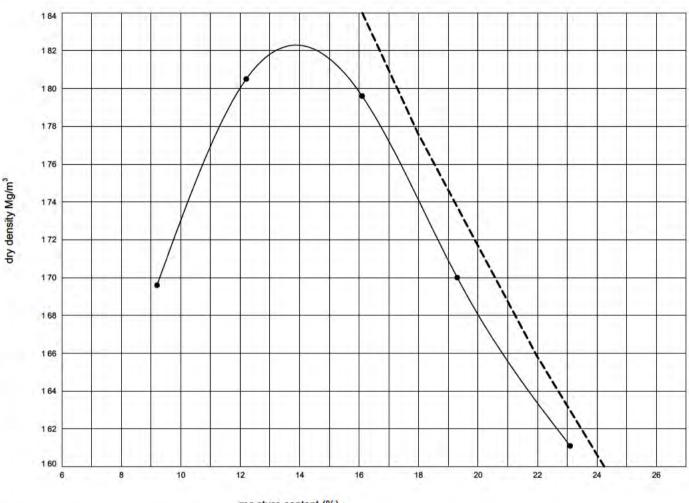
SAMPLE No./TYPE

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

SAMPLE DEPTH (m) 2.50

DESCRIPTION Brown slightly gravelly sandy silty CLAY

SPECIMEN DEPTH (m) 2.50



mo	sture	content	(%)

preparat on procedure samp e preparat on	2777	2.5kg dynam c compact on 1L mo (grad ng zone 1)	u d	
proport on retained on 37.5mm sieve (%) proport on retained on 20mm sieve (%)	0	n ta mo sture content max mum dry dens ty	(%) (Mg/m³)	18 1.82
part c e dens ty (Mg/m³)	#2.61	opt mum mo sture content	(%)	14

remarks:

represents 0% a r vo ds curve

denotes part c e dens ty has been ass gned an assumed va ue

C denotes samp e has been chopped to pass 20mm s eve S denotes samp e has been shredded to pass 20mm s eve

R denotes samp e mater a has been recycled between/for points

CONTRACT 30766

CHECKED SR

el 01452 527743 30766 MAS ER GPJ 13/10/2015 10 15 54

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CONSOLIDATION TEST

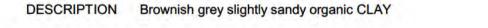
BS.1377: Part 5: 1990: 3

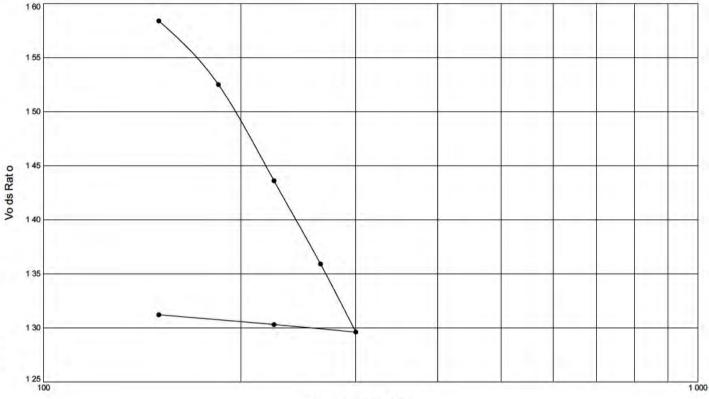
CLIENT LONDON RESORT COMPANY HOLDINGS LTD BH/TP No. **BH101**

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT SAMPLE No./TYPE **32UT** 7.20

SAMPLE DEPTH (m)

SPECIMEN DEPTH (m) 7.35





App ed Pressure (kPa)

Test and samp e deta s			Test resu ts			
spec men d ameter spec men he ght n t a mo sture content	(mm) (mm) (%)	63.32 18.83 86.4	pressure stage (kPa)	vo ds rat o	aboratory coc compress b ty (m²/MN)	eff c ents of conso dat on (m²/year)
f na mo sture content n ta bu k dens ty n ta dry dens ty n ta vo ds rat o n ta degree of saturat on part c e dens ty swe ng pressure	(%) (Mg/m³) (Mg/m³) (%) (Mg/m³) (kPa)	52.0 1.46 0.78 2.444 95 #2.70 N/A	150 185 225 265 300 225 150	1.584 1.525 1.436 1.359 1.296 1.303 1.312	1.665 0.655 0.880 0.789 0.764 0.042 0.050	0.52 0.03 0.06 0.10 0.01
P'o to P'o +100 kPa aboratory temperature method of t me f tt ng	(kPa) (°C)	21 root t me				
emarks # denotes particle dens	sity has been assign	ed an assumed value	9		CONTRACT	CHECKE

30766

SR

Geotechnical Engineering Ltd Centurion House Olympus Park Quedgeley Gloucester GL2 4NF el 01452 527743 30766 MAS ER GPJ 13/10/2015 10 1830

CONSOLIDATION TEST

BS.1377: Part 5: 1990: 3

SITE

CLIENT LONDON RESORT COMPANY HOLDINGS LTD BH/TP No. **BH101**

SAMPLE No./TYPE

SAMPLE DEPTH (m) 12.00

50UT

SPECIMEN DEPTH (m) 12.10

LONDON PARAMOUNT ENTERTAINMENT RESORT

DESCRIPTION Greyish brown slighty sandy organic CLAY

1 32 1 30 1 28 1 26 Vo ds Rato 1 22 1 20 1 18 1 16 1 12 ______ 1 000

App ed Pressure (kPa)

Test and samp e deta s			Test resu ts			
spec men d ameter spec men he ght n t a mo sture content	(mm) (mm) (%)	63.48 18.97 71.8	pressure stage (kPa)	vo ds rat o	aboratory coe compress b ty (m²/MN)	eff c ents of conso dat on (m²/year)
fina mo sture content in tai bulk density in tai dry density in tai voids ratio in tai degree of saturation particle density swelling pressure P'o to P'o +100 kPa aboratory temperature method of time fitting	(%) (Mg/m³) (Mg/m³) (%) (Mg/m³) (kPa) (kPa) (c°C)	45.0 1.48 0.86 2.129 91 #2.70 N/A	240 300 360 420 480 360 240	1.334 1.281 1.222 1.174 1.123 1.133 1.145	1.060 0.377 0.429 0.364 0.385 0.037 0.046	0.32 0.12 0.21 0.06 0.02
remarks # denotes particle dens	situ has boon assign	od on oncumed value			CONTRACT	CHECKED

30766

SR

Determination of Permeability in a Triaxial Cell (BS1377: Part 6: 1990, clause 6 - Constant Head test) N5110-15 Sample Details: Hole No. Project No BH204 Project Name Depth (m BGL) 3.30-3.75 Sample No Type LONDON PARAMOUNT ENTERTAINMENT 13 UT Spec Ref Specimen Details Soil Description Dark brown CLAY. Initial Final Mg/m³ **Bulk Density** 1.39 1.45 Specimen Type RECOMPACTED using 2.5kg effort at as received /Preparation moisture content Water Content 120.9 100.2 Mg/m³ Length 100.4 Dry density 0.63 0.72 mm Diameter Voids ratio 102.7 mm 3.20 2.66 Particle density 2.65 Mg/m³ Assumed Degree of saturation 100 100 Saturation Stage Method: 1.0 Increments of cell and back pressure 0.8 kPa Cell pressure increments 0.6 Differential Pressure 10 kPa 0.4 Final Cell Pressure kPa 410 0.2 Final pore water pressure 396 kPa Final B Value 0.96 0.0 50 100 150 350 400 450 500 Cell pressure kPa Consolidation Stage 0.0 20.0 **Drainage Condition** to one end only 텉 40.0 Cell pressure applied 420 kPa Volume change Back pressure applied kPa 350 60.0 Effective stress 70 kPa 80.0 100.0 120.0 0 20 40 60 80 100 120 140 160 180 200 Root time minutes Permeability Stage Flow inwards + Flow outwards Cell Pressure 425 kPa 3.0 **Top Pressure** kPa 350 Base Pressure 360 kPa Mean Effective Stress 70 kPa Differential Pressure 10 kPa 2.0 Hydraulic gradient F Volume of flow + Mean rate of flow 0.00167 ml/min 1.5 °C Temperature during test 24.2 1.0 PERMEABILITY, kv 0.5 -10 at 20°C) 3.0 x 10 m/s 0.0 200 400 600 800 1000 1200 1400 1600 1800 2000

Notes

Ref SLR6.6 Rev 1 Aug 11





Time minutes

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Figure

sheet 1 of 1

TXLP

BS1377 : Part 6 : Clause 6 :1990

Determination of Permeability in a Triaxial Cell

Borehole: BH204 Sample No: 21

Depth: 5.20 - 5.65

Description:

Soft to firm grey CLAY with rare fine sand and some patches of black

organic rich clay.

SPECIMEN	DETAILS
----------	---------

Depth within original sample 30mm from top
Orientation within original Vertical
Specimen preparation Undisturbed

TEST DETAILS

IESI DETAILS			
Cell Preparation		Performed in accordance with Clause 3.5	
		INITIAL	FINAL
Diameter	mm	100.9	96.2
Height	mm	100.3	95.9
Moisture Content	%	65	50
Bulk Density	Mg/m³	1.60	1.68
Dry Density	Mg/m³	0.97	1.12

SATURATION STAGE

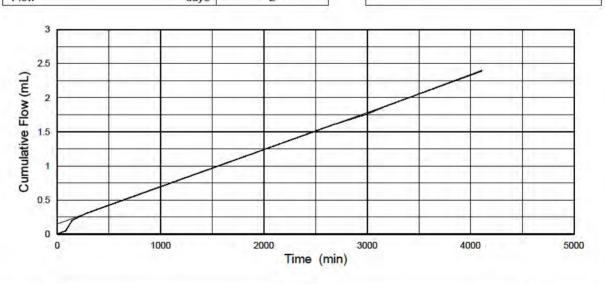
Saturation initially by constant moisture content, followed by back-pressure assistance using 5-10 kPa differential 'B' value 0.98 0.99

CONSOLIDATION STAGE			
Effective pressure	kPa	110	
Volume change	mL	104 9	

PERMEABILITY STAGE			
Pressure difference across s	pecimen	20	
Hydraulic gradient	-	21.3	
Mean effective stress	kPa	100	

TEST DURATIONS			
Saturation	days	2	
Consolidation	days	4	
Flow	days	2	

RESULT	
Coefficient of Permea	ability
kv at 20°C =	5.9 x 10 ⁻¹¹ m/s



Checked and Approved

17/08/1

Project Number:

GEO / 22927

Initials:

Date:

RJP LO

ONDON BARAMOUNT ENTERT

LONDON PARAMOUNT ENTERTAINMENT RESORT Project Number 30766

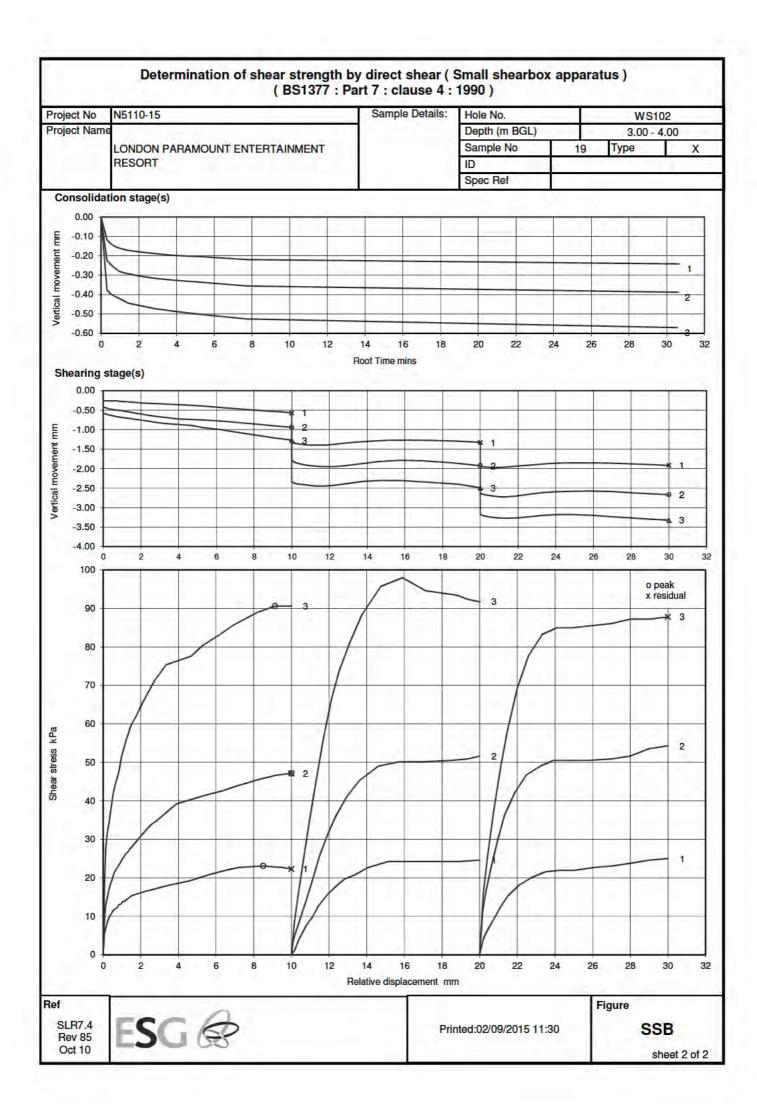




Determination of shear strength by direct shear (Small shearbox apparatus) (BS1377 : Part 7 : clause 4 : 1990) Sample Details: Project No N5110-15 Hole No. WS102 Project Name Depth (m BGL) 3.00 - 4.00 Sample No LONDON PARAMOUNT ENTERTAINMENT 19 Type RESORT ID Spec Ref Soil Description Light brown slightly gravelly SILT. Specimen(s) nominally 60mm x 60mm square Test(s) carried out in submerged condition -2mm material. Recompacted to a medium dense state at as received Specimen Type /Preparation moisture content. Particle density, assumed Mg/m³ Specimen Details 2 5 6 Height mm 25.0 25.0 25.0 **Bulk Density** Mg/m³ 1.33 1.33 1.33 Water Content 80.4 80.4 80.6 0.74 Dry density Mg/m³ 0.74 0.74 2.600 2.599 2.603 Voids ratio Degree of Saturation 82 82 82 Consolidation / Normal Stress applied kPa 30 60 120 Change in height during consolidation mm -0.242-0.388-0.570 Voids ratio after consolidation 2.565 2.543 2.520 Voids ratio at end of test 2,521 2.439 2.377 % 91.5 88.9 86.6 Moisture content at end of test Saturation at end of test 97 97 Shearing stage 0.041 0.041 0.041 Peak mm/min Rate of displacement Residual mm/min 0.103 0.103 0.103 Relative displacement 8.50 10.00 9.13 mm Peak values, (o) 90.6 Shear stress kPa 23.1 47.1 2 2 No. of reversals 2 Residual values, (x) Relative displacement mm 10.00 10.00 30.00 Shear stress kPa 22.3 47.1 87.8 160 **Shear Strength Parameters** Regression Manual 140 Peak strength, (o) c' kPa 1.5 120 degrees 361/2 Shear stress kPa 100 Residual strength, (x) C'R kPa 2.2 80 Ø'R 351/2 degrees 60 Notes: 40 1 After shear values based on BS1377, Pt 7 cl. 4.6.1.6 using δH calculated from consolidation and shear stages 20 0 20 40 100 120 140 160 180 200 Normal stress kPa Ref **Figure SLR7.4** Printed:02/09/2015 11:30 SSB Rev 85

sheet 1 of 2

Oct 10



Determination of shear strength by direct shear (Small shearbox apparatus) (BS1377 : Part 7 : clause 4 : 1990) Sample Details: Project No N5110-15 Hole No. WS202 Project Name Depth (m BGL) 2.00 - 3.00 Sample No 12 Type London Paramount Entertainment Resort ID Spec Ref Soil Description Light greyish brown slightly sandy slightly gravelly SILT. Specimen(s) nominally 60mm x 60mm square Test(s) carried out in submerged condition Specimen Type -2mm material. Recompacted to a medium dense state at as received /Preparation moisture content. Particle density, assumed Mg/m³ Specimen Details 2 5 6 Height mm 25.0 25.0 25.0 **Bulk Density** Mg/m³ 1.33 1.33 1.33 Water Content 56.5 56.6 56.6 0.85 0.85 Dry density Mg/m³ 0.85 Voids ratio 2.120 2.122 2.122 Degree of Saturation 71 71 71 Consolidation / Normal Stress applied 20 40

kPa

mm

%

Change in height during consolidation

Voids ratio after consolidation

Moisture content at end of test Saturation at end of test

Voids ratio at end of test

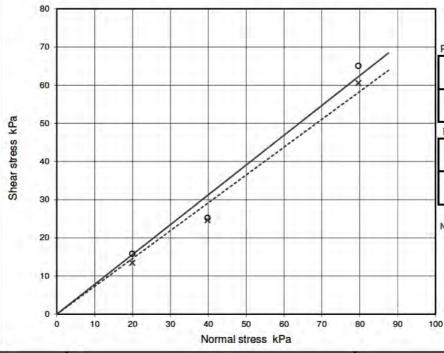
Snearing stage							
Data of State and and	Peak	mm/min	0.059	0.059	0.059		The Y
Rate of displacement	Residual	mm/min	0.148	0.148	0.148		
Dealcustuse (a)	Relative displacement	mm	1.20	3.02	3.77		
Peak values, (o)	Shear stress	kPa	15.8	25.2	65.1		
VIII 4 10 1.0	No. of reversals		2	2	2		
Residual values, (x)	Relative displacement	mm	2.34	5.62	6.15	21 1	1,12
	Shear stress	kPa	13.5	24.6	60.6		

-0.132

2.103

2.059

73.7



Shear Strength Parameters

Peak streng	gth, (o)	Regression	Manual
c'	kPa	(-4.1)	0.0
ø'	degrees	(40½)	38
Residual st	trength, (x)		

c' _R	kPa	(-4.5)	0.0
Ø' _R	degrees	(39)	36

Notes:

80

-0.578

2.050

1.972

68.9

93

-0.224

2.094

2.089

71.8

91

1 After shear values based on BS1377, Pt 7 cl. 4.6.1.6 using δH calculated from consolidation and shear stages

Ref

SLR7.4 Rev 85 Oct 10

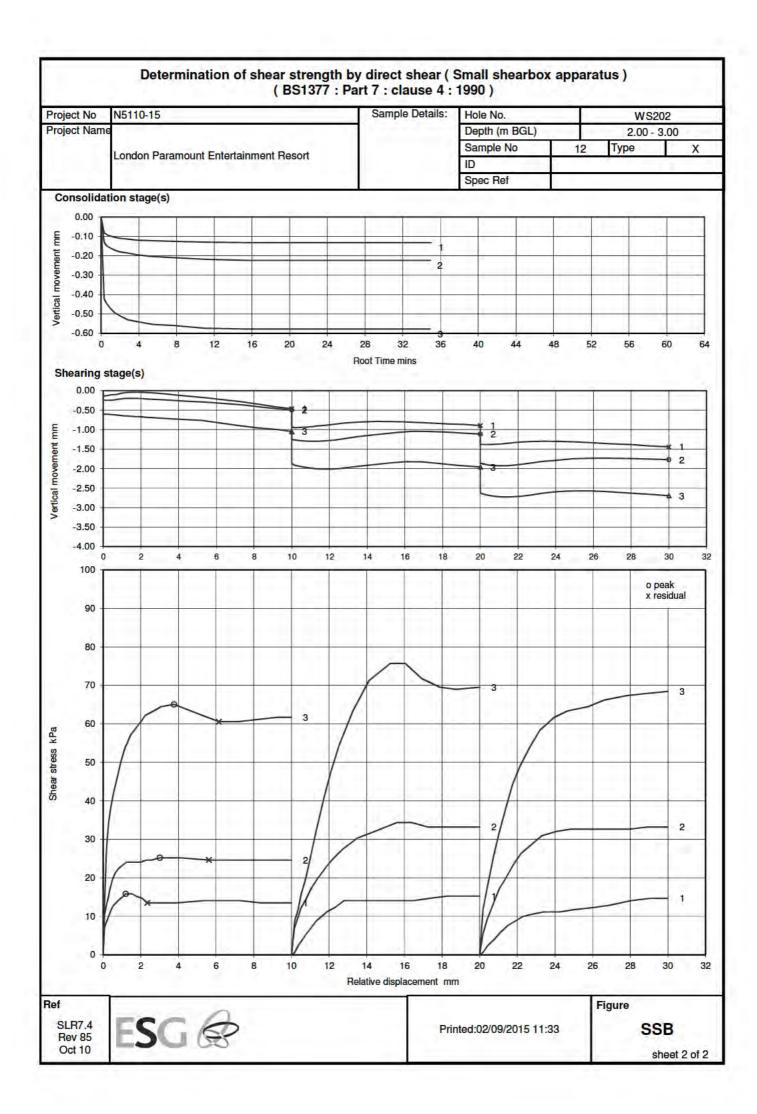


Figure

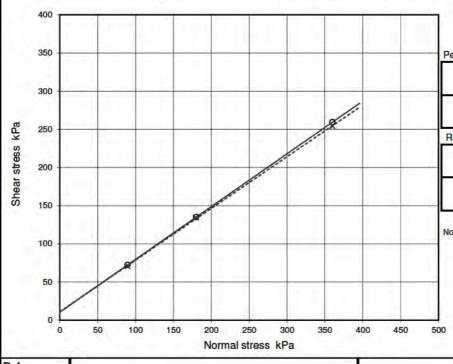
SSB

sheet 1 of 2

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Determination of shear strength by direct shear (Small shearbox apparatus) (BS1377 : Part 7 : clause 4 : 1990) Sample Details: Project No N5110-15 Hole No. WS202 Project Name Depth (m BGL) 9.00 - 10.00 Sample No 36 Type London Paramount Entertainment Resort ID Spec Ref Light brown and cream slightly gravelly sandy SILT. Soil Description Specimen(s) nominally 60mm x 60mm square Test(s) carried out in submerged condition -2mm material. Recompacted to a medium dense state at as received Specimen Type /Preparation moisture content. Particle density, assumed Mg/m³ Specimen Details 2 5 6 Height mm 25.0 25.0 25.0 **Bulk Density** Mg/m³ 1,24 1.24 1.24 Water Content 47.4 48.4 48.2 0.84 Dry density Mg/m³ 0.84 0.83 2.153 2.174 2.169 Voids ratio Degree of Saturation 58 59 59 Consolidation / Normal Stress applied 180 360 kPa 90 Change in height during consolidation mm -1.796 -3.180 -3.830 Voids ratio after consolidation 1.927 1.771 1.683 Voids ratio at end of test 1.785 1.577 1.470 % 67.3 59.5 55.5 Moisture content at end of test Saturation at end of test 100 100 100 Shearing stage 0.010 0.010 0.010 Peak mm/min Rate of displacement Residual mm/min 0.026 0.026 Relative displacement 8.04 7.56 7.22 mm Peak values, (o) 135.1 259.4 Shear stress kPa 72.3 2 2 No. of reversals 2 Residual values, (x) Relative displacement mm 10.00 10.00 10.00 Shear stress kPa 70.8 134.4 254.2 400 **Shear Strength Parameters** 350 Regression Manual Peak strength, (o) 300 250



c'	kPa	10	1.5
ø,	degrees	341/2	7-1
Residual st	rength, (x)		
c' _R	kPa	11	197

Notes:

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1 After shear values based on BS1377, Pt 7 cl. 4.6.1.6 using δH calculated from consolidation and shear stages

Ref

SLR7.4 Rev 85 Oct 10

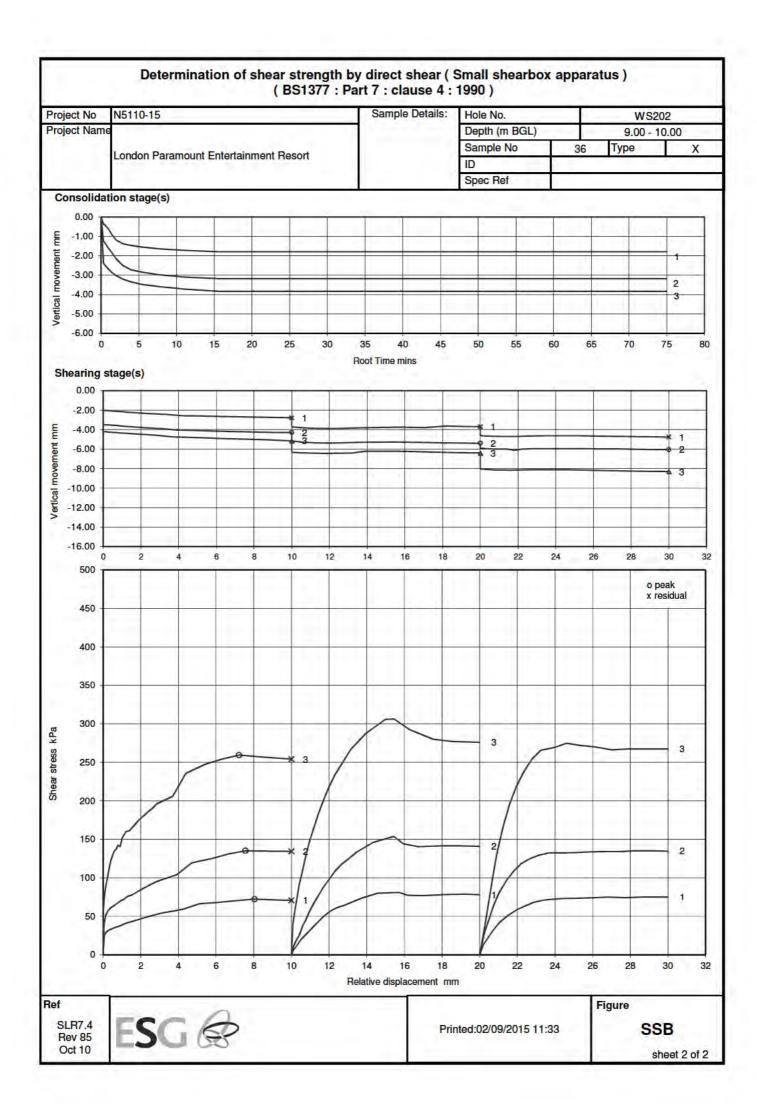


Figure

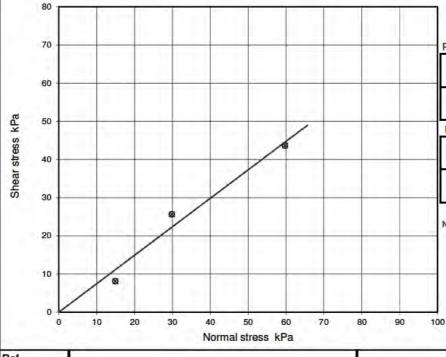
degrees

SSB

sheet 1 of 2



Determination of shear strength by direct shear (Small shearbox apparatus) (BS1377 : Part 7 : clause 4 : 1990) Sample Details: Project No N5110-15 Hole No. WS203 Project Name Depth (m BGL) 1.20 - 2.00 Sample No 8 Type London Paramount Entertainment Resort ID Spec Ref Soil Description Light brown slightly sandy slightly gravelly S LT. Specimen(s) nominally 60mm x 60mm square Test(s) carried out in submerged condition -2mm material. Recompacted to a medium dense state at as received Specimen Type /Preparation moisture content. Particle density, assumed Mg/m³ Specimen Details 2 5 6 Height mm 25,0 25.0 25.0 **Bulk Density** Mg/m³ 1.29 1.29 1.29 Water Content 58.4 58.7 58.4 0.81 Dry density Mg/m³ 0.81 0.81 2.252 2.258 2.252 Voids ratio Degree of Saturation 69 69 69 Consolidation / Normal Stress applied kPa 15 30 60 Change in height during consolidation mm -0.090 -0.240-0.476 Voids ratio after consolidation 2.240 2.227 2.190 Voids ratio at end of test 2.268 2.133 2.032 % 75.3 74.2 72.4 Moisture content at end of test Saturation at end of test 88 92 94 Shearing stage 0.032 0.032 0.032 Peak mm/min Rate of displacement Residual mm/min 0.081 0.081 Relative displacement 7.07 10.24 10.26 mm Peak values, (o) 43.6 Shear stress kPa 8.1 25.6 2 2 No. of reversals 2 Residual values, (x) Relative displacement mm 8.28 10.24 10.26 Shear stress kPa 8.1 25.6 43.6 80 **Shear Strength Parameters** 70 Regression Manual Peak strength, (o) c' kPa (-0.9)0.0 60 degrees (371/2) 361/2 50 Residual strength, (x) kPa (-0.9)0.0 C'R 40



Notes:

Ø'R

1 After shear values based on BS1377. Pt 7 cl. 4.6.1.6 using δH calculated from consolidation and shear stages

Figure

(371/2)

361/2

Ref

SLR7.4 Rev 85 Oct 10

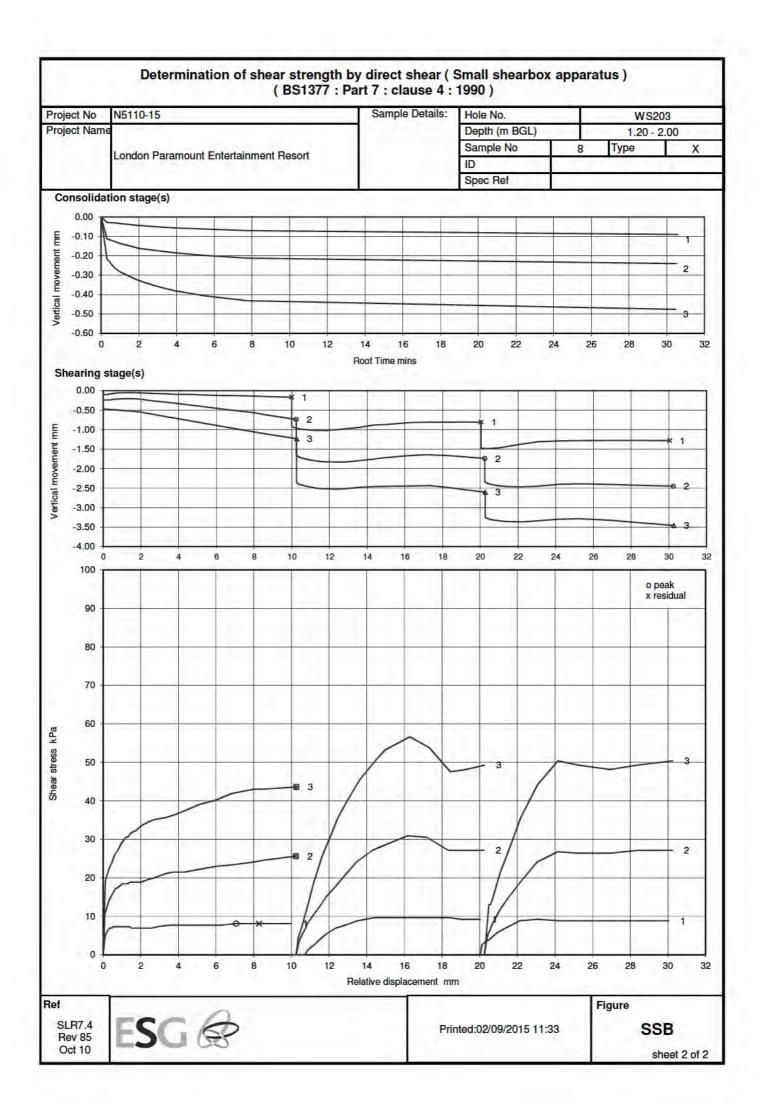


degrees

SSB

sheet 1 of 2

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UNDRAINED TRIAXIAL COMPRESSION



BS.1377: Part 7: 1990: 8 and 9

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

borehole /trial pit	sam	ple	specimen depth	code	moisture content	der	sity	cell	deviator stress	ailure strain	ailure mode	shear strength*	description and remarks
no no	no / type	depth (m)	(m)		(%)	bulk (Mg/m³)	dry (Mg/m³)	(kPa)	(kPa)	(%)	mode	(kPa)	description and remarks
8H101	32UT	7 20	7 40	UU100	64 0	1 49	0 91	150	21	78		11	Brownish grey slightly sandy silty organic CLAY with rare rootlets
BH101	50UT	12 00	12 20	UUM100	73 1	1 50	0 87	120 240 480	20 28 36	19 63 97	t .	10 14 18	Brownish grey slightly sandy silty organic CLAY with rare rootlets
H204	32UT	10 00	10 10	UU100	23 5	2 14	1 73	200	42	160	В	21	Greyish brown slightly sandy silty CLAY
VS203	110	2 00	2 20	UU70	48 8	170	1 14	44	1280	18	S	640	Brownish grey sandy gravelly S L

eneral remarks * shear strength taken as half deviator stress at failure for each stage

denotes sample unsuitable to test

code

Seotechnical Engineering Ltd Centurion House

Olympus Park Quedgeley Gloucester GL2 4NF el 01452 527743 30766 MAS ER GPJ 13/10/2015 10 35 35

CD - Consolidated drained

CU - Consolidated undrained

UU - Unconsolidated undrained

d S-

M - Multistage 38 - 38mm dia x 76mm

S - Set of 3 specimens 70 - 69mm dia x 140mm R - Remoulded 100 - 106mm dia x 200mm

failure mode

B - barrelling (plastic failure)

S - shear (brittle failure)

- intermediate

O - other (see remarks)

membrane correction applied

sample taken vertically (unless specified) rate of strain = 2%/min (unless specified)

membrane thickness 38 - 0 2mm 70 - 0 4mm 106 - 0 4mm 30766

CHECKED

BS 1377 : Part 7 : 1990 Clause 8

Quick Undrained Triaxial Compression Test

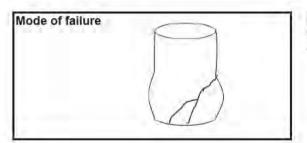
BH/TP No BH204
Sample Ref UT21
Depth (m) 5.20-5.65
Sample Type U

Description:

Soft to firm grey CLAY with rare fine sand and some patches of black organic rich material.

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	200.1
Diameter	(mm)	100.9
Moisture Content	(%)	60
Bulk Density	(Mg/m²)	1.69
Dry Density	(Mg/m³)	1.06
Test Details		
Latex membrane thickness	(mm)	0.3
Membrane correction	(kPa)	0.7
Axial displacement rate	(%/min)	2,0
Cell pressure	(kPa)	110
Strain at failure	(%)	11.0
Maximum Deviator Stress	(kPa)	51
Shear Stress Cu	(kPa)	26



Orientation of the sample	Vertical
Distance from top of tube mm	150

Checked and Approved by:

Operations Manager
17/08/2015

Project Number:

GEO / 22927

Project Name:

LONDON PARAMOUNT ENTERTAINMENT RESORT 30766



GL:Version 1.47 - 14/07/2015

UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TESTS WITHOUT MEASUREMENT OF PORE PRESSURE - SUMMARY OF RESULTS

	Sa		ple	="		Der	nsity	w	Test	Dia.	Ó ₃	At fail	ure / er	nd of s	tage	
Hole No. No. Depth (m) type from to	Soil Description				bulk dry type			Axial strain			M	Remarks				
	IVO.			Mg/m ³		m³ %		mm kPa		% kPa		kPa	D E			
BH101	12	2.20	2.65	UT	Firm dark brown mottled black organic CLAY.	1.39	0.67	109	UU	103.0	50	4.5	53	27	Р	
BH201	23	6.70	7.15		Stiff brownish grey slightly sandy clayey SILT.	1.60	0.95	69	UU	103.1	140	11.4	192	96	С	
BH202	13	2.20	2.60	UT	Stiff light greyish brown CHALK	1.35	0.64	110	UU	103.3	50	5.5	347	173	В	

General notes:

Project No

Project Name

Tests carried out in accordance with BS1377: Part 7: 1990, clause 8 for single stage, clause 9 for multistage tests. Specimens nominally 2:1 height

diameter ratio and tested at a rate of strain of 2%/minute, unless annotated otherwise. See individual test reports for further details.

Legend

UU - single stage test (may be in sets of specimens)

ó₃ cell pressure

Mode of failure P plastic

UUM - multistage test on a single specimen

Ó₁ - Ó₃ deviator stress

undrained shear strength

B brittle

Table

suffix R - remoulded or recompacted

Cu

C compound

QA Ref

SLR 2 Rev 71 Mar 12



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UUSUM 1

Consolidated Drained Triaxial Compression Test with Measurement of Volume Change

Borehole No.: 101

Depth (m): 5.20-5.65

Description:

Soft grey organic silty CLAY with rare fine gravel.

SPECIMEN DETAILS Depth within original sample Orientation within original sample		20 mm from top Vertical		
TEST DETAILS Specimen Type and Preparation Cell Preparation		UT (Undisturbed) Checks performed in ac	cordance with Clause 3.5	
Specimen Number Initial Diameter Initial Length Initial Moisture Content	mm mm %	Specimen No. 1 37.65 75.99 108	Specimen No. 2 37.55 76.00 99	Specimen No. 3 37.67 75.98 102
Initial Wet Density Drainage Conditions	Mg/m³	1.43 One end and radial bour	1.48 ndary	1.45
SATURATION STAGE Final Cell Pressure Final Pore Pressure Final Pore Pressure Parameter B Duration	kPa kPa day(s)	Method: Clause 5.2 350 346 0.98 2	Method: Clause 5.3 400 393 0.97 2	Method: Clause 5.2 & 5. 500 483 0.95
CONSOLIDATION STAGE Cell Pressure Back Pressure Effective Pressure Final Pore Pressure Final Pore Pressure Dissipation Duration	kPa kPa kPa kPa kPa % day(s)	350 300 50 300 100 4	400 300 100 300 100 4	500 300 200 300 100 5
SHEARING STAGE Cell Pressure Rate of Axial Displacement Initial Pore Pressure Initial Effective Stress	kPa mm/min kPa kPa	350 0.00060 300 50	400 0.00060 300 100	500 0.00048 300 200
CONDITIONS AT FAILURE Pore Pressure Minor Effective Principal Stress Deviator Stress Major Effective Principal Stress Volume Change Volumetric Strain Axial Strain Correction applied to Deviator Stress Duration	criteria kPa kPa kPa kPa mL % % kPa day(s)	Maximum deviator stres 299 51 80 131 7.40 10.7 20.6 17	296 104 126 230 4.14 6.4 20.9 14	296 204 218 422 5.55 8.8 18.8 14
Final Moisture Content	% Ma/m³	66 1.52	57 1.63	56 1.67
Final Wet Density EFFECTIVE STRESS PARAMETERS Cohesion Angle of Shear Resistance	Mg/m³ kPa degrees	12 18	1.03	1.07
FAILURE SKETCH				

Checked and Approved by

Project Number:

GEO / 23014

Project Name:

LONDON PARAMOUNT ENTERTAINMENT RESORT 30766



Senior Technician 09/10/2015

Consolidated Drained Triaxial Compression Test with Measurement of Volume Change

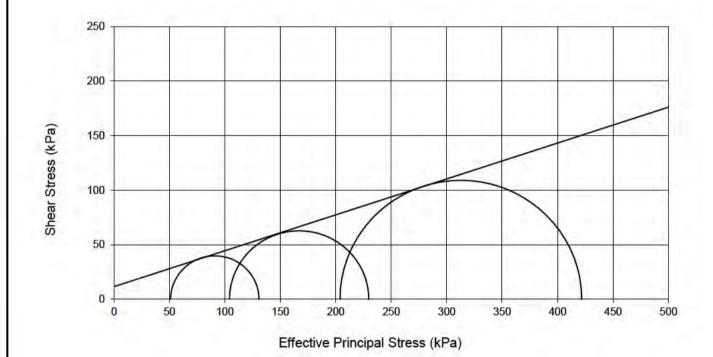
Borehole No.:

101

5.20-5.65 Depth (m):

Description:

Soft grey organic silty CLAY with rare fine gravel.



Checked and Approved by Senior Technician 09/10/2015

Project Number:

Project Name:

LONDON PARAMOUNT ENTERTAINMENT RESORT 30766

GEO / 23014

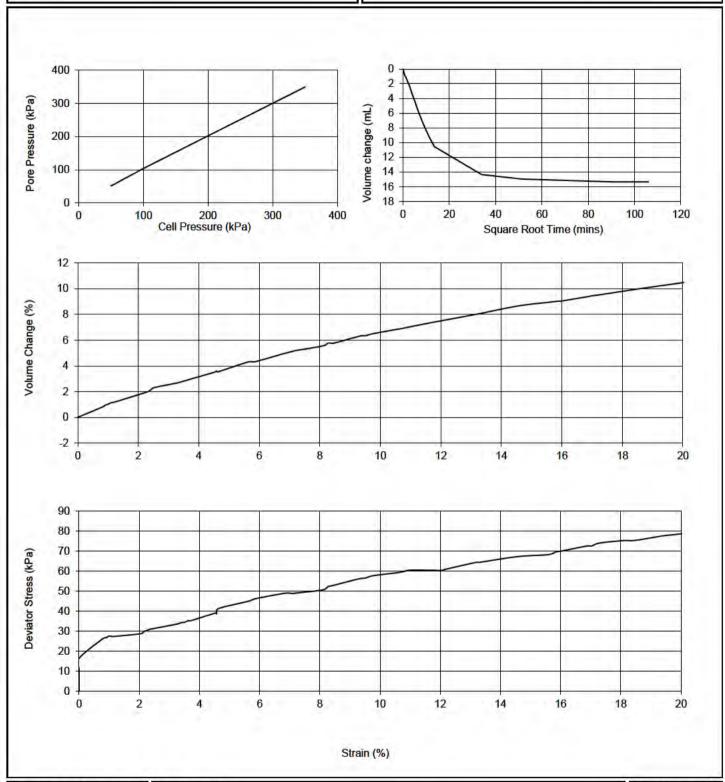


Consolidated Drained Triaxial Compression Test with Measurement of Volume Change

101 Borehole No .:

5.20-5.65 Depth (m):

Specimen 1



Checked and Approved by Senior Technician

Project Number:

GEO / 23014

Project Name:

LONDON PARAMOUNT ENTERTAINMENT RESORT 30766



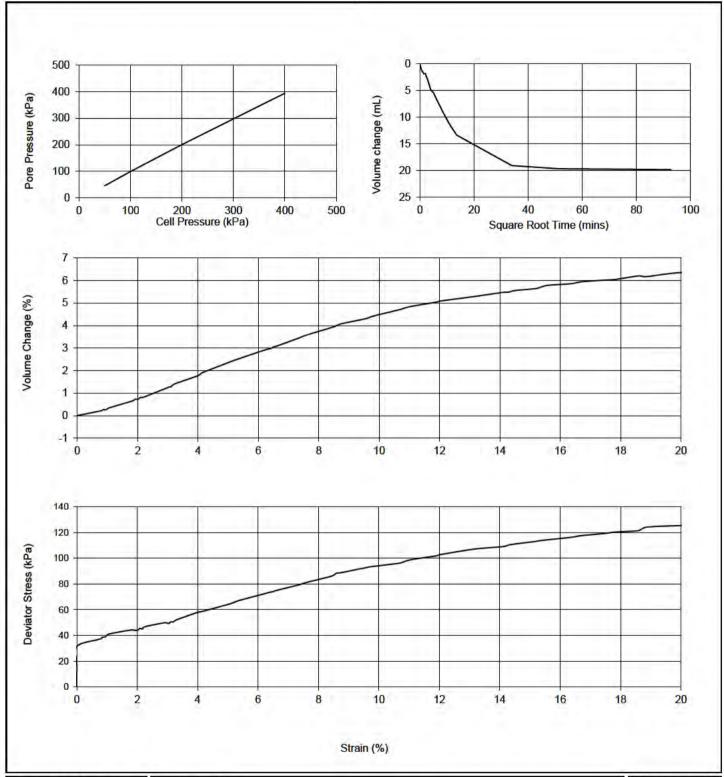
09/10/2015

Consolidated Drained Triaxial Compression Test with Measurement of Volume Change

Borehole No.: 101

Depth (m): 5.20-5.65

Specimen 2



Checked and Approved by

Senior Technician 09/10/2015

Project Number:

Project Name:

GEO / 23014

LONDON PARAMOUNT ENTERTAINMENT RESORT 30766

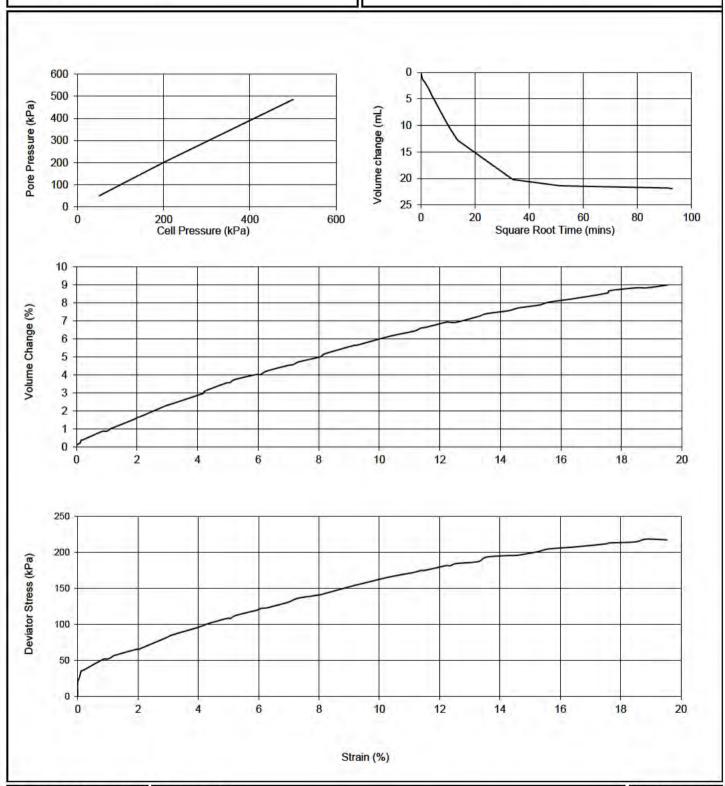


Consolidated Drained Triaxial Compression Test with Measurement of Volume Change

101 Borehole No.:

5.20-5.65 Depth (m):

Specimen 3



Checked and Approved by

Project Number:

GEO / 23014

Project Name:

LONDON PARAMOUNT ENTERTAINMENT RESORT 30766



Senior Technician

09/10/2015

Consolidated Drained Triaxial Compression Test with Measurement of Volume Change

Borehole No.: 101

Depth (m):

100

9.20-9.65

Description:

Soft to firm black fibrous PEAT.

SPECIMEN DETAILS Depth within original sample Orientation within original sample		20 mm from top Vertical		
TEST DETAILS Specimen Type and Preparation Cell Preparation		UT (Undisturbed) Checks performed in acc	cordance with Clause 3.5	
Specimen Number Initial Diameter Initial Length Initial Moisture Content Initial Wet Density Drainage Conditions	mm mm % Mg/m³	Specimen No. 1 37.52 76.53 494 1.04 One end and radial bour	Specimen No. 2 37.38 76.53 479 1.05	Specimen No. 3 37.48 76.48 479 1.03
TELECORIS CONTROL OF THE RESERVE OF	-			Mothad: Clause F 2 9 F
Final Cell Pressure Final Pore Pressure Final Pore Pressure Final Pore Pressure Parameter B Duration	kPa kPa day(s)	Method: Clause 5.2 390 381 1.00 2	Method: Clause 5.3 480 463 0.98 2	Method: Clause 5.2 & 5. 660 638 1.00
CONSOLIDATION STAGE		0.0	655	2.0
Cell Pressure Back Pressure Effective Pressure	kPa kPa kPa	390 300 90	480 300 180	660 300 360
Final Pore Pressure Final Pore Pressure Dissipation Duration	kPa % day(s)	301 99 6	305 97 7	309 97 6
SHEARING STAGE	170		336	isal
Cell Pressure	kPa mm/min	390 0.00080	480 0.00080	660 0.00060
Rate of Axial Displacement Initial Pore Pressure	kPa	301	305	309
Initial Effective Stress	kPa	89	176	351
CONDITIONS AT FAILURE	criteria	Maximum deviator stress	S	
Pore Pressure	kPa	300	302	299
Minor Effective Principal Stress	kPa	90	178	361
Deviator Stress	kPa kPa	144 234	327 505	582 943
Major Effective Principal Stress Volume Change	mL	12.20	9.40	3.87
Volumetric Strain	%	19.0	17.7	8.7
Axial Strain	%	20.9	20.1	20.2
Correction applied to Deviator Stress	kPa	18	18	19
Duration	day(s)	16	16	19
Final Moisture Content Final Wet Density	% Mg/m³	262 0.89	194 1.02	164 0.97
EFFECTIVE STRESS PARAMETERS	giiii			2.2.
Cohesion	kPa	5.2		
Angle of Shear Resistance	degrees	26.5		Y
FAILURE SKETCH				

Checked and Approved by

Project Number:

GEO / 23014

Project Name:

LONDON PARAMOUNT ENTERTAINMENT RESORT 30766



Senior Technician 09/10/2015

Consolidated Drained Triaxial Compression Test with Measurement of Volume Change

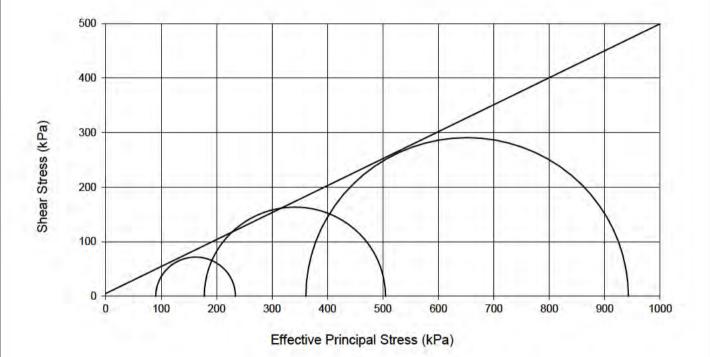
Borehole No .:

101

9.20-9.65 Depth (m):

Description:

Soft to firm black fibrous PEAT.



Checked and Approved by

Senior Technician 09/10/2015

Project Number:

Project Name:

GEO / 23014

LONDON PARAMOUNT ENTERTAINMENT RESORT 30766

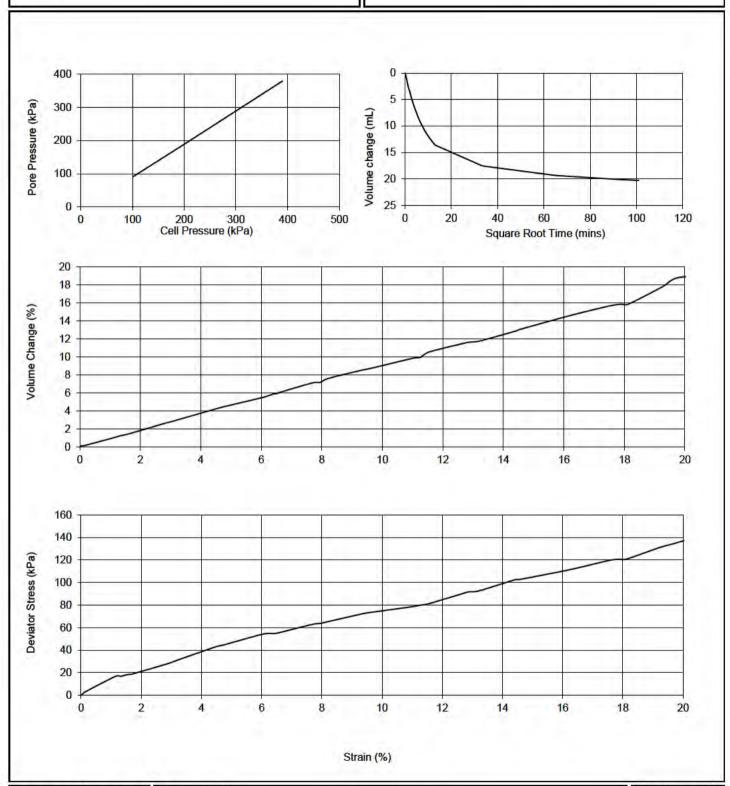


Consolidated Drained Triaxial Compression Test with Measurement of Volume Change

101 Borehole No.:

9.20-9.65 Depth (m):

Specimen 1



Checked and Approved by

Project Number:

GEO / 23014

Project Name:

LONDON PARAMOUNT ENTERTAINMENT RESORT 30766



Senior Technician

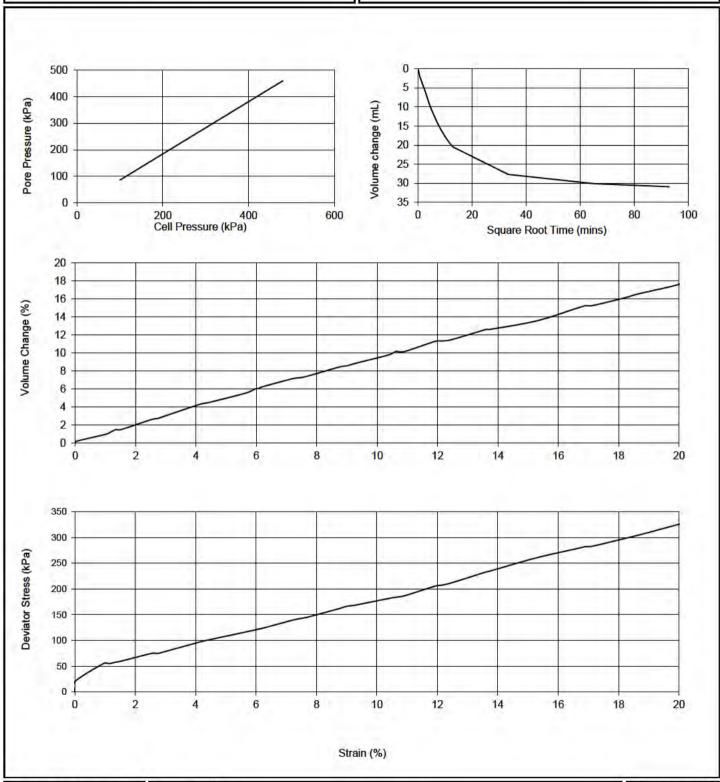
09/10/2015

Consolidated Drained Triaxial Compression Test with Measurement of Volume Change

101 Borehole No.:

9.20-9.65 Depth (m):

Specimen 2



Checked and Approved by Senior Technician 09/10/2015

Project Number:

Project Name:

GEO / 23014

LONDON PARAMOUNT ENTERTAINMENT RESORT 30766

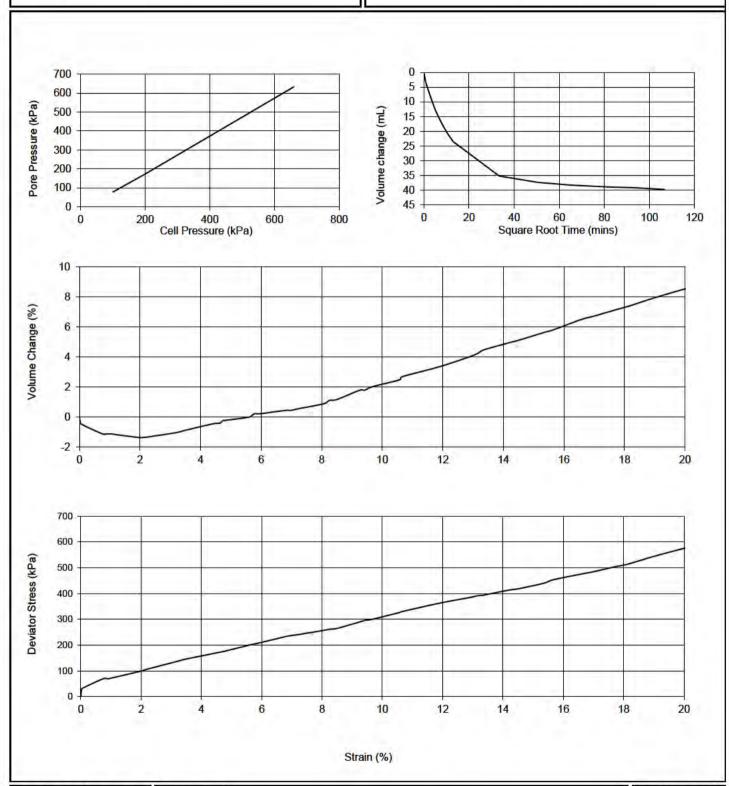


Consolidated Drained Triaxial Compression Test with Measurement of Volume Change

101 Borehole No.:

9.20-9.65 Depth (m):

Specimen 3



Checked and Approved by

Senior Technician 09/10/2015

Project Number:

Project Name:

GEO / 23014

LONDON PARAMOUNT ENTERTAINMENT RESORT 30766



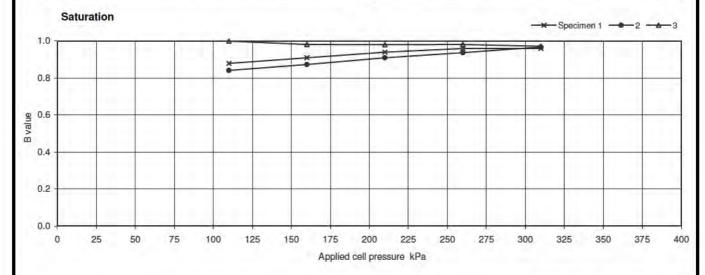
Consolidated Drained Triaxial Compression test with Measurement of Volume Change (BS1377 : Part 8 : 1990)

Project No	N5110-15	Sample Details:	Hole No		BH2	02
Project Name			Depth (m BG	L)	8.2-	8.6
(30766) LONDON PARAMOUNT		No	34	Туре	UT	
	ENTERTAINMENT RESORT		ID		20 12	7 - 4 10 -
	A STATE OF THE STA	_	Spec Ref		8.35-8.55	m

	Specimen Detai	ls	1	2	3
	Length	mm	74.9	75.9	75,5
	Diameter	mm	37.5	37.0	37.6
Initial	Bulk Density	Mg/m³	1.15	1.09	1.15
=	Water Content	%	249	214	250
	Dry density	Mg/m³	0.33	0.35	0.33
8	Length	mm	63.6	61.4	59.5
idati	Diameter	mm	31.4	29.6	28.6
After consolidation	Bulk Density	Mg/m³	1.27	1.25	1.25
8	Water Content	%	129	84.0	74.3
Afte	Dry density	Mg/m³	0.55	0.68	0.72
St	Bulk Density	Mg/m³	1.23	1.81	1.27
After test	Water Content	%	163	114	105
A	Dry density	Mg/m³	0.47	0.85	0.62

Soil Description	Firm black pseudo fibrous PEAT with occasional rootlets.
Specimen Type /Preparation	UNDISTURBED

0.000	Me	thod of Satura	tion	
Saturation Details	Increments of cell and back press			
Cell pressure increments	kPa	50	50	50
Differential Pressure	kPa	10	10	10
Final Cell Pressure	kPa	310	310	310
Final pore water pressure	kPa	300	296.1	298.3
Final B Value	17.7	0.96	0.97	0.97



	Drainage Conditions		Fro	m radial bound	dary and one	end
	Specimen No.		-1	2	3	
Consolidation	Cell Pressure applied	380	460	620	kPa	
Details	Back Pressure applied			300	300	kPa
see sheet 2 for plots	Effective Pressure	80	160	320	kPa	
	Pore pressure at start of consolidation	376	448	606	kPa	
	Pore pressure at end of consolidation	300	300	304	kPa	
	Pore pressure dissipation at end of consolidation	100	100	99	%	
Consolidation	Coefficient of Consolidation	C _{vi}	0.44	0.37	0.03	m²/year
parameters	Coefficient of Compressibility	M _{vi}	2.71	1.95	1.44	m ² /MN
see note to BS1377: pt 8, clause 6.3.4)	Coefficient of Permeability (calculated)	k _{vi}	3.7E-10	2.2E-10	1.5E-11	m/s

Ref

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Figure

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sheet 1 of 3

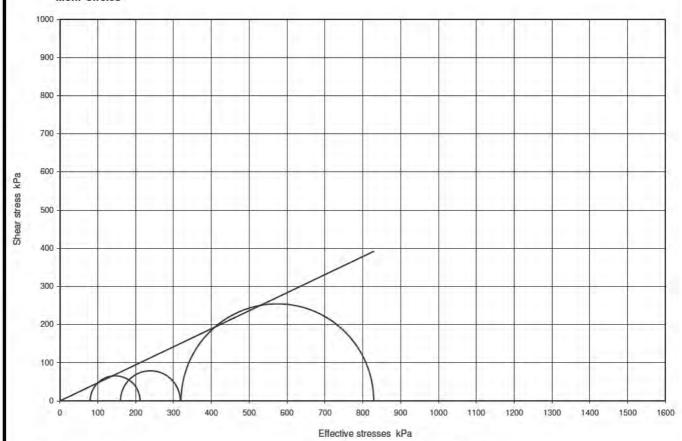
Project No	3	N5110	-15					5	Sample Details	: Hole No				BH202	
Project Na	me			-				= 1		Depth (m	BGL)			8.2-8.6	5
		(30766) LOND	ON PA	RAM	AMOUNT No		34	Type		U				
			TAINM							ID					
	= =1				Spec Re	f		8.35-	8.55m						
Consoli	dation														
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Consolidated Drained Triaxial Compression test with Measurement of Volume Change (BS1377: Part 8: 1990)

Project No	N5110-15	Sample Details:	Hole No		BH202		
Project Name	(30766) LONDON PARAMOUNT ENTERTAINMENT RESORT		Depth (m BGL)		8.2-8.6		
			No	34	Type	UT	
			ID				
	and a control of control of the		Spec Ref	Ţ	8.35-8.55	m	

Mohr Circles



Compression stages

Specimen Cell pressure Initial pwp Initial σ_3 Rate of strain

1	2	3		
380	460	620	kPa	
300	300	300	kPa	
80	160	320	kPa	
0.07	0.07	0.07	%/hr	

Failure conditions

Criterion Axial strain $(\sigma_1' - \sigma_3')_{\mathfrak{f}}$ Volumetric strain $\sigma_3{'}_{\mathfrak{f}}$ $\sigma_{1'f}$ Time to failure

	stress	num deviator	Maxim
%	22.08	23.63	22.49
kPa	508.7	157.9	131.6
%	-25.65	-24.21	-20.26
kPa	320	160	80
kPa	829	318	212
hrs	315.5	337.6	321.2

Shear Strength Parameters

Linear regression

C.	kPa	(-16.6)
ø.	degrees	(27.5)

Manual re-assessment

C'	kPa	0	
Ø'	degrees	25.3	

Deviator stresses corrected for area change, vertical side drains and 0.285 mm thick rubber membrane(s)

Mode of failure







Ref

SLR8.2 Rev 85 Jan 10





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Figure

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sheet 3 of 3

Consolidated Drained Triaxial Compression test with Measurement of Volume Change (BS1377 : Part 8 : 1990)

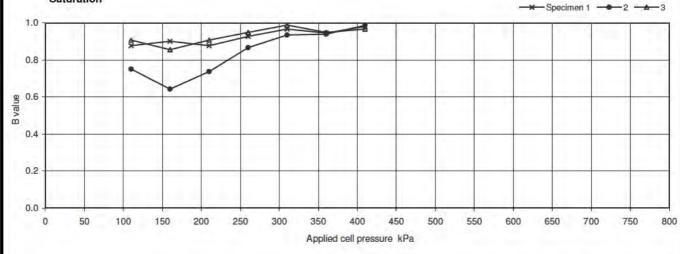
Project No	N5110-15	Sample Details:	Hole No		BH202		
Project Name			Depth (m BG	iL)	13.00-13.45		
	(30766) LONDON PARAMOUNT		No	50	Type	UT	
	ENTERTAINMENT RESORT		ID		2011		
		- 1	Spec Ref		13.20-13.4	0m	

	Specimen Detai	ls	1	2	3
	Length	mm	75.1	75.0	74.7
	Diameter	mm	37.5	36.5	37.7
Initial	Bulk Density	Mg/m³	1.56	1.60	1.57
-	Water Content	%	78.6	77.8	76.6
	Dry density	Mg/m³	0.87	0.90	0.89
6	Length	mm	67.5	66.5	64.4
idat	Diameter	mm	33.5	33.2	32.1
After consolidation	Bulk Density	Mg/m³	1.74	1.71	1.85
8	Water Content	%	43.5	38.9	30.0
Affe	Dry density	Mg/m³	1.21	1.23	1.42
St	Bulk Density	Mg/m³	1.66	1.99	1.80
After test	Water Content	%	53.2	46.6	36.9
A	Dry density	Mg/m³	1.09	1.36	1.32

Soil Description	Soft grey organic CLAY.	
Specimen Type /Preparation	UNDISTURBED	

0.0000000000000000000000000000000000000		Method of Saturation Increments of cell and back pressure							
Saturation Details									
Cell pressure increments	kPa	50	50	50					
Differential Pressure	kPa	10	10	10					
Final Cell Pressure	kPa	410	410	410					
Final pore water pressure	kPa	398.4	394.9	390.5					
Final B Value	174	0.98	0.99	0.97					





	Drainage Conditions		Fro	m radial boun	dary and one	end
	Specimen No.		1	2	3	
Consolidation	Cell Pressure applied		480	610	870	kPa
Details	Back Pressure applied		350	350	350	kPa
see sheet 2 for plots	Effective Pressure		130	260	520	kPa
	Pore pressure at start of consolidation	465	599	859	kPa	
	Pore pressure at end of consolidation		350	350	355	kPa
	Pore pressure dissipation at end of consolidation		100	100	99	%
Consolidation	Coefficient of Consolidation	C _{vi}	0.14	0.13	0.09	m²/year
parameters	Coefficient of Compressibility	M _{vi}	1.45	0.79	0.69	m ² /MN
see note to BS1377: pt 8, clause 6.3.4)	Coefficient of Permeability (calculated)	k _{vi}	6.2E-11	3.2E-11	2.0E-11	m/s

Ref

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Figure

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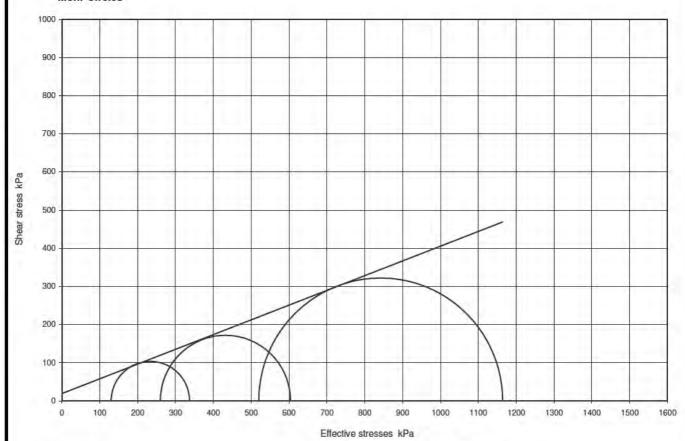
sheet 1 of 3

Projec	t No	N5110-	-15					Sar	nple Det	ails:	Hole No				BHZ	202	
	t Name	7	570								Depth (m	BGL)		13.00-	13.45	
. rojec	, ricanio	(30766) LOND	ΟΝ ΡΔΙ	RAMO	DUNT					No		50	Тур			U
			TAINME							- 1	ID			1.21		-	
		C. T. C.	- THE STATE OF THE								Spec Re			13.2	0-13.4	10m	_
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Consolidated Drained Triaxial Compression test with Measurement of Volume Change (BS1377: Part 8: 1990)

Project No	N5110-15	Sample Details:	Hole No		BH2	202
Project Name			Depth (m BG	L)	13.00-	13.45
	(30766) LONDON PARAMOUNT		No	50	Type	UT
	ENTERTAINMENT RESORT		ID			
	and all and and instruction of the		Spec Ref		13.20-13.4	0m

Mohr Circles



Compression stages

Specimen Cell pressure Initial pwp Initial σ_3 Rate of strain

1	2	3	
480	610	870	kPa
350	350	350	kPa
130	260	520	kPa
0.22	0.22	0.22	%/hr

Failure conditions

Criterion Axial strain $(\sigma_1' - \sigma_3')_i$ Volumetric strain σ₃' _f $\sigma_1'_f$ Time to failure

ı	alless	num deviator	IVIDAIII
	18.43	18.36	21.21
À	644.2	343.8	207.0
	-9.26	-9.52	-12.07
	520	260	130
	1164	604	337
11	83.8	83.4	96.4

Shear Strength Parameters

Linear regression

C.	kPa	19.5
Ø'	degrees	21.1

Manual re-assessment

c'	kPa	114	
Ø'	degrees	12	

Deviator stresses corrected for area change, vertical side drains and 0.25 mm thick rubber membrane(s)

Mode of failure







Ref

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Figure

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sheet 3 of 3

Consolidated Undrained Triaxial Compression test with Measurement of Pore Water Pressure (BS1377: Part 8: 1990) Sample Details Hole No Project No. N5110-15 **BH202** Depth (m BGL) 16.00-16.45 **Project Name** UT (30766) LONDON PARAMOUNT No 59 Type ID ENTERTAINMENT RESORT Spec Ref 16.20-16.40m Soft grey CLAY. Specimen Details 2 3 Soil Description Length 76.53 75.42 75.36 mm Specimen Type UNDISTURBED Diameter 37.90 37.83 37.06 /Preparation mm **Bulk Density** 1.50 1.57 1.60 Ma/m Method of Saturation Water Content 72 67 65 Saturation Details Dry density 0.87 0.94 0.97 Increments of cell and back pressure Mg/m³ 70.59 69.07 Length 72.60 Cell pressure increments kPa 50 50 consolidation mm 33.82 10 10 10 Diameter mm 35.89 35.44 **Differential Pressure** kPa **Bulk Density*** 1.63 1.70 1.78 Final Cell Pressure kPa 310 310 310 Mg/m Water Content* 299.4 298.4 300.3 59 48 39 Final pore water pressure kPa Dry density Mg/m³ 1.03 1.14 1.28 Final B Value 0.95 0.98 0.96 for undrained test, after consolidation and after test are the same Specimen 1 -1.0 8.0 0.6 0.4 0.2 0.0 50 100 150 200 300 350 400 Applied cell pressure kPa **Drainage Conditions** From radial boundary and one end Specimen No. 1 2 3 Cell Pressure applied 460 620 940 kPa Consolidation Back Pressure applied 300 300 300 kPa **Details** Effective Pressure 320 640 kPa 160 Pore pressure at start of consolidation 440 600 883 kPa Pore pressure at end of consolidation 300 300 302 kPa Pore pressure dissipation at end of consolidation 100 100 100 % Consolidation Coefficient of Consolidation Cvi 0.20 0.23 0.16 m²/year parameters Coefficient of Compressibility M_{vi} 0.94 0.61 0.40 m²/MN see note to BS1377: Coefficient of Permeability (calculated) 5.8E-11 4.4E-11 2.0E-11 k_{vi} pt 8, clause 6.3.4) Root time minutes 10 0 20 30 60 70 80 50 0 (-ve if swell 5 10 mL × 1 change 15 20 25 Ref **Figure SLR8.1** CU Printed:06/10/2015 14:46

sheet 1 of 3

Rev 85 May 09

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Consolidated Undrained Triaxial Compression test with Measurement of Pore Water Pressure (BS1377: Part 8: 1990) Sample Details: Hole No Project No N5110-15 BH202 Depth (m BGL) 16.00-16.45 Project Name (30766) LONDON PARAMOUNT No 59 Type UT ID **ENTERTAINMENT RESORT** Spec Ref 16.20-16.40m **Mohr Circles** 400 Shear stress KPa 300 200 100 0 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 MIT Stress field Effective stresses kPa 500 Compression stages 2 Specimen 3 Cell pressure 460 620 940 kPa 400 Initial pwp 300 kPa (01-03)/2 KPa Initial og' 160 320 638 kPa Rate of strain 0.99 %/hr 200 Failure conditions Criterion Maximum deviator stress 100 Axial strain 2.80 9.65 8.92 $(\sigma_{1}'/\sigma_{3}')_{f}$ 4.923 2.957 3.011 0 $(\sigma_1' - \sigma_3')_f$ 227.9 194.7 600.1 kPa 1000 500 s' (o1'+o3')/ 2 kPa 402 521 642 kPa kPa 58 100 298 Cambridge stress field O3't 1000 $\sigma_{1'}$ 286 294 kPa 0.45 1.13 0.57 800 Time to failure 2.8 9.8 9.0 (0,'-03') kPa **Shear Strength Parameters** 600 Linear regression 400 kPa C' not assessed ø. degrees not assessed Manual re-assessment 200 kPa Ø' degrees 0 200 400 600 800 1000 1200 1400 1600 1800 2000 p' $(\sigma_1' + 2\sigma_3')/3$ kPa Mode of failure Deviator stresses corrected for area change, vertical side drains and 0.25 mm thick rubber membrane(s) Notes: Ref **Figure SLR8.1** CU Printed:06/10/2015 14:46 Rev 85 May 09 sheet 3 of 3

UNIAXIAL COMPRESSIVE STRENGTH OF ROCK



I.S.R.M. Suggested Methods: 2007 Edition

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

borehole	san	nple	specimen	diameter	height		moisture	bulk	loading	time to	UCS	description and coding
no	no /type		depth (m)	D (mm)	H (mm)	H/D	content (%)	density	rate (kN/min)	failure	(MPa)	test remarks
BH101	108Cs	35.95	35.95	99.0	216.4	2.19	28.2	1.93	10	01:53	2.00	White CHALK Ax
BH101	117Cs	41.50	41.50	100.5	222.8	2.22	24.5	1.90	5	02:05	2.30	Wh te CHALK Ax
BH101	132Cs	58.44	58.44	99.5	237.3	2.39	18.9	1.95	2	08:09	2.70	Wh te CHALK Ax
BH203	67Cs	26.75	26.80	115.0	215.0	1.87	24.9	2.02	10	4:12	3.60	Wh te CHALK Ax
BH203	98Cs	38.10	38.10	115.0	201.0	1.75	25.8	1.96	10	2:46	2.60	Wh te CHALK Ax
BH502	71Cs	19.20	19.30	87.0	208.0	2.39	25.9	1.96	5	3:22	2.80	White CHALK Ax

general remarks

Sample obtained from vertically drilled core (unless specified)

Test machine - ELE 1500

COD NG

moisture condition

N - natural moisture content

F - fully saturated

S - soaked

P - air/partially dried

sample storage

U - sample not wrapped

F - sample wrapped in cling film/foil

W - sample waxed

G - sample contained in sealed Geoline

failure mode

Ax - axial cleavage

Ca - cataclasis

Sh - shear

Ex - explosive

30766

CHECKED

SR

Geotechnical Engineering Ltd Centurion House Olympus Park Quedgeley Gloucester GL2 4NF el 01452 527743 30766 MAS ER GPJ 13/10/2015 10 48 25

UNIAXIAL COMPRESSIVE STRENGTH OF ROCK - SUMMARY OF RESULTS

Project No **Project Name** N5110-15 LONDON PARAMOUNT ENTERTAINMENT RESORT Sample Uniaxial Compression³ Bulk Water Density² Content¹ Load Time to Mode of Hole No. Rock Type Remarks Type Depth (m) UCS Rate failure failure No. type from to Mg/m³ % kN/m MPa Outside ISRM BH202 99 29.75 30.00 CHALK 2.00 24.2 10 226 AC 3.11 100mm³ Specification

Notes: Test Specification: International Society for Rock Mechanics, The complete ISRM suggested methods for Rock Characterization Testing and Monitoring, 2007

1 ISRM p87 test 1, water content at 105 ± 3 °C, specimen as received at the laboratory

2 ISRM p86 clause (vii), Caliper method used for determination of bulk volume and derivation of bulk density

3 ISRM p153 part 1, determination of Uniaxial Compressive Strength (UCS) of Rock Materials

above notes apply unless annotated otherwise in the remarks

Mode of failure :

S - Single shear MS - multiple shear

AC - Axial cleavage

F - Fragmented

Ref

RLR 2 Rev 2 Jul 14



Printed:02/09/2015 11:24

Table

RUCS 1

POINT LOAD STRENGTH TEST RESULTS



I.S.R.M. SUGGESTED METHODS 2007 EDITION

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

borehole /trial pit no	sample depth (m)	test	test orientation	moisture condition	width W (mm)	length L (mm)	platen sep D (mm)	failure load P (kN)	equiv dia De (mm)	s (MPa)	size factor F	s(50) (MPa)	rock type
BH101	30.20	į	U	P	80	35	60	0.79	78.18	0.13	1.22	0.16	Wh te CHALK
BH101	33.05	1	U	Р	90	35	80	0.37	95.75	0.04	1.34	0.05	Wh te CHALK
BH101	34.20	D	Y	Р		40	100	0.20	100.00	0.02	1.37	0.03	Wh te CHALK
BH101	34.20	Α	x	P	100		65	0.35	90.97	0.04	1.31	0.06	Wh te CHALK
BH101	35.70	1	Y	Р	90	40	75	0.53	92.71	0.06	1.32	0.08	Wh te CHALK
BH101	37.40	D	Y	Р		100	90	0.78	90.00	0.10	1.30	0.12	Wh te CHALK
BH101	37.40	Α	x	Р	90		120	0.91	117.26	0.07	1.47	0.10	Wh te CHALK
BH101	38.85	D	Y	Р		100	100	1.80	100.00	0.18	1.37	0.25	Wh te CHALK
BH101	38.85	Α	x	Р	100		90	1.69	107.05	0.15	1.41	0.21	Wh te CHALK
BH101	42.10	1	u	Р	70	40	50	0.81	66.76	0.18	1.14	0.21	Wh te CHALK
BH101	44.80	D	Y	P		40	100	0.51	100.00	0.05	1.37	0.07	Wh te CHALK
BH101	44.80	Α	x	Р	100		50	0.69	79.79	0.11	1.23	0.13	Wh te CHALK
BH101	60.00	D	Y	Р		70	100	0.49	100.00	0.05	1.37	0.07	Wh te CHALK
BH101	60.00	Α	x	Р	100		65	0.59	90.97	0.07	1.31	0.09	Wh te CHALK
BH203	14.40	ì	U	N	50	70	50	0.28	56.42	0.09	1.06	0.09	Wh te CHALK
BH203	16.70	-t	U	N	55	90	50	0.36	59.17	0.10	1.08	0.11	White CHALK
BH203	24.00	1	U	N	70	105	70	1.32	78.99	0.21	1.23	0.26	Wh te CHALK
BH203	25.50	D	Y	N		145	120	3.17	120.00	0.22	1.48	0.33	Wh te CHALK

remarks Tests carried out in accordance with SRM (2007) Suggested Methods for Determining Point Load Strength

nt J Rock Mech Min Sci and Geotech Abstr Vol 22 No 2

test type D - diametral

Geotechnical Engineering Ltd Centurion House Olympus Park Quedgeley Gloucester GL2 4NF el 01452 527743 30766 MAS ER GPJ 13/10/2015 11 07 49

A - axial Y - parallel - rregular lump Z - oblique

test orientation relative to discontinuities X - perpendicular U - unknown

moisture condition
N - natural moisture content

P - partially air dried S - soaked 30766

CHECKED

POINT LOAD STRENGTH TEST RESULTS



I.S.R.M. SUGGESTED METHODS 2007 EDITION

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

borehole /trial pit no	sample depth (m)	test	test orientation	moisture condition	width W (mm)	length L (mm)	platen sep D (mm)	failure load P (kN)	equiv dia De (mm)	s (MPa)	size factor F	s(50) (MPa)	rock type
BH203	25.50	Α	x	N	120		70	1.90	103.42	0.18	1.39	0.25	Wh te CHALK
BH203	25.80	1	U	N	40	90	40	0.73	45.14	0.36	0.95	0.34	Wh te CHALK
BH203	26.70	1	U	N	80	110	80	1.57	90.27	0.19	1.30	0.25	Wh te CHALK
BH203	27.90	D	Y	N		100	120	1.52	120.00	0.11	1.48	0.16	Wh te CHALK
BH203	27.90	Α	x	N	120		90	2.20	117.26	0.16	1.47	0.23	Wh te CHALK
BH203	29.50	D	Y	N		120	115	1.31	115.00	0.10	1.45	0.14	Wh te CHALK
BH203	29.50	Α	x	N	115		100	1.48	121.01	0.10	1.49	0.15	Wh te CHALK
BH203	30.95	D	Y	N		170	110	1.97	110.00	0.16	1.43	0.23	Wh te CHALK
BH203	30.95	A	x	N	110		115	0.93	126.91	0.06	1.52	0.09	Wh te CHALK
BH203	32.30	Α	x	N	50		50	0.99	56.42	0.31	1.06	0.33	Wh te CHALK
BH203	32.50	D	Y	N		150	120	1.92	120.00	0.13	1.48	0.20	Wh te CHALK
BH203	32.50	A	x	N	120		90	1.11	117.26	0.08	1.47	0.12	Wh te CHALK
BH203	35.20	į	U	N	80	115	50	0.39	71.36	0.08	1.17	0.09	Wh te CHALK
BH203	36.00	1	U	N	70	110	60	0.70	73.13	0.13	1.19	0.15	Wh te CHALK
BH203	36.75	D	Y	N		120	110	0.73	110.00	0.06	1.43	0.09	White CHALK
BH203	36.75	Α	x	N	110		75	1.38	102.49	0.13	1.38	0.18	Wh te CHALK
BH203	37.80	1	U	N	45	110	45	0.98	50.78	0.38	1.01	0.38	Wh te CHALK
BH204	17,60	1	U	N	90	110	50	0.48	75.69	0.08	1.21	0.10	Wh te CHALK

remarks Tests carried out in accordance with SRM (2007) Suggested Methods for Determining Point Load Strength

nt J Rock Mech Min Sci and Geotech Abstr Vol 22 No 2

test type D - diametral

Geotechnical Engineering Ltd Centurion House Olympus Park Quedgeley Gloucester GL2 4NF el 01452 527743 30766 MAS ER GPJ 13/10/2015 11 07 49

A - axial - rregular lump

test orientation relative to discontinuities

X - perpendicular U - unknown

Y - parallel Z - oblique intes mo

moisture condition
N - natural moisture content

P - partially air dried S - soaked 30766

CHECKED

POINT LOAD STRENGTH TEST RESULTS



I.S.R.M. SUGGESTED METHODS 2007 EDITION

CLIENT LONDON RESORT COMPANY HOLDINGS LTD

SITE LONDON PARAMOUNT ENTERTAINMENT RESORT

borehole /trial pit no	sample depth (m)	test type	test orientation	moisture condition	width W (mm)	length L (mm)	platen sep D (mm)	failure load P (kN)	equiv dia De (mm)	s (MPa)	size factor F	s(50) (MPa)	rock type	
BH204	17.70	į	U	N	100	130	70	0.54	94.41	0.06	1.33	0.08	Wh te CHAL	к
BH204	19.90	î	U	N	90	110	65	0.52	86.30	0.07	1.28	0.09	Wh te CHAL	к
BH501	18.60	1	U	Р	95	110	60	0.53	85.19	0.07	1.27	0.09	Wh te CHAL	к
BH501	19.85	1	U	Р	95	100	60	0.66	85.19	0.09	1.27	0.11	Wh te CHAL	к
BH502	18.20	D	Y	Р		135	90	0.37	90.00	0.05	1.30	0.06	Wh te CHAL	к
BH502	18.20	Α	×	Р	90		110	0.77	112.27	0.06	1.44	0.09	Wh te CHAL	к
BH706	28.70	D	Y .	N		125	85	0.41	85.00	0.06	1.27	0.07	Off wh te CH	ALK
BH706	28.70	Α	x	N	85		70	0.21	87.04	0.03	1.28	0.03	Off wh te CH	ALK
		ech Min	cordance with Sci and Geo	otech Abst	r Vol 2	2 No 2		s for Det		Point Lo	ad Streng			OUT CUT
test type test orientation relative to disco D - diametral X - perpendicular U - unkno A - axial Y - parallel - rregular lump Z - oblique							N - P -		noisture d	content		-	0766	SR

Point Load Index Test ISRM:1985 Project No Project Name N5110-15 LONDON PARAMOUNT ENTERTAINMENT RESORT All specimens tested at as received water content unless shown otherwise Diametral Axial Block/irregular lump D - Diametral, A - Axial, I - Irregular Lump, B - Block Direction (U = unknown or random) L - parallel to planes of weakness D_{ps} P - perpendicular to planes of weakness **Dimensions** D_{ps}- Distance between platens (platen separation) D_{ps}' - at failure (see ISRM note 6) Lne - Length from platens to nearest free end W - Width of shortest dimension perpendicular to load, P Point Load Index Test Type LOAD equivalent diameter see ISRM **Dimensions** Specimen Depth Specimen Ref P Sample Type Sample Ref Fig 5 and 8 Borehole Failure Valid $F = (De/50)^{0.45}$ Depth, Remarks Rock type Type A, I, B) Direction (L, P or U) W Dps Lne Dos Is s(50) mm mm mm 0 BH202 XS CHALK U Y 26.95 90 40.0 63.2 49.0 44.0 0.50 59.50 0.14 0.15

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May 12

Environmental Scientifics Group

SPLIT AND DESCRIBE



CLIENT LONDON RESORT COMPANY HOLDINGS LTD BH/TP No. BH704

SITE LONDON PARAMOUNT ENTERTAINMENT SAMPLE No./TYPE 15UT RESORT

DESCRIPTION Soft brown slightly sandy slightly gravelly CLAY DEPTH FROM (m) 3.20

Soft brown slightly sandy slightly gravelly CLAY
with rare rootlets. Gravel is fine to coarse flint and
white chalk.

DEPTH FROM (m)
3.20
DEPTH TO (m)
3.65

DATE 21-July-2015 LOGGED BY CA

PHOTOGRAPHS

BEFORE



AFTER



CHECKED
CA

SPLIT AND DESCRIBE



13.70m

CLIENT LONDON RESORT COMPANY HOLDINGS LTD. BH/TP No. BH707

SITE LONDON PARAMOUNT ENTERTAINMENT SAMPLE No./TYPE 58UT

RESORT

DESCRIPTION White, orange stained, structureless CHALK DEPTH FROM (m) 13.20m

containing weak, fine to medium, subrounded

gravel. DEPTH TO (m)

DATE 28.06.2015 LOGGED BY EL

PHOTOGRAPHS





AFTER



CONTRACT	CHECKED
30766	CA

SPLIT AND DESCRIBE



CLIENT:

LONDON RESORT

BH/TP No. **BH707**

SITE:

COMPANY HOLDINGS LTD. LONDON PARAMOUNT ENTERTAINMENT

SAMPLE No./TYPE

66UT

DESCRIPTION:

RESORT White, orange stained structureless CHALK

DEPTH FROM (m)

16.20m

containing extremely weak clasts of fine to coarse gravel.

DEPTH TO (m)

16.70m

DATE

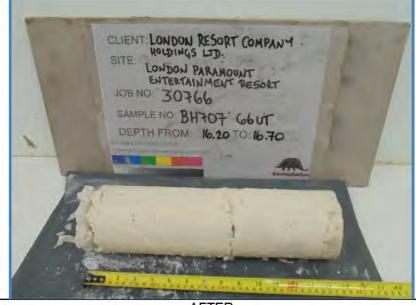
28.06.2015

LOGGED BY

EL

PHOTOGRAPHS

BEFORE



AFTER



CONTRACT	CHECKED
30766	CA

SPLIT AND DESCRIBE



CLIENT LONDON RESORT COMPANY HOLDINGS LTD. BH/TP No. BH708

SITE LONDON PARAMOUNT ENTERTAINMENT SAMPLE No./TYPE 48UT

RESORT

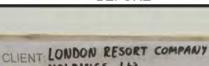
DESCRIPTION Soft brown slightly sandy slightly gravelly CLAY. DEPTH FROM (m) 9.20

Gravel is fine to medium flint.

DEPTH TO (m) 9.65

DATE 21-July-2015 LOGGED BY CA

PHOTOGRAPHS BEFORE



JOB NO: 30766 SAMPLE NO: 8H708 48 UT DEPTH FROM: 9.20 TO: 9.65

HOLDINGS LED LONDON PARAMOUNT ENTERTAINMENT RESORT





CONTRACT	CHECKED
30766	CA

SPLIT AND DESCRIBE



CLIENT LONDON PARAMOUNT COMPANY HOLDINGS BH/TP No. WS202

LTD.

SITE LONDON PARAMOUNT ENTERTAINMENT SAMPLE No./TYPE U

RESORT

DESCRIPTION Firm dark greenish grey CLAY with rare rootlets. DEPTH FROM (m) 11.00

Locally mottled black, orange and pale yellow.

Poorly cemented fine CKD at top. DEPTH TO (m) 11.45

DATE 18-Aug-2015 LOGGED BY CA

PHOTOGRAPHS



AFTER



CONTRACT	CHECKED
30766	CA

CHEMICAL TESTS - SUMMARY OF RESULTS

Project No Project Name N5110-15 LONDON PARAMOUNT ENTERTAINMENT RESORT

Hole No.	7 10 2	Sam	ple			Org	LOI	pH		Sulph	ate as So	04	SE	1 options	CO ₂	Chlori	de, CI	<2	
	No.	Depti	h (m)	type	Soil Description			oaration/test*	2:1 water sol.	ground water	acid sol.	TS	Mg mg/L NO₃ mg/L NH₄		water sol.	acid sol.	mm	Remarks	
		from	to			%	%		Pre	g/L	g/L	%	%		%	%	%	%	
BH101	17	3.00	3.20	В	Grey sandy GRAVEL.	1.7 c												30	
BH202	32	8.00	8.20	В	Grey slightly sandy slightly gravelly CLAY.	0.2 c	F		Ħ									100	

BS 1377 : definitive method unless stated :

Org Organic matter content (s-sulphides, c-chlorides identified)

LOI Mass loss on ignition at 440°C

CO2 Carbonate content (rapid titration)

CI Chloride content

* Sulphate tests preparation / test methods :

3. BS 1377:Part 3:1990:clause 5.5

< 2mm material passing 2mm sieve

1. BS 1377:Part 3:1990:clause 5.3 4. TRL447 - 1 water soluble sulphate

2. BS 1377:Part 3:1990:clause 5.4 5. TRL447 - 2 acid soluble sulphate

6. BR279 - groundwater sulphate

BRE Special Digest SD1, dependent options :

TS Total Sulphur to BR279 / EN ISO15178

Mg Soluble Magnesium to BR279, colorimetric

NO3 Soluble Nitrate to BR279, colorimetric

NH₄ qualitative

QA Ref

SLR₃ Rev 96 Aug 11



Printed:02/09/2015 10:23

Table CHEM 1



Chemtest The right chemistry to deliver results

Chemtest Ltd. Depot Road Newmarket CB8 0AL

Tel: 01638 606070 Email: info@chemtest.co.uk

Final Report

Report Number: 15-16597 Issue-1

Initial Date of Issue: 23-Jul-2015

Client: Geotechnical Engineering Ltd

Centurion House Olympus Park

Client Address: Quedgeley

Gloucester

Gloucestershire

GL2 4NF

Contact(s): Claire Andrew

Project: 30766 London Paramount Entertainment Resort

Quotation No.: Date Received: 21-Jul-2015

Order No.: Date Instructed: 21-Jul-2015

No. of Samples: 3 Target Due Date: 23-Jul-2015

Turnaround: (Wkdays) 5 Results Due Date: 27-Jul-2015

Date Approved: 23-Jul-2015

Approved By:

Details: Keith Jones, Technical Manager



Results Summary - Soil

Project: 30766 London Paramount Entertainment Resort

Client: Geotechnical Engineering Ltd		Chem	itest Jo	b No.:	15-16597	15-16597	15-16597
Quotation No.:	С	hemtes	t Samp	le ID.:	167488	167489	167490
Order No.:		Clien	t Sample	e Ref.:	BH101	BH101	BH101
		Clier	t Samp	le ID.:	27B	39B	59B
			Sample	Туре:	SOIL	SOIL	SOIL
	Top Depth (m):				6.0	9.0	14.0
		Bot	tom Dep	oth(m):			
		[Date Sar	mpled:	20-Jul-15	20-Jul-15	20-Jul-15
Determinand	Accred.	SOP	Units	LOD			
Moisture	N	2030	%	0.02	63	42	19
Organic Matter	U	2625	%	0.4	19	5.2	0.86



Report Information

Key

- U UKAS accredited
- M MCERTS and UKAS accredited
- N Unaccredited
- S This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
- SN This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
- T This analysis has been subcontracted to an unaccredited laboratory
- I/S Insufficient Sample
- U/S Unsuitable Sample
- N/E not evaluated
 - < "less than"
 - "greater than"

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVCOs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at our Coventry laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A Date of sampling not supplied
- B Sample age exceeds stability time (sampling to extraction)
- C Sample not received in appropriate containers
- D Broken Container

Sample Retention and Disposal

All soil samples will be retained for a period of 60 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to: <u>customerservices@chemtest.co.uk</u>



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13/07/2015

Analytical Report Number: 15-75255

Project / Site name: London Paramount Entertainment Samples received on:

Resort

Your job number: 30766 BH202 Samples instructed on: 13/07/2015

Your order number: Analysis completed by: 17/07/2015

Report Issue Number: 1 Report issued on: 17/07/2015

Samples Analysed: 3 soil samples

Signed:

Colin Everett Senior Analyst

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting

Iss No 15-75255-1





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				464705	464706	464707	
Sample Reference		BH202 44B	BH202 53B	BH202 64D			
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				10.60	14 00	17.50	
Date Sampled				09/07/2015	10/07/2015	11/07/2015	
Time Taken				1400	1410	1430	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	
Moisture Content	%	N/A	NONE	59	45	13	
Total mass of sample received	kg	0.001	NONE	0.20	0.22	0.15	
General Inorganics							
Organic Matter	%	0.1	MCERTS	9.8	7.8	2.5	





Project / Site name: London Paramount Entertainment Resort

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Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
464705	BH202 44B	None Supplied	10.60	Grey clay.
464706	BH202 53B	None Supplied	14.00	Grey clay.
464707	BH202 64D	None Supplied	17.50	Grey clay.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





Claire Andrew

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29/07/2015

Analytical Report Number: 15-76182

Project / Site name: London Paramount Entertainment Samples received on:

Resort

Your job number: 30766 BH203 Samples instructed on: 29/07/2015

Your order number: Analysis completed by: 03/08/2015

Report Issue Number: 1 Report issued on: 03/08/2015

Samples Analysed: 1 soil sample

Rexona Rahman Reporting Manager

Signed:

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number		470308				
Sample Reference				BH203 17B		
Sample Number				None Supplied		
Depth (m)				5.00		
Date Sampled				28/07/2015		
Time Taken				0930		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status			
Stone Content	%	0.1	NONE	< 0.1		
Moisture Content	%	N/A	NONE	35		
Total mass of sample received	kg	0.001	NONE	2.0		





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
470308	BH203 17B	None Supplied	5 00	Light grey clay.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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Analytical Report Number: 15-76372

Project / Site name: London Paramount Enertainment Resort Samples received on: 31/07/2015

Your job number: 30766 BH204 Samples instructed on: 31/07/2015

Your order number: Analysis completed by: 06/08/2015

Report Issue Number: 1 Report issued on: 06/08/2015

Samples Analysed: 2 soil samples



Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting





Project / Site name: London Paramount Enertainment Resort

Lab Sample Number	-			471495	471496		
Sample Reference				BH204 16B	BH204 27B		
Sample Number		None Supplied	None Supplied				
Depth (m)		4.00	7.00				
Date Sampled				30/07/2015	30/07/2015		
Time Taken				0900	0900		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	19	11		
Total mass of sample received	kg	0.001	NONE	0 23	0.23		

General Inorganics

General Inorganics	eneral morganics								
pH	pH Units	N/A	MCERTS	7.3	-				
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	1.4	-				
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	1400	-				
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	0 68	-				
Organic Matter	%	0.1	MCERTS	4.3	0.4				





Project / Site name: London Paramount Enertainment Resort

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Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
471495	BH204 16B	None Supplied	4 00	Black clay.
471496	BH204 27B	None Supplied	7 00	Light grey clay.





Project / Site name: London Paramount Enertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



Claire Andrew

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13/07/2015

Analytical Report Number: 15-75265

Project / Site name: London Paramount Entertainment Samples received on:

Resort

Your job number: 30766 BH501 Samples instructed on: 13/07/2015

Your order number: Analysis completed by: 17/07/2015

Report Issue Number: 1 Report issued on: 17/07/2015

Samples Analysed: 1 soil sample

Signed:

Neil Donovan
Environmental Forensics Manager
For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter
Assistant Reporting Manager
For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting



Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				464746		
Sample Reference		BH501 40X				
Sample Number				None Supplied		
Depth (m)	7.40					
Date Sampled				10/07/2015		
Time Taken				0615		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status			
Stone Content	%	0.1	NONE	< 0.1		
Moisture Content	%	N/A	NONE	6.8		
Total mass of sample received	kg	0.001	NONE	0 29		

General Inorganics

pH	pH Units	N/A	NONE	9.7		
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	NONE	0 56		
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	NONE	560		
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	NONE	0 28		



Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

ı	.ab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
	464746	BH501 40X	None Supplied	7.40	White chalk with rubble.**

**Non MCERTS matrix



Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



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Analytical Report Number: 15-76032

Project / Site name: London Paramount Entertainment Samples received on: 27/07/2015

Resort

Your job number: 30766 BH502 Samples instructed on: 27/07/2015

Your order number: Analysis completed by: 30/07/2015

Report Issue Number: 1 Report issued on: 30/07/2015

Samples Analysed: 1 soil sample

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting



Lab Sample Number

Project / Site name: London Paramount Entertainment Resort

Sample Reference				BH502 27X			
Sample Number				None Supplied			
Depth (m)				5 60			
Date Sampled				23/07/2015			
Time Taken				1630			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1			
Moisture Content	%	N/A	NONE	12			
Total mass of sample received	kg	0.001	NONE	0.23			
General Inorganics							
рН	pH Units	N/A	NONE	8.7	·		
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	NONE	0.15			
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	NONE	150	, and the second		
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	NONE	0.074			

469369



Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

	Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
ſ	469369	BH502 27X	None Supplied	5.60	White chalk. **

^{**} Non MCerts Matrix



Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





Claire Andrew

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Analytical Report Number: 15-74049

London Paramount Entertainment Project / Site name:

Resort

Your job number: 30766 BH703

Your order number: Analysis completed by:

Report Issue Number:

Samples Analysed: 1 soil sample Samples received on: 23/06/2015

Samples instructed on: 23/06/2015

29/06/2015

Report issued on: 29/06/2015

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Signed:

Emma Winter

Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number		457514					
Sample Reference				BH703 5B			
Sample Number	Sample Number						
Depth (m)	1.00						
Date Sampled				22/06/2015			
Time Taken	0930						
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1			
Moisture Content	%	N/A	NONE	15			
Total mass of sample received	kg	0.001	NONE	0.57			

General Inorganics

choral Inorganics									
pH	pH Units	N/A	MCERTS	8.3					
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	0.20					
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	200					
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	n/l	0.00125	MCFRTS	0.10					





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
457514	BH703 5B	None Supplied	1 00	Light brown sandy clay with gravel and chalk.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
		T. I	1010 111/70		NONE
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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08/07/2015

08/07/2015

14/07/2015

Analytical Report Number: 15-74914

Project / Site name: London Paramount Entertainment

Resort

Your job number: 30766 BH704

Your order number: Analysis completed by: 14/07/2015

Report Issue Number:

Samples Analysed: 2 soil samples

Signed:

Emma Winter

soils

Assistant Reporting Manager

Samples received on:

Samples instructed on:

Report issued on:

For & on behalf of i2 Analytical Ltd.

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

- 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				462872	462873		
Sample Reference				BH704 23D	BH704 16D		
Sample Number				None Supplied	None Supplied		
Depth (m)				4.60	3.65		
Date Sampled				07/07/2015	07/07/2015		
Time Taken				0930	0930		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	15	15		
Total mass of sample received	kg	0.001	NONE	0.21	0.25		
General Inorganics							
pH	pH Units	N/A	MCERTS	7.9	-		
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	0.068	-		
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	68	-		
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	0.034	-		
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	42	-		
Organic Matter	%	0.1	MCERTS	-	< 0.1		
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	-		

Magnesium (water soluble)	ma/ka	5	NONE	11	_		





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
462872	BH704 23D	None Supplied	4 60	Grey clay.
462873	BH704 16D	None Supplied	3 65	Light brown clay.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES.	In-house method based on TRL 447	L038-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





Claire Andrew

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t: 01923 225404 f: 01923 237404

e: reception@i2analytical.com

Analytical Report Number: 15-74051

London Paramount Entertainment Project / Site name:

Resort

Your job number: 30766 BH707

Your order number: Analysis completed by:

Report Issue Number:

Samples Analysed: 1 soil sample Samples received on: 23/06/2015

Samples instructed on: 25/06/2015

01/07/2015

Report issued on: 01/07/2015

Signed:

Dr Claire Stone Quality Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				457530			
Sample Reference				BH707 8X			
Sample Number	Sample Number						
Depth (m)	1.30-1.50						
Date Sampled	22/06/2015						
Time Taken				1045			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1			
Moisture Content	%	N/A	NONE	12			
Total mass of sample received	kg	0.001	NONE	1.3			

General Inorganics

Concrar Interganics	scholar Inolyanics									
pH	pH Units	N/A	MCERTS	8.0						
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	1.1						
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	1100						
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	n/l	0.00125	MCFRTS	0.54						





Project / Site name: London Paramount Entertainment Resort

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Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
457530	BH707 8X	None Supplied	1.30-1.50	Brown clay and loam with chalk.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
		T. I	1010 111/70		NONE
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





Claire Andrew

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e: reception@i2analytical.com

Analytical Report Number: 15-75864

Project / Site name: London Paramount Entertainment Samples received on: 23/07/2015

Resort

Your job number: 30766 TP702 Samples instructed on: 23/07/2015

Your order number: Analysis completed by: 29/07/2015

Report Issue Number: 1 Report issued on: 29/07/2015

Samples Analysed: 1 soil sample

Signed:

Rexona Rahman Reporting Manager For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				468519			
Sample Reference	Sample Reference						
Sample Number				None Supplied			
Depth (m)	1 50						
Date Sampled				22/07/2015			
Time Taken				0830			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1			
Moisture Content	%	N/A	NONE	11			
Total mass of sample received	kg	0.001	NONE	0.47			

General Inorganics

рН	pH Units	N/A	MCERTS	8.0					
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	0.17					
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	170					
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	0.086					





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
468519	TP702 7B	None Supplied	1.50	Light brown clay and loam.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

APPENDIX CCHEMICAL ANALYSES





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14/08/2015

14/08/2015

24/08/2015

Analytical Report Number: 15-77208

London Paramount Entertainment Project / Site name: Samples received on:

Resort

Your job number: 30766

Your order number: Analysis completed by: 24/08/2015

Report Issue Number:

Samples Analysed: 4 water samples

Signed:

Emma Winter

Samples instructed on:

Report issued on:

Signed: Neil Donovan

Environmental Forensics Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

soils - 4 weeks from reporting

For & on behalf of i2 Analytical Ltd.

Assistant Reporting Manager

leachates - 2 weeks from reporting - 2 weeks from reporting

asbestos - 6 months from reporting

Iss No 15-77208-1





Lab Sample Number			476304	476305	476306	476307		
Sample Reference				BH706	DUPLICATE B	BH707	BH705	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				6.46	None Supplied	11.03	2.77	
Date Sampled				14/08/2015	14/08/2015	14/08/2015	14/08/2015	
Time Taken				0900	0900	0925	1030	
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.8	7.7	7.5	7.4	
Electrical Conductivity	μS/cm	10	NONE	1200	1200	1300	1100	
Total Cyanide	μg/l	10	ISO 17025	< 10	< 10	< 10	< 10	
Complex Cyanide	μg/l	10	NONE	< 10	< 10	< 10	< 10	
Free Cyanide	μg/l	10	ISO 17025	< 10	< 10	< 10	< 10	
Sulphate as SO ₄	μg/l	45	ISO 17025	141000	113000	322000	137000	
Sulphide	μg/l 	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	
Chloride Ammoniacal Nitrogen as N	mg/l	0.15 15	ISO 17025 ISO 17025	140 62	140 110	190 240	140 110	
Nitrate as N	μg/l mg/l	0.01	ISO 17025	22.9	22.6	9.04	26.0	
Nitrate as NO ₃	mg/l	0.05	ISO 17025	101	100	40.1	115	
Nitrite as N	μq/l	1	ISO 17025	16	21	230	32	
Nitrite as NO ₂	μg/l	5	ISO 17025	53	69	750	110	
Chemical Oxygen Demand (Total)	mg/l	2	ISO 17025	7.2	6.4	27	15	
BOD (Biochemical Oxygen Demand)	mg/l	1	ISO 17025	4.2	4.7	73	73	
Total Oxidised Nitrogen (TON)	mg/l	0.3	NONE	23	23	9.3	26	
Total Phenois								
Total Phenols (monohydric)	μg/l	10	ISO 17025	< 10	< 10	< 10	< 10	
Considered PAUL								
Speciated PAHs Naphthalene		0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	1
Acenaphthylene	μg/l μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Acenaphthene	μg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Fluorene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Phenanthrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Chrysene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene	μg/l μg/l	0.01	ISO 17025 ISO 17025	< 0.01 < 0.01	< 0.01 < 0.01	< 0.01 < 0.01	< 0.01 < 0.01	
Benzo(ghi)perylene	μg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Coronene	μg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	
Total PAH		0.0	100 17005	. 0.2	.02	. 0.2	.03	
Total EPA-16 PAHs Total WAC-17 PAHs	μg/l μg/l	0.2	ISO 17025 NONE	< 0.2 < 0.2	< 0.2 < 0.2	< 0.2 < 0.2	< 0.2 < 0.2	
TOTAL WAC-17 PARS	ру/і	0.2	NUNE	< 0.2	< 0.2	< 0.2	< 0.2	
Heavy Metals / Metalloids								
Aluminium (dissolved)	mg/l	0.001	ISO 17025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	
Antimony (dissolved)	μg/l	0.4	ISO 17025	1.4	1.2	1.2	1.2	
Arsenic (dissolved)	μg/l	0.15	ISO 17025	0.23	0.23	0.57	0.31	
Barium (dissolved)	μg/l	0.06	ISO 17025	63	82	53	67	
Beryllium (dissolved)	μg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	
Boron (dissolved)	μg/l	0.02	ISO 17025	42 0.02	42 0.02	47 0.05	36 0.02	
Cadmium (dissolved) Chromium (dissolved)	μg/l μg/l	0.02	ISO 17025 ISO 17025	0.02	0.02	< 0.2	< 0.2	
Copper (dissolved)	μg/I μg/I	0.5	ISO 17025	< 0.5	< 0.5	0.6	0.9	
Iron (dissolved)	mg/l	0.004	ISO 17025	0.38	0.039	0.076	0.042	
Lead (dissolved)	μg/l	0.2	ISO 17025	23	20	< 0.2	< 0.2	
Manganese (dissolved)	μg/l	0.05	ISO 17025	20	25	560	170	
Mercury (dissolved)	μg/l	0.05	ISO 17025	0.21	0.17	0.16	0.12	
Molybdenum (dissolved)	μg/l	0.05	ISO 17025	0.35	0.38	9.4	0.82	
Nickel (dissolved)	μg/l 	0.5	ISO 17025	1.7	2.8	26	4.8	
Selenium (dissolved)	μg/l	0.6	ISO 17025	2.9	2.6	4.6	3.0	
Vanadium (dissolved)	μg/l	0.2	ISO 17025 ISO 17025	0.3 1.9	0.4 3.0	< 0.2 1.7	0.4 < 0.5	
Zinc (dissolved)	μg/l	0.5	150 1/025	1.9	3.0	1./	< 0.5	
Calcium (dissolved)	mg/l	0.012	ISO 17025	220	170	240	230	
Calcium (dissolved) Magnesium (dissolved)	mg/l mg/l	0.005	ISO 17025	11	11	12	7.1	
			100 1.010					





Lab Sample Number				476304	476305	476306	476307	
Sample Reference				BH706	DUPLICATE B	BH707	BH705	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				6.46	None Supplied	11.03	2.77	
Date Sampled				14/08/2015	14/08/2015	14/08/2015	14/08/2015	
Time Taken				0900	0900	0925	1030	
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
Monoaromatics	-				-		-	
Benzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
o-xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C16 - C21	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic (C5 - C35)	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C5 - C7	μq/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C5 - C7 TPH-CWG - Aromatic >C7 - C8	μg/I μg/I	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C7 - C8 TPH-CWG - Aromatic >C8 - C10	μg/I μg/I	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C0 - C10	μg/I μg/I	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C10 - C12 TPH-CWG - Aromatic >C12 - C16	μg/I μg/I	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C12 - C16 TPH-CWG - Aromatic >C16 - C21	μg/I μg/I	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C16 - C21 TPH-CWG - Aromatic >C21 - C35	μg/I μg/I	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic (C5 - C35)	μg/I μg/I	10	NONE	< 10	< 10	< 10	< 10	





Lab Sample Number				476304	476305	476306	476307	
Sample Reference				BH706	DUPLICATE B	BH707	BH705	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				6.46	None Supplied	11.03	2.77	
Date Sampled				14/08/2015	14/08/2015	14/08/2015	14/08/2015	
Time Taken		,	1	0900	0900	0925	1030	
		Δ	Αcc					
Analytical Parameter	Units	Limit of detection	Accreditation Status					
(Water Analysis)	<u>ਛ</u>	ct o	tus					
		5 7	Ö					
VOCs								
Chloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Chloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromomethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Vinyl Chloride	μg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
Trichlorofluoromethane	μg/I	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethene	μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0	< 1.0	
1,1,2-Trichloro-1,2,2-trifluoroethane Cis-1,2-dichloroethene	μ g/ l μ q/ l	1	ISO 17025	< 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
MTBE (Methyl Tertiary Butyl Ether)	μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethane	µg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
2,2-Dichloropropane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trichloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,1-Trichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloropropene Trans-1,2-dichloroethene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
Benzene	μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tetrachloromethane	µg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloropropane	μq/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Dibromomethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromodichloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Cis-1,3-dichloropropene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trans-1,3-dichloropropene	μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
Toluene 1,1,2-Trichloroethane	μg/l μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichloropropane	µg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Dibromochloromethane	μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tetrachloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dibromoethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Chlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0	< 1.0 < 1.0	
Ethylbenzene p & m-Xylene	μg/l μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0 < 1.0	< 1.0	
Styrene	µg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tribromomethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
o-Xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2,2-Tetrachloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Isopropylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
n-Propylbenzene 2-Chlorotoluene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
4-Chlorotoluene	µg/1	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,3,5-Trimethylbenzene	µg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
tert-Butylbenzene	μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,4-Trimethylbenzene	µg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
sec-Butylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p-Isopropyltoluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichlorobenzene 1,4-Dichlorobenzene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
Butylbenzene	μ g /I μ g /I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dibromo-3-chloropropane	μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,4-Trichlorobenzene	μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Hexachlorobutadiene	μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,3-Trichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				476304	476305	476306	476307	
Sample Reference				BH706	DUPLICATE B	BH707	BH705	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				6.46	None Supplied	11.03	2.77	
Date Sampled Time Taken				14/08/2015 0900	14/08/2015 0900	14/08/2015 0925	14/08/2015 1030	
Time Taken	ı —			0900	0900	0925	1030	
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs	•	•					•	
Aniline	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Phenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2-Chlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Bis(2-chloroethyl)ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1,3-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1,2-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1,4-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Bis(2-chloroisopropyl)ether 2-Methylphenol	μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	
2-Metnyiphenoi Hexachloroethane	μg/l	0.05	NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	
Nitrobenzene	μg/l μq/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Methylphenol	μg/I μg/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Isophorone	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2-Nitrophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2,4-Dimethylphenol	μq/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Bis(2-chloroethoxy)methane	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1,2,4-Trichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Naphthalene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
2,4-Dichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Chloroaniline	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Hexachlorobutadiene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Chloro-3-methylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2,4,6-Trichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2,4,5-Trichlorophenol 2-Methylnaphthalene	μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	
2-Chloronaphthalene	μg/l μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Dimethylphthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2,6-Dinitrotoluene	μq/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Acenaphthylene	μq/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
2,4-Dinitrotoluene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Dibenzofuran	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Chlorophenyl phenyl ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Diethyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Nitroaniline	μg/l	0.05	NONE TCO 1703E	< 0.05 < 0.01	< 0.05 < 0.01	< 0.05 < 0.01	< 0.05 < 0.01	
Fluorene	μg/l	0.01	ISO 17025 NONE	< 0.01	< 0.01 < 0.05	< 0.01 < 0.05	< 0.01 < 0.05	
Azobenzene Bromophenyl phenyl ether	μg/l μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Hexachlorobenzene	μg/I μg/I	0.03	NONE	< 0.02	< 0.03	< 0.03	< 0.03	
Phenanthrene	μg/l	0.01	ISO 17025	< 0.02	< 0.02	< 0.01	< 0.02	
Anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Carbazole	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Dibutyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Anthraquinone	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Butyl benzyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Chrysene Benzo(b)fluoranthene	μg/l	0.01	ISO 17025 ISO 17025	< 0.01 < 0.01	< 0.01 < 0.01	< 0.01 < 0.01	< 0.01 < 0.01	
Benzo(k)fluoranthene Benzo(k)fluoranthene	μg/l μg/l	0.01	ISO 17025 ISO 17025	< 0.01	< 0.01 < 0.01	< 0.01	< 0.01 < 0.01	
Benzo(a)pyrene	μg/I μg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Indeno(1,2,3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Dibenz(a,h)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
100 11 1 1 1								

U/S = Unsuitable Sample I/S = Insufficient Sample





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Biological oxygen demand of water	Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.	In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care.	L086-PL	W	ISO 17025
Boron in water	Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025
Chemical Oxygen Demand in Water (Total)	Determination of total COD in water by reflux oxidation with acidified K2Cr2O7 followed by colorimetry. Accredited matrices: SW, PW, GW.	HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)	L065-PL	W	ISO 17025
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082 B	W	ISO 17025
Complex cyanide in water	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Electrical conductivity of water	Determination of electrical conductivity in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in water	Determination of free cyanide by distillation followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrate in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrite in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by colorimetry.Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L077-PL	W	ISO 17025
pH in water	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L070-UK	W	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Speciated WAC-17 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L070-UK	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L010-PL	W	NONE
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN-82/C-04579.08	L078-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-UK	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





Emma Leivers

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Analytical Report Number: 15-77128

Replaces Analytical Report Number: 15-77128, issue no. 1

London Paramount Entertainment Project / Site name: Samples received on: 13/08/2015

Resort

Your job number: 30766 Samples instructed on: 13/08/2015

Your order number: Analysis completed by: 24/08/2015

Report Issue Number: Report issued on: 24/08/2015

Samples Analysed: 7 water samples

Signed:

Dee Theis **Operations Director** For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting - 2 weeks from reporting asbestos - 6 months from reporting





Lab Sample Number			475816	475817	475818	475819	475820	
Sample Reference				BH502	Duplicate A	BH708	BH204	BH203
Sample Number				None Supplied				
Depth (m)				12.09	12.09	16.12	3.08	2.82
Date Sampled				13/08/2015	13/08/2015	13/08/2015	13/08/2015	13/08/2015
Time Taken				1130	1130	1215	0945	1030
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.2	7.3	7.4	7.7	7.7
Electrical Conductivity	μS/cm	10	NONE	4000	4000	1500	1600	3000
Total Cyanide	μg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Complex Cyanide	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
Free Cyanide	μg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Sulphate as SO ₄	μg/l	45	ISO 17025	500000	483000	227000	95200	1060000
Sulphide	μg/l	5	NONE	< 5 0	< 5.0	< 5.0	< 5.0	< 5.0
Chloride	mg/l	0.15	ISO 17025	920	880	120	200	250
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15	< 15	< 15	1400	1800
Nitrate as N	mg/l	0.01	ISO 17025	29.9	28.4	19.2	0.32	0.32
Nitrate as NO ₃	mg/l	0.05	ISO 17025	132	126	85.1	1.40	1.40
Nitrite as N	μg/l	1	ISO 17025	14	10	4.0	3.0	13 43
Nitrite as NO ₂	μg/l	5	ISO 17025	46	33	13	9.9	
Chemical Oxygen Demand (Total)	mg/l	2	ISO 17025	14	20	5.6	58	53
BOD (Biochemical Oxygen Demand) Total Oxidised Nitrogen (TON)	mg/l mg/l	0.3	ISO 17025 NONE	5.3 30	6.6 28	3.3 19	16 0.3	5.6 0.3
Total Phenois	Ilig/i	0.5	NONL	30	20	19	0.5	0.5
Total Phenois (monohydric)	μg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene		0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	μg/l μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	μg/I μg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
Chrysene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
Dibenz(a,h)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
Coronene	μg/l	0.01	NONE	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
Total PAH					•			
Total EPA-16 PAHs	μg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Total WAC-17 PAHs	μg/l	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2





Lab Sample Number				475816	475817	475818	475819	475820
Sample Reference				BH502	Duplicate A	BH708	BH204	BH203
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				12.09	12.09	16.12	3.08	2.82
Date Sampled				13/08/2015	13/08/2015	13/08/2015	13/08/2015	13/08/2015
Time Taken				1130	1130	1215	0945	1030
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Aluminium (dissolved)	mg/l	0.001	ISO 17025	0.0026	0.0032	0.0046	0.0120	0.0518
Antimony (dissolved)	μg/l	0.4	ISO 17025	1.3	1.1	0.8	1.3	1.8
Arsenic (dissolved)	μg/l	0.15	ISO 17025	0.70	0.74	0.48	2.57	2.87
Barium (dissolved)	μg/l	0.06	ISO 17025	66	65	48	50	160
Beryllium (dissolved)	μg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Boron (dissolved)	μg/l	10	ISO 17025	480	470	36	290	480
Cadmium (dissolved)	μg/l	0.02	ISO 17025	0.03	< 0.02	0.03	< 0.02	< 0.02
Chromium (dissolved)	μg/l	0.2	ISO 17025	22	22	0.9	0.5	0.7
Copper (dissolved)	μg/l	0.5	ISO 17025	4.9	4.3	2.7	4.2	4.3
Iron (dissolved)	mg/l	0.004	ISO 17025	< 0.004	0.064	0.011	0.097	0.012
Lead (dissolved)	μg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	0.2	0.4
Manganese (dissolved)	μg/l	0.05	ISO 17025	12	11	10	880	1100
Mercury (dissolved) Molybdenum (dissolved)	μg/l	0.05	ISO 17025 ISO 17025	0.38 4.3	0.31 4.4	0.06	0.28 12	0.28 7.2
Molybdenum (dissolved) Nickel (dissolved)	μg/l	0.05 0.5	ISO 17025 ISO 17025	4.3	4.4	0.38 2.2	5.3	7.2 8.8
Selenium (dissolved)	μg/l μg/l	0.5	ISO 17025	18	17	2.8	3.4	10
Vanadium (dissolved)	μg/I μg/I	0.0	ISO 17025	2.0	2.1	0.4	0.7	0.9
Zinc (dissolved)	μg/I μg/I	0.5	ISO 17025	18	12	1.6	6.6	2.9
Calcium (dissolved) Magnesium (dissolved) Potassium (dissolved) Phosphorus (total)	mg/l mg/l mg/l µg/l	0.012 0.005 0.025 20	ISO 17025 ISO 17025 ISO 17025 ISO 17025	350 20 74 190	370 19 72 750	210 18 5.2 600	86 37 21 100	380 77 50 70
Monoaromatics								
Benzene	µg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Alighatic >C16 - C21	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C7 - C8	μg/I μg/I	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic > C8 - C10	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
			_					





Lab Sample Number				475816	475817	475818	475819	475820
Sample Reference				BH502	Duplicate A	BH708	BH204	BH203
Sample Number				None Supplied				
Depth (m)				12.09	12.09	16.12	3.08	2.82
Date Sampled				13/08/2015	13/08/2015	13/08/2015	13/08/2015	13/08/2015
Time Taken				1130	1130	1215	0945	1030
			A					
Analytical Parameter	_	Limit of detection	Accreditation Status					
(Water Analysis)	Units	nit ecti	creditat Status					
(Water Analysis)	o,	g of	s					
			š					
VOCs								
Chloromethane	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	μg/l	1	NONE	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	μg/l	1	NONE ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene 1,1,2-Trichloro-1,2,2-trifluoroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	μg/l μg/l	1	ISO 17025	< 1 0 < 1 0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
MTBE (Methyl Tertiary Butyl Ether)	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene Trans-1,3-dichloropropene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1 0 < 1 0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	μg/l	1	ISO 17025	< 10	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
1,1,2-Trichloroethane	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene 1.1.2.2-Tetrachloroethane	μg/l	1	ISO 17025	< 1 0 < 1 0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
	μg/l	1	ISO 17025					
<u>Isopropylbenzene</u> Bromobenzene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1 0 < 1 0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
n-Propylbenzene	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
1 3 5-Trimethylbenzene	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	μg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	μg/l	1	ISO 17025	< 1 0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 10	< 1.0	< 1.0	< 1.0	< 1.0
1 2-Dibromo-3-chloropropane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1 2 4-Trichlorobenzene Hexachlorobutadiene	μg/l	1	ISO 17025 ISO 17025	< 1.0	< 1.0	< 1.0 < 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1 0 < 1 0	< 1.0 < 1.0	< 1.0	< 1.0 < 1.0	< 1.0 < 1.0
1/2/3ciliorobenzene	P9/1		100 1/023	`10	` 1.0	` 1.0	` 1.0	` 1.0





Lab Sample Number				475816	475817	475818	475819	475820
Sample Reference				BH502	Duplicate A	BH708	BH204	BH203
Sample Number				None Supplied				
Depth (m)				12.09	12.09	16.12	3.08	2.82
Date Sampled				13/08/2015	13/08/2015	13/08/2015	13/08/2015	13/08/2015
Time Taken				1130	1130	1215	0945	1030
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs					•			
Aniline	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1 4-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether 2-Methylphenol	μg/l μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0 05 < 0 05	< 0.05 < 0.05	< 0.05 < 0.05
Z-Metnyipnenoi Hexachloroethane	μg/l μg/l	0.05	NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	μg/I μg/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	μg/l μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isophorone	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2 4-Dimethylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
2 4-Dichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol 2 4 5-Trichlorophenol	μg/l μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0 05 < 0 05	< 0.05 < 0.05	< 0.05 < 0.05
2-Methylnaphthalene	μg/l μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chloronaphthalene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2 6-Dinitrotoluene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Diethyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene Azobenzene	μg/l	0.01	ISO 17025 NONE	< 0.01 < 0.05	< 0.01 < 0.05	< 0 01 < 0 05	< 0.01 < 0.05	< 0.01 < 0.05
Azobenzene Bromophenyl phenyl ether	μg/l μg/l	0.05	NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	μg/l μg/l	0.03	NONE	< 0.03	< 0.03	< 0.03	< 0.03	< 0.02
Phenanthrene	μg/l	0.02	ISO 17025	< 0.01	< 0.02	< 0.02	< 0.02	< 0.01
Anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbazole	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
Pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
Butyl benzyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene Benzo(k)fluoranthene	μg/l	0.01	ISO 17025 ISO 17025	< 0.01 < 0.01	< 0.01 < 0.01	< 0 01 < 0 01	< 0.01 < 0.01	< 0.01 < 0.01
Benzo(a)pyrene	μg/l μg/l	0.01	ISO 17025 ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1 2 3-cd)pyrene	μg/I μg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a h)anthracene	μg/l μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Donie (grif)por fronc	μ9/ 1	0.01	1/023	7 0.01			` 0.01	, 0.01





Lab Sample Number		475821	475822				
Sample Reference				BH501	BH703		
Sample Number				None Supplied	None Supplied		
Depth (m)				11.74	4.73		
Date Sampled				13/08/2015	13/08/2015		
Time Taken				1120	1230		
			A				
		Limit of detection	Accreditation Status				
Analytical Parameter	Units	mit	edit				
(Water Analysis)	S.	ig of	us				
			9				
General Inorganics							
pH	pH Units	N/A	ISO 17025	7.5	7.7		
Electrical Conductivity	μS/cm	10	NONE	1100	1500		
Total Cyanide	μg/l	10	ISO 17025	< 10	< 10		
Complex Cyanide	μg/l	10	NONE	< 10	< 10		
Free Cyanide	μg/l	10	ISO 17025	< 10	< 10		
Sulphate as SO ₄	μg/l	45	ISO 17025	124000	329000		
Sulphide	μg/l	5	NONE	< 5 0	< 5.0		
Chloride	mg/l	0.15	ISO 17025	60	120	 	\vdash
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15	< 15		
Nitrate as N	mg/l	0.01	ISO 17025	18.1	7.16		
Nitrate as NO ₃	mg/l	0.05	ISO 17025	80.2	31.7		
Nitrite as N	μg/l	1	ISO 17025	4.0	30		
Nitrite as NO ₂	μg/l	5	ISO 17025	13	99		
Chemical Oxygen Demand (Total)	mg/l	2	ISO 17025	5.9	4.3	!	
BOD (Biochemical Oxygen Demand) Total Oxidised Nitrogen (TON)	mg/l	0.3	ISO 17025	5.5	3.0 7.2		
Total Oxidised Nitrogen (TON)	mg/l	0.3	NONE	18	7.2		
Total Phenois							
Total Phenols (monohydric)	μg/l	10	ISO 17025	< 10	< 10		
rotal ritarios (monoriyano)	P9/·		100 17 020	120		I.	<u> </u>
Speciated PAHs							
Naphthalene	μg/l	0.01	ISO 17025	< 0.01	< 0.01		
Acenaphthylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01		
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01		
Fluorene	μg/l	0.01	ISO 17025	< 0.01	< 0.01		
Phenanthrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01		
Anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01		
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01		
Pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01		
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01		
Chrysene	μg/l	0.01	ISO 17025	< 0.01	< 0.01		
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01		
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01		
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01		
Indeno(1,2,3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	1	├ ───┤
Dibenz(a,h)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	 	├──
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01		
Coronene	μg/l	0.01	NONE	< 0.01	< 0.01	<u> </u>	
Total PAH							
Total EPA-16 PAHs	μg/l	0.2	ISO 17025	< 0 2	< 0.2	1	
Total WAC-17 PAHs	μg/l	0.2	NONE	< 0.2	< 0.2		
TOWN TITLE IT I THIS	μ9/1	٧.۷	INOINL	\ U Z	\ V.Z		





Lab Sample Number				475821	475822		
Sample Reference				BH501	BH703		
Sample Number				None Supplied	None Supplied		
Depth (m)				11.74	4.73		
Date Sampled				13/08/2015	13/08/2015		
Time Taken				1120	1230		
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
			=				
Heavy Metals / Metalloids		0.004	I	0.0470	0.0050		
Aluminium (dissolved) Antimony (dissolved)	mg/l	0.001	ISO 17025	0.0172 1.4	0.0058 1.0		
Arsenic (dissolved)	μg/l μg/l	0.4	ISO 17025 ISO 17025	0.61	0.22		
Barium (dissolved)	μg/l μg/l	0.13	ISO 17025	45	110		
Beryllium (dissolved)	μg/l	0.00	ISO 17025	< 0.1	< 0.1		
Boron (dissolved)	μg/l	10	ISO 17025	120	48		
Cadmium (dissolved)	μg/l	0.02	ISO 17025	0.03	< 0.02		
Chromium (dissolved)	μg/l	0.2	ISO 17025	0.8	0.4		
Copper (dissolved)	μg/l	0.5	ISO 17025	4.5	4.3		
Iron (dissolved)	mg/l	0.004	ISO 17025	< 0.004	0.006		
Lead (dissolved)	μg/l	0.2	ISO 17025	7.5	< 0.2		
Manganese (dissolved)	μg/l	0.05	ISO 17025	4.7	130		
Mercury (dissolved)	μg/l	0.05	ISO 17025	0.37	0.20		
Molybdenum (dissolved)	μg/l	0.05	ISO 17025	0.92	1.5		
Nickel (dissolved)	μg/l	0.5	ISO 17025	3.1	3.0		
Selenium (dissolved)	μg/l	0.6	ISO 17025	3.6	3.0		
Vanadium (dissolved)	μg/l	0.2	ISO 17025	0.9	0.3		
Zinc (dissolved)	μg/l	0.5	ISO 17025	3.6	0.7		
Calcium (dissolved) Magnesium (dissolved) Potassium (dissolved) Phosphorus (total)	mg/l mg/l mg/l µg/l	0.012 0.005 0.025 20	ISO 17025 ISO 17025 ISO 17025 ISO 17025	160 10 13 430	200 11 48 3000		
Monoaromatics	1	n				_	
Benzene	μg/l	1	ISO 17025	< 1 0	< 1.0		
Toluene	μg/l	1	ISO 17025	< 1 0	< 1.0		
Ethylbenzene	μg/l	1	ISO 17025	< 1 0	< 1.0	-	
p & m-xylene o-xylene	μg/l	1	ISO 17025 ISO 17025	< 1 0 < 1 0	< 1.0 < 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/l μg/l	1	ISO 17025	< 10	< 1.0		
Petroleum Hydrocarbons	F-9/·			·			
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10	< 10	.	
TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE	< 10	< 10	1	
TPH-CWG - Aliphatic > C16 - C21	μg/l	10	NONE	< 10	< 10	1	
TPH-CWG - Aliphatic >C21 - C35	μg/l	10 10	NONE	< 10	< 10 < 10	 	
TPH-CWG - Aliphatic (C5 - C35)	μg/l	10	NONE	< 10	< 10	1	
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aromatic >C5 - C7 TPH-CWG - Aromatic >C7 - C8	μg/I μg/I	10	NONE	< 10	< 10	 	
TPH-CWG - Aromatic > C8 - C10	μg/l	10	NONE	< 10	< 10	1	
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE	< 10	< 10	1	
TPH-CWG - Aromatic >C12 - C16	μg/l	10	NONE	< 10	< 10	1	
TPH-CWG - Aromatic >C16 - C21	μg/l	10	NONE	< 10	< 10	1	
TPH-CWG - Aromatic >C21 - C35	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aromatic (C5 - C35)	μg/l	10	NONE	< 10	< 10		





Lab Sample Number				475821	475822		
Sample Reference				BH501	BH703	1	
Sample Number				None Supplied	None Supplied		
Depth (m)				11.74	4.73		
Date Sampled				13/08/2015	13/08/2015		
Time Taken				1120	1230		
			A				
Analytical Dayameter	_	de ⊑	Accreditation Status				
Analytical Parameter	Units	Limit of detection	edit				
(Water Analysis)	66	할 육	atio				
			on on				
VOCs							
Chloromethane	μg/l	1	ISO 17025	< 10	< 1.0		
Chloroethane	μg/l	1	ISO 17025	< 1 0	< 1.0		
Bromomethane	μg/l	1	ISO 17025	< 1 0	< 1.0		
Vinyl Chloride	μg/l	1	NONE	< 1 0	< 1.0		
Trichlorofluoromethane	μg/l	1	NONE	< 10	< 1.0		
1,1-Dichloroethene	μg/l	1	ISO 17025	< 1 0	< 1.0		
1,1,2-Trichloro-1,2,2-trifluoroethane Cis-1,2-dichloroethene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1 0 < 1 0	< 1.0 < 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/l	1	ISO 17025	< 10	< 1.0		
1,1-Dichloroethane	μg/l	1	ISO 17025	< 10	< 1.0	1	
2,2-Dichloropropane	μg/l	1	ISO 17025	< 10	< 1.0	1	
Trichloromethane	μg/l	1	ISO 17025	< 10	< 1.0		
1,1,1-Trichloroethane	μg/l	1	ISO 17025	< 10	< 1.0		
1,2-Dichloroethane	μg/l	1	ISO 17025	< 10	< 1.0		
1,1-Dichloropropene	μg/l	1	ISO 17025	< 10	< 1.0		
Trans-1,2-dichloroethene	μg/l	1	ISO 17025	< 10	< 1.0		
Benzene	μg/l	1	ISO 17025	< 10	< 1.0		
Tetrachloromethane	μg/l	1	ISO 17025	< 1 0	< 1.0		
1,2-Dichloropropane	μg/l	1	ISO 17025	< 1 0	< 1.0		
Trichloroethene	μg/l	1	ISO 17025	< 1 0	< 1.0		
Dibromomethane	μg/l	1	ISO 17025	< 1 0	< 1.0		
Bromodichloromethane	μg/l	1	ISO 17025	< 1 0	< 1.0		
Cis-1,3-dichloropropene Trans-1,3-dichloropropene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1 0 < 1 0	< 1.0 < 1.0		
Toluene	μg/l	1	ISO 17025	< 10	< 1.0		
1,1,2-Trichloroethane	μg/l	1	ISO 17025	< 10	< 1.0		
1,3-Dichloropropane	μg/l	1	ISO 17025	< 10	< 1.0	1	
Dibromochloromethane	μg/l	1	ISO 17025	< 10	< 1.0		
Tetrachloroethene	μg/l	1	ISO 17025	< 10	< 1.0		
1,2-Dibromoethane	μg/l	1	ISO 17025	< 10	< 1.0		
Chlorobenzene	μg/l	1	ISO 17025	< 10	< 1.0		
1,1,1,2-Tetrachloroethane	μg/l	1	ISO 17025	< 10	< 1.0		
Ethylbenzene	μg/l	1	ISO 17025	< 10	< 1.0		
p & m-Xylene	μg/l	1	ISO 17025	< 1 0	< 1.0		
Styrene	μg/l	1	ISO 17025	< 1 0	< 1.0	1	
Tribromomethane	µg/l	1	ISO 17025	< 10	< 1.0	_	
o-Xylene 1,1,2,2-Tetrachloroethane	μg/l	1	ISO 17025 ISO 17025	< 1 0 < 1 0	< 1.0 < 1.0	 	
Isopropylbenzene	μg/l	1	ISO 17025	< 10	< 1.0	 	
Bromobenzene	μg/l μg/l	1	ISO 17025	< 10	< 1.0	1	
n-Propylbenzene	μg/l	1	ISO 17025	< 10	< 1.0	1	1
2-Chlorotoluene	μg/l	1	ISO 17025	< 10	< 1.0		
4-Chlorotoluene	μg/l	1	ISO 17025	< 1 0	< 1.0		
1 3 5-Trimethylbenzene	μg/l	1	ISO 17025	< 1 0	< 1.0		
tert-Butylbenzene	μg/l	1	ISO 17025	< 10	< 1.0		
1,2,4-Trimethylbenzene	μg/l	1	ISO 17025	< 10	< 1.0		
sec-Butylbenzene	μg/l	1	ISO 17025	< 10	< 1.0	ļ	
1,3-Dichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0		
p-Isopropyltoluene	μg/l	1	ISO 17025	< 1 0	< 1.0	.	
1,2-Dichlorobenzene	μg/l	1	ISO 17025	< 1 0	< 1.0	.	
1,4-Dichlorobenzene	μg/l	1	ISO 17025	< 1 0	< 1.0	 	
Butylbenzene	μg/l	1	ISO 17025 ISO 17025	< 1.0	< 1.0	-	
1 2-Dibromo-3-chloropropane 1 2 4-Trichlorobenzene	μg/l	1	ISO 17025	< 1 0 < 1 0	< 1.0 < 1.0	 	
Hexachlorobutadiene	μg/l μg/l	1	ISO 17025	< 10	< 1.0		
1,2,3-Trichlorobenzene	μg/I μg/I	1	ISO 17025	< 10	< 1.0	1	
7 7- 1-11-11-11-11-11-11-11-11-11-11-11-11-	L31.		1,020		1.0	1	





Lab Sample Number				475821	475822		I	
Sample Reference				BH501	BH703			
Sample Number				None Supplied	None Supplied			
Depth (m)				11.74	4.73			
Date Sampled				13/08/2015	13/08/2015			
Time Taken				1120	1230			
			A					
Analytical Parameter	_	Limit of detection	Accreditation Status					
(Water Analysis)	Units	Limit of detection	at diff.					
(Water Analysis)	٧,	의 역	s					
			=					
SVOCs	_		1		ı	T		1
Aniline	μg/l	0.05	NONE	< 0.05	< 0.05			
Phenol	μg/l	0.05	NONE	< 0.05 < 0.05	< 0.05 < 0.05			
2-Chlorophenol Bis(2-chloroethyl)ether	μg/l μg/l	0.05	NONE NONE	< 0.05	< 0.05			
1,3-Dichlorobenzene	μg/l μg/l	0.05	NONE	< 0.05	< 0.05			
1,2-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05			
1 4-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05			
Bis(2-chloroisopropyl)ether	μg/l	0.05	NONE	< 0.05	< 0.05			
2-Methylphenol	μg/l	0.05	NONE	< 0.05	< 0.05			
Hexachloroethane	μg/l	0.05	NONE	< 0.05	< 0.05			
Nitrobenzene	μg/l	0.05	NONE	< 0.05	< 0.05			
4-Methylphenol	μg/l	0.05	NONE	< 0.05	< 0.05			
Isophorone	μg/l	0.05	NONE	< 0.05	< 0.05			
2-Nitrophenol 2 4-Dimethylphenol	μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05			
Bis(2-chloroethoxy)methane	μg/l μg/l	0.05	NONE	< 0.05	< 0.05			
1,2,4-Trichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05			
Naphthalene	μg/l	0.01	ISO 17025	< 0.01	< 0.01			
2 4-Dichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05			
4-Chloroaniline	μg/l	0.05	NONE	< 0.05	< 0.05			
Hexachlorobutadiene	μg/l	0.05	NONE	< 0.05	< 0.05			
4-Chloro-3-methylphenol	μg/l	0.05	NONE	< 0.05	< 0.05			
2,4,6-Trichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05			
2 4 5-Trichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05			
2-Methylnaphthalene	μg/l	0.05	NONE	< 0.05	< 0.05			
2-Chloronaphthalene Dimethylphthalate	μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05			
2 6-Dinitrotoluene	μg/l μg/l	0.05	NONE	< 0.05	< 0.05			
Acenaphthylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01			
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01			
2,4-Dinitrotoluene	μg/l	0.05	NONE	< 0.05	< 0.05			
Dibenzofuran	μg/l	0.05	NONE	< 0.05	< 0.05			
4-Chlorophenyl phenyl ether	μg/l	0.05	NONE	< 0.05	< 0.05			
Diethyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05			
4-Nitroaniline	μg/l	0.05	NONE	< 0.05	< 0.05			
Fluorene	μg/l	0.01	ISO 17025	< 0.01 < 0.05	< 0.01 < 0.05		-	
Azobenzene Bromophenyl phenyl ether	μg/l μg/l	0.05	NONE NONE	< 0.05	< 0.05 < 0.05			
Hexachlorobenzene	μg/l μg/l	0.03	NONE	< 0.02	< 0.03			
Phenanthrene	μg/l	0.02	ISO 17025	< 0.01	< 0.02			
Anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01			
Carbazole	μg/l	0.05	NONE	< 0.05	< 0.05			
Dibutyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05			
Anthraquinone	μg/l	0.05	NONE	< 0.05	< 0.05			
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01			
Pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01			
Butyl benzyl phthalate	μg/l	0.05	NONE ISO 17025	< 0.05	< 0.05		-	
Benzo(a)anthracene Chrysene	μg/l μg/l	0.01	ISO 17025 ISO 17025	< 0.01 < 0.01	< 0.01 < 0.01		 	
Benzo(b)fluoranthene	μg/I μg/I	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(k)fluoranthene	μg/l μg/l	0.01	ISO 17025	< 0.01	< 0.01		1	
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01			
Indeno(1 2 3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01			
Dibenz(a h)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01			





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Biological oxygen demand of water	Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.	In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care.	L086-PL	W	ISO 17025
Boron in water	Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025
Chemical Oxygen Demand in Water (Total)	Determination of total COD in water by reflux oxidation with acidified K2Cr2O7 followed by colorimetry. Accredited matrices: SW, PW, GW.	HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)	L065-PL	W	ISO 17025
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082 B	W	ISO 17025
Complex cyanide in water	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of water	Determination of electrical conductivity in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in water	Determination of free cyanide by distillation followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrate in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrite in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by colorimetry.Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L077-PL	W	ISO 17025
pH in water	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L070-UK	W	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Speciated WAC-17 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L070-UK	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L010-PL	W	NONE
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN-82/C-04579.08	L078-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-UK	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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Analytical Report Number: 15-77040

Project / Site name: London Paramount Entertainment Samples received on: 12/08/2015

Resort

Your job number: 30766 Samples instructed on: 12/08/2015

Your order number: Analysis completed by: 20/08/2015

Report Issue Number: 1 Report issued on: 20/08/2015

Samples Analysed: 4 water samples

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Signed:

Emma Winter

Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

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Iss No 15-77040-1





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number	475326	475327	475328	475329				
Sample Reference				SW01	SW02	SW03	SW05	
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied				
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied				
Date Sampled	12/08/2015	12/08/2015	12/08/2015	12/08/2015				
Time Taken	1040	1145	1015	1115				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics			T					
pH	pH Units	N/A	ISO 17025	8.6	7.9	8.0	7.8	
Turbidity	NTU	1	NONE	< 1	< 1	< 1	< 1	
Nitrate as N	mg/l	0.01	ISO 17025	4.36	0.56	1.00	7.24	
Nitrate as NO ₃	mg/l	0.05	ISO 17025	19 3	2.49	4.42	32.1	
BOD (Biochemical Oxygen Demand)	mg/l mg/l	0.05	ISO 17025 ISO 17025	1.4	1.8	3.4	1.3	
· · · · · · · · · · · · · · · · · · ·	3,	0.05 1 4		1.4 3100	1.8 3700	3.4 3000	1.3 540	
BOD (Biochemical Oxygen Demand)	mg/l	1	ISO 17025	1.4	1.8	3.4	1.3	
BOD (Biochemical Oxygen Demand) Total Dissolved Solids (Gravimetric)	mg/l mg/l	1	ISO 17025 NONE	1.4 3100	1.8 3700	3.4 3000	1.3 540	
BOD (Biochemical Oxygen Demand) Total Dissolved Solids (Gravimetric) Dissolved Oxygen	mg/l mg/l	1	ISO 17025 NONE	1.4 3100 7.0	1.8 3700	3.4 3000	1.3 540	
BOD (Biochemical Oxygen Demand) Total Dissolved Solids (Gravimetric) Dissolved Oxygen Heavy Metals / Metalloids	mg/l mg/l mg/l	1 4 1	ISO 17025 NONE NONE	1.4 3100 7.0	1.8 3700 6.9	3.4 3000 5.5	1.3 540 7.9	

U/S = Unsuitable Sample I/S = Insufficient Sample





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status	
Biological oxygen demand of water	Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.	In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care.	L086-PL	W	ISO 17025	
Dissolved Oxygen in water	Determination of dissolved oxygen.	In-house method	L086-PL	W	NONE	
Faecal Coliforms Subcon Stansted Labs	Subcontracted.	Subcontracted analysis		W	NONE	
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025	
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025	
Nitrate in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025	
pH in water	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025	
Total dissolved solids in water (Gravimetric)	Determination of total dissolved solids in water by gravimetry.	In house method based on BSEN 15216:2007	L004-PL	W	NONE	
Turbidity of in water	Determination of sample turbidity by colorimeter and comparison with standard reference samples.	In-house method based on Standard Method 8237	L083-PL	W	NONE	

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

BACTERIOLOGICAL TEST REPORT



Client i2 Analytical LTD
Address: 7 Woodshots Meadow

7 Woodshots Meadow Croxley Green Business Park

Croxley Green Hertfordshire WD18 8YS

Site: 15-77040

FAO: Trevor Hill **Order No:** 7378 15-77040

Job Number: M/182/22045

Report No: 22967.1

Date Taken: Wed, Aug 12th, 2015

Date Rec'd: Fri, Aug 14th, 2015



Stansted Laboratories LTD

Unit 9, Riverside Industrial Estate 27 Thames Road Barking, Essex IG11 0ND

> Tel: +44 (0)20 8594 5104 Fax: +44 (0)20 8591 8762 sales@stanstedlabs.co.uk www.stanstedlabs.co.uk

> Directors: B. Patel, K.Patel

Items Marked ¤ are not included in the UKAS Schedule									
Sample ID Description & Temperatures		Analysis	Result	Tested	Notes / Species				
SL116313 475326			Faecal Coliforms ¤	15 MPN/100ml	14/08/2015				
Water - Open Init Temp	Temp > 1 Min	Temp > 2 Min							
SL116314 475327			Faecal Coliforms ¤	816 MPN/100ml	14/08/2015				
Water - Open Init Temp	Temp > 1 Min	Temp > 2 Min							
SL116315 475328			Faecal Coliforms ¤	37 MPN/100ml	14/08/2015				
Water - Open Init Temp	Temp > 1 Min	Temp > 2 Min							
SL116316 475329			Faecal Coliforms ¤	81 MPN/100ml	14/08/2015				
Water - Open Init Temp	Temp > 1 Min	Temp > 2 Min							

BACTERIOLOGICAL TEST REPORT



Client i2 Analytical LTD Address:

7 Woodshots Meadow Croxley Green Business Park

Croxley Green Hertfordshire **WD18 8YS**

15-77040 Site:

FAO: Trevor Hill Order No: 7378 15-77040 Job Number: M/182/22045 Report No:

Date Taken: Wed, Aug 12th, 2015 Date Rec'd:

22967.1

Fri, Aug 14th, 2015



Stansted Laboratories LTD

Unit 9. Riverside Industrial Estate 27 Thames Road Barking, Essex IG11 0ND

> Tel: +44 (0)20 8594 5104 Fax: +44 (0)20 8591 8762 sales@stanstedlabs.co.uk www.stanstedlabs.co.uk

Directors: B. Patel, K.Patel

Items Marked ¤ are not included in the UKAS Schedule
--

Sample ID Description & Temperatures **Analysis** Result Tested Notes / Species

Method Codes

B3.12 Coliforms and Escherichia coli

Legend & Footnotes

cfu = Colony Forming Units.

mpn = Most Probable Number.

TNTC = Too Numerous to Count.

Tests Marked a are not included in our UKAS Schedule.

All Samples Analysed as received.

Disclaimer

Results relate to water samples tested and should not be reproduced except in full, without the written approval of the laboratory.

----- END OF REPORT -----



Quality Manager

Date: Thu, Aug 20th 2015, 11:10





Emma Leivers

Geotechnical Engineering Ltd Centurion House Olympus Park Quedgeley Gloucester GL2 4NF

t: 01452 527 743 f: 01452 729 314

e: emma.leivers@geoeng.co.uk

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404 f: 01923 237404

e: reception@i2analytical.com

12/08/2015

Analytical Report Number: 15-77039

Project / Site name: London Paramount Entertainment Samples received on:

Resort

Your job number: 30766 Samples instructed on: 12/08/2015

Your order number: Analysis completed by: 21/08/2015

Report Issue Number: 1 Report issued on: 21/08/2015

Samples Analysed: 9 water samples

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





Lab Sample Number				475317	475318	475319	475320	475321
Sample Reference	BH101	WS102	WS203	BH201	WS101			
Sample Number		None Supplied	None Supplied	None Supplied	None Supplied	None Supplied		
Depth (m)				4.98	3.98	1.56	3.92	3,66
Date Sampled				12/08/2015	12/08/2015	12/08/2015	12/08/2015	12/08/2015
Time Taken	1000	1100	1200	1300	1000			
			>					
Analytical Parameter	⊆	Lim dete	Sta					
(Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics	General Inorganics							
рН	pH Units	N/A	ISO 17025	6.8	12.8	13.1	11.7	8.0
Electrical Conductivity	μS/cm	10	NONE	17000	34000	73000	4400	110000
Total Cyanide	μg/l	10	ISO 17025	< 10	< 10	13	< 10	< 10
Complex Cyanide	μg/l	10	NONE	< 10	< 10	13	< 10	< 10
Free Cyanide	μg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Sulphate as SO _{4 #}	μg/l	45	ISO 17025	532000	1530000	4720000	429000	11000000
Sulphide	μg/l	5	NONE	< 5.0	< 5.0	37000	5.8	< 5.0
Chloride	mg/l	0.15	ISO 17025	7000	3200	4700	460	28000
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	2800	5400	50000	2700	450000
Nitrate as N	mg/l	0.01	ISO 17025	0.09	0.14	0.36	0.83	0.80
Nitrate as NO ₃	mg/l	0.05	ISO 17025	0.42	0.62	1.61	3.69	3.53
Nitrite as N	μg/l	1	ISO 17025	1.0	300	410	590	11
Nitrite as NO ₂	μg/l	5	ISO 17025	< 5.0	970	1300	1900	36
Chemical Oxygen Demand (Total)	mg/l	2	ISO 17025	69	97	1300	80	1800
BOD (Biochemical Oxygen Demand)	mg/l	1	ISO 17025	4.4	1.4	34	9.7	24
Total Oxidised Nitrogen (TON)	mg/l	0.3	NONE	< 0.3	0.4	0.8	1.4	0.8
Total Phenois								
Total Phenols (monohydric)	μg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
Fluorene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
Phenanthrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
Anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
Pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Coronene	μg/l	0.01	NONE	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	μg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Total WAC-17 PAHs	μg/l	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2





Lab Sample Number	475317	475318	475319	475320	475321			
Sample Reference	BH101	WS102	WS203	BH201	WS101			
Sample Number		None Supplied	None Supplied	None Supplied	None Supplied	None Supplied		
Depth (m)				4.98	3.98	1.56	3.92	3.66
Date Sampled				12/08/2015	12/08/2015	12/08/2015	12/08/2015	12/08/2015
Time Taken	1000	1100	1200	1300	1000			
			A					
	_	de Li	Accreditation Status					
Analytical Parameter	Units	Limit of detection	creditat Status					
(Water Analysis)	ढ	<u>e</u> e	üs					
		3 "	9					
Heavy Metals / Metalloids								
Aluminium (dissolved)	mg/l	0.001	ISO 17025	0.0026	20.2	0.647	0.432	0.0433
Antimony (dissolved)	μg/l	0.4	ISO 17025	1.0	< 0.4	< 0.4	12	< 0.4
Arsenic (dissolved)	μg/l	0.15	ISO 17025	0.68	38.3	21.4	53.9	29.2
Barium (dissolved)	μg/l	0.06	ISO 17025	130	17	43	11	43
Beryllium (dissolved)	μg/l	0.1	ISO 17025	< 0.1	0.1	0.3	< 0.1	< 0.1
Boron (dissolved)	μg/l	10	ISO 17025	860	32	25	92	890
Cadmium (dissolved)	μg/l	0.02	ISO 17025	< 0.02	< 0.02	< 0.02	0.10	1.8
Chromium (dissolved)	μg/l	0.2	ISO 17025	1.2	18	1.2	4.5	17
Copper (dissolved)	μg/l	0.5	ISO 17025	4.0	66	9.4	21	12
Iron (dissolved)	mg/l	0.004	ISO 17025	< 0 004	0.039	0.029	0 073	0.078
Lead (dissolved)	μg/l	0.2	ISO 17025	0.3	9.0	1.4	2.4	1.6
Manganese (dissolved)	μg/l	0.05	ISO 17025	250	0.38	0.22	1.6	89
Mercury (dissolved)	μg/l	0.05	ISO 17025	0.94	< 0.05	1.33	0.71	< 0.05
Molybdenum (dissolved)	μg/l	0.05	ISO 17025	1.8	100	730	33	4.6
Nickel (dissolved)	μg/l	0.5	ISO 17025	12	7.0	1200	17	19
Selenium (dissolved)	μg/l	0.6	ISO 17025	65	47	260	20	18
Vanadium (dissolved)	μg/l	0.2	ISO 17025	0.9	73	84	460	34
Zinc (dissolved)	μg/l	0.5	ISO 17025	1.9	1.8	2.1	< 0.5	1.9
Calcium (dissolved)	mg/l	0.012	ISO 17025	270	6.6	20	8.1	230
Magnesium (dissolved)	mg/l	0.005	ISO 17025	270	< 0.005	< 0.005	< 0.005	270
Potassium (dissolved) #	mg/l	0.025	ISO 17025	110	6800	12000	880	21000
Phosphorus (total)	μg/l	20	ISO 17025	97	670	89	15000	34000
Monoaromatics								
Benzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Between Hadronalian								
Petroleum Hydrocarbons								
TDH CMC Aliabatic > CE CC	n	10	NONE	. 10	. 10	. 10	. 10	- 10
TPH-CWG - Aliphatic > C5 - C6	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic > C6 - C8	μg/l	10 10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C8 - C10 TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10
TPH-CWG - Aliphatic >C10 - C12 TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE NONE	< 10	< 10	< 10 < 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 TPH-CWG - Aliphatic >C16 - C21	μg/l	10		< 10	< 10		< 10	
TPH-CWG - Aliphatic >C16 - C21 TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE NONE	< 10	< 10	< 10 < 10	< 10	< 10 < 10
TPH-CWG - Aliphatic (C5 - C35)	μg/l μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
Circ Amphado (Co Coo)	P9/1	- 10	HONE	` 10	` 10	` 10	` 10	` 10
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C3 - C7 TPH-CWG - Aromatic >C7 - C8	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic > C8 - C10	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic > C10 - C12	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic > C12 - C16	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic > C16 - C21	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
` ′								





Lab Sample Number				475317	475318	475319	475320	475321
Sample Reference				BH101	WS102	WS203	BH201	WS101
Sample Number				None Supplied				
Depth (m)				4.98	3.98	1.56	3.92	3.66
Date Sampled				12/08/2015	12/08/2015	12/08/2015	12/08/2015	12/08/2015
Time Taken				1000	1100	1200	1300	1000
		_	Ac					
Analytical Parameter	_	Limit of detection	Accreditation Status					
(Water Analysis)	Units	nit ect	creditat Status					
(Water Analysis)	v	할 역	atic					
			ă					
VOCs Chloromethane			1700 47005	. 1.0	1.0	1.0	1.0	1.0
	µg/l	1	ISO 17025 ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane Bromomethane	μg/l μg/l	1	ISO 17025	< 1.0 < 1.0				
Vinyl Chloride	μg/I μg/I	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	μg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1 1-Dichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane 1,2-Dichloroethane	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0				
1 1-Dichloropropene	μg/I μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0				
1,1,2-Trichloroethane 1,3-Dichloropropane	μg/l μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1 2-Dibromoethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene Tribromomethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane o-Xylene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0				
1,1,2,2-Tetrachloroethane	μg/I μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	μg/l	1	ISO 17025 ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene 1,3-Dichlorobenzene	μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0				
p-Isopropyltoluene	μg/l μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1 2-Dichlorobenzene	μg/I μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
					-			





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				475317	475318	475319	475320	475321
Sample Reference				BH101	WS102	WS203	BH201	WS101
Sample Number				None Supplied				
Depth (m)				4.98	3.98	1.56	3.92	3.66
Date Sampled Time Taken				12/08/2015 1000	12/08/2015 1100	12/08/2015 1200	12/08/2015 1300	12/08/2015 1000
Time Taken			b	1000	1100	1200	1300	1000
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs								
Aniline	μg/l	0.05	NONE	< 0.05	0.40	11	< 0.05	< 0.05
Phenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol Bis(2-chloroethyl)ether	μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0 05 < 0 05	< 0.05 < 0.05	< 0.05 < 0.05
1,3-Dichlorobenzene	μg/l μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1 2-Dichlorobenzene	μg/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	μg/l	0.05	NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05	< 0.05 < 0.05	< 0.05 < 0.05
Nitrobenzene 4-Methylphenol	μg/l μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0 05 < 0 05	< 0.05 < 0.05	< 0.05 < 0.05
Isophorone	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene 2,4-Dichlorophenol	μg/l	0.01	ISO 17025	< 0.01 < 0.05	< 0.01 < 0.05	< 0 01 < 0 05	< 0.01 < 0.05	< 0.01 < 0.05
4-Chloroaniline	μg/l μg/l	0.05	NONE NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	μg/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	μg/l	0.05	NONE	< 0.05 < 0.05	0.17 < 0.05	< 0.05	< 0.05 < 0.05	< 0.05
2-Chloronaphthalene Dimethylphthalate	μg/l μg/l	0.05	NONE NONE	< 0.05	< 0.05	< 0 05 < 0 05	< 0.05 < 0.05	< 0.05 < 0.05
2,6-Dinitrotoluene	μg/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
2 4-Dinitrotoluene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether Diethyl phthalate	μg/l μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0 05 < 0 05	< 0.05 < 0.05	< 0.05 < 0.05
4-Nitroaniline	μg/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Azobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromophenyl phenyl ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	μg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Phenanthrene Anthracene	μg/l	0.01	ISO 17025 ISO 17025	< 0.01 < 0.01	< 0.01 < 0.01	< 0 01 < 0 01	< 0.01 < 0.01	< 0.01 < 0.01
Carbazole	μg/l μg/l	0.01	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
Pyrene Pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Butyl benzyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05 < 0.01	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene Chrysene	μg/l μg/l	0.01	ISO 17025 ISO 17025	< 0.01 < 0.01	< 0.01	< 0 01 < 0 01	< 0.01 < 0.01	< 0.01 < 0.01
Benzo(b)fluoranthene	μg/I μg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01
Dibenz(a,h)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0 01	< 0.01	< 0.01

[#] Results are an estimate only due to high dilutions

U/S = Unsuitable Sample I/S = Insufficient Sample





Sample None Suppled None Supplied None Suppled None Sup	Lab Sample Number				475322	475323	475324	475325	
None Supplied None Supplie	Sample Reference				BH202	WS202	FIELD BLANK	TRIP BLANK	
Depth (m) 3.66 7.95 None Supplied Date Sampled 12/08/2015 12/08/2015 12/08/2015 12/08/2015 12/08/2015 12/08/2015 12/08/2015 12/08/2015 12/08/2015 12/08/2015 12/08/2015 12/08/2015 12/08/2015 12/08/2015 12/08/2015 11/00					None Supplied	None Supplied			
Analytical Parameter (Water Analysis)									
Complex Cyanide Parameter Parameter	Date Sampled				12/08/2015	12/08/2015	12/08/2015	12/08/2015	
Ceneral Inorganics PH	Time Taken				1100	1200	1100	1100	
PH	•	Units	Limit of detection	Accreditation Status					
Electrical Conductivity	General Inorganics								
Total Cyanide	pH	pH Units	N/A	ISO 17025	7.4	13.0	10.3	8.6	
Complex Cyanide	Electrical Conductivity	μS/cm	10	NONE	14000	92000	540	10	
Free Cyanide	Total Cyanide	μg/l	10	ISO 17025	< 10	< 10	< 10	< 10	
Sulphate as SO _{4.7}	Complex Cyanide	μg/l	10	NONE	< 10	< 10	< 10	< 10	
Sulphide		μg/l		ISO 17025					
Chloride	Sulphate as SO _{4 #}	μg/l		ISO 17025		13000000	3280		
Ammoniacal Nitrogen as N μg/l 15 ISO 17025 4500 28000 < 15 < 15 Nitrate as N mg/l 0.01 ISO 17025 0.41 0.27 0.05 0.05 0.19 Nitrate as N mg/l 0.05 ISO 17025 1.82 1.19 0.21 0.83 Nitrite as N μg/l 1 ISO 17025 1.82 1.19 0.21 0.83 Nitrite as N μg/l 1 ISO 17025 14 910 9.0 6.0 Nitrite as N μg/l 5 ISO 17025 14 910 9.0 6.0 Nitrite as N μg/l 5 ISO 17025 46 3000 30 20 Octamical Oxygen Demand (Total) mg/l 2 ISO 17025 140 560 28 < 2.0 DOL (Biochemical Oxygen Demand) mg/l 1 ISO 17025 < 1.0 120 - - Octamical Oxygen (TON) mg/l 0.3 NONE 0.4 1.2 < 0.3 < 0.3 Octamical Oxygen (TON) mg/l 0.3 NONE 0.4 1.2 < 0.3 < 0.3 Octamical Oxygen (TON) mg/l 0.1 ISO 17025 < 1.0 10 < 10 < 10 < 10 Octamical Oxygen (TON) Octamical Oxygen (TON) mg/l 0.01 ISO 17025 < 1.0 0.1 < 0.01 < 0.01 < 0.01 Octamical Oxygen (TON) Octamical Oxygen (TON) Mg/l 0.01 ISO 17025 < 0.01 Octamical Oxygen (TON) Oc	Sulphide	μg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	
Nitrate as N		mg/l	0.15	ISO 17025		4300	0.61	2.5	
Nitrite as NO ₃		μg/l							
Nitrite as N		mg/l							
Nitrite as NO ₂	3	mg/l	0.05						
Chemical Oxygen Demand (Total) mg/l 2 ISO 17025 140 560 28 < 2.0									
Description									
Total Phenols Total Phenols Total Phenols (monohydric) μg/l 10 ISO 17025 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10									
Total Phenols Total Phenols (monohydric) μg/l 10 ISO 17025 < 10									
Total Phenols (monohydric) μg/l 10 ISO 17025 < 10 < 10 < 10 < 10 < 10	Total Oxidised Nitrogen (TON)	mg/l	0.3	NONE	0.4	1.2	< 0.3	< 0.3	
Speciated PAHs Naphthalene μg/l 0.01 ISO 17025 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	Total Phenois								
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Total Phenols (monohydric)	μg/l	10	ISO 17025	< 10	< 10	< 10	< 10	
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Benzo(ghi)perylene μg/l 0.01 ISO 17025 < 0.01 < 0.01 < 0.01 < 0.01									
	19 // /								
		1.5/						· · · · · · · · · · · · · · · · · · ·	
Total PAH	Total PAH								
Total EPA-16 PAHs		μg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	
Total WAC-17 PAHs	Total WAC-17 PAHs		0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	





Lab Sample Number				475322	475323	475324	475325	
Sample Reference				BH202	WS202	FIELD BLANK	TRIP BLANK	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				3.66	7.95	None Supplied	None Supplied	
Date Sampled				12/08/2015	12/08/2015	12/08/2015	12/08/2015	
Time Taken				1100	1200	1100	1100	
			Α					
	_	Li	Accreditation Status					
Analytical Parameter	Units	Limit of detection	ed:					
(Water Analysis)	ß	<u>e</u> e	üs					
		3 "	9					
Heavy Metals / Metalloids								
Aluminium (dissolved)	mg/l	0.001	ISO 17025	0.0080	0.0734	0.0578	0.0020	
Antimony (dissolved)	μg/l	0.4	ISO 17025	1.0	< 0.4	1.1	1.4	
Arsenic (dissolved)	μg/l	0.15	ISO 17025	0.76	15.6	0.36	< 0.15	
Barium (dissolved)	μg/l	0.06	ISO 17025	200	27	1.6	0.35	
Beryllium (dissolved)	μg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	
Boron (dissolved)	µg/l	10	ISO 17025	620	27	100	100	
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02	0.02	< 0.02	
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.9	1600	2.0	0.7	
Copper (dissolved)	μg/l	0.5	ISO 17025	2.2	27	3.1	3.3	
Iron (dissolved)	mg/l	0.004	ISO 17025	0.38	< 0.004	0.008	0 018	
Lead (dissolved)	μg/l	0.2	ISO 17025	0.2	3.0	< 0.2	< 0.2	
Manganese (dissolved)	μg/l	0.05	ISO 17025	860	< 0.05	5.8	0.53	
Mercury (dissolved)	μg/l	0.05	ISO 17025	0.24	< 0.05	< 0.05	< 0.05	
Molybdenum (dissolved)	μg/l	0.05	ISO 17025	2.8	380	2.8	0.45	
Nickel (dissolved)	μg/l	0.5	ISO 17025	1.9	160	1.2	< 0.5	
Selenium (dissolved)	μg/l	0.6	ISO 17025	49	630	13	3.2	
Vanadium (dissolved)	μg/l	0.2	ISO 17025	0.9	61	0.5	< 0.2	
Zinc (dissolved)	μg/l	0.5	ISO 17025	< 0.5	< 0.5	4.6	< 0.5	
Calcium (dissolved)	mg/l	0.012	ISO 17025	310	38	0.19	0.20	
Magnesium (dissolved)	mg/l	0.005	ISO 17025	190	< 0.005	< 0.005	< 0.005	
Potassium (dissolved) #	mg/l	0.025	ISO 17025	81	18000	9.5	9.5	
Phosphorus (total)	μg/l	20	ISO 17025	470	160	< 20	< 20	
Managemetics								
Monoaromatics				1.0	1.0	4.0	4.0	
Benzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
o-xylene MTBE (Methyl Tertiary Butyl Ether)	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
MIDE (Metrly) Tertiary Butyl Ether)	ру/і		130 17023	V 1.0	< 1.0	< 1.0	< 1.0	
Petroleum Hydrocarbons								
i ca olculii riyurocarboiis								
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C6 - C8	μg/I μg/I	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic > C10 - C12	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic > C12 - C16	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic > C16 - C21	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C7 - C8	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C8 - C10	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C12 - C16	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C16 - C21	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C21 - C35	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic (C5 - C35)	μg/l	10	NONE	< 10	< 10	< 10	< 10	





Lab Sample Number				475322	475323	475324	475325	
Sample Reference				BH202	WS202	FIELD BLANK	TRIP BLANK	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				3.66	7.95	None Supplied	None Supplied	
Date Sampled				12/08/2015	12/08/2015	12/08/2015	12/08/2015	
Time Taken				1100	1200	1100	1100	
		۵_	Acc					
Analytical Parameter	Units	Limit of detection	Accreditation Status					
(Water Analysis)	ij	향현	itat					
		5 "	ġ					
VOCs								
Chloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Chloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromomethane Vinyl Chloride	μg/l	1	ISO 17025 NONE	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
Trichlorofluoromethane	μg/l μg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2-Trichloro-1,2,2-trifluoroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Cis-1,2-dichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1 1-Dichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
2,2-Dichloropropane Trichloromethane	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
1,1,1-Trichloroethane	μg/I μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1 1-Dichloropropene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trans-1,2-dichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Benzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tetrachloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloropropane Trichloroethene	μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
Dibromomethane	μg/l μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromodichloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trans-1,3-dichloropropene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2-Trichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichloropropane Dibromochloromethane	μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0	
Tetrachloroethene	μg/l μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0 < 1.0	
1 2-Dibromoethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Chlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,1,2-Tetrachloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-Xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Styrene Tribromomethane	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
o-Xylene	μg/I μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2,2-Tetrachloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Isopropylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
n-Propylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
2-Chlorotoluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
4-Chlorotoluene 1,3,5-Trimethylbenzene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
tert-Butylbenzene	μg/I μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,4-Trimethylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
sec-Butylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p-Isopropyltoluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1 2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,4-Dichlorobenzene Butylbenzene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
1,2-Dibromo-3-chloropropane	μg/I μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,4-Trichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Hexachlorobutadiene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,3-Trichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
<u> </u>								





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				475222	475222	475224	475225	1
Lab Sample Number Sample Reference				475322 BH202	475323 WS202	475324 FIELD BLANK	475325 TRIP BLANK	
Sample Reference Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				3.66	7.95	None Supplied	None Supplied	
Date Sampled				12/08/2015	12/08/2015	12/08/2015	12/08/2015	
Time Taken				1100	1200	1100	1100	
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs	<u> </u>							
Aniline	μg/l	0.05	NONE	< 0.05	2.9	< 0.05	< 0.05	
Phenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2-Chlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Bis(2-chloroethyl)ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1,3-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1 2-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1,4-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Bis(2-chloroisopropyl)ether 2-Methylphenol	μg/l	0.05	NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	
2-Methylphenol Hexachloroethane	μg/l μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	
Nitrobenzene	μg/I μg/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Methylphenol	μg/I μg/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Isophorone	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2-Nitrophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2,4-Dimethylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Bis(2-chloroethoxy)methane	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1,2,4-Trichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Naphthalene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
2,4-Dichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Chloroaniline	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Hexachlorobutadiene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Chloro-3-methylphenol	μg/l	0.05	NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0 05 < 0 05	
2,4,6-Trichlorophenol 2,4,5-Trichlorophenol	μg/l μg/l	0.05	NONE NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2-Methylnaphthalene	μg/I μg/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2-Chloronaphthalene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2,6-Dinitrotoluene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Acenaphthylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0 01	
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0 01	
2 4-Dinitrotoluene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Dibenzofuran	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Chlorophenyl phenyl ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Diethyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Nitroaniline Fluorene	μg/l μg/l	0.05	NONE ISO 17025	< 0.05 < 0.01	< 0.05 < 0.01	< 0.05 < 0.01	< 0 05 < 0 01	
Azobenzene	μg/I μg/I	0.01	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Bromophenyl phenyl ether	μg/I μg/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Hexachlorobenzene	μg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
Phenanthrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0 01	
Carbazole	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Dibutyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Anthraquinone	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0 01	
Pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Butyl benzyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Chrysene Renzo(h)fluoranthene	μg/l	0.01	ISO 17025 ISO 17025	< 0.01 < 0.01	< 0.01	< 0.01 < 0.01	< 0 01 < 0 01	
Benzo(b)fluoranthene Benzo(k)fluoranthene	μg/l μg/l	0.01	ISO 17025	< 0.01	< 0.01 < 0.01	< 0.01	< 0.01	
Benzo(a)pyrene	μg/I μg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Indeno(1,2,3-cd)pyrene	μg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Dibenz(a,h)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0 01	

[#] Results are an estimate only due to high dilutions

U/S = Unsuitable Sample I/S = Insufficient Sample





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Biological oxygen demand of water	Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.	In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care.	L086-PL	W	ISO 17025
Boron in water	Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025
Chemical Oxygen Demand in Water (Total)	Determination of total COD in water by reflux oxidation with acidified K2Cr2O7 followed by colorimetry. Accredited matrices: SW, PW, GW.	HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)	L065-PL	W	ISO 17025
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082 B	W	ISO 17025
Complex cyanide in water	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of water	Determination of electrical conductivity in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in water	Determination of free cyanide by distillation followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrate in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrite in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by colorimetry.Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L077-PL	W	ISO 17025
pH in water	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L070-UK	W	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Speciated WAC-17 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L070-UK	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L010-PL	W	NONE
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN-82/C-04579.08	L078-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-UK	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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29/07/2015

Analytical Report Number: 15-76250

Project / Site name: London Paramount Entertainment Samples received on:

Resort

Your job number: 30766 Samples instructed on: 29/07/2015

Your order number: Analysis completed by: 06/08/2015

Report Issue Number: 1 Report issued on: 06/08/2015

Samples Analysed: 4 water samples

Rexona Rahman Reporting Manager

Signed:

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Iss No 15-76250-1





Lab Sample Number			470706	470707	470708	470709		
Sample Reference				Duplicate A	BH201	BH204	BH202	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	3.81	2.80	3.85	
Date Sampled				29/07/2015	29/07/2015	29/07/2015	29/07/2015	
Time Taken				None Supplied	100	0900	1000	
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
pH	pH Units	N/A	ISO 17025	13.1	11.4	7.6	7.8	
Electrical Conductivity	μS/cm	10	NONE	60000	3600	1800	11000	
Total Cyanide	μg/l	10	ISO 17025	< 10	< 10	< 10	< 10	
Complex Cyanide	μg/l	10	NONE	< 10	< 10	< 10	< 10	
Free Cyanide	μg/l	10	ISO 17025	< 10	< 10	< 10	< 10	
Sulphate as SO ₄	μg/l	45	ISO 17025	4940000	347000	103000	452000	
Sulphide	μg/l	5	NONE	45000	77	< 5.0	< 5.0	
Chloride	mg/l	0.15	ISO 17025	4700	330	220	4200	
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	51000	190	1700	4400	
Nitrate as N	mg/l	0.01	ISO 17025	0.33	1.18	0.25	0.91	
Nitrate as NO ₃	mg/l	0.05	ISO 17025	1.45	5.25	1.09	4 05	
Nitrite as N	μg/l	1 -	ISO 17025	390	950	17	220	
Nitrite as NO ₂	μg/l	5	ISO 17025	1300	3100	56	740	
Chemical Oxygen Demand (Total)	mg/l	2	ISO 17025	1100	64	31	99	
BOD (Biochemical Oxygen Demand)	mg/l	1	ISO 17025	21	7 5	25	22	
Total Oxidised Nitrogen (TON)	mg/l	0.3	NONE	0.7	2.1	< 0.3	1.1	
Total Phenols (monohydric)	μg/l	10	ISO 17025	1700	< 10	< 10	< 10	
rotar menois (mononyane)	P9/1	10	150 17025	1700	110	110	110	
Speciated PAHs								
Naphthalene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Acenaphthylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Fluorene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Phenanthrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Chrysene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Indeno(1,2,3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Dibenz(a,h)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Coronene	μg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	
Total PAH	1		I	0.0	0.0	0.0		
Total EPA-16 PAHs	μg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	
Total WAC-17 PAHs	μg/l	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	





Lab Sample Number				470706	470707	470708	470709	
Sample Reference					BH201		8H202	
• • • • • • • • • • • • • • • • • • • •				Duplicate A		BH204		
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	3.81	2.80	3.85	
Date Sampled				29/07/2015	29/07/2015	29/07/2015	29/07/2015	
Time Taken				None Supplied	100	0900	1000	
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Aluminium (dissolved)	mg/l	0.001	ISO 17025	0.195	0.229	0.0352	0.0020	
Antimony (dissolved)	μg/l	0.4	ISO 17025	3.2	9 5	1.0	1.3	
Arsenic (dissolved)	μg/l	0.15	ISO 17025	19.3	28.5	1.77	1 31	
Barium (dissolved)	μg/l	0.06	ISO 17025	52	7 8	43	180	
Beryllium (dissolved)	μg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	
Boron (dissolved)	μg/l	10	ISO 17025	15	99	300	450	
Cadmium (dissolved)	μg/l	0.02	ISO 17025	0.29	0.05	< 0.02	< 0.02	
Chromium (hexavalent)	μg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	
Chromium (dissolved)	μg/l	0.2	ISO 17025	1.2	4.7	0.5	0.3	
Copper (dissolved)	μg/l	0.5	ISO 17025	4.7	8 8	2.1	3.2	
Iron (dissolved)	mg/l	0.004	ISO 17025	0.13	0.29	0.44	3.1	
Lead (dissolved)	μg/l	0.2	ISO 17025	0.5	3 2	0.5	0.4	
Manganese (dissolved)	μg/l	0.05	ISO 17025	0.67	2 2	640	470	
Mercury (dissolved)	μg/l	0.05	ISO 17025	5.83	0.24	< 0.05	< 0.05	
Molybdenum (dissolved)	μg/l	0.05	ISO 17025	1100	11	4.5	8.2	
Nickel (dissolved)	μg/l	0.5	ISO 17025	1700	7 3	7.3	13	
Selenium (dissolved)	μg/l	0.6	ISO 17025	480	8.9	5.2	39	
Vanadium (dissolved)	μg/l	0.2	ISO 17025	150	120	1.1	0.6	
Zinc (dissolved)	μg/l	0.5	ISO 17025	2.4	2 0	2.4	14	
Calcium (dissolved)	mg/l	0.012	ISO 17025	46	8 6	91	320	
Magnesium (dissolved)	mg/l	0.005	ISO 17025	< 0.005	< 0.005	43	210	
Potassium (dissolved)	mg/l	0.025	ISO 17025	11000	570	65	130	
Phosphorus (total)	μg/l	20	ISO 17025	100	5200	1900	180	





Lab Sample Number				470706	470707	470708	470709	
Sample Reference				Duplicate A	BH201	BH204	BH202	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	3.81	2.80	3.85	
Date Sampled				29/07/2015	29/07/2015	29/07/2015	29/07/2015	
Time Taken				None Supplied	100	0900	1000	
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
Monoaromatics	•	•						
Benzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
o-xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TRU CIAIC Alleberte CC CO		10		. 10	. 10	. 10	. 10	

MIDE (Medity) Terdary Dutyr Editer)	μ9/1	1	130 17023	< 1.0	< 1.0	< 1.0	< 1.0	
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C16 - C21	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic (C5 - C35)	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C7 - C8	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C8 - C10	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C12 - C16	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C16 - C21	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C21 - C35	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic (C5 - C35)	μg/l	10	NONE	< 10	< 10	< 10	< 10	





Lab Sample Number		470706	470707	470708	470709			
Sample Reference				Duplicate A	BH201	BH204	BH202	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	3.81	2.80	3.85	
Date Sampled				29/07/2015	29/07/2015	29/07/2015	29/07/2015	
Time Taken				None Supplied	100	0900	1000	
			W					
Applytical Daysmotor	_	Limit of detection	Accreditation Status					
Analytical Parameter	Units	mi t	creditat Status					
(Water Analysis)	Vi	할 약	atic					
			ä					
VOCs								
Chloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Chloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromomethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Vinyl Chloride	μg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
Trichlorofluoromethane	μg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2-Trichloro-1,2,2-trifluoroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Cis-1,2-dichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethane	μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0	< 1.0	< 1.0	
2,2-Dichloropropane	μg/l μg/l	1	ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0	< 1.0	
Trichloromethane 1,1,1-Trichloroethane	μg/I μg/I	1	ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
1,2-Dichloroethane	μg/I μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloropropene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trans-1,2-dichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Benzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tetrachloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloropropane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Dibromomethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromodichloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Cis-1,3-dichloropropene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trans-1,3-dichloropropene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2-Trichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichloropropane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Dibromochloromethane T-t	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tetrachloroethene 1,2-Dibromoethane	μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0	< 1.0	< 1.0	
Chlorobenzene	μg/l μg/l	1	ISO 17025	< 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	μg/I μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Styrene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tribromomethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
o-Xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2,2-Tetrachloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Isopropylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
n-Propylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
2-Chlorotoluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
4-Chlorotoluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1 3 5-Trimethylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
tert-Butylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,4-Trimethylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
sec-Butylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p-Isopropyltoluene 1,2-Dichlorobenzene	μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0	< 1.0	< 1.0	
1,4-Dichlorobenzene	μg/l μg/l	1	ISO 17025	< 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
Butylbenzene	μg/I μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1 2-Dibromo-3-chloropropane	μg/I μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1 2 4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Hexachlorobutadiene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,3-Trichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
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Lab Sample Number		470706	470707	470708	470709			
Sample Reference				Duplicate A	BH201	BH204	BH202	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	3.81	2.80	3.85	
Date Sampled				29/07/2015	29/07/2015	29/07/2015	29/07/2015	
Time Taken				None Supplied	100	0900	1000	
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
SHOO:			3					
SVOCs		0.05	HONE	16	. 0.05	. 0.05	. 0.05	
Aniline Phenol	μg/l μg/l	0.05	NONE NONE	16 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	
2-Chlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Bis(2-chloroethyl)ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1,3-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1,2-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1 4-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Bis(2-chloroisopropyl)ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2-Methylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Hexachloroethane	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Nitrobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Methylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Isophorone 2-Nitrophenol	μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	
2 4-Dimethylphenol	μg/l μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Bis(2-chloroethoxy)methane	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1,2,4-Trichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Naphthalene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
2 4-Dichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Chloroaniline	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Hexachlorobutadiene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Chloro-3-methylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2,4,6-Trichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2 4 5-Trichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2-Methylnaphthalene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2-Chloronaphthalene Dimethylphthalate	μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	
2 6-Dinitrotoluene	μg/l μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Acenaphthylene	μg/I μg/I	0.03	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
2,4-Dinitrotoluene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Dibenzofuran	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Chlorophenyl phenyl ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Diethyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Nitroaniline	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Fluorene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Azobenzene Promonhonyl phonyl othor	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Bromophenyl phenyl ether Hexachlorobenzene	μg/l	0.05	NONE NONE	< 0.05 < 0.02	< 0.05 < 0.02	< 0.05 < 0.02	< 0.05 < 0.02	
Phenanthrene	μg/l μg/l	0.02	ISO 17025	< 0.02	< 0.02	< 0.02	< 0.02	
Anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Carbazole	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Dibutyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Anthraquinone	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Butyl benzyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Chrysene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(b)fluoranthene Benzo(k)fluoranthene	μg/l	0.01	ISO 17025 ISO 17025	< 0.01 < 0.01	< 0.01 < 0.01	< 0.01	< 0.01 < 0.01	
Benzo(k)riuorantnene Benzo(a)pyrene	μg/l μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01 < 0.01	< 0.01	
Indeno(1 2 3-cd)pyrene	μg/I μg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Dibenz(a h)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
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Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Biological oxygen demand of water	Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.	In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care.	L086-PL	W	ISO 17025
Boron in water	Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025
Chemical Oxygen Demand in Water (Total)	Determination of total COD in water by reflux oxidation with acidified K2Cr2O7 followed by colorimetry. Accredited matrices: SW, PW, GW.	HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)	L065-PL	W	ISO 17025
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082 B	W	ISO 17025
Complex cyanide in water	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of water	Determination of electrical conductivity in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in water	Determination of free cyanide by distillation followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrate in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrite in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by colorimetry.Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L077-PL	W	ISO 17025
pH in water	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L070-UK	W	NONE
Speciated WAC-17 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L070-UK	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L010-PL	W	NONE
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN-82/C-04579.08	L078-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-UK	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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29/07/2015

Analytical Report Number: 15-76240

Project / Site name: London Paramount Entertainment Samples received on:

Resort

Your job number: 30766 Samples instructed on: 29/07/2015

Your order number: Analysis completed by: 06/08/2015

Report Issue Number: 1 Report issued on: 06/08/2015

Samples Analysed: 3 water samples



Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Iss No 15-76240-1





Lab Sample Number	b Sample Number					470681		
Sample Reference				470679 Duplicate B	470680 WS102	WS203		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	3.49	1.23		
Date Sampled				29/07/2015	29/07/2015	29/07/2015		
Time Taken				None Supplied	1245	1100		
	_	Limit of detection	Accreditation Status					
Analytical Parameter	Units	tec	creditat Status					
(Water Analysis)	द्ध	ti of	us					
		_	9					
		<u> </u>			•		•	
General Inorganics								
pΗ	pH Units	N/A	ISO 17025	7.3	12.8	13.1		
Electrical Conductivity	μS/cm	10	NONE	13000	19000	59000		
Total Cyanide	μg/l	10	ISO 17025	< 10	< 10	< 10		
Complex Cyanide	μg/l	10	NONE	< 10	< 10	< 10		
Free Cyanide	μg/l	10	ISO 17025	< 10	< 10	< 10		
Sulphate as SO ₄	μg/l	45	ISO 17025	487000	2310000	5060000		
Sulphide	μg/l	5	NONE	< 5.0	< 5.0	30000		
Chloride	mg/l	0.15	ISO 17025	5000	2800	4900		
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	1700	3900	53000		
Nitrate as N	mg/l	0.01	ISO 17025	0.46	0.15	0.34		
Nitrate as NO ₃	mg/l	0.05	ISO 17025	2.03	0.68	1.51		
Nitrite as N	μg/l	1	ISO 17025	3.0	290	400		
Nitrite as NO ₂	μg/l	5	ISO 17025	9.9	940	1300		
Chemical Oxygen Demand (Total)	mg/l	2	ISO 17025	130	200	1200		
BOD (Biochemical Oxygen Demand)	mg/l	1	ISO 17025	33	3 3	17		
Total Oxidised Nitrogen (TON)	mg/l	0.3	NONE	0.5	0.4	0.7		
Total Phenois								
Total Phenols (monohydric)	μg/l	10	ISO 17025	280	120	1700		
Total Therios (mononyane)	P9/	- 10	100 17 020	200	120	1700		
Speciated PAHs								
Naphthalene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Acenaphthylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Fluorene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Phenanthrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Chrysene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Indeno(1,2,3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Dibenz(a,h)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Coronene	μg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	l	<u>I</u>
Total DAII								
Total PAH Total EPA-16 PAHs	//	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	ī	1
Total WAC-17 PAHs	μg/l	0.2	NONE	< 0.2	< 0.2	< 0.2		
TOTAL MAC-1/ PARS	μg/l	U.Z	INUNE	< ∪.∠	< U.Z	< U.Z		





				470670	470600	170601	1
Lab Sample Number				470679	470680	470681	
Sample Reference				Duplicate B	WS102	WS203	
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	3.49	1.23	
Date Sampled				29/07/2015	29/07/2015	29/07/2015	
Time Taken		T		None Supplied	1245	1100	
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids							
Aluminium (dissolved)	mg/l	0.001	ISO 17025	0 0015	25.7	0.424	
Antimony (dissolved)	μg/l	0.4	ISO 17025	1.2	2 6	2.9	
Arsenic (dissolved)	μg/l	0.15	ISO 17025	7.68	34.3	21.4	
Barium (dissolved)	μg/l	0.06	ISO 17025	140	22	56	
Beryllium (dissolved)	μg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	
Boron (dissolved)	μg/l	10	ISO 17025	560	11	21	
Cadmium (dissolved)	μg/l	0.02	ISO 17025	< 0.02	0.04	0.44	
Chromium (hexavalent)	μg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	
Chromium (dissolved)	μg/l	0.2	ISO 17025	0.3	24	1.7	
Copper (dissolved)	μg/l	0.5	ISO 17025	1.3	52	7.8	
Iron (dissolved)	mg/l	0.004	ISO 17025	5.3	0.57	0.24	
Lead (dissolved)	μg/l	0.2	ISO 17025	< 0.2	28	0.7	
Manganese (dissolved)	μg/l	0.05	ISO 17025	290	0.70	0.48	
Mercury (dissolved)	μg/l	0.05	ISO 17025	0.64	1.44	8.83	
Molybdenum (dissolved)	μg/l	0.05	ISO 17025	2.3	77	940	
Nickel (dissolved)	μg/l	0.5	ISO 17025	21	4 5	1400	
Selenium (dissolved)	μg/l	0.6	ISO 17025	43	110	370	
Vanadium (dissolved)	μg/l	0.2	ISO 17025	0.7	80	170	
Zinc (dissolved)	μg/l	0.5	ISO 17025	2.1	7 5	2.7	
Calcium (dissolved)	mg/l	0.012	ISO 17025	340	19	35	
Magnesium (dissolved)	mg/l	0.005	ISO 17025	280	< 0.005	< 0.005	
Potassium (dissolved)	mg/l	0.025	ISO 17025	240	8200	11000	
Phosphorus (total)	μg/l	20	ISO 17025	23	810	96	





			470679	470680	470681		1
			Duplicate B	WS102	WS203		
			None Supplied	None Supplied	None Supplied		
Depth (m)					1.23		
Date Sampled					29/07/2015		
			None Supplied	1245	1100		
Units	Limit of detection	Accreditation Status					
•	•						
μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
µg/I µg/I	1 1 1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
μg/l	10	NONE	< 10	< 10	< 10		
µq/l	10	NONE	< 10	< 10	< 10		
	µg/I µg/I µg/I µg/I µg/I µg/I	рд/I 1	μg/I 1 ISO 17025 μg/I 1 ISO 17025	Duplicate B None Supplied	Duplicate B None Supplied None Supplied None Supplied None Supplied 3.49 29/07/2015 29/07/2015 None Supplied 1245	Duplicate B WS102 WS203 None Supplied None Supplied None Supplied None Supplied 3.49 1.23 29/07/2015 29/07/2015 29/07/2015 None Supplied 1245 1100	Duplicate B None Supplied None Supplied None Supplied None Supplied None Supplied None Supplied 3.49 1.23 29/07/2015 29/07/2015 29/07/2015 29/07/2015 None Supplied 1245 1100

Petroleum Hydrocarbons							
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C16 - C21	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aliphatic (C5 - C35)	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aromatic >C7 - C8	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aromatic >C8 - C10	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aromatic >C12 - C16	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aromatic >C16 - C21	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aromatic >C21 - C35	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aromatic (C5 - C35)	μg/l	10	NONE	< 10	< 10	< 10	





Lab Carrella Norrabarra			1	470670	470500	470504	ı	
Lab Sample Number				470679	470680	470681		
Sample Reference Sample Number				Duplicate B None Supplied	WS102 None Supplied	WS203 None Supplied		
Depth (m)				None Supplied None Supplied	3.49	1.23		
Date Sampled				29/07/2015	29/07/2015	29/07/2015		
Time Taken				None Supplied	1245	1100		
			A					
Analytical Parameter	_	Limit of detection	SI					
(Water Analysis)	Units	nit ect	급급					
(Water Analysis)	V 1	을 약	Accreditation Status					
			3					
VOCs Chloromethane	ug/l	1 1	ISO 17025	- 10	. 1.0	.10	I	
Chloroethane	μg/l μg/l	1	ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
Bromomethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Vinyl Chloride	μg/l	1	NONE	< 1.0	< 1.0	< 1.0		
Trichlorofluoromethane	μg/l	1	NONE	< 1.0	< 1.0	< 1.0		
1,1-Dichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloro-1,2,2-trifluoroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Cis-1,2-dichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/l	1	ISO 17025 ISO 17025	< 1.0	< 1.0	< 1.0		
1,1-Dichloroethane 2,2-Dichloropropane	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
Z,Z-Dichloropropane Trichloromethane	μg/I μg/I	1	ISO 17025	< 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
1,1,1-Trichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1-Dichloropropene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trans-1,2-dichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Benzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tetrachloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichloropropane	μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0	< 1.0		
Trichloroethene Dibromomethane	μg/l μg/l	1	ISO 17025	< 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
Bromodichloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Cis-1,3-dichloropropene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trans-1,3-dichloropropene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Toluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,3-Dichloropropane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Dibromochloromethane	μg/l	1	ISO 17025 ISO 17025	< 1.0	< 1.0	< 1.0		
Tetrachloroethene 1,2-Dibromoethane	μg/l μg/l	1	ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
Chlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,1,2-Tetrachloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Ethylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p & m-Xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Styrene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tribromomethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
o-Xylene	μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0		
1,1,2,2-Tetrachloroethane Isopropylbenzene	μg/l μg/l	1	ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
Bromobenzene	μg/I μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0		
n-Propylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
2-Chlorotoluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
4-Chlorotoluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1 3 5-Trimethylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
tert-Butylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,4-Trimethylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
sec-Butylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,3-Dichlorobenzene p-Isopropyltoluene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
1,2-Dichlorobenzene	μg/I μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,4-Dichlorobenzene	μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Butylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1 2-Dibromo-3-chloropropane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1 2 4-Trichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Hexachlorobutadiene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,3-Trichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		





Lab Sample Number				470679	470680	470681	I	
Sample Reference				Duplicate B	WS102	WS203		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	3.49	1.23		
Date Sampled				29/07/2015	29/07/2015	29/07/2015		
Time Taken				None Supplied	1245	1100		
		•	Ac					
Analytical Parameter	⊆	Limit of detection	Sta					
(Water Analysis)	Units	Ctic	creditat Status					
, ,		3 4	Accreditation Status					
SVOCs		l	_				<u> </u>	
Aniline	μg/l	0.05	NONE	< 0.05	< 0.05	19		
Phenol	μg/l μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Chlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Bis(2-chloroethyl)ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1,3-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1,2-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1 4-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Bis(2-chloroisopropyl)ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Methylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Hexachloroethane Nitrobenzene	μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	 	
Nitropenzene 4-Methylphenol	μg/l μg/l	0.05	NONE	< 0.05	< 0.05 < 0.05	< 0.05 < 0.05		
Isophorone	μg/l μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	1	
2-Nitrophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2 4-Dimethylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Bis(2-chloroethoxy)methane	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1,2,4-Trichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Naphthalene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
2 4-Dichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Chloroaniline	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Hexachlorobutadiene 4-Chloro-3-methylphenol	μg/l μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05		
2,4,6-Trichlorophenol	μg/I μg/I	0.05	NONE	< 0.05	< 0.05	< 0.05		
2 4 5-Trichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Methylnaphthalene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Chloronaphthalene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Dimethylphthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2 6-Dinitrotoluene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Acenaphthylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
2,4-Dinitrotoluene Dibenzofuran	μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05		
4-Chlorophenyl phenyl ether	μg/l μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Diethyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Nitroaniline	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Fluorene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Azobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Bromophenyl phenyl ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Hexachlorobenzene	μg/l	0.02	NONE	< 0.02	< 0.02	< 0.02		
Phenanthrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Anthracene Carbazole	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	-	
Carpazole Dibutyl phthalate	μg/l μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05		
Anthraguinone	μg/l μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	1	
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Butyl benzyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Chrysene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(a)pyrene	μg/l	0.01	ISO 17025 ISO 17025	< 0.01	< 0.01	< 0.01	-	
Indeno(1 2 3-cd)pyrene Dibenz(a h)anthracene	μg/l μg/l	0.01	ISO 17025 ISO 17025	< 0.01 < 0.01	< 0.01 < 0.01	< 0.01 < 0.01	 	
Benzo(ghi)perylene	μg/I μg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
penzo(grit)perytene	µy/I	0.01	100 1/023	< 0.01	∨ 0.01	< U.UI		





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Biological oxygen demand of water	Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.	In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care.	L086-PL	W	ISO 17025
Boron in water	Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	w	ISO 17025
Chemical Oxygen Demand in Water (Total)	Determination of total COD in water by reflux oxidation with acidified K2Cr2O7 followed by colorimetry. Accredited matrices: SW, PW, GW.	HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)	L065-PL	W	ISO 17025
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082 B	W	ISO 17025
Complex cyanide in water	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Electrical conductivity of water	Determination of electrical conductivity in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	w	NONE
Free cyanide in water	Determination of free cyanide by distillation followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	w	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	w	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	w	ISO 17025
Nitrate in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrite in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by colorimetry.Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L077-PL	W	ISO 17025
pH in water	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L070-UK	W	NONE
Speciated WAC-17 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L070-UK	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L010-PL	W	NONE
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN-82/C-04579.08	L078-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-UK	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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Herts,
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e: reception@i2analytical.com

29/07/2015

Analytical Report Number: 15-76237

Project / Site name: London Paramount Entertainment Samples received on:

Resort

Your job number: 30766 Samples instructed on: 29/07/2015

Your order number: Analysis completed by: 06/08/2015

Report Issue Number: 1 Report issued on: 06/08/2015

Samples Analysed: 4 water samples

Rexona Rahman Reporting Manager

Signed:

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Iss No 15-76237-1





Lab Sample Number			470638	470639	470640	470641		
Sample Reference				BH101	WS202	WS101	BH203	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				3.99	7.26	3.65	2.86	
Date Sampled				29/07/2015	29/07/2015	29/07/2015	29/07/2015	
Time Taken				1315	1150	1230	0900	
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
pH	pH Units	N/A	ISO 17025	6.7	13.1	8.2	7.6	
Electrical Conductivity	μS/cm	10	NONE	13000	64000	97000	2800	
Total Cyanide	μg/l	10	ISO 17025	< 10	< 10	< 10	< 10	
Complex Cyanide	μg/l	10	NONE	< 10	< 10	< 10	< 10	
Free Cyanide	μg/l	10	ISO 17025	< 10	< 10	< 10	< 10	
Sulphate as SO ₄	μg/l	45	ISO 17025	461000	15000000	10000000	1000000	
Sulphide	μg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	
Chloride	mg/l	0.15	ISO 17025	5000	4600	29000	240	
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15	39000	400000	1500	
Nitrate as N	mg/l	0.01	ISO 17025	0.36	0.26	0.94	0.18	
Nitrate as NO ₃	mg/l	0.05	ISO 17025	1.61	1.14	4.16	0.78	
Nitrite as N	μg/l	1 -	ISO 17025	4.0	1000	23	45	
Nitrite as NO ₂	μg/l	5	ISO 17025	13	3400	76	150	
Chemical Oxygen Demand (Total)	mg/l	2	ISO 17025	3200	2100	5000	110	
BOD (Biochemical Oxygen Demand)	mg/l	1	ISO 17025	33	2.1	130	23	
Total Oxidised Nitrogen (TON)	mg/l	0.3	NONE	0.4	13	1.0	< 0.3	
Total Phenols Total Phenols (monohydric)	μg/l	10	ISO 17025	< 10	1000	1000	< 10	
Cussiated PAUs							<u>-</u>	
Speciated PAHs	/1	0.01	100 17025	. 0.01	4.0.01	. 0.01	. 0.01	
Naphthalene	μg/l	0.01	ISO 17025 ISO 17025	< 0.01 < 0.01	< 0.01 < 0.01	< 0.01 < 0.01	< 0.01 < 0.01	
Acenaphthylene Acenaphthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Fluorene	μg/l μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Phenanthrene	μg/l μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Anthracene	μg/I μg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Pyrene	μg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Chrysene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(b)fluoranthene	μg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Indeno(1,2,3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Dibenz(a,h)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Coronene	μg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	
Total PAH								
Total EPA-16 PAHs	μg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	
Total WAC-17 PAHs	μg/l	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	





Lab Sample Number				470638	470639	470640	470641	
Sample Reference				BH101	WS202	WS101	BH203	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				3.99	7.26	3.65	2.86	
Date Sampled				29/07/2015	29/07/2015	29/07/2015	29/07/2015	
Time Taken				1315	1150	1230	0900	
			Ac					
Analytical Parameter	_	Limit of detection	Accreditation Status					
(Water Analysis)	Units	nit o	atu atu					
(**************************************		g of	s itio					
			3					
Heavy Metals / Metalloids								Ţ
Aluminium (dissolved)	mg/l	0.001	ISO 17025	0 0014	0.0609	< 0.0010	0.0155	
Antimony (dissolved)	μg/l	0.4	ISO 17025	1.4	2 5	< 0.4	3.5	
Arsenic (dissolved)	µg/l	0.15	ISO 17025	5.57	29.9	< 0.15	1.78	
Barium (dissolved) Beryllium (dissolved)	μg/l	0.06	ISO 17025 ISO 17025	130 < 0.1	24 0.1	3.7 < 0.1	140 < 0.1	
Boron (dissolved)	μg/l μg/l	10	ISO 17025	540	25	710	370	
Cadmium (dissolved)	μg/I	0.02	ISO 17025	< 0.02	0.36	< 0.02	0 05	
Chromium (hexavalent)	μg/l	5	ISO 17025	< 5.0	2000	< 5.0	< 5.0	
Chromium (dissolved)	μg/l	0.2	ISO 17025	< 0.2	2100	7.4	0.9	
Copper (dissolved)	μg/l	0.5	ISO 17025	0.9	33	1.8	9.9	
Iron (dissolved)	mg/l	0.004	ISO 17025	6.8	0.16	0.29	0.087	
Lead (dissolved)	μg/l	0.2	ISO 17025	< 0.2	4.9	< 0.2	1.2	
Manganese (dissolved)	μg/l	0.05	ISO 17025	230	0.47	16	410	
Mercury (dissolved)	μg/l	0.05	ISO 17025	0.68	2.71	< 0.05	0.11	
Molybdenum (dissolved)	μg/l	0.05	ISO 17025	3.3	680	0.22	9.9	
Nickel (dissolved)	μg/l	0.5	ISO 17025	21	240	< 0.5	11	
Selenium (dissolved)	μg/l	0.6	ISO 17025	41	820	< 0.6	21	
Vanadium (dissolved)	μg/l	0.2	ISO 17025	0.6	120	2.2	1.2	
Zinc (dissolved)	μg/l	0.5	ISO 17025	2.9	< 0.5	20	9.1	
Calcium (dissolved)	mg/l	0.012	ISO 17025	320	61	130	320	
Magnesium (dissolved)	mg/l	0.005	ISO 17025	280	< 0.005	300	68	
Potassium (dissolved)	mg/l	0.025	ISO 17025	160	18000	1500	40	
Phosphorus (total)	μg/l	20	ISO 17025	21	58	22000	190	
•								
Monoaromatics								
Benzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
o-xylene MTBE (Methyl Tertiary Butyl Ether)	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
THE (Ficury) Tordary Dutyl Edici)	μу/1	1	150 1/025	\ 1.U	\ 1.U	\ 1.U	× 1.0	
Petroleum Hydrocarbons								
. Caloleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C16 - C21	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic (C5 - C35)	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TDH_CMC - Aromatic > CE C7	uc/I	10	NONE	× 10	z 10	z 10	z 10	
TPH-CWG - Aromatic >C5 - C7 TPH-CWG - Aromatic >C7 - C8	μg/l	10	NONE	< 10 < 10	< 10 < 10	< 10	< 10	
TPH-CWG - Aromatic >C7 - C8 TPH-CWG - Aromatic >C8 - C10	μg/l μg/l	10 10	NONE NONE	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	
TPH-CWG - Aromatic >C6 - C10 TPH-CWG - Aromatic >C10 - C12	μg/I μg/I	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C10 - C12 TPH-CWG - Aromatic >C12 - C16	μg/I μg/I	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C12 - C10	μg/I	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C21 - C35	μg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic (C5 - C35)	μg/l	10	NONE	< 10	< 10	< 10	< 10	
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Lab Sample Number				470638	470639	470640	470641	
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Date Sampled				29/07/2015	29/07/2015	29/07/2015	29/07/2015	
Time Taken				1315	1150	1230	0900	
			Ac					
Analytical Parameter	_	Limit of detection	Accreditation Status					
(Water Analysis)	Units	Limit of	creditat Status					
(Water Analysis)	v,	일 역	s					
			š					
VOCs								
Chloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Chloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromomethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Vinyl Chloride	μg/l μg/l	1	NONE NONE	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0	
Trichlorofluoromethane 1,1-Dichloroethene	μg/I μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0 < 1.0	
1,1,2-Trichloro-1,2,2-trifluoroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Cis-1,2-dichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
2,2-Dichloropropane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trichloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,1-Trichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloropropene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trans-1,2-dichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Benzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tetrachloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloropropane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trichloroethene	μg/l	1	ISO 17025 ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Dibromomethane Bromodichloromethane	μg/l μg/l	1	ISO 17025	< 1.0 < 1.0	< 1.0	< 1.0	< 1.0	
Cis-1,3-dichloropropene	μg/l	1	ISO 17025	< 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
Trans-1,3-dichloropropene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2-Trichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Dibromochloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tetrachloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dibromoethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Chlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,1,2-Tetrachloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-Xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Styrene Tribromomothano	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tribromomethane o-Xylene	μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
1,1,2,2-Tetrachloroethane	μg/l μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Isopropylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
n-Propylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
4-Chlorotoluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1 3 5-Trimethylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
tert-Butylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,4-Trimethylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
sec-Butylbenzene	μg/l	11	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p-Isopropyltoluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,4-Dichlorobenzene Butylbenzene	μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0	< 1.0 < 1.0	
1 2-Dibromo-3-chloropropane	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
1 2 4-Trichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Hexachlorobutadiene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,3-Trichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
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Sample Reference	Lab Sample Number		470638	470639	470640	470641			
Sample Number									
Page Page	Sample Number								
Time Taken	Depth (m)				3.99	7.26	3.65		
Analytical Parameter									
Section	Time Taken				1315	1150	1230	0900	
Anline April D.O.S NORE < 0.05 < 0.05 < 0.05 < 0.05	-	Units	Limit of detection	Accreditation Status					
Phenol	SVOCs				<u> </u>				
Phenot		μq/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
BisQ2-chicorestryDether	Phenol		0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1,3-Dichlorobereene	2-Chlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1.2.Delichrobenzeme									
14-Dichrobenzene	,	1							
BisC-thicknoscoropy stere		1							
2-Nethythpenol									
Heackhrosethane									
Ninoberenee									
4-Methylphenol									
Sophorone		1							
24-Dimethylphenol μg/l 0.05 NoNe < 0.05 < 0.05 < 0.05 < 0.05									
BigC2 chloroethoxy)methane	2-Nitrophenol	μg/l	0.05	NONE		< 0.05	< 0.05		
12.4-Trichloroberszene	, .	1							
Naphthalene	` ''	1							
24-Dichrophenol		1							
4-Chloronalline		1							
Hexachlorobutadiene		1							
4-Chioro-3-methylphenol μg/l 0.05 NONE < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05									
2.4.6 + Trichlorophenol		1							
2-Methylnaphthalene									
2-Chloronaphthalene	2 4 5-Trichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Dimethylphthalate	2-Methylnaphthalene	μg/l		NONE					
2.6-Dinitrotoluene μg/l 0.05 NONE < 0.05		1							
Acenaphthylene μg/l 0.01 ISO 17025 < 0.01 < 0.01 < 0.01 < 0.01 Acenaphthene μg/l 0.01 ISO 17025 < 0.01		1							
Acenaphthene μg/l 0.01 ISO 17025 < 0.01 < 0.01 < 0.01 < 0.01 < 0.05 Acenaphthene μg/l 0.05 NONE < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 <		1							
2,4-Dinitrotoluene		1							
Dibenzofuran		1							
4-Chlorophenyl phenyl ether μg/l 0.05 NONE < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.01 < 0.01 < 0.01 < 0.01	,								
Diethyl phthalate µg/l 0.05 NONE < 0.05 < 0.05 < 0.05 < 0.05 4-Nitroaniline µg/l 0.05 NONE < 0.05	4-Chlorophenyl phenyl ether								
Fluorene		μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Azobenzene μg/l 0.05 NONE < 0.05 < 0.05 < 0.05 < 0.05 Bromophenyl phenyl ether μg/l 0.05 NONE < 0.05		μg/l							
Bromophenyl phenyl ether μg/l 0.05 NONE < 0.05 < 0.05 < 0.05 < 0.05 < 0.05		1							
Hexachlorobenzene μg/l 0.02 NONE < 0.02 < 0.02 < 0.02 < 0.02 < 0.02 < 0.02 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 <		1							
Phenanthrene μg/l 0.01 ISO 17025 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 <									
Anthracene μg/l 0.01 ISO 17025 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0									
Carbazole µg/l 0.05 NONE < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		1							
Dibutyl phthalate μg/l 0.05 NONE < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 <		1							
Anthraquinone μg/l 0.05 NONE < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.0									
Pyrene μg/l 0.01 ISO 17025 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01<		1	0.05		< 0.05				
Butyl benzyl phthalate μg/l 0.05 NONE < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01		1							
Benzo(a)anthracene μg/l 0.01 ISO 17025 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	•								
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		1							
Benzo(b)fluoranthene μg/l 0.01 ISO 17025 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01									
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$ \begin{array}{cccccccccccccccccccccccccccccccccccc$									
$ \begin{array}{llllllllllllllllllllllllllllllllllll$		1							
Dibenz(a h)anthracene μg/l 0.01 ISO 17025 < 0.01 < 0.01 < 0.01 < 0.01		1							
		1							
	Benzo(ghi)perylene	1	0.01	ISO 17025		< 0.01			





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Biological oxygen demand of water	Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.	In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care.	L086-PL	W	ISO 17025
Boron in water	Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025
Chemical Oxygen Demand in Water (Total)	Determination of total COD in water by reflux oxidation with acidified K2Cr2O7 followed by colorimetry. Accredited matrices: SW, PW, GW.	HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)	L065-PL	W	ISO 17025
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082 B	W	ISO 17025
Complex cyanide in water	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of water	Determination of electrical conductivity in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in water	Determination of free cyanide by distillation followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrate in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrite in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by colorimetry.Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L077-PL	W	ISO 17025
pH in water	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L070-UK	W	NONE
Speciated WAC-17 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L070-UK	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L010-PL	W	NONE
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN-82/C-04579.08	L078-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-UK	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





Emma Leivers

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e: emma.leivers@geoeng.co.uk

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t: 01923 225404 f: 01923 237404

e: reception@i2analytical.com

Analytical Report Number: 15-76177

London Paramount Entertainment Project / Site name:

Resort

30766 Your job number:

Your order number: Analysis completed by:

Report Issue Number:

Samples Analysed: 1 water sample Samples received on: 28/07/2015

Samples instructed on: 29/07/2015

04/08/2015

Report issued on: 04/08/2015

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting - 2 weeks from reporting asbestos - 6 months from reporting

Iss No 15-76177-1





Lab Sample Number			470279				
Sample Reference				BH502			
Sample Number				None Supplied			
Depth (m)				12.02			
Date Sampled				28/07/2015			
Time Taken				1340			
		_	Ac				
Analytical Parameter	_	Limit of detection	Accreditation Status				
(Water Analysis)	Units	Limit of	ă tr				
(Water Analysis)	•	<u> </u> 으	s				
			š				
C							
General Inorganics pH	pH Units	N/A	ISO 17025	6.5		l	
Electrical Conductivity	μS/cm	10	NONE	4500			
Total Cyanide	μg/l	10	ISO 17025	< 10			
Complex Cyanide	μg/l	10	NONE	< 10			
Free Cyanide	μg/l	10	ISO 17025	< 10			
Sulphate as SO ₄	μg/l	45	ISO 17025	600000			
Sulphide	μg/l	5	NONE	< 5.0			
Chloride	mg/l	0.15	ISO 17025	1100			
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15			
Nitrate as N	mg/l	0.01	ISO 17025	33.5			
Nitrate as NO ₃	mg/l	0.05	ISO 17025	148			
Nitrite as N	μg/l	1	ISO 17025	96			
Nitrite as NO ₂	μg/l	5	ISO 17025	320			
Chemical Oxygen Demand (Total)	mg/l	2	ISO 17025	25			
BOD (Biochemical Oxygen Demand)	mg/l	0.3	ISO 17025	< 1.0 34			
Total Oxidised Nitrogen (TON)	mg/l	0.3	NONE	34			
Total Phenois							
Total Phenols (monohydric)	μg/l	10	ISO 17025	< 10			
Speciated PAHs			1		1		
Naphthalene	μg/l	0.01	ISO 17025	< 0.01			
Acenaphthylene	μg/l	0.01	ISO 17025	< 0.01	1		
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01			
Fluorene	μg/l	0.01	ISO 17025	< 0.01			
Phenanthrene Anthracene	μg/l μg/l	0.01	ISO 17025 ISO 17025	< 0.01 < 0.01	1		
Fluoranthene	μg/l μg/l	0.01	ISO 17025	< 0.01			
Pyrene	µg/l	0.01	ISO 17025	< 0.01			
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01			
Chrysene	μg/l	0.01	ISO 17025	< 0.01			
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025	< 0.01			
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01			
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01			
Indeno(1,2,3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01			
Dibenz(a,h)anthracene	μg/l	0.01	ISO 17025	< 0.01			
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01			
Coronene	μg/l	0.01	NONE	< 0.01	<u> </u>	<u> </u>	
Total BAH							
Total PAH Total EPA-16 PAHs	μg/l	0.2	ISO 17025	< 0.2	1	Ī	
Total WAC-17 PAHs	μg/l	0.2	NONE	< 0.2	ĺ		
1000 1710 27 17110	P9/1	0.2	HOHE	` 0.2			





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Lab Sample Number				470279			
Sample Reference				BH502			
Sample Number				None Supplied			
Depth (m)				12.02			
Date Sampled				28/07/2015			
Time Taken				1340			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids							
Aluminium (dissolved)	mg/l	0.001	ISO 17025	0 0736			
Antimony (dissolved)	μg/l	0.4	ISO 17025	1.4			
Arsenic (dissolved)	μg/l	0.15	ISO 17025	0.79			
Barium (dissolved)	μg/l	0.06	ISO 17025	55			
Beryllium (dissolved)	μg/l	0.1	ISO 17025	< 0.1			
Boron (dissolved)	μg/l	10	ISO 17025	540			
Cadmium (dissolved)	μg/l	0.02	ISO 17025	< 0.02			
Chromium (hexavalent)	μg/l	5	ISO 17025	< 5.0			
Chromium (dissolved)	μg/l	0.2	ISO 17025	19			
Copper (dissolved)	μg/l	0.5	ISO 17025	4.3			
Iron (dissolved)	mg/l	0.004	ISO 17025	0.044			
Lead (dissolved)	μg/l	0.2	ISO 17025	0.5			
Manganese (dissolved)	μg/l	0.05	ISO 17025	22			
Mercury (dissolved)	μg/l	0.05	ISO 17025	0.47			
Molybdenum (dissolved)	μg/l	0.05	ISO 17025	4.7			
Nickel (dissolved)	μg/l	0.5	ISO 17025	9.6			
Selenium (dissolved)	μg/l	0.6	ISO 17025	18			
Vanadium (dissolved)	μg/l	0.2	ISO 17025	1.8			
Zinc (dissolved)	μg/l	0.5	ISO 17025	6.5			
Calcium (dissolved)	mg/l	0.012	ISO 17025	520			
Magnesium (dissolved)	mg/l	0.005	ISO 17025	24		<u> </u>	
Potassium (dissolved)	mg/l	0.025	ISO 17025	89		<u> </u>	
Phosphorus (total)	μg/l	20	ISO 17025	2400			





I ah Camula Numbar				470279	ı	I	1
Lab Sample Number Sample Reference				8H502			
Sample Number				None Supplied			
		12.02					
Depth (m)		28/07/2015					
Date Sampled Time Taken	1340						
Time Taken				1340			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
Monoaromatics							
Benzene	μg/l	1	ISO 17025	< 1.0			
Toluene	μg/l	1	ISO 17025	< 1.0			
Ethylbenzene	μg/l	1	ISO 17025	< 1.0			
p & m-xylene	μg/l	1	ISO 17025	< 1.0			
o-xylene	μg/l	1	ISO 17025	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	μg/l	1	ISO 17025	< 1.0			
Petroleum Hydrocarbons							
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE	< 10			

TPH-CWG - Aliphauc >C6 - C8	μg/i	10	NONE	< 10			
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C16 - C21	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic (C5 - C35)	μg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C7 - C8	μg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C8 - C10	μg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C12 - C16	μg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C16 - C21	μg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C21 - C35	μg/l	10	NONE	< 10			
TPH-CWG - Aromatic (C5 - C35)	μg/l	10	NONE	< 10	·		





Lab Sample Number				470279				
Sample Reference				BH502				
Sample Number				None Supplied				
Depth (m)				12.02				
Date Sampled				28/07/2015				
Time Taken		-		1340				
			Ac					
Analytical Parameter	⊆	Limit of detection	Accreditation Status					
(Water Analysis)	Units	CE: TE	creditat Status					
		3 4	s tio					
Vac			_					
VOCs	//	1	ISO 17025	. 1.0	ı		I	
Chloromethane Chloroethane	μg/l μg/l	1	ISO 17025	< 1.0 < 1.0				
Bromomethane	μg/I	1	ISO 17025	< 1.0				
Vinyl Chloride	μg/l	1	NONE	< 1.0				
Trichlorofluoromethane	μg/l	1	NONE	< 1.0				
1,1-Dichloroethene	μg/l	1	ISO 17025	< 1.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	μg/l	1	ISO 17025	< 1.0				
Cis-1,2-dichloroethene	μg/l	1	ISO 17025	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	μg/l	1	ISO 17025	< 1.0				
1,1-Dichloroethane 2,2-Dichloropropane	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0				
Z,Z-Dichloroproparie Trichloromethane	μg/I μg/I	1	ISO 17025	< 1.0				
1,1,1-Trichloroethane	μg/I μg/I	1	ISO 17025	< 1.0				
1,2-Dichloroethane	μg/l	1	ISO 17025	< 1.0				
1,1-Dichloropropene	μg/l	1	ISO 17025	< 1.0				
Trans-1,2-dichloroethene	μg/l	1	ISO 17025	< 1.0				
Benzene	μg/l	1	ISO 17025	< 1.0				
Tetrachloromethane	μg/l	1	ISO 17025	< 1.0				
1,2-Dichloropropane	μg/l	1	ISO 17025	< 1.0				
Trichloroethene	μg/l	1	ISO 17025	< 1.0				
Dibromomethane Bromodichloromethane	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0				
Cis-1,3-dichloropropene	μg/l	1	ISO 17025	< 1.0				
Trans-1,3-dichloropropene	μg/l	1	ISO 17025	< 1.0				
Toluene	μg/l	1	ISO 17025	< 1.0				
1,1,2-Trichloroethane	μg/l	1	ISO 17025	< 1.0				
1,3-Dichloropropane	μg/l	1	ISO 17025	< 1.0				
Dibromochloromethane	μg/l	1	ISO 17025	< 1.0				
Tetrachloroethene	μg/l	1	ISO 17025	< 1.0				
1,2-Dibromoethane	μg/l	1	ISO 17025 ISO 17025	< 1.0				
Chlorobenzene 1,1,1,2-Tetrachloroethane	μg/l μg/l	1	ISO 17025	< 1.0 < 1.0				
Ethylbenzene	μg/I μg/I	1	ISO 17025	< 1.0				
p & m-Xylene	μg/l	1	ISO 17025	< 1.0				
Styrene	μg/l	1	ISO 17025	< 1.0				
Tribromomethane	μg/l	1	ISO 17025	< 1.0				
o-Xylene	μg/l	1	ISO 17025	< 1.0				
1,1,2,2-Tetrachloroethane	μg/l	1	ISO 17025	< 1.0				
<u>Isopropylbenzene</u>	μg/l	1	ISO 17025	< 1.0				
Bromobenzene n-Propylbenzene	μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0				
2-Chlorotoluene	μg/l μg/l	1	ISO 17025	< 1.0				
4-Chlorotoluene	μg/l	1	ISO 17025	< 1.0				
1 3 5-Trimethylbenzene	μg/l	1	ISO 17025	< 1.0				
tert-Butylbenzene	μg/l	1	ISO 17025	< 1.0				
1,2,4-Trimethylbenzene	μg/l	1	ISO 17025	< 1.0				
<u>sec-Butylbenzene</u>	μg/l	1	ISO 17025	< 1.0				
1,3-Dichlorobenzene	μg/l	1	ISO 17025	< 1.0				
p-Isopropyltoluene	μg/l	1	ISO 17025	< 1.0 < 1.0				
1,2-Dichlorobenzene 1,4-Dichlorobenzene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0				
Butylbenzene	μg/I μg/I	1	ISO 17025	< 1.0				
1 2-Dibromo-3-chloropropane	μg/I	1	ISO 17025	< 1.0				
1 2 4-Trichlorobenzene	μg/l	1	ISO 17025	< 1.0				
Hexachlorobutadiene	μg/l	1	ISO 17025	< 1.0	-	-		
1,2,3-Trichlorobenzene	μg/l	1	ISO 17025	< 1.0				





Lab Sample Number				470279		
Sample Reference				BH502	 	
Sample Number				None Supplied		
Depth (m)				12.02		
Date Sampled				28/07/2015		
Time Taken				1340		
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status			
SVOCs		<u> </u>				
Aniline	μg/l	0.05	NONE	< 0.05		
Phenol	μg/l	0.05	NONE	< 0.05		
2-Chlorophenol	μg/l	0.05	NONE	< 0.05		
Bis(2-chloroethyl)ether	μg/l	0.05	NONE	< 0.05		
1,3-Dichlorobenzene	μg/l	0.05	NONE	< 0.05		
1,2-Dichlorobenzene	μg/l	0.05	NONE	< 0.05		
1 4-Dichlorobenzene	μg/l	0.05	NONE	< 0.05		
Bis(2-chloroisopropyl)ether	μg/l	0.05	NONE	< 0.05	 	
2-Methylphenol	μg/l	0.05	NONE	< 0.05		
Hexachloroethane	μg/l	0.05	NONE	< 0.05		
Nitrobenzene	μg/l	0.05	NONE	< 0.05		
4-Methylphenol	μg/l	0.05	NONE	< 0.05		
Isophorone	μg/l	0.05	NONE	< 0.05		
2-Nitrophenol	μg/l	0.05	NONE	< 0.05		
2 4-Dimethylphenol	μg/l	0.05	NONE	< 0.05		
Bis(2-chloroethoxy)methane	μg/l	0.05	NONE	< 0.05		
1,2,4-Trichlorobenzene Naphthalene	μg/l	0.05	NONE ISO 17025	< 0.05 < 0.01		
2 4-Dichlorophenol	μg/l μg/l	0.01	NONE	< 0.05		
4-Chloroaniline	μg/l	0.05	NONE	< 0.05		
Hexachlorobutadiene	μg/l	0.05	NONE	< 0.05		
4-Chloro-3-methylphenol	μg/l	0.05	NONE	< 0.05		
2,4,6-Trichlorophenol	μg/l	0.05	NONE	< 0.05		
2 4 5-Trichlorophenol	μg/l	0.05	NONE	< 0.05		
2-Methylnaphthalene	μg/l	0.05	NONE	< 0.05		
2-Chloronaphthalene	μg/l	0.05	NONE	< 0.05		
Dimethylphthalate	μg/l	0.05	NONE	< 0.05		
2 6-Dinitrotoluene	μg/l	0.05	NONE	< 0.05		
Acenaphthylene	μg/l	0.01	ISO 17025	< 0.01		
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01		
2,4-Dinitrotoluene	μg/l	0.05	NONE	< 0.05		
Dibenzofuran	μg/l	0.05	NONE	< 0.05		
4-Chlorophenyl phenyl ether	μg/l	0.05	NONE	< 0.05		
Diethyl phthalate 4-Nitroaniline	μg/l μg/l	0.05	NONE NONE	< 0.05 < 0.05		
Fluorene	μg/I μg/I	0.03	ISO 17025	< 0.03		
Azobenzene	μg/I μg/I	0.01	NONE	< 0.05		
Bromophenyl phenyl ether	μg/l	0.05	NONE	< 0.05		
Hexachlorobenzene	μg/l	0.02	NONE	< 0.02		
Phenanthrene	μg/l	0.01	ISO 17025	< 0.01		
Anthracene	μg/l	0.01	ISO 17025	< 0.01		
Carbazole	μg/l	0.05	NONE	< 0.05		
Dibutyl phthalate	μg/l	0.05	NONE	< 0.05		
Anthraquinone	μg/l	0.05	NONE	< 0.05		
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01		
Pyrene	μg/l	0.01	ISO 17025	< 0.01		
Butyl benzyl phthalate	μg/l	0.05	NONE	< 0.05		
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01		
Chrysene Renze(h)fluoranthana	μg/l	0.01	ISO 17025	< 0.01		
Benzo(b)fluoranthene Benzo(k)fluoranthene	μg/l	0.01	ISO 17025 ISO 17025	< 0.01 < 0.01		
Benzo(k)filioranthene Benzo(a)pyrene	μg/l	0.01	ISO 17025 ISO 17025	< 0.01		
Indeno(1 2 3-cd)pyrene	μg/l μg/l	0.01	ISO 17025	< 0.01		
Dibenz(a h)anthracene	μg/l μg/l	0.01	ISO 17025	< 0.01		
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01		
18: - 1				/		





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

			Mathad	Wet / Dec	A countitation
Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Biological oxygen demand of water	Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.	In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care.	L086-PL	W	ISO 17025
Boron in water	Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	w	ISO 17025
Chemical Oxygen Demand in Water (Total)	Determination of total COD in water by reflux oxidation with acidified K2Cr2O7 followed by colorimetry. Accredited matrices: SW, PW, GW.	HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)	L065-PL	W	ISO 17025
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082 B	w	ISO 17025
Complex cyanide in water	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Electrical conductivity of water	Determination of electrical conductivity in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	w	NONE
Free cyanide in water	Determination of free cyanide by distillation followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	w	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	w	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	w	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	w	ISO 17025
Nitrate in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrite in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by colorimetry.Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L077-PL	W	ISO 17025
pH in water	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L070-UK	W	NONE
Speciated WAC-17 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L070-UK	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L010-PL	W	NONE
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN-82/C-04579.08	L078-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-UK	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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e: reception@i2analytical.com

28/07/2015

Analytical Report Number: 15-76174

Project / Site name: London Paramount Entertainment Samples received on:

Resort

Your job number: 30766 Samples instructed on: 29/07/2015

Your order number: Analysis completed by: 04/08/2015

Report Issue Number: 1 Report issued on: 04/08/2015

Samples Analysed: 5 water samples

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Iss No 15-76174-1





Lab Sample Number				470264	470265	470266	470267	470268
Sample Reference				BH501	BH703	BH705	BH706	BH707
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				28/07/2015	28/07/2015	28/07/2015	28/07/2015	28/07/2015
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.2	7 2	7.2	7.1	7.0
Electrical Conductivity	μS/cm	10	NONE	1100	1400	1200	1200	1400
Total Cyanide	μg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Complex Cyanide	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
Free Cyanide	μg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Sulphate as SO ₄	μg/l	45	ISO 17025	144000	373000	140000	147000	300000
Sulphide	μg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloride	mg/l	0.15	ISO 17025	60	99	130	110	110
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15	23	< 15	< 15	< 15
Nitrate as N	mg/l	0.01	ISO 17025	17.5	7.80	22.1	23.0	8.49
Nitrate as NO ₃	mg/l	0.05	ISO 17025	77.6	34.5	97.7	102	37.6
Nitrite as N	μg/l	1	ISO 17025	6.0	21	5.0	17	110
Nitrite as NO ₂	μg/l	5	ISO 17025	20	69	16	56	360
Chemical Oxygen Demand (Total)	mg/l	2	ISO 17025	22	7 2	3.0	< 2.0	21
BOD (Biochemical Oxygen Demand) Total Oxidised Nitrogen (TON)	mg/l	1	ISO 17025	4.2 18	3 6 7 8	< 1.0 22	1.6	1.7
	mg/l	0.3	NONE	10	7 0	ZZ	23	8.6
Total Phenols Total Phenols (monohydric)	μg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
			•					
Speciated PAHs	1	0.04	I	0.04	0.04	0.04	0.04	
Naphthalene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene Acenaphthene	μg/l	0.01	ISO 17025 ISO 17025	< 0.01 < 0.01				
Fluorene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	μg/l μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	μg/I μg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	μg/I μg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Coronene	μg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	μg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Total WAC-17 PAHs	μg/l	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2





Lab Sample Number				470264	470265	470266	470267	470268
Sample Reference				BH501	BH703	BH705	BH706	BH707
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				28/07/2015	28/07/2015	28/07/2015	28/07/2015	28/07/2015
Time Taken				None Supplied				
			Ac					
Analytical Parameter	_	Limit of detection	Accreditation Status					
(Water Analysis)	Units	ecti	reditat Status					
(crace: / manyoro)	•	을 약	s					
			3					
Heavy Metals / Metalloids							1	
Aluminium (dissolved)	mg/l	0.001	ISO 17025	0 0076	0.0019	0.0044	0.0087	0.0244
Antimony (dissolved)	μg/l	0.4	ISO 17025	1.6	1 2	1.0	1.0	1.3
Arsenic (dissolved)	μg/l	0.15 0.06	ISO 17025 ISO 17025	0.58 41	< 0.15 100	0.37 57	0 34 50	0.61 47
Barium (dissolved) Beryllium (dissolved)	μg/l μg/l	0.06	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Boron (dissolved)	μg/I μg/I	10	ISO 17025	120	45	31	43	49
Cadmium (dissolved)	μg/l	0.02	ISO 17025	0.03	< 0.02	0.02	0 03	0.02
Chromium (hexavalent)	μg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (dissolved)	μg/l	0.2	ISO 17025	0.5	0 2	0.2	0.9	0.3
Copper (dissolved)	μg/l	0.5	ISO 17025	3.7	3 2	3.0	3.9	1.7
Iron (dissolved)	mg/l	0.004	ISO 17025	0.051	0.094	0.031	0.071	0.047
Lead (dissolved)	μg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	12	2.0
Manganese (dissolved)	μg/l	0.05	ISO 17025	9.5	160	66	29	470
Mercury (dissolved)	μg/l	0.05	ISO 17025	0.09	0.10	< 0.05	< 0.05	0.07
Molybdenum (dissolved)	μg/l	0.05	ISO 17025	0.86	15	0.35	0 32	7.9
Nickel (dissolved)	μg/l	0.5	ISO 17025	5.5	6 5	5.7	5.2	21
Selenium (dissolved) Vanadium (dissolved)	μg/l	0.6	ISO 17025	4.4	26	1.8	1.5	3.2
Zinc (dissolved)	μg/l	0.2 0.5	ISO 17025 ISO 17025	0.8 6.7	0 2 2 8	0.4 3.2	0.5 5.3	0.3 3.1
ZINC (dissolved)	μg/l	0.5	150 17025	0.7	2 8	3.2	5.3	3.1
Calcium (dissolved)	mg/l	0.012	ISO 17025	200	240	230	230	290
Magnesium (dissolved)	mg/l	0.005	ISO 17025	11	13	8.5	12	13
Potassium (dissolved)	mg/l	0.025	ISO 17025	13	51	3.9	4.6	3.4
Phosphorus (total)	μg/l	20	ISO 17025	3700	250	640	1100	3900
Management								
Monoaromatics				1.0		4.0		- 10
Benzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene Ethylbenzene	μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0				
p & m-xylene	μg/l μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic > C10 - C12	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic > C16 - C11	μg/l	10 10	NONE NONE	< 10 < 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 TPH-CWG - Aliphatic >C21 - C35	μg/l μg/l	10	NONE	< 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10
TPH-CWG - Aliphatic (C5 - C35)	μg/I μg/I	10	NONE	< 10	< 10	< 10	< 10	< 10
	P9/1	- 10		. 10	. 10	. 10	- 10	. 10
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C7 - C8	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C8 - C10	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10





Lab Sample Number				470264	470265	470266	470267	470268
Sample Reference				BH501	BH703	BH705	BH706	BH707
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				28/07/2015	28/07/2015	28/07/2015	28/07/2015	28/07/2015
Time Taken				None Supplied				
		_	Ac					
Analytical Parameter	_	Limit of detection	Accreditation Status					
(Water Analysis)	Units	ecti ecti	reditat Status					
(Water Analysis)	۷,	<u> </u>	s					
			š					
VOCs	_							
Chloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	μg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	μg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene 1,1,2-Trichloro-1,2,2-trifluoroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	μg/I μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
1,1-Dichloroethane	μg/I μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene 1,1,2-Trichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	μg/l μg/l	1	ISO 17025	< 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
Dibromochloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene 1 3 5-Trimethylbenzene	μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0				
tert-Butylbenzene	μg/l μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	μg/I μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1 2-Dibromo-3-chloropropane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1 2 4-Trichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0





Lab Sample Number				470264	470265	470266	470267	470268
Sample Reference				BH501	BH703	BH705	BH706	BH707
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				28/07/2015	28/07/2015	28/07/2015	28/07/2015	28/07/2015
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs			_					
Aniline	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	μg/I μg/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1 4-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05 < 0.05	< 0.05
Isophorone 2-Nitrophenol	μg/l μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05	< 0.05 < 0.05
2 4-Dimethylphenol	μg/I μg/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	μg/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2 4-Dichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2 4 5-Trichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chloronaphthalene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate 2 6-Dinitrotoluene	μg/l	0.05	NONE NONE	< 0.05 < 0.05				
Acenaphthylene	μg/l μg/l	0.03	ISO 17025	< 0.01	< 0.03	< 0.03	< 0.03	< 0.01
Acenaphthene	μg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Diethyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Azobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromophenyl phenyl ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene Phonanthropo	μg/l	0.02	NONE ISO 17025	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Phenanthrene Anthracene	μg/l μg/l	0.01	ISO 17025 ISO 17025	< 0.01 < 0.01				
Carbazole	μg/I μg/I	0.01	NONE	< 0.05	< 0.01	< 0.01	< 0.01	< 0.05
Dibutyl phthalate	μg/I μg/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Butyl benzyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1 2 3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a h)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

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Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Biological oxygen demand of water	Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.	In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care.	L086-PL	W	ISO 17025
Boron in water	Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025
Chemical Oxygen Demand in Water (Total)	Determination of total COD in water by reflux oxidation with acidified K2Cr2O7 followed by colorimetry. Accredited matrices: SW, PW, GW.	HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)	L065-PL	W	ISO 17025
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082 B	W	ISO 17025
Complex cyanide in water	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of water	Determination of electrical conductivity in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in water	Determination of free cyanide by distillation followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrate in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrite in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by colorimetry.Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L077-PL	W	ISO 17025
pH in water	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025
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Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L070-UK	W	NONE
Speciated WAC-17 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L070-UK	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L010-PL	W	NONE
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN-82/C-04579.08	L078-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-UK	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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Analytical Report Number: 15-75469

Project / Site name: London Paramount Entertainment Resort Samples received on: 26/06/2015

Your job number: 30766 Samples instructed on: 15/07/2015

Your order number: Analysis completed by: 22/07/2015

Report Issue Number: 1 Report issued on: 22/07/2015

Samples Analysed: 8 soil samples

Signed:

Rexona Rahman

Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter

Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting leachates - 2 weeks from reporting

waters - 2 weeks from reporting

asbestos - 6 months from reporting

Iss No 15-75469-1





Lab Sample Number				465846	465847	465848	465849	465850
Sample Reference				BH502	BH502	BH502	BH502	BH502
Sample Number				None Supplied				
Depth (m)				1 60	2.10	4.70	5 60	7.70
Date Sampled				24/06/2015	24/06/2015	24/06/2015	24/06/2015	24/06/2015
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected





Lab Sample Number				465851	465852	465853	
Sample Reference				BH502	BH502	BH502	
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				9 00	9.40	11.30	
Date Sampled				24/06/2015	24/06/2015	24/06/2015	
Time Taken	•			None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom. For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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e: reception@i2analytical.com

Analytical Report Number: 15-75465

Project / Site name: London Paramount Entertainment Samples received on: 15/07/2015

Resort

Your job number: 30766 Samples instructed on: 15/07/2015

Your order number: Analysis completed by: 23/07/2015

Report Issue Number: 1 Report issued on: 23/07/2015

Samples Analysed: 7 water samples

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting





Lab Sample Number				465834	465835	465836	465837	465838	465839	465840
Sample Reference				BH101	WS101	BH204	BH203	BH201	BH501	BH502
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				5.26	3.31	2.50	2.37	3.83	11.73	12.20
Date Sampled				15/07/2015	15/07/2015	15/07/2015	15/07/2015	15/07/2015	15/07/2015	15/07/2015
Time Taken				0900	1000	1100	1145	1245	1345	1410
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status							
General Inorganics										
nH	pH Units	N/A	ISO 17025	7.2	8.9	7.4	7.5	11.3	7.5	7.3
Electrical Conductivity	µS/cm	10	NONE	6000	120000	1700	2800	3100	1200	4900
Total Cyanide	μg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Complex Cyanide	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Free Cyanide	μg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Sulphate as SO ₄	μg/l	45	ISO 17025	327000	9820000	111000	1080000	383000	136000	614000
Sulphide Chloride	μg/l mg/l	5 0.15	NONE ISO 17025	< 5.0 1900	< 5.0 28000	< 5.0 230	< 5.0 260	< 5.0 260	< 5.0 75	< 5.0 1300
Ammoniacal Nitrogen as N	mq/I μg/I	15	ISO 17025	3600	410000	1300	1300	690	< 15	< 15
Nitrate as N	mg/I	0.01	ISO 17025	0.15	1.07	0.35	1.11	1.14	15.9	34.7
Nitrate as NO ₃	mg/I	0.05	ISO 17025	0.68	4.73	1.56	4.94	5.04	70.5	154
Nitrite as N	µq/l	1	ISO 17025	2.0	21	2.0	410	450	29	20
Nitrite as NO ₂	μg/l	5	ISO 17025	6.6	69	6.6	1300	1500	95	66
Chemical Oxygen Demand (Total)	mg/I	2	ISO 17025	98	2200	43	62	62	14	37
BOD (Biochemical Oxygen Demand)	mg/I	1	ISO 17025	50	8.2	5.7	3.0	2.8	4.5	4.8
Total Oxidised Nitrogen (TON)	mg/l	0.3	NONE	< 0.3	1.1	0.4	1.5	1.6	16	35
Total Phenols										
Total Phenols (monohydric)	ug/l	10	ISO 17025	110	< 10	< 10	< 10	< 10	< 10	< 10
Speciated PAHs	•									
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	μg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene Fluorene	µg/I µg/I	0.01	ISO 17025 ISO 17025	< 0.01	< 0.01 < 0.01	< 0.01	< 0.01	< 0.01 < 0.01	< 0.01 < 0.01	< 0.01 < 0.01
Phenanthrene	µg/1 µg/1	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	μq/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene Benzo(k)fluoranthene	µg/I µg/I	0.01	ISO 17025 ISO 17025	< 0.01	< 0.01 < 0.01	< 0.01	< 0.01	< 0.01 < 0.01	< 0.01 < 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1 2 3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH										
Total EPA-16 PAHs	µд/І	0.2	ISO 17025	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Heavy Metals / Metalloids Aluminium (dissolved)	mg/l	0.001	ISO 17025	0.0030	0.0563	0.0036	0.0059	0.474	0.0039	0.0029
Antimony (dissolved)	μg/l	0.4	ISO 17025	2.0	2.4	2.1	2.6	11	1.1	1.5
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.72	55.3	2.64	1.71	41.3	0.44	0.69
Barium (dissolved)	μg/l	0.06	ISO 17025	110	37	39	130	8.3	43	66
Beryllium (dissolved)	μq/l	0.1	ISO 17025	< 0.1	0.1	< 0.1 290	< 0.1	< 0.1	< 0.1	< 0.1
Boron (dissolved) Cadmium (dissolved)	µg/I µg/I	0.02	ISO 17025 ISO 17025	220 < 0.02	920 0.41	< 0.02	420 < 0.02	110 < 0.02	120 < 0.02	560 < 0.02
Chromium (hexavalent)	µg/1 µg/1	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	15	< 0.2	0.2	4.1	0.3	14
Copper (dissolved)	µq/l	0.5	ISO 17025	1.5	15	6.4	8.5	25	5.3	4.5
Iron (dissolved)	mg/l	0.004	ISO 17025	3.4	0.14	0.37	0.13	0.092	0.39	0.34
Lead (dissolved)	µg/l	0.2	ISO 17025	0.2	6.7	0.3	0.4	1.4	0.3	0.3
Manganese (dissolved)	μg/I	0.05	ISO 17025	800 < 0.05	48 0.37	210 0.52	420 1.37	1.5	16 0.09	18 < 0.05
Mercury (dissolved) Molybdenum (dissolved)	µq/I µg/I	0.05	ISO 17025 ISO 17025	< 0.05 18	9.2	0.52 5.9	9.7	1.08	0.09	< 0.05 5.8
Nickel (dissolved)	µg/1 µg/1	0.03	ISO 17025	15	26	8.3	9.6	3.5	4.4	10
Selenium (dissolved)	µg/l	0.6	ISO 17025	94	36	6.4	25	11	3.6	22
Vanadium (dissolved)	μg/l	0.2	ISO 17025	0.3	37	3.2	1.3	230	0.9	1.5
Zinc (dissolved)	µg/l	0.5	ISO 17025	2.5	4.3	1.4	2.9	< 0.5	7.1	3.9





Lab Sample Number				465834	465835	465836	465837	465838	465839	465840
Sample Reference				BH101	WS101	BH204	BH203	BH201	BH501	BH502
Sample Number				None Supplied						
Depth (m)				5.26	3.31	2.50	2.37	3.83	11.73	12.20
Date Sampled				15/07/2015	15/07/2015	15/07/2015	15/07/2015	15/07/2015	15/07/2015	15/07/2015
Time Taken				0900	1000	1100	1145	1245	1345	1410
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status							
Calcium (dissolved)	mg/l	0.012	ISO 17025	150	220	91	360	7.4	190	500
Magnesium (dissolved)	mg/I	0.005	ISO 17025	78	280	35	65	0.31	9.7	21
Potassium (dissolved)	mg/l	0.025	ISO 17025	44	3100	46	55	580	13	85
Phosphorus (total)	mg/I	0.05	ISO 17025	< 0.050	19	0.86	0.44	1.1	4.0	1.8
Phosphorus (total)	μg/I	20	ISO 17025	24	19000	860	440	1100	4000	1800
Monoaromatics Benzene	µq/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	μq/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xvlene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µд/І	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons TPH-CWG - Aliphatic >C5 - C6	ug/l	10	NONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C6 - C8	дд/1	10	NONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic > C8 - C10	ua/l	10	NONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic > C10 - C12	ua/l	10	NONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic > C12 - C16	μq/I	10	NONE	< 10	12	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	230	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	980	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	μg/l	10	NONE	< 10	1200	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C7 - C8	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C8 - C10	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	μg/l	10	NONE	< 10	< 10	< 10	< 10	< 10	< 10	< 10





Semple Reference	Lab Sample Number				465834	465835	465836	465837	465838	465839	465840
Sept					BH101	WS101			BH201		
Security											
Analytical Parameter G											
Analytical Parameter Water Analysis Section Sect											
Vocarrentaries	Time Taken	r -			0900	1000	1100	1145	1245	1345	1410
Vocarrentaries	-	Units	Limit of detection	Accreditation Status							
Distribution 1971 1 150,7705 2.10	VOCs										•
Segmentations	Chloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Variable			1			< 1.0	< 1.0	< 1.0	< 1.0		< 1.0
Indicatophorountaines											
13-Definitionshipme 1991 1 5017025 < 1.0											
10.2 Trinstreon 12.0 1 90 10.0 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10 <											
Section Sect											
MTES (Mathy Tentral Bury Ethies)											
13-Delinformerane			1								
22-Differentemen			1		< 1.0					< 1.0	
Trightpromethree	2,2-Dichloropropane	μg/l	1	ISO 17025	< 1.0				< 1.0		
12-Dishibrographe	Trichloromethane	μg/l	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
13-Dehroreptopene											
Figs 1 150 17025 10 10 10 10 10 10 10 1			1								
Bername			1								
Tetrachicromethane			1								
12-Dichropropage			1								
Tichloroethene											
Discrimentation											
Bomodichloromethane			1								
Trans-1 3-dichloropropene	Bromodichloromethane		1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tolume	Cis-1 3-dichloropropene	μg/l	1	ISO 17025		< 1.0	< 1.0	< 1.0	< 1.0		< 1.0
11.2-Trichforcethane			1								
13-Dichropropane			1								
Distronochloromeltane μg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.											
Tetrachroresthene µg/l 1 ISD 17025 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0											
1.2 Dibromoethane			1								
Chloroberzene			1								
1.1.12-Tetrachloroethane			1								
p & m-Xylene μg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0			1							< 1.0	
Styrene	Ethylbenzene	µq/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane		μg/l									
O-Xylene µg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 <											
11 2 2-Tetrachloroethane											
Sopropylbenzene			1								
Bromobenzene			1								
n-Propylbenzene											
2-Chlorotoluene μg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0			_								
4-Chlorotoluene μα/I 1 ISO 17025 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0											
lert-Butylbenzene up/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0			1	ISO 17025							
1,2,4-Trimethylbenzene			1								
sec-Bulylbenzene ug/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0			1								
1 3-Dichlorobenzene µg/l 1 ISO 17025 < 1.0			1								
p-Isopropyltoluene			_								
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			_								
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$											
Butylbenzene µg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0											
1 2-Dibromo-3-chloropropane μg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 1 2 4-Trichlorobenzene μg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1			1								
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			1								
			1	ISO 17025	< 1.0						
1,2,3-Trichlorobenzene µg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0		μg/l	1								
	1,2,3-Trichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				465834	465835	465836	465837	465838	465839	465840
Sample Reference				BH101	WS101	BH204	BH203	BH201	BH501	BH502
Sample Number				None Supplied						
Depth (m)				5.26	3.31	2.50	2.37	3.83	11.73	12.20
Date Sampled				15/07/2015	15/07/2015	15/07/2015	15/07/2015	15/07/2015	15/07/2015	15/07/2015
Time Taken				0900	1000	1100	1145	1245	1345	1410
			A							
Amphatical Payameter	_	Limit of detection	Accreditation Status							
Analytical Parameter	Units	ie m	ta edir							
(Water Analysis)	8	호 유	us at							
		_	9							
SVOCs	•									
Aniline	ua/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	µg/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µq/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	μg/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1 3-Dichlorobenzene	µq/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1 2-Dichlorobenzene	ua/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1 4-Dichlorobenzene	µq/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	μq/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	µq/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	μq/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isophorone	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2 4-Dimethylphenol	µq/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	μg/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µq/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	µq/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	µq/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µq/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2 4 6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2 4 5-Trichlorophenol	µq/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chloronaphthalene	µq/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2 6-Dinitrotoluene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2 4-Dinitrotoluene Dibenzofuran	µg/l	0.05	NONE NONE	< 0.05 < 0.05						
	μg/l	0.05		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether Diethyl phthalate	μq/l μq/l	0.05	NONE NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline		0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-nitroaniline Fluorene	µg/I µg/I	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Azobenzene	µq/I µq/I	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromophenyl phenyl ether	μg/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	μq/I	0.03	NONE	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	ug/l	0.02	ISO 17025	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Anthracene	μq/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	µg/I	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	ug/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µq/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µq/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µq/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µq/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1 2 3-cd)pyrene	µg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a h)anthracene	μq/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µq/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

 $\label{eq:U/S} \text{U/S} = \text{Unsuitable Sample} \qquad \text{I/S} = \text{Insufficient Sample}$





Lab Sample Number						
Sample Reference						
Sample Number						
Depth (m)						
Date Sampled Time Taken						
Tille Takeli	1		_			
		유	Accreditation Status			
Analytical Parameter	Units	Limit of detection	edi Stat			
(Water Analysis)	Ŗ	ti of	tati			
		3	9			
General Inorganics						
На	pH Units	N/A	ISO 17025			
Electrical Conductivity	μS/cm	10	NONE			
Total Cyanide	μq/l	10	ISO 17025			
Complex Cyanide Free Cyanide	μg/l μg/l	10 10	NONE ISO 17025			
Sulphate as SO ₄	µg/I µg/I	45	ISO 17025			
Sulphide	μg/l	5	NONE			
Chloride	mg/l	0.15	ISO 17025			
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025			
Nitrate as N	mg/l	0.01	ISO 17025			
Nitrate as NO ₃	mg/l	0.05	ISO 17025			
Nitrite as N	μq/l	1	ISO 17025			
Nitrite as NO ₂	μg/l	5 2	ISO 17025 ISO 17025			
Chemical Oxygen Demand (Total) BOD (Biochemical Oxygen Demand)	mg/l mg/l	1	ISO 17025			
Total Oxidised Nitrogen (TON)	mg/l	0.3	NONE			
Total Oxidised Willogen (TON)	mg/i	0.3	NONE			
Total Phenols				_		
Total Phenols (monohydric)	μg/l	10	ISO 17025			
					-	
Speciated PAHs						
Naphthalene	µg/l	0.01	ISO 17025			
Acenaphthylene	μg/I	0.01	ISO 17025			
Acenaphthene Fluorene	µg/I µg/I	0.01	ISO 17025 ISO 17025			
Phenanthrene	μg/I μg/I	0.01	ISO 17025			
Anthracene	µq/l	0.01	ISO 17025			
Fluoranthene	μg/l	0.01	ISO 17025			
Pyrene	µq/l	0.01	ISO 17025			
Benzo(a)anthracene	μg/l	0.01	ISO 17025			
Chrysene	μq/l	0.01	ISO 17025			
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025			
Benzo(k)fluoranthene	μq/l	0.01	ISO 17025 ISO 17025			
Benzo(a)pyrene Indeno(1 2 3-cd)pyrene	μg/l μg/l	0.01	ISO 17025			
Dibenz(a h)anthracene	μg/1 μg/l	0.01	ISO 17025			
Benzo(ghi)perylene	μg/l	0.01	ISO 17025			
	F-57-					
Total PAH						
Total EPA-16 PAHs	µg/l	0.2	ISO 17025			
Heavy Metals / Metalloids					1	
Aluminium (dissolved) Antimony (dissolved)	mg/l	0.001	ISO 17025			
Antimony (dissolved) Arsenic (dissolved)	μg/l μg/l	0.4	ISO 17025 ISO 17025			
Barium (dissolved)	μq/I μg/I	0.15	ISO 17025			
Beryllium (dissolved)	µg/l	0.1	ISO 17025			
Boron (dissolved)	μg/l	10	ISO 17025			
Cadmium (dissolved)	μg/l	0.02	ISO 17025			
Chromium (hexavalent)	μq/l	5	ISO 17025			
Chromium (dissolved)	μg/l	0.2	ISO 17025			
Copper (dissolved)	μq/l	0.5	ISO 17025			
Iron (dissolved)	mg/l	0.004	ISO 17025			
Lead (dissolved) Manganese (dissolved)	µg/l	0.2	ISO 17025 ISO 17025			
Mercury (dissolved)	μg/l μg/l	0.05	ISO 17025			
Molybdenum (dissolved)	μg/I	0.05	ISO 17025			
Nickel (dissolved)	μg/l	0.5	ISO 17025			
Selenium (dissolved)	μq/l	0.6	ISO 17025			
Vanadium (dissolved)	μg/l	0.2	ISO 17025			
Zinc (dissolved)	µg/l	0.5	ISO 17025			





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number						
Sample Reference						
Sample Number						
Depth (m)						
Date Sampled						
Time Taken						
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status			
Calcium (dissolved)	mg/I	0.012	ISO 17025			
Magnesium (dissolved)	mg/l	0.005	ISO 17025			
Potassium (dissolved)	mg/l	0.025	ISO 17025			
Phosphorus (total)	mg/l	0.05	ISO 17025			
Phosphorus (total)	µд/І	20	ISO 17025	•	•	

Monoaromatics

Benzene	μq/l	1	ISO 17025		
Toluene	μg/l	1	ISO 17025		
Ethylbenzene	μg/l	1	ISO 17025		
p & m-xylene	μg/l	1	ISO 17025		
o-xylene	μg/l	1	ISO 17025		
MTBE (Methyl Tertiary Butyl Ether)	μg/l	1	ISO 17025	 ,	

Petroleum Hydrocarbons					
TPH-CWG - Aliphatic >C5 - C6	µq/l	10	NONE		
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE		
TPH-CWG - Aliphatic >C8 - C10	µq/l	10	NONE		
TPH-CWG - Aliphatic >C10 - C12	μq/l	10	NONE		
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE		
TPH-CWG - Aliphatic >C16 - C21	µq/l	10	NONE		
TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE		
TPH-CWG - Aliphatic (C5 - C35)	μg/l	10	NONE		
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE		
TPH-CWG - Aromatic >C7 - C8	μg/I	10	NONE		
TPH-CWG - Aromatic >C8 - C10	µg/l	10	NONE		
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE		
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE		
TPH-CWG - Aromatic >C16 - C21	μg/l	10	NONE		
TPH-CWG - Aromatic >C21 - C35	μg/l	10	NONE		
TPH-CWG - Aromatic (C5 - C35)	μg/l	10	NONE		





Lab Sample Number					
Sample Reference					
Sample Number					
Depth (m)					
Date Sampled					
Time Taken					
			>		
		요 _	Accreditation Status		
Analytical Parameter	Units	Limit of detection	xreditat Status		
(Water Analysis)	ढ	ti of	us		
		-	9		
VOCs					
Chloromethane	µg/l	1	ISO 17025		
Chloroethane	µg/l	1	ISO 17025		
Bromomethane	μg/l	1	ISO 17025		
Vinyl Chloride	µg/l	1	NONE		
Trichlorofluoromethane	μg/l	1	NONE		
1,1-Dichloroethene	μg/l	1	ISO 17025		
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025		
Cis-1,2-dichloroethene	μg/l	1	ISO 17025		
MTBE (Methyl Tertiary Butyl Ether) 1,1-Dichloroethane	µg/I µg/I	1	ISO 17025 ISO 17025		
2,2-Dichloropropane	µg/I µg/I	1	ISO 17025		
Z,2-Dichloropropane Trichloromethane	рд/I µд/I	1	ISO 17025		
1,1,1-Trichloroethane	рд/1 µд/1	1	ISO 17025		
1,2-Dichloroethane	µg/I	1	ISO 17025		
1,1-Dichloropropene	µg/I	1	ISO 17025		
Trans-1,2-dichloroethene	µg/l	1	ISO 17025		
Benzene	μg/l	1	ISO 17025		
Tetrachloromethane	µg/l	1	ISO 17025		
1,2-Dichloropropane	μg/l	1	ISO 17025		
Trichloroethene	μg/l	1	ISO 17025		
Dibromomethane	μg/I	1	ISO 17025		
Bromodichloromethane	μg/I	1	ISO 17025 ISO 17025		
Cis-1 3-dichloropropene Trans-1 3-dichloropropene	μg/l	1	ISO 17025		
Toluene	µg/I µg/I	1	ISO 17025		
1 1 2-Trichloroethane	µg/l	1	ISO 17025		
1,3-Dichloropropane	µg/l	1	ISO 17025		
Dibromochloromethane	µg/l	1	ISO 17025		
Tetrachloroethene	μg/l	1	ISO 17025		
1,2-Dibromoethane	μg/l	1	ISO 17025		
Chlorobenzene	μg/I	1	ISO 17025		
1,1,1,2-Tetrachloroethane	μg/l	1	ISO 17025		
Ethylbenzene	µg/l	11	ISO 17025		
p & m-Xylene	μg/I	1	ISO 17025		
Styrene	μg/I	1	ISO 17025		
Tribromomethane	µд/І	1	ISO 17025 ISO 17025		
o-Xylene 1 1 2 2-Tetrachloroethane	µg/I µg/I	1	ISO 17025		
Isopropylbenzene	µд/1 µg/I	1	ISO 17025		
Bromobenzene	µg/I	1	ISO 17025		
n-Propylbenzene	да/1	1	ISO 17025		
2-Chlorotoluene	µg/l	1	ISO 17025		
4-Chlorotoluene	µg/l	1	ISO 17025		
1,3,5-Trimethylbenzene	μg/l	1	ISO 17025		
tert-Butylbenzene	μq/l	1	ISO 17025		
1,2,4-Trimethylbenzene	μg/l	1	ISO 17025		
sec-Butylbenzene	µg/l	1	ISO 17025		
1 3-Dichlorobenzene	μg/I	1	ISO 17025		
p-Isopropyltoluene	μg/l	1	ISO 17025		
1 2-Dichlorobenzene	μq/I	1	ISO 17025		
1 4-Dichlorobenzene	μg/l	1	ISO 17025		
Butylbenzene 1 2-Dibromo-3-chloropropane	µg/I µg/I	1	ISO 17025 ISO 17025		
	рд/1 µд/1	1	ISO 17025		
1.2 A-Trichlorohonzono					
1 2 4-Trichlorobenzene Hexachlorobutadiene	µд/1 µд/1	1	ISO 17025		





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number					
Sample Reference					
Sample Number					
Depth (m)					
Date Sampled					
Time Taken	ı				
		۰_	Accreditation Status		
Analytical Parameter	Units	Limit of detection	sta		
(Water Analysis)	द्ध	0.00	tus ita		
		5 7	ğ		
SVOCs	<u> </u>			!	<u> </u>
Aniline	µд/І	0.05	NONE	1	I
Phenol	ug/l	0.05	NONE		
2-Chlorophenol	μg/I	0.05	NONE		
Bis(2-chloroethyl)ether	μg/l	0.05	NONE		
1 3-Dichlorobenzene	μg/l	0.05	NONE		
1 2-Dichlorobenzene	μq/l	0.05	NONE		
1 4-Dichlorobenzene	μg/l	0.05	NONE		
Bis(2-chloroisopropyl)ether	µg/I	0.05	NONE	 	
2-Methylphenol Hexachloroethane	µg/I µg/I	0.05	NONE NONE	 	
Nitrobenzene	µд/I µд/I	0.05	NONE	t	
4-Methylphenol	µg/l	0.05	NONE	1	
Isophorone	μg/l	0.05	NONE	 <u> </u>	
2-Nitrophenol	μg/l	0.05	NONE		
2 4-Dimethylphenol	µд/І	0.05	NONE		
Bis(2-chloroethoxy)methane	μg/l	0.05	NONE		
1,2,4-Trichlorobenzene	µд/І	0.05	NONE		
Naphthalene	μg/l	0.01	ISO 17025		
2,4-Dichlorophenol 4-Chloroaniline	µg/I	0.05	NONE		
4-Chioroaniline Hexachlorobutadiene	µq/I µq/I	0.05	NONE NONE		
4-Chloro-3-methylphenol	ug/l	0.05	NONE		
2 4 6-Trichlorophenol	дд/1	0.05	NONE	İ	
2 4 5-Trichlorophenol	μq/l	0.05	NONE		
2-Methylnaphthalene	μg/l	0.05	NONE		
2-Chloronaphthalene	µд/І	0.05	NONE		
Dimethylphthalate	μg/l	0.05	NONE		
2 6-Dinitrotoluene	μg/l	0.05	NONE		
Acenaphthylene	μq/l	0.01	ISO 17025	-	
Acenaphthene 2 4-Dinitrotoluene	µg/I µg/I	0.01	ISO 17025 NONE		
Dibenzofuran	µq/I	0.05	NONE		
4-Chlorophenyl phenyl ether	ug/l	0.05	NONE	İ	
Diethyl phthalate	μg/l	0.05	NONE		
4-Nitroaniline	μg/l	0.05	NONE		
Fluorene	µд/І	0.01	ISO 17025		
Azobenzene	μg/l	0.05	NONE		
Bromophenyl phenyl ether	µд/I	0.05	NONE		
Hexachlorobenzene	μg/l	0.02	NONE		
Phenanthrene Anthracene	µq/I µg/I	0.01	ISO 17025 ISO 17025		
Carbazole	µg/I	0.01	NONE		
Dibutyl phthalate	рд/I µд/I	0.05	NONE		
Anthraquinone	µg/I	0.05	NONE		
Fluoranthene	μq/l	0.01	ISO 17025		
Pyrene	μg/l	0.01	ISO 17025		
Butyl benzyl phthalate	μq/l	0.05	NONE	 <u> </u>	
Benzo(a)anthracene	μg/l	0.01	ISO 17025		
Chrysene	μg/l	0.01	ISO 17025	!	
Benzo(b)fluoranthene	µg/I	0.01	ISO 17025	 	
Benzo(k)fluoranthene Benzo(a)pyrene	µg/I	0.01	ISO 17025	 	
Benzo(a)pyrene Indeno(1 2 3-cd)pyrene	µq/I µg/I	0.01	ISO 17025 ISO 17025	 	
Dibenz(a h)anthracene	µg/1 µg/1	0.01	ISO 17025	 	
Benzo(ghi)perylene	µg/I	0.01	ISO 17025	1	

 $\label{eq:U/S} \text{U/S} = \text{Unsuitable Sample} \qquad \text{I/S} = \text{Insufficient Sample}$





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Biological oxygen demand of water	Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.	In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care.	L086-PL	W	ISO 17025
Boron in water	Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025
Chemical Oxygen Demand in Water (Total)	Determination of total COD in water by reflux oxidation with acidified K2Cr2O7 followed by colorimetry. Accredited matrices: SW, PW, GW.	HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)	L065-PL	W	ISO 17025
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082 B	W	ISO 17025
Complex cyanide in water	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Electrical conductivity of water	Determination of electrical conductivity in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in water	Determination of free cyanide by distillation followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, AI=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrate in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrite in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L077-PL	W	ISO 17025
pH in water	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025
	1			Iss No 15	o-75465-T





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L070-UK	W	NONE
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L070-UK	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L010-PL	W	NONE
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN-82/C-04579 08	L078-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-UK	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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t: 01923 225404 f: 01923 237404

e: reception@i2analytical.com

Analytical Report Number: 15-74953

London Paramount Entertainment Project / Site name: Samples received on: 19/06/2015

Resort

Your job number: 30766 Samples instructed on: 07/07/2015

Your order number: Analysis completed by: 14/07/2015

Report Issue Number: Report issued on: 14/07/2015

Samples Analysed: 2 leachate samples

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting





Lab Sample Number				463063	463064		
Sample Reference	BH101	BH101	1				
Sample Number				None Supplied	None Supplied		
Depth (m)				4 50	7.00		
Date Sampled				18/06/2015	19/06/2015		
Time Taken				1210	0830		
Time Tuken				1210	0030	1	
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status				
Speciated PAHs							
Naphthalene	μg/l	0.01	NONE	< 0.01	< 0.01		
Acenaphthylene	μg/l	0.01	NONE	< 0.01	< 0.01		
Acenaphthene	μg/l	0.01	NONE	< 0.01	< 0.01		
Fluorene	μg/l	0.01	NONE	< 0.01	< 0.01		
Phenanthrene	μg/l	0.01	NONE	< 0.01	< 0.01		
Anthracene	μg/l	0.01	NONE	< 0.01	< 0.01		
Fluoranthene	μg/l	0.01	NONE	< 0.01	< 0.01		
Pyrene	μg/l	0.01	NONE	< 0.01	< 0.01		
Benzo(a)anthracene	μg/l	0.01	NONE	< 0.01	< 0.01		
Chrysene	μg/l	0.01	NONE	< 0.01	< 0.01		
Benzo(b)fluoranthene	μg/l	0.01	NONE	< 0.01	< 0.01		
Benzo(k)fluoranthene	μg/l	0.01	NONE	< 0.01	< 0.01		
Benzo(a)pyrene	μg/l	0.01	NONE	< 0.01	< 0.01		
Indeno(1,2,3-cd)pyrene	μg/l	0.01	NONE	< 0.01	< 0.01		
Dibenz(a,h)anthracene	μg/l	0.01	NONE	< 0.01	< 0.01		
Benzo(ghi)perylene	μg/l	0.01	NONE	< 0.01	< 0.01		
Total PAH							
Total EPA-16 PAHs	μg/l	0.2	NONE	< 0.2	< 0.2		
Total EFA-10 FAIIS	ру/і	0.2	NONL	₹ 0.2	₹ 0.2		
Heavy Metals / Metalloids							
Arsenic (dissolved)	μg/l	1.1	ISO 17025	4.1	9.7		
Barium (dissolved)	μg/l	0.05	ISO 17025	19	20		
Beryllium (dissolved)	μg/l	0.2	ISO 17025	< 0.2	< 0.2		
Boron (dissolved)	μg/l	10	ISO 17025	180	150		
Cadmium (dissolved)	μg/l	0.08	ISO 17025	< 0.08	< 0.08		
Chromium (dissolved)	μg/l	0.4	ISO 17025	1.6	1.9		
Copper (dissolved)	μg/l	0.7	ISO 17025	2.5	6 6		
Lead (dissolved)	μg/l	1	ISO 17025	< 1.0	< 1.0		
Mercury (dissolved)	μg/l	0.5	ISO 17025	< 0.5	< 0.5		
Nickel (dissolved)	μg/l	0.3	ISO 17025	0.9	3 3		
Selenium (dissolved)	μg/l	4	ISO 17025	< 4.0	< 4.0		
Vanadium (dissolved)	μg/l	1.7	ISO 17025	5.1	66		
Zinc (dissolved)	μg/l	0.4	ISO 17025	7.4	3 8		





TPH-CWG - Aromatic >C21 - C35 TPH-CWG - Aromatic (C5 - C35)

Project / Site name: London Paramount Entertainment Resort

Lab Sample Number	463063	463064					
Sample Reference				BH101	BH101		
Sample Number				None Supplied	None Supplied		
Depth (m)				4 50	7.00		
Date Sampled				18/06/2015	19/06/2015		
Time Taken				1210	0830		
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status				
Monoaromatics							
Benzene	μg/l	1	NONE	< 1.0	< 1.0		
Toluene	μg/l	1	NONE	< 1.0	< 1.0		
Ethylbenzene	μg/l	1	NONE	< 1.0	< 1.0		
p & m-xylene	μg/l	1	NONE	< 1.0	< 1.0		
o-xylene	μg/l	1	NONE	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/l	10	NONE	< 10	< 10		
Petroleum Hydrocarbons							
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic >C16 - C21	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic (C5 - C35)	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aromatic >C7 - C8	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aromatic >C8 - C10	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE	< 10	< 10		_
TPH-CWG - Aromatic >C12 - C16	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aromatic >C16 - C21	μg/l	10	NONE	< 10	< 10		

< 10 < 10

μg/l

10

NONE

< 10





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Boron in leachate	Determination of boron by acidification followed by ICP-OES.	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in leachates	Determination of BTEX and MTBE in leachates by headspace GC-MS.	In-house method based on USEPA8260	L073W-PL	W	NONE
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Speciated EPA-16 PAHs in leachate	Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L070-PL	W	NONE
TPHCWG (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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24/06/2015

14/07/2015

14/07/2015

Analytical Report Number: 15-74932

Project / Site name: London Paramount Entertainment

Resort

Your job number: 30766

30766 Samples instructed on: 07/07/2015

Your order number:

Report Issue Number:

Samples Analysed: 1 leachate sample

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Signed:

Emma Winter Assistant Reporting Manager

Samples received on:

Analysis completed by:

Report issued on:

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

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Lab Sample Number				462993		1	1
•	WS101						
Sample Reference Sample Number				None Supplied			
Depth (m)				5 60			
	23/06/2015						
Date Sampled Time Taken				1600			
Time Taken	1	1	1	1000		 	1
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status				
Speciated PAHs							
Naphthalene	μg/l	0.01	NONE	< 0.01			
Acenaphthylene	μg/l	0.01	NONE	< 0.01			
Acenaphthene	μg/l	0.01	NONE	< 0.01			
Fluorene	μg/l	0.01	NONE	< 0.01			
Phenanthrene	μg/l	0.01	NONE	< 0.01			
Anthracene	μg/l	0.01	NONE	< 0.01			
Fluoranthene	μg/l	0.01	NONE	< 0.01			
Pyrene	μg/l	0.01	NONE	< 0.01			
Benzo(a)anthracene	μg/l	0.01	NONE	< 0.01			
Chrysene	μg/l	0.01	NONE	< 0.01			
Benzo(b)fluoranthene	μg/l	0.01	NONE	< 0.01			
Benzo(k)fluoranthene	μg/l	0.01	NONE	< 0.01			
Benzo(a)pyrene	μg/l	0.01	NONE	< 0.01			
Indeno(1,2,3-cd)pyrene	μg/l	0.01	NONE	< 0.01			
Dibenz(a,h)anthracene	μg/l	0.01	NONE	< 0.01			
Benzo(ghi)perylene	μg/l	0.01	NONE	< 0.01			
Total PAH							
Total EPA-16 PAHs	μg/l	0.2	NONE	< 0.2	1		
Total EFA-10 FALIS	μg/i	0.2	NONE	< 0.2			
Heavy Metals / Metalloids							
Arsenic (dissolved)	μq/l	1.1	ISO 17025	< 1.1			
Barium (dissolved)	μg/l	0.05	ISO 17025	78			
Beryllium (dissolved)	μg/l	0.2	ISO 17025	< 0.2			
Boron (dissolved)	μg/l	10	ISO 17025	41			
Cadmium (dissolved)	μg/l	0.08	ISO 17025	< 0.08			
Chromium (dissolved)	μg/l	0.4	ISO 17025	< 0.4			
Copper (dissolved)	μg/l	0.7	ISO 17025	3.2			
Lead (dissolved)	μg/l	1	ISO 17025	< 1.0			
Mercury (dissolved)	μg/l	0.5	ISO 17025	< 0.5			
Nickel (dissolved)	μg/l	0.3	ISO 17025	1.6			
Selenium (dissolved)	μg/l	4	ISO 17025	< 4.0			
Vanadium (dissolved)	μg/l	1.7	ISO 17025	3.9			
Zinc (dissolved)	μg/l	0.4	ISO 17025	1.9			





Lab Sample Number	b Sample Number					
Sample Reference				WS101		
Sample Number				None Supplied		
Depth (m)				5 60		
Date Sampled			23/06/2015			
Time Taken				1600		
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status			
Monoaromatics						
Benzene	μg/l	1	NONE	< 1.0		
Toluene	μg/l	1	NONE	< 1.0		
Ethylbenzene	μg/l	1	NONE	< 1.0		
p & m-xylene	μg/l	1	NONE	< 1.0		
o-xylene	μg/l	1	NONE	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/l	10	NONE	< 10		
Petroleum Hydrocarbons		- 10				
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic >C16 - C21	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic (C5 - C35)	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C7 - C8	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C8 - C10	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C12 - C16	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C16 - C21	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C21 - C35	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic (C5 - C35)	μg/l	10	NONE	< 10		





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Boron in leachate	Determination of boron by acidification followed by ICP-OES.	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in leachates	Determination of BTEX and MTBE in leachates by headspace GC-MS.	In-house method based on USEPA8260	L073W-PL	W	NONE
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Speciated EPA-16 PAHs in leachate	Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L070-PL	W	NONE
TPHCWG (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





Emma Leivers

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Analytical Report Number: 15-74930

Project / Site name: London Paramount Entertainment Samples received on: 23/06/2015

Resort

Your job number: 30766 Samples instructed on: 07/07/2015

Your order number: Analysis completed by: 14/07/2015

Report Issue Number: 1 Report issued on: 14/07/2015

Samples Analysed: 1 leachate sample - 1 soil sample

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Iss No 15-74930-1





Lab Sample Number				462990	I	I	
Sample Reference				BH101			
Sample Number				None Supplied			
Depth (m)				21.00			
Date Sampled				22/06/2015			
Time Taken	_	1		1525			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1			
Moisture Content	%	N/A	NONE	11			
Total mass of sample received	kg	0.001	NONE	2.0			
					18.		
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected			
	•			•			•
General Inorganics							
pH	pH Units	N/A	NONE	8.1			
Electrical Conductivity	μS/cm	10	NONE	2400			
Total Cyanide	mg/kg	1	NONE	< 1		1	
Complex Cyanide	mg/kg	1	NONE	< 1		1	
Free Cyanide	mg/kg	1	NONE	< 1		1	
Total Sulphate as SO ₄	mg/kg	50	NONE	510			
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	NONE	0.31			
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	NONE	310			
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	q/l	0.00125	NONE	0.16			
Sulphide	mg/kg	1	NONE	< 1.0			
Water Soluble Chloride (2:1)	mg/kg	1	NONE	2400			
Ammoniacal Nitrogen as N		0.5	NONE	1.8			
Organic Matter	mg/kg %	0.5	NONE	< 0.1			
		2		< 2.0			
Water Soluble Nitrate (2:1) as N Water Soluble Nitrite (2:1) as N	mg/kg	20	NONE NONE	< 20			
	μg/kg						
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0			
Total Phenois							
Total Phenois (monohydric)		1	NONE	. 1.0	1	ı	1
Total Prienois (mononyuric)	mg/kg	1	NONE	< 1.0			
Speciated PAHs							
Naphthalene	mg/kg	0.05	NONE	< 0.05		1	
Acenaphthylene	mg/kg	0.03	NONE	< 0.10			
Acenaphthene	mg/kg	0.1	NONE	< 0.10			
Fluorene	mg/kg	0.1	NONE	< 0.10			
Phenanthrene	mg/kg	0.1	NONE	< 0.10			
Anthracene	mg/kg	0.1	NONE	< 0.10			
Fluoranthene		0.1	NONE	< 0.10	1	1	1
Pyrene	mg/kg	0.1	NONE	< 0.10			
Benzo(a)anthracene	mg/kg	0.1	NONE	< 0.10	1	1	1
Chrysene	mg/kg mg/kg	0.05	NONE	< 0.10			
		0.05	NONE	< 0.05	1	1	1
Benzo(b)fluoranthene	mg/kg	0.1	NONE	< 0.10 < 0.10	 	 	
Benzo(k)fluoranthene	mg/kg	0.1		< 0.10		-	
Benzo(a)pyrene Indeno(1,2,3-cd)pyrene	mg/kg	0.1	NONE	< 0.10	 	 	1
, , , , , , , , , , , , , , , , , , , ,	mg/kg		NONE				
Dibenz(a,h)anthracene	mg/kg	0.1	NONE	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	NONE	< 0.05	1	1	1
Coronene	mg/kg	0.05	NONE	< 0.05	I	1	
Total PAH						1	
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6	<u> </u>		





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				462990			
Sample Reference							
Sample Number				BH101 None Supplied			
Depth (m)				21.00			
Date Sampled	22/06/2015						
Time Taken	1525						
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	1323			
Heavy Metals / Metalloids			_		<u> </u>		
Aluminium (agua regia extractable)	mg/kg	30	NONE	510			
Antimony (aqua regia extractable)	mg/kg	1	NONE	< 1.0			
Arsenic (aqua regia extractable)	mg/kg	1	NONE	< 1.0			
Barium (aqua regia extractable)	mg/kg	1	NONE	10			
Beryllium (aqua regia extractable)	mg/kg	0.06	NONE	< 0.1			
Boron (water soluble)	mg/kg	0.2	NONE	0.9			
Cadmium (aqua regia extractable)	mg/kg	0.2	NONE	< 0.2			
Chromium (hexavalent)	mg/kg	4	NONE	< 4.0			
Chromium (aqua regia extractable)	mg/kg	1	NONE	2.9			
Copper (aqua regia extractable)	mg/kg	1	NONE	7.5			
Iron (aqua regia extractable)	mg/kg	40	NONE	2400			
Lead (aqua regia extractable)	mg/kg	1	NONE	9.3			
Manganese (aqua regia extractable)	mg/kg	1	NONE	230			
Mercury (aqua regia extractable)	mg/kg	0.3	NONE	< 0.3			
Molybdenum (aqua regia extractable)	mg/kg	0.25	NONE	< 0.3			
Nickel (aqua regia extractable)	mg/kg	1	NONE	4.4			
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	360			
Selenium (aqua regia extractable)	mg/kg	1	NONE	2.8			
Vanadium (aqua regia extractable)	mg/kg	1	NONE	4.9			
Zinc (aqua regia extractable)	mg/kg	1	NONE	13			
Calcium (aqua regia extractable)	mg/kg	20	NONE	460000	I	1	
Magnesium (aqua regia extractable)	mg/kg	20	NONE	1200			
Potassium (aqua regia extractable)	mg/kg	20	NONE	270			
Monoaromatics			_		 		
Benzene	μg/kg	1	NONE	< 1.0			
Toluene	μg/kg	1	NONE	< 1.0			
Ethylbenzene	μg/kg	1	NONE	< 1.0			
p & m-xylene	μg/kg	1	NONE	< 1.0			
o-xylene	μg/kg	1	NONE	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	NONE	< 1.0			-

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	NONE	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	NONE	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	NONE	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	NONE	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	NONE	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	NONE	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	NONE	< 8.0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	NONE	< 10		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	NONE	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	NONE	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	NONE	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	NONE	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	NONE	< 2.0		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	NONE	< 10		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	NONE	< 10		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	NONE	< 10		





Lab Sample Number		462990					
Sample Reference				BH101			
Sample Number				None Supplied			
Depth (m)				21.00			
Date Sampled				22/06/2015			
Time Taken				1525			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
VOCs							
Chloromethane	μg/kg	1	NONE	< 1.0			
Chloroethane	µg/kg	1	NONE	< 1.0			
Bromomethane	μg/kg	1	NONE	< 1.0			
Vinyl Chloride	μg/kg	1	NONE	< 1.0			
Trichlorofluoromethane	μg/kg	1	NONE	< 1.0			
1,1-Dichloroethene	μg/kg	1	NONE	< 1.0			
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	NONE	< 1.0			
Cis-1,2-dichloroethene	μg/kg	1	NONE	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	NONE	< 1.0			
1,1-Dichloroethane	μg/kg	1	NONE	< 1.0			
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0			
Trichloromethane	μg/kg	1	NONE	< 1.0		ļ	
1,1,1-Trichloroethane	μg/kg	1	NONE	< 1.0			
1,2-Dichloroethane	μg/kg	1	NONE	< 1.0 < 1.0			
1,1-Dichloropropene Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0			
Benzene	μg/kg μg/kg	1	NONE NONE	< 1.0			
Tetrachloromethane	μg/kg μg/kg	1	NONE	< 1.0			
1,2-Dichloropropane	μg/kg μg/kg	1	NONE	< 1.0			
Trichloroethene	μg/kg	1	NONE	< 1.0			
Dibromomethane	µg/kg	1	NONE	< 1.0			
Bromodichloromethane	μg/kg	1	NONE	< 1.0			
Cis-1,3-dichloropropene	μg/kg	1	NONE	< 1.0			
Trans-1,3-dichloropropene	μg/kg	1	NONE	< 1.0			
Toluene	μg/kg	1	NONE	< 1.0			
1,1,2-Trichloroethane	μg/kg	1	NONE	< 1.0			
1,3-Dichloropropane	μg/kg	1	NONE	< 1.0			
Dibromochloromethane	μg/kg	1	NONE	< 1.0			
Tetrachloroethene	μg/kg	1	NONE	< 1.0			
1,2-Dibromoethane	μg/kg	1	NONE	< 1.0			
Chlorobenzene	μg/kg	1	NONE	< 1.0			
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0			
Ethylbenzene p & m-Xylene	μg/kg	1	NONE NONE	< 1.0 < 1.0			
Styrene	μg/kg μg/kg	1	NONE	< 1.0			
Tribromomethane	μg/kg μg/kg	1	NONE	< 1.0			
o-Xylene	μg/kg	1	NONE	< 1.0			
1,1,2,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0			
Isopropylbenzene	μg/kg	1	NONE	< 1.0			
Bromobenzene	μg/kg	1	NONE	< 1.0			
n-Propylbenzene	μg/kg	1	NONE	< 1.0			
2-Chlorotoluene	μg/kg	1	NONE	< 1.0			
4-Chlorotoluene	μg/kg	1	NONE	< 1.0			
1,3,5-Trimethylbenzene	μg/kg	1	NONE	< 1.0			
tert-Butylbenzene	μg/kg	1	NONE	< 1.0			
1 2 4-Trimethylbenzene	μg/kg	1	NONE	< 1.0			
sec-Butylbenzene	μg/kg	1	NONE	< 1.0		ļ	
1,3-Dichlorobenzene	μg/kg	1	NONE	< 1.0			
p-Isopropyltoluene	μg/kg	1	NONE	< 1.0			
1,2-Dichlorobenzene 1 4-Dichlorobenzene	μg/kg	1	NONE NONE	< 1.0 < 1.0		 	
Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0			
1,2-Dibromo-3-chloropropane	μg/kg μg/kg	1	NONE	< 1.0			
1,2,4-Trichlorobenzene	μg/kg μg/kg	1	NONE	< 1.0		1	
Hexachlorobutadiene	µg/kg	1	NONE	< 1.0		i	
1,2,3-Trichlorobenzene	µg/kg	1	NONE	< 1.0			
· · ·						-	





Lab Sample Number		462990					
Sample Reference				BH101			
Sample Number				None Supplied			
Depth (m)				21.00			
Date Sampled				22/06/2015			
Time Taken				1525			
			Α .				
		de L	Accreditation Status				
Analytical Parameter	Units	Limit of detection	edi				
(Soil Analysis)	ts	tio	tat :us				
		3 "	Ö				
SVOCs							
Aniline	mg/kg	0.1	NONE	< 0.1			
Phenol	mg/kg	0.2	NONE	< 0.2			
2-Chlorophenol	mg/kg	0.1	NONE	< 0.1			
Bis(2-chloroethyl)ether	mg/kg	0.2	NONE	< 0.2			
1,3-Dichlorobenzene	mg/kg	0.2	NONE	< 0.2			
1 2-Dichlorobenzene	mg/kg	0.1	NONE	< 0.1			
1,4-Dichlorobenzene	mg/kg	0.2	NONE	< 0.2			
Bis(2-chloroisopropyl)ether	mg/kg	0.1	NONE	< 0.1			
2-Methylphenol	mg/kg	0.3	NONE	< 0.3	 		
Hexachloroethane	mg/kg	0.05	NONE	< 0.05			
Nitrobenzene	mg/kg	0.3	NONE	< 0.3			
4-Methylphenol	mg/kg	0.2	NONE	< 0.2			
Isophorone	mg/kg	0.2	NONE	< 0.2			
2-Nitrophenol	mg/kg	0.3	NONE	< 0.3			
2,4-Dimethylphenol	mg/kg	0.3	NONE	< 0.3			
Bis(2-chloroethoxy)methane	mg/kg	0.3	NONE	< 0.3			
1,2,4-Trichlorobenzene	mg/kg	0.3	NONE	< 0.3			
Naphthalene	mg/kg	0.05	NONE	< 0.05			
2,4-Dichlorophenol	mg/kg	0.3	NONE	< 0.3			
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1			
Hexachlorobutadiene 4-Chloro-3-methylphenol	mg/kg	0.1	NONE NONE	< 0.1 < 0.1			
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	< 0.1			
2,4,5-Trichlorophenol	mg/kg mg/kg	0.1	NONE	< 0.1			
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1			
2-Chloronaphthalene	mg/kg	0.1	NONE	< 0.1			
Dimethylphthalate	mg/kg	0.1	NONE	< 0.1			
2,6-Dinitrotoluene	mg/kg	0.1	NONE	< 0.1			
Acenaphthylene	mg/kg	0.1	NONE	< 0.10			
Acenaphthene	mg/kg	0.1	NONE	< 0.10			
2 4-Dinitrotoluene	mg/kg	0.2	NONE	< 0.2			
Dibenzofuran	mg/kg	0.2	NONE	< 0.2			
4-Chlorophenyl phenyl ether	mg/kg	0.3	NONE	< 0.3			
Diethyl phthalate	mg/kg	0.2	NONE	< 0.2			
4-Nitroaniline	mg/kg	0.2	NONE	< 0.2			
Fluorene	mg/kg	0.1	NONE	< 0.10			
Azobenzene	mg/kg	0.3	NONE	< 0.3			
Bromophenyl phenyl ether	mg/kg	0.2	NONE	< 0.2			
Hexachlorobenzene	mg/kg	0.3	NONE	< 0.3			
Phenanthrene	mg/kg	0.1	NONE	< 0.10			
Anthracene	mg/kg	0.1	NONE	< 0.10			
Carbazole	mg/kg	0.3	NONE	< 0.3 < 0.2			
Dibutyl phthalate	mg/kg	0.2	NONE NONE	< 0.2		 	
Anthraquinone Fluoranthene	mg/kg mg/kg	0.3	NONE	< 0.10		 	
Pyrene	mg/kg mg/kg	0.1	NONE	< 0.10		 	
Butyl benzyl phthalate	mg/kg	0.3	NONE	< 0.3			
Benzo(a)anthracene	mg/kg	0.3	NONE	< 0.10		†	
Chrysene	mg/kg	0.05	NONE	< 0.05		i	
Benzo(b)fluoranthene	mg/kg	0.03	NONE	< 0.10		1	
Benzo(k)fluoranthene	mg/kg	0.1	NONE	< 0.10			
Benzo(a)pyrene	mg/kg	0.1	NONE	< 0.10			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	NONE	< 0.10			
Dibenz(a,h)anthracene	mg/kg	0.1	NONE	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	NONE	< 0.05			





Lab Carried Name to a				462001	ı			
Lab Sample Number				462991				
Sample Reference				BH101				
Sample Number				None Supplied				
Depth (m)				21.00				
Date Sampled				22/06/2015				
Time Taken				1525				
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					
Speciated PAHs								
Naphthalene	μg/l	0.01	NONE	< 0.01				
Acenaphthylene	μg/l	0.01	NONE	< 0.01				
Acenaphthene	μg/l	0.01	NONE	< 0.01				
Fluorene	μg/l	0.01	NONE	< 0.01				
Phenanthrene	μg/l	0.01	NONE	< 0.01				
Anthracene	μg/l	0.01	NONE	< 0.01				
Fluoranthene	μg/l	0.01	NONE	< 0.01				
Pyrene	μg/l	0.01	NONE	< 0.01				
Benzo(a)anthracene	μg/l	0.01	NONE	< 0.01				
Chrysene	μg/l	0.01	NONE	< 0.01				
Benzo(b)fluoranthene	μg/l	0.01	NONE	< 0.01				
Benzo(k)fluoranthene	μg/l	0.01	NONE	< 0.01				
Benzo(a)pyrene	μg/l	0.01	NONE	< 0.01				
Indeno(1,2,3-cd)pyrene	μg/l	0.01	NONE	< 0.01				
Dibenz(a,h)anthracene	μg/l	0.01	NONE	< 0.01				
Benzo(ghi)perylene	μg/l	0.01	NONE	< 0.01				
Total PAH								
Total EPA-16 PAHs	μg/l	02	NONE	< 0.2				
Heavy Metals / Metalloids			•		T	T	•	r
Arsenic (dissolved)	μg/l 	1.1	ISO 17025	3.6				
Barium (dissolved)	μg/l	0.05	ISO 17025	94				
Beryllium (dissolved)	μg/l	0.2	ISO 17025	< 0.2				
Boron (dissolved)	μg/l	10	ISO 17025	13				
Cadmium (dissolved)	μg/l	0.08	ISO 17025	< 0.08				
Chromium (dissolved)	μg/l "	0.4	ISO 17025	3.7				
Copper (dissolved)	μg/l	0.7	ISO 17025	1.1				
Lead (dissolved)	μg/l	1	ISO 17025	1.4	<u> </u>		 	
Mercury (dissolved)	μg/l	05	ISO 17025	< 0.5				
Nickel (dissolved)	μg/l	0.3	ISO 17025	1.1				
Selenium (dissolved)	μg/l	4	ISO 17025	< 4.0				
Zinc (dissolved)	μg/l	0.4	ISO 17025	8.5				





Lab Sample Number				462991						
Sample Reference				BH101						
Sample Number				None Supplied						
Depth (m)				21.00						
Date Sampled				22/06/2015						
Time Taken	1525									
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status							
	Monoaromatics									
Benzene	μg/l	1	NONE	< 1.0						
Toluene	μg/l	1	NONE	< 1.0						
Ethylbenzene	μg/l	1	NONE	< 1.0						
p & m-xylene	μg/l	1	NONE	< 1.0						
o-xylene	μg/l	1	NONE	< 1.0						
MTBE (Methyl Tertiary Butyl Ether)	μg/l	10	NONE	< 10						
Petroleum Hydrocarbons										
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10						
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10						
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10						
TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10						
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE	< 10						
TPH-CWG - Aliphatic >C16 - C21	μg/l	10	NONE	< 10						
TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE	< 10						
TPH-CWG - Aliphatic (C5 - C35)	μg/l	10	NONE	< 10						
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10						
TPH-CWG - Aromatic >C7 - C8	μg/l	10	NONE	< 10						
TPH-CWG - Aromatic >C8 - C10	μg/l	10	NONE	< 10						
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE	< 10						
TPH-CWG - Aromatic >C12 - C16	μg/l	10	NONE	< 10						
TPH-CWG - Aromatic >C16 - C21	μg/l	10	NONE	< 10						
TPH-CWG - Aromatic >C21 - C35	μg/l	10	NONE	< 10						
TPH-CWG - Aromatic (C5 - C35)	μg/l	10	NONE	< 10						





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
462990	BH101	None Supplied	21.00	Grey chalk with gravel.**

**Non MCERTS matrix





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron in leachate	Determination of boron by acidification followed by ICP-OES.	In-house method based on MEWAM	L039-PL	W	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in leachates	Determination of BTEX and MTBE in leachates by headspace GC-MS.	In-house method based on USEPA8260	L073W-PL	W	NONE
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L070-PL	W	NONE
Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS
Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE
Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE
	Determination of pH in soil by addition of water followed by electrometric measurement. Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS. Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards. Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight. Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent). Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode. Determination of total cyanide by distillation followed by colorimetry. Calculation from nitrate and nitrite. Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES. Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS. Determination of volatile organic compounds in soil by headspace GC-MS. Determination of nitrate by reaction with sodium salicylate and colorimetry.	Determination of pH in soil by addition of water followed by electrometric measurement. Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS. Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards. Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards. Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards. Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight. Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent). Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode. Determination of total cyanide by distillation followed by colorimetry. Calculation from nitrate and nitrite. In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) Determination of total sulphate in soil by extraction in-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS. Determination of volatile organic compounds in soil by GC-MS/GC-FID. Determination of nitrate by reaction with sodium salicylate and colorimetry. Determination of nitrate by reaction with sodium salicylate and colorimetry. Determination of nitrate by reaction with sodium salicylate and colorimetry. Determination of nitrate in soil by extraction with water followed by with 4-aminobenzene sul	Determination of pH in soil by addition of water followed by electrometric measurement. Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS. Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Determination of PAH compounds in soil by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Determination of PAH compounds in soil by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Standards preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight. Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent). Determination of sulphide in soil by addification and heating to liberate hydrogen sulphide, trapped in an alkaline solution them assayed by ions selective electrode. Determination of total cyanide by distillation followed by colorimetry. Calculation from nitrate and nitrite. In-house method based on Examination of Mater and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) Determination of total sulphate in soil by extraction for Mater and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Dan Mater) Determination of total sulphate in soil by extraction In-house method based on Examination of Mater and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) Determination of rotal sulphate in soil by extraction In-house method based on Examination of Mater and Wastewater Mater and Wastewater Alpha Edition: Clesceri, Greenberg & Eaton (Skalar) Determination of rotal sulphate by GC-MS. Determination of rotal sulphat	Analytical Method Description Analytical Method Reference number Analytical Method Bis1377 Part 3, 1099-PL Determination of PAH compounds in soil by extraction in dichloromethane followed by CC-MS with the use of surrogate and internal standards. In-house method based on USEPA 8270 In-house method based on USEPA 8270 In-house method based on USEPA 8270 In-house method based on British Standard Refuncion of soil by extraction of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent). Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent). Determination of biliparce hydrogen sulphide, trapped solubide in an alkalme solution there assayed by los acidification and healing to liberate hydrogen sulphide, trapped in an alkalme solution there assayed by In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) Determination of total sulphate in soil by extraction in In-house method based on Bisi377 Part 3, 1990, Chemical and Electrochemical Tests Determination of Alphate in soil by extraction with sodium soil by GC-MS. In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton Determination o

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Sample Deviation Report



Sample ID		BH101
Other ID		
Sample Type		S
Job Number	15-74930	
Sample Number		462990
Deviation Code		С
Test Name	Method no	
BTEX and MTBE in soil	L073S-PL	С
Complex cyanide in soil	L080-PL	С
Free cyanide in soil	L080-PL	С
Sulphide in soil	L010-PL	С
Total cyanide in soil	L080-PL	С
TPHCWG (Soil)	L076-PL	С
Volatile organic compounds in soil	L073S-PL	С





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e: reception@i2analytical.com

10/06/2015

Analytical Report Number: 15-74927

Project / Site name: London Paramount Entertainment Samples received on:

Resort

Your job number: 30766 Samples instructed on: 07/07/2015

Your order number: Analysis completed by: 14/07/2015

Report Issue Number: 1 Report issued on: 14/07/2015

Samples Analysed: 1 leachate sample

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting

Iss No 15-74927-1





Lab Sample Number				462987		
Sample Reference				BH202		
Sample Number				None Supplied		
Depth (m)				7 00		
Date Sampled				10/06/2015		
Time Taken				0950		
				0350		
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status			
Speciated PAHs						
Naphthalene	μg/l	0.01	NONE	1.4		
Acenaphthylene	μg/l	0.01	NONE	1.1		
Acenaphthene	μg/l	0.01	NONE	0.53		
Fluorene	μg/l	0.01	NONE	0.47		
Phenanthrene	μg/l	0.01	NONE	0.68		
Anthracene	μg/l	0.01	NONE	0.16		
Fluoranthene	μg/l	0.01	NONE	< 0.01		
Pyrene	μg/l	0.01	NONE	< 0.01		
Benzo(a)anthracene	μg/l	0.01	NONE	< 0.01		
Chrysene	μg/l	0.01	NONE	< 0.01		
Benzo(b)fluoranthene	μg/l	0.01	NONE	< 0.01		
Benzo(k)fluoranthene	μg/l	0.01	NONE	< 0.01		
Benzo(a)pyrene	μg/l	0.01	NONE	< 0.01		
Indeno(1,2,3-cd)pyrene	μg/l	0.01	NONE	< 0.01		
Dibenz(a,h)anthracene	μg/l	0.01	NONE	< 0.01		
Benzo(ghi)perylene	μg/l	0.01	NONE	< 0.01		
Total PAH						
Total EPA-16 PAHs	μg/l	0.2	NONE	4.3		
Heavy Metals / Metalloids					 	
Arsenic (dissolved)	μg/l	1.1	ISO 17025	< 1.1		
Barium (dissolved)	μg/l	0.05	ISO 17025	80		
Beryllium (dissolved)	μg/l	0.2	ISO 17025	< 0.2		
Boron (dissolved)	μg/l	10	ISO 17025	27		
Cadmium (dissolved)	μg/l	0.08	ISO 17025	< 0.08		
Chromium (dissolved)	μg/l	0.4	ISO 17025	6.1		
Copper (dissolved)	μg/l	0.7	ISO 17025	2.7		
Lead (dissolved)	μg/l	1	ISO 17025	1.8		
Mercury (dissolved)	μg/l	0.5	ISO 17025	< 0.5		
Nickel (dissolved)	μg/l	0.3	ISO 17025	< 0.3		
Selenium (dissolved)	μg/l	4	ISO 17025	14		
Vanadium (dissolved)	μg/l	1.7	ISO 17025	7.1		
Zinc (dissolved)	μg/l	0.4	ISO 17025	2.8		





b Sample Number				462987				
Sample Reference				BH202				
Sample Number				None Supplied				
Depth (m)				7 00				
Date Sampled				10/06/2015				
Time Taken	0950							
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					
Monoaromatics								
Benzene	μg/l	1	NONE	< 1.0				
Toluene	μg/l	1	NONE	< 1.0				
Ethylbenzene	μg/l	1	NONE	< 1.0				
p & m-xylene	μg/l	1	NONE	< 1.0				
o-xylene	μg/l	1	NONE	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	μg/l	10	NONE	< 10				
Petroleum Hydrocarbons TPH-CWG - Aliphatic >C5 - C6	μq/l	10	NONE	< 10	T	T	T	<u> </u>
TPH-CWG - Aliphatic >C5 - C6 TPH-CWG - Aliphatic >C6 - C8	μ9/1		INOINE					
	ua/l	10	NONE	✓ 10				
	μg/l	10	NONE	< 10				
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10				
TPH-CWG - Aliphatic >C8 - C10 TPH-CWG - Aliphatic >C10 - C12	µg/l µg/l	10 10	NONE NONE	< 10 < 10				
TPH-CWG - Aliphatic >C8 - C10 TPH-CWG - Aliphatic >C10 - C12 TPH-CWG - Aliphatic >C12 - C16	µg/l µg/l µg/l	10 10 10	NONE NONE NONE	< 10 < 10 < 10				
TPH-CWG - Aliphatic >C8 - C10 TPH-CWG - Aliphatic >C10 - C12 TPH-CWG - Aliphatic >C12 - C16 TPH-CWG - Aliphatic >C16 - C21	µg/l µg/l µg/l µg/l	10 10 10 10	NONE NONE NONE	< 10 < 10 < 10 < 10				
TPH-CWG - Aliphatic >C8 - C10 TPH-CWG - Aliphatic >C10 - C12 TPH-CWG - Aliphatic >C12 - C16 TPH-CWG - Aliphatic >C16 - C21 TPH-CWG - Aliphatic >C21 - C35	µg/I µg/I µg/I µg/I µg/I	10 10 10 10 10	NONE NONE NONE NONE	< 10 < 10 < 10 < 10 < 10				
TPH-CWG - Aliphatic >C8 - C10 TPH-CWG - Aliphatic >C10 - C12 TPH-CWG - Aliphatic >C12 - C16 TPH-CWG - Aliphatic >C16 - C21	µg/l µg/l µg/l µg/l	10 10 10 10	NONE NONE NONE	< 10 < 10 < 10 < 10				
TPH-CWG - Aliphatic > C8 - C10 TPH-CWG - Aliphatic > C10 - C12 TPH-CWG - Aliphatic > C12 - C16 TPH-CWG - Aliphatic > C16 - C21 TPH-CWG - Aliphatic > C21 - C35 TPH-CWG - Aliphatic (C5 - C35)	рд/I рд/I рд/I рд/I рд/I рд/I	10 10 10 10 10 10	NONE NONE NONE NONE NONE	< 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10				
TPH-CWG - Aliphatic > C8 - C10 TPH-CWG - Aliphatic > C10 - C12 TPH-CWG - Aliphatic > C12 - C16 TPH-CWG - Aliphatic > C16 - C21 TPH-CWG - Aliphatic > C21 - C35 TPH-CWG - Aliphatic (C5 - C35) TPH-CWG - Aromatic > C5 - C7	рд/I рд/I рд/I рд/I рд/I рд/I	10 10 10 10 10 10	NONE NONE NONE NONE NONE NONE NONE	< 10 < 10 < 10 < 10 < 10 < 10 < 10				
TPH-CWG - Aliphatic > C8 - C10 TPH-CWG - Aliphatic > C10 - C12 TPH-CWG - Aliphatic > C12 - C16 TPH-CWG - Aliphatic > C16 - C21 TPH-CWG - Aliphatic > C21 - C35 TPH-CWG - Aliphatic (C5 - C35)	µg/l µg/l µg/l µg/l µg/l µg/l	10 10 10 10 10 10	NONE NONE NONE NONE NONE	< 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10				
TPH-CWG - Aliphatic > C8 - C10 TPH-CWG - Aliphatic > C10 - C12 TPH-CWG - Aliphatic > C12 - C16 TPH-CWG - Aliphatic > C16 - C21 TPH-CWG - Aliphatic > C21 - C35 TPH-CWG - Aliphatic (C5 - C35) TPH-CWG - Aromatic > C7 - C8 TPH-CWG - Aromatic > C8 - C10	µg/I µg/I µg/I µg/I µg/I µg/I µg/I	10 10 10 10 10 10 10	NONE NONE NONE NONE NONE NONE NONE	< 10 < 10 < 10 < 10 < 10 < 10 < 10				
TPH-CWG - Aliphatic > C8 - C10 TPH-CWG - Aliphatic > C10 - C12 TPH-CWG - Aliphatic > C12 - C16 TPH-CWG - Aliphatic > C16 - C21 TPH-CWG - Aliphatic > C21 - C35 TPH-CWG - Aliphatic (C5 - C35) TPH-CWG - Aromatic > C7 - C8	µg/l µg/l µg/l µg/l µg/l µg/l	10 10 10 10 10 10 10 10	NONE NONE NONE NONE NONE NONE NONE NONE	< 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10				
TPH-CWG - Aliphatic > C8 - C10 TPH-CWG - Aliphatic > C10 - C12 TPH-CWG - Aliphatic > C12 - C16 TPH-CWG - Aliphatic > C16 - C21 TPH-CWG - Aliphatic > C21 - C35 TPH-CWG - Aliphatic > C5 - C35 TPH-CWG - Aromatic > C5 - C7 TPH-CWG - Aromatic > C7 - C8 TPH-CWG - Aromatic > C8 - C10 TPH-CWG - Aromatic > C10 - C12	µg/l µg/l µg/l µg/l µg/l µg/l µg/l µg/l	10 10 10 10 10 10 10 10 10 10	NONE NONE NONE NONE NONE NONE NONE NONE	< 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10				
TPH-CWG - Aliphatic > C8 - C10 TPH-CWG - Aliphatic > C10 - C12 TPH-CWG - Aliphatic > C12 - C16 TPH-CWG - Aliphatic > C16 - C21 TPH-CWG - Aliphatic > C21 - C35 TPH-CWG - Aliphatic > C21 - C35 TPH-CWG - Aliphatic (C5 - C35) TPH-CWG - Aromatic > C7 - C8 TPH-CWG - Aromatic > C8 - C10 TPH-CWG - Aromatic > C10 - C12 TPH-CWG - Aromatic > C12 - C16	µg/l µg/l µg/l µg/l µg/l µg/l µg/l µg/l	10 10 10 10 10 10 10 10 10 10 10 10	NONE NONE NONE NONE NONE NONE NONE NONE	< 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10				





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Boron in leachate	Determination of boron by acidification followed by ICP-OES.	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in leachates	Determination of BTEX and MTBE in leachates by headspace GC-MS.	In-house method based on USEPA8260	L073W-PL	W	NONE
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Speciated EPA-16 PAHs in leachate	Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L070-PL	W	NONE
TPHCWG (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





Emma Leivers

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e: reception@i2analytical.com

Analytical Report Number: 15-74920

London Paramount Entertainment Project / Site name: Samples received on: 25/06/2015

Resort

Your job number: 30766 Samples instructed on: 07/07/2015

Your order number: Analysis completed by: 14/07/2015

Report Issue Number: Report issued on: 14/07/2015

Samples Analysed: 1 leachate sample

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting





Lab Sample Number		462909						
Sample Reference				WS102				
Sample Number				None Supplied				
Depth (m)				4 20				
Date Sampled				24/06/2015			1	
Time Taken				1625			1	
				1020				
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					
Speciated PAHs								
Naphthalene	μg/l	0.01	NONE	< 0.01				
Acenaphthylene	μg/l	0.01	NONE	< 0.01				
Acenaphthene	μg/l	0.01	NONE	< 0.01				
Fluorene	μg/l	0.01	NONE	< 0.01				
Phenanthrene	μg/l	0.01	NONE	< 0.01				
Anthracene	μg/l	0.01	NONE	< 0.01				
Fluoranthene	μg/l	0.01	NONE	< 0.01				
Pyrene	μg/l	0.01	NONE	< 0.01				
Benzo(a)anthracene	μg/l	0.01	NONE	< 0.01				
Chrysene	μg/l	0.01	NONE	< 0.01				
Benzo(b)fluoranthene	μg/l	0.01	NONE	< 0.01				
Benzo(k)fluoranthene	μg/l	0.01	NONE	< 0.01				
Benzo(a)pyrene	μg/l	0.01	NONE	< 0.01				
Indeno(1,2,3-cd)pyrene	μg/l	0.01	NONE	< 0.01				
Dibenz(a,h)anthracene	μg/l	0.01	NONE	< 0.01				
Benzo(ghi)perylene	μg/l	0.01	NONE	< 0.01				
T-t-I DAII								
Total PAH Total EPA-16 PAHs		0.2	NONE	402	I	1	1	I
TOTAL EPA-16 PARS	μg/l	0.2	NONE	< 0.2				
Heavy Metals / Metalloids								
Arsenic (dissolved)	μg/l	1.1	ISO 17025	< 1.1				
Barium (dissolved)	μg/l	0.05	ISO 17025	40				
Beryllium (dissolved)	μg/l	0.2	ISO 17025	< 0.2				
Boron (dissolved)	μg/l	10	ISO 17025	< 10				
Cadmium (dissolved)	μg/l	0.08	ISO 17025	< 0.08				
Chromium (dissolved)	μg/l	0.4	ISO 17025	< 0.4				
Copper (dissolved)	μg/l	0.7	ISO 17025	2.0	Ì	Ì	1	
Lead (dissolved)	μg/l	1	ISO 17025	< 1.0				
Mercury (dissolved)	μg/l	0.5	ISO 17025	< 0.5				
Nickel (dissolved)	μg/l	0.3	ISO 17025	0.4				
Selenium (dissolved)	μg/l	4	ISO 17025	< 4.0				
Vanadium (dissolved)	μg/l	1.7	ISO 17025	< 1.7				
Zinc (dissolved)	μg/l	0.4	ISO 17025	1.2				





Lab Sample Number				462909		
Sample Reference				WS102		
Sample Number		•		None Supplied		
Depth (m)				4 20		
Date Sampled				24/06/2015		
Time Taken				1625		
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status			
Monoaromatics						
Benzene	μg/l	1	NONE	< 1.0		
Toluene	μg/l	1	NONE	< 1.0		
Ethylbenzene	μg/l	1	NONE	< 1.0		
p & m-xylene	μg/l	1	NONE	< 1.0		
o-xylene	μg/l	1	NONE	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/l	10	NONE	< 10		
Petroleum Hydrocarbons						
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic >C16 - C21	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic (C5 - C35)	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C7 - C8	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C8 - C10	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C12 - C16	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C16 - C21	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C21 - C35	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic (C5 - C35)	μg/l	10	NONE	< 10		





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Boron in leachate	Determination of boron by acidification followed by ICP-OES.	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in leachates	Determination of BTEX and MTBE in leachates by headspace GC-MS.	In-house method based on USEPA8260	L073W-PL	W	NONE
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Speciated EPA-16 PAHs in leachate	Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L070-PL	W	NONE
TPHCWG (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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e: reception@i2analytical.com

Analytical Report Number: 15-74919

Project / Site name: London Paramount Entertainment Samples received on: 29/06/2015

Resort

Your job number: 30766 Samples instructed on: 07/07/2015

Your order number: Analysis completed by: 14/07/2015

Report Issue Number: 1 Report issued on: 14/07/2015

Samples Analysed: 2 leachate samples

Rexona Rahman Reporting Manager

Signed:

For & on behalf of i2 Analytical Ltd.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

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Lab Sample Number		462907	462908	1	1		
Sample Reference				BH203	BH203		
Sample Number				None Supplied	None Supplied		
Depth (m)				5 00	13.00		
Date Sampled				29/06/2015	29/06/2015		
Time Taken				1525	1610		
				1020	1010		
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status				
Speciated PAHs							
Naphthalene	μg/l	0.01	NONE	< 0.01	< 0.01		
Acenaphthylene	μg/l	0.01	NONE	< 0.01	< 0.01		
Acenaphthene	μg/l	0.01	NONE	< 0.01	< 0.01		
Fluorene	μg/l	0.01	NONE	< 0.01	< 0.01		
Phenanthrene	μg/l	0.01	NONE	< 0.01	< 0.01		
Anthracene	μg/l	0.01	NONE	< 0.01	< 0.01		
Fluoranthene	μg/l	0.01	NONE	< 0.01	< 0.01		
Pyrene	μg/l	0.01	NONE	< 0.01	< 0.01		
Benzo(a)anthracene	μg/l	0.01	NONE	< 0.01	< 0.01		
Chrysene	μg/l	0.01	NONE	< 0.01	< 0.01		
Benzo(b)fluoranthene	μg/l	0.01	NONE	< 0.01	< 0.01		
Benzo(k)fluoranthene	μg/l	0.01	NONE	< 0.01	< 0.01		
Benzo(a)pyrene	μg/l	0.01	NONE	< 0.01	< 0.01		
Indeno(1,2,3-cd)pyrene	μg/l	0.01	NONE	< 0.01	< 0.01		
Dibenz(a,h)anthracene	μg/l	0.01	NONE	< 0.01	< 0.01		
Benzo(ghi)perylene	μg/l	0.01	NONE	< 0.01	< 0.01		
Total PAH							
Total EPA-16 PAHs	μg/l	0.2	NONE	< 0.2	< 0.2	1	1
TOTAL LEA-10 PAILS	μ9/1	0.2	NONE	₹ 0.2	< 0.2	1	
Heavy Metals / Metalloids							
Arsenic (dissolved)	μg/l	1.1	ISO 17025	< 1.1	3.7		
Barium (dissolved)	μg/l	0.05	ISO 17025	260	34		
Beryllium (dissolved)	μg/l	0.2	ISO 17025	< 0.2	< 0.2		
Boron (dissolved)	μg/l	10	ISO 17025	< 10	68		
Cadmium (dissolved)	μg/l	0.08	ISO 17025	< 0.08	< 0.08		
Chromium (dissolved)	μg/l	0.4	ISO 17025	1.6	1.4		
Copper (dissolved)	μg/l	0.7	ISO 17025	2.6	2.4		
Lead (dissolved)	μg/l	1	ISO 17025	3.9	2 0		
Mercury (dissolved)	μg/l	0.5	ISO 17025	< 0.5	< 0.5		
Nickel (dissolved)	μg/l	0.3	ISO 17025	0.4	1.4		
Selenium (dissolved)	μg/l	4	ISO 17025	< 4.0	< 4.0		
Vanadium (dissolved)	μg/l	1.7	ISO 17025	31	18		
Zinc (dissolved)	μg/l	0.4	ISO 17025	0.6	2 3		





TPH-CWG - Aromatic >C21 - C35 TPH-CWG - Aromatic (C5 - C35)

Project / Site name: London Paramount Entertainment Resort

Lab Sample Number	462907	462908					
Sample Reference				BH203	BH203		
Sample Number				None Supplied	None Supplied		
Depth (m)				5 00	13.00		
Date Sampled				29/06/2015	29/06/2015		
Time Taken				1525	1610		
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status				
Monoaromatics							
Benzene	μg/l	1	NONE	< 1.0	< 1.0		
Toluene	μg/l	1	NONE	< 1.0	< 1.0		
Ethylbenzene	μg/l	1	NONE	< 1.0	< 1.0		
p & m-xylene	μg/l	1	NONE	< 1.0	< 1.0		
o-xylene	μg/l	1	NONE	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/l	10	NONE	< 10	< 10		
Petroleum Hydrocarbons							
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10	18		
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE	< 10	170		
TPH-CWG - Aliphatic >C16 - C21	μg/l	10	NONE	< 10	540		
TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE	< 10	1200		
TPH-CWG - Aliphatic (C5 - C35)	μg/l	10	NONE	< 10	2000		
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aromatic >C7 - C8	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aromatic >C8 - C10	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE	< 10	200		
TPH-CWG - Aromatic >C12 - C16	μg/l	10	NONE	< 10	520		
TPH-CWG - Aromatic >C16 - C21	μg/l	10	NONE	< 10	1500		

< 10 2300

μg/l

10

NONE

< 10





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Boron in leachate	Determination of boron by acidification followed by ICP-OES.	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in leachates	Determination of BTEX and MTBE in leachates by headspace GC-MS.	In-house method based on USEPA8260	L073W-PL	W	NONE
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Speciated EPA-16 PAHs in leachate	Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L070-PL	W	NONE
TPHCWG (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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e: reception@i2analytical.com

Analytical Report Number: 15-74917

Project / Site name: London Paramount Entertainment 29/06/2015 Samples received on:

Resort

Your job number: 30766 Samples instructed on: 07/07/2015

Your order number: Analysis completed by: 14/07/2015

Report Issue Number: Report issued on: 14/07/2015 1

Samples Analysed: 1 leachate sample

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting





Lab Sample Number	462899		I					
Sample Reference				WS204				
Sample Number				None Supplied				
Depth (m)				4.45				
Date Sampled				29/06/2015			1	
Time Taken				1235			1	
			_	1200				
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					
Speciated PAHs								
Naphthalene	μg/l	0.01	NONE	< 0.01				
Acenaphthylene	μg/l	0.01	NONE	< 0.01				
Acenaphthene	μg/l	0.01	NONE	< 0.01				
Fluorene	μg/l	0.01	NONE	< 0.01				
Phenanthrene	μg/l	0.01	NONE	< 0.01				
Anthracene	μg/l	0.01	NONE	< 0.01				
Fluoranthene	μg/l	0.01	NONE	< 0.01				
Pyrene	μg/l	0.01	NONE	< 0.01				
Benzo(a)anthracene	μg/l	0.01	NONE	< 0.01				
Chrysene	μg/l	0.01	NONE	< 0.01				
Benzo(b)fluoranthene	μg/l	0.01	NONE	< 0.01				
Benzo(k)fluoranthene	μg/l	0.01	NONE	< 0.01				
Benzo(a)pyrene	μg/l	0.01	NONE	< 0.01				
Indeno(1,2,3-cd)pyrene	μg/l	0.01	NONE	< 0.01				
Dibenz(a,h)anthracene	μg/l	0.01	NONE	< 0.01				
Benzo(ghi)perylene	μg/l	0.01	NONE	< 0.01				
Total PAH								
Total EPA-16 PAHs	μg/l	0.2	NONE	< 0.2	1	1	1	
TOTAL LEA-10 FALIS	µу/і	0.2	NONE	< 0.2				
Heavy Metals / Metalloids								
Arsenic (dissolved)	μg/l	1.1	ISO 17025	7.1				
Barium (dissolved)	µg/l	0.05	ISO 17025	32		Ì	1	
Beryllium (dissolved)	μg/l	0.03	ISO 17025	< 0.2		Ì	1	
Boron (dissolved)	μg/l	10	ISO 17025	170	1			
Cadmium (dissolved)	μg/l	0.08	ISO 17025	< 0.08		Ì		
Chromium (dissolved)	μg/l	0.4	ISO 17025	1.5	İ	Ì	İ	
Copper (dissolved)	μg/l	0.7	ISO 17025	4.4		Ì	1	
Lead (dissolved)	μg/l	1	ISO 17025	3.5	İ	Ì	İ	
Mercury (dissolved)	μg/l	0.5	ISO 17025	< 0.5		Ì	1	
Nickel (dissolved)	μg/l	0.3	ISO 17025	1.9		Ì	1	
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	İ	Ì	İ	
Vanadium (dissolved)	μg/l	1.7	ISO 17025	35		Ì	1	
				2.1	İ	İ	İ	
Zinc (dissolved)	μg/l	0.4	ISO 17025	2.1				





TPH-CWG - Aromatic >C21 - C35 TPH-CWG - Aromatic (C5 - C35)

Project / Site name: London Paramount Entertainment Resort

Lab Sample Number	462899					
Sample Reference				WS204		
Sample Number				None Supplied		
Depth (m)				4.45		
Date Sampled				29/06/2015		
Time Taken				1235		
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status			
Monoaromatics						
Benzene	μg/l	1	NONE	< 1.0		
Toluene	μg/l	1	NONE	< 1.0		
Ethylbenzene	μg/l	1	NONE	< 1.0		
p & m-xylene	μg/l	1	NONE	< 1.0		
o-xylene	μg/l	1	NONE	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/l	10	NONE	< 10		
Petroleum Hydrocarbons						
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic >C16 - C21	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE	< 10		
TPH-CWG - Aliphatic (C5 - C35)	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C7 - C8	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C8 - C10	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C12 - C16	μg/l	10	NONE	< 10		
TPH-CWG - Aromatic >C16 - C21	μg/l	10	NONE	< 10		

μg/l

10

NONE

< 10





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Boron in leachate	Determination of boron by acidification followed by ICP-OES.	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in leachates	Determination of BTEX and MTBE in leachates by headspace GC-MS.	In-house method based on USEPA8260	L073W-PL	W	NONE
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Speciated EPA-16 PAHs in leachate	Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L070-PL	W	NONE
TPHCWG (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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e: reception@i2analytical.com

Analytical Report Number: 15-74915

Project / Site name: London Paramount Entertainment Samples received on: 25/06/2015

Resort

Your job number: 30766 Samples instructed on: 07/07/2015

Your order number: Analysis completed by: 14/07/2015

Report Issue Number: 1 Report issued on: 14/07/2015

Samples Analysed: 1 leachate sample - 1 soil sample

Signed:

Rexona Rahman

Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting





Lab Sample Number				462875	I		
Sample Reference				BH204			1
Sample Number				None Supplied			
Depth (m)				13.00			
Date Sampled				24/06/2015			
Time Taken	1		1	1240			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1			
Moisture Content	%	N/A	NONE	15			
Total mass of sample received	kg	0.001	NONE	1.4			
	9						
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected			
	. ,,-						
General Inorganics							
рН	pH Units	N/A	NONE	8.2		1]
Electrical Conductivity	μS/cm	10	NONE	210		1	
Total Cyanide	mg/kg	1	NONE	< 1		1	
Complex Cyanide	mg/kg	1	NONE	< 1			
Free Cyanide	mg/kg	1	NONE	< 1			
Total Sulphate as SO ₄	mg/kg	50	NONE	670			
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	NONE	0.085			
Water Soluble Sulphate (Soli Equivalent) Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	NONE	85			
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	q/l	0.00125	NONE	0.043			1
Sulphide		1	NONE	< 1.0			
	mg/kg			84			
Water Soluble Chloride (2:1)	mg/kg	1	NONE				
Ammoniacal Nitrogen as N	mg/kg	0.5	NONE	< 0.5			
Organic Matter	%	0.1	NONE	0.1			
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0			
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20			
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0			
Total Phenois			1			1	
Total Phenols (monohydric)	mg/kg	1	NONE	< 1.0			
Consisted BAUS							
Speciated PAHs	T	0.05		0.05			
Naphthalene	mg/kg	0.05	NONE	< 0.05			
Acenaphthylene	mg/kg	0.1	NONE	< 0.10			
Acenaphthene	mg/kg	0.1	NONE	< 0.10			
Fluorene	mg/kg	0.1	NONE	< 0.10			
Phenanthrene	mg/kg	0.1	NONE	< 0.10			
Anthracene	mg/kg	0.1	NONE	< 0.10			
Fluoranthene	mg/kg	0.1	NONE	< 0.10			
Pyrene	mg/kg	0.1	NONE	< 0.10			
Benzo(a)anthracene	mg/kg	0.1	NONE	< 0.10			
Chrysene	mg/kg	0.05	NONE	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.1	NONE	< 0.10			
Benzo(k)fluoranthene	mg/kg	0.1	NONE	< 0.10			
Benzo(a)pyrene	mg/kg	0.1	NONE	< 0.10			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	NONE	< 0.10			
Dibenz(a,h)anthracene	mg/kg	0.1	NONE	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	NONE	< 0.05			
Coronene	mg/kg	0.05	NONE	< 0.05			
	<u> </u>		- L				
Total PAH							
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6			
		•			•		





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				462875				
Sample Reference				BH204				
Sample Number				None Supplied				
•				13.00				
Depth (m)				24/06/2015				
Date Sampled Time Taken						-		
Tille Takeli				1240				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids	•	•			•	•	•	
Aluminium (aqua regia extractable)	mg/kg	30	NONE	500				
Antimony (aqua regia extractable)	mg/kg	1	NONE	< 1.0				
Arsenic (aqua regia extractable)	mg/kg	1	NONE	1.6				
Barium (agua regia extractable)	mg/kg	1	NONE	11				
Beryllium (aqua regia extractable)	mg/kg	0.06	NONE	< 0.1				
Boron (water soluble)	mg/kg	0.2	NONE	0.5				
Cadmium (agua regia extractable)	mg/kg	0.2	NONE	< 0.2				
Chromium (hexavalent)	mg/kg	4	NONE	< 4.0				
Chromium (aqua regia extractable)	mg/kg	1	NONE	1.7				
Copper (aqua regia extractable)	mg/kg	1	NONE	3.6				
Iron (agua regia extractable)	mg/kg	40	NONE	1100				
Lead (agua regia extractable)	mg/kg	1	NONE	< 1.0				
Manganese (aqua regia extractable)	mg/kg	1	NONE	220				
Mercury (aqua regia extractable)	mg/kg	0.3	NONE	< 0.3				
Molybdenum (aqua regia extractable)	mg/kg	0.25	NONE	< 0.3				
Nickel (aqua regia extractable)	mg/kg	1	NONE	1.3				
Phosphorus (agua regia extractable)	mg/kg	20	NONE	510				
Selenium (aqua regia extractable)	mg/kg	1	NONE	< 1.0				
Vanadium (aqua regia extractable)	mg/kg	1	NONE	2.9				
Zinc (aqua regia extractable)	mg/kg	1	NONE	9.4				
Calcium (aqua regia extractable)	mg/kg	20	NONE	640000				
Magnesium (agua regia extractable)	mg/kg	20	NONE	1300				
Potassium (aqua regia extractable)	mg/kg	20	NONE	180				
Monoaromatics								
Benzene	μg/kg	1	NONE	< 1.0				
Toluene	μg/kg	1	NONE	< 1.0				
Ethylbenzene	μg/kg	1	NONE	< 1.0				
p & m-xylene	μg/kg	1	NONE	< 1.0				
o-xylene	μg/kg	1	NONE	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	NONE	< 1.0				

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	NONE	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	NONE	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	NONE	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	NONE	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	NONE	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	NONE	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	NONE	< 8.0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	NONE	< 10		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	NONE	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	NONE	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	NONE	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	NONE	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	NONE	< 2.0		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	NONE	< 10		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	NONE	< 10		





Lab Sample Number	ab Sample Number				I	I	
Sample Reference				462875 BH204			
Sample Number				None Supplied	1	1	
Depth (m)				13.00			
Date Sampled				24/06/2015			
Time Taken				1240			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
VOCs							
Chloromethane	μg/kg	1	NONE	< 1.0			
Chloroethane	μg/kg	1	NONE	< 1.0			
Bromomethane	μg/kg	1	NONE	< 1.0			
Vinyl Chloride	μg/kg	1	NONE	< 1.0			
Trichlorofluoromethane	μg/kg	1	NONE	< 1.0			
1,1-Dichloroethene	μg/kg	1	NONE	< 1.0			
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	NONE	< 1.0			
Cis-1,2-dichloroethene	μg/kg	1	NONE	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	NONE	< 1.0			
1,1-Dichloroethane	μg/kg	1	NONE	< 1.0			
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0			
Trichloromethane	μg/kg	1	NONE	< 1.0			
1,1,1-Trichloroethane	μg/kg	1	NONE	< 1.0			
1,2-Dichloroethane 1,1-Dichloropropene	μg/kg μg/kg	1	NONE NONE	< 1.0 < 1.0	1	 	
Trans-1,2-dichloroethene	μg/kg μg/kg	1	NONE	< 1.0			
Benzene	μg/kg μg/kg	1	NONE	< 1.0			
Tetrachloromethane	μg/kg μg/kg	1	NONE	< 1.0			
1,2-Dichloropropane	μg/kg	1	NONE	< 1.0			
Trichloroethene	μg/kg	1	NONE	< 1.0			
Dibromomethane	μg/kg	1	NONE	< 1.0			
Bromodichloromethane	μg/kg	1	NONE	< 1.0			
Cis-1,3-dichloropropene	μg/kg	1	NONE	< 1.0			
Trans-1,3-dichloropropene	μg/kg	1	NONE	< 1.0			
Toluene	μg/kg	1	NONE	< 1.0			
1,1,2-Trichloroethane	μg/kg	1	NONE	< 1.0			
1,3-Dichloropropane	μg/kg	1	NONE	< 1.0			
Dibromochloromethane	μg/kg	1	NONE	< 1.0			
Tetrachloroethene	μg/kg	1	NONE	< 1.0			
1,2-Dibromoethane	μg/kg	1	NONE	< 1.0			
Chlorobenzene	μg/kg	1	NONE	< 1.0			
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE NONE	< 1.0 < 1.0			
Ethylbenzene p & m-Xylene	μg/kg	1	NONE	< 1.0			
Styrene	μg/kg μg/kg	1	NONE	< 1.0			
Tribromomethane	μg/kg	1	NONE	< 1.0			
o-Xylene	μg/kg	1	NONE	< 1.0			
1,1,2,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0			
Isopropylbenzene	μg/kg	1	NONE	< 1.0			
Bromobenzene	μg/kg	1	NONE	< 1.0			
n-Propylbenzene	μg/kg	1	NONE	< 1.0			
2-Chlorotoluene	μg/kg	1	NONE	< 1.0			
4-Chlorotoluene	μg/kg	1	NONE	< 1.0			
1,3,5-Trimethylbenzene	μg/kg	1	NONE	< 1.0			
tert-Butylbenzene	μg/kg	1	NONE	< 1.0			
1 2 4-Trimethylbenzene	μg/kg	1	NONE	< 1.0			
sec-Butylbenzene	μg/kg	1	NONE	< 1.0			
1,3-Dichlorobenzene	μg/kg	1	NONE	< 1.0 < 1.0	-		
p-Isopropyltoluene 1,2-Dichlorobenzene	μg/kg	1	NONE NONE	< 1.0	1	 	
1 4-Dichlorobenzene	μg/kg μg/kg	1	NONE	< 1.0		 	
Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0			
1,2-Dibromo-3-chloropropane	μg/kg μg/kg	1	NONE	< 1.0		†	
1,2,4-Trichlorobenzene	µg/kg	1	NONE	< 1.0	İ	İ	
Hexachlorobutadiene	µg/kg	1	NONE	< 1.0			
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0			
			-		•	•	-





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Lab Sample Number	462875							
Sample Reference Sample Number		BH204						
Depth (m)		None Supplied 13.00						
,	24/06/2015							
Date Sampled Time Taken	1240							
Time Tuken				1240				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1				
Phenol	mg/kg	0.2	NONE	< 0.2				
2-Chlorophenol	mg/kg	0.1	NONE	< 0.1				
Bis(2-chloroethyl)ether	mg/kg	0.2	NONE	< 0.2				
1,3-Dichlorobenzene	mg/kg	0.2	NONE	< 0.2				
1 2-Dichlorobenzene	mg/kg	0.1	NONE	< 0.1				
1,4-Dichlorobenzene	mg/kg	0.2	NONE	< 0.2				
Bis(2-chloroisopropyl)ether	mg/kg	0.1	NONE	< 0.1				
2-Methylphenol Hexachloroethane	mg/kg	0.3	NONE	< 0.3 < 0.05				
Nitrobenzene	mg/kg	0.05	NONE NONE	< 0.05				
4-Methylphenol	mg/kg mg/kg	0.3	NONE	< 0.3				
Isophorone	mg/kg	0.2	NONE	< 0.2				
2-Nitrophenol	mg/kg	0.3	NONE	< 0.3				
2,4-Dimethylphenol	mg/kg	0.3	NONE	< 0.3				
Bis(2-chloroethoxy)methane	mg/kg	0.3	NONE	< 0.3				
1,2,4-Trichlorobenzene	mg/kg	0.3	NONE	< 0.3				
Naphthalene	mg/kg	0.05	NONE	< 0.05				
2,4-Dichlorophenol	mg/kg	0.3	NONE	< 0.3				
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1				
Hexachlorobutadiene	mg/kg	0.1	NONE	< 0.1				
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1				
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	< 0.1				
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	< 0.2				
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1				
2-Chloronaphthalene	mg/kg	0.1	NONE	< 0.1 < 0.1				
Dimethylphthalate 2,6-Dinitrotoluene	mg/kg	0.1	NONE NONE	< 0.1				
Acenaphthylene	mg/kg mg/kg	0.1	NONE	< 0.10				
Acenaphthene	mg/kg	0.1	NONE	< 0.10				
2 4-Dinitrotoluene	mg/kg	0.2	NONE	< 0.2				
Dibenzofuran	mg/kg	0.2	NONE	< 0.2				
4-Chlorophenyl phenyl ether	mg/kg	0.3	NONE	< 0.3				
Diethyl phthalate	mg/kg	0.2	NONE	< 0.2				
4-Nitroaniline	mg/kg	0.2	NONE	< 0.2				
Fluorene	mg/kg	0.1	NONE	< 0.10				
Azobenzene	mg/kg	0.3	NONE	< 0.3				
Bromophenyl phenyl ether	mg/kg	0.2	NONE	< 0.2				
Hexachlorobenzene	mg/kg	0.3	NONE	< 0.3				
Phenanthrene	mg/kg	0.1	NONE	< 0.10				
Anthracene	mg/kg	0.1	NONE	< 0.10 < 0.3				
Carbazole Dibutyl phthalate	mg/kg mg/kg	0.3	NONE NONE	< 0.2				
Anthraquinone	mg/kg	0.2	NONE	< 0.2				
Fluoranthene	mg/kg	0.1	NONE	< 0.10				
Pyrene	mg/kg	0.1	NONE	< 0.10				
Butyl benzyl phthalate	mg/kg	0.3	NONE	< 0.3				
Benzo(a)anthracene	mg/kg	0.1	NONE	< 0.10				
Chrysene	mg/kg	0.05	NONE	< 0.05				
Benzo(b)fluoranthene	mg/kg	0.1	NONE	< 0.10				
Benzo(k)fluoranthene	mg/kg	0.1	NONE	< 0.10				
Benzo(a)pyrene	mg/kg	0.1	NONE	< 0.10				
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	NONE	< 0.10				
Dibenz(a,h)anthracene	mg/kg	0.1	NONE	< 0.10				
Benzo(ghi)perylene	mg/kg	0.05	NONE	< 0.05				





Lab Sample Number				462874			
Sample Reference	BH204						
Sample Number	None Supplied						
Depth (m)	6.70						
Date Sampled	24/06/2015						
Time Taken				0910			
			Ā				
Analytical Davameter	_	Limit of detection	Accreditation Status				
Analytical Parameter	Units	mit	ta di				
(Leachate Analysis)	S	ii of	us at				
			9				
Speciated PAHs							
Naphthalene	μg/l	0.01	NONE	< 0.01		ı	
Acenaphthylene	μg/l	0.01	NONE	< 0.01	Ì		
Acenaphthene	μg/l	0.01	NONE	< 0.01	Ì		
Fluorene	μg/l	0.01	NONE	< 0.01			
Phenanthrene	μg/l	0.01	NONE	< 0.01			
Anthracene	μg/l	0.01	NONE	< 0.01			
Fluoranthene	μg/l	0.01	NONE	< 0.01			
Pyrene	μg/l	0.01	NONE	< 0.01			
Benzo(a)anthracene	μg/l	0.01	NONE	< 0.01			
Chrysene	μg/l	0.01	NONE	< 0.01			
Benzo(b)fluoranthene	μg/l	0.01	NONE	< 0.01			
Benzo(k)fluoranthene	μg/l	0.01	NONE	< 0.01			
Benzo(a)pyrene	μg/l	0.01	NONE	< 0.01			
Indeno(1,2,3-cd)pyrene	μg/l	0.01	NONE	< 0.01			
Dibenz(a,h)anthracene	μg/l	0.01	NONE	< 0.01			
Benzo(ghi)perylene	μg/l	0.01	NONE	< 0.01			
	13,				•	•	
Total PAH							
Total EPA-16 PAHs	μg/l	0.2	NONE	< 0.2			
Heavy Metals / Metalloids Arsenic (dissolved)	/1	1.1	ISO 17025	12	I	T	
	μg/l			11			
Barium (dissolved)	μg/l	0.05	ISO 17025 ISO 17025	< 0.2			
Beryllium (dissolved)	μg/l						
Boron (dissolved)	μg/l	10	ISO 17025	58 < 0.08			
Cadmium (dissolved) Chromium (dissolved)	μg/l	0.08	ISO 17025 ISO 17025	< 0.08 4.0			
` '	μg/l			4.0			
Copper (dissolved) Lead (dissolved)	μg/l	0.7	ISO 17025 ISO 17025	< 1.0			
Lead (dissolved) Mercury (dissolved)	μg/l	0.5		< 1.0 < 0.5			
Mercury (dissolved) Nickel (dissolved)	μg/l	0.5	ISO 17025 ISO 17025	< 0.5 4.2			
	μg/l						
Selenium (dissolved)	μg/l	4	ISO 17025	7.1 21			
Vanadium (dissolved) Zinc (dissolved)	μg/l	1.7 0.4	ISO 17025 ISO 17025	4.9			
ZIIIC (UISSOIVEU)	μg/l	0.4	150 1/025	4.9			





Lab Sample Number				462874			
Sample Reference				BH204			
Sample Number	None Supplied						
Depth (m)	6.70						
Date Sampled				24/06/2015			
Time Taken				0910			
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status				
Monoaromatics							
Benzene	μg/l	1	NONE	< 1.0			
Toluene	μg/l	1	NONE	< 1.0			
Ethylbenzene	μg/l	1	NONE	< 1.0			
p & m-xylene	μg/l	1	NONE	6.6			
o-xylene	μg/l	1	NONE	2.1			
MTBE (Methyl Tertiary Butyl Ether)	μg/l	10	NONE	< 10			
Petroleum Hydrocarbons		10	NO.UE	. 10		1	
TPH-CWG - Aliphatic > C5 - C6	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C16 - C21	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic (C5 - C35)	μg/l	10	NONE	< 10			
TRU CAIC Assess to CF C7		10	HONE	. 10			
TPH-CWG - Aromatic > C5 - C7	μg/l	10 10	NONE	< 10			
TPH-CWG - Aromatic >C7 - C8	μg/l		NONE NONE	< 10			
TPH-CWG - Aromatic >C8 - C10	μg/l	10 10		< 10			
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE NONE	< 10			
TPH-CWG - Aromatic >C12 - C16	μg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C16 - C21	μg/l			< 10			
TPH-CWG - Aromatic >C21 - C35 TPH-CWG - Aromatic (C5 - C35)	μg/l	10 10	NONE NONE	< 10 < 10			
TENT-CWG - AFORMACE (CS - CSS)	μg/l	10	NONE	< 10			





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Samp Numbe		Sample Number	Depth (m)	Sample Description *
462875	BH204	None Supplied	13.00	White chalk.**

**Non MCERTS matrix





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron in leachate	Determination of boron by acidification followed by ICP-OES.	In-house method based on MEWAM	L039-PL	W	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in leachates	Determination of BTEX and MTBE in leachates by headspace GC-MS.	In-house method based on USEPA8260	L073W-PL	W	NONE
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

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Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated EPA-16 PAHs in leachate	Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L070-PL	W	NONE
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Sample Deviation Report



Sample ID		BH204
Other ID		
Sample Typ	e	S
Job Numbe	r	15-74915
Sample Numi	ber	462875
Deviation Co	de	С
Test Name	Method no	
BTEX and MTBE in soil	L073S-PL	С
Complex cyanide in soil	L080-PL	С
Free cyanide in soil	L080-PL	С
Sulphide in soil	L010-PL	С
Total cyanide in soil	L080-PL	С
TPHCWG (Soil)	L076-PL	С
Volatile organic compounds in soil	L073S-PL	С





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e: reception@i2analytical.com

Project / Site name: London Paramount Entertainment

Resort

Your job number: 30766

Your order number:

Report Issue Number: 1

Samples Analysed: 1 soil sample

Samples received on: 11/06/2015

Samples instructed on: 07/07/2015

Analysis completed by: 14/07/2015

Report issued on: 14/07/2015

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter
Assistant Reporting Manager
For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Iss No 15-74904-1





Lab Sample Number				462802	I	I	
Sample Reference				BH202			
Sample Number				None Supplied	-		
Depth (m)				21.60 16/06/2015			
Date Sampled Time Taken							
Time Taken	1	1	1	0920			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1			
Moisture Content	%	N/A	NONE	23			
Total mass of sample received	kg	0.001	NONE	1.7			
	9						
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected			
General Inorganics							
рН	pH Units	N/A	NONE	7.8	Ĭ	1	
Electrical Conductivity	μS/cm	10	NONE	1500	Ì		
Total Cyanide	mg/kg	1	NONE	< 1	Ì		
Complex Cyanide	mg/kg	1	NONE	< 1			
Free Cyanide	mg/kg	1	NONE	< 1	Ì		
Total Sulphate as SO ₄	mg/kg	50	NONE	610			
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	NONE	0.27			
Water Soluble Sulphate (Soli Equivalent) Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	NONE	270			
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	q/l	0.00125	NONE	0.13			
Sulphide		1	NONE	< 1.0			
	mg/kg			2200			
Water Soluble Chloride (2:1)	mg/kg	1	NONE				
Ammoniacal Nitrogen as N	mg/kg	0.5	NONE	< 0.5			
Organic Matter	%	0.1	NONE	0.2			
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0			
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20			
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0			
Total Phenols						ı	
Total Phenols (monohydric)	mg/kg	1	NONE	< 1.0			
Speciated PAHs			1		1		
Naphthalene	mg/kg	0.05	NONE	< 0.05			
Acenaphthylene	mg/kg	0.1	NONE	< 0.10	1	1	
Acenaphthene	mg/kg	0.1	NONE	< 0.10			
Fluorene	mg/kg	0.1	NONE	< 0.10			
Phenanthrene	mg/kg	0.1	NONE	< 0.10	 		
Anthracene	mg/kg	0.1	NONE	< 0.10	ļ		
Fluoranthene	mg/kg	0.1	NONE	< 0.10	ļ		
Pyrene	mg/kg	0.1	NONE	< 0.10	Į.		
Benzo(a)anthracene	mg/kg	0.1	NONE	< 0.10			
Chrysene	mg/kg	0.05	NONE	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.1	NONE	< 0.10	<u> </u>		
Benzo(k)fluoranthene	mg/kg	0.1	NONE	< 0.10			
Benzo(a)pyrene	mg/kg	0.1	NONE	< 0.10			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	NONE	< 0.10			
Dibenz(a,h)anthracene	mg/kg	0.1	NONE	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	NONE	< 0.05			
Coronene	mg/kg	0.05	NONE	< 0.05			
	<u> </u>		L. Carlotte				
Total PAH							
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6			
¥		•		•	-	*	





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number			462802				
Sample Reference				BH202			
Sample Number				None Supplied			
Depth (m)				21.60			
Date Sampled				16/06/2015		1	
Time Taken				0920			
Time Tuken				0920			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids							
Aluminium (aqua regia extractable)	mg/kg	30	NONE	510			
Antimony (aqua regia extractable)	mg/kg	1	NONE	< 1.0			
Arsenic (aqua regia extractable)	mg/kg	1	NONE	< 1.0			
Barium (aqua regia extractable)	mg/kg	1	NONE	12			
Beryllium (aqua regia extractable)	mg/kg	0.06	NONE	< 0.1			
Boron (water soluble)	mg/kg	0.2	NONE	0.2			
Cadmium (aqua regia extractable)	mg/kg	0.2	NONE	< 0.2			
Chromium (hexavalent)	mg/kg	4	NONE	< 4.0			
Chromium (aqua regia extractable)	mg/kg	1	NONE	1.7			
Copper (aqua regia extractable)	mg/kg	1	NONE	3.6			
Iron (aqua regia extractable)	mg/kg	40	NONE	790			
Lead (aqua regia extractable)	mg/kg	1	NONE	1.5			
Manganese (aqua regia extractable)	mg/kg	1	NONE	200			
Mercury (aqua regia extractable)	mg/kg	0.3	NONE	0.3			
Molybdenum (aqua regia extractable)	mg/kg	0.25	NONE	< 0.3			
Nickel (aqua regia extractable)	mg/kg	1	NONE	9.5			
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	390			
Selenium (aqua regia extractable)	mg/kg	1	NONE	< 1.0			
Vanadium (aqua regia extractable)	mg/kg	1	NONE	3.6			
Zinc (aqua regia extractable)	mg/kg	1	NONE	11			
Calcium (aqua regia extractable)	mg/kg	20	NONE	690000			
Magnesium (aqua regia extractable)	mg/kg	20	NONE	1400			
Potassium (aqua regia extractable)	mg/kg	20	NONE	170			
Monoaromatics			_				
Benzene	μg/kg	1	NONE	< 1.0			
Toluene	μg/kg	1	NONE	< 1.0			
Ethylbenzene	μg/kg	1	NONE	< 1.0			
p & m-xylene	μg/kg	1	NONE	< 1.0			
o-xylene	μg/kg	1	NONE	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	NONE	< 1.0			

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	NONE	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	NONE	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	NONE	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	NONE	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	NONE	3.4		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	NONE	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	NONE	< 8.0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	NONE	< 10		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	NONE	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	NONE	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	NONE	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	NONE	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	NONE	< 2.0		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	NONE	< 10		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	NONE	< 10		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	NONE	< 10		





Lab Sample Number	462802	I	I				
Sample Reference				BH202			
Sample Number				None Supplied	1	1	
Depth (m)				21.60			
Date Sampled				16/06/2015			
Time Taken				0920			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
VOCa			3				
VOCs		-		. 1.0			
Chloromethane	μg/kg	1	NONE	< 1.0			
Chloroethane Bromomethane	μg/kg	1	NONE	< 1.0 < 1.0			
Vinyl Chloride	μg/kg	1	NONE NONE	< 1.0			
Trichlorofluoromethane	μg/kg μg/kg	1	NONE	< 1.0			
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0			
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	NONE	< 1.0			
Cis-1,2-dichloroethene	µg/kg	1	NONE	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0			
1,1-Dichloroethane	μg/kg	1	NONE	< 1.0			
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0			
Trichloromethane	μg/kg	1	NONE	< 1.0			
1,1,1-Trichloroethane	μg/kg	1	NONE	< 1.0			
1,2-Dichloroethane	μg/kg	1	NONE	< 1.0			
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0			
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0			
Benzene	μg/kg	1	NONE	< 1.0			
Tetrachloromethane	μg/kg	1	NONE	< 1.0			
1,2-Dichloropropane	μg/kg	1	NONE	< 1.0			
Trichloroethene	μg/kg	1	NONE	< 1.0			
Dibromomethane	μg/kg	1	NONE	< 1.0			
Bromodichloromethane	μg/kg	1	NONE	< 1.0			
Cis-1,3-dichloropropene	μg/kg	1	NONE	< 1.0			
Trans-1,3-dichloropropene	μg/kg	1	NONE	< 1.0 < 1.0			
Toluene 1,1,2-Trichloroethane	μg/kg	1	NONE	< 1.0			
1,3-Dichloropropane	μg/kg μg/kg	1	NONE NONE	< 1.0			
Dibromochloromethane	μg/kg μg/kg	1	NONE	< 1.0			
Tetrachloroethene	μg/kg μg/kg	1	NONE	< 1.0			
1,2-Dibromoethane	μg/kg μg/kg	1	NONE	< 1.0			
Chlorobenzene	µg/kg	1	NONE	< 1.0			
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0			
Ethylbenzene	μg/kg	1	NONE	< 1.0			
p & m-Xylene	μg/kg	1	NONE	< 1.0			
Styrene	μg/kg	1	NONE	< 1.0			
Tribromomethane	μg/kg	1	NONE	< 1.0			
o-Xylene	μg/kg	1	NONE	< 1.0			
1,1,2,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0			
Isopropylbenzene	μg/kg	1	NONE	< 1.0			
Bromobenzene	μg/kg	1	NONE	< 1.0			
n-Propylbenzene	μg/kg	1	NONE	< 1.0			
2-Chlorotoluene	μg/kg	1	NONE	< 1.0			
4-Chlorotoluene	μg/kg	1	NONE	< 1.0			
1,3,5-Trimethylbenzene	μg/kg 	1	NONE	< 1.0			
tert-Butylbenzene	μg/kg	1	NONE	< 1.0			
1 2 4-Trimethylbenzene	μg/kg	1	NONE	< 1.0			
sec-Butylbenzene 1,3-Dichlorobenzene	μg/kg	1	NONE	< 1.0	-		
,	μg/kg	1	NONE	< 1.0 < 1.0	1	 	
p-Isopropyltoluene 1,2-Dichlorobenzene	μg/kg	1	NONE	< 1.0	1	 	
1 4-Dichlorobenzene	μg/kg μg/kg	1	NONE NONE	< 1.0	 	 	
Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0			
1,2-Dibromo-3-chloropropane	μg/kg μg/kg	1	NONE	< 1.0			
1,2,4-Trichlorobenzene	μg/kg μg/kg	1	NONE	< 1.0	1	1	
Hexachlorobutadiene	μg/kg μg/kg	1	NONE	< 1.0	1	1	
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	i	i	
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Lab Sample Number	462802						
Sample Reference				BH202			
Sample Number				None Supplied			
Depth (m)				21.60			
Date Sampled				16/06/2015			
Time Taken				0920			
			>	0320			
		윤묘	Accreditation Status				
Analytical Parameter	Units	Limit of detection	edi				
(Soil Analysis)	ţ	tio c	tat				
		5 7	ion				
SVOCs							
Aniline	/l	0.1	NONE	< 0.1		r	1
Phenol	mg/kg mg/kg	0.1	NONE NONE	< 0.1			
2-Chlorophenol	mg/kg	0.2	NONE	< 0.1			
Bis(2-chloroethyl)ether	mg/kg	0.1	NONE	< 0.2			
1,3-Dichlorobenzene	mg/kg	0.2	NONE	< 0.2			
1 2-Dichlorobenzene	mg/kg	0.1	NONE	< 0.1			
1,4-Dichlorobenzene	mg/kg	0.2	NONE	< 0.2			
Bis(2-chloroisopropyl)ether	mg/kg	0.1	NONE	< 0.1		i	
2-Methylphenol	mg/kg	0.3	NONE	< 0.3			
Hexachloroethane	mg/kg	0.05	NONE	< 0.05			
Nitrobenzene	mg/kg	0.3	NONE	< 0.3			
4-Methylphenol	mg/kg	0.2	NONE	< 0.2			
Isophorone	mg/kg	0.2	NONE	< 0.2			
2-Nitrophenol	mg/kg	0.3	NONE	< 0.3			
2,4-Dimethylphenol	mg/kg	0.3	NONE	< 0.3			
Bis(2-chloroethoxy)methane	mg/kg	0.3	NONE	< 0.3			
1,2,4-Trichlorobenzene	mg/kg	0.3	NONE	< 0.3			
Naphthalene	mg/kg	0.05	NONE	< 0.05			
2,4-Dichlorophenol	mg/kg	0.3	NONE	< 0.3			
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1			
Hexachlorobutadiene	mg/kg	0.1	NONE	< 0.1			
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1			
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	< 0.1			
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	< 0.2			
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1			
2-Chloronaphthalene	mg/kg	0.1	NONE	< 0.1			
Dimethylphthalate	mg/kg	0.1	NONE	< 0.1 < 0.1			
2,6-Dinitrotoluene Acenaphthylene	mg/kg	0.1	NONE NONE	< 0.10			
Acenaphthene	mg/kg mg/kg	0.1	NONE	< 0.10			
2 4-Dinitrotoluene	mg/kg	0.1	NONE	< 0.10			
Dibenzofuran	mg/kg	0.2	NONE	< 0.2			
4-Chlorophenyl phenyl ether	mg/kg	0.3	NONE	< 0.3			
Diethyl phthalate	mg/kg	0.2	NONE	< 0.2			
4-Nitroaniline	mg/kg	0.2	NONE	< 0.2			
Fluorene	mg/kg	0.1	NONE	< 0.10			
Azobenzene	mg/kg	0.3	NONE	< 0.3			
Bromophenyl phenyl ether	mg/kg	0.2	NONE	< 0.2			
Hexachlorobenzene	mg/kg	0.3	NONE	< 0.3			
Phenanthrene	mg/kg	0.1	NONE	< 0.10	 		
Anthracene	mg/kg	0.1	NONE	< 0.10			
Carbazole	mg/kg	0.3	NONE	< 0.3			
Dibutyl phthalate	mg/kg	0.2	NONE	< 0.2			
Anthraquinone	mg/kg	0.3	NONE	< 0.3			
Fluoranthene	mg/kg	0.1	NONE	< 0.10			
Pyrene	mg/kg	0.1	NONE	< 0.10		ļ	
Butyl benzyl phthalate	mg/kg	0.3	NONE	< 0.3			
Benzo(a)anthracene	mg/kg	0.1	NONE	< 0.10			
Chrysene	mg/kg	0.05	NONE	< 0.05			
Benzo(b)fluoranthene Benzo(k)fluoranthene	mg/kg	0.1	NONE	< 0.10			
` /	mg/kg	0.1	NONE	< 0.10 < 0.10		 	
Benzo(a)pyrene	mg/kg	0.1	NONE NONE	< 0.10		 	
Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene	mg/kg mg/kg	0.1	NONE	< 0.10		 	
Benzo(ghi)perylene	mg/kg	0.05	NONE	< 0.10		 	
penzo(gni)peryiene	mg/kg	0.03	NONE	\ U.UJ		1	<u> </u>





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sampl Number	e Sample Reference	Sample Number	Depth (m)	Sample Description *
462802	BH202	None Supplied	21.60	White chalk.**

**Non MCERTS matrix





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Sample Deviation Report



Sample ID		BH202
Other ID		1
Sample Type	S	
Job Number	15-74904	
Sample Number	462802	
Deviation Code	C	
Test Name	Method no	4
Complex cyanide in soil	L080-PL	C
Free cyanide in soil	L080-PL	C
Monohydric phenols in soil	L080-PL	C
Semi-volatile organic compounds in soil	L064-PL	c
Speciated WAC-17 PAHs in soil	L064-PL	C
Sulphide in soil	L010-PL	C
Total cyanide in soil	L080-PL	C
Total oxidised nitrogen in soil		C
Volatile organic compounds in soil	L073S-PL	C
BTEX and MTBE in soil	L073S-PL	C
Speciated WAC-17 PAHs in soil	L064-PL	C
Ammoniacal Nitrogen as N in soil	L082-PL	C
TPHCWG (Soil)	L076-PL	C
Volatile organic compounds in soil	L073S-PL	C





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Analytical Report Number: 15-74902

Project / Site name: London Paramount Entertainment Samples received on: 07/07/2015

Resort

Your job number: 30766 Samples instructed on: 07/07/2015

Your order number: Analysis completed by: 14/07/2015

Report Issue Number: 1 Report issued on: 14/07/2015

Samples Analysed: 1 leachate sample

Rexona Rahman

Signed:

Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting





				462000	_	_	1
Lab Sample Number				462800			
Sample Reference				BH202			
Sample Number				None Supplied			
Depth (m)				11.50			
Date Sampled				11/06/2015			
Time Taken				None Supplied			
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status				
Speciated PAHs							
Naphthalene	μg/l	0.01	NONE	< 0.01			
Acenaphthylene	μg/l	0.01	NONE	< 0.01			
Acenaphthene	μg/l	0.01	NONE	< 0.01			
Fluorene	μg/l	0.01	NONE	< 0.01			
Phenanthrene	μg/l	0.01	NONE	< 0.01			
Anthracene	μg/l	0.01	NONE	< 0.01			
Fluoranthene	μg/l	0.01	NONE	< 0.01			
Pyrene	μg/l	0.01	NONE	< 0.01			
Benzo(a)anthracene	μg/l	0.01	NONE	< 0.01			
Chrysene	μg/l	0.01	NONE	< 0.01			
Benzo(b)fluoranthene	μg/l	0.01	NONE	< 0.01			
Benzo(k)fluoranthene	μg/l	0.01	NONE	< 0.01			
Benzo(a)pyrene	μg/l	0.01	NONE	< 0.01			
Indeno(1,2,3-cd)pyrene	μg/l	0.01	NONE	< 0.01			
Dibenz(a,h)anthracene	μg/l	0.01	NONE	< 0.01			
Benzo(ghi)perylene	μg/l	0.01	NONE	< 0.01			
Total PAH		0.3	NOVE	. 0.2	1	•	
Total EPA-16 PAHs	μg/l	0.2	NONE	< 0.2	I	<u> </u>	
Heavy Metals / Metalloids							
Arsenic (dissolved)	μg/l	1.1	ISO 17025	20			
Barium (dissolved)	μg/l	0.05	ISO 17025	52			
Beryllium (dissolved)	μg/l μg/l	0.03	ISO 17025	< 0.2			
Boron (dissolved)	μg/I μg/I	10	ISO 17025	120	 	1	
Cadmium (dissolved)	μg/I μg/I	0.08	ISO 17025	< 0.08		1	
Chromium (dissolved) Chromium (dissolved)	μg/l μg/l	0.08	ISO 17025	1.6		1	
Copper (dissolved)	μg/I μg/I	0.4	ISO 17025	9.2			
Lead (dissolved)		1	ISO 17025	< 1.0		1	
Mercury (dissolved)	μg/l	0.5	ISO 17025	< 0.5		1	
Nickel (dissolved)	μg/l μg/l	0.3	ISO 17025	< 0.5 2.7		1	
						1	
Selenium (dissolved) Zinc (dissolved)	μg/l	4 0.4	ISO 17025 ISO 17025	< 4.0 3.1		-	
ZITIC (UISSOIVEU)	μg/l	0.4	130 1/025	3.1			





Lab Sample Number		462800					
Sample Reference				BH202			
Sample Number				None Supplied			
Depth (m)				11.50			
Date Sampled			11/06/2015				
Time Taken				None Supplied			
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status				
Monoaromatics							
Benzene	μg/l	1	NONE	< 1.0			
Toluene	μg/l	1	NONE	< 1.0			
Ethylbenzene	μg/l	1	NONE	< 1.0			
p & m-xylene	μg/l	1	NONE	< 1.0			
o-xylene	μg/l	1	NONE	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	μg/l	10	NONE	< 10			
Petroleum Hydrocarbons		- 10	1				
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C16 - C21	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic (C5 - C35)	μg/l	10	NONE	< 10			
	_				1	ı	
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C7 - C8	μg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C8 - C10	μg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C12 - C16	μg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C16 - C21	μg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C21 - C35	μg/l	10	NONE	< 10			
TPH-CWG - Aromatic (C5 - C35)	μg/l	10	NONE	< 10			





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Boron in leachate	Determination of boron by acidification followed by ICP-OES.	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in leachates	Determination of BTEX and MTBE in leachates by headspace GC-MS.	In-house method based on USEPA8260	L073W-PL	W	NONE
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Speciated EPA-16 PAHs in leachate	Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L070-PL	W	NONE
TPHCWG (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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Analytical Report Number: 15-74900

Project / Site name: London Paramount Entertainment Samples received on: 26/06/2015

Resort

Your job number: 30766 Samples instructed on: 07/07/2015

Your order number: Analysis completed by: 14/07/2015

Report Issue Number: 1 Report issued on: 14/07/2015

Samples Analysed: 2 leachate samples

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

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Lab Sample Number		462796	463176					
Sample Reference				WS202	WS202			
Sample Number				None Supplied	460461			
Depth (m)				6.70	11.70			
Date Sampled				25/06/2015	26/06/2015			
Time Taken				None Supplied	None Supplied			
Time raken	T			None Supplied	None Supplied			
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					
Speciated PAHs								
Naphthalene	µq/l	0.01	NONE	< 0.01	< 0.01			
Acenaphthylene	μg/l	0.01	NONE	< 0.01	< 0.01			
Acenaphthene	μq/l	0.01	NONE	< 0.01	< 0.01			
Fluorene	μg/l	0.01	NONE	< 0.01	< 0.01			
Phenanthrene	μq/l	0.01	NONE	< 0.01	< 0.01			
Anthracene	μq/l	0.01	NONE	< 0.01	< 0.01			
Fluoranthene	μg/l	0.01	NONE	< 0.01	< 0.01			
Pyrene	μg/l	0.01	NONE	< 0.01	< 0.01			
Benzo(a)anthracene	μg/l	0.01	NONE	< 0.01	< 0.01			
Chrysene	μg/l	0.01	NONE	< 0.01	< 0.01			
Benzo(b)fluoranthene	μg/l	0.01	NONE	< 0.01	< 0.01			
Benzo(k)fluoranthene	μg/l	0.01	NONE	< 0.01	< 0.01			
Benzo(a)pyrene	μg/l	0.01	NONE	< 0.01	< 0.01			
Indeno(1,2,3-cd)pyrene	μg/l	0.01	NONE	< 0.01	< 0.01			
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01			
Benzo(ghi)perylene	μg/l	0.01	NONE	< 0.01	< 0.01			
berizo(grii)peryierie	ру/і	0.01	INOINE	< 0.01	< 0.01	<u> </u>	<u> </u>	
Total PAH								
Total EPA-16 PAHs	μg/l	0.2	NONE	< 0.2	< 0.2			
	р9/1	0.2	NONE	V 0.2	V 0.2			
Heavy Metals / Metalloids Arsenic (dissolved)		1 1 1	ISO 17025	< 1.1	8 8	1	1	ı
	μg/l	1.1						
Barium (dissolved)	μg/l	0.05	ISO 17025	440	30			1
Beryllium (dissolved)	μg/l	0.2	ISO 17025	< 0.2	< 0.2			
Boron (dissolved)	μg/l	10	ISO 17025	12	170			
Cadmium (dissolved)	μg/l	0.08	ISO 17025	< 0.08	< 0.08			
Chromium (dissolved)	μg/l	0.4	ISO 17025	180	0.7			
Copper (dissolved)	μg/l	0.7	ISO 17025	7.6	2.7			
Lead (dissolved)	μg/l	1	ISO 17025	1.5	12			
Mercury (dissolved)	μg/l	0.5	ISO 17025	< 0.5	< 0.5			
Nickel (dissolved)	μg/l	0.3	ISO 17025	2.1	0.8			
Selenium (dissolved)	μg/l	4	ISO 17025	18	< 4.0			
Vanadium (dissolved)	μg/l	1.7	ISO 17025	12	25			
Zinc (dissolved)	μg/l	0.4	ISO 17025	1.2	1 3			





TPH-CWG - Aromatic >C16 - C21

TPH-CWG - Aromatic >C21 - C35 TPH-CWG - Aromatic (C5 - C35)

Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				462796	463176		
Sample Reference				WS202	WS202		
Sample Number				None Supplied	460461		
Depth (m)				6.70	11.70		
Date Sampled				25/06/2015	26/06/2015		
Time Taken		None Supplied	None Supplied				
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status				
Monoaromatics							
Benzene	μg/l	1	NONE	< 1.0	< 1.0		
Toluene	μg/l	1	NONE	< 1.0	< 1.0		
Ethylbenzene	μg/l	1	NONE	< 1.0	< 1.0		
p & m-xylene	μg/l	1	NONE	< 1.0	< 1.0		
o-xylene	μg/l	1	NONE	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/l	10	NONE	< 10	< 10		
Petroleum Hydrocarbons							
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic >C16 - C21	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aliphatic (C5 - C35)	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aromatic >C7 - C8	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aromatic >C8 - C10	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE	< 10	< 10		
TPH-CWG - Aromatic >C12 - C16	μg/l	10	NONE	< 10	< 10		

< 10

< 10

μg/l

μg/l

10

NONE

< 10

< 10 < 10





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Boron in leachate	Determination of boron by acidification followed by ICP-OES.	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in leachates	Determination of BTEX and MTBE in leachates by headspace GC-MS.	In-house method based on USEPA8260	L073W-PL	W	NONE
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Speciated EPA-16 PAHs in leachate	Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L070-PL	W	NONE
TPHCWG (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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Analytical Report Number: 15-74897

Project / Site name: London Paramount Entertainment Samples received on: 24/06/2015

Resort

Your job number: 30766 Samples instructed on: 08/07/2015

Your order number: Analysis completed by: 09/07/2015

Report Issue Number: 1 Report issued on: 09/07/2015

Samples Analysed: 1 soil sample



Signed:

Rexona Rahman Reporting Manager For & on behalf of i2 Analytical Ltd.

Tor & on benan or 12 Analytical Ett.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter

Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting





Lab Sample Number	b Sample Number						
Sample Reference	mple Reference						
Sample Number				None Supplied			
Depth (m)				7.70			
Date Sampled							
Time Taken	None Supplied						
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected			





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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Analytical Report Number: 15-74657

Replaces Analytical Report Number: 15-74657, issue no. 1

Project / Site name: London Paramount Entertainment Samples received on: 01/07/2015

Resort

Your job number: 30766 Samples instructed on: 03/07/2015

Your order number: Analysis completed by: 09/07/2015

Report Issue Number: 2 Report issued on: 09/07/2015

Samples Analysed: 3 soil samples

Rexona Rahman Reporting Manager

Signed:

For & on behalf of i2 Analytical Ltd.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

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Lab Sample Number				461260	461261	461262		
Sample Reference				BH201	BH201	BH201		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)	2.90	5.80	7.20					
Date Sampled				30/06/2015	01/07/2015	01/07/2015		
Time Taken				1645	0950	1010		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	16	42	43		
Total mass of sample received	kg	0.001	NONE	1.0	1.0	1.0		
Asbestos in Soil Screen / Identification Name	Туре	N/A	ISO 17025	-	-	Amosite		
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Not-detected	Detected		
Asbestos Quantification	%	0.001	ISO 17025	-	-	< 0.001		
General Inorganics	1	1 11/4				11.2	_	
pH	pH Units	N/A	MCERTS	11.8	11.3	11.3	+	
Electrical Conductivity	μS/cm	10	NONE	2400	5300	6900	1	
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1		
Complex Cyanide	mg/kg	1	NONE	< 1	< 1	< 1		
Free Cyanide Total Sulphate as SO₄	mg/kg	1 50	NONE MCERTS	< 1 30000	< 1 53000	< 1 48000		
	mg/kg							
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	3.2	7.8	10		
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	3200	7800	10000		
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	1.6	3.9	5.1		-
Sulphide	mg/kg	1	MCERTS	200	86	170		
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	180	5800	9100		
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	2.9	4.1		
Organic Matter	%	0.1	MCERTS	0.2	0.2	0.4		
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0		
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20	< 20	< 20		
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0		
Total Phenois								
Total Phenois (monohydric)		1	MCERTS	< 1.0	< 1.0	< 1.0	ı	т і
Total Phenois (monoriyunc)	mg/kg		MCERTS	< 1.0	< 1.0	< 1.0	J	J
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		1
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		1
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	1.1	< 0.10		1
Anthracene	mg/kg	0.1	MCERTS	< 0.10	0.10	< 0.10		
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	0.38	< 0.10		
Pyrene	mg/kg	0.1	MCERTS	< 0.10	0.17	< 0.10		
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05		
	<u> </u>		U					
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6	1.8	< 1.6		
· · · · · · · · · · · · · · · · · · ·								





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				461260	461261	461262		
Sample Reference				BH201	BH201	BH201		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				2.90	5.80	7.20		
Date Sampled				30/06/2015	01/07/2015	01/07/2015		
Time Taken		1645	0950	1010				
- Time raken		d L	Acc	1045	0930	1010		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids			•				•	
Aluminium (aqua regia extractable)	mg/kg	30	NONE	22000	38000	28000		
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	20	22	15		
Barium (aqua regia extractable)	mg/kg	1	MCERTS	110	350	280		
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.1	2.1	1.9		
Boron (water soluble)	mg/kg	0.2	MCERTS	9.0	4.5	3.8		
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	3.5	11	12		
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	24	30	29		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	57	78	68		
Iron (aqua regia extractable)	mg/kg	40	MCERTS	24000	17000	14000		
Lead (aqua regia extractable)	mg/kg	1	MCERTS	150	400	390		
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	300	270	280		
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	1.1	0.9	1.0		
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	25	33	26		
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	440	470	440		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	3.8	2.6		
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	42	81	67		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	270	370	500		
Calcium (aqua regia extractable)	mg/kg	20	NONE	280000	320000	310000		
Magnesium (agua regia extractable)	mg/kg	20	ISO 17025	3800	3900	3700		
Potassium (aqua regia extractable)	mg/kg	20	NONE	18000	35000	31000		
Monoaromatics								
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
p & m-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
o-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	4.9	< 2.0	< 2.0	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	19	< 8.0	< 8.0	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	92	8.7	< 8.0	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	120	< 10	< 10	
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	





Lab Sample Number				461260	461261	461262		
Sample Reference				BH201	BH201	BH201		
Sample Number				None Supplied	None Supplied	None Supplied	i	
Depth (m)				2.90	5.80	7.20		
Date Sampled				30/06/2015	01/07/2015	01/07/2015		
Time Taken				1645	0950	1010		
			A					
	_	de Li	Accreditation Status					
Analytical Parameter	Units	Limit of detection	edi					
(Soil Analysis)	ß	ti of	tat					
		3 "	on on					
VOCs								
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Chloroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Bromomethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Trichloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	ļ	
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Trans-1,2-dichloroethene Benzene	μg/kg	1	NONE MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
Tetrachloromethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,2-Dichloropropane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Trichloroethene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Dibromomethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Bromodichloromethane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Dibromochloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tetrachloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Chlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
p & m-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Styrene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Tribromomethane o-Xylene	μg/kg	1	MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
1,1,2,2-Tetrachloroethane	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0	< 1.0	< 1.0	 	
Isopropylbenzene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	 	
Bromobenzene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
n-Propylbenzene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	1	
2-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
4-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
1,3,5-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
tert-Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
1 2 4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
sec-Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
1,2-Dibromo-3-chloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		





Lab Sample Number				461260	461261	461262		
Sample Reference				BH201	BH201	BH201		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				2.90	5.80	7.20		
Date Sampled				30/06/2015	01/07/2015	01/07/2015		
Time Taken				1645	0950	1010		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs		•					•	
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1		
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2		
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1 < 0.3	< 0.1 < 0.3	< 0.1 < 0.3		
2-Methylphenol Hexachloroethane	mg/kg mg/kg	0.05	MCERTS MCERTS	< 0.3 < 0.05	< 0.3 < 0.05	< 0.3 < 0.05	 	
Nitrobenzene	mg/kg	0.03	MCERTS	< 0.3	< 0.3	< 0.03		
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	1	
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1		
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
4-Chloro-3-methylphenol 2,4,6-Trichlorophenol	mg/kg	0.1	NONE MCERTS	< 0.1 < 0.1	< 0.1 < 0.1	< 0.1 < 0.1		
2,4,5-Trichlorophenol	mg/kg mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1		
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
2 4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3		
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2 < 0.2	< 0.2 < 0.2	< 0.2 < 0.2		
4-Nitroaniline Fluorene	mg/kg mg/kg	0.2	MCERTS MCERTS	< 0.2	< 0.2	< 0.10		
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	1	
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	1.1	< 0.10		
Anthracene	mg/kg	0.1	MCERTS	< 0.10	0.10	< 0.10		
Carbazole	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	0.38	< 0.10	ļ	
Pyrene	mg/kg	0.1	MCERTS	< 0.10	0.17	< 0.10		
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3 < 0.10	< 0.3	< 0.3		
Benzo(a)anthracene Chrysene	mg/kg mg/kg	0.05	MCERTS MCERTS	< 0.10 < 0.05	< 0.10 < 0.05	< 0.10 < 0.05	 	
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.10	< 0.10	< 0.10	 	
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	1	
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		





Project / Site name: London Paramount Entertainment Resort

Your Order No:

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

"The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

Any material greater than 16mm is considered as Bulk sample and reported separately, asbestos content (if any) is not included in the final Quantitative analysis. The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
461262	BH201	7.20	87	Loose Fibres	Amosite	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
461260	BH201	None Supplied	2.90	Light grey sandy clay with gravel and rubble.
461261	BH201	None Supplied	5 80	Light grey sandy clay with rubble.
461262	BH201	None Supplied	7 20	Grey sandy clay with vegetation.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

	lace water (SW) Fotable water (FW) Ground			1	1
Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification	The analysis was carried out using documented inhouse method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



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Analytical Report Number: 15-74657

Project / Site name: London Paramount Entertainment Sampl

Resort

Your job number: 30766

Report Issue Number:

Your order number:

Samples Analysed: 3 soil samples

Samples received on:

01/07/2015

Samples instructed on:

03/07/2015

Analysis completed by:

09/07/2015

Report issued on:

09/07/2015



Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting





Lab Sample Number				461260	461261	461262	
Sample Reference			BH201	BH201	BH201		
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				2.90	5.80	7.20	
Date Sampled				30/06/2015	01/07/2015	01/07/2015	
Time Taken			1645	0950	1010		
				1010	0700	.0.0	i
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	
Moisture Content	%	N/A	NONE	16	42	43	
Total mass of sample received	kg	0.001	NONE	1.0	1.0	1.0	
	-					<u>. </u>	
Asbestos in Soil Screen / Identification Name	Туре	N/A	ISO 17025	-	-	Amosite	
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected	
Asbestos Quantification	%	0.001	ISO 17025	-	-	< 0.001	
							<u>-</u>
General Inorganics							
pH	pH Units	N/A	MCERTS	11.8	11.3	11.3	
Electrical Conductivity	μS/cm	10	NONE	2400	5300	6900	
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	
Complex Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	
Free Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	
Total Sulphate as SO ₄	mg/kg	50	MCERTS	30000	53000	48000	
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	3.2	7.8	10	
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	3200	7800	10000	
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	1.6	3.9	5.1	
Sulphide	mg/kg	1	MCERTS	200	86	170	
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	180	5800	9100	
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	2.9	4.1	
Organic Matter	%	0.1	MCERTS	0.2	0.2	0.4	
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20	< 20	< 20	
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	
Total Phenols							
		1	MOEDTO	1.0	1.0	1.0	
Total Phenols (monohydric)	mg/kg		MCERTS	< 1.0	< 1.0	< 1.0	
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	
Acenaphthylene	mg/kg	0.03	MCERTS	< 0.10	< 0.10	< 0.03	†
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	1.1	< 0.10	
Anthracene	mg/kg	0.1	MCERTS	< 0.10	0.10	< 0.10	
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	0.38	< 0.10	
Pyrene	mg/kg	0.1	MCERTS	< 0.10	0.17	< 0.10	İ
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	Î
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	ĺ
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	ĺ
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Dibenz(a h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	
						-	
Total PAH							
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6	1.8	< 1.6	





Lab Cample Number				4/12/0	4/10/1	4/12/2	
Lab Sample Number				461260 BH201	461261 BH201	461262 BH201	
Sample Reference Sample Number			None Supplied	None Supplied	None Supplied		
Depth (m)				2.90	5.80	7.20	
Date Sampled				30/06/2015	01/07/2015	01/07/2015	
Time Taken			1645	0950	1010		
Time Taken				1043	0730	1010	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids							•
Aluminium (aqua regia extractable)	mg/kg	30	NONE	22000	38000	28000	
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	20	22	15	
Barium (aqua regia extractable)	mg/kg	1	MCERTS	110	350	280	
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.1	2.1	1.9	
Boron (water soluble)	mg/kg	0.2	MCERTS	9.0	4.5	3.8	
Cadmium (agua regia extractable)	mg/kg	0.2	MCERTS	3.5	11	12	
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	
Chromium (aqua regia extractable)	mg/kg	1 1	MCERTS	24	30	29	
Copper (aqua regia extractable)	mg/kg	1 10	MCERTS	57	78	68	
Iron (agua regia extractable)	mg/kg	40	MCERTS	24000	17000	14000	
Lead (aqua regia extractable) Manganese (aqua regia extractable)	mg/kg	1 1	MCERTS MCERTS	150 300	400 270	390 280	<u> </u>
Mercury (aqua regia extractable)	mg/kg mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	
Molybdenum (agua regia extractable)	mg/kg	0.25	MCERTS	1.1	0.9	1.0	
Nickel (agua regia extractable)	mg/kg	1	MCERTS	25	33	26	
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	440	470	440	
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	3.8	2.6	
Vanadium (agua regia extractable)	mg/kg	1	MCERTS	42	81	67	
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	270	370	500	
0.11 (20	HOUE	200000	222222	210000	
Calcium (aqua regia extractable) Magnesium (aqua regia extractable)	mg/kg mg/kg	20	NONE ISO 17025	280000 3800	320000 3900	310000 3700	
Potassium (aqua regia extractable)	mg/kg	20	NONE	18000	35000	31000	
r otassiam (aqua regia extractable)	mg/kg	20	NONE	10000	33000	01000	'
Monoaromatics							
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
Toluene	μg/kg	11	MCERTS	< 1.0	< 1.0	< 1.0	
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
p & m-xylene	μg/kg	11	MCERTS	< 1.0	< 1.0	< 1.0	
o-xylene	μg/kg	11	MCERTS	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	11	MCERTS	< 1.0	< 1.0	< 1.0	
Petroleum Hydrocarbons							
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic > EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC10 - EC12 TPH-CWG - Aliphatic >EC12 - EC16	mg/kg mg/kg	2	MCERTS MCERTS	< 1.0 4.9	< 1.0 < 2.0	< 1.0 < 2.0	<u> </u>
TPH-CWG - Aliphatic >EC12 - EC16 TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	19	< 8.0	< 8.0	
TPH-CWG - Aliphatic >EC16 - EC21 TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	92	< 8.0 8.7	< 8.0	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	120	< 10	< 10	
					-		<u> </u>
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	11	MCERTS	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	
TPH-CWG - Aromatic > EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10 10	MCERTS	< 10	< 10	< 10	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	ΙU	MCERTS	< 10	< 10	< 10	





Lab Sample Number				461260	461261	461262		
Sample Reference	BH201	BH201	BH201					
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				2.90	5.80	7.20		
Date Sampled		30/06/2015	01/07/2015	01/07/2015 1010				
Time Taken	1	ı		1645	0950	1010		
		윤	Accreditation Status					
Analytical Parameter	Units	Limit of detection	redi Stat					
(Soil Analysis)	ផ	ti of	us					
			9					
VOCs	•				=		-	
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Chloroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Bromomethane Visual Chlorida	μg/kg	1	ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
Vinyl Chloride Trichlorofluoromethane	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
2,2-Dichloropropane Trichloromothana	μg/kg μg/kg	1	NONE MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0		
Trichloromethane 1,1,1-Trichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0 < 1.0		
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1 1-Dichloropropene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,2-Dichloropropane	μg/kg	1	MCERTS MCERTS	< 1.0	< 1.0	< 1.0		
Trichloroethene Dibromomethane	μg/kg μg/kg	1	MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
Bromodichloromethane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,3-Dichloropropane Dibromochloromethane	μg/kg μg/kg	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
Tetrachloroethene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Chlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
p & m-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Styrene Tribromomethane	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
o-Xylene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1 1 2 2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Isopropylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Bromobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
2-Chlorotoluene 4-Chlorotoluene	μg/kg μα/ka	1	NONE NONE	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
4-Chlorotoluene 1 3 5-Trimethylbenzene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
tert-Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
1 2 4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
sec-Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichlorobenzene 1,4-Dichlorobenzene	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
Butvlbenzene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
1,2-Dibromo-3-chloropropane	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		





Sample Reference	Lab Commis Number				4/12/0	4/10/1	4/12/2		
Sample Number Sample Sample Segretary Sample Segretary Sample S	Lab Sample Number				461260	461261	461262		
Depth (m) 2.90 3.80 7.20 7.									
Special Spec									
Second Color									
Note	Time Taken								
Months	Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Propose	SVOCs					•			,
Page Page	Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1		
BRIZ entropelly entropy Maries Maries Part	Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2		
13 Definorbemente	2-Chlorophenol	mg/kg		MCERTS					
12. DEINOCROPRION	Bis(2-chloroethyl)ether								
1.4 Discriptopeneries									
BBG2 - Horrorisopromylother	·								
2-Methylahend									}
Heachtroellane marks 0.05 McERTS < 0.05 < 0.05 < 0.05									
Nitrobenonene									
Isospharone	Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
2-Mitrophenol									
24-Directhylphenol	·								
BisQ2-chiroreshoxylmethane	·								
12,4-Trichlorobenzone	71								1
Naphthalene									
24-Dichlorophenol									
Househfordutatione	2 4-Dichlorophenol								
4.Chloro-3-methylphenol mg/kg 0.1 MONE < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.	4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1		
2.4.6-Trichlorophenol mg/kg 0.1 MCERTS < 0.1 < 0.1 < 0.1		mg/kg		MCERTS					
24 S-Trichlorophenol mg/kg 0.2 MCERTS < 0.2 < 0.2 < 0.2	, 1								
2-Methylaphthalene									
2-Chloronaphthalene									
Dimethylphthalate	•								}
Acenaphthylene	·								
Acenaphthene mg/kg 0.1 MCERTS < 0.10 < 0.10 < 0.10 2,4-Dinifrotoluene mg/kg 0.2 MCERTS < 0.2									
2,4-Dinitrotoluene	Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Diberzofuran mg/kg	Acenaphthene	mg/kg	0.1	MCERTS			< 0.10		
A-Chlorophenyl phenyl ether mg/kg 0.3 ISO 17025 < 0.3 < 0.3 < 0.3 < 0.3	2,4-Dinitrotoluene								
Diethyl phthalate									
4-Nitroaniline mg/kg 0.2 MCERTS < 0.2 < 0.2 < 0.2									
Fluorene									
Bromophenyl phenyl ether mg/kg 0.2 MCERTS < 0.2 < 0.2 < 0.2	Fluorene								
Hexachlorobenzene	Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Phenanthrene mg/kg 0.1 MCERTS < 0.10 1.1 < 0.10 < 0.10	Bromophenyl phenyl ether	mg/kg							
Anthracene mg/kg 0.1 MCERTS < 0.10 < 0.10 < 0.10 Carbazole mg/kg 0.3 MCERTS < 0.3									
Carbazole mg/kg 0.3 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.03 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
Dibutyl phthalate									1
Anthraquinone mg/kg 0.3 MCERTS < 0.3 < 0.3 < 0.3 Fluoranthene mg/kg 0.1 MCERTS < 0.10									
Fluoranthene	Anthraguinone								
Butyl benzyl phthalate mg/kg 0.3 ISO 17025 < 0.3 < 0.3 < 0.3 Benzo(a)anthracene mg/kg 0.1 MCERTS < 0.10	Fluoranthene								
Benzo(a)anthracene	Pyrene		0.1		< 0.10		< 0.10	-	
Chrysene mg/kg 0.05 MCERTS < 0.05 < 0.05 < 0.05 Benzo(b)fluoranthene mg/kg 0.1 MCERTS < 0.10	Butyl benzyl phthalate								
Benzo(b)fluoranthene mg/kg 0.1 MCERTS < 0.10 < 0.10 < 0.10 Benzo(k)fluoranthene mg/kg 0.1 MCERTS < 0.10	Benzo(a)anthracene								
Benzo(k)fluoranthene mq/kg 0.1 MCERTS < 0.10 < 0.10 < 0.10 Benzo(a)pyrene mq/kg 0.1 MCERTS < 0.10									
Benzo(a)pyrene mg/kg 0.1 MCERTS < 0.10 < 0.10 < 0.10 Indeno(1,2,3-cd)pyrene mg/kg 0.1 MCERTS < 0.10									
Indeno(1,2,3-cd)pyrene mg/kg 0.1 MCERTS < 0.10 < 0.10 < 0.10 Dibenz(a,h)anthracene mg/kg 0.1 MCERTS < 0.10									
Dibenz(a,h)anthracene mg/kg 0.1 MCERTS < 0.10 < 0.10 < 0.10									
	Dibenz(a,h)anthracene								
	Benzo(ghi)perylene		0.05	MCERTS	< 0.05		< 0.05		





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
461260	BH201	None Supplied	2.90	Light grey sandy clay with gravel and rubble.
461261	BH201	None Supplied	5.80	Light grey sandy clay with rubble.
461262	BH201	None Supplied	7.20	Grey sandy clay with vegetation.





Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification	The analysis was carried out using documented inhouse method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
	<u> </u>			ISS NO TE	p-/465/-T





Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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29/06/2015

Analytical Report Number: 15-74514

Project / Site name: London Paramount Entertainment Samples received on:

Resort

Your job number: 30766 Samples instructed on: 30/06/2015

Your order number: Analysis completed by: 07/07/2015

Report Issue Number: 1 Report issued on: 07/07/2015

Samples Analysed: 1 wac multi sample

Rexona Rahman Reporting Manager

Signed:

For & on behalf of i2 Analytical Ltd.

Signed:

Dr Irma Doyle Assistant Quality Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





i2 Analytical

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email:reception@i2analytical.com

Waste Acceptance Criteria Analytical							
Report No:		15-74514					
						•	
				Client:	GEOENG		
Location	Lone	don Paramount Entertai	nment Resort				
Lab Reference (Sample Number)		460.470		Landfill Waste Acceptance Criteria			
		460473			Limits		
Sampling Date		25/06/2015			Stable Non- reactive		
Sample ID		WS202		Inert Waste	HAZARDOUS	Hazardous	
Depth (m)		2.70	Landfill	waste in non- hazardous Landfill	Waste Landfill		
Solid Waste Analysis					<u> </u>		
TOC (%)**	0.2			3%	5%	6%	
Loss on Ignition (%) **						10%	
BTEX (μg/kg) **	< 10			6000			
Sum of PCBs (mg/kg) ** Minoral Oil (mg/kg)	< 0.30			1 500			
Mineral Oil (mg/kg)	24	 		500			
Total PAH (WAC-17) (mg/kg) pH (units)**	< 1.6			100	>6		
рн (units)*** Acid Neutralisation Capacity (mol / kg)	-				To be evaluated	To be evaluated	
Eluate Analysis	2:1	8:1	Cumulative 10:1		es for compliance le		
(BS EN 12457 - 3 preparation utilising end over end leaching		<u> </u>		using BS EN	N 12457-3 at L/S 10	l/kg (mg/kg)	
procedure)	mg/l	mg/l	mg/kg				
Arsenic *	< 0.010	< 0.010	< 0.050	0.5	2	25	
Barium *	0.36	0.34	3.4	20	100	300	
Cadmium *	< 0.0005	< 0.0005	< 0.0020	0.04	1	5	
Chromium *	0.037	0.017	0.20	0.5	10	70	
Copper *	< 0.0010	< 0.0030	< 0.020	2	50	100	
Mercury *	< 0.0015	< 0.0015	< 0.010	0.01	0.2	2	
Molybdenum *	0.013	0.0057	0.065	0.5	10	30	
Nickel *	< 0.0010	< 0.0010	0.0070	0.4	10	40	
Lead *	< 0.0050	< 0.0050	< 0.020	0.5	10	50	
Antimony *	< 0.0050	< 0.0050	< 0.020	0.06	0.7	5	
Selenium *	< 0.010	< 0.010	< 0.040	0.1 4	0.5 50	7 200	
Zinc * Chloride *	0.0017 27	< 0.0010 7.3	< 0.020 97	800	4000	25000	
Fluoride	1.6	1.5	16	10	150	500	
Sulphate *	280	150	1600	1000	20000	50000	
TDS	3000	1500	17000	4000	60000	100000	
Phenol Index (Monhydric Phenols) *	< 0.13	< 0.13	< 0.50	1	-	-	
DOC	4.3	2.6	28	500	800	1000	
Leach Test Information					1		
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	79						
Moisture (%)	21						
Stage 1							
Volume Eluate L2 (litres)	0.31						
Filtered Eluate VE1 (litres)	0.21					<u> </u>	
		i I	1		1	1	

^{*=} UKAS accredited (liquid eluate analysis only)

*= MCERTS accredited





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
460473	WS202	None Supplied	2.70	Beige loam and sand.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BTEX (Sum of BTEX compounds) in soil	Determination of BTEX in soil by headspace GC- MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Chloride in WAC leachate (BS EN 12457-3 Prep)	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
DOC in WAC leachate (BS EN 12457- 3 Prep)	Determination of dissolved organic carbon in leachate by TOC/DOC NDIR analyser.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L037-PL	W	NONE
Fluoride in WAC leachate (BS EN 12457-3 Prep)	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L033-PL	W	NONE
Metals in WAC leachate (BS EN 12457- 3 Prep)	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	ISO 17025
Mineral Oil in Soil	Determination of dichloromethane/hexane extractable hydrocarbons in soil by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
PCB's by GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
Phenol Index in WAC leachate (BS EN 12457-3 Prep)	Determination of monohydric phenols in leachate by continuous flow analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Seciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate in WAC leachate (BS EN 12457-3 Prep)	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	ISO 17025
TDS in WAC leachate (BS EN 12457-3 Prep)	Determination of total dissolved solids in leachate by electrometric measurement.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L004-PL	W	NONE
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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29/06/2015

Analytical Report Number: 15-74513

Project / Site name: London Paramount Entertainment Samples received on:

Resort

Your job number: 30766 Samples instructed on: 30/06/2015

Your order number: Analysis completed by: 08/07/2015

Report Issue Number: 1 Report issued on: 08/07/2015

Samples Analysed: 14 soil samples

Rexona Rahman Reporting Manager

Signed:

For & on behalf of i2 Analytical Ltd.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

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Lab Sample Number				460459	460460	460461	460462	460463
Sample Reference				WS202	WS202	WS202	WS204	WS204
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.65	3.70	11.70	0.50	1.90
Date Sampled				25/06/2015	25/06/2015	26/06/2015	26/06/2015	29/06/2015
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	1205
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	10	25	40	28	26
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0	2.0	2.0
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
General Inorganics	pH Units	N/A	MCERTS	11.4	12.1	10.5	10.9	11.5
Electrical Conductivity	μS/cm	10	NONE	4400	6800	3200	1300	1600
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO ₄	mg/kg	50	MCERTS	17000	67000	10000	94000	54000
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	2.8	6.3	8.5	5.6	0.14
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	2800	6300	8500	5600	140
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	1.4	3.1	4.3	2.8	0 068
Sulphide	mg/kg	1	MCERTS	3.3	5.2	360	19	20
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	590	240	4200	55	84
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	< 0.5	43	< 0.5	< 0.5
Organic Matter	%	0.1	MCERTS	11	0.2	4.7	0.1	0.2
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	U/S	< 2.0	< 2.0	< 2.0	< 2.0
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20	< 20	< 20	< 20	< 20
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	U/S	< 5.0	< 5.0	< 5.0	< 5.0
Total Phenois		-	MCEDIC	-110				
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0





Lab Sample Number		460459	460460	460461	460462	460463		
Sample Reference				WS202	WS202	WS202	WS204	WS204
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.65	3.70	11.70	0.50	1.90
Date Sampled				25/06/2015	25/06/2015	26/06/2015	26/06/2015	29/06/2015
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	1205
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	3.2	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	2.9	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	MCERTS	0.37	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	0.59	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	0.60	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.59	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	mg/kg	0.05	MCERTS	0.85	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	0.35	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.38	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.35	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.15	< 0.05
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH Total WAC-17 PAHs	mg/kg	1.6	NONE	10	< 1.6	< 1.6	< 1.6	< 1.6
Heavy Metals / Metalloids								
Aluminium (aqua regia extractable)	mg/kg	30	NONE	9000	15000	22000	9100	15000
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	2.2	< 1.0	3.1	< 1.0
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	17	25	22	66	43
Barium (aqua regia extractable)	mg/kg	1	MCERTS	98	70	21	47	35
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.6	0.5	2.0	0.3	0.5
Boron (water soluble)	mg/kg	0.2	MCERTS	3.0	1.8	5.1	1.8	1.8
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.7	3.1	< 0.2	3.5	3.7
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	24	17	38	13	17
Copper (aqua regia extractable)	mg/kg	1	MCERTS	32	18	11	28	14
Iron (aqua regia extractable)	mg/kg	40	MCERTS	16000	14000	60000	18000	13000
Lead (aqua regia extractable)	mg/kg	1	MCERTS	32	66	20	180	130
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	230	190	230	170	160
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	0.4
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	1.8	1.6	0.8	1.1	1.5
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	23	31	46	19	15
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	910	440	730	390	400
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	7.5
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	53	160	75	80	130
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	51	46	88	80	130
Calcium (aqua regia extractable)	mg/kg	20	NONE	230000	440000	43000	330000	450000
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	3100	3900	7200	3400	3500
Potassium (aqua regia extractable)	mg/kg	20	NONE	11000	8700	8000	1300	2000





Lab Sample Number				460459	460460	460461	460462	460463
Sample Reference		WS202	WS202	WS202	WS204	WS204		
Sample Number		None Supplied	None Supplied	None Supplied	None Supplied	None Supplied		
Depth (m)				1.65	3.70	11.70	0.50	1.90
Date Sampled				25/06/2015	25/06/2015	26/06/2015	26/06/2015	29/06/2015
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	1205
Analytical Parameter (Soil Analysis) Accreditation Status Units								
Monoaromatics								
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene μg/kg 1 MCERTS				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	4.8	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	6.5	2.2	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	11	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	30	11	24	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	52	14	24	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	3.9	< 1.0	2.5	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	13	< 2.0	3.4	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	19	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	22	14	13	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	58	14	19	< 10	< 10





Lab Sample Number		460459	460460	460461	460462	460463		
Sample Reference				WS202	WS202	WS202	WS204	WS204
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.65	3.70	11.70	0.50	1.90
Date Sampled				25/06/2015	25/06/2015	26/06/2015	26/06/2015	29/06/2015
Time Taken	1		1	None Supplied	None Supplied	None Supplied	None Supplied	1205
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
VOCs		•	•				•	•
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	μg/kg 	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	μg/kg	1	NONE TCO 1702F	< 1.0 < 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025 ISO 17025	< 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene Toluene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0 < 1.0	< 1.0 < 1.0
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	μg/kg 	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	μg/kg μα/kα	1	MCERTS ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	P9/119	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene 4-Chlorotoluene	μg/kg μg/kg	1	NONE	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
1,3,5-Trimethylbenzene	μg/kg μα/kg	1	NONE ISO 17025	< 1.0 < 1.0	< 1.0	< 1.0 < 1.0	< 1.0	< 1.0 < 1.0
tert-Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1 2 4-Trimethylbenzene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0





Lab Sample Number						460461	460462	460463
Sample Reference				WS202	WS202	WS202	WS204	WS204
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.65	3.70	11.70	0.50	1.90
Date Sampled				25/06/2015	25/06/2015	26/06/2015	26/06/2015	29/06/2015
Time Taken	_			None Supplied	None Supplied	None Supplied	None Supplied	1205
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2 < 0.1	< 0.2 < 0.1	< 0.2 < 0.1	< 0.2 < 0.1	< 0.2 < 0.1
Bis(2-chloroisopropyl)ether 2-Methylphenol	mg/kg mg/kg	0.1	MCERTS MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.5	< 0.05
Nitrobenzene	mg/kg	0.03	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	3.2	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1 < 0.1	< 0.1 < 0.1	< 0.1	< 0.1 < 0.1	< 0.1 < 0.1
4-Chloro-3-methylphenol 2,4,6-Trichlorophenol	mg/kg mg/kg	0.1	NONE MCERTS	< 0.1	< 0.1	< 0.1 < 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.1	< 0.2	< 0.2	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	4.6	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
2 4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	1.5	< 0.2	< 0.2	< 0.2	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Nitroaniline Fluorene	mg/kg mg/kg	0.2	MCERTS MCERTS	< 0.2 < 0.10	< 0.2 < 0.10	< 0.2 < 0.10	< 0.2 < 0.10	< 0.2 < 0.10
Azobenzene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Phenanthrene	mg/kg	0.1	MCERTS	2.9	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	MCERTS	0.37	< 0.10	< 0.10	< 0.10	< 0.10
Carbazole	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Fluoranthene	mg/kg	0.1	MCERTS	0.59	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	0.60	< 0.10	< 0.10	< 0.10	< 0.10
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Benzo(a)anthracene Chrysene	mg/kg	0.1	MCERTS	0.59	< 0.10	< 0.10	< 0.10	< 0.10
Cnrysene Benzo(b)fluoranthene	mg/kg	0.05	MCERTS MCERTS	0.85 0.35	< 0.05 < 0.10	< 0.05 < 0.10	< 0.05 < 0.10	< 0.05 < 0.10
Benzo(k)fluoranthene Benzo(k)fluoranthene	mg/kg mg/kg	0.1	MCERTS	0.38	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.35	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
/2 ::/[-::/:-::-				3.00				,





Lab Sample Number				460464	460465	460466	460467	460468
Sample Reference				WS204	WS204	TP701	TP701	TP702
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.90	7.45	0.50	2.50	1.00
Date Sampled				29/06/2015	29/06/2015	25/06/2015	25/06/2015	25/06/2015
Time Taken				1225	1320	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	18	18	5.9	13	5.2
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0	2.0	2.0
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
General Inorganics pH	pH Units	N/A	MCERTS	12.2	12.1	8.0	7.8	7.9
Electrical Conductivity	μS/cm	10	NONE	26000	33000	410	330	350
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO ₄	mg/kg	50	MCERTS	95000	70000	690	780	750
Water Soluble Sulphate (Soil Equivalent)	q/l	0.0025	MCERTS	19	15	0.077	0.22	0.10
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	19000	15000	77	220	100
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	9.6	7.5	0.039	0.11	0 051
Sulphide	mg/kg	1	MCERTS	26	1.0	< 1.0	< 1.0	< 1.0
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	790	20000	20	38	20
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	4.1	< 0.5	< 0.5	< 0.5
Organic Matter	%	0.1	MCERTS	0.1	0.2	2.1	0.1	0.1
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	8.1	< 2.0
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20	< 20	< 20	< 20	< 20
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	8.1	< 5.0
Total Phenois								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0





Lab Sample Number		460464	460465	460466	460467	460468		
Sample Reference				WS204	WS204	TP701	TP701	TP702
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.90	7.45	0.50	2.50	1.00
Date Sampled				29/06/2015	29/06/2015	25/06/2015	25/06/2015	25/06/2015
Time Taken				1225	1320	None Supplied	None Supplied	None Supplied
Time Taken	1			1223	1320	моне заррнеа	моне заррнеа	тионе заррнеа
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.33	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.30	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.30	< 0.10	< 0.10
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.10	0.10	< 0.10	< 0.05
Benzo(b)fluoranthene	mg/kg	0.03	MCERTS	< 0.10	< 0.10	0.24	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.24	< 0.10	< 0.10
		0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg		MCERTS					
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05 < 0.05	< 0 05 < 0 05	< 0.05 < 0.05
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total DAII								
Total PAH Total WAC-17 PAHs		1.6	NONE	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
TOTAL WAC-17 PARS	mg/kg	1.0	NONE	< 1.0	< 1.6	< 1.6	< 1.0	< 1.0
Heavy Metals / Metalloids								
Aluminium (agua regia extractable)	mg/kg	30	NONE	9000	14000	9000	15000	1800
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	< 1.0	2.1	< 1.0	< 1.0
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	54	19	8.6	7.5	5.5
Barium (aqua regia extractable)	mg/kg	1	MCERTS	25	51	54	52	14
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.2	0.5	0.7	0.8	0.2
Boron (water soluble)	mg/kg	0.2	MCERTS	2.0	2.9	1.3	0.4	0.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	3.0	3.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	13	24	19	23	6.4
Copper (aqua regia extractable)	mg/kg	1	MCERTS	16	12	15	13	3.1
Iron (aqua regia extractable)	mg/kg	40	MCERTS	15000	9700	21000	29000	6300
Lead (aqua regia extractable)	mg/kg	1	MCERTS	120	86	60	8.9	4.1
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	140	170	240	360	69
Mercury (aqua regia extractable)	mg/kg mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Molybdenum (aqua regia extractable)	mg/kg mg/kg	0.3	MCERTS	1.4	< 0.3 4.6	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)		1	MCERTS	1.4	10	< 0.3 15	< 0.3 19	5.5
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	350	360	460	330	130
,	mg/kg							
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	5.6	9.1	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	100	29	33	39	9.6
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	53	51	61	40	13
Calcium (agua ragia aytractable)	man fler	20	NONE	430000	330000	41000	4600	16000
Calcium (aqua regia extractable)	mg/kg		NONE					
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	2900	3500	2700	2800	690
Potassium (aqua regia extractable)	mg/kg	20	NONE	38000	36000	2100	2200	590





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				460464	460465	460466	460467	460468
Sample Reference		WS204	WS204	TP701	TP701	TP702		
Sample Number		None Supplied	None Supplied	None Supplied	None Supplied	None Supplied		
Depth (m)				3.90	7.45	0.50	2.50	1.00
Date Sampled				29/06/2015	29/06/2015	25/06/2015	25/06/2015	25/06/2015
Time Taken				1225	1320	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Monoaromatics								
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
			MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Petroleum Hydrocarbons

1 caroleani ilyarocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	2.6	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	150	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	29	19	2200	14	11
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	29	19	2300	14	11
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	42	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	750	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	790	< 10	< 10





Lab Sample Number		460464	460465	460466	460467	460468		
Sample Reference				WS204	WS204	TP701	TP701	TP702
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.90	7.45	0.50	2.50	1.00
Date Sampled				29/06/2015	29/06/2015	25/06/2015	25/06/2015	25/06/2015
Time Taken				1225	1320	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
VOCs								
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene Toluene	μg/kg μg/kg	1	ISO 17025 MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
1,1,2-Trichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1 2 4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene 1,2-Dibromo-3-chloropropane	μg/kg	1	NONE ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
T ₁ Z ₁ J-111CHIOLODEHZEHE	μg/Kg		INUINE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0





Lab Sample Number				460464	460465	460466	460467	460468
Sample Reference				WS204	WS204	TP701	TP701	TP702
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.90	7.45	0.50	2.50	1.00
Date Sampled				29/06/2015	29/06/2015	25/06/2015	25/06/2015	25/06/2015
Time Taken				1225	1320	None Supplied	None Supplied	None Supplied
			A					
Analytical Parameter	_	Limit of detection	Accreditation Status					
(Soil Analysis)	Units	Limit of detection	ta tid					
(Soli Alialysis)	v	g 약	atic					
			ă					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2 < 0.2	< 0.2 < 0.2	< 0.2 < 0.2	< 0.2 < 0.2	< 0.2 < 0.2
1,3-Dichlorobenzene 1 2-Dichlorobenzene	mg/kg mg/kg	0.2	MCERTS MCERTS	< 0.2	< 0.2	< 0.1	< 0.2	< 0.2
1,4-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.2	< 0.2	< 0.1	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3 < 0.3	< 0.3 < 0.3	< 0.3 < 0.3	< 0.3	< 0.3 < 0.3
1,2,4-Trichlorobenzene Naphthalene	mg/kg mg/kg	0.3	MCERTS MCERTS	< 0.05	< 0.05	< 0.05	< 0.3 < 0.05	< 0.05
2,4-Dichlorophenol	mg/kg	0.03	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1 < 0.10	< 0.1	< 0.1	< 0.1 < 0.10	< 0.1
Acenaphthylene Acenaphthene	mg/kg mg/kg	0.1	MCERTS MCERTS	< 0.10	< 0.10 < 0.10	< 0.10 < 0.10	< 0.10	< 0.10 < 0.10
2 4-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene Dhenanthrope	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Phenanthrene Anthracene	mg/kg	0.1	MCERTS MCERTS	< 0.10 < 0.10	< 0.10 < 0.10	< 0.10 < 0.10	< 0.10 < 0.10	< 0.10 < 0.10
Anthracene Carbazole	mg/kg mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.33	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.30	< 0.10	< 0.10
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.18	< 0.10	< 0.10
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.27	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.24	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.25	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS MCERTS	< 0.10 < 0.10	< 0.10 < 0.10	< 0.10 < 0.10	< 0.10 < 0.10	< 0.10 < 0.10
Benzo(ghi)perylene	mg/kg mg/kg	0.05	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
penzo(gni)pei yiene	mg/kg	0.03	PICERIO	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03





Lab Sample Number				460469	460470	460471	460472	
Sample Reference				TP702	TP702	BH203	BH203	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				1.50	2.00	2.00	4.00	
Date Sampled				25/06/2015	25/06/2015	25/06/2015	25/06/2015	
Time Taken		None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Moisture Content	%	N/A	NONE	13	11	17	38	
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0	2.0	
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	
General Inorganics	pH Units	N/A	MCERTS	7.5	7.6	8.4	7.5	
Electrical Conductivity	μS/cm	10	NONE	700	180	2600	1300	
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	
Complex Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	
Free Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	
Total Sulphate as SO ₄	mg/kg	50	MCERTS	1100	420	15000	9700	
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	0.53	0.15	2.3	2.6	
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	530	150	2300	2600	
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	0.26	0.077	1.2	1.3	
Sulphide	mg/kg	1	MCERTS	8.2	< 1.0	6.2	10	
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	13	31	53	67	
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	31	< 0.5	2.6	46	
Organic Matter	%	0.1	MCERTS	1.2	0.3	2.6	4.5	
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	5.4	< 2.0	< 2.0	
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20	< 20	< 20	< 20	
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0	5.4	< 5.0	< 5.0	
Total Phenols Total Phenols (monohydric)	malks	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
тотаі міеноїѕ (тіопопуціїс)	mg/kg	1 1	MCERIS	< 1.0	< 1.0	< 1.0	< 1.0	





Lab Sample Number			460469	460470	460471	460472		
Sample Reference				TP702	TP702	BH203	BH203	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				1.50	2.00	2.00	4.00	
Date Sampled				25/06/2015	25/06/2015	25/06/2015	25/06/2015	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
			A					
Annalist and Branco at an	_	Limit of detection	Accreditation Status					
Analytical Parameter	Units	ie mi	tat edi:					
(Soil Analysis)	Ċ.	Limit of detection	us lati					
		-	9					
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.54	< 0.05	
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
Phenanthrene	mg/kg	0.1	MCERTS	0.21	< 0.10	1.1	< 0.10	
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.13	< 0.10	
Fluoranthene	mg/kg	0.1	MCERTS	0.71	< 0.10	0.96	< 0.10	
Pyrene	mg/kg	0.1	MCERTS	0.64	< 0.10	0.86	< 0.10	
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.36	< 0.10	0.46	< 0.10	
Chrysene	mg/kg	0.05	MCERTS	0.47	< 0.05	0.65	< 0.05	
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	0.31	< 0.10	0.40	< 0.10	
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.27	< 0.10	0.32	< 0.10	
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.28	< 0.10	0.30	< 0.10	
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	3.3	< 1.6	5.7	< 1.6	
Heavy Metals / Metalloids								
Aluminium (aqua regia extractable)	mg/kg	30	NONE	9600	9800	9400	15000	
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	1.0	6.3	< 1.0	
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	5.3	7.6	22	26	
Barium (aqua regia extractable)	mg/kg	1	MCERTS	45	49	130	29	
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.7	0.8	0.8	0.8	
Boron (water soluble)	mg/kg	0.2	MCERTS	1.3	0.5	4.8	5.0	
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	0.3	< 0.2	
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	20	19	49	33	
Copper (aqua regia extractable)	mg/kg	1	MCERTS	19	11	60	14	
Iron (aqua regia extractable)	mg/kg	40	MCERTS	21000	21000	22000	45000	
Lead (aqua regia extractable)	mg/kg	1	MCERTS	28	14	90	18	
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	280	460	280	99	
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.5	< 0.3	2.1	0.8	
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	17	15	29	19	
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	460	300	490	710	
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.2	< 1.0	< 1.0	< 1.0	
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	33	34	41	68	
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	49	36	100	47	
Calaires (anno maria este la la)		20	NONE	F4000	5500	240000	11000	
Calcium (aqua regia extractable)	mg/kg	20	NONE	54000	5500	240000	11000	
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	3500	1900	2500	4700	
Potassium (aqua regia extractable)	mg/kg	20	NONE	3000	1700	2900	5800	





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				460469	460470	460471	460472	
Sample Reference	TP702	TP702	BH203	BH203				
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				1.50	2.00	2.00	4.00	
Date Sampled				25/06/2015	25/06/2015	25/06/2015	25/06/2015	
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Monoaromatics								
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
o-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	

Petroleum Hydrocarbons

Petroleum nydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	2.0	< 2.0	< 2.0	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	14	< 8.0	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	41	9.1	110	18	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	41	11	130	18	
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	1.0	< 1.0	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	11	< 10	50	< 10	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	11	< 10	51	< 10	





Lab Sample Number				460469	460470	460471	460472	
Sample Reference				TP702	TP702	BH203	BH203	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				1.50	2.00	2.00	4.00	
Date Sampled				25/06/2015	25/06/2015	25/06/2015	25/06/2015	
Time Taken	1	1		None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
VOCs								
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Chloroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromomethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
1,1-Dichloroethane 2,2-Dichloropropane	μg/kg μg/kg	1	MCERTS NONE	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
Trichloromethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,1-Trichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloropropane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Trichloroethene	μg/kg 	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Dibromomethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Bromodichloromethane Cis-1,3-dichloropropene	μg/kg μg/kg	1	NONE ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
Trans-1,3-dichloropropene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Dibromochloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tetrachloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Chlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-Xylene Styrene	μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
Tribromomethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
o-Xylene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Isopropylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
Bromobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
2-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
4-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
1,3,5-Trimethylbenzene	μg/kg 	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
tert-Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
1 2 4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
sec-Butylbenzene 1,3-Dichlorobenzene	μg/kg μg/kg	1	NONE ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
p-Isopropyltoluene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichlorobenzene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1 4-Dichlorobenzene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dibromo-3-chloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	





Lab Sample Number				460469	460470	460471	460472	
Sample Reference				TP702	TP702	BH203	BH203	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				1.50	2.00	2.00	4.00	
Date Sampled				25/06/2015	25/06/2015	25/06/2015	25/06/2015	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
			A					
Annalist and Branco at an	_	de Li	Accreditation Status					
Analytical Parameter	Units	Limit of detection	creditat Status					
(Soil Analysis)	S.	Limit of detection	us					
		_	9					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	
1 2-Dichlorobenzene 1,4-Dichlorobenzene	mg/kg	0.1	MCERTS MCERTS	< 0.1 < 0.2	< 0.1 < 0.2	< 0.1 < 0.2	< 0.1 < 0.2	
Bis(2-chloroisopropyl)ether	mg/kg mg/kg	0.2	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	
Naphthalene 2,4-Dichlorophenol	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.54	< 0.05	
4-Chloroaniline	mg/kg mg/kg	0.3	MCERTS NONE	< 0.3 < 0.1	< 0.3 < 0.1	< 0.3 < 0.1	< 0.3 < 0.1	
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1	0.5	< 0.1	
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
2 4-Dinitrotoluene Dibenzofuran	mg/kg mg/kg	0.2	MCERTS MCERTS	< 0.2 < 0.2	< 0.2 < 0.2	< 0.2 0.2	< 0.2 < 0.2	
4-Chlorophenyl phenyl ether	mg/kg	0.2	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	
Phenanthrene	mg/kg	0.1	MCERTS	0.21	< 0.10	1.1	< 0.10	
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.13	< 0.10	
Carbazole	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	
Dibutyl phthalate Anthraquinone	mg/kg	0.2	MCERTS MCERTS	< 0.2 < 0.3	< 0.2 < 0.3	< 0.2 < 0.3	< 0.2 < 0.3	
Fluoranthene	mg/kg mg/kg	0.3	MCERTS	0.71	< 0.10	0.96	< 0.10	
Pyrene	mg/kg	0.1	MCERTS	0.64	< 0.10	0.86	< 0.10	
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.36	< 0.10	0.46	< 0.10	
Chrysene	mg/kg	0.05	MCERTS	0.47	< 0.05	0.65	< 0.05	
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	0.31	< 0.10	0.40	< 0.10	
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.27	< 0.10	0.32	< 0.10	
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.28	< 0.10	0.30	< 0.10	
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
460459	WS202	None Supplied	1 65	Black loam and sand with gravel.
460460	WS202	None Supplied	3.70	Beige clay and sand.
460461	WS202	None Supplied	11.70	Grey clay and sand.
460462	WS204	None Supplied	0 50	Beige sandy loam.
460463	WS204	None Supplied	1.90	Beige sandy loam.
460464	WS204	None Supplied	3.90	Beige sandy loam.
460465	WS204	None Supplied	7.45	Beige clay and sand.
460466	TP701	None Supplied	0 50	Light brown loam and sand with gravel and vegetation.
460467	TP701	None Supplied	2 50	Brown loam and clay with gravel.
460468	TP702	None Supplied	1 00	Light brown clay and sand with vegetation.
460469	TP702	None Supplied	1 50	Brown loam and clay with gravel.
460470	TP702	None Supplied	2 00	Brown sandy loam.
460471	BH203	None Supplied	2 00	Grey loam and clay with gravel and chalk.
460472	BH203	None Supplied	4 00	Brown loam and clay.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





Emma Leivers

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Preliminary Report Number: 15-74513

Project / Site name: London Paramount Entertainment Samples received on: 29/06/2015

Resort

Your job number: 30766 Samples instructed on: 30/06/2015

Your order number: Analysis completed by: Not complete

Report Issue Number: 0 Report issued on: 07/07/2015

Samples Analysed: 14 soil samples



Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are : soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Preliminary reports provided at the request of the client should be considered as incomplete and have not been through the complete quality control procedure.

Results contained in preliminary reports may be subject to change and therefore should not be used as a basis for decision making, except at the risk of the client.





Lab Sample Number	Sample Number					460461	460462	460463
Sample Reference				460459 WS202	460460 WS202	WS202	WS204	WS204
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.65	3.70	11.70	0.50	1.90
Date Sampled				25/06/2015	25/06/2015	26/06/2015	26/06/2015	29/06/2015
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	1205
			b	Trone Supplied	Hone Supplied	ттопе варрнеа	Horic Supplied	1200
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	10	25	40	28	26
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0	2.0	2.0
				•				
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
General Inorganics								
pH	pH Units	N/A	MCERTS	11.4	12.1	10.5	10.9	11.5
Electrical Conductivity	μS/cm	10	NONE	4400	6800	3200	1300	1600
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO ₄	mg/kg	50	MCERTS	17000	67000	10000	94000	54000
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	2.8	6.3	8.5	5.6	0.14
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	2800	6300	8500	5600	140
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	1.4	3.1	4.3	2.8	0 068
Sulphide	mg/kg	1	MCERTS	3.3	5.2	360	19	20
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	590	240	4200	55	84
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	< 0.5	43	< 0.5	< 0.5
Organic Matter	// // // // // // // // // // // // //	0.1	MCERTS	11	0.2	4.7	0.1	0.2
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	U/S	< 2.0	< 2.0	< 2.0	< 2.0
Water Soluble Nitrite (2:1) as N	µg/kg	20	NONE	< 20	< 20	< 20	< 20	< 20
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	U/S	< 5.0	< 5.0	< 5.0	< 5.0
Total Oxidised Nidogen (TON)	mg/kg		NONL	0/3	< 5.0	< 3.0	< 3.0	V 3.0
Total Phenois			MOEDES	. 1.0	. 1.0	.10	1 .10	
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	3.2	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	2.9	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	MCERTS	0.37	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	0.59	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	0.60	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.59	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	mg/kg	0.05	MCERTS	0.85	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	0.35	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.38	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.35	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	10	< 1.6	< 1.6	< 1.6	< 1.6
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Project / Site name: London Paramount Entertainment Resort

Lab Sample Number						460461	460462	460463
Sample Reference				WS202	WS202	WS202	WS204	WS204
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.65	3.70	11.70	0.50	1.90
Date Sampled				25/06/2015	25/06/2015	26/06/2015	26/06/2015	29/06/2015
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	1205
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Aluminium (aqua regia extractable)	mg/kg	30	NONE	9000	15000	22000	9100	15000
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	2.2	< 1.0	3.1	< 1.0
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	17	25	22	66	43
Barium (aqua regia extractable)	mg/kg	1	MCERTS	98	70	21	47	35
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.6	0.5	2.0	0.3	0.5
Boron (water soluble)	mg/kg	0.2	MCERTS	3.0	1.8	5.1	1.8	1.8
Cadmium (agua regia extractable)	mg/kg	0.2	MCERTS	0.7	3.1	< 0.2	3.5	3.7
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	24	17	38	13	17
Copper (aqua regia extractable)	mg/kg	1	MCERTS	32	18	11	28	14
Iron (aqua regia extractable)	mg/kg	40	MCERTS	16000	14000	60000	18000	13000
Lead (aqua regia extractable)	mg/kg	1	MCERTS	32	66	20	180	130
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	230	190	230	170	160
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	0.4
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	1.8	1.6	0.8	1.1	1.5
Nickel (agua regia extractable)	mg/kg	1	MCERTS	23	31	46	19	15
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	910	440	730	390	400
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	7.5
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	53	160	75	80	130
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	51	46	88	80	130
Calcium (aqua regia extractable)	mg/kg	20	NONE	230000	440000	43000	330000	450000
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	3100	3900	7200	3400	3500
Potassium (aqua regia extractable)	mg/kg	20	NONE	11000	8700	8000	1300	2000
Monoaromatics								
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	To follow	To follow	To follow	To follow	To follow
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	To follow	To follow	To follow	To follow	To follow
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	To follow	To follow	To follow	To follow	To follow
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	To follow	To follow	To follow	To follow	To follow
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	To follow	To follow	To follow	To follow	To follow
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	To follow	To follow	To follow	To follow	To follow
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	To follow	To follow	To follow	To follow	To follow
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	To follow	To follow	To follow	To follow	To follow
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	To follow	To follow	To follow	To follow	To follow
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	To follow	To follow	To follow	To follow	To follow





Lab Sample Number		460459	460460	460461	460462	460463		
Sample Reference				WS202	WS202	WS202	WS204	WS204
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.65	3.70	11.70	0.50	1.90
Date Sampled				25/06/2015	25/06/2015	26/06/2015	26/06/2015	29/06/2015
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	1205
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
VOCs								
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	μg/kg "	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	μg/kg "	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane Cis-1,2-dichloroethene	μg/kg	1	ISO 17025	< 1.0 < 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
1,1-Dichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane Bromodichloromethane	μg/kg	1	MCERTS NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
Toluene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene Tribromomethane	μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
o-Xylene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	μg/kg "	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1 2 4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	μg/kg	1	NONE TCO 1702F	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene p-Isopropyltoluene	μg/kg	1	ISO 17025 ISO 17025	< 1.0	< 1.0	< 1.0 < 1.0	< 1.0	< 1.0 < 1.0
1,2-Dichlorobenzene	μg/kg μg/kg	1	MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0	< 1.0 < 1.0	< 1.0
1 4-Dichlorobenzene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0





Lab Sample Number		460459	460460	460461	460462	460463		
Sample Reference				WS202	WS202	WS202	WS204	WS204
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.65	3.70	11.70	0.50	1.90
Date Sampled				25/06/2015	25/06/2015	26/06/2015	26/06/2015	29/06/2015
Time Taken	_			None Supplied	None Supplied	None Supplied	None Supplied	1205
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2 < 0.1	< 0.2 < 0.1	< 0.2 < 0.1	< 0.2 < 0.1	< 0.2 < 0.1
Bis(2-chloroisopropyl)ether 2-Methylphenol	mg/kg mg/kg	0.1	MCERTS MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.5	< 0.05
Nitrobenzene	mg/kg	0.03	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	3.2	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1 < 0.1	< 0.1 < 0.1	< 0.1	< 0.1 < 0.1	< 0.1 < 0.1
4-Chloro-3-methylphenol 2,4,6-Trichlorophenol	mg/kg mg/kg	0.1	NONE MCERTS	< 0.1	< 0.1	< 0.1 < 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	4.6	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
2 4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	1.5	< 0.2	< 0.2	< 0.2	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Nitroaniline Fluorene	mg/kg mg/kg	0.2	MCERTS MCERTS	< 0.2 < 0.10	< 0.2 < 0.10	< 0.2 < 0.10	< 0.2 < 0.10	< 0.2 < 0.10
Azobenzene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Phenanthrene	mg/kg	0.1	MCERTS	2.9	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	MCERTS	0.37	< 0.10	< 0.10	< 0.10	< 0.10
Carbazole	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Fluoranthene	mg/kg	0.1	MCERTS	0.59	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	0.60	< 0.10	< 0.10	< 0.10	< 0.10
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Benzo(a)anthracene Chrysene	mg/kg	0.1	MCERTS	0.59	< 0.10	< 0.10	< 0.10	< 0.10
Cnrysene Benzo(b)fluoranthene	mg/kg	0.05	MCERTS MCERTS	0.85 0.35	< 0.05 < 0.10	< 0.05 < 0.10	< 0.05 < 0.10	< 0.05 < 0.10
Benzo(k)fluoranthene Benzo(k)fluoranthene	mg/kg mg/kg	0.1	MCERTS	0.38	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.35	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
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Lab Sample Number		460464	460465	460466	460467	460468		
Sample Reference				WS204	WS204	TP701	TP701	TP702
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.90	7.45	0.50	2.50	1.00
Date Sampled				29/06/2015	29/06/2015	25/06/2015	25/06/2015	25/06/2015
Time Taken				1225	1320	None Supplied	None Supplied	None Supplied
				1220	1520	Tronc Supplied	Horic Supplied	ттопе варрнеа
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	18	18	5.9	13	5.2
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0	2.0	2.0
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
General Inorganics								<u> </u>
pH	pH Units	N/A	MCERTS	12.2	12.1	8.0	7.8	7.9
Electrical Conductivity	μS/cm	10	NONE	26000	33000	410	330	350
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO ₄	mg/kg	50	MCERTS	95000	70000	690	780	750
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	19	15	0.077	0.22	0.10
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	19000	15000	77	220	100
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	9.6	7.5	0.039	0.11	0 051
Sulphide	mg/kg	1	MCERTS	26	1.0	< 1.0	< 1.0	< 1.0
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	790	20000	20	38	20
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	4.1	< 0.5	< 0.5	< 0.5
Organic Matter	%	0.1	MCERTS	0.1	0.2	2.1	0.1	0.1
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	8.1	< 2.0
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20	< 20	< 20	< 20	< 20
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	8.1	< 5.0
Total Phenois								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.33	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.30	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.18	< 0.10	< 0.10
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.27	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.24	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.25	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
	פיי ופיי			. 3.00	3.00	3.00		3.00
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
<u> </u>	- J. J			-	-	-		





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				460464	460465	460466	460467	460468
Sample Reference				WS204	WS204	TP701	TP701	TP702
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.90	7.45	0.50	2.50	1.00
Date Sampled				29/06/2015	29/06/2015	25/06/2015	25/06/2015	25/06/2015
Time Taken				1225	1320	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Aluminium (aqua regia extractable)	mg/kg	30	NONE	9000	14000	9000	15000	1800
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	< 1.0	2.1	< 1.0	< 1.0
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	54	19	8.6	7.5	5.5
Barium (aqua regia extractable)	mg/kg	1	MCERTS	25	51	54	52	14
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.2	0.5	0.7	0.8	0.2
Boron (water soluble)	mg/kg	0.2	MCERTS	2.0	2.9	1.3	0.4	0.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	3.0	3.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	13	24	19	23	6.4
Copper (aqua regia extractable)	mg/kg	1	MCERTS	16	12	15	13	3.1
Iron (aqua regia extractable)	mg/kg	40	MCERTS	15000	9700	21000	29000	6300
Lead (aqua regia extractable)	mg/kg	1	MCERTS	120	86	60	8.9	4.1
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	140	170	240	360	69
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	1.4	4.6	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	19	10	15	19	5.5
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	350	360	460	330	130
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	5.6	9.1	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	100	29	33	39	9.6
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	53	51	61	40	13
Calcium (aqua regia extractable)	mg/kg	20	NONE	430000	330000	41000	4600	16000
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	2900	3500	2700	2800	690
Potassium (aqua regia extractable)	mg/kg	20	NONE	38000	36000	2100	2200	590
Monoaromatics								
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	To follow	To follow	To follow	To follow	To follow
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	To follow	To follow	To follow	To follow	To follow
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	To follow	To follow	To follow	To follow	To follow
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	To follow	To follow	To follow	To follow	To follow
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	To follow	To follow	To follow	To follow	To follow
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	To follow	To follow	To follow	To follow	To follow
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	To follow	To follow	To follow	To follow	To follow
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	To follow	To follow	To follow	To follow	To follow
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	To follow	To follow	To follow	To follow	To follow
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	To follow	To follow	To follow	To follow	To follow





Lab Sample Number		460464	460465	460466	460467	460468		
Sample Reference				WS204	WS204	TP701	TP701	TP702
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.90	7.45	0.50	2.50	1.00
Date Sampled				29/06/2015	29/06/2015	25/06/2015	25/06/2015	25/06/2015
Time Taken				1225	1320	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
VOCs								
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene Toluene	μg/kg μg/kg	1 1	ISO 17025 MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1 2 4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	μg/kg	1	NONE TCO 1702E	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene 1.2-Dichlorobenzene	μg/kg	1	ISO 17025 MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0	< 1.0
1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0 < 1.0	< 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
Butylbenzene	μg/kg	1	NONE	< 1.0		< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	μg/kg μg/kg	1	ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
1,2,4-Trichlorobenzene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1/2/3GIIOTODGIILGIIG	₽9/ N9		HONE	· 1.0	` 1.0	` 1.0	` 1.0	7 110





b Sample Number				460464	460465	460466	460467	460468
Sample Reference				WS204	WS204	TP701	TP701	TP702
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.90	7.45	0.50	2.50	1.00
Date Sampled				29/06/2015	29/06/2015	25/06/2015	25/06/2015	25/06/2015
Time Taken				1225	1320	None Supplied	None Supplied	None Supplied
			A					
Analytical Parameter	_	Limit of detection	Accreditation Status					
(Soil Analysis)	Units	Limit of detection	ta tid					
(Soli Alialysis)	v	g 약	atic					
			ă					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2 < 0.2	< 0.2 < 0.2	< 0.2 < 0.2	< 0.2 < 0.2	< 0.2 < 0.2
1,3-Dichlorobenzene 1 2-Dichlorobenzene	mg/kg mg/kg	0.2	MCERTS MCERTS	< 0.2	< 0.2	< 0.1	< 0.2	< 0.2
1,4-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.2	< 0.2	< 0.2	< 0.1	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3 < 0.3	< 0.3 < 0.3	< 0.3 < 0.3	< 0.3	< 0.3 < 0.3
1,2,4-Trichlorobenzene Naphthalene	mg/kg mg/kg	0.3	MCERTS MCERTS	< 0.05	< 0.05	< 0.05	< 0.3 < 0.05	< 0.05
2,4-Dichlorophenol	mg/kg	0.03	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1 < 0.10	< 0.1	< 0.1	< 0.1 < 0.10	< 0.1
Acenaphthylene Acenaphthene	mg/kg mg/kg	0.1	MCERTS MCERTS	< 0.10	< 0.10 < 0.10	< 0.10 < 0.10	< 0.10	< 0.10 < 0.10
2 4-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene Dhenanthrope	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Phenanthrene Anthracene	mg/kg	0.1	MCERTS MCERTS	< 0.10 < 0.10	< 0.10 < 0.10	< 0.10 < 0.10	< 0.10 < 0.10	< 0.10 < 0.10
Anthracene Carbazole	mg/kg mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.33	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.30	< 0.10	< 0.10
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.18	< 0.10	< 0.10
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.27	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.24	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.25	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS MCERTS	< 0.10 < 0.10	< 0.10 < 0.10	< 0.10 < 0.10	< 0.10 < 0.10	< 0.10 < 0.10
Benzo(ghi)perylene	mg/kg mg/kg	0.05	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
penzo(gni)pei yiene	mg/kg	0.03	PICERIO	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03





Lab Sample Number		460469	460470	460471	460472			
Sample Reference				TP702	TP702	BH203	BH203	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				1.50	2.00	2.00	4.00	
Date Sampled				25/06/2015	25/06/2015	25/06/2015	25/06/2015	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
			× .	None Supplied	Hone Supplied	None Supplied	Hone Supplied	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Moisture Content	%	N/A	NONE	13	11	17	38	
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0	2.0	
Asbestos in Soil	Timo	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	
ASDESIOS III 30II	Туре	IN/A	130 17023	Not-detected	Not-detected	Not-detected	Not-detected	
General Inorganics								
pH	pH Units	N/A	MCERTS	7.5	7.6	8.4	7.5	
Electrical Conductivity	μS/cm	10	NONE	700	180	2600	1300	
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	
Complex Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	
Free Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	
Total Sulphate as SO ₄	mg/kg	50	MCERTS	1100	420	15000	9700	
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	0.53	0.15	2.3	2.6	
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	530	150	2300	2600	
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	0.26	0.077	1.2	1.3	
Sulphide	mg/kg	1	MCERTS	8.2	< 1.0	6.2	10	
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	13	31	53	67	
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	31	< 0.5	2.6	46	
Organic Matter	%	0.1	MCERTS	1.2	0.3	2.6	4.5	
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	5.4	< 2.0	< 2.0	
Water Soluble Nitrite (2:1) as N	μg/kg "	20	NONE	< 20	< 20	< 20	< 20	
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0	5.4	< 5.0	< 5.0	
Total Phenois								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.54	< 0.05	
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
Phenanthrene	mg/kg	0.1	MCERTS	0.21	< 0.10	1.1	< 0.10	
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.13	< 0.10	
Fluoranthene	mg/kg	0.1	MCERTS	0.71	< 0.10	0.96	< 0.10	
Pyrene	mg/kg	0.1	MCERTS	0.64	< 0.10	0.86	< 0.10	
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.36	< 0.10	0.46	< 0.10	
Chrysene	mg/kg	0.05	MCERTS	0.47	< 0.05	0.65	< 0.05	
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	0.31	< 0.10	0.40	< 0.10	
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.27	< 0.10	0.32	< 0.10	
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.28	< 0.10	0.30	< 0.10	
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Total DAH								
Total PAH Total WAC-17 PAHs	malka	1.6	NONE	3.3	< 1.6	5.7	< 1.6	
TOTAL WAC-17 FALIS	mg/kg	1.0	INUINE	ر.ر	V 1.0	J./	< 1.0	





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				460469	460470	460471	460472	
Sample Reference				TP702	TP702	BH203	BH203	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				1.50	2.00	2.00	4.00	
Date Sampled				25/06/2015	25/06/2015	25/06/2015	25/06/2015	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Aluminium (aqua regia extractable)	mg/kg	30	NONE	9600	9800	9400	15000	
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	1.0	6.3	< 1.0	
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	5.3	7.6	22	26	
Barium (aqua regia extractable)	mg/kg	1	MCERTS	45	49	130	29	
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.7	0.8	0.8	0.8	
Boron (water soluble)	mg/kg	0.2	MCERTS	1.3	0.5	4.8	5.0	
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	0.3	< 0.2	
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	20	19	49	33	
Copper (aqua regia extractable)	mg/kg	1	MCERTS	19	11	60	14	
Iron (aqua regia extractable)	mg/kg	40	MCERTS	21000	21000	22000	45000	
Lead (aqua regia extractable)	mg/kg	1	MCERTS	28	14	90	18	
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	280	460	280	99	
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.5	< 0.3	2.1	0.8	
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	17	15	29	19	
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	460	300	490	710	
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.2	< 1.0	< 1.0	< 1.0	
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	33	34	41	68	
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	49	36	100	47	
Calcium (agua regia extractable)	mg/kg	20	NONE	54000	5500	240000	11000	
Magnesium (agua regia extractable)	mg/kg	20	ISO 17025	3500	1900	2500	4700	
Potassium (aqua regia extractable)	mg/kg	20	NONE	3000	1700	2900	5800	
Monoaromatics								
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
o-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	To follow	To follow	To follow	To follow	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	To follow	To follow	To follow	To follow	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	To follow	To follow	To follow	To follow	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	To follow	To follow	To follow	To follow	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	To follow	To follow	To follow	To follow	
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC7 - EC8 TPH-CWG - Aromatic >EC8 - EC10	mg/kg mg/kg	0.1	MCERTS MCERTS	< 0.1 < 0.1		< 0.1 < 0.1	< 0.1 < 0.1	
	<u> </u>				< 0.1	-		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg		MCERTS	< 0.1	< 0.1 < 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC8 - EC10 TPH-CWG - Aromatic >EC10 - EC12	mg/kg mg/kg		MCERTS MCERTS	< 0.1 To follow	< 0.1 < 0.1 To follow	< 0.1 To follow	< 0.1 To follow	
TPH-CWG - Aromatic >EC8 - EC10 TPH-CWG - Aromatic >EC10 - EC12 TPH-CWG - Aromatic >EC12 - EC16	mg/kg mg/kg mg/kg	0.1 1 2	MCERTS MCERTS MCERTS	< 0.1 To follow To follow	< 0.1 < 0.1 To follow To follow	< 0.1 To follow To follow	< 0.1 To follow To follow	





Lab Sample Number				460469	460470	460471	460472	
Sample Reference				TP702	TP702	BH203	BH203	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				1.50	2.00	2.00	4.00	
Date Sampled				25/06/2015	25/06/2015	25/06/2015	25/06/2015	
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
VOCs								
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Chloroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromomethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether) 1,1-Dichloroethane	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
2,2-Dichloropropane	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
Z,Z-Dichloropropane Trichloromethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,1-Trichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloropropane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Trichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Dibromomethane Bromodichloromethane	μg/kg μg/kg	1	MCERTS NONE	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trans-1,3-dichloropropene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Dibromochloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tetrachloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Chlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene p & m-Xylene	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
Styrene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Tribromomethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
o-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Isopropylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
Bromobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
2-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
4-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
1,3,5-Trimethylbenzene tert-Butylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0 < 1.0	< 1.0	
1 2 4-Trimethylbenzene	μg/kg μg/kg	1	NONE ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
sec-Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichlorobenzene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dibromo-3-chloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	





Sample Reference					160160	160 170	460.474	160 173	
None Suppled None	Lab Sample Number				460469	460470	460471	460472	
Depth (m)						None Supplied			
Decision Property	•								
None Supplied None Supplie	-T- ()								
Analytical Parameter							_ ' '		
Note	Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Andine mg/hg 0,1 NONE < 0,1 < 0,1 < 0,1 < 0,1 < 0,1	SVOCs								
Piles	Aniline	ma/ka	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
BRG2 - Life control problems	Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	
1,3 Dictriorbetrezene	2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
12-Dictoropeneme	Bis(2-chloroethyl)ether								
J.4-Dichtorbenzene									
Bisi2-2-th/orisopropylether		5. 5							
2-Methylphenol mg/lag 0.3 McRETS < 0.3 < 0.3 < 0.3 < 0.3	7								
Hearthriorestane									
Nitrobensene									
Hethylphenol	Nitrobenzene								
	4-Methylphenol	5. 5							
2,4-Dimethylphenol	Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	
BisQ2-chloroethoxy)methane	2-Nitrophenol	mg/kg							
12,4-FTrichlorobenzene									
Naphthalene									
2,4-Dichlorophenol	7.7								
AChioroaniline									
Hexachforobutadiene									
AChioro-3-methylphenol									
2.4,6-Trichlorophenol									
2-Methylnaphthalene	2,4,6-Trichlorophenol		0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
2-Chioroaphthalene	2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	
Dimethylphthalate		mg/kg		NONE					
Acenaphthylene									
Acenaphthylene mg/kg 0.1 MCERTS < 0.10 < 0.10 < 0.10 < 0.10 Acenaphthene mg/kg 0.1 MCERTS < 0.10	, .								
Acenaphthene mg/kg 0.1 MCERTS < 0.10 < 0.10 < 0.10 < 0.10 2 4-Dinitrotoluene mg/kg 0.2 MCERTS < 0.2	,								
2.4 Dinitrotoluene									
Diberzofuran mg/kg 0.2 MCERTS < 0.2 < 0.2 < 0.2 < 0.2 < 0.2									
A-Chlorophenyl phenyl ether									
4-Nitroaniline mg/kg 0.2 MCERTS < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 Fluorene mg/kg 0.1 MCERTS < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 Acobenzene mg/kg 0.3 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 Bromophenyl phenyl ether mg/kg 0.2 MCERTS < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 Hexachlorobenzene mg/kg 0.3 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 Phenanthrene mg/kg 0.3 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 Phenanthrene mg/kg 0.1 MCERTS 0.21 < 0.10 1.1 < 0.10 Anthracene mg/kg 0.1 MCERTS < 0.10 < 0.10 0.13 < 0.10 Carbazole mg/kg 0.3 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 Dibutyl phthalate mg/kg 0.2 MCERTS < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 Anthraquinone mg/kg 0.3 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 Dibutyl phthalate mg/kg 0.1 MCERTS < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 Anthraquinone mg/kg 0.3 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 Dibutyl phthalate mg/kg 0.3 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 Dibutyl phthalate mg/kg 0.1 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 Dibutyl phthalate mg/kg 0.1 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 Dibutyl phthalate mg/kg 0.1 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 Dibutyl phthalate mg/kg 0.1 MCERTS 0.3 < 0.3 < 0.3 < 0.3 < 0.3 Dibutyl phthalate mg/kg 0.1 MCERTS 0.44 < 0.10 0.96 < 0.10 Dibutyl phthalate mg/kg 0.1 MCERTS 0.36 < 0.10 0.46 < 0.10 Dibutyl phthalate mg/kg 0.1 MCERTS 0.31 < 0.30 < 0.3 < 0.3 Dibutyl phthalate mg/kg 0.1 MCERTS 0.36 < 0.10 0.46 < 0.10 Dibutyl phthalate mg/kg 0.1 MCERTS 0.31 < 0.30 < 0.3 < 0.3 < 0.3 Dibutyl phthalate mg/kg 0.1 MCERTS 0.36 < 0.10 0.46 < 0.10 Dibutyl phthalate mg/kg 0.1 MCERTS 0.37 < 0.10 0.40 < 0.10 Dibutyl phthalate mg/kg 0.1 MCERTS 0.27 < 0.10 0.30 < 0.10 Dibutyl phthalate mg/kg 0.1 MCERTS 0.27 < 0.10 0.30 < 0.10 Dibutyl phthalate mg/kg 0.1 MCERTS 0.28 < 0.10 0.30 < 0.10 Dibutyl phthalate mg/kg 0.1 MCERTS 0.28 < 0.10 0.30 < 0.10 Dibutyl phthalate mg/kg 0.1 MCERTS 0.27 < 0.10 0.30 < 0.10 Dibutyl phthalate mg/kg 0.1 MCERTS 0.28 < 0.10 0.30 < 0.10 Dibutyl phthalate mg/kg 0.1 MCERTS 0.29 < 0.20 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	4-Chlorophenyl phenyl ether								
Fluorene	Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	
Azobenzene mg/kg 0.3 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 Bromophenyl phenyl ether mg/kg 0.2 MCERTS < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 Hexachlorobenzene mg/kg 0.3 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 Phenanthrene mg/kg 0.1 MCERTS 0.21 < 0.10 Anthracene mg/kg 0.1 MCERTS Anthracene mg/kg 0.1 MCERTS Anthracene mg/kg 0.3 MCERTS Anthracene mg/kg 0.3 MCERTS Anthracene mg/kg 0.3 MCERTS Anthracene mg/kg 0.3 MCERTS Bromophenyl phenyl ether MG/kg 0.3 MCERTS MG/kg 0.3 MCERTS MG/kg 0.2 MCERTS MG/kg 0.3 MCERTS MG/kRT MG/kg 0.3 MCERTS MG/kRT MG/kRT MG/kg 0.1 MCERTS MG/kRT MG/kg 0.1 MCERTS MG/kRT MG/kg 0.1 MCERTS MG/kRT MG/kg 0.1 MCERTS MG/kRT MG/kg 0.1 MCERTS MG/kRT MG/kg 0.1 MCERTS MG/kRT MG/kg 0.1 MCERTS MG/kRT MG/kg 0.1 MCERTS MG/kRT MG/kRT MG/kg 0.1 MCERTS MG/kRT MG/kg 0.1 MCERTS MG/kRT MG/kg 0.1 MCERTS MG/kRT MG/kg 0.1 MCERTS MG/kRT MG/kg 0.1 MCERTS MG/kRT MG/kRT MG/kRT MG/kRT MG/kRT MG/kRT MG/kRT MG/kRT MG/kRT MG/kRT MG/kRT MG/kRT MG/kRT MG/kRT MG/kRT MG/kRT MG/kRT MG/KRT	4-Nitroaniline								
Bromophenyl phenyl ether									
Hexachlorobenzene mg/kg 0.3 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 < 0.3									
Phenanthrene mg/kg 0.1 MCERTS 0.21 < 0.10 1.1 < 0.10 Anthracene mg/kg 0.1 MCERTS < 0.10									
Anthracene mg/kg 0.1 MCERTS < 0.10 0.13 < 0.10 Carbazole mg/kg 0.3 MCERTS < 0.3									
Carbazole mg/kg 0.3 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.1 < 0.10 < 0.10 < 0.10 < 0.2 < 0.10 < 0.2 < 0.3 < 0.3 < 0.3									
Dibutyl phthalate mg/kg 0.2 MCERTS < 0.2 < 0.2 < 0.2 < 0.2 Anthraquinone mg/kg 0.3 MCERTS < 0.3									
Fluoranthene mg/kg 0.1 MCERTS 0.71 < 0.10 0.96 < 0.10 Pyrene mg/kg 0.1 MCERTS 0.64 < 0.10	Dibutyl phthalate				< 0.2				
Pyrene mg/kg 0.1 MCERTS 0.64 < 0.10 0.86 < 0.10 Butyl benzyl phthalate mg/kg 0.3 ISO 17025 < 0.3	Anthraquinone								
Dutyl benzyl phthalate mg/kg 0.3 ISO 17025 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3	Fluoranthene								
Benzo(a)anthracene mg/kg 0.1 MCERTS 0.36 < 0.10 0.46 < 0.10	Pyrene								
Chrysene mg/kg 0.05 MCERTS 0.47 < 0.05 0.65 < 0.05 Benzo(b)fluoranthene mg/kg 0.1 MCERTS 0.31 < 0.10									
Benzo(b)fluoranthene mg/kg 0.1 MCERTS 0.31 < 0.10 0.40 < 0.10 Benzo(k)fluoranthene mg/kg 0.1 MCERTS 0.27 < 0.10									
Benzo(k)fluoranthene mg/kg 0.1 MCERTS 0.27 < 0.10 0.32 < 0.10 Benzo(a)pyrene mg/kg 0.1 MCERTS 0.28 < 0.10	,								
Benzo(a)pyrene mg/kg 0.1 MCERTS 0.28 < 0.10 0.30 < 0.10 Indeno(1,2,3-cd)pyrene mg/kg 0.1 MCERTS < 0.10									
Indeno(1,2,3-cd)pyrene mg/kg 0.1 MCERTS < 0.10 < 0.10 < 0.10 < 0.10 Dibenz(a,h)anthracene mg/kg 0.1 MCERTS < 0.10									
Dibenz(a,h)anthracene mg/kg 0.1 MCERTS < 0.10 < 0.10 < 0.10 < 0.10	Indeno(1,2,3-cd)pyrene								
Benzo(ghi)perylene mg/kg 0.05 MCERTS < 0.05 < 0.05 < 0.05 < 0.05	Dibenz(a,h)anthracene				< 0.10				
	Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	





Preliminary Report Number: 15-74513

Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
460459	WS202	None Supplied	1 65	Black loam and sand with gravel.
460460	WS202	None Supplied	3.70	Beige clay and sand.
460461	WS202	None Supplied	11.70	Grey clay and sand.
460462	WS204	None Supplied	0 50	Beige sandy loam.
460463	WS204	None Supplied	1.90	Beige sandy loam.
460464	WS204	None Supplied	3.90	Beige sandy loam.
460465	WS204	None Supplied	7.45	Beige clay and sand.
460466	TP701	None Supplied	0 50	Light brown loam and sand with gravel and vegetation.
460467	TP701	None Supplied	2 50	Brown loam and clay with gravel.
460468	TP702	None Supplied	1 00	Light brown clay and sand with vegetation.
460469	TP702	None Supplied	1 50	Brown loam and clay with gravel.
460470	TP702	None Supplied	2 00	Brown sandy loam.
460471	BH203	None Supplied	2 00	Grey loam and clay with gravel and chalk.
460472	BH203	None Supplied	4 00	Brown loam and clay.





Preliminary Report Number: 15-74513

Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE





Preliminary Report Number: 15-74513

Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Sample Deviation Report



Sample	ID	WS202	WS202	TP701	TP701	TP702	TP702	TP702	BH203	BH203
Other 1	ID									
Sample 1	Гуре	S	S	S	S	S	S	S	S	S
Job Num	nber	15-74513	15-74513	15-74513	15-74513	15-74513	15-74513	15-74513	15-74513	15-74513
Sample Nu	ımber	460459	460460	460466	460467	460468	460469	460470	460471	460472
Deviation	Code	С	С	С	С	С	С	С	С	С
Test Name	Method no									
Sulphide in soil	L010-PL	С	С	С	С	С	С	С	С	С





Emma Leivers

Geotechnical Engineering Ltd Centurion House Olympus Park Quedgeley Gloucester GL2 4NF

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e: emma.leivers@geoeng.co.uk

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404 f: 01923 237404

e: reception@i2analytical.com

25/06/2015

Analytical Report Number: 15-74373

Project / Site name: London Paramount Entertainment Samples received on:

Resort

Your job number: 30766 Samples instructed on: 26/06/2015

Your order number: Analysis completed by: 03/07/2015

Report Issue Number: 1 Report issued on: 03/07/2015

Samples Analysed: 1 soil sample

Signed:

Dr Claire Stone Quality Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting





Lab Sample Number				459455	I		
Sample Reference				WS203			
Sample Number							
				None Supplied 1.00	-		
Depth (m)				23/06/2015			
Date Sampled Time Taken				1700			
тіте такен	1	1		1/00			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1			
Moisture Content	%	N/A	NONE	28			
Total mass of sample received	kg	0.001	NONE	1.5			
Total mass of sample reserved	9	0.001	HOHE	2.0	1		
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected			
General Inorganics							
	pH Units	NI/A	MCEDIC	8.1	ī	1	1
pH Electrical Conductivity		N/A 10	MCERTS NONE	1800	1	1	
Total Cyanide	μS/cm		MCERTS	1800 < 1	1	1	
,	mg/kg	1					
Complex Cyanide	mg/kg	1	NONE	< 1			
Free Cyanide Total Sulphate as SO ₄	mg/kg	1 50	NONE MCERTS	< 1 32000		1	
	mg/kg						
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	5.0			
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	5000			
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	2.5			
Sulphide	mg/kg	1	MCERTS	< 1.0			
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	98			
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5			
Organic Matter	%	0.1	MCERTS	0.3			
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0			
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20			
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0			
Total Phenois						-	
Total Phenois (monohydric)	ma //s a	1	MCERTS	< 1.0	1	1	1
Total Pilenois (monoriyunc)	mg/kg	1	MCERTS	< 1.0		ı	
Speciated PAHs							
Naphthalene		0.05	MCERTS	< 0.05	1	T	1
'	mg/kg						
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	 -		1
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	 -		-
Fluorene	mg/kg	0.1	MCERTS	< 0.10		1	
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10		1	
Anthracene	mg/kg	0.1	MCERTS	< 0.10			
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10			
Pyrene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10		Į.	
Chrysene	mg/kg	0.05	MCERTS	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10			
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05			
Coronene	mg/kg	0.05	NONE	< 0.05			
-	. 313				•		
Total PAH							
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6			
	9,9	<u> </u>					





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				459455		
Sample Reference				WS203		
Sample Number				None Supplied		
Depth (m)				1.00		
Date Sampled				23/06/2015		
Time Taken		1700				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status			
Heavy Metals / Metalloids					T	T
Aluminium (aqua regia extractable)	mg/kg	30	NONE	15000		
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	2.0		
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	3.6		
Barium (aqua regia extractable)	mg/kg	1	MCERTS	76		
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.4		
Boron (water soluble)	mg/kg	0.2	MCERTS	3.2		
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	2.7		
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	25		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	14		
Iron (aqua regia extractable)	mg/kg	40	MCERTS	13000		
Lead (aqua regia extractable)	mg/kg	1	MCERTS	41		
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	220		
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3		
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	1.8		
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	31		
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	450		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	3.1		
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	120		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	36		
Calcium (aqua regia extractable)	mg/kg	20	NONE	320000		
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	4800		
Potassium (aqua regia extractable)	mg/kg	20	NONE	8100		
Monoaromatics						
Benzene	μg/kg	1	MCERTS	< 1.0		
Toluene	μg/kg	1	MCERTS	< 1.0		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0		
p & m-xylene	μg/kg	1	MCERTS	< 1.0		
o-xylene	μg/kg	1	MCERTS	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0		

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10		





Lab Sample Number	459455					
Sample Reference				WS203		
Sample Number				None Supplied		
Depth (m)				1.00		
Date Sampled				23/06/2015		
Time Taken				1700		
			Α .			
Aughstical Development	_	Li det	Accreditation Status			
Analytical Parameter	Units	Limit of detection	edi			
(Soil Analysis)	ß	: of tior	us tati			
		1	9			
VOCs						·
Chloromethane	μg/kg	1	ISO 17025	< 1.0		
Chloroethane	μg/kg	1	ISO 17025	< 1.0		
Bromomethane	μg/kg	1	ISO 17025	< 1.0		
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0		
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0		
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0		
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0		
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg "	1	MCERTS	< 1.0		
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0		
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0		
Trichloromethane	μg/kg	1	MCERTS	< 1.0		
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0		
1,2-Dichloroethane 1,1-Dichloropropene	μg/kg	1 1	MCERTS NONE	< 1.0 < 1.0		
Trans-1,2-dichloroethene	μg/kg μg/kg	1	NONE	< 1.0		
Benzene	μg/kg μg/kg	1	MCERTS	< 1.0		
Tetrachloromethane	μg/kg μg/kg	1	MCERTS	< 1.0		
1,2-Dichloropropane	μg/kg	1	MCERTS	< 1.0		
Trichloroethene	μg/kg	1	MCERTS	< 1.0		
Dibromomethane	μg/kg	1	MCERTS	< 1.0		
Bromodichloromethane	μg/kg	1	NONE	< 1.0		
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0		
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0		
Toluene	μg/kg	1	MCERTS	< 1.0		
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0		
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0		
Dibromochloromethane	μg/kg	1	ISO 17025	< 1.0		
Tetrachloroethene	μg/kg	1	MCERTS	< 1.0		
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0		
Chlorobenzene	μg/kg	1	MCERTS	< 1.0		
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0		
p & m-Xylene	μg/kg	1	MCERTS	< 1.0		
Styrene Tribromomothano	μg/kg	1 1	MCERTS	< 1.0 < 1.0		
Tribromomethane o-Xylene	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0		
1,1,2,2-Tetrachloroethane	μg/kg μg/kg	1	MCERTS	< 1.0		
Isopropylbenzene	μg/kg μg/kg	1	NONE	< 1.0		
Bromobenzene	μg/kg	1	MCERTS	< 1.0		
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0		
2-Chlorotoluene	μg/kg	1	NONE	< 1.0		
4-Chlorotoluene	μg/kg	1	NONE	< 1.0		
1,3,5-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0		
tert-Butylbenzene	μg/kg	1	NONE	< 1.0		
1 2 4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0		
sec-Butylbenzene	μg/kg	1	NONE	< 1.0	 	
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0		
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0		
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0		
1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0		
Butylbenzene	μg/kg	1	NONE	< 1.0		
1,2-Dibromo-3-chloropropane	μg/kg "	1	ISO 17025	< 1.0		
1,2,4-Trichlorobenzene	μg/kg "	1	MCERTS	< 1.0		
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0		
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0		





Lab Sample Number				459455	I	I	
Sample Reference				WS203			
Sample Number				None Supplied			
Depth (m)				1.00			
Date Sampled				23/06/2015			
Time Taken				1700			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs							
Aniline	mg/kg	0.1	NONE	< 0.1			
Phenol	mg/kg	0.2	ISO 17025	< 0.2			
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1			
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2			
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1 < 0.2			
1,4-Dichlorobenzene Bis(2-chloroisopropyl)ether	mg/kg mg/kg	0.2	MCERTS MCERTS	< 0.2			
2-Methylphenol	mg/kg	0.1	MCERTS	< 0.1			
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05			
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3			
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	 		
Isophorone	mg/kg	0.2	MCERTS	< 0.2			
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3			
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3			
Bis(2-chloroethoxy)methane 1.2.4-Trichlorobenzene	mg/kg mg/kg	0.3	MCERTS MCERTS	< 0.3 < 0.3			
Naphthalene	mg/kg	0.05	MCERTS	< 0.05			
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3			
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1			
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1			
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1			
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1			
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2			
2-Methylnaphthalene 2-Chloronaphthalene	mg/kg mg/kg	0.1	NONE MCERTS	< 0.1 < 0.1			
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1			
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1			
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10			
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10			
2 4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2			
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2			
4-Chlorophenyl phenyl ether Diethyl phthalate	mg/kg	0.3	ISO 17025	< 0.3 < 0.2			
4-Nitroaniline	mg/kg mg/kg	0.2	MCERTS MCERTS	< 0.2			
Fluorene	mg/kg	0.2	MCERTS	< 0.10			
Azobenzene	mg/kg	0.3	MCERTS	< 0.3			
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2			
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3			
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10			
Anthracene Carbazole	mg/kg	0.1	MCERTS	< 0.10			
Dibutyl phthalate	mg/kg mg/kg	0.3	MCERTS MCERTS	< 0.3 < 0.2			
Anthraquinone	mg/kg	0.2	MCERTS	< 0.3			
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10			
Pyrene	mg/kg	0.1	MCERTS	< 0.10			
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	 		
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10			
Chrysene	mg/kg	0.05	MCERTS	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(k)fluoranthene Benzo(a)pyrene	mg/kg mg/kg	0.1	MCERTS MCERTS	< 0.10 < 0.10			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10			
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05			





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
459455	WS203	None Supplied	1 00	Light brown sandy clay with vegetation.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a diazonium salt which forms chromophore which is	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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Analytical Report Number: 15-74372

London Paramount Entertainment Project / Site name:

Resort

Your job number: 30766

Your order number: Analysis completed by: 03/07/2015

Report Issue Number:

Samples Analysed: 2 soil samples Samples received on: 25/06/2015

Samples instructed on: 26/06/2015

Report issued on: 03/07/2015

Signed:

Dr Claire Stone Quality Manager

For & on behalf of i2 Analytical Ltd.

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

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Lab Sample Number		459453	459454				
Sample Reference				BH502	BH502		
Sample Number				None Supplied	None Supplied		
Depth (m)				0.50	1.00		
Date Sampled				23/06/2015	23/06/2015		
Time Taken				1800	1805		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	13	14	1	
Total mass of sample received	kg	0.001	NONE	1.6	1.5		
rotal mass of sample received	ı kg	0.001	HONE	1.0	1.5	1	
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Not-detected		
General Inorganics							
pH	pH Units	N/A	MCERTS	9.4	11.2	1	<u> </u>
Electrical Conductivity	μS/cm	10	NONE	530	760		
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	1	
Complex Cyanide	mg/kg	1	NONE	< 1	< 1		
Free Cyanide	mg/kg	1	NONE	< 1	< 1		
Total Sulphate as SO ₄	mg/kg	50	MCERTS	980	2000		
Water Soluble Sulphate (Soil Equivalent)	g/I	0.0025	MCERTS	0.43	1.0		
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	430	1000		
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	q/I	0.00125	MCERTS	0.21	0.50		
Sulphide	mg/kg	1	MCERTS	< 1.0	< 1.0		
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	270	410		
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	< 0.5		
Organic Matter	//////////////////////////////////////	0.1	MCERTS	0.2	0.2		
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	5.3	4.6		
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20	< 20	1	
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	5.3	< 5.0	1	
Total Phenois	919						<u> </u>
Total Phenois (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	1	
Total Filenois (monoriyunc)	ilig/kg	1	MCERTS	< 1.0	< 1.0	1	
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	<u> </u>	
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	<u> </u>	
Total DALI							
Total PAH Total WAC-17 PAHs		1.6	NONE	< 1.6	< 1.6	1	1
TOTAL WAC-17 PARS	mg/kg	1.0	NONE	< 1.0	< 1.0	<u> </u>	<u> </u>





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				459453	459454		
Sample Reference				BH502	BH502		
Sample Number				None Supplied	None Supplied		
Depth (m)				0.50	1.00		
Date Sampled				23/06/2015	23/06/2015		
Time Taken				1800	1805		
Time raken				1000	1003		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids							
Aluminium (aqua regia extractable)	mg/kg	30	NONE	2600	2100		
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	2.6	< 1.0		
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	1.1	< 1.0		
Barium (aqua regia extractable)	mg/kg	1	MCERTS	19	17		
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.1	< 0.1		
Boron (water soluble)	mg/kg	0.2	MCERTS	1.0	0.9		
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2		
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	7.2	7.7		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	5.9	6.6		
Iron (aqua regia extractable)	mg/kg	40	MCERTS	5200	3100		
Lead (aqua regia extractable)	mg/kg	1	MCERTS	3.9	3.5		
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	230	200		
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3		
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	< 0.3	< 0.3		
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	6.1	6.8		
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	430	350		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0		
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	11	7.7		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	17	16		
Calcium (aqua regia extractable)	mg/kg	20	NONE	400000	410000		
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	2300	2300		
Potassium (aqua regia extractable)	mg/kg	20	NONE	870	520		
Monoaromatics							
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
p & m-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0		
o-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0		

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	11	12		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	11	12		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	14	< 10		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	14	< 10		





Lab Sample Number				459453	459454		
Sample Reference				BH502	BH502		
Sample Number				None Supplied	None Supplied		
Depth (m)				0.50	1.00		
Date Sampled				23/06/2015	23/06/2015		
Time Taken				1800	1805		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
VOCs						U.	
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Chloroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Bromomethane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	.	
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	 	
1,1-Dichloroethane	μg/kg	1	MCERTS NONE	< 1.0 < 1.0	< 1.0 < 1.0	 	
2,2-Dichloropropane Trichloromethane	μg/kg μg/kg	1	MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	 	
1,1,1-Trichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	 	
1,2-Dichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0		
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0	< 1.0		
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0	< 1.0		
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,2-Dichloropropane	μg/kg	1	MCERTS	< 1.0	< 1.0		
Trichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Dibromomethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
Bromodichloromethane	μg/kg	1	NONE	< 1.0	< 1.0		
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,1,2-Trichloroethane	μg/kg	1	MCERTS ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0		
1,3-Dichloropropane Dibromochloromethane	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0		
Tetrachloroethene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0		
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Chlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0	< 1.0		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
p & m-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Styrene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Tribromomethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
o-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
Isopropylbenzene	μg/kg "	1	NONE	< 1.0	< 1.0		
Bromobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	 	
n-Propylbenzene 2-Chlorotoluene	μg/kg μα/ka	1	NONE	< 1.0 < 1.0	< 1.0 < 1.0	 	
4-Chlorotoluene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	 	
1,3,5-Trimethylbenzene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	 	
tert-Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0		
1 2 4-Trimethylbenzene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	1	
sec-Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0		
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0		
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0	< 1.0		
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0		
1,2-Dibromo-3-chloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0	< 1.0	!	
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	< 1.0		





Lab Sample Number		459453	459454				
Sample Reference				BH502	BH502		
Sample Number				None Supplied	None Supplied		
Depth (m)				0.50	1.00		
Date Sampled				23/06/2015	23/06/2015		
Time Taken				1800	1805		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs							
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1		
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2		
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2		
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2		
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2		
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS MCERTS	< 0.1 < 0.3	< 0.1 < 0.3		
2-Methylphenol Hexachloroethane	mg/kg mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Nitrobenzene	mg/kg	0.03	MCERTS	< 0.3	< 0.3		
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2		
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2		
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3		
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3		
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3		
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3		
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3		
4-Chloroaniline Hexachlorobutadiene	mg/kg	0.1	NONE	< 0.1 < 0.1	< 0.1 < 0.1		
4-Chloro-3-methylphenol	mg/kg mg/kg	0.1	MCERTS NONE	< 0.1	< 0.1		
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2		
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1		
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
2 4-Dinitrotoluene Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2 < 0.2	< 0.2 < 0.2		
4-Chlorophenyl phenyl ether	mg/kg mg/kg	0.2	MCERTS ISO 17025	< 0.2	< 0.2		
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2		
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2		
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3		
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	 	
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3		
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Carbazole	mg/kg	0.3	MCERTS	< 0.3 < 0.2	< 0.3 < 0.2		
Dibutyl phthalate Anthraquinone	mg/kg mg/kg	0.2	MCERTS MCERTS	< 0.3	< 0.2		
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3		
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Dibenz(a,h)anthracene Benzo(ghi)perylene	mg/kg	0.1	MCERTS MCERTS	< 0.10 < 0.05	< 0.10 < 0.05	1	
ренzо(дні)регутене	mg/kg	0.05	PICEKIS	< 0.05	< 0.05		





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
459453	BH502	None Supplied	0 50	Light brown sandy clay.
459454	BH502	None Supplied	1 00	White chalk with gravel. **

^{**}Non MCerts Matrix





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Trace many appreviations our	face Water (SW) Potable Water (PW) Ground (I		I	1
Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a diazonium salt which forms chromophore which is	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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Analytical Report Number: 15-74371

London Paramount Entertainment Project / Site name:

Resort

Your job number: 30766

Your order number: Analysis completed by: 03/07/2015

Report Issue Number:

Samples Analysed: 3 soil samples

25/06/2015 Samples received on:

Samples instructed on: 26/06/2015

Report issued on: 03/07/2015

Signed:

Dr Claire Stone Quality Manager

For & on behalf of i2 Analytical Ltd.

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting - 2 weeks from reporting asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





Lab Sample Number		459450	459451	459452				
Sample Reference				WS102	WS102	WS102		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				0.50	2.70	4.70		
Date Sampled				24/06/2015	24/06/2015	24/06/2015		
Time Taken				1710	1540	1635		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	13	16	15		
Total mass of sample received	kg	0.001	NONE	1.1	1.6	1.2		
rotal mass of sample received	Ng	0.001	HOHL		1.0	1.2		
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Not-detected	Not-detected		
General Inorganics								
pH	pH Units	N/A	MCERTS	10.7	11.9	12.3	<u> </u>	
PI Electrical Conductivity	μS/cm	10 10	NONE	1400	2500	9800		
Total Cyanide	mg/kg	10	MCERTS	< 1	< 1	< 1		
Complex Cyanide	mg/kg	1	NONE	< 1	< 1	< 1		
Free Cyanide	mg/kg	1	NONE	< 1	< 1	< 1		
Total Sulphate as SO ₄	mg/kg	50	MCERTS	63000	54000	41000		
Water Soluble Sulphate (Soil Equivalent)	q/l	0.0025	MCERTS	4.3	1.6	7.6		
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	4300	1600	7600		
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	q/l	0.00125	MCERTS	2.2	0.78	3.8		
Sulphide	mg/kg	1	MCERTS	2.6	5.9	1.5		
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	40	570	1800		
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	< 0.5	1.7		
Organic Matter	//////////////////////////////////////	0.1	MCERTS	0.3	0.1	0.2		
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0		
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20	< 20	< 20		
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0		
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Total Friends (monoriyane)	mg/kg		HICERTS	11.0	11.0	11.0		
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Phenanthrene	mg/kg	0.1	MCERTS	0.60	< 0.10	< 0.10		
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Fluoranthene	mg/kg	0.1	MCERTS	0.37	< 0.10	< 0.10		
Pyrene	mg/kg	0.1	MCERTS	0.23	< 0.10	< 0.10		
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.24	< 0.10	< 0.10		
Chrysene	mg/kg	0.05	MCERTS	0.29	< 0.05	< 0.05	ļ	
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	ļ	
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	0.35	< 0.10	< 0.10		
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05		
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	2.1	< 1.6	< 1.6		1
	9/19	-10			- 110	- 1.0	B	





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number	Sample Number					459452		
Sample Reference				459450 WS102	459451 WS102	WS102		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				0.50	2.70	4.70		
Date Sampled				24/06/2015	24/06/2015	24/06/2015		
Time Taken				1710	1540	1635		
Time Taken				1/10	1540	1033		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Aluminium (aqua regia extractable)	mg/kg	30	NONE	13000	17000	15000		
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	1.7	2.4	1.7		
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	11	22	12		
Barium (aqua regia extractable)	mg/kg	1	MCERTS	57	49	72		-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.5	0.6	0.7		
Boron (water soluble)	mg/kg	0.2	MCERTS	2.8	2.4	3.6		
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	3.7	3.7	4.3		
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	20	17	21		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	34	36	32		
Iron (aqua regia extractable)	mg/kg	40	MCERTS	12000	7900	8300		
Lead (aqua regia extractable)	mg/kg	1	MCERTS	140	130	130		
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	170	140	160		
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.6	1.2	0.7		
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	11	10	12		
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	380	320	360		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.1	4.9	< 1.0		
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	27	23	25		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	180	120	120		
							-	-
Calcium (aqua regia extractable)	mg/kg	20	NONE	310000	280000	300000		
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	3400	2900	3800		
Potassium (aqua regia extractable)	mg/kg	20	NONE	3800	5500	19000		
Monoaromatics	-		-		-	-		_
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
p & m-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
o-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		

Petroleum Hydrocarbons

E			r				
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	
TPH-CWG - Aromatic >EC12 - EC16 TPH-CWG - Aromatic >EC16 - EC21	mg/kg mg/kg	2 10	MCERTS MCERTS	< 2.0 < 10	< 2.0 < 10	< 2.0 < 10	
	J. J	2 10 10		-			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg		MCERTS	< 10	< 10	< 10	





ab Sample Number				459450	459451	459452		
Sample Reference				WS102	WS102	WS102		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				0.50	2.70	4.70		
Date Sampled				24/06/2015	24/06/2015	24/06/2015		
Time Taken				1710	1540	1635		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
VOCs				L				
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Chloroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Bromomethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	ļ	
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
2,2-Dichloropropane Trichloromethane	μg/kg	1	NONE MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
1,1,1-Trichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0	 	
1,2-Dichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,2-Dichloropropane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Trichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Dibromomethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Bromodichloromethane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,3-Dichloropropane	μg/kg	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0	< 1.0		
Dibromochloromethane Tetrachloroethene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
1,2-Dibromoethane	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Chlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
p & m-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Styrene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Tribromomethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
o-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Isopropylbenzene	μg/kg "	1	NONE	< 1.0	< 1.0	< 1.0		
Bromobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	ļ	
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
2-Chlorotoluene 4-Chlorotoluene	μg/kg	1	NONE	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
4-Cniorotoiuene 1,3,5-Trimethylbenzene	μg/kg μg/kg	1	NONE ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0	 	
tert-Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
1 2 4-Trimethylbenzene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	†	
sec-Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	İ	
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
1,2-Dibromo-3-chloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	<u> </u>	





Lab Sample Number		459450	459451	459452				
Sample Reference				WS102	WS102	WS102		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				0.50	2.70	4.70		
Date Sampled				24/06/2015	24/06/2015	24/06/2015		
Time Taken				1710	1540	1635		
			A					
Annalistical Benediction	_	e Li	Accreditation Status					
Analytical Parameter	Units	Limit of detection	edi					
(Soil Analysis)	ß	ti of	us					
		3	on on					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1		
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2		
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	ļ	
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	ļ	
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2		
Isophorone 2-Nitrophenol	mg/kg mg/kg	0.2	MCERTS MCERTS	< 0.2 < 0.3	< 0.2 < 0.3	< 0.2 < 0.3	 	
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1		
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1		
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1		
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
2 4-Dinitrotoluene Dibenzofuran	mg/kg mg/kg	0.2	MCERTS MCERTS	< 0.2 < 0.2	< 0.2 < 0.2	< 0.2 < 0.2		
4-Chlorophenyl phenyl ether	mg/kg	0.2	ISO 17025	< 0.3	< 0.3	< 0.3		
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Phenanthrene	mg/kg	0.1	MCERTS	0.60	< 0.10	< 0.10		
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Carbazole	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Fluoranthene	mg/kg	0.1	MCERTS	0.37 0.23	< 0.10 < 0.10	< 0.10 < 0.10		
Pyrene Butyl benzyl phthalate	mg/kg	0.1	MCERTS ISO 17025	< 0.3	< 0.10	< 0.10	 	
Benzo(a)anthracene	mg/kg mg/kg	0.3	MCERTS	0.24	< 0.10	< 0.10	 	
Chrysene	mg/kg	0.05	MCERTS	0.29	< 0.10	< 0.10		
Benzo(b)fluoranthene	mg/kg	0.03	MCERTS	< 0.10	< 0.10	< 0.10	†	
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	0.35	< 0.10	< 0.10		
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
459450	WS102	None Supplied	0 50	Beige sand.
459451	WS102	None Supplied	2.70	Light brown sandy clay.
459452	WS102	None Supplied	4.70	Light brown sandy clay.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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Analytical Report Number: 15-74370

Project / Site name: London Paramount Entertainment Samples received on: 25/06/2015

Resort

Your job number: 30766 Samples instructed on: 26/06/2015

Your order number: Analysis completed by: 03/07/2015

Report Issue Number: 1 Report issued on: 03/07/2015

Samples Analysed: 2 soil samples

Signed:

Dr Claire Stone Quality Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting





Lab Sample Number				459448	459449			
Sample Reference				TP302	TP302			
Sample Number				None Supplied	None Supplied			
Depth (m)				1.00	3.00			1
				24/06/2015	24/06/2015			
Date Sampled Time Taken					<u>' '</u>			
Tille Takeli				1615	1655			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1			
Moisture Content	%	N/A	NONE	9.5	15			
Total mass of sample received	kg	0.001	NONE	1.6	1.7			
Total mass of sample reserved	9	0.001	HOLLE	2.0				
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Not-detected			
General Inorganics								
	pH Units	N/A	MCERTS	10.9	11.7		ī	1
pH Electrical Conductivity		10	NONE	300	11.7		-	
Total Cyanide	μS/cm		MCERTS	300 < 1			-	
,	mg/kg	1			< 1			
Complex Cyanide	mg/kg	1	NONE	< 1	< 1			
Free Cyanide	mg/kg	1	NONE	< 1	< 1			
Total Sulphate as SO ₄	mg/kg	50	MCERTS	2500	1200			
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	0.68	0.34			
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	680	340			
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	0.34	0.17			
Sulphide	mg/kg	1	MCERTS	< 1.0	< 1.0			
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	11	16			
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	< 0.5			
Organic Matter	%	0.1	MCERTS	0.6	0.1			
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	< 2.0			
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20	< 20			
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0	< 5.0			
Total Phenois	. 3, 3	•					•	
			MCEDIC	. 1.0	. 1.0			1
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0			
Speciated PAHs								
		0.05	MOERTO	0.10	. 0.05	1	I	1
Naphthalene	mg/kg	0.05	MCERTS	0.10	< 0.05			
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		ļ	1
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		ļ	1
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Phenanthrene	mg/kg	0.1	MCERTS	0.59	< 0.10			
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Fluoranthene	mg/kg	0.1	MCERTS	1.2	< 0.10			
Pyrene	mg/kg	0.1	MCERTS	0.64	< 0.10			
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.52	< 0.10			
Chrysene	mg/kg	0.05	MCERTS	0.70	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	1.1	< 0.10			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	1.0	< 0.10			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	0.68	< 0.10			
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.70	< 0.05			
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05			
<u> </u>	פיי ופיי			3.00	3.00			
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	7.2	< 1.6			1
1000. 1.7.10 27 17110	mg/kg	1.0	HOHE	/ 12	` 1.0			





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				459448	459449			
Sample Reference				TP302	TP302			
Sample Number				None Supplied	None Supplied			
Depth (m)				1.00	3.00			
Date Sampled				24/06/2015	24/06/2015			
Time Taken		1615	1655					
Time Taken				1013	1033			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Aluminium (aqua regia extractable)	mg/kg	30	NONE	11000	790			
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	< 1.0			
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	11	< 1.0			
Barium (aqua regia extractable)	mg/kg	1	MCERTS	44	11			
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.5	< 0.1			
Boron (water soluble)	mg/kg	0.2	MCERTS	1.6	0.4			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.3	0.3			
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	20	2.4			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	19	6.2			
Iron (aqua regia extractable)	mg/kg	40	MCERTS	21000	1300			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	30	2.9			
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	340	250			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	< 0.3	< 0.3			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	19	5.4			
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	610	640			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0			
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	35	5.1			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	48	16			
Calcium (aqua regia extractable)	mg/kg	20	NONE	220000	410000			
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	15000	1800			
Potassium (aqua regia extractable)	mg/kg	20	NONE	2000	420			
Monoaromatics								
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0			
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0		1	
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	İ	İ	
p & m-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0		1	
o-xvlene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	ĺ		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0			
Title (Teaty) Terdary bucyr Edici /	μg/ N g		PICEIXIS	` 1.0	` 1.0	I	1	<u> </u>

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	9.6	< 8.0	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	60	14	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	70	14	
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	45	< 10	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	45	< 10	





Lab Canada Namban				450440	450440	1	
Lab Sample Number				459448 TP302	459449 TP302		
Sample Reference Sample Number				None Supplied	None Supplied	 	
Depth (m)				1.00	3.00		
Date Sampled				24/06/2015	24/06/2015		
Time Taken				1615	1655		
			A				
Analytical Parameter	_	Limit of detection	Accreditation Status				
(Soil Analysis)	Units	Limit of	batt.				
(Soli Alialysis)	v	할 약	atio				
			Š				
VOCs							
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Chloroethane Bromomethane	μg/kg	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0		
Vinyl Chloride	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0 < 1.0		
Trichlorofluoromethane	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0		
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
2,2-Dichloropropane Trichloromethane	μg/kg	1	NONE MCERTS	< 1.0 < 1.0	< 1.0 < 1.0		
1,1,1-Trichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	 	
1,2-Dichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0		
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0	< 1.0		
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0	< 1.0		
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,2-Dichloropropane	μg/kg	1	MCERTS	< 1.0	< 1.0		
Trichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Dibromomethane	μg/kg	1	MCERTS NONE	< 1.0 < 1.0	< 1.0 < 1.0		
Bromodichloromethane Cis-1,3-dichloropropene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0		
Trans-1,3-dichloropropene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0		
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Dibromochloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Tetrachloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Chlorobenzene 1,1,1,2-Tetrachloroethane	μg/kg μg/kg	1	MCERTS NONE	< 1.0 < 1.0	< 1.0 < 1.0		
Ethylbenzene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0		
p & m-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Styrene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Tribromomethane	μg/kg	1	MCERTS	< 1.0	< 1.0	 	
o-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
Isopropylbenzene Bromobenzene	μg/kg	1	NONE	< 1.0 < 1.0	< 1.0 < 1.0		
n-Propylbenzene	μg/kg μg/kg	1	MCERTS ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	 	
2-Chlorotoluene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	1	
4-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0		
1,3,5-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0		
tert-Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	 	
1 2 4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0		
sec-Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0		
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0		
p-Isopropyltoluene 1,2-Dichlorobenzene	μg/kg μg/kg	1	ISO 17025 MCERTS	< 1.0 < 1.0	< 1.0 < 1.0		
1 4-Dichlorobenzene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0		
Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0		
1,2-Dibromo-3-chloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0	< 1.0		
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	< 1.0		





Lab Sample Number								
Sample Reference				TP302	TP302			
Sample Number				None Supplied	None Supplied			
Depth (m)				1.00	3.00			
Date Sampled				24/06/2015	24/06/2015			
Time Taken				1615	1655			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs				L.				
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1			
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2			
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS MCERTS	< 0.1 < 0.3	< 0.1 < 0.3			
2-Methylphenol Hexachloroethane	mg/kg mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Nitrobenzene	mg/kg	0.03	MCERTS	< 0.3	< 0.3			
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2			
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
Naphthalene	mg/kg	0.05	MCERTS	0.10	< 0.05			
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
4-Chloroaniline Hexachlorobutadiene	mg/kg	0.1	NONE MCERTS	< 0.1 < 0.1	< 0.1 < 0.1			
4-Chloro-3-methylphenol	mg/kg mg/kg	0.1	NONE	< 0.1	< 0.1			
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1			
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
2 4-Dinitrotoluene Dibenzofuran	mg/kg mg/kg	0.2	MCERTS MCERTS	< 0.2 < 0.2	< 0.2 < 0.2			
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.2	< 0.3			
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
Phenanthrene Anthracene	mg/kg	0.1	MCERTS MCERTS	0.59 < 0.10	< 0.10 < 0.10			
Anthracene Carbazole	mg/kg mg/kg	0.1	MCERTS	< 0.10 < 0.3	< 0.10 < 0.3		1	
Dibutyl phthalate	mg/kg	0.3	MCERTS	< 0.2	< 0.2			
Anthraquinone	mg/kg	0.3	MCERTS	< 0.2	< 0.3			
Fluoranthene	mg/kg	0.1	MCERTS	1.2	< 0.10			
Pyrene	mg/kg	0.1	MCERTS	0.64	< 0.10			
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3			
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.52	< 0.10			
Chrysene	mg/kg	0.05	MCERTS	0.70	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	1.1	< 0.10			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	1.0	< 0.10			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS MCERTS	0.68 < 0.10	< 0.10 < 0.10		1	
Benzo(ghi)perylene	mg/kg mg/kg	0.05	MCERTS	0.70	< 0.10		1	
DC1120(g111)pc1y1c11c	mg/kg	0.03	PICERIO	0.70	< U.UJ			





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
459448	TP302	None Supplied	1 00	Light brown sand with gravel and chalk.
459449	TP302	None Supplied	3 00	White chalk. **

^{**} Non MCERTS matrix.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



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Analytical Report Number: 15-74369

Project / Site name: London Paramount Entertainment

Resort

Your job number: 30766

....

Report Issue Number:

Your order number:

Samples Analysed: 2 soil samples

Samples received on:

25/06/2015

Samples instructed on:

26/06/2015

Analysis completed by:

03/07/2015

Report issued on:

03/07/2015

Signed:

Dr Claire Stone Quality Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting





Lab Sample Number				459446	459447	I	
Sample Reference				TP301	TP301		1
Sample Number				None Supplied	None Supplied		1
Depth (m)				0.50	2.00		
Date Sampled				24/06/2015	24/06/2015		
Time Taken				1200	1255		
Time Taken	1		Ι	1200	1200		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1		1
Moisture Content	%	N/A	NONE	9.1	11		
Total mass of sample received	kg	0.001	NONE	1.7	1.3		
Total mass of sample received	NY	0.001	INOINL	1.7	1.5		
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected		
7 GDCSTCS III SCII	Турс	14//(130 17023	Not detected	Not detected	<u> </u>	.1
General Inorganics							
pH	pH Units	N/A	MCERTS	10.8	11.5		
Electrical Conductivity	µS/cm	10	NONE	260	1000		1
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1		1
Complex Cyanide	mg/kg	1	NONE	< 1	< 1	1	1
Free Cyanide	mg/kg	1	NONE	< 1	< 1	1	1
Total Sulphate as SO ₄	mg/kg	50	MCERTS	1500	12000	1	1
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	0.43	0.31		
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	430	310		
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	0.22	0.16		
Sulphide	mg/kg	1	MCERTS	< 1.0	1.7		
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	15	220		
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	< 0.5		
Organic Matter	// // // // // // // // // // // // //	0.3	MCERTS	0.3	2.1		•
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	7.5		•
Water Soluble Nitrate (2.1) as N	µg/kg	20	NONE	< 20	16000		•
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0	24		•
Total Oxidised Nitrogen (TON)	Hig/kg	3	NONE	< 5.0	24		<u>.</u> L
Total Phenois							
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	I	1
Total Friendis (monoriyane)	Hig/kg	<u> </u>	WICERTS	< 1.0	< 1.0	1	.1
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		1
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		1
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	0.42		1
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		1
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	0.66		1
Pyrene	mg/kg	0.1	MCERTS	< 0.10	0.42	1	1
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	0.19	1	1
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.17	1	1
Benzo(b)fluoranthene	mg/kg	0.03	MCERTS	< 0.10	< 0.10	1	1
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		1
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		1
Indeno(1 2 3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		1
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		1
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.10	1	1
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	1	1
our oriente	my/ky	0.00	INCINE	< 0.00	\ 0.00		
Total PAH							
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6	2.0		
Total Wild IT I Alla	mg/kg	1.0	INOINE	V 1.0	2.0	1	





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Lab Sample Number				459446	459447			
Sample Reference				TP301	TP301			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.50	2.00			
Date Sampled				24/06/2015	24/06/2015			
Time Taken				1200	1255			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids			<u>. </u>		<u>!</u>		<u>!</u>	
Aluminium (agua regia extractable)	mg/kg	30	NONE	2900	9400			
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	5.8			
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	4.0	16			
Barium (aqua regia extractable)	mg/kg	1	MCERTS	24	260			
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	< 0.1	0.5		1	
Boron (water soluble)	mg/kg	0.2	MCERTS	2.6	3.1			
Cadmium (agua regia extractable)	mg/kg	0.2	MCERTS	0.3	6.1			
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0			
Chromium (agua regia extractable)	mg/kg	1	MCERTS	9.0	23			
Copper (agua regia extractable)	mg/kg	1	MCERTS	9.0	1100			
Iron (agua regia extractable)	mg/kg mg/kg	40	MCERTS	5000	19000		 	
Lead (aqua regia extractable)	mg/kg mg/kg	1	MCERTS	12	150		 	
Manganese (agua regia extractable)		1	MCERTS	210	270			
Mercury (agua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
	mg/kg						1	
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	< 0.3	1.2			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	5.9	19			
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	440	430			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0		!	
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	11	32			
Zinc (aqua regia extractable)	mg/kg	- 1	MCERTS	32	530			
Calaium (agus ragio extrastable)	/-	20	NONE	450000	340000		1	
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	2000	2400		1	
Magnesium (aqua regia extractable) Potassium (aqua regia extractable)	mg/kg	20	NONE	900	2100		1	
Potassium (aqua regia extractable)	mg/kg	20	NONE	900	2100		1	
Monoaromatics								
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0			
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0			
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0			
p & m-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0			
o-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0			
	parna	·	WOLKTO					
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0		!	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	27		!	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	130			
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	160		<u> </u>	
TDI 014/0 A FOS 503		0.1		0.1		1	T	1
TPH-CWG - Aromatic > EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1		 	
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1		!	
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1		!	
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0		!	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0		!	
TPH-CWG - Aromatic > EC16 - EC21	mg/kg	10	MCERTS	< 10	15		!	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	75		.	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	90			





Lab Sample Number				459446	459447		
Sample Reference				TP301	TP301		
Sample Number				None Supplied	None Supplied		
Depth (m)				0.50	2.00		
Date Sampled				24/06/2015	24/06/2015		
Time Taken	1	1		1200	1255		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
VOCs	•	=	•			-	
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Chloroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Bromomethane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Vinyl Chloride	μg/kg 	1	ISO 17025	< 1.0	< 1.0		
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
1,1-Dichloroethene 1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
Cis-1,2-dichloroethene	μg/kg μg/kg	1	ISO 17025 MCERTS	< 1.0 < 1.0	< 1.0 < 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0		
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0	< 1.0		
Trichloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
1 1-Dichloropropene	μg/kg	1	NONE	< 1.0	< 1.0		
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0	< 1.0		
Benzene	μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 1.0		
Tetrachloromethane 1.2-Dichloropropane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0 < 1.0		
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0		
Dibromomethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
Bromodichloromethane	μg/kg	1	NONE	< 1.0	< 1.0		
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,3-Dichloropropane Dibromochloromethane	μg/kg μg/kg	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0		
Tetrachloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0		
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	< 1.0		
Chlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0	< 1.0		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
p & m-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Styrene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Tribromomethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
o-Xylene 1 1 2 2-Tetrachloroethane	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	 	
Isopropylbenzene	µg/kg µg/kg	1	NONE	< 1.0	< 1.0		
Bromobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0		
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0		
2-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	 	
4-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0		
1 3 5-Trimethylbenzene	μg/kg 	1	ISO 17025	< 1.0	< 1.0		
tert-Butylbenzene	μg/kg	1	NONE LCO 1700F	< 1.0	< 1.0		
1 2 4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0 < 1.0	 	
sec-Butylbenzene 1,3-Dichlorobenzene	μg/kg μg/kg	1	NONE ISO 17025	< 1.0 < 1.0	< 1.0		
p-Isopropyltoluene	µg/kg µg/kg	1	ISO 17025	< 1.0	< 1.0	1	
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0		
1,4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0		
1,2-Dibromo-3-chloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0	< 1.0		
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	< 1.0		





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Lab Sample Number				459446	459447			
Sample Reference				TP301	TP301			
Sample Number				None Supplied 0.50	None Supplied 2.00			
Depth (m)				24/06/2015	24/06/2015			
Date Sampled Time Taken				1200	1255			
Tille Takell				1200	1200			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs	-		-		=	3	-	-
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1			
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2			
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
1 3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
1 4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
Bis(2-chloroisopropyl)ether 2-Methylphenol	mg/kg mg/kg	0.1	MCERTS MCERTS	< 0.1 < 0.3	< 0.1 < 0.3		 	
2-Metriyiphenoi Hexachloroethane	mg/kg mg/kg	0.05	MCERTS	< 0.3	< 0.3 < 0.05			
Nitrobenzene	mg/kg	0.03	MCERTS	< 0.3	< 0.3		1	
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2			
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
2 4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
2 4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3		•	
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1			
Hexachlorobutadiene 4-Chloro-3-methylphenol	mg/kg	0.1	MCERTS	< 0.1 < 0.1	< 0.1 < 0.1			
2,4,6-Trichlorophenol	mg/kg mg/kg	0.1	NONE MCERTS	< 0.1	< 0.1			
2 4 5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1			
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
Dibenzofuran 4-Chlorophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2 < 0.3	< 0.2 < 0.3			
Diethyl phthalate	mg/kg mg/kg	0.3	ISO 17025 MCERTS	< 0.3	< 0.3			
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2		1	
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		İ	
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	0.42		ļ	
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Carbazole	mg/kg	0.3	MCERTS	< 0.3	< 0.3		.	
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2		-	
Anthraquinone Fluoranthene	mg/kg mg/kg	0.3	MCERTS MCERTS	< 0.3 < 0.10	< 0.3 0.66		 	
Pyrene	mg/kg mg/kg	0.1	MCERTS	< 0.10	0.42			
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.10	< 0.3		1	
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	0.19			
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.27			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		<u> </u>	
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		.	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		<u> </u>	





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

	Sample mber	Sample Reference	Sample Number	Depth (m)	Sample Description *
459	9446	TP301	None Supplied	0.50	White chalk with gravel. **
459	9447	TP301	None Supplied	2.00	Black loam and sand with gravel.

^{**} Non MCerts Matrix





Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
				ISS No 15	- 74369-1





Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
	I Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





Emma Leivers

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i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, **WD18 8YS**

t: 01923 225404 f: 01923 237404

e: reception@i2analytical.com

Analytical Report Number: 15-74368

London Paramount Entertainment Project / Site name:

Resort

Your job number: 30766

Your order number: Analysis completed by: 03/07/2015

Report Issue Number:

Samples Analysed: 1 soil sample

25/06/2015 Samples received on:

Samples instructed on: 26/06/2015

Report issued on: 03/07/2015

Signed:

Dr Claire Stone Quality Manager

For & on behalf of i2 Analytical Ltd.

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





Lab Sample Number				459445				
Sample Reference				WS203				
Sample Number				None Supplied				
Depth (m)				2.25				
Date Sampled				25/06/2015				
Time Taken				1025				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	14				
Total mass of sample received	kg	0.001	NONE	1.2				
					•	•	•	
Asbestos in Soil Screen / Identification Name	Туре	N/A	ISO 17025	Chrysotile				
Asbestos in Soil	Type	N/A	ISO 17025	Detected				
Asbestos Quantification	%	0.001	ISO 17025	0 080				
General Inorganics	pH Units	N/A	MCERTS	12.7		1	ı	
Electrical Conductivity	μS/cm	10	NONE	14000		 		
Total Cyanide	mg/kg	1	MCERTS	< 1				
Complex Cyanide	mg/kg	1	NONE	< 1		 		
Free Cyanide	mg/kg	1	NONE	< 1				
Total Sulphate as SO ₄	mg/kg	50	MCERTS	56000				
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	3.3				
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	3300				
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	1.6		1		
Sulphide	mg/kg	1	MCERTS	< 1.0				
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	1400		1		
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	8.2				
Organic Matter	111g/kg %	0.3	MCERTS	0.4		1		
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0				
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20				
Total Oxidised Nitrogen (TON)	μg/kg mg/kg	5	NONE	< 5.0				
Total Oxidised Nitrogen (TON)	ilig/kg	<u> </u>	NONL	V 3.0		<u> </u>	<u> </u>	
Total Phenois								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0				
Speciated PAHs			-					<u></u>
Naphthalene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10		1		
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10		i	i	
Fluorene	mg/kg	0.1	MCERTS	< 0.10		i	i	
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10		1		
Anthracene	mg/kg	0.1	MCERTS	< 0.10				
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10		1		
Pyrene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10		1		
Chrysene	mg/kg	0.05	MCERTS	< 0.05		1		
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10		1		
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10				
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10				
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05				
Coronene	mg/kg	0.05	NONE	< 0.05		1		
•	<u> </u>					•	•	
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6				
					•	-		





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				459445	1	ı	
•				WS203			
Sample Reference					1		
Sample Number				None Supplied			
Depth (m)				2.25			
Date Sampled				25/06/2015			
Time Taken				1025			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids							
Aluminium (aqua regia extractable)	mg/kg	30	NONE	14000			
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	2.7			
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	5.3			
Barium (aqua regia extractable)	mg/kg	1	MCERTS	59			
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.3			
Boron (water soluble)	mg/kg	0.2	MCERTS	2.1			
Cadmium (agua regia extractable)	mg/kg	0.2	MCERTS	1.8			
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	1		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23	1		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	11			
Iron (agua regia extractable)	mg/kg	40	MCERTS	9700	1		
Lead (aqua regia extractable)	mg/kg	1	MCERTS	40	1		
Manganese (agua regia extractable)	mg/kg	1	MCERTS	210	1		
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3			
Molybdenum (agua regia extractable)	mg/kg	0.25	MCERTS	2.8			
Nickel (agua regia extractable)	mg/kg	1	MCERTS	24	1		
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	450	1		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.2			
Vanadium (agua regia extractable)	mg/kg	1	MCERTS	110	1		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	74			
Calcium (aqua regia extractable)	mg/kg	20	NONE	390000	1		
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	4200	1		
Potassium (aqua regia extractable)	mg/kg	20	NONE	13000			
<u> </u>	mg/kg	20	NONE	13000	!I	<u> </u>	<u></u>
Monoaromatics Benzene	μg/kg	1	MCERTS	< 1.0	1		1
Toluene		1	MCERTS	< 1.0			
Ethylbenzene	μg/kg	1	•	< 1.0			
,	μg/kg	1	MCERTS	< 1.0	-		
p & m-xylene	μg/kg		MCERTS		 		
o-xylene	μg/kg	1	MCERTS	< 1.0	 		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	l l	l	l

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	14		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	220		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	230		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10		





Lab Sample Number				459445				
Sample Reference				WS203				
Sample Number				None Supplied				
Depth (m)				2.25				
Date Sampled				25/06/2015				
Time Taken				1025				
		<u>a</u>	Accreditation Status					
Analytical Parameter	Units	Limit of detection	red Sta					
(Soil Analysis)	iits	it o	itus					
		n f	, E					
VOCs								
Chloromethane	μg/kg	1	ISO 17025	< 1.0				
Chloroethane	μg/kg	1	ISO 17025	< 1.0				
Bromomethane	μg/kg	1	ISO 17025	< 1.0				
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0				
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0				
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0				
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0				
Cis-1,2-dichloroethene MTBE (Methyl Tertiary Butyl Ether)	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0			 	
1,1-Dichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0				
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0				
Trichloromethane	μg/kg	1	MCERTS	< 1.0				
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0				
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0				
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0				
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0				
Benzene Tetrachloromethane	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0				
1,2-Dichloropropane	μg/kg μg/kg	1	MCERTS	< 1.0				
Trichloroethene	μg/kg	1	MCERTS	< 1.0				
Dibromomethane	μg/kg	1	MCERTS	< 1.0				
Bromodichloromethane	μg/kg	1	NONE	< 1.0				
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0				
Trans-1,3-dichloropropene	μg/kg "	1	ISO 17025	< 1.0				
Toluene	μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0				
1,1,2-Trichloroethane 1,3-Dichloropropane	μg/kg μg/kg	1	ISO 17025	< 1.0				
Dibromochloromethane	μg/kg μg/kg	1	ISO 17025	< 1.0				
Tetrachloroethene	μg/kg	1	MCERTS	< 1.0				
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0				
Chlorobenzene	μg/kg	1	MCERTS	< 1.0				
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0				
Ethylbenzene	μg/kg	1	MCERTS	< 1.0				
p & m-Xylene Styrene	μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0				
Tribromomethane	μg/kg μg/kg	1	MCERTS	< 1.0				
o-Xylene	μg/kg	1	MCERTS	< 1.0				
1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0				
Isopropylbenzene	μg/kg	1	NONE	< 1.0				
Bromobenzene	μg/kg	1	MCERTS	< 1.0				
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0				
2-Chlorotoluene	μg/kg	1	NONE	< 1.0				
4-Chlorotoluene 1,3,5-Trimethylbenzene	μg/kg μg/kg	1	NONE ISO 17025	< 1.0 < 1.0				
tert-Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0				
1 2 4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0				
sec-Butylbenzene	μg/kg	1	NONE	< 1.0				
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0				
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0				
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0				
1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0				
Butylbenzene 1,2-Dibromo-3-chloropropane	μg/kg μg/kg	1	NONE ISO 17025	< 1.0 < 1.0			 	
1,2,4-Trichlorobenzene	μg/kg μg/kg	1	MCERTS	< 1.0				
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0				
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0				
					-	-		





				450.445		ı	
Lab Sample Number				459445 W6303			
Sample Reference				WS203			
Sample Number				None Supplied 2.25			
Depth (m)				25/06/2015			
Date Sampled Time Taken				1025			
Time Taken				1023			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs						•	
Aniline	mg/kg	0.1	NONE	< 0.1			
Phenol	mg/kg	0.2	ISO 17025	< 0.2			
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1			
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2			
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1			
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1		1	
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3			
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05			
Nitrobenzene 4 Methylphonel	mg/kg	0.3	MCERTS	< 0.3 < 0.2			
4-Methylphenol Isophorone	mg/kg	0.2	NONE MCERTS	< 0.2			
2-Nitrophenol	mg/kg mg/kg	0.2	MCERTS	< 0.2		1	
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3			
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3			
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3			
Naphthalene	mg/kg	0.05	MCERTS	< 0.05			
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3			
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1			
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1			
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1			
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1			
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2			
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1			
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1			
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1			
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1			
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10			
Acenaphthene 2 4-Dinitrotoluene	mg/kg	0.1	MCERTS MCERTS	< 0.10 < 0.2			
Dibenzofuran	mg/kg mg/kg	0.2	MCERTS	< 0.2			
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3			
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2			
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2			
Fluorene	mg/kg	0.1	MCERTS	< 0.10			
Azobenzene	mg/kg	0.3	MCERTS	< 0.3			
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2			
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3			
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10			
Anthracene	mg/kg	0.1	MCERTS	< 0.10			
Carbazole	mg/kg	0.3	MCERTS	< 0.3			
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2			
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3			
Fluoranthene Pyrene	mg/kg	0.1	MCERTS MCERTS	< 0.10 < 0.10			
Butyl benzyl phthalate	mg/kg	0.1	ISO 17025	< 0.10			
Benzo(a)anthracene	mg/kg mg/kg	0.3	MCERTS	< 0.10			
Chrysene	mg/kg	0.05	MCERTS	< 0.10			
Benzo(b)fluoranthene	mg/kg	0.03	MCERTS	< 0.10			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10			
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05			
		_					





Project / Site name: London Paramount Entertainment Resort

Your Order No:

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

"The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

Any material greater than 16mm is considered as Bulk sample and reported separately, asbestos content (if any) is not included in the final Quantitative analysis. The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
459445	WS203	2.25	91	Insulation Lagging & Loose Fibres	Chrysotile	0.080	0.080

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
459445	WS203	None Supplied	2 25	Beige sandy clay with gravel.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification	The analysis was carried out using documented inhouse method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a diazonium salt which forms chromophore which is	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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25/06/2015

Analytical Report Number: 15-74367

Project / Site name: London Paramount Entertainment Samples received on:

Resort

Your job number: 30766 Samples instructed on: 26/06/2015

Your order number: Analysis completed by: 03/07/2015

Report Issue Number: 1 Report issued on: 03/07/2015

Samples Analysed: 1 soil sample

Signed:

Dr Claire Stone
Quality Manager
For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Iss No 15-74367-1





Lab Sample Number				459441	I		1
Sample Reference				WS202			1
Sample Number				None Supplied			
				0.50	-		
Depth (m)				24/06/2015			
Date Sampled Time Taken				1705			
Time Taken	1	1		1/05			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1			
Moisture Content	%	N/A	NONE	14			
Total mass of sample received	kg	0.001	NONE	2.0			
Total mass of sample received	9	0.001	HOLLE	2.0	1		
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected			
General Inorganics							
	pH Units	N/A	MCEDIC	10.4	ī	T .	1
pH Electrical Conductivity		N/A 10	MCERTS NONE	1300	1	1	
Total Cyanide	μS/cm		MCERTS	1300 < 1	1	1	
,	mg/kg	1					-
Complex Cyanide	mg/kg	1	NONE	< 1			
Free Cyanide Total Sulphate as SO ₄	mg/kg	1 50	NONE MCERTS	< 1 63000			
•	mg/kg						
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	3.6			
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	3600			
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	1.8			
Sulphide	mg/kg	1	MCERTS	< 1.0			
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	49			
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5			
Organic Matter	%	0.1	MCERTS	0.2			
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0			
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20			
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0			
Total Phenois							
Total Phenois (monohydric)	mg/kg	1	MCERTS	< 1.0			
Total Prienois (monoriyunc)	mg/kg	1	MCERTS	< 1.0			
Speciated PAHs							
Naphthalene		0.05	MCERTS	< 0.05	1	1	1
· ·	mg/kg						
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	 -	_	
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10			
Fluorene	mg/kg	0.1	MCERTS	< 0.10			
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10			
Anthracene	mg/kg	0.1	MCERTS	< 0.10			
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10			
Pyrene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10		ļ	
Chrysene	mg/kg	0.05	MCERTS	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10		ļ	
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10			
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05			
Coronene	mg/kg	0.05	NONE	< 0.05			
				_	_	_	
Total PAH							
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6			
		-			-	-	





Lab Sample Number				459441			
Sample Reference				WS202			
Sample Number				None Supplied			
Depth (m)				0.50			
Date Sampled				24/06/2015			
Time Taken				1705			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids							
Aluminium (aqua regia extractable)	mg/kg	30	NONE	13000			
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0			
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	18			
Barium (aqua regia extractable)	mg/kg	1	MCERTS	54			
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.4			
Boron (water soluble)	mg/kg	0.2	MCERTS	2.4			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	3.3			
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	17			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	15			
Iron (aqua regia extractable)	mg/kg	40	MCERTS	9500			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	90			
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	180			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3			
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.8			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	19			
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	430			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	5.5			
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	68			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	65			
				<u> </u>	 	<u> </u>	
Calcium (aqua regia extractable)	mg/kg	20	NONE	380000			
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	3700	 		
Potassium (aqua regia extractable)	mg/kg	20	NONE	2100			





Lab Sample Number				459441			
Sample Reference				WS202			
Sample Number				None Supplied			
Depth (m)	0.50						
Date Sampled	24/06/2015						
Time Taken				1705			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Monoaromatics							
Benzene	μg/kg	1	MCERTS	< 1.0			
Toluene	μg/kg	1	MCERTS	< 1.0			
Ethylbenzene	μg/kg	1	MCERTS	< 1.0			
p & m-xylene	μg/kg	1	MCERTS	< 1.0			
o-xylene	μg/kg	1	MCERTS	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	, and the second		

Petroleum Hydrocarbons						
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	8.6		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	·	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10		





Lab Sample Number				459441		
Sample Reference				WS202		
Sample Number				None Supplied		
Depth (m)				0.50		
Date Sampled				24/06/2015		
Time Taken				1705		
			A			
Analytical Danamaton	_	de	Accreditation Status			
Analytical Parameter	Units	Limit of detection	edi			
(Soil Analysis)	ß	ti of	us tati			
		-	9			
VOCs						<u> </u>
Chloromethane	μg/kg	1	ISO 17025	< 1.0		
Chloroethane	μg/kg	1	ISO 17025	< 1.0		
Bromomethane	μg/kg	1	ISO 17025	< 1.0		
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0		
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0		
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0		
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0		
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0		
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0		
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0		ļ — — — — — — — — — — — — — — — — — — —
Trichloromethane	μg/kg	1	MCERTS	< 1.0		ļ — — — — — — — — — — — — — — — — — — —
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0		
1,2-Dichloroethane 1,1-Dichloropropene	μg/kg	1	MCERTS	< 1.0 < 1.0		
Trans-1,2-dichloroethene	μg/kg	1	NONE NONE	< 1.0		
Benzene	μg/kg μg/kg	1	MCERTS	< 1.0		
Tetrachloromethane	μg/kg μg/kg	1	MCERTS	< 1.0		
1,2-Dichloropropane	μg/kg μg/kg	1	MCERTS	< 1.0		
Trichloroethene	μg/kg	1	MCERTS	< 1.0		
Dibromomethane	μg/kg	1	MCERTS	< 1.0		
Bromodichloromethane	μg/kg	1	NONE	< 1.0		
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0		
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0		
Toluene	μg/kg	1	MCERTS	< 1.0		
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0		
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0		
Dibromochloromethane	μg/kg	1	ISO 17025	< 1.0		
Tetrachloroethene	μg/kg	1	MCERTS	< 1.0		
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0		
Chlorobenzene	μg/kg	1	MCERTS	< 1.0		
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0		
p & m-Xylene	μg/kg	1	MCERTS	< 1.0		
Styrene Tribromomothano	μg/kg	1	MCERTS	< 1.0 < 1.0		
Tribromomethane o-Xylene	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0		
1,1,2,2-Tetrachloroethane	μg/kg μg/kg	1	MCERTS	< 1.0		
Isopropylbenzene	μg/kg μg/kg	1	NONE	< 1.0		
Bromobenzene	μg/kg	1	MCERTS	< 1.0		
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0		
2-Chlorotoluene	μg/kg	1	NONE	< 1.0		
4-Chlorotoluene	μg/kg	1	NONE	< 1.0		
1,3,5-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0		
tert-Butylbenzene	μg/kg	1	NONE	< 1.0		
1 2 4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	 	
sec-Butylbenzene	μg/kg	1	NONE	< 1.0		
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0		
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0		
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0		
1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0		
Butylbenzene	μg/kg	1	NONE	< 1.0		
1,2-Dibromo-3-chloropropane	μg/kg	1	ISO 17025	< 1.0		ļ — — — — — — — — — — — — — — — — — — —
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0		ļ — — — — — — — — — — — — — — — — — — —
Hexachlorobutadiene 1,2,3-Trichlorobenzene	μg/kg	1	NONE NONE	< 1.0 < 1.0		
TIZIO- MICHOLODENZENE	μg/kg	1	INOINE	< 1.0		





Lab Sample Number				459441			
Sample Reference				WS202			
Sample Number				None Supplied			
Depth (m)				0.50			
Date Sampled				24/06/2015			
Time Taken				1705			
		_	Ac				
Analytical Parameter	⊆	Limit of detection	St				
(Soil Analysis)	Units	nit o	dita				
(continuity)	•	of on	Accreditation Status				
SVOCs							
Aniline	mg/kg	0.1	NONE	< 0.1		I	
Phenol	mg/kg	0.2	ISO 17025	< 0.2			
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1			
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2			
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1			
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS MCERTS	< 0.1 < 0.3			
2-Methylphenol Hexachloroethane	mg/kg mg/kg	0.05	MCERTS	< 0.05			
Nitrobenzene	mg/kg	0.03	MCERTS	< 0.3			
4-Methylphenol	mg/kg	0.2	NONE	< 0.2			
Isophorone	mg/kg	0.2	MCERTS	< 0.2			
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3			
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3			
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3			
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3			
Naphthalene 2,4-Dichlorophenol	mg/kg	0.05	MCERTS	< 0.05 < 0.3			
4-Chloroaniline	mg/kg mg/kg	0.3	MCERTS NONE	< 0.3			
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1			
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1			
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1			
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2			
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1			
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1			
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1			
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1			
Acenaphthylene Acenaphthene	mg/kg mg/kg	0.1	MCERTS MCERTS	< 0.10 < 0.10			
2 4-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.10			
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2			
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3			
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2			
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2			
Fluorene	mg/kg	0.1	MCERTS	< 0.10			
Azobenzene	mg/kg	0.3	MCERTS	< 0.3			
Bromophenyl phenyl ether Hexachlorobenzene	mg/kg mg/kg	0.2	MCERTS MCERTS	< 0.2 < 0.3			
Phenanthrene	mg/kg	0.3	MCERTS	< 0.10			
Anthracene	mg/kg	0.1	MCERTS	< 0.10			
Carbazole	mg/kg	0.3	MCERTS	< 0.3			
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2			
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	 		
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10			
Pyrene	mg/kg	0.1	MCERTS	< 0.10			
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3			
Benzo(a)anthracene Chrysene	mg/kg	0.1	MCERTS	< 0.10 < 0.05			
Cnrysene Benzo(b)fluoranthene	mg/kg mg/kg	0.05	MCERTS MCERTS	< 0.05			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10			
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05			





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
459441	WS202	None Supplied	0 50	Beige sand with rubble.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a diazonium salt which forms chromophore which is	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





Emma Leivers

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e: emma.leivers@geoeng.co.uk

i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, **WD18 8YS**

t: 01923 225404 f: 01923 237404

e: reception@i2analytical.com

Analytical Report Number: 15-74366

London Paramount Entertainment Project / Site name:

Resort

Your job number: 30766

Your order number: Analysis completed by: 03/07/2015

Report Issue Number:

Samples Analysed: 1 soil sample

25/06/2015 Samples received on:

Samples instructed on: 26/06/2015

Report issued on: 03/07/2015

Signed:

Dr Claire Stone Quality Manager

For & on behalf of i2 Analytical Ltd.

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





Lab Sample Number				459440				
Sample Reference				TP201				
Sample Number								
Depth (m)				None Supplied 1.00				
				25/06/2015				
Date Sampled Time Taken				0950				
Tille Takeli		1		0950				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	10				
Total mass of sample received	kg	0.001	NONE	2.0				
Total mass of sample received	9	0.001	HOLLE	2.0				
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected				
General Inorganics								
	pH Units	NI/A	MCEDIC	10.9		1	T .	1
pH Electrical Conductivity		N/A 10	MCERTS NONE	10.9 590		1	1	
Total Cyanide	μS/cm		MCERTS	590 < 1		1	1	
,	mg/kg	1				 		
Complex Cyanide	mg/kg	1	NONE	< 1		 	<u> </u>	
Free Cyanide	mg/kg	1 50	NONE MCERTS	< 1 5600		<u> </u>		
Total Sulphate as SO ₄	mg/kg							
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	2.0				
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	2000				
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	1.0				
Sulphide	mg/kg	1	MCERTS	2.4				
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	16				
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5				
Organic Matter	%	0.1	MCERTS	0.9				
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0				
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20				
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0				
Total Phenois								
Total Phenois (monohydric)	ma //s a	1	MCERTS	< 1.0		1	1	1
Total Prienois (monoriyunc)	mg/kg	1	MCERTS	< 1.0		ı		
Speciated PAHs								
Naphthalene		0.05	MCERTS	< 0.05		T	1	1
· ·	mg/kg							
Acenaphthylene	mg/kg	0.1	MCERTS	0.56		1	_	1
Acenaphthene	mg/kg	0.1	MCERTS	0.48		 		
Fluorene	mg/kg	0.1	MCERTS	0.46		<u> </u>		
Phenanthrene	mg/kg	0.1	MCERTS	12		l	1	ļ
Anthracene	mg/kg	0.1	MCERTS	1.4		.		
Fluoranthene	mg/kg	0.1	MCERTS	38		 		
Pyrene	mg/kg	0.1	MCERTS	22		ļ		
Benzo(a)anthracene	mg/kg	0.1	MCERTS	11		Į		
Chrysene	mg/kg	0.05	MCERTS	12				
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	11				
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	7.2				
Benzo(a)pyrene	mg/kg	0.1	MCERTS	5.5				
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	16				
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	3.3				
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	15				
Coronene	mg/kg	0.05	NONE	4.7				
		-	-		-	-	-	
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	160				
-	<u> </u>	•				*		





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				459440	-	
Sample Reference				TP201		
Sample Number				None Supplied		
Depth (m)				1.00		
Date Sampled				25/06/2015		i
Time Taken				0950		i
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status			
Heavy Metals / Metalloids					 	
Aluminium (aqua regia extractable)	mg/kg	30	NONE	18000		
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	15		
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	11		
Barium (aqua regia extractable)	mg/kg	1	MCERTS	750		
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.0		
Boron (water soluble)	mg/kg	0.2	MCERTS	1.6		
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.5		
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	36		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	30		
Iron (aqua regia extractable)	mg/kg	40	MCERTS	25000		
Lead (aqua regia extractable)	mg/kg	1	MCERTS	770		
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	240		
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3		
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	1.0		
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	27		
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	610		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0		
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	74		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	450		
Calcium (aqua regia extractable)	mg/kg	20	NONE	140000		
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	3600		
Potassium (aqua regia extractable)	mg/kg	20	NONE	9100		
Monoaromatics						
Benzene	μg/kg	1	MCERTS	< 1.0		
Toluene	μg/kg	1	MCERTS	< 1.0		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0		_
p & m-xylene	μg/kg	1	MCERTS	< 1.0		
o-xylene	μg/kg	1	MCERTS	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0		

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	40		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	40		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	11		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	120		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	290		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	420		





Lab Sample Number				459440			
Sample Reference	TP201						
Sample Number		None Supplied					
Depth (m)		1.00					
Date Sampled		25/06/2015					
Time Taken	0950						
			À				
Annalistical Property	_	Li de	Accreditation Status				
Analytical Parameter	Units	Limit of detection	edi				
(Soil Analysis)	S	tio of	us tati				
		-	9				
VOCs							
Chloromethane	μg/kg	1	ISO 17025	< 1.0			
Chloroethane	μg/kg	1	ISO 17025	< 1.0			
Bromomethane	μg/kg	1	ISO 17025	< 1.0			
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0			
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0			
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0			
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0			
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	μg/kg "	1	MCERTS	< 1.0			
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0			
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0			
Trichloromethane	μg/kg	1	MCERTS	< 1.0			
1,1,1-Trichloroethane 1,2-Dichloroethane	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0			
1,1-Dichloropropene	μg/kg μg/kg	1	NONE	< 1.0			
Trans-1,2-dichloroethene	μg/kg μg/kg	1	NONE	< 1.0			
Benzene	μg/kg	1	MCERTS	< 1.0			
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0			
1,2-Dichloropropane	μg/kg	1	MCERTS	< 1.0			
Trichloroethene	μg/kg	1	MCERTS	< 1.0			
Dibromomethane	μg/kg	1	MCERTS	< 1.0			
Bromodichloromethane	μg/kg	1	NONE	< 1.0			
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0			
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0			
Toluene	μg/kg	1	MCERTS	< 1.0			
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0			
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0			
Dibromochloromethane	μg/kg	1	ISO 17025	< 1.0			
Tetrachloroethene	μg/kg	1	MCERTS	< 1.0			
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0			
Chlorobenzene	μg/kg	1	MCERTS	< 1.0			
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0			
Ethylbenzene p & m-Xylene	μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0			
Styrene	μg/kg μg/kg	1	MCERTS	< 1.0			
Tribromomethane	μg/kg μg/kg	1	MCERTS	< 1.0			
o-Xylene	μg/kg	1	MCERTS	< 1.0			
1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0			
Isopropylbenzene	μg/kg	1	NONE	< 1.0			
Bromobenzene	μg/kg	1	MCERTS	< 1.0			
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0			
2-Chlorotoluene	μg/kg	1	NONE	< 1.0			
4-Chlorotoluene	μg/kg	1	NONE	< 1.0			
1,3,5-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0			
tert-Butylbenzene	μg/kg	1	NONE	< 1.0			
1 2 4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0			
sec-Butylbenzene	μg/kg	1	NONE	< 1.0		1	
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0			
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0			
1,2-Dichlorobenzene 1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0 < 1.0			
1 4-Dichiorobenzene Butylbenzene	μg/kg	1	MCERTS NONE	< 1.0 < 1.0		1	
1,2-Dibromo-3-chloropropane	μg/kg μg/kg	1	ISO 17025	< 1.0			
1,2,4-Trichlorobenzene	μg/kg μg/kg	1	MCERTS	< 1.0			
Hexachlorobutadiene	μg/kg μg/kg	1	NONE	< 1.0			
1,2,3-Trichlorobenzene	μg/kg μg/kg	1	NONE	< 1.0			
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Lab Sample Number	459440						
Sample Reference		TP201					
Sample Number				None Supplied			
Depth (m)				1.00			
Date Sampled				25/06/2015			
Time Taken	0950						
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs							
Aniline	mg/kg	0.1	NONE	< 0.1			
Phenol	mg/kg	0.2	ISO 17025	< 0.2			
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1			
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2			
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1			
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
Bis(2-chloroisopropyl)ether 2-Methylphenol	mg/kg	0.1	MCERTS MCERTS	< 0.1 < 0.3			
Z-Methylphenol Hexachloroethane	mg/kg mg/kg	0.05	MCERTS	< 0.05			
Nitrobenzene	mg/kg	0.03	MCERTS	< 0.3			
4-Methylphenol	mg/kg	0.2	NONE	< 0.2			
Isophorone	mg/kg	0.2	MCERTS	< 0.2			
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3			
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3			
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3			
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3			
Naphthalene	mg/kg	0.05	MCERTS	< 0.05			
2,4-Dichlorophenol 4-Chloroaniline	mg/kg	0.3	MCERTS	< 0.3 < 0.1			
Hexachlorobutadiene	mg/kg mg/kg	0.1	NONE MCERTS	< 0.1			
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1			
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1			
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2			
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1			
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1			
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1			
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1			
Acenaphthylene	mg/kg	0.1	MCERTS	0.56 0.48			
Acenaphthene 2 4-Dinitrotoluene	mg/kg mg/kg	0.1	MCERTS MCERTS	< 0.2			
Dibenzofuran	mg/kg	0.2	MCERTS	0.7			
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3			
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2			
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2			
Fluorene	mg/kg	0.1	MCERTS	0.46			
Azobenzene	mg/kg	0.3	MCERTS	< 0.3			
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2			
Hexachlorobenzene Phenanthrene	mg/kg mg/kg	0.3	MCERTS MCERTS	< 0.3 12			
Anthracene	mg/kg mg/ka	0.1	MCERTS	1.4			
Carbazole	mg/kg	0.3	MCERTS	< 0.3			
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2			
Anthraquinone	mg/kg	0.3	MCERTS	1.1			
Fluoranthene	mg/kg	0.1	MCERTS	38			
Pyrene	mg/kg	0.1	MCERTS	22			
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3			
Benzo(a)anthracene	mg/kg	0.1	MCERTS	11			
Chrysene Renze/h)fluerenthene	mg/kg	0.05	MCERTS	12			
Benzo(b)fluoranthene Benzo(k)fluoranthene	mg/kg	0.1	MCERTS MCERTS	11 7.2			
Benzo(k)fluorantnene Benzo(a)pyrene	mg/kg mg/kg	0.1	MCERTS	5.5			
Indeno(1,2,3-cd)pyrene	mg/kg mg/kg	0.1	MCERTS	16			
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	3.3			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	15			
S II - I	319			-	-	-	





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
459440	TP201	None Supplied	1 00	Light brown sand with rubble and brick.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

	I I I I I I I I I I I I I I I I I I I	1		1	
Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a diazonium salt which forms chromophore which is	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





Emma Leivers

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e: reception@i2analytical.com

Analytical Report Number: 15-74336

Project / Site name: London Paramount Entertainment Samples received on: 24/06/2015

Resort

Your job number: 30766 Samples instructed on: 26/06/2015

Your order number: Analysis completed by: 03/07/2015

Report Issue Number: 1 Report issued on: 03/07/2015

Samples Analysed: 1 soil sample

Signed:

Dr Claire Stone
Quality Manager
For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Iss No 15-74336-1





Lab Sample Number	459235						
Sample Reference				BH501			
Sample Number				None Supplied			
Depth (m)				7.70			
Date Sampled				23/06/2015			
Time Taken		1550					
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1			
Moisture Content	%	N/A	NONE	11			
Total mass of sample received	kg	0.001	NONE	1.7			
Asbestos in Soil Screen / Identification Name	Туре	N/A	ISO 17025	Chrysotile			
Asbestos in Soil	Туре	N/A	ISO 17025	Detected			
Asbestos Quantification	%	0.001	ISO 17025	< 0.001			
General Inorganics pH	pH Units	N/A	MCERTS	10.5			
Electrical Conductivity	μS/cm	10	NONE	530			
Total Cyanide	mg/kg	1	MCERTS	< 1			
Complex Cyanide	mg/kg	1	NONE	< 1			
Free Cyanide	mg/kg	1	NONE	< 1			
Total Sulphate as SO ₄	mg/kg	50	MCERTS	2500			
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	0.89			
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	890			
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	0.44			
Sulphide	mg/kg	1	MCERTS	1.2			
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	340			
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	13			
Organic Matter	%	0.1	MCERTS	2.6			
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0			
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20			
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0			
Total Phenois							
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0			
Speciated PAHs		0.05		0.05		T	1
Naphthalene Accepabithylope	mg/kg	0.05	MCERTS	< 0.05 < 0.10			
Acenaphthylene Acenaphthene	mg/kg	0.1	MCERTS MCERTS	< 0.10		1	
Fluorene	mg/kg	0.1	MCERTS	< 0.10			
Phenanthrene	mg/kg mg/kg	0.1	MCERTS	1.9		1	
Anthracene	mg/kg	0.1	MCERTS	0.63			
Fluoranthene	mg/kg	0.1	MCERTS	2.2			
Pyrene	mg/kg	0.1	MCERTS	1.9			
Benzo(a)anthracene	mg/kg	0.1	MCERTS	1.1			
Chrysene	mg/kg	0.05	MCERTS	0.92			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	1.1		Ì	
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.48		l	
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.72			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	0.39			
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.41			
Coronene	mg/kg	0.05	NONE	< 0.05			
Total PAH		-	-		_	-	-
Total WAC-17 PAHs	mg/kg	1.6	NONE	12			
	313						





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				459235			
Sample Reference				BH501	 		
Sample Number				None Supplied			
Depth (m)				7.70			
Date Sampled				23/06/2015			
Time Taken		1550					
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	1330			
Heavy Metals / Metalloids							
Aluminium (aqua regia extractable)	mg/kg	30	NONE	5800			
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	2.7			
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	10			
Barium (aqua regia extractable)	mg/kg	1	MCERTS	86			
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.7			
Boron (water soluble)	mg/kg	0.2	MCERTS	1.3			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	1.8			
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	16			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	80			
Iron (aqua regia extractable)	mg/kg	40	MCERTS	16000			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	45			
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	260			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3			
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.9			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	18			
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	500			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0			
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	23			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	93			
Calcium (aqua regia extractable)	mg/kg	20	NONE	310000			
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	2700			
Potassium (aqua regia extractable)	mg/kg	20	NONE	1300			
Monoaromatics							
Benzene	μg/kg	1	MCERTS	< 1.0			
Toluene	μg/kg	1	MCERTS	< 1.0			
Ethylbenzene	μg/kg	1	MCERTS	< 1.0		·	
p & m-xylene	μg/kg	1	MCERTS	< 1.0			
o-xylene	μg/kg	1	MCERTS	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0			

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	1.7		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	3.4		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	12		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	75		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	91		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	4.2		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	15		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	70		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	89		





Lab Sample Number		459235					
Sample Reference				BH501			
Sample Number				None Supplied			
Depth (m)				7.70			
Date Sampled				23/06/2015			
Time Taken				1550			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
(Son Analysis)	S	ig of	atic				
			ĭ				
VOCs							
Chloromethane	μg/kg	1	ISO 17025	< 1.0			
Chloroethane	μg/kg	1	ISO 17025	< 1.0			
Bromomethane	μg/kg	1	ISO 17025	< 1.0			
Vinyl Chloride	µg/kg	1	ISO 17025 ISO 17025	< 1.0 < 1.0			
Trichlorofluoromethane 1,1-Dichloroethene	μg/kg μg/kg	1	MCERTS	< 1.0			
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg μg/kg	1	ISO 17025	< 1.0			
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0			
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0			
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0			
Trichloromethane	μg/kg	1	MCERTS	< 1.0			
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0			
1,2-Dichloroethane	μg/kg 	1	MCERTS	< 1.0			
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0			
Trans-1,2-dichloroethene	μg/kg	1 1	NONE MCERTS	< 1.0 < 1.0			
Benzene Tetrachloromethane	μg/kg μg/kg	1	MCERTS	< 1.0			
1,2-Dichloropropane	μg/kg	1	MCERTS	< 1.0			
Trichloroethene	μg/kg	1	MCERTS	< 1.0			
Dibromomethane	μg/kg	1	MCERTS	< 1.0			
Bromodichloromethane	μg/kg	1	NONE	< 1.0			
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0			
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0			
Toluene	μg/kg	1	MCERTS	< 1.0			
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0			
1,3-Dichloropropane Dibromochloromethane	μg/kg	1	ISO 17025 ISO 17025	< 1.0 < 1.0			
Tetrachloroethene	μg/kg μg/kg	1	MCERTS	< 1.0			
1,2-Dibromoethane	μg/kg μg/kg	1	ISO 17025	< 1.0			
Chlorobenzene	μg/kg	1	MCERTS	< 1.0			
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0			
Ethylbenzene	μg/kg	1	MCERTS	< 1.0			
p & m-Xylene	μg/kg	1	MCERTS	< 1.0			
Styrene	μg/kg	1	MCERTS	< 1.0			
Tribromomethane	μg/kg	1	MCERTS	< 1.0		1	
o-Xylene	μg/kg	1	MCERTS	< 1.0			
1,1,2,2-Tetrachloroethane Isopropylbenzene	μg/kg μα/ka	1	MCERTS NONE	< 1.0 < 1.0			
Bromobenzene	μg/kg μg/kg	1	MCERTS	< 1.0			
n-Propylbenzene	μg/kg μg/kg	1	ISO 17025	< 1.0			
2-Chlorotoluene	μg/kg	1	NONE	< 1.0			
4-Chlorotoluene	μg/kg	1	NONE	< 1.0			
1,3,5-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0			
tert-Butylbenzene	μg/kg	1	NONE	< 1.0			
1 2 4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0			
sec-Butylbenzene	μg/kg	1	NONE	< 1.0		1	
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0			
p-Isopropyltoluene 1,2-Dichlorobenzene	μg/kg μg/kg	1	ISO 17025 MCERTS	< 1.0 < 1.0		1	
1,2-Dichlorobenzene 1 4-Dichlorobenzene	µg/кg µg/kg	1	MCERTS	< 1.0			
Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0			
1,2-Dibromo-3-chloropropane	μg/kg μg/kg	1	ISO 17025	< 1.0			
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0			
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0			
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0			





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Lab Sample Number				459235			
Sample Reference				BH501			
Sample Number				None Supplied 7.70			
Depth (m) Date Sampled				23/06/2015			
Time Taken				1550			
			-	1550			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs				L			
Aniline	mg/kg	0.1	NONE	< 0.1			
Phenol	mg/kg	0.2	ISO 17025	< 0.2			
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1			
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2			
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1			
1,4-Dichlorobenzene Bis(2-chloroisopropyl)ether	mg/kg	0.2	MCERTS	< 0.2 < 0.1			
2-Methylphenol	mg/kg mg/kg	0.1	MCERTS MCERTS	< 0.1			
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05			
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3			
4-Methylphenol	mg/kg	0.2	NONE	< 0.2			
Isophorone	mg/kg	0.2	MCERTS	< 0.2			
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3			
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3			
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3			
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3			
Naphthalene	mg/kg	0.05	MCERTS	< 0.05			
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3			
4-Chloroaniline Hexachlorobutadiene	mg/kg	0.1	NONE MCERTS	< 0.1 < 0.1			
4-Chloro-3-methylphenol	mg/kg mg/kg	0.1	NONE	< 0.1			
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1			
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2			
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1			
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1			
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1			
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1			
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10			
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10			
2 4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2			
Dibenzofuran 4-Chlorophenyl phenyl ether	mg/kg	0.2	MCERTS ISO 17025	< 0.2 < 0.3			
Diethyl phthalate	mg/kg mg/kg	0.3	MCERTS	< 0.2			
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2			
Fluorene	mg/kg	0.1	MCERTS	< 0.10			
Azobenzene	mg/kg	0.3	MCERTS	< 0.3			
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2			
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3		 	
Phenanthrene	mg/kg	0.1	MCERTS	1.9			
Anthracene	mg/kg	0.1	MCERTS	0.63			
Carbazole	mg/kg	0.3	MCERTS	< 0.3		1	
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2			
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3			
Fluoranthene Pyrene	mg/kg mg/kg	0.1	MCERTS MCERTS	2.2 1.9			
Butyl benzyl phthalate	mg/kg	0.1	ISO 17025	< 0.3			
Benzo(a)anthracene	mg/kg	0.1	MCERTS	1.1			
Chrysene	mg/kg	0.05	MCERTS	0.92			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	1.1			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.48			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.72		 	
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	0.39		<u> </u>	
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.41			





Project / Site name: London Paramount Entertainment Resort

Your Order No:

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

"The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

Any material greater than 16mm is considered as Bulk sample and reported separately, asbestos content (if any) is not included in the final Quantitative analysis. The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
459235	BH501	7.70	101	Loose Fibres	Chrysotile	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
459235	BH501	None Supplied	7.70	Grey loam and sand with gravel.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification	The analysis was carried out using documented inhouse method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a diazonium salt which forms chromophore which is	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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Analytical Report Number: 15-74331

Project / Site name: London Paramount Entertainment

Resort

Your job number: 30766

Your order number: Analysis completed by:

Report Issue Number: 1

Samples Analysed: 2 soil samples

Samples received on: 24/06/2015

Samples instructed on:

03/07/2015

26/06/2015

Report issued on:

03/07/2015

Signed:

Dr Claire Stone Quality Manager

For & on behalf of i2 Analytical Ltd.

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





Lab Sample Number				459219	459220		
Sample Reference				WS101	WS101		
Sample Number				None Supplied	None Supplied		
Depth (m)				1.00	3.70		
Date Sampled				23/06/2015	23/06/2015		
Time Taken				1630	1535		
Tille Takeli				1030	1333		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	18	14		
Total mass of sample received	kg	0.001	NONE	1.6	1.5		
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Not-detected		
Comment Incomments							
General Inorganics	a1111a3+	NI/A	MCEDIC	0.0	12.4	1	1
pH Electrical Conductivity	pH Units	N/A	MCERTS	8.8	12.4	 	
Electrical Conductivity	μS/cm	10	NONE	2200	27000	+	
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1		
Complex Cyanide	mg/kg	1	NONE	< 1	< 1	1	
Free Cyanide	mg/kg	1 50	NONE	< 1	< 1		
Total Sulphate as SO ₄	mg/kg	50	MCERTS	46000	86000		
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	4.8	15		
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	4800	15000		
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0 00125	MCERTS	2.4	7.5		
Sulphide	mg/kg	1	MCERTS	1.7	1.4		
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	93	3700		
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	4.4		
Organic Matter	%	0.1	MCERTS	0.6	0.3		
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	< 2.0		
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20	220		
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0	< 5.0		
Total Phenols							
Total Phenois (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0		
Total Friends (monoriyane)	ilig/kg	11	MCER 13	< 1.0	< 1.0		
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	1	
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	1	
Anthracene		0.1	MCERTS	< 0.10	< 0.10	1	
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	1	
	mg/kg					+	-
Pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	1	
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	1	
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1	
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	1	
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	1	1
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	1	1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	1	1
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	_	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	 	
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	<u> </u>	
Total PAH							
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6	< 1.6		
•							-





Project / Site name: London Paramount Entertainment Resort

Lab Cample Number				450210	450000	T	1
Lab Sample Number				459219	459220		
Sample Reference				WS101	WS101		
Sample Number				None Supplied	None Supplied		
Depth (m)				1.00	3.70		
Date Sampled		23/06/2015	23/06/2015				
Time Taken	_			1630	1535		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids	-		•		•	-	
Aluminium (aqua regia extractable)	mg/kg	30	NONE	16000	19000		
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	3.0	3.3		
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	25	35		
Barium (aqua regia extractable)	mg/kg	1	MCERTS	88	81		
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.8	0.7		
Boron (water soluble)	mg/kg	0.2	MCERTS	11	4.9		
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	6.9	8.3		
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	20	28		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	65	100		
Iron (aqua regia extractable)	mg/kg	40	MCERTS	15000	15000		
Lead (aqua regia extractable)	mg/kg	1	MCERTS	450	430		
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	190	190		
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3		
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.5	2.5		
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	17	12		
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	400	390		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	6.5	5.5		
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	29	27		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	290	340		
F							,
Calcium (aqua regia extractable)	mg/kg	20	NONE	360000	310000		
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	3900	3400		
Potassium (aqua regia extractable)	mg/kg	20	NONE	8000	53000		
Monoaromatics						 	
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
p & m-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0		
o-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0		

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	30	< 8.0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	30	< 10		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10		





Lab Sample Number		459219	459220				
Sample Reference				WS101	WS101		
Sample Number				None Supplied	None Supplied		
Depth (m)				1.00	3.70		
Date Sampled				23/06/2015	23/06/2015		
Time Taken				1630	1535		
		_	Ac				
Analytical Parameter	_	Limit of detection	Accreditation Status				
(Soil Analysis)	Units	ect:	atu				
(Soli Alialysis)	vi	of of	atio				
			Š				
VOCs						•	
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Chloroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Bromomethane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Vinyl Chloride Trichlorofluoromethane	μg/kg	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0		
1,1-Dichloroethene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0		
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0		
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0	< 1.0		
Trichloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
1 2-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0	< 1.0		
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0	< 1.0		
Benzene	μg/kg 	1	MCERTS	< 1.0	< 1.0		
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
1 2-Dichloropropane	μg/kg	1	MCERTS	< 1.0 < 1.0	< 1.0		
Trichloroethene Dibromomethane	μg/kg	1	MCERTS MCERTS	< 1.0	< 1.0 < 1.0		
Bromodichloromethane	μg/kg μg/kg	1	NONE	< 1.0	< 1.0		
Cis-1,3-dichloropropene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0		
Trans-1 3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Dibromochloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Tetrachloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0	< 1.0		
Chlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
1,1,1,2-Tetrachloroethane	μg/kg 	1	NONE	< 1.0	< 1.0		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
p & m-Xylene Styrene	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 1.0 < 1.0		
Tribromomethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0		
o-Xylene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	†	
1,1,2,2-Tetrachloroethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	İ	
Isopropylbenzene	μg/kg	1	NONE	< 1.0	< 1.0		
Bromobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0		
2-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0		
4-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0		
1 3 5-Trimethylbenzene	μg/kg 	1	ISO 17025	< 1.0	< 1.0		
tert-Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	ļ	
1,2,4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0		
sec-Butylbenzene	μg/kg	1	NONE ISO 1702E	< 1.0	< 1.0		
1,3-Dichlorobenzene p-Isopropyltoluene	μg/kg	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	 	
p-isopropyitoluene 1,2-Dichlorobenzene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	 	
1,4-Dichlorobenzene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0		
Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	1	
1,2-Dibromo-3-chloropropane	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	1	
1 2 4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0		
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0	< 1.0		
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	< 1.0		
		_			_		





Sample Number Popth (m) None Supplied	Lab Sample Number		459219	459220	l	1			
1,00 3.70	Sample Reference								
Date Sampled	Sample Number				None Supplied	None Supplied			
Second	Depth (m)								
Analytical Parameter									
Note	Time Taken	1			1630	1535			
Note	Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Phenol	SVOCs					<u> </u>	8	<u> </u>	
March Marc	Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1			
SR2 2-tion/order/yether	Phenol								
1,3-Dictrobenence									
J.4. Dictinorbenzene									
Big2_chronicopropylether									
Hearthirocethane	Bis(2-chloroisopropyl)ether								
Nitrobenzene	2-Methylphenol								
Hebrytyhenel mg/kg Q.2 NONE C.0.2 C.2									
Sophorone								<u> </u>	
2-Mirophenol									
2.4-Dimethylphenol mg/kg 0.3 MCRTS < 0.3 < 0.3									
1,2,4-Trichlorobenzene	2,4-Dimethylphenol								
Naphthalene			0.3	MCERTS	< 0.3	< 0.3			
24-Dichlorophenol		mg/kg							
AChicroalline									
Hexachirorbutadiene									
AChioro-methylphenol									
2.4,6-Trichlorophenol mg/kg 0.1 MCERTS < 0.1 < 0.1 < 0.1									
24 S-Trichlorophenol mg/kg 0.2 MCERTS < 0.2 < 0.2 < 0.2									
2-Chioronaphthalene	2 4 5-Trichlorophenol		0.2	MCERTS	< 0.2	< 0.2			
Dimethylphthalate	2-Methylnaphthalene								
2,6-Dinitrotoluene mg/kg 0.1 MCERTS < 0.1 < 0.1 Acenaphthylene mg/kg 0.1 MCERTS < 0.10									
Acenaphthylene mg/kg 0.1 MCERTS < 0.10 < 0.10 Acenaphthene mg/kg 0.1 MCERTS < 0.10									
Acenaphthene mg/kg 0.1 MCERTS < 0.10 < 0.10 Z,4-Dinitrotoluene mg/kg 0.2 MCERTS < 0.2 < 0.2									
2,4-Dinitrotoluene mg/kg 0.2 MCERTS < 0.2 < 0.2 Dibenzofuran mg/kg 0.2 MCERTS < 0.2									
A-Chlorophenyl phenyl ether mg/kg 0.3 ISO 17025 < 0.3 < 0.3 < 0.3	2,4-Dinitrotoluene								
Diethyl phthalate mg/kg 0.2 MCERTS < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 <	Dibenzofuran	mg/kg	0.2	MCERTS					
## A-Nitroaniline mg/kg 0.2 MCERTS < 0.2 < 0.2	4-Chlorophenyl phenyl ether								
Fluorene									
Azobenzene mg/kg 0.3 MCERTS < 0.3 < 0.3								 	
Bromophenyl phenyl ether								 	
Mexachlorobenzene mg/kg 0.3 MCERTS < 0.3 < 0.3	Bromophenyl phenyl ether								
Anthracene mg/kg 0.1 MCERTS < 0.10 < 0.10 Carbazole mg/kg 0.3 MCERTS < 0.3	Hexachlorobenzene				< 0.3	< 0.3			
Carbazole mg/kg 0.3 MCERTS < 0.3 < 0.3 Dibutyl phthalate mg/kg 0.2 MCERTS < 0.2	Phenanthrene								
Dibutyl phthalate mg/kg 0.2 MCERTS < 0.2 < 0.2 Anthraquinone mg/kg 0.3 MCERTS < 0.3	Anthracene							<u> </u>	
Anthraquinone mg/kg 0.3 MCERTS < 0.3 < 0.3 Fluoranthene mg/kg 0.1 MCERTS < 0.10 < 0.10 Pyrene mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.3 ISO 17025 < 0.3 < 0.3 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.10 Elevatoryl phthalate mg/kg 0.1 MCERTS < 0.								 	
Fluoranthene mg/kg 0.1 MCERTS < 0.10 < 0.10								 	
Pyrene mg/kg 0.1 MCERTS < 0.10 < 0.10 Butyl benzyl phthalate mg/kg 0.3 ISO 17025 < 0.3	Fluoranthene							1	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Pyrene								
Chrysene mg/kg 0.05 MCERTS < 0.05 < 0.05 Benzo(b)fluoranthene mg/kg 0.1 MCERTS < 0.10	Butyl benzyl phthalate								
Benzo(b)fluoranthene mg/kg 0.1 MCERTS < 0.10 < 0.10 Benzo(k)fluoranthene mg/kg 0.1 MCERTS < 0.10	Benzo(a)anthracene								
Benzo(k)fluoranthene mg/kg 0.1 MCERTS < 0.10 < 0.10 Benzo(a)pyrene mg/kg 0.1 MCERTS < 0.10								<u> </u>	
Benzo(a)pyrene mg/kg 0.1 MCERTS < 0.10 < 0.10 Indeno(1,2,3-cd)pyrene mg/kg 0.1 MCERTS < 0.10								-	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$								 	
Dibenz(a h)anthracene mg/kg 0.1 MCERTS < 0.10 < 0.10	Indeno(1,2,3-cd)pyrene							1	
	Dibenz(a h)anthracene								
	Benzo(ghi)perylene		0.05	MCERTS	< 0.05	< 0.05			





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
459219	WS101	None Supplied	1 00	Grey sandy loam with vegetation.
459220	WS101	None Supplied	3.70	Grey clay and sand.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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Analytical Report Number: 15-74330

Project / Site name: London Paramount Entertainment Samples received on: 24/06/2015

Resort

Your job number: 30766 Samples instructed on: 26/06/2015

Your order number: 03/07/2015

Report Issue Number: 1 Report issued on: 03/07/2015

Samples Analysed: 1 soil sample

Signed:

Dr Claire Stone Quality Manager

For & on behalf of i2 Analytical Ltd.

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





Lab Sample Number				459218	I			
Sample Reference				BH203				
Sample Number				None Supplied				
Depth (m)				0.50				
				23/06/2015				
Date Sampled Time Taken								
Tille Takeli		1		1650				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				1
Moisture Content	%	N/A	NONE	9.2				
Total mass of sample received	kg	0.001	NONE	1.4				
Total mass of sample received	Кg	0.001	HOHE	1				
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected				
General Inorganics								
	pH Units	N/A	MCEDIC	8.1	1	1	T .	1
pH Electrical Conductivity		N/A 10	MCERTS NONE	8.1 1700	1	1	1	
Total Cyanide	μS/cm		MCERTS	1700 < 1	1	1	1	
,	mg/kg	1				 		
Complex Cyanide	mg/kg	1	NONE	< 1		 	<u> </u>	
Free Cyanide	mg/kg	1 50	NONE MCERTS	< 1 16000		1		
Total Sulphate as SO ₄	mg/kg							
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	3.5				
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	3500				
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	1.7				
Sulphide	mg/kg	1	MCERTS	4.5				
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	41				
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5				
Organic Matter	%	0.1	MCERTS	1.5				
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0				
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20				
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0				
Total Phenois								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	I		1	I
Total Friends (monoriyane)	ilig/kg		MCLKIS	₹ 1.0	I		<u> </u>	
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	0.14				
Acenaphthylene		0.03	MCERTS	< 0.10				
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	1	1	+	1
Fluorene	mg/kg	0.1	MCERTS	< 0.10		1	1	
	mg/kg					 		
Phenanthrene	mg/kg	0.1	MCERTS	0.82 0.10		 		
Anthracene	mg/kg	0.1	MCERTS			 		
Fluoranthene	mg/kg	0.1	MCERTS	1.2	<u> </u>	 	1	
Pyrene	mg/kg	0.1	MCERTS	1.0	ļ	<u> </u>	1	1
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.75		.		
Chrysene	mg/kg	0.05	MCERTS	0.41		.		
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	0.60		ļ		
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.42		<u> </u>	ļ	
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.53		<u> </u>	ļ	
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	0.25		Į	ļ	
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10		Į	ļ	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.30				
Coronene	mg/kg	0.05	NONE	< 0.05				
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	6.5				
		•	-		-	-	-	-





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				459218			
Sample Reference				BH203			
Sample Number				None Supplied			
Depth (m)				0.50			
Date Sampled				23/06/2015	1		
Time Taken				1650			
Tille Takell	1		 	1050			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids							
Aluminium (aqua regia extractable)	mg/kg	30	NONE	9500			
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	3.2			
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	8.8			
Barium (aqua regia extractable)	mg/kg	1	MCERTS	82			
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.6			
Boron (water soluble)	mg/kg	0.2	MCERTS	2.7			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.4			
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	i i		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	21	i i		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	59			
Iron (agua regia extractable)	mg/kg	40	MCERTS	19000	i i		
Lead (aqua regia extractable)	mg/kg	1	MCERTS	52			
Manganese (agua regia extractable)	mg/kg	1	MCERTS	360			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3			
Molybdenum (agua regia extractable)	mg/kg	0.25	MCERTS	0.9			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	17			
Phosphorus (agua regia extractable)	mg/kg	20	NONE	990			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	i i		
Vanadium (agua regia extractable)	mg/kg	1	MCERTS	31	i i		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	100			
Calcium (agua ragia aytractable)		20	NONE	340000]	Ī	ı
Calcium (aqua regia extractable)	mg/kg	20	NONE 150 17025		 		
Magnesium (aqua regia extractable)	mg/kg	20 20	ISO 17025	3100	 		
Potassium (aqua regia extractable)	mg/kg	20	NONE	2800	<u> </u>		
Monoaromatics							
Benzene	μg/kg	1	MCERTS	< 1.0			
Toluene	μg/kg	1	MCERTS	< 1.0			
Ethylbenzene	μg/kg	1	MCERTS	< 1.0			
p & m-xylene	μg/kg	1	MCERTS	< 1.0			
o-xylene	μg/kg	1	MCERTS	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0			

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6

mg/kg	0.1	MCERTS	< 0.1				
mg/kg	0.1	MCERTS	< 0.1				
mg/kg	1	MCERTS	< 1.0				
mg/kg	2	MCERTS	3.0				
mg/kg	8	MCERTS	< 8.0				
mg/kg	8	MCERTS	32				
mg/kg	10	MCERTS	35				
mg/kg	0.1	MCERTS	< 0.1				
mg/kg	0.1	MCERTS	< 0.1				
mg/kg	0.1	MCERTS	< 0.1				
mg/kg	1	MCERTS	< 1.0				
mg/kg	2	MCERTS	< 2.0				
mg/kg	10	MCERTS	< 10				
mg/kg	10	MCERTS	16	_			
ma/ka	10	MCERTS	16				
	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	mg/kg 0.1 mg/kg 1 mg/kg 2 mg/kg 8 mg/kg 8 mg/kg 10 mg/kg 0.1 mg/kg 0.1 mg/kg 0.1 mg/kg 1.1 mg/kg 1.1 mg/kg 1.1 mg/kg 1.1 mg/kg 1.1 mg/kg 1.1 mg/kg 1.1 mg/kg 1.1 mg/kg 1.1	mg/kg 0.1 MCERTS mg/kg 1 MCERTS mg/kg 2 MCERTS mg/kg 8 MCERTS mg/kg 8 MCERTS mg/kg 10 MCERTS mg/kg 0.1 MCERTS mg/kg 0.1 MCERTS mg/kg 1 MCERTS mg/kg 2 MCERTS mg/kg 10 MCERTS mg/kg 10 MCERTS mg/kg 10 MCERTS	mg/kg 0.1 MCERTS < 0.1	mg/kg 0.1 MCERTS < 0.1	mg/kg 0.1 MCERTS < 0.1	mg/kg 0.1 MCERTS < 0.1

< 0.1

MCERTS

mg/kg





Lab Sample Number		459218					
Sample Reference				BH203			
Sample Number				None Supplied			
Depth (m)				0.50			
Date Sampled				23/06/2015			
Time Taken				1650			
		de L	Accreditation Status				
Analytical Parameter	Units	imi	redi				
(Soil Analysis)	its	Limit of detection	tus				
		5 "	ġ				
VOCs							
Chloromethane	μg/kg	1	ISO 17025	< 1.0	I	I	
Chloroethane	μg/kg	1	ISO 17025	< 1.0			
Bromomethane	μg/kg	1	ISO 17025	< 1.0			
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0			
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0			
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0			
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0			
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	μg/kg "	1	MCERTS	< 1.0			
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0		1	
2,2-Dichloropropane	μg/kg	1	NONE MCERTS	< 1.0 < 1.0			
Trichloromethane	μg/kg	1		< 1.0 < 1.0			
1,1,1-Trichloroethane 1,2-Dichloroethane	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0		1	
1,1-Dichloropropene	μg/kg μg/kg	1	NONE	< 1.0			
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0			
Benzene	μg/kg	1	MCERTS	< 1.0			
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0			
1,2-Dichloropropane	μg/kg	1	MCERTS	< 1.0			
Trichloroethene	μg/kg	1	MCERTS	< 1.0			
Dibromomethane	μg/kg	1	MCERTS	< 1.0			
Bromodichloromethane	μg/kg	1	NONE	< 1.0			
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0			
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0			
Toluene	μg/kg	1	MCERTS	< 1.0			
1,1,2-Trichloroethane	μg/kg	1	MCERTS ISO 17025	< 1.0			
1,3-Dichloropropane Dibromochloromethane	μg/kg μg/kg	1	ISO 17025	< 1.0 < 1.0			
Tetrachloroethene	μg/kg μg/kg	1	MCERTS	< 1.0			
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0			
Chlorobenzene	μg/kg	1	MCERTS	< 1.0			
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0			
Ethylbenzene	μg/kg	1	MCERTS	< 1.0			
p & m-Xylene	μg/kg	1	MCERTS	< 1.0			
Styrene	μg/kg	1	MCERTS	< 1.0			
Tribromomethane	μg/kg "	1	MCERTS	< 1.0			
o-Xylene	μg/kg	1	MCERTS	< 1.0			
1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0			
Isopropylbenzene Bromobenzene	μg/kg μg/kg	1	NONE MCERTS	< 1.0 < 1.0		1	
. Down the conservation	µg/кg µg/kg	1	700 47005	< 1.0			
n-Propylbenzene 2-Chlorotoluene	μg/kg μg/kg	1	NONE	< 1.0			
4-Chlorotoluene	μg/kg	1	NONE	< 1.0			
1,3,5-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0			
tert-Butylbenzene	μg/kg	1	NONE	< 1.0			
1 2 4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0			
sec-Butylbenzene	μg/kg	1	NONE	< 1.0]	
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0			
p-Isopropyltoluene	μg/kg "	1	ISO 17025	< 1.0			
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0		1	
1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0			
Butylbenzene	μg/kg	1	NONE ISO 17025	< 1.0			
1,2-Dibromo-3-chloropropane 1,2,4-Trichlorobenzene	μg/kg μg/kg	1	MCERTS	< 1.0 < 1.0		1	
Hexachlorobutadiene	μg/kg μg/kg	1	NONE	< 1.0			
1,2,3-Trichlorobenzene	μg/kg μg/kg	1	NONE	< 1.0			
-,-,	P3/19			. 1.0			





Lab Sample Number		459218	I				
Sample Reference				BH203			
Sample Number				None Supplied			
Depth (m)				0.50			
Date Sampled				23/06/2015			
Time Taken				1650			
			>	_,,,			
		de L	Accreditation Status				
Analytical Parameter	Units	Limit of detection	edi				
(Soil Analysis)	its	tio	tat				
		5 "	ion				
SVOCs			_				
Aniline	mg/kg	0.1	NONE	< 0.1			
Phenol	mg/kg	0.1	ISO 17025	< 0.2			
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1			
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2			
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1			
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1			
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3			
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05			
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3			
4-Methylphenol	mg/kg	0.2	NONE	< 0.2			
Isophorone	mg/kg	0.2	MCERTS	< 0.2			
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3			
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3			
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3			
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3			
Naphthalene	mg/kg	0.05	MCERTS	0.14			
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3			
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1			
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1			
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1			
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1			
2,4,5-Trichlorophenol 2-Methylnaphthalene	mg/kg	0.2	MCERTS NONE	< 0.2 < 0.1			
2-Chloronaphthalene	mg/kg mg/kg	0.1	MCERTS	< 0.1			
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1			
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1			
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10			
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10			
2 4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2			
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2			
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3			
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2			
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2			
Fluorene	mg/kg	0.1	MCERTS	< 0.10			
Azobenzene	mg/kg	0.3	MCERTS	< 0.3			
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2			
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3			
Phenanthrene	mg/kg	0.1	MCERTS	0.82			
Anthracene	mg/kg	0.1	MCERTS	0.10			
Carbazole	mg/kg	0.3	MCERTS	< 0.3			
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2			
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3			
Fluoranthene	mg/kg	0.1	MCERTS	1.2			
Pyrene Butyl benzyl phthalate	mg/kg	0.1	MCERTS	1.0 < 0.3	1		
Benzo(a)anthracene	mg/kg mg/kg	0.3	ISO 17025 MCERTS	< 0.3 0.75			
Chrysene	mg/kg	0.05	MCERTS	0.75			
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.60			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.42			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.53			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	0.25			
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.30			
15 11 · 1 · ·	JI 3				-	•	





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
459218	BH203	None Supplied	0 50	Light grey loam and sand with gravel.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a diazonium salt which forms chromophore which is	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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Analytical Report Number: 15-74185

London Paramount Entertainment Project / Site name:

Resort

Your job number: 30766

Your order number: Analysis completed by:

Report Issue Number:

Samples Analysed: 2 soil samples

23/06/2015 Samples received on:

Samples instructed on: 24/06/2015

01/07/2015

Report issued on: 01/07/2015

Signed:

Dr Claire Stone Quality Manager

For & on behalf of i2 Analytical Ltd.

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting - 2 weeks from reporting asbestos - 6 months from reporting

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Lab Sample Number	ab Sample Number						
Sample Reference				BH501	BH501		
Sample Number				None Supplied	None Supplied		
Depth (m)				3.00	5.50		
Date Sampled				22/06/2015	22/06/2015		
Time Taken				1415	1545		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	22	16		
Total mass of sample received	kg	0.001	NONE	2.0	2.0		
	9						
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected		
General Inorganics	1	N// A		44.4	1 42.2	1	1
pH	pH Units	N/A	NONE	11.4	11.1	1	
Electrical Conductivity	μS/cm	10	NONE	1200	950		
Total Cyanide	mg/kg	1	NONE	< 1	< 1		
Complex Cyanide	mg/kg	1	NONE	< 1	< 1		
Free Cyanide Total Sulphate as SO ₄	mg/kg	1 50	NONE NONE	< 1 2000	< 1 1600		
	mg/kg						
Water Soluble Sulphate (Soil Equivalent)	g/l mg/kg	0.0025 2.5	NONE NONE	1.3 1300	0.80 800	!	
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg						
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	NONE	0.67	0.40		
Sulphide	mg/kg	1	NONE	< 1.0	< 1.0		
Water Soluble Chloride (2:1)	mg/kg	1	NONE	700	820		
Ammoniacal Nitrogen as N	mg/kg	0.5	NONE	0.8	4.2		
Organic Matter	%	0.1	NONE	0.4	< 0.1		
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	< 2.0		
Water Soluble Nitrite (2:1) as N Total Oxidised Nitrogen (TON)	μg/kg mg/kg	20 5	NONE NONE	< 20 < 5.0	< 20 < 5.0		
Total Phenois	mg/kg		NONE	V 5.0	V 3.0		<u> </u>
Total Phenols (monohydric)	mg/kg	1	NONE	< 1.0	< 1.0		
Total Frictions (monorityarie)	mg/kg		NONE	V 1.0	V 1.0		
Speciated PAHs							
Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05		
Acenaphthylene	mg/kg	0.1	NONE	< 0.10	< 0.10		
Acenaphthene	mg/kg	0.1	NONE	< 0.10	< 0.10		
Fluorene	mg/kg	0.1	NONE	< 0.10	< 0.10		1
Phenanthrene	mg/kg	0.1	NONE	< 0.10	< 0.10		
Anthracene	mg/kg	0.1	NONE	< 0.10	< 0.10		
Fluoranthene	mg/kg	0.1	NONE	< 0.10	< 0.10		
Pyrene	mg/kg	0.1	NONE	< 0.10	< 0.10		
Benzo(a)anthracene	mg/kg	0.1	NONE	< 0.10	< 0.10		
Chrysene	mg/kg	0.05	NONE	< 0.05	< 0.05		
Benzo(b)fluoranthene	mg/kg	0.1	NONE	< 0.10	< 0.10		
Benzo(k)fluoranthene	mg/kg	0.1	NONE	< 0.10	< 0.10		
Benzo(a)pyrene	mg/kg	0.1	NONE	< 0.10	< 0.10		
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	NONE	< 0.10	< 0.10		
Dibenz(a,h)anthracene	mg/kg	0.1	NONE	< 0.10	< 0.10	-	
Benzo(ghi)perylene	mg/kg	0.05	NONE	< 0.05	< 0.05	!	
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	I .	<u> </u>
Total PAH							
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6	< 1.6		
TOTAL WITCH TAILING	mg/kg	1.0	INOINE	× 1.0	` 1.0	 	<u> </u>





Project / Site name: London Paramount Entertainment Resort

							_
Lab Sample Number				458272	458273		
Sample Reference				BH501	BH501		
Sample Number				None Supplied	None Supplied		
Depth (m)				3.00	5.50		
Date Sampled				22/06/2015	22/06/2015		
Time Taken				1415	1545		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids							
Aluminium (aqua regia extractable)	mg/kg	30	NONE	1400	1500		
Antimony (aqua regia extractable)	mg/kg	1	NONE	< 1.0	< 1.0		
Arsenic (aqua regia extractable)	mg/kg	1	NONE	2.2	< 1.0		
Barium (aqua regia extractable)	mg/kg	1	NONE	29	31		
Beryllium (aqua regia extractable)	mg/kg	0.06	NONE	< 0.1	< 0.1		
Boron (water soluble)	mg/kg	0.2	NONE	0.7	0.9		
Cadmium (aqua regia extractable)	mg/kg	0.2	NONE	0.3	< 0.2		
Chromium (hexavalent)	mg/kg	4	NONE	< 4.0	< 4.0		
Chromium (aqua regia extractable)	mg/kg	1	NONE	11	9.2		
Copper (aqua regia extractable)	mg/kg	1	NONE	3.5	5.9		
Iron (aqua regia extractable)	mg/kg	40	NONE	1400	1700		
Lead (aqua regia extractable)	mg/kg	1	NONE	2.9	4.6		
Manganese (aqua regia extractable)	mg/kg	1	NONE	200	210		
Mercury (aqua regia extractable)	mg/kg	0.3	NONE	< 0.3	< 0.3		
Molybdenum (aqua regia extractable)	mg/kg	0.25	NONE	< 0.3	< 0.3		
Nickel (aqua regia extractable)	mg/kg	1	NONE	8.4	7.1		
Phosphorus (agua regia extractable)	mg/kg	20	NONE	370	380		
Selenium (aqua regia extractable)	mg/kg	1	NONE	1.6	< 1.0		
Vanadium (aqua regia extractable)	mg/kg	1	NONE	5.8	6.0		
Zinc (aqua regia extractable)	mg/kg	1	NONE	16	19		
Calcium (aqua regia extractable)	mg/kg	20	NONE	430000	460000		
Magnesium (aqua regia extractable)	mg/kg	20	NONE	2300	2100		
Potassium (aqua regia extractable)	mg/kg	20	NONE	330	370		
Monoaromatics							
Benzene	μg/kg	1	NONE	< 1.0	< 1.0		
Toluene	μg/kg	1	NONE	< 1.0	< 1.0		
Ethylbenzene	μg/kg	1	NONE	< 1.0	< 1.0		
p & m-xylene	μg/kg	1	NONE	< 1.0	< 1.0		
o-xylene	μg/kg	1	NONE	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	NONE	< 1.0	< 1.0		-

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	NONE	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	NONE	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	NONE	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	NONE	< 1.0	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	NONE	< 2.0	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	NONE	< 8.0	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	NONE	< 8.0	< 8.0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	NONE	< 10	< 10		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	NONE	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	NONE	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	NONE	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	NONE	< 1.0	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	NONE	< 2.0	< 2.0		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	NONE	< 10	< 10		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	NONE	< 10	< 10		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	NONE	< 10	< 10		





Lab Sample Number				458272	458273		
Sample Reference				BH501	BH501		
Sample Number				None Supplied	None Supplied		
Depth (m)				3.00	5.50		
Date Sampled				22/06/2015	22/06/2015		
Time Taken		1		1415	1545		
		_ ـ	Accreditation Status				
Analytical Parameter	Units	Limit of detection	red Sta				
(Soil Analysis)	its	ctio	itat				
		5 1	ion				
VOCs							
Chloromethane	μg/kg	1	NONE	< 1.0	< 1.0		
Chloroethane	μg/kg	1	NONE	< 1.0	< 1.0		
Bromomethane	μg/kg	1	NONE	< 1.0	< 1.0		
Vinyl Chloride	μg/kg	1	NONE	< 1.0	< 1.0		
Trichlorofluoromethane	μg/kg 	1	NONE	< 1.0	< 1.0		
1,1-Dichloroethene	μg/kg	1	NONE	< 1.0 < 1.0	< 1.0 < 1.0		
1,1,2-Trichloro 1,2,2-Trifluoroethane Cis-1,2-dichloroethene	μg/kg μg/kg	1	NONE NONE	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg μg/kg	1	NONE	< 1.0	< 1.0		
1,1-Dichloroethane	µg/kg	1	NONE	< 1.0	< 1.0	1	
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0	< 1.0		
Trichloromethane	μg/kg	1	NONE	< 1.0	< 1.0		
1,1,1-Trichloroethane	μg/kg	1	NONE	< 1.0	< 1.0		
1,2-Dichloroethane	μg/kg "	1	NONE	< 1.0	< 1.0		
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0	< 1.0	1	
Trans-1,2-dichloroethene Benzene	μg/kg μg/kg	1	NONE NONE	< 1.0 < 1.0	< 1.0 < 1.0		
Tetrachloromethane	μg/kg μg/kg	1	NONE	< 1.0	< 1.0		
1,2-Dichloropropane	μg/kg	1	NONE	< 1.0	< 1.0		
Trichloroethene	μg/kg	1	NONE	< 1.0	< 1.0		
Dibromomethane	μg/kg	1	NONE	< 1.0	< 1.0		
Bromodichloromethane	μg/kg	1	NONE	< 1.0	< 1.0		
Cis-1,3-dichloropropene	μg/kg	1	NONE	< 1.0	< 1.0		
Trans-1,3-dichloropropene	μg/kg	1	NONE	< 1.0	< 1.0	1	
Toluene 1,1,2-Trichloroethane	μg/kg μg/kg	1	NONE NONE	< 1.0 < 1.0	< 1.0 < 1.0		
1,3-Dichloropropane	μg/kg μg/kg	1	NONE	< 1.0	< 1.0		
Dibromochloromethane	μg/kg	1	NONE	< 1.0	< 1.0		
Tetrachloroethene	μg/kg	1	NONE	< 1.0	< 1.0		
1,2-Dibromoethane	μg/kg	1	NONE	< 1.0	< 1.0		
Chlorobenzene	μg/kg	1	NONE	< 1.0	< 1.0		
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0	< 1.0		
Ethylbenzene	μg/kg	1	NONE	< 1.0 < 1.0	< 1.0 < 1.0		
p & m-Xylene Styrene	μg/kg μg/kg	1	NONE NONE	< 1.0	< 1.0	+	
Tribromomethane	μg/kg μg/kg	1	NONE	< 1.0	< 1.0		
o-Xylene	μg/kg	1	NONE	< 1.0	< 1.0		
1,1,2,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0	< 1.0		
Isopropylbenzene	μg/kg	1	NONE	< 1.0	< 1.0		
Bromobenzene	μg/kg	1	NONE	< 1.0	< 1.0		
n-Propylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	1	
2-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0		
4-Chlorotoluene 1,3,5-Trimethylbenzene	μg/kg μg/kg	1	NONE NONE	< 1.0 < 1.0	< 1.0 < 1.0	 	
tert-Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	1	
1 2 4-Trimethylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	1	
sec-Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0		
1,3-Dichlorobenzene	μg/kg	1	NONE	< 1.0	< 1.0		
p-Isopropyltoluene	μg/kg	1	NONE	< 1.0	< 1.0	ļ	
1,2-Dichlorobenzene	μg/kg	1	NONE	< 1.0	< 1.0		
1 4-Dichlorobenzene	μg/kg	1	NONE	< 1.0	< 1.0	 	
Butylbenzene 1,2-Dibromo-3-chloropropane	μg/kg μg/kg	1	NONE NONE	< 1.0 < 1.0	< 1.0 < 1.0	-	
1,2,4-Trichlorobenzene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0		
Hexachlorobutadiene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	1	
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	< 1.0		





Lab Sample Number				458272	458273			
Sample Reference				BH501	BH501			
Sample Number				None Supplied	None Supplied			
Depth (m)				3.00	5.50			
Date Sampled				22/06/2015	22/06/2015			
Time Taken	_			1415	1545			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs		•			•	•	•	
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1			
Phenol	mg/kg	0.2	NONE	< 0.2	< 0.2			
2-Chlorophenol	mg/kg	0.1	NONE	< 0.1	< 0.1			
Bis(2-chloroethyl)ether	mg/kg	0.2	NONE	< 0.2	< 0.2			
1,3-Dichlorobenzene	mg/kg	0.2	NONE	< 0.2	< 0.2			
1 2-Dichlorobenzene	mg/kg	0.1	NONE	< 0.1	< 0.1			
1,4-Dichlorobenzene	mg/kg	0.2	NONE	< 0.2	< 0.2			
Bis(2-chloroisopropyl)ether	mg/kg	0.1	NONE NONE	< 0.1 < 0.3	< 0.1 < 0.3			
2-Methylphenol Hexachloroethane	mg/kg mg/kg	0.05	NONE	< 0.05	< 0.05			
Nitrobenzene	mg/kg	0.03	NONE	< 0.3	< 0.3			
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2			
Isophorone	mg/kg	0.2	NONE	< 0.2	< 0.2			
2-Nitrophenol	mg/kg	0.3	NONE	< 0.3	< 0.3			
2,4-Dimethylphenol	mg/kg	0.3	NONE	< 0.3	< 0.3			
Bis(2-chloroethoxy)methane	mg/kg	0.3	NONE	< 0.3	< 0.3			
1,2,4-Trichlorobenzene	mg/kg	0.3	NONE	< 0.3	< 0.3			
Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05			
2,4-Dichlorophenol	mg/kg	0.3	NONE	< 0.3	< 0.3			
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1			
Hexachlorobutadiene	mg/kg	0.1	NONE	< 0.1	< 0.1			
4-Chloro-3-methylphenol 2,4,6-Trichlorophenol	mg/kg	0.1	NONE	< 0.1 < 0.1	< 0.1 < 0.1			
2,4,5-Trichlorophenol	mg/kg mg/kg	0.1	NONE NONE	< 0.1	< 0.1			
2-Methylnaphthalene	mg/kg	0.2	NONE	< 0.1	< 0.1			
2-Chloronaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1			
Dimethylphthalate	mg/kg	0.1	NONE	< 0.1	< 0.1			
2,6-Dinitrotoluene	mg/kg	0.1	NONE	< 0.1	< 0.1			
Acenaphthylene	mg/kg	0.1	NONE	< 0.10	< 0.10			
Acenaphthene	mg/kg	0.1	NONE	< 0.10	< 0.10			
2 4-Dinitrotoluene	mg/kg	0.2	NONE	< 0.2	< 0.2			
Dibenzofuran	mg/kg	0.2	NONE	< 0.2	< 0.2			
4-Chlorophenyl phenyl ether	mg/kg	0.3	NONE	< 0.3	< 0.3			
Diethyl phthalate	mg/kg	0.2	NONE	< 0.2	< 0.2			
4-Nitroaniline Fluorene	mg/kg mg/kg	0.2	NONE NONE	< 0.2 < 0.10	< 0.2 < 0.10			
Azobenzene	mg/kg mg/kg	0.1	NONE	< 0.10	< 0.10			
Bromophenyl phenyl ether	mg/kg	0.3	NONE	< 0.2	< 0.2			
Hexachlorobenzene	mg/kg	0.3	NONE	< 0.3	< 0.3			
Phenanthrene	mg/kg	0.1	NONE	< 0.10	< 0.10			
Anthracene	mg/kg	0.1	NONE	< 0.10	< 0.10			
Carbazole	mg/kg	0.3	NONE	< 0.3	< 0.3			
Dibutyl phthalate	mg/kg	0.2	NONE	< 0.2	< 0.2			
Anthraquinone	mg/kg	0.3	NONE	< 0.3	< 0.3		Į	
Fluoranthene	mg/kg	0.1	NONE	< 0.10	< 0.10			
Pyrene	mg/kg	0.1	NONE	< 0.10	< 0.10		1	
Butyl benzyl phthalate	mg/kg	0.3	NONE	< 0.3	< 0.3			
Benzo(a)anthracene Chrysene	mg/kg	0.1	NONE	< 0.10 < 0.05	< 0.10 < 0.05			
Cnrysene Benzo(b)fluoranthene	mg/kg mg/kg	0.05	NONE NONE	< 0.10	< 0.05			
Benzo(k)fluoranthene	mg/kg mg/kg	0.1	NONE	< 0.10	< 0.10			
Benzo(a)pyrene	mg/kg	0.1	NONE	< 0.10	< 0.10			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	NONE	< 0.10	< 0.10			
Dibenz(a,h)anthracene	mg/kg	0.1	NONE	< 0.10	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	NONE	< 0.05	< 0.05			
	פייונייי							





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
458272	BH501	None Supplied	3 00	Beige chalk. **
458273	BH501	None Supplied	5 50	Beige chalk. **

^{**} Non MCerts Matrix





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a diazonium salt which forms chromophore which is	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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Analytical Report Number: 15-74184

Project / Site name: London Paramount Entertainment Samples received on: 19/06/2015

Resort

Your job number: 30766 Samples instructed on: 24/06/2015

Your order number: Analysis completed by: 30/06/2015

Report Issue Number: 1 Report issued on: 30/06/2015

Samples Analysed: 1 soil sample

Signed:

Dr Claire Stone Quality Manager

For & on behalf of i2 Analytical Ltd.

Rexona Rahman

Signed:

Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





Lab Sample Number				458271			
Sample Reference				BH501			
Sample Number				None Supplied			
Depth (m)				0.50			
Date Sampled				17/06/2015			
Time Taken				1450			
Tille Takeli				1450	 	.	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1			
Moisture Content	%	N/A	NONE	16			
Total mass of sample received	kg	0.001	NONE	2.0			
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected		<u> </u>	
General Inorganics		NI/A	MOFETTO	0.4	1	1	1
pH	pH Units	N/A	MCERTS	8.4	1		
Electrical Conductivity	μS/cm	10	NONE	220	 	 	
Total Cyanide	mg/kg	1	MCERTS	< 1	 	1	
Complex Cyanide	mg/kg	1	NONE	< 1	 	1	
Free Cyanide	mg/kg	1	NONE	< 1			
Total Sulphate as SO ₄	mg/kg	50	MCERTS	810			
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	0.12			
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	120			
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0 00125	MCERTS	0 062			
Sulphide	mg/kg	1	MCERTS	< 1.0			
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	17			
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5			
Organic Matter	%	0.1	MCERTS	0.4			
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0			
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20			
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0			
Total Phenols	_						
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0			
Speciated PAHs					•		
Naphthalene	mg/kg	0.05	MCERTS	< 0.05			
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10			
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10			
Fluorene	mg/kg	0.1	MCERTS	< 0.10			
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10			
Anthracene	mg/kg	0.1	MCERTS	< 0.10	!	1	
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10			
Pyrene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10			
Chrysene	mg/kg	0.05	MCERTS	< 0.05	ļ		
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	ļ		
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	<u> </u>	1	
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10		<u> </u>	
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10			
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05			
Coronene	mg/kg	0.05	NONE	< 0.05			
Total PAH			-				, ,
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6			





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				458271				
Sample Reference				BH501				
Sample Number				None Supplied				
Depth (m)				0.50				
Date Sampled				17/06/2015				
Time Taken	1450							
Tanco.	I			1150			1	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids	-	=	•		-	-	-	-
Aluminium (aqua regia extractable)	mg/kg	30	NONE	3600				
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0				
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	3.3				
Barium (aqua regia extractable)	mg/kg	1	MCERTS	30				
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.2				
Boron (water soluble)	mg/kg	0.2	MCERTS	0.8				
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.2				
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0				
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	10				
Copper (aqua regia extractable)	mg/kg	1	MCERTS	8.8				
Iron (aqua regia extractable)	mg/kg	40	MCERTS	6500				
Lead (aqua regia extractable)	mg/kg	1	MCERTS	6.7				
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	250				
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3				
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	< 0.3				
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	8.0				
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	410				
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0				
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	13				
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	32				
Calcium (aqua regia extractable)	mg/kg	20	NONE	340000	 	 	1	1
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	2400				
Potassium (aqua regia extractable)	mg/kg	20	NONE	1000			 	
r occasion (aqua regia extractable)	mg/kg	20	NONL	1000				
Monoaromatics								
Benzene	μg/kg	1	MCERTS	< 1.0				
Toluene	μg/kg	1	MCERTS	< 1.0				
Ethylbenzene	μg/kg	1	MCERTS	< 1.0				
p & m-xylene	μg/kg	1	MCERTS	< 1.0				
o-xylene	μg/kg	1	MCERTS	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0				

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	15		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	15		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	//	2	MCERTS	< 2.0		
TPH-CWG - Arolliduc >EC12 - EC16	mg/kg	4	TICERTS	, 10		
TPH-CWG - Aromatic >EC12 - EC16 TPH-CWG - Aromatic >EC16 - EC21	mg/kg mg/kg	10	MCERTS	< 10		
	5, 5	10 10				





Lab Camula Numban			1	450274			ı	
Lab Sample Number				458271				
Sample Reference Sample Number				BH501				
Depth (m)				None Supplied 0.50				
Date Sampled				17/06/2015				
Time Taken				1450				
			b	1130				
	_	e L	Accreditation Status					
Analytical Parameter	Units	tect mit	creditat Status					
(Soil Analysis)	ស	Limit of detection	us					
			on					
VOCs			•				-	-
Chloromethane	μg/kg	1	ISO 17025	< 1.0				
Chloroethane	μg/kg	1	ISO 17025	< 1.0				
Bromomethane	μg/kg 	1	ISO 17025	< 1.0				
Vinyl Chloride	μg/kg	1	ISO 17025 ISO 17025	< 1.0				
Trichlorofluoromethane 1,1-Dichloroethene	μg/kg μg/kg	1	MCERTS	< 1.0 < 1.0				
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0				
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0				
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0				
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0				
Trichloromethane	μg/kg	1	MCERTS	< 1.0				
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0				
1 2-Dichloroethane 1,1-Dichloropropene	μg/kg	1	MCERTS NONE	< 1.0 < 1.0				
Trans-1,2-dichloroethene	μg/kg μg/kg	1	NONE	< 1.0				
Benzene	μg/kg μg/kg	1	MCERTS	< 1.0				
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0				
1 2-Dichloropropane	μg/kg	1	MCERTS	< 1.0				
Trichloroethene	μg/kg	1	MCERTS	< 1.0				
Dibromomethane	μg/kg	1	MCERTS	< 1.0				
Bromodichloromethane	μg/kg	1	NONE	< 1.0				
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0				
Trans-1 3-dichloropropene	μg/kg	1	ISO 17025 MCERTS	< 1.0				
Toluene 1,1,2-Trichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0 < 1.0				
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0				
Dibromochloromethane	μg/kg	1	ISO 17025	< 1.0				
Tetrachloroethene	μg/kg	1	MCERTS	< 1.0				
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0				
Chlorobenzene	μg/kg	1	MCERTS	< 1.0				
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0				
Ethylbenzene	μg/kg	1	MCERTS	< 1.0				
p & m-Xylene Styrene	μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0				
Tribromomethane	μg/kg μg/kg	1	MCERTS	< 1.0				
o-Xylene	μg/kg μg/kg	1	MCERTS	< 1.0				
1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0				
Isopropylbenzene	μg/kg	1	NONE	< 1.0				
Bromobenzene	μg/kg	1	MCERTS	< 1.0				
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0				
2-Chlorotoluene	μg/kg 	1	NONE	< 1.0				
4-Chlorotoluene 1 3 5-Trimethylbenzene	μg/kg	1	NONE ISO 1702E	< 1.0				
tert-Butylbenzene	μg/kg μg/kg	1	ISO 17025 NONE	< 1.0 < 1.0				
1,2,4-Trimethylbenzene	μg/kg μg/kg	1	ISO 17025	< 1.0				
sec-Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0				
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0				
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0				
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0				
1,4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0				
Butylbenzene	μg/kg	1	NONE	< 1.0				
1,2-Dibromo-3-chloropropane	μg/kg	1	ISO 17025	< 1.0				
1 2 4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0				
Hexachlorobutadiene 1,2,3-Trichlorobenzene	μg/kg μg/kg	1	NONE NONE	< 1.0 < 1.0				
1/2/3 THE HOLDERIZERE	μg/Kg	1	INOINE	< 1.U	I	I		





				450074			
Lab Sample Number				458271			
Sample Reference Sample Number				BH501			
Depth (m)				None Supplied 0.50			
Date Sampled				17/06/2015			
Time Taken				1450			
			1430				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs						<u>!</u>	!!
Aniline	mg/kg	0.1	NONE	< 0.1			
Phenol	mg/kg	0.2	ISO 17025	< 0.2			
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1			
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2			
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1			
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1			
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3			
Hexachloroethane Nitroboggoo	mg/kg	0.05	MCERTS	< 0.05 < 0.3		 	
Nitrobenzene 4-Methylphenol	mg/kg mg/kg	0.3	MCERTS NONE	< 0.3 < 0.2		 	
Isophorone	mg/kg	0.2	MCERTS	< 0.2			
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3			
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3			
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3			
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3			
Naphthalene	mg/kg	0.05	MCERTS	< 0.05			
2 4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3			
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1			
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1			
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1			
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1			
2 4 5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2			
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1			
2-Chloronaphthalene Dimethylphthalate	mg/kg	0.1	MCERTS MCERTS	< 0.1 < 0.1			
2,6-Dinitrotoluene	mg/kg mg/kg	0.1	MCERTS	< 0.1			
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10			
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10			
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2			
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2			
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3			
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2			
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2			
Fluorene	mg/kg	0.1	MCERTS	< 0.10			
Azobenzene	mg/kg	0.3	MCERTS	< 0.3			
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2			
Hexachlorobenzene Phenanthrene	mg/kg	0.3	MCERTS MCERTS	< 0.3 < 0.10			
Anthracene	mg/kg mg/kg	0.1	MCERTS	< 0.10			
Carbazole	mg/kg	0.3	MCERTS	< 0.3			
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2		1	
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3		İ	
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10			
Pyrene	mg/kg	0.1	MCERTS	< 0.10			
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	 		
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10			
Chrysene	mg/kg	0.05	MCERTS	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10			
Indeno(1,2,3-cd)pyrene Dibenz(a h)anthracene	mg/kg mg/kg	0.1	MCERTS MCERTS	< 0.10 < 0.10		 	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.10			
Delizo(Gill)peryiene	mg/kg	0.03	PICENTO	\ U UJ		I	





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
458271	BH501	None Supplied	0 50	Beige sandy loam with gravel and chalk.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Sample Deviation Report



Sample ID		BH501
Other ID		
Sample Type	S	
Job Number	15-74184	
Sample Number	458271	
Deviation Code	C	
Test Name	Method no	
Complex cyanide in soil	L080-PL	С
Free cyanide in soil	L080-PL	C
Monohydric phenols in soil	L080-PL	C
Semi-volatile organic compounds in soil	L064-PL	C
Speciated WAC-17 PAHs in soil	L064-PL	C
Sulphide in soil	L010-PL	C
Total cyanide in soil	L080-PL	С
Volatile organic compounds in soil	L0/3S-PL	С
BTEX and MTBE in soil	L073S-PL	С
Speciated WAC-17 PAHs in soil	L064-PL	С
TPHCWG (Soil)	L076-PL	С
Volatile organic compounds in soil	L073S-PL	C





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7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404 **f:** 01923 237404

e: reception@i2analytical.com

Analytical Report Number: 15-74181

Project / Site name: London Paramount Entertainment Samples received on: 19/06/2015

Resort

Your job number: 30766 Samples instructed on: 24/06/2015

Your order number: Analysis completed by: 03/07/2015

Report Issue Number: 1 Report issued on: 03/07/2015

Samples Analysed: 5 soil samples - 1 water sample

Signed:

Dr Claire Stone Quality Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting





Lab Sample Number	Sample Number					458258	458259	458260
Sample Reference				458256 BH101	458257 BH101	BH101	BH101	BH101
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	1.50	2.00	4.00	5.00
Date Sampled				18/06/2015	18/06/2015	18/06/2015	18/06/2015	18/06/2015
Time Taken				0855	1045	1100	1155	1215
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
(**************************************		9 ⁵⁴	ition					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	22	31	38	38	36
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0	2.0	2.0
Asbestos in Soil Screen / Identification Name	Туре	N/A	ISO 17025	Chrysotile- Loose fibres	Chrysotile- Loose fibres; Crocidolite- loose fibres	Chrysotile- Loose fibres	-	-
Asbestos in Soil	Туре	N/A	ISO 17025	Detected	Detected	Detected	Not-detected	Not-detected
General Inorganics		NI/A	MOEDTO		10.4	0.0	0.1	0.2
pH Electrical Conductivity	pH Units	N/A 10	MCERTS	6.6 2500	10.4 8800	8.8 8100	8.1 6900	8.2 5100
Electrical Conductivity Total Cyanide	μS/cm mg/kg	1 1	NONE MCERTS	2500 < 1	8800 < 1	8100	6900 < 1	< 1
Complex Cyanide	mg/kg	1	NONE	< 1	< 1	1	< 1	< 1
Free Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO₄	mg/kg	50	MCERTS	17000	15000	9200	2000	1300
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	4.1	10	9.3	3.1	0.52
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	4100	10000	9300	3100	520
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	2.0	5.0	4.6	1.6	0.26
Sulphide	mg/kg	1	MCERTS	< 1.0	86	37	65	68
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	390	7000	7000	5100	4000
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	< 0.5	270	160	26
Organic Matter	%	0.1	MCERTS	0.9	3.4	5.0	3.7	3.9
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20	< 20	< 20	< 20	< 20
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0	< 5.0	< 5 0	< 5.0	< 5.0
Total Phenols Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Total Prieriois (monoriyaric)	mg/kg		MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.26	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.25	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.22	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	0.50	1.2	< 0.10	< 0.10
Anthracene	mg/kg	0.1	MCERTS	< 0.10	0.18	0.37	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	0.38	1.2	2.6	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	0.30	1.0	2.1	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.22	0.74	1.5	< 0.10	< 0.10
Chrysene	mg/kg	0.05	MCERTS	0.17	0.66	1.4	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	0.25	1.2	2.3	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	0.50	1.1	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.17	0.97	2.0	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	0.64	1.4	< 0.10	< 0.10
Dibenz(a h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.26	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.78	1.6	< 0.05	< 0.05
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6	8.4	19	< 1.6	< 1.6





TPH-CWG - Aromatic >EC12 - EC16

TPH-CWG - Aromatic >EC16 - EC21

TPH-CWG - Aromatic >EC21 - EC35
TPH-CWG - Aromatic (EC5 - EC35)

Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				458256	458257	458258	458259	458260
Sample Reference				BH101	BH101	BH101	BH101	BH101
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	1.50	2.00	4.00	5.00
Date Sampled				18/06/2015	18/06/2015	18/06/2015	18/06/2015	18/06/2015
Time Taken				0855	1045	1100	1155	1215
			>					
	_	de L	Accreditation Status					
Analytical Parameter	Units	Limit of detection	ed:					
(Soil Analysis)	ढ	tio of	tat					
		3 "	ġ					
Heavy Metals / Metalloids	<u> </u>				<u> </u>	<u> </u>		
Aluminium (agua regia extractable)	mg/kg	30	NONE	14000	17000	18000	28000	25000
Antimony (aqua regia extractable)	mg/kg mg/kg	30	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	15	18	35	21	13
Barium (aqua regia extractable)	mg/kg	1	MCERTS	110	100	170	43	39
Beryllium (agua regia extractable)	mg/kg	0.06	MCERTS	1.0	1.0	1.1	1.5	1.1
Boron (water soluble)	mg/kg mg/kg	0.06	MCERTS	1.1	4.5	7.6	1.5	9.7
Cadmium (agua regia extractable)	mg/kg mg/kg	0.2	MCERTS	2.0	4.0	7.0	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg mg/kg	4	MCERTS	< 4.0	< 4.0	< 4 0	< 4.0	< 4.0
Chromium (nexavalent) Chromium (agua regia extractable)	mg/kg	1	MCERTS	32	70	110	54	38
Copper (aqua regia extractable)	mg/kg	1	MCERTS	210	95	160	21	12
ron (aqua regia extractable)	mg/kg	40	MCERTS	37000	30000	36000	56000	42000
Lead (agua regia extractable)	mg/kg	1	MCERTS	170	120	190	32	21
Manganese (agua regia extractable)	mg/kg	1	MCERTS	300	270	310	980	220
Mercury (agua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	2.0	4.5	< 0.3	< 0.3
Molybdenum (agua regia extractable)	mg/kg	0.25	MCERTS	3.5	1.8	3.5	1.6	0.5
lickel (agua regia extractable)	mg/kg	1	MCERTS	37	30	42	39	26
Phosphorus (agua regia extractable)	mg/kg	20	NONE	410	2000	3800	900	640
Selenium (agua regia extractable)	mg/kg	1	MCERTS	< 1.0	4.4	< 1.0	< 1.0	< 1.0
/anadium (aqua regia extractable)	mg/kg	1	MCERTS	48	49	62	84	64
Zinc (agua regia extractable)	mg/kg	1	MCERTS	310	280	480	110	74
and (agad rogic oxtractable)	mg/ ng		MOLITIO	0.10	200	100		
Calcium (agua regia extractable)	mg/kg	20	NONE	38000	88000	79000	19000	31000
Vagnesium (agua regia extractable)	mg/kg	20	ISO 17025	3100	6600	6700	11000	8300
Potassium (agua regia extractable)	mg/kg	20	NONE	6100	23000	27000	10000	5700
· · · · · · · · · · · · · · · · · · ·		•			•	•		
Monoaromatics								
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
oluene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
thylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
2 & m-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
o-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
<u> </u>			-		-	-	-	-
Petroleum Hydrocarbons								
FPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
PH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	6.1	13	< 2.0	< 2.0
PH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	8.2	42	98	< 8.0	< 8.0
FPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	53	160	380	< 8.0	< 8.0
PH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	61	210	490	< 10	< 10
PH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0

< 2.0

< 10

< 10 < 10

10

10

mg/kg

mg/kg

MCERTS

MCERTS

4.0

< 10

3.0

31

6.7

71

< 2.0

< 10





Lab Sample Number				458256	458257	458258	458259	458260
Sample Reference				BH101	BH101	BH101	BH101	BH101
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	1.50	2.00	4.00	5.00
Date Sampled				18/06/2015	18/06/2015 1045	18/06/2015 1100	18/06/2015	18/06/2015
Time Taken	I			0855	1045	1100	1155	1215
		de L	Accreditation Status					
Analytical Parameter	Units	Limit of detection	redi Stat					
(Soil Analysis)	द्ध	ti of	us					
			on					
VOCs	Ξ-		•		_			
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Chloroethane	μg/kg 	1	ISO 17025	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Bromomethane Visual Chlorida	μg/kg	1	ISO 17025	< 1.0 < 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride Trichlorofluoromethane	μg/kg μg/kg	1	ISO 17025 ISO 17025	< 1.0	< 1.0 < 1.0	< 1 0 < 1 0	< 1.0 < 1.0	< 1.0 < 1.0
1,1-Dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
1,1-Dichloroethane	μg/kg 	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane 1,1,1-Trichloroethane	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 10 < 10	< 1.0 < 1.0	< 1.0 < 1.0
1,2-Dichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1 1-Dichloropropene	µg/kg	1	NONE	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
1,2-Dichloropropane	μg/kg 	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	μg/kg	1	MCERTS MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane Bromodichloromethane	μg/kg μg/kg	1	NONE	< 1.0 < 1.0	< 1.0 < 1.0	< 1 0 < 1 0	< 1.0 < 1.0	< 1.0 < 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
1,3-Dichloropropane	μg/kg 	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Tetrachloroethene 1,2-Dibromoethane	μg/kg μg/kg	1	MCERTS ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1 0 < 1 0	< 1.0 < 1.0	< 1.0 < 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
p & m-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Styrene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	μg/kg	1	MCERTS	< 1.0	< 1.0 < 1.0	< 1.0	< 1.0	< 1.0
o-Xylene 1 1 2 2-Tetrachloroethane	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 1.0	< 1 0 < 1 0	< 1.0 < 1.0	< 1.0 < 1.0
Isopropylbenzene	μg/kg μα/ka	1	NONE	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Bromobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 10	< 1.0	< 1.0
2-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	< 10	< 1.0	< 1.0
4-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1 3 5-Trimethylbenzene tert-Butylbenzene	μg/kg	1	ISO 17025 NONE	< 1.0 < 1.0	< 1.0 < 1.0	< 1 0 < 1 0	< 1.0 < 1.0	< 1.0 < 1.0
1 2 4-Trimethylbenzene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 10	< 1.0	< 1.0
sec-Butylbenzene	µg/kg µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 10	< 1.0	< 1.0
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
1,4-Dichlorobenzene	μg/kg 	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Butylbenzene	μg/kg	1	NONE ISO 17025	< 1.0	< 1.0	< 10	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane 1,2,4-Trichlorobenzene	μg/kg μg/kg	1	ISO 17025 MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 10 < 10	< 1.0 < 1.0	< 1.0 < 1.0
Hexachlorobutadiene	µg/kg µg/kg	1	NONE	< 1.0	< 1.0	< 10	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/kg µg/kg	1	NONE	< 1.0	< 1.0	< 10	< 1.0	< 1.0
	1.00							





Lab Sample Number	•						458259	458260
Sample Reference				BH101	BH101	BH101	BH101	BH101
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	1.50	2.00	4.00	5.00
Date Sampled				18/06/2015	18/06/2015	18/06/2015	18/06/2015	18/06/2015
Time Taken		_	_	0855	1045	1100	1155	1215
			Accreditation Status					
Analytical Parameter	⊆	Limit of detection	Sta					
(Soil Analysis)	Units	ğ, ii	at ita					
(***	-	3 %	s tio					
		<u> </u>						
SVOCs		0.1	HOUE	0.1	0.1	0.1	0.1	0.1
Aniline Phenol	mg/kg mg/kg	0.1	NONE ISO 17025	< 0.1	< 0.1 < 0.2	< 0.1	< 0.1 < 0.2	< 0.1 < 0.2
2-Chlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.1	< 0.2	< 0.2
Bis(2-chloroethyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1 3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1.2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1 4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.7	< 0.2	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
2 4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.26	< 0.05	< 0.05
2 4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3 < 0.1	< 0.3 < 0.1	< 0.3	< 0.3
4-Chloroaniline Hexachlorobutadiene	mg/kg	0.1	NONE MCERTS	< 0.1 < 0.1	< 0.1	< 0.1	< 0.1 < 0.1	< 0.1 < 0.1
4-Chloro-3-methylphenol	mg/kg mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2 4 5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.1	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.25	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Diethyl phthalate 4-Nitroaniline	mg/kg	0.2	MCERTS MCERTS	< 0.2 < 0.2	< 0.2 < 0.2	< 0 2 < 0 2	< 0.2 < 0.2	< 0.2 < 0.2
Fluorene	mg/kg mg/kg	0.2	MCERTS	< 0.2	< 0.2	0.22	< 0.2	< 0.2
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	0.50	1.2	< 0.10	< 0.10
Anthracene	mg/kg	0.1	MCERTS	< 0.10	0.18	0.37	< 0.10	< 0.10
Carbazole	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Fluoranthene	mg/kg	0.1	MCERTS	0.38	1.2	2.6	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	0.30	1.0	2.1	< 0.10	< 0.10
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.22	0.74	1.5	< 0.10	< 0.10
Chrysene Benzo(b)fluoranthene	mg/kg	0.05	MCERTS MCERTS	0.17 0.25	0.66 1.2	1.4 2.3	< 0.05	< 0.05 < 0.10
Benzo(b)fluorantnene Benzo(k)fluoranthene	mg/kg mg/kg	0.1	MCERTS	< 0.10	0.50	2.3	< 0.10 < 0.10	< 0.10
Benzo(k)nuorantnene Benzo(a)pyrene	mg/kg mg/kg	0.1	MCERTS	< 0.10 0.17	0.50	2.0	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg mg/kg	0.1	MCERTS	< 0.10	0.64	1.4	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.26	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.78	1.6	< 0.05	< 0.05





Lab Sample Number		458261						
Sample Reference				BH101				
Sample Number				None Supplied				
Depth (m)				2.80				
Date Sampled				19/06/2015				
Time Taken				1100				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
рН	pH Units	N/A	ISO 17025	8.3				
Electrical Conductivity	μS/cm	10	NONE	23000				
Total Cyanide	μg/l	10	ISO 17025	< 10				
Complex Cyanide	μg/l	10	NONE	< 10				
Free Cyanide	μg/l	10	ISO 17025	< 10				
Sulphate as SO ₄	μg/l	45	ISO 17025	1820000				
Sulphide	µg/l	5	NONE	< 5.0				
Chloride	mg/l	0.15	ISO 17025	20000				
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	100000				
Nitrate as N Nitrate as NO ₃	mg/l mg/l	0.01	ISO 17025 ISO 17025	0.34 1.50				
Nitrite as N	µq/l	1	ISO 17025	4.0				
Nitrite as NO ₂	μg/I	5	ISO 17025	13				
Chemical Oxygen Demand (Settled)	mg/l	2	ISO 17025	300				
BOD (Biochemical Oxygen Demand)	mg/l	1	ISO 17025	350				
Total Oxidised Nitrogen (TON)	mg/l	0.3	NONE	0.3				
Total Phonois	-		-		-	-	-	-
Total Phenols Total Phenols (monohydric)	μg/l	10	ISO 17025	650				
Cuscinted PAUL								
Speciated PAHs Naphthalene		0.01	ISO 17025	< 0.01			1	
Acenaphthylene	μg/l μg/l	0.01	ISO 17025	< 0.01				
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01				
Fluorene	μg/l	0.01	ISO 17025	< 0.01				
Phenanthrene	μg/l	0.01	ISO 17025	< 0.01				
Anthracene	μg/l	0.01	ISO 17025	< 0.01				
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01				
Pyrene	μg/l	0.01	ISO 17025	< 0.01				
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01				
Chrysene	µg/l	0.01	ISO 17025	< 0.01				
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01				
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01			 	
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01			 	
Indeno(1 2 3-cd)pyrene Dibenz(a,h)anthracene	μg/l μg/l	0.01	ISO 17025 ISO 17025	< 0.01 < 0.01			1	
Benzo(ghi)perylene	µд/I µд/I	0.01	ISO 17025	< 0.01			 	
Coronene	μg/1 μg/l	0.01	NONE	< 0.01			 	
odranane	μу/1	0.01	INCINE	\ 0.01				
Total PAH								
Total EPA-16 PAHs	μg/l	0.2	ISO 17025	< 0.2				
Total WAC-17 PAHs	μg/l	0.2	NONE	< 0.2				





Lab Sample Number		458261					
Sample Reference				BH101			
Sample Number				None Supplied			
Depth (m)				2.80			
Date Sampled				19/06/2015			
Time Taken				1100			
		_	Ac				
Analytical Parameter	⊆	Limit of detection	Accreditation Status				
(Water Analysis)	Units	et i	dita				
()		9 4	s tio				
			3				
Heavy Metals / Metalloids		0.001	100 47005	0.0100	1	ſ	
Aluminium (dissolved) Antimony (dissolved)	mg/l µg/l	0.001	ISO 17025 ISO 17025	0.0190 6.8			
Arsenic (dissolved)	µд/I µд/I	0.15	ISO 17025	24.7			
Barium (dissolved)	μg/l	0.06	ISO 17025	250			
Beryllium (dissolved)	μg/l	0.1	ISO 17025	< 0.1			
Boron (dissolved)	μg/l	10	ISO 17025	1300			
Cadmium (dissolved)	μg/l	0.02	ISO 17025	0.04			
Chromium (hexavalent)	μg/l	5	ISO 17025	< 5.0			
Chromium (dissolved)	μg/l	0.2	ISO 17025	6.0			
Copper (dissolved)	μg/l	0.5	ISO 17025	6.1			
Iron (dissolved) Lead (dissolved)	mg/l µg/l	0.004	ISO 17025 ISO 17025	0.41 2.7	 	1	
Manganese (dissolved)	µд/I µд/I	0.2	ISO 17025	84	 		
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	1		
Molybdenum (dissolved)	μg/l	0.05	ISO 17025	51			
Nickel (dissolved)	μg/l	0.5	ISO 17025	9.4			
Selenium (dissolved)	μg/l	0.6	ISO 17025	210			
Vanadium (dissolved)	μg/l	0.2	ISO 17025	19			
Zinc (dissolved)	μg/l	0.5	ISO 17025	3.1			
Outstand (Parallell)		0.010	100 17005	270	1	1	1
Calcium (dissolved) Magnesium (dissolved)	mg/l mg/l	0.012	ISO 17025 ISO 17025	270 610			
Potassium (dissolved)	mg/l	0.005	ISO 17025	4700			
Phosphorus (total)	mg/l	0.05	ISO 17025	86			
Phosphorus (total)	μg/l	20	ISO 17025	86000			
-	-	_		3	-	=	<u>-</u>
Monoaromatics			1			T	1
Benzene	μg/l	1	ISO 17025	< 1.0			
Toluene Ethylbenzene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0			
p & m-xylene	µg/l	1	ISO 17025	< 1.0			
o-xylene	µg/l	1	ISO 17025	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	μg/l	1	ISO 17025	< 1.0		 <u> </u>	
Petroleum Hydrocarbons							
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10	 		
TPH-CWG - Aliphatic >C8 - C10 TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE NONE	< 10 < 10	 	 	
TPH-CWG - Aliphatic >CTO - CT2 TPH-CWG - Aliphatic >C12 - C16	μg/l μg/l	10 10	NONE	< 10	 		
TPH-CWG - Aliphatic > C12 - C16 TPH-CWG - Aliphatic > C16 - C21	µд/I µд/I	10	NONE	< 10		1	
TPH-CWG - Aliphatic >C10 - C21 TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE	< 10			
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10		 	
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10		 	
TPH-CWG - Aromatic >C7 - C8	μg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C8 - C10	μg/l	10	NONE	< 10			
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE	< 10	 		
TPH-CWG - Aromatic >C12 - C16 TPH-CWG - Aromatic >C16 - C21	μg/l	10 10	NONE NONE	< 10 < 10			
TPH-CWG - Aromatic >C16 - C21 TPH-CWG - Aromatic >C21 - C35	μg/l μg/l	10	NONE	< 10	 	 	
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10			
	P9'					1	





Lab Cample Number			1	450074	ı	ı	1	
Lab Sample Number				458261				
Sample Reference Sample Number				BH101 None Supplied				
Depth (m)				2.80				
Date Sampled				19/06/2015			1	
Time Taken				1100				
			A					
Analytical Parameter	_	Limit of detection	Accreditation Status					
(Water Analysis)	Units	ect mit	edit.					
(Water Analysis)	v	할 약	atio					
			3					
VOCs					1	1		
Chloromethane	μg/l	1	ISO 17025	< 1.0				
Chloroethane Bromomethane	µg/l µg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0				
Vinyl Chloride	рд/I µд/I	1	NONE	< 1.0				
Trichlorofluoromethane	μg/l	1	NONE	< 1.0				
1,1-Dichloroethene	μg/l	1	ISO 17025	< 1.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	μg/l	1	ISO 17025	< 1.0				
Cis-1,2-dichloroethene	μg/l	1	ISO 17025	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	μg/l	1	ISO 17025	< 1.0			<u> </u>	
1,1-Dichloroethane 2,2-Dichloropropane	µg/l µg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0				
z,z-Dichioropropane Trichloromethane	µg/I µg/I	1	ISO 17025	< 1.0				
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0			1	
1,2-Dichloroethane	μg/l	1	ISO 17025	< 1.0				
1,1-Dichloropropene	μg/l	1	ISO 17025	< 1.0				
Trans-1,2-dichloroethene	μg/l	1	ISO 17025	< 1.0				
Benzene	μg/l	1	ISO 17025	< 1.0				
Tetrachloromethane	μg/l	1	ISO 17025 ISO 17025	< 1.0				
1,2-Dichloropropane Trichloroethene	µg/l µg/l	1	ISO 17025	< 1.0 < 1.0				
Dibromomethane	µg/l	1	ISO 17025	< 1.0				
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0				
Cis-1,3-dichloropropene	μg/l	1	ISO 17025	< 1.0				
Trans-1,3-dichloropropene	μg/l	1	ISO 17025	< 1.0				
Toluene	μg/l	1	ISO 17025	< 1.0				
1,1,2-Trichloroethane	μg/l	1	ISO 17025	< 1.0				
1,3-Dichloropropane Dibromochloromethane	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0				
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0				
1,2-Dibromoethane	μg/l	1	ISO 17025	< 1.0				
Chlorobenzene	μg/l	1	ISO 17025	< 1.0				
1 1 1 2-Tetrachloroethane	μg/l	1	ISO 17025	< 1.0				
Ethylbenzene	μg/l	1	ISO 17025	< 1.0				
p & m-Xylene	μg/l	1	ISO 17025	< 1.0				
Styrene Tribromomethane	µg/l µg/l	1	ISO 17025	< 1.0 < 1.0				
o-Xylene	µд/I µд/I	1	ISO 17025	< 1.0				
1 1 2 2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0				
Isopropylbenzene	μg/l	1	ISO 17025	< 1.0				
Bromobenzene	μg/l	1	ISO 17025	< 1.0				
n-Propylbenzene	μg/l	1	ISO 17025	< 1.0				
2-Chlorotoluene	μg/l	1	ISO 17025	< 1.0				
4-Chlorotoluene 1 3 5-Trimethylbenzene	µg/l µg/l	1	ISO 17025	< 1.0 < 1.0				
tert-Butylbenzene	µд/I µд/I	1	ISO 17025	< 1.0				
1 2 4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0				
sec-Butylbenzene	μg/l	1	ISO 17025	< 1.0				
1,3-Dichlorobenzene	μg/l	1	ISO 17025	< 1.0				
p-Isopropyltoluene	μg/l	1	ISO 17025	< 1.0				
1 2-Dichlorobenzene	μg/l 	1	ISO 17025	< 1.0				
1,4-Dichlorobenzene	μg/l	1	ISO 17025	< 1.0				
Butylbenzene 1,2-Dibromo-3-chloropropane	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0			 	
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0				
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0				
1,2,3-Trichlorobenzene	μg/l	1	ISO 17025	< 1.0				
					-	-	-	





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Lab Sample Number				458261			
Sample Reference Sample Number				BH101			
Depth (m)				None Supplied 2.80			
Date Sampled				19/06/2015			
Time Taken				1100			
			>	1100			
Annal all and Brown as to a	_	de Li	Accreditation Status				
Analytical Parameter	Units	Limit of detection	edit				
(Water Analysis)	ß	<u> </u>	us				
			S S				
SVOCs							
Aniline	μg/l	0.05	NONE	< 0.05			
Phenol	μg/l	0.05	NONE	< 0.05			
2-Chlorophenol	μg/l	0.05	NONE	< 0.05			
Bis(2-chloroethyl)ether	μg/l	0.05	NONE	< 0.05			
1 3-Dichlorobenzene 1,2-Dichlorobenzene	μg/l μg/l	0.05	NONE NONE	< 0.05 < 0.05			
1 4-Dichlorobenzene	μg/l	0.05	NONE	< 0.05			
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05			
2-Methylphenol	µg/l	0.05	NONE	< 0.05			
Hexachloroethane	μg/l	0.05	NONE	< 0.05			
Nitrobenzene	μg/l	0.05	NONE	< 0.05		 	
4-Methylphenol	μg/l	0.05	NONE	< 0.05			
Isophorone	μg/l	0.05	NONE	< 0.05			
2-Nitrophenol	μg/l	0.05	NONE	< 0.05			
2,4-Dimethylphenol Bis(2-chloroethoxy)methane	μg/l μg/l	0.05	NONE NONE	< 0.05 < 0.05			
1,2,4-Trichlorobenzene	µg/l µg/l	0.05	NONE	< 0.05			
Naphthalene	μg/l	0.03	ISO 17025	< 0.01			
2 4-Dichlorophenol	μg/l	0.05	NONE	< 0.05			
4-Chloroaniline	μg/l	0.05	NONE	< 0.05			
Hexachlorobutadiene	μg/l	0.05	NONE	< 0.05			
4-Chloro-3-methylphenol	μg/l	0.05	NONE	< 0.05			
2,4,6-Trichlorophenol	μg/l	0.05	NONE	< 0.05			
2 4 5-Trichlorophenol	μg/l	0.05	NONE	< 0.05			
2-Methylnaphthalene 2-Chloronaphthalene	μg/l	0.05	NONE NONE	< 0.05 < 0.05			
Dimethylphthalate	μg/l μg/l	0.05	NONE	< 0.05			
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05			
Acenaphthylene	μg/l	0.01	ISO 17025	< 0.01			
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01			
2,4-Dinitrotoluene	μg/l	0.05	NONE	< 0.05			
Dibenzofuran	μg/l	0.05	NONE	< 0.05			
4-Chlorophenyl phenyl ether	μg/l	0.05	NONE	< 0.05			
Diethyl phthalate 4-Nitroaniline	μg/l	0.05	NONE NONE	< 0.05 < 0.05			
Fluorene	μg/l μg/l	0.05	ISO 17025	< 0.05			
Azobenzene	μg/l	0.05	NONE	< 0.05			
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05			
Hexachlorobenzene	μg/l	0.02	NONE	< 0.02			
Phenanthrene	μg/l	0.01	ISO 17025	< 0.01			
Anthracene	μg/l	0.01	ISO 17025	< 0.01			
Carbazole	μg/l	0.05	NONE	< 0.05			
Dibutyl phthalate	μg/l	0.05	NONE	< 0.05			
Anthraquinone Fluoranthene	µg/l	0.05	NONE ISO 17025	< 0.05 < 0.01			
Fluoranthene Pyrene	μg/l μg/l	0.01	ISO 17025 ISO 17025	< 0.01			
Butyl benzyl phthalate	µg/l µg/l	0.01	NONE	< 0.01			
Benzo(a)anthracene	μg/l	0.03	ISO 17025	< 0.01			
Chrysene	µg/l	0.01	ISO 17025	< 0.01			
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025	< 0.01			
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01		 	
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01			
Indeno(1,2,3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01			
Dibenz(a,h)anthracene	μg/l	0.01	ISO 17025	< 0.01			
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01			





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
458256	BH101	None Supplied	0.50	Light brown clay and sand with vegetation.
458257	BH101	None Supplied	1.50	Beige clay and sand with vegetation.
458258	BH101	None Supplied	2.00	Grey clay and sand.
458259	BH101	None Supplied	4.00	Light grey clay and sand.
458260	BH101	None Supplied	5.00	Light grey clay and sand.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Ammoniscal Natiogen is N in sol mornisched Natiogen is N in sol Ammonisched National Ammonisched National Natio	Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniture/immoniture in Strongton Bitrogen by the coloriments assignation consistence and international control of the Coloriments assignated in part of the Coloriments assignated in the case of proteins of light microscopy in conjunction with dispersion strangton by the coloriments of the coloriments with the case of proteins of light microscopy in conjunction with dispersion strangton and the coloriments of the coloriments of proteins of light microscopy in conjunction with dispersion strangton of the coloriments of display. Accordated matrices SW, PW, GW and the coloriments of the coloriment	Ammoniacal Nitrogen as N in soil	Ammonium/Ammonia/Ammoniacal Nitrogen by the	Water and Wastewater 20th Edition:	L082-PL	W	MCERTS
sibility microscopy in conjunction with dispersion sibility determination of biochemical oxygen demand in water (5 days). Accredited matrices. SW, PW, CW, method 52066. Samples received 3-24 hrs. after sampling, data may not be valid and should be interpreted with care. SW, PW, CW, CW, CW, CW, CW, CW, CW, CW, CW, C	Ammoniacal Nitrogen as N in water	Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	Water and Wastewater 20th Edition:	L082-PL	W	ISO 17025
water (5 days). Accordited matrices: SW, PW, CW the sampling, data may not be valid and should be interpreted with care. Determination of boron by socification followed by in-house method based on MEWAM (1094-PL). W ISO 17025 (PP-OES. Accordited matrices: SW PW CW Beron, water soluble, in soil Determination of water soluble boron in soil by hot valer extract followed by ICP-OES. BIEX and MTBE in soil Determination of BTEX in soil by headspace GC-MS. In-house method based on USEPA8260 (1078-PL). W MCRRTS BIEX and MTBE in water Determination of BTEX and MTBE in water by headspace GC-MS. Accordited matrices: SW PW Describes version 3. In-house method based on USEPA8260 (1078-PL). W MCRRTS BIEX and MTBE in water Determination of BTEX and MTBE in water by headspace GC-MS. Accordited matrices: SW PW Describes are soil by ICP-OES. BIEX and MTBE in water Determination of BTEX and MTBE in water by headspace GC-MS. Accordited matrices: SW PW Describes are soil by ICP-OES. Determination of BTEX and MTBE in water by matrices are soil by ICP-OES. Determination of BTEX and MTBE in water by matrices are soil by ICP-OES. Determination of Coloride COD in water by reflux Coloridate COD in	Asbestos identification in soil	light microscopy in conjunction with disperion	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil Determination of water soluble boron in soil by hot water soluble, in soil Determination of water soluble boron in soil by hot water outract followed by ICP-OES. BTEX and MTBE in soil Determination of BTEX in soil by headspace GC-MS. In-house method based on USEPA8260 L0735-PL W MCERTS. BTEX and MTBE in water Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW Determination of cations in soil by aqua-regia algeston followed by ICP-OES. Determination of cations in soil by aqua-regia algeston followed by ICP-OES. Soil Determination of material process of the Determination of Material process of the Determination of Material process of the Determination of Material process of the Determination of Material process of the Determination of Material process of the Determination of Material process of the Determination of Material process of the Determination of Material process of the Determination of Material process of the Determination of Material process of the Determination of Material process of the Determination of Material process of the Determination of Material process of the Determination of Material process of the Determination of Material process of the Determination of Material process of the Determination of Material process of the Determination of Material process of the Determination of Material process of the Determination of Chloride colorimetrically by discrete analyses. Determination of Chloride colorimetrically by discrete analyses. Determination of complex cyanide by destillation followed by colorimetry. Determination of complex cyanide by destillation followed by colorimetry. Determination of electrical conductivity in water by addition of saturation of electrical conductivity in water by addition of saturation of electrical conductivity in water by addition of saturation of feet expended by distillation followed by colorimetry. Determination of feet cyanide by distillation followed by colorimetry. Determination of fee	Biological oxygen demand of water		method 5210B. Samples received > 24 hrs after sampling, data may not be valid and	L086-PL	W	ISO 17025
water extract followed by ICP-DES. Properties version 3 Properties version 4 Propertie	Boron in water		In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW Cations in soil by ICP-OES Determination of cations in soil by aqua-rogia digestion followed by ICP-OES. Determination of sations in soil by aqua-rogia digestion followed by ICP-OES. Determination of security is soil. Determination of settled COD in water by reflux color investigation with acidfield ECQCO2TO followed by ICP-OES. Chemical Oxygen Demand in Water Certification with acidfield ECQCO2TO followed by ICP-OES. Chloride in water Determination of Chloride colorimetrically by discrete analyser. Chloride, water soluble, in soil Determination of Chloride colorimetrically by discrete analyser. Chloride, water soluble, in soil Determination of Chloride colorimetrically by discrete analyser. Complex cyanide in soil Determination of complex cyanide by distillation followed by colorimetry. Determination of complex cyanide by distillation followed by colorimetry. Determination of complex cyanide by distillation followed by colorimetry. Determination of electrical conductivity in soil by distillation followed by colorimetry. Determination of electrical conductivity in soil by distillation followed by colorimetry. Determination of electrical conductivity in water by electrometric measurement. Determination of electrical conductivity in water by electrometric measurement. Determination of electrical conductivity in water by electrometric measurement. Determination of fee cyanide by distillation followed by colorimetry. Determination of electrical conductivity in water by electrometric measurement. Determination of electrical conductivity in water by electrometric measurement. Determination of fee cyanide by distillation followed by activities and Wastewater 20th Edition. Clesceri, Greenberg & Eaton LOBO-PL W NONE NONE	Boron, water soluble, in soil			L038-PL	D	MCERTS
Package GC-MS. Accredited matrices: SW PW GW Cations in soil by ICP-OES Determination of cations in soil by aqua-regia digestion followed by ICP-OES. Chemical Oxygen Demand in Water oxidation with acidified K2C/207 followed by Colorimetry. Accredited matrices: SW, PW. GW. Chloride in water Determination of Chloride colorimetrically by discrete analyser. Chloride, water soluble, in soil Determination of Chloride colorimetrically by discrete analyser. Chloride, water soluble, in soil Determination of Chloride colorimetrically by discrete analyser. Chloride in soil Determination of Chloride colorimetrically by discrete analyser. Chloride in soil Determination of Chloride colorimetrically by discrete analyser. Chloride in soil Determination of Complex cyanide by distillation followed by colorimetry. Complex cyanide in soil Determination of complex cyanide by distillation followed by colorimetry. Electrical conductivity of soil Determination of electrical conductivity in soil by addition of saturated calcium suphate followed by celectrometric measurement. Electrical conductivity of water Determination of feectrical conductivity in water by electrometric measurement. Determination of feectrical conductivity in water by electrometric measurement. Determination of free cyanide by distillation followed by colorimetry. Determination of feectrical conductivity in lin-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) L080-PL W NONE NONE Determination of feectrical conductivity in water by electrometric measurement. Determination of feectrical conductivity in lin-house method based on Examination of Edition: Clesceri, Greenberg & Eaton (Skalar) L080-PL W NONE NONE The cyanide in soil Determination of feectrical conductivity in lin-house method based on Examination of Edition: Clesceri, Greenberg & Eaton (Skalar) L080-PL W NONE NONE The cyanide in water Determination of free cyanide by distillation in house method by Clear method ba	BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
digestion followed by ICP-OES. Methods for the Determination of Metals in Soil. Determination of settled COD in water by reflux oxidation with acidified X2Cr2O7 followed by colorimetry. Accredited matrices: SW, PW, GW. Chloride in water Determination of Chloride colorimetrically by discrete analyser. Chloride, water soluble, in soil Determination of Chloride colorimetrically by discrete analyser. Chloride, water soluble, in soil Determination of Chloride colorimetrically by discrete analyser. Chloride in soil Determination of Chloride colorimetrically by discrete analyser. Complex cyanide in soil Determination of complex cyanide by distillation followed by colorimetry. Electrical conductivity of soil Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement. Electrical conductivity of water Determination of electrical conductivity in water by electrometric measurement. Determination of free cyanide by distillation followed by colorimetry. Determination of electrical conductivity in water by electrometric measurement. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by c	BTEX and MTBE in water	headspace GC-MS. Accredited matrices: SW PW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025
oxidation with acidified K2Cr2O7 followed by colorimetry. Accredited matrices: SW. PW, GW. Chloride in water Determination of Chloride colorimetrically by discrete analyser. Chloride, water soluble, in soil Determination of Chloride colorimetrically by discrete analyser. In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction. Complex cyanide in soil Determination of complex cyanide by distillation followed by colorimetry. Determination of complex cyanide by distillation followed by colorimetry. Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement. Determination of electrical conductivity in water by electrometric measurement. Determination of fee cyanide by distillation followed by colorimetry. Determination of fee cyanide by distillation followed by colorimetry. Determination of fee cyanide by distillation followed by colorimetry. Determination of fee cyanide by distillation followed by colorimetry. Determination of fee cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton Electrical conductivity of water Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton Electrical conductivity of water Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Electrical conductivity of water Determination of free cyanide by distillation followed by colorimetry. Electrical conductivity of water Determination of free cyanide by distillation followed by colorimetry. El	Cations in soil by ICP-OES		Methods for the Determination of Metals in	L038-PL	D	NONE
discrete analyser. Oliforide, water soluble, in soil Determination of Chloride colorimetrically by discrete analyser. Determination of complex cyanide by distillation followed by colorimetry. Determination of complex cyanide by distillation followed by colorimetry. Determination of electrical conductivity of soil Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement. Determination of electrical conductivity in water by electrometric measurement. Determination of electrical conductivity in water by electrometric measurement. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of followed by colorimetry. Determination of Characterical conductivity in water by followed by colorimetry. Determinati		oxidation with acidified K2Cr2O7 followed by		L065-PL	W	ISO 17025
discrete analyser. 1990, Chemical and Electrochemical Tests. 2:1 extraction. Loso-PL W NONE In-house method based on Examination of Mater and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) Electrical conductivity of soil Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement. In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton Loso-PL W NONE NONE NONE In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton Loso-PL W NONE NONE NONE Tree cyanide in soil Determination of free cyanide by distillation followed by colorimetry. In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton Loso-PL W NONE NONE NONE NONE Tree cyanide in soil Determination of free cyanide by distillation followed by colorimetry. In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton Loso-PL W NONE NONE	Chloride in water	3 3	0117516260. Accredited matrices: SW, PW,	L082 B	W	ISO 17025
followed by colorimetry. Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement. In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton Determination of electrical conductivity in water by electrometric measurement. In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton Determination of free cyanide by distillation Free cyanide in soil Determination of free cyanide by distillation Free cyanide in water Determination of free cyanide by distillation Free cyanide in water Determination of free cyanide by distillation In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton L080-PL W NONE NONE NONE NONE Theorem and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) NONE NONE NONE NONE	Chloride, water soluble, in soil	3 3	1990, Chemical and Electrochemical Tests.	L082-PL	D	MCERTS
addition of saturated calcium sulphate followed by electrometric measurement. Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton In-house method based on Examination of electrical conductivity in water by electrometric measurement. In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton Determination of free cyanide by distillation followed by colorimetry. In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton L080-PL W NONE Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) Determination of free cyanide by distillation In-house method L080-PL W ISO 17025	Complex cyanide in soil		Water and Wastewater 20th Edition:	L080-PL	W	NONE
electrometric measurement. Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton Free cyanide in soil Determination of free cyanide by distillation followed by colorimetry. Free cyanide in water Determination of free cyanide by distillation In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) Free cyanide in water Determination of free cyanide by distillation In-house method L080-PL W ISO 17025	Electrical conductivity of soil	addition of saturated calcium sulphate followed by	Water and Wastewater 20th Edition:	LO31-PL	W	NONE
followed by colorimetry. Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) Free cyanide in water Determination of free cyanide by distillation In-house method L080-PL W ISO 17025	Electrical conductivity of water	, ,	Water and Wastewater 20th Edition:	L031-PL	W	NONE
	Free cyanide in soil		Water and Wastewater 20th Edition:	L080-PL	W	NONE
	Free cyanide in water		In-house method	L080-PL	W	ISO 17025





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	nalytical Test Name Analytical Method Description A		Method number	Wet / Dry Analysis	Accreditation Status
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrate in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrite in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L077-PL	W	ISO 17025
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
pH in water	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L070-UK	W	NONE
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D Iss No 15	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Speciated WAC-17 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L070-UK	W	ISO 17025
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L010-PL	W	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN-82/C-04579 08	L078-PL	W	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-UK	W	NONE
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soi	Il Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE





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7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404 **f:** 01923 237404

e: reception@i2analytical.com

Preliminary Report Number: 15-74181

Project / Site name: London Paramount Entertainment Samples received on: 19/06/2015

Resort

Your job number: 30766 Samples instructed on: 24/06/2015

Your order number: Analysis completed by: not complete

Report Issue Number: 0 Report issued on: 30/06/2015

Samples Analysed: 5 soil samples - 1 water sample

Signed:

Dr Claire Stone Quality Manager

For & on behalf of i2 Analytical Ltd.

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are : soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Preliminary reports provided at the request of the client should be considered as incomplete and have not been through the complete quality control procedure.

Results contained in preliminary reports may be subject to change and therefore should not be used as a basis for decision making, except at the risk of the client.





Lab Sample Number				458256	458257	458258	458259	458260
Sample Reference				BH101	BH101	BH101	BH101	BH101
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	1.50	2.00	4.00	5.00
Date Sampled				18/06/2015	18/06/2015	18/06/2015	18/06/2015	18/06/2015
Time Taken				0855	1045	1100	1155	1215
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	22	31	38	38	36
Total mass of sample received	ka	0.001	NONE	2.0	2.0	2.0	2.0	2.0
Total mass of sample received	Kg	0.001	NONL	2.0	2.0	2.0	2.0	2.0
Asbestos in Soil Screen / Identification Name	Туре	N/A	ISO 17025	Chrysotile- Loose fibres	Chrysotile- Loose fibres; Crocidolite- loose fibres	Chrysotile- Loose fibres	-	-
Asbestos in Soil	Туре	N/A	ISO 17025	Detected	Detected	Detected	Not-detected	Not-detected
General Inorganics								
pH	pH Units	N/A	MCERTS	6.6	10.4	8.8	8.1	8.2
Electrical Conductivity	μS/cm	10	NONE	2500	8800	8100	6900	5100
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	1	< 1	< 1
Complex Cyanide	mg/kg	1	NONE	< 1	< 1	1	< 1	< 1
Free Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO ₄	mg/kg	50	MCERTS	17000	15000	9200	2000	1300
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	4.1	10	9.3	3.1	0.52
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	4100	10000	9300	3100	520
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	2.0	5.0	4.6	1.6	0.26
Sulphide	mg/kg	1	MCERTS	< 1.0	86	37	65	68
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	390	7000	7000	5100	4000
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	< 0.5	270	160	26
Organic Matter	%	0.1	MCERTS	0.9	3.4	5.0	3.7	3.9
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	< 2.0	< 20	< 2.0	< 2.0
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20	< 20	< 20	< 20	< 20
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0	< 5.0	< 5 0	< 5.0	< 5.0
Total Phenols								
Total Phenois (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Total Fileriois (Monoriyunc)	mg/kg		IVICERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.26	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.03	MCERTS	< 0.10	< 0.10	0.25	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.22	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	0.50	1.2	< 0.10	< 0.10
Anthracene	mg/kg	0.1	MCERTS	< 0.10	0.18	0.37	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	0.38	1.2	2.6	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	0.30	1.0	2.1	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.22	0.74	1.5	< 0.10	< 0.10
Chrysene	mg/kg	0.05	MCERTS	0.17	0.66	1.4	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	0.25	1.2	2.3	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	0.50	1.1	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.17	0.97	2.0	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	0.64	1.4	< 0.10	< 0.10
Dibenz(a h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.26	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.78	1.6	< 0.05	< 0.05
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6	8.4	19	< 1.6	< 1.6





TPH-CWG - Aromatic >EC16 - EC21

TPH-CWG - Aromatic >EC21 - EC35
TPH-CWG - Aromatic (EC5 - EC35)

Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				458256	458257	458258	458259	458260
Sample Reference				BH101	BH101	BH101	BH101	BH101
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	1.50	2.00	4.00	5.00
Date Sampled				18/06/2015	18/06/2015	18/06/2015	18/06/2015	18/06/2015
Time Taken				0855	1045	1100	1155	1215
		de L	Accreditation Status					
Analytical Parameter	Units	Limit of detection	redi					
(Soil Analysis)	<u>r</u>	tio t	itat					
		3 T	ig					
Heavy Metals / Metalloids	<u> </u>		<u>. </u>			<u></u>		
		20	NONE	14000	17000	10000	20000	25000
Numinium (aqua regia extractable) Antimony (aqua regia extractable)	mg/kg	30 1	NONE ISO 17025	14000	17000	18000 < 1 0	28000 < 1.0	25000 < 1.0
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	15	< 1.0 18	35	21	13
Barium (agua regia extractable)	mg/kg	1	MCERTS	110	100	170	43	39
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.0	1.0	1.1	1.5	1.1
Boron (water soluble)	mg/kg	0.00	MCERTS	1.1	4.5	7.6	1.3	9.7
Cadmium (agua regia extractable)	mg/kg mg/kg	0.2	MCERTS	2.0	4.5	7.0	< 0.2	< 0.2
cadmium (aqua regia extractable) Chromium (hexavalent)	mg/кд mg/ka	4	MCERTS	< 4.0	< 4.0	< 4 0	< 4.0	< 4.0
Chromium (nexavaient) Chromium (agua regia extractable)		1	MCERTS	< 4.0	< 4.0 70	< 4 U	< 4.0 54	< 4.0 38
Copper (aqua regia extractable)	mg/kg mg/kg	1	MCERTS	210	95	160	21	12
ron (agua regia extractable)	mg/кд mg/ka	40	MCERTS	37000	30000	36000	56000	42000
ead (agua regia extractable)	mg/kg mg/kg	1	MCERTS	170	120	190	32	21
Manganese (agua regia extractable)	mg/kg	1	MCERTS	300	270	310	980	220
Mercury (agua regia extractable)	mg/kg	0.3	MCFRTS	< 0.3	2.0	4.5	< 0.3	< 0.3
Molybdenum (agua regia extractable)	mg/kg	0.25	MCERTS	3.5	1.8	3.5	1.6	0.5
lickel (agua regia extractable)	mg/kg	1	MCERTS	37	30	42	39	26
Phosphorus (agua regia extractable)	mg/kg	20	NONE	410	2000	3800	900	640
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	4.4	< 1.0	< 1.0	< 1.0
/anadium (agua regia extractable)	mg/kg	1	MCERTS	48	49	62	84	64
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	310	280	480	110	74
and (adda rogia oxiradiasio)	i iig/ng		WOLKTO	0.0	200	100		, ,
Calcium (agua regia extractable)	mg/kg	20	NONE	38000	88000	79000	19000	31000
Magnesium (agua regia extractable)	mg/kg	20	ISO 17025	3100	6600	6700	11000	8300
Potassium (agua regia extractable)	mg/kg	20	NONE	6100	23000	27000	10000	5700
(-4								
Monoaromatics								
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Foluene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
thylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
& m-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
p-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
			-		=	-		
Petroleum Hydrocarbons								
PH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
PH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	6.1	13	< 2.0	< 2.0
PH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	8.2	42	98	< 8.0	< 8.0
PH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	53	160	380	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	61	210	490	< 10	< 10
PH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
PH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	4.0	3.0	6.7	< 2.0	< 2.0
TPH-CWG - Aromatic > FC16 - FC21	ma/ka	10	MCERTS	< 10	31	71	< 10	< 10

< 10

< 10

10

10

mg/kg

MCERTS





Lab Sample Number				458256	458257	458258	458259	458260
Sample Reference				BH101	BH101	BH101	BH101	BH101
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	1.50	2.00	4.00	5.00
Date Sampled				18/06/2015	18/06/2015	18/06/2015	18/06/2015	18/06/2015
Time Taken				0855	1045	1100	1155	1215
			Accreditation Status					
Analytical Parameter	⊆	Limit of detection	Sta					
(Soil Analysis)	Units	<u>Ģ</u> . ∺	dita					
		3 7	ti og					
VOCs		<u> </u>			<u></u>			
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Chloroethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 10	< 1.0	< 1.0
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether) 1,1-Dichloroethane	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1 0 < 1 0	< 1.0 < 1.0	< 1.0 < 1.0
2,2-Dichloropropane	μg/kg μg/kg	1	NONE	< 1.0	< 1.0 < 1.0	< 1.0	< 1.0	< 1.0 < 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
1 1-Dichloropropene	μg/kg	1	NONE	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane Trichloroethene	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1 0 < 1 0	< 1.0 < 1.0	< 1.0 < 1.0
Dibromomethane	µg/kg µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/kg	1	NONE	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Dibromochloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene 1,2-Dibromoethane	μg/kg μg/kg	1	MCERTS ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1 0 < 1 0	< 1.0 < 1.0	< 1.0 < 1.0
Chlorobenzene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
p & m-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Styrene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Tribromomethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
o-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1 1 2 2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene Bromobenzene	μg/kg μg/kg	1	NONE MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1 0 < 1 0	< 1.0 < 1.0	< 1.0 < 1.0
n-Propylbenzene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 10	< 1.0	< 1.0
2-Chlorotoluene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	< 10	< 1.0	< 1.0
1 3 5-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 10	< 1.0	< 1.0
tert-Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 10	< 1.0	< 1.0
1 2 4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene 1,2-Dichlorobenzene	μg/kg μg/kg	1	ISO 17025 MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1 0 < 1 0	< 1.0 < 1.0	< 1.0 < 1.0
1,4-Dichlorobenzene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Butylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	μg/kg	11	ISO 17025	< 1.0	< 1.0	< 10	< 1.0	< 1.0
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0	< 1.0	< 10	< 1.0	< 1.0
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 10	< 1.0	< 1.0





Lab Sample Number				458256	458257	458258	458259	458260
Sample Reference				8H101	8H101	456256 BH101	456259 BH101	456260 BH101
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	1.50	2.00	4.00	5.00
Date Sampled				18/06/2015	18/06/2015	18/06/2015	18/06/2015	18/06/2015
Time Taken				0855	1045	1100	1155	1215
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs					_		-	
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2 < 0.2	< 0.2 < 0.2	< 0 2 < 0 2	< 0.2	< 0.2
1 3-Dichlorobenzene 1.2-Dichlorobenzene	mg/kg mg/kg	0.2	MCERTS MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2 < 0.1
1 4-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol 2 4-Dimethylphenol	mg/kg mg/kg	0.3	MCERTS MCERTS	< 0.3 < 0.3	< 0.3 < 0.3	< 0 3	< 0.3 < 0.3	< 0.3 < 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.26	< 0.05	< 0.05
2 4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1 < 0.2	< 0.1 < 0.2	< 0.1	< 0.1 < 0.2	< 0.1
2 4 5-Trichlorophenol 2-Methylnaphthalene	mg/kg mg/kg	0.2	MCERTS NONE	< 0.2	< 0.2	< 0.1	< 0.2	< 0.2
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.25	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dibenzofuran 4-Chlorophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2 < 0.3	< 0.2 < 0.3	< 0 2 < 0 3	< 0.2	< 0.2 < 0.3
Diethyl phthalate	mg/kg mg/kg	0.3	ISO 17025 MCERTS	< 0.3	< 0.3	< 0.2	< 0.3	< 0.3
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.22	< 0.10	< 0.10
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	0.50	1.2	< 0.10	< 0.10
Anthracene Carbazole	mg/kg mg/kg	0.1	MCERTS MCERTS	< 0.10	0.18 < 0.3	0.37	< 0.10	< 0.10
Dibutyl phthalate	mg/kg	0.3	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.3
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Fluoranthene	mg/kg	0.1	MCERTS	0.38	1.2	2.6	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	0.30	1.0	2.1	< 0.10	< 0.10
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.22	0.74	1.5	< 0.10	< 0.10
Chrysene (L) St. and the second control of t	mg/kg	0.05	MCERTS	0.17	0.66	1.4	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS MCERTS	0.25 < 0.10	1.2	2.3	< 0.10	< 0.10
Benzo(k)fluoranthene Benzo(a)pyrene	mg/kg mg/kg	0.1	MCERTS	< 0.10	0.50 0.97	1.1 2.0	< 0.10 < 0.10	< 0.10 < 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	0.64	1.4	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.26	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.78	1.6	< 0.05	< 0.05





Lab Sample Number				458261			
Sample Reference				BH101			
Sample Number				None Supplied			
Depth (m)				2.80			
Date Sampled				19/06/2015			
Time Taken				1100			
			•				
		Li de	Accreditation Status				
Analytical Parameter	Units	Limit of detection	ia edi				
(Water Analysis)	៥	tio	ᄧᅗ				
		1	9				
	•				•		
General Inorganics							
рН	pH Units	N/A	ISO 17025	8.3			
Electrical Conductivity	μS/cm	10	NONE	23000			
Total Cyanide	μg/l	10	ISO 17025	< 10			
Complex Cyanide	μg/l	10	NONE	< 10			
Free Cyanide	μg/l	10	ISO 17025	< 10			
Sulphate as SO ₄	μg/l	45	ISO 17025	1820000			
Sulphide	μg/l	5	NONE	< 5.0			
Chloride	mg/l	0.15	ISO 17025	20000			
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	100000			
Nitrate as N	mg/l	0.01	ISO 17025	0.34			
Nitrate as NO ₃	mg/l	0.05	ISO 17025	1.50			
Nitrite as N	μg/l	1	ISO 17025	4.0			
Nitrite as NO ₂	μg/l	5	ISO 17025	13			
Chemical Oxygen Demand (Settled)	mg/l	2	ISO 17025	300			
BOD (Biochemical Oxygen Demand)	mg/l	1	ISO 17025	To follow			
Total Oxidised Nitrogen (TON)	mg/l	0.3	NONE	0.3	<u> </u>		
Total Phenois							
Total Phenols (monohydric)	µg/l	10	ISO 17025	650			
,	F.5:						, I
Speciated PAHs							
Naphthalene	μg/l	0.01	ISO 17025	< 0.01			
Acenaphthylene	μg/l	0.01	ISO 17025	< 0.01			
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01			
Fluorene	μg/l	0.01	ISO 17025	< 0.01			
Phenanthrene	μg/l	0.01	ISO 17025	< 0.01			
Anthracene	μg/l	0.01	ISO 17025	< 0.01			
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01			
Pyrene	μg/l	0.01	ISO 17025	< 0.01			
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01			
Chrysene	μg/l	0.01	ISO 17025	< 0.01			
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025	< 0.01			
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01			
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01	1	ļ	
Indeno(1 2 3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01	-		
Dibenz(a,h)anthracene	μg/l	0.01	ISO 17025	< 0.01	1		
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01			
Coronene	μg/l	0.01	NONE	< 0.01			
Total PAH							
Total EPA-16 PAHs	l/g/l	0.2	ISO 17025	< 0.2	1	Ī	
Total WAC-17 PAHs	µg/l	0.2	NONE	< 0.2			
TOTAL TIMO TELETINA	µg/1	U.Z	INOINE	\ U.Z			





Lab Sample Number				458261				
Sample Reference				BH101				
Sample Number				None Supplied				
Depth (m)				2.80				
Date Sampled				19/06/2015				
Time Taken				1100				
			A					
Analytical Parameter	_	Limit of detection	Accreditation Status					
(Water Analysis)	Units	8 ₹	ta tidi					
(Water Allarysis)	v	할 약	s atio					
			š					
Heavy Metals / Metalloids								
Aluminium (dissolved)	mg/l	0.001	ISO 17025	0.0190				
Antimony (dissolved)	μg/l	0.4	ISO 17025	6.8				
Arsenic (dissolved)	µg/l	0.15	ISO 17025	24.7				
Barium (dissolved)	μg/l	0.06	ISO 17025	250				
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1				
Boron (dissolved)	µg/l	10	ISO 17025	1300			1	1
Cadmium (dissolved)	μg/l	0.02	ISO 17025	0.04			1	
Chromium (hexavalent)	μg/l	5	ISO 17025	< 5.0				
Chromium (dissolved)	μg/l	0.2	ISO 17025	6.0				
Copper (dissolved) Iron (dissolved)	μg/l mg/l	0.5	ISO 17025 ISO 17025	6.1 0.41			1	
Lead (dissolved)	mg/l μg/l	0.004	ISO 17025	2.7				
Manganese (dissolved)	μg/I μg/I	0.2	ISO 17025	84				
Mercury (dissolved)	μg/I μg/I	0.05	ISO 17025	< 0.05				
Molybdenum (dissolved)	µg/l	0.05	ISO 17025	51				
Nickel (dissolved)	µg/l	0.5	ISO 17025	9.4				
Selenium (dissolved)	μg/l	0.6	ISO 17025	210				
Vanadium (dissolved)	μg/l	0.2	ISO 17025	19				
Zinc (dissolved)	μg/l	0.5	ISO 17025	3.1				
Calcium (dissolved)	mg/l	0.012	ISO 17025	270				
Magnesium (dissolved)	mg/l	0.005	ISO 17025	610				
Potassium (dissolved)	mg/l	0.025	ISO 17025	4700				
Phosphorus (total)	mg/l	0.05	ISO 17025	86				
Phosphorus (total)	μg/l	20	ISO 17025	86000				
Monoaromatics								
Benzene	μg/l	1	ISO 17025	< 1.0				
Toluene	μg/I μg/I	1	ISO 17025	< 1.0				
Ethylbenzene	µg/l	1	ISO 17025	< 1.0				
p & m-xylene	µg/l	1	ISO 17025	< 1.0				
o-xylene	μg/l	1	ISO 17025	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	μg/l	1	ISO 17025	< 1.0				
<u> </u>				•				
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10				
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10				
TPH-CWG - Aliphatic >C8 - C10	µg/l	10	NONE	< 10			1	1
TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10				
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE	< 10				
TPH-CWG - Aliphatic >C16 - C21 TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE	< 10			1	1
TPH-CWG - Aliphatic (C5 - C35)	μg/l μg/l	10 10	NONE NONE	< 10 < 10				
otto Ampilatic (co coo)	±9/1	10	INOINE	× 10	1	1	1	1
TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10				
TPH-CWG - Aromatic > C7 - C8	µg/l	10	NONE	< 10				
TPH-CWG - Aromatic >C8 - C10	μg/l	10	NONE	< 10				
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE	< 10				
TPH-CWG - Aromatic >C12 - C16	μg/l	10	NONE	< 10				
TPH-CWG - Aromatic >C16 - C21	μg/l	10	NONE	< 10				
TPH-CWG - Aromatic >C21 - C35	μg/l	10	NONE	< 10				
TPH-CWG - Aromatic (C5 - C35)	μg/l	10	NONE	< 10				





Lab Sample Number				458261			
Sample Reference				BH101			
Sample Number				None Supplied			
Depth (m)				2.80			
Date Sampled				19/06/2015			
Time Taken		ı		1100			
		Δ.	Accreditation Status				
Analytical Parameter	Ş	Limit of detection	Sta				
(Water Analysis)	Units	ct o	itus				
		5 →	ġ				
VOCs		l .			<u> </u>		
Chloromethane	μg/l	1	ISO 17025	< 1.0			
Chloroethane	μg/l	1	ISO 17025	< 1.0			
Bromomethane	μg/l	1	ISO 17025	< 1.0			
Vinyl Chloride	µg/l	1	NONE	< 1.0			
Trichlorofluoromethane	μg/l	1	NONE	< 1.0			
1,1-Dichloroethene	μg/l	1	ISO 17025	< 1.0			
1,1,2-Trichloro-1,2,2-trifluoroethane Cis-1,2-dichloroethene	μg/l μg/l	1	ISO 17025	< 1.0 < 1.0	 		
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	1		
1,1-Dichloroethane	μg/l	1	ISO 17025	< 1.0			
2,2-Dichloropropane	μg/l	1	ISO 17025	< 1.0		-	
Trichloromethane	μg/l	1	ISO 17025	< 1.0			
1,1,1-Trichloroethane	μg/l	1	ISO 17025	< 1.0			
1,2-Dichloroethane 1,1-Dichloropropene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0			
Trans-1,2-dichloroethene	μg/l	1	ISO 17025	< 1.0			
Benzene	µg/l	1	ISO 17025	< 1.0			
Tetrachloromethane	μg/l	1	ISO 17025	< 1.0			
1,2-Dichloropropane	μg/l	1	ISO 17025	< 1.0			
Trichloroethene	μg/l	1	ISO 17025	< 1.0			
Dibromomethane	μg/l	1	ISO 17025	< 1.0			
Bromodichloromethane Cis-1,3-dichloropropene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0			
Trans-1,3-dichloropropene	μg/l	1	ISO 17025	< 1.0			
Toluene	μg/l	1	ISO 17025	< 1.0			
1,1,2-Trichloroethane	μg/l	1	ISO 17025	< 1.0			
1,3-Dichloropropane	μg/l	1	ISO 17025	< 1.0			
Dibromochloromethane	μg/l	1	ISO 17025	< 1.0			
Tetrachloroethene 1,2-Dibromoethane	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0			
Chlorobenzene	μg/l	1	ISO 17025	< 1.0			
1 1 1 2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0			
Ethylbenzene	μg/l	1	ISO 17025	< 1.0			
p & m-Xylene	μg/l	1	ISO 17025	< 1.0			
Styrene	μg/l	1	ISO 17025	< 1.0			
Tribromomethane	μg/l	1	ISO 17025	< 1.0			
o-Xylene 1 1 2 2-Tetrachloroethane	µg/l µg/l	1	ISO 17025	< 1.0 < 1.0			
Isopropylbenzene	ua/l	1	ISO 17025	< 1.0			
Bromobenzene	μg/l	1	ISO 17025	< 1.0			
n-Propylbenzene	μg/l	1	ISO 17025	< 1.0			
2-Chlorotoluene	μg/l	1	ISO 17025	< 1.0			
4-Chlorotoluene	μg/l	1	ISO 17025	< 1.0			
1 3 5-Trimethylbenzene tert-Butylbenzene	μg/l μg/l	1	ISO 17025	< 1.0 < 1.0			
1 2 4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	1		
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0			
1,3-Dichlorobenzene	μg/l	1	ISO 17025	< 1.0			
p-Isopropyltoluene	μg/l	1	ISO 17025	< 1.0			
1 2-Dichlorobenzene	μg/l	1	ISO 17025	< 1.0			
1,4-Dichlorobenzene Butylbenzene	μg/l	1	ISO 17025	< 1.0 < 1.0			
1,2-Dibromo-3-chloropropane	μg/l μg/l	1	ISO 17025	< 1.0			
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0			
Hexachlorobutadiene	μg/l	1	ISO 17025	< 1.0			
1,2,3-Trichlorobenzene	μg/l	1	ISO 17025	< 1.0			





Lab Sample Number				458261	I	I	I	
Sample Reference				BH101				
Sample Number				None Supplied				
Depth (m)				2.80				
Date Sampled				19/06/2015				
Time Taken				1100				
		_	Ac					
Analytical Parameter	_	Limit of detection	Accreditation Status					
(Water Analysis)	Units	ect at	dit:					
(Crace Final Join)	•,	유역	s					
			3					
SVOCs		0.05		0.05	1	ı	1	
Aniline	μg/l	0.05	NONE	< 0.05 < 0.05				
Phenol 2-Chlorophenol	µg/l µg/l	0.05	NONE NONE	< 0.05				
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05				
1 3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05				
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05				
1 4-Dichlorobenzene	μg/l	0.05	NONE	< 0.05				
Bis(2-chloroisopropyl)ether	μg/l	0.05	NONE	< 0.05				
2-Methylphenol	μg/l	0.05	NONE	< 0.05				
Hexachloroethane	μg/l	0.05	NONE	< 0.05				
Nitrobenzene	μg/l	0.05	NONE	< 0.05				
4-Methylphenol	μg/l	0.05	NONE	< 0.05				
Isophorone 2-Nitrophenol	μg/l μg/l	0.05	NONE NONE	< 0.05 < 0.05	 			
2,4-Dimethylphenol	μg/l	0.05	NONE	< 0.05				
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05				
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05				
Naphthalene	μg/l	0.01	ISO 17025	< 0.01				
2 4-Dichlorophenol	μg/l	0.05	NONE	< 0.05				
4-Chloroaniline	μg/l	0.05	NONE	< 0.05				
Hexachlorobutadiene	μg/l	0.05	NONE	< 0.05				
4-Chloro-3-methylphenol	μg/l	0.05	NONE	< 0.05				
2,4,6-Trichlorophenol	μg/l	0.05	NONE	< 0.05				
2 4 5-Trichlorophenol 2-Methylnaphthalene	μg/l μg/l	0.05	NONE NONE	< 0.05 < 0.05				
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05				
Dimethylphthalate	µg/l	0.05	NONE	< 0.05				
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05				
Acenaphthylene	μg/l	0.01	ISO 17025	< 0.01				
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01				
2,4-Dinitrotoluene	μg/l	0.05	NONE	< 0.05				
Dibenzofuran	μg/l	0.05	NONE	< 0.05				
4-Chlorophenyl phenyl ether	μg/l	0.05	NONE	< 0.05				
Diethyl phthalate 4-Nitroaniline	μg/l μg/l	0.05	NONE NONE	< 0.05 < 0.05				
Fluorene	μg/l	0.03	ISO 17025	< 0.03				
Azobenzene	µg/l	0.05	NONE	< 0.05				
Bromophenyl phenyl ether	μg/l	0.05	NONE	< 0.05				
Hexachlorobenzene	μg/l	0.02	NONE	< 0.02				
Phenanthrene	μg/l	0.01	ISO 17025	< 0.01				
Anthracene	μg/l	0.01	ISO 17025	< 0.01				
Carbazole	μg/l	0.05	NONE	< 0.05				
Dibutyl phthalate	μg/l	0.05	NONE	< 0.05				
Anthraquinone	μg/l	0.05	NONE ISO 1703E	< 0.05	-			
Fluoranthene Pyrene	μg/l μg/l	0.01	ISO 17025 ISO 17025	< 0.01 < 0.01				
Butyl benzyl phthalate	μg/I μg/I	0.01	NONE	< 0.01				
Benzo(a)anthracene	μg/l	0.03	ISO 17025	< 0.01				
Chrysene	μg/l	0.01	ISO 17025	< 0.01				
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025	< 0.01				
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01				
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01				
Indeno(1,2,3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01				
Dibenz(a,h)anthracene	μg/l	0.01	ISO 17025	< 0.01				
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01				





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
458256	BH101	None Supplied	0.50	Light brown clay and sand with vegetation.
458257	BH101	None Supplied	1.50	Beige clay and sand with vegetation.
458258	BH101	None Supplied	2.00	Grey clay and sand.
458259	BH101	None Supplied	4.00	Light grey clay and sand.
458260	BH101	None Supplied	5.00	Light grey clay and sand.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Ammoniacal Nitrogen as N in water De Ar				Ī	Accreditation Status	
Ar	colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS	
	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025	
lig	Asbestos Identification with the use of polarised ght microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025	
		In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care.	L086-PL	W	ISO 17025	
	Determination of boron by acidification followed by CP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025	
	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS	
BTEX and MTBE in soil De	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS	
he	Determination of BTEX and MTBE in water by neadspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025	
	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE	
(Settled) ox	Determination of settled COD in water by reflux oxidation with acidified K2Cr2O7 followed by colorimetry. Accredited matrices: SW, PW, GW.	HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)	L065-PL	W	ISO 17025	
		In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082 B	W	ISO 17025	
	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS	
	Determination of complex cyanide by distillation ollowed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE	
ad	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE	
,	Determination of electrical conductivity in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE	
	Determination of free cyanide by distillation ollowed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE	
	Determination of free cyanide by distillation ollowed by colorimetry.	In-house method	L080-PL	W	ISO 17025	





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status	
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS	
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025	
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS	
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, AI=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025	
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025	
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE	
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS	
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025	
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025	
Nitrate in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025	
Nitrite in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by colorimetry.Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L077-PL	W	ISO 17025	
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS	
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS	
pH in water	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025	
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS	
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L070-UK	W	NONE	
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE	





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Speciated WAC-17 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L070-UK	W	ISO 17025
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L010-PL	W	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN-82/C-04579 08	L078-PL	W	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-UK	W	NONE
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE
				155 No 15	7/191 n

Sample Deviation Report



Sample ID	BH101	BH101	BH101	BH101	BH101	BH101	
Other ID							
Sample Type	S	S	S	S	S	w	
Job Number		15-74181	15-74181 458257	15-74181 458258	15-74181	15-74181 458260 c	15-74181
Sample Number		458256			458259		458261
Deviation Code		С	С	С	С		С
Test Name	Method no						
Ammoniacal Nitrogen as N in water	L082-PL	-	-	-	-	-	С
Biological oxygen demand of water	L086-PL	-	-	-	-	-	С
Electrical conductivity of water	L031-PL	-	-	-	-	-	С
Hexavalent chromium in water	L080-PL	=	=	=	=	=	С
Nitrate as N in water	L078-PL	-	-	-	-	-	С
Nitrate in water	L078-PL	-	-	-	-	-	С
Nitrite as N in water	L077-PI	-	-	-	-	-	С
Nitrite in water	L077-PL	=	=	=	=	-	С
pH in water	L005-PL	=	-	=	=	-	С
Sulphide in soil	L010-PL	С	С	С	С	С	=
Sulphide in water	L010-PL	=	=	=	=	=	С
Total oxidised nitrogen in water	L078-PL	-	-	-	-	-	С





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Analytical Report Number: 15-74176

Replaces Analytical Report Number: 15-74176, issue no. 1

Project / Site name: London Paramount Entertainment Samples received on: 23/06/2015

Resort

Your job number: 30766 Samples instructed on: 24/06/2015

Your order number: Analysis completed by: 02/07/2015

Report Issue Number: 2 Report issued on: 02/07/2015

Samples Analysed: 3 soil samples

Rexona Rahman Reporting Manager

Signed:

For & on behalf of i2 Analytical Ltd.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





Lab Sample Number				458244	458245	458246		
Sample Reference	458244 BH204	458245 BH204	458246 BH204					
Sample Number		None Supplied	None Supplied	None Supplied				
Depth (m)				1.00	3.00	3.60		
Date Sampled		23/06/2015	23/06/2015	23/06/2015				
Time Taken	1100	1120	1150					
Time Taken		1		1100	1120	1130		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	32	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	6.3	32	34		
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0		
Asbestos in Soil Screen / Identification Name	Туре	N/A	ISO 17025	Chrysotile	Chrysotile	Chrysotile		
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Detected		
Asbestos Quantification	%	0.001	ISO 17025	< 0.001	< 0.001	< 0.001		
	·							
General Inorganics		•		,			-	
pH	pH Units	N/A	MCERTS	11.1	8.4	8.3	ļL	
Electrical Conductivity	μS/cm	10	NONE	740	520	480	ļL	
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	<u> </u>	
Complex Cyanide	mg/kg	1	NONE	< 1	< 1	< 1		
Free Cyanide	mg/kg	1 50	NONE	< 1	< 1	< 1		
Total Sulphate as SO ₄	mg/kg	50	MCERTS	5400	1900	2500		
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	1.1	1.8	1.7		
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	1100	1800	1700		
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	0.56	0.92	0 84		
Sulphide	mg/kg	1	MCERTS	6.6	30	22		
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	66	68	280		
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	18	28		
Organic Matter	%	0.1	MCERTS	1.2	3.8	3.8		
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0		
Water Soluble Nitrite (2:1) as N	μg/kg	20 5	NONE	< 20	< 20	< 20		
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0]	
Total Phenois								
Total Phenois (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Total Pilenois (monoriyanc)	mg/kg		MCERTS	< 1.0	< 1.0	< 1.0	<u> </u>	
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	0.31	0.49	0 55		
Acenaphthylene	mg/kg	0.03	MCERTS	0.37	< 0.10	< 0.10	 	
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Fluorene	mg/kg	0.1	MCERTS	0.45	< 0.10	< 0.10	 	
Phenanthrene	mg/kg	0.1	MCERTS	1.6	0.45	0.54	1	
Anthracene	mg/kg	0.1	MCERTS	0.61	0.12	0.16		
Fluoranthene	mg/kg	0.1	MCERTS	2.0	0.63	0.10	1	
Pyrene	mg/kg	0.1	MCERTS	1.5	0.50	0.71		
Benzo(a)anthracene	mg/kg	0.1	MCERTS	1.0	0.37	0 53		
Chrysene	mg/kg	0.05	MCERTS	0.81	0.36	0.47		
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	0.88	0.62	0.79	l i	
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.41	0.18	0 35		
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.67	0.46	0 58		
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	0.38	0.32	0.45		
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.43	0.39	0 57		
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05		
Total PAH			_					
Total WAC-17 PAHs	mg/kg	1.6	NONE	11	4.9	6.6		





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				458244	458245	458246	
Sample Reference		BH204	BH204	BH204			
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				1.00	3.00	3.60	
Date Sampled	23/06/2015	23/06/2015	23/06/2015				
Time Taken	1100	1120	1150				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	1100	1120	1150	
Heavy Metals / Metalloids							
Aluminium (aqua regia extractable)	mg/kg	30	NONE	12000	24000	27000	
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	2.1	3.3	3.5	
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.5	19	23	
Barium (aqua regia extractable)	mg/kg	1	MCERTS	110	100	160	
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.9	1.6	2.3	
Boron (water soluble)	mg/kg	0.2	MCERTS	2.2	6.0	5.7	
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.4	< 0.2	< 0.2	
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	59	44	50	
Copper (aqua regia extractable)	mg/kg	1	MCERTS	34	27	48	
Iron (aqua regia extractable)	mg/kg	40	MCERTS	21000	40000	46000	
Lead (aqua regia extractable)	mg/kg	1	MCERTS	47	41	47	
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	370	320	300	
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.4	< 0.3	< 0.3	
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.9	1.5	1.5	
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	36	28	35	
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	750	480	480	
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	39	74	85	
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	84	88	92	
Coloium (a cua un cia su tra statula)		20	l vove	150000	01000	F2000	
Calcium (aqua regia extractable)	mg/kg	20	NONE	150000	81000	53000	
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	4300	5600	6600	
Potassium (aqua regia extractable)	mg/kg	20	NONE	2400	6300	6600	<u> </u>
Monoaromatics							
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
p & m-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
o-xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	3.0	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	21	12	22	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	61	150	280	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	82	160	300	
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	2.4	< 2.0	< 2.0	
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	18	< 10	16	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	36	37	110	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	56	37	130	





Lab Sample Number	458244	458245	458246				
Sample Reference				BH204	BH204	BH204	
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				1.00	3.00	3.60	
Date Sampled				23/06/2015	23/06/2015	23/06/2015	
Time Taken	1			1100	1120	1150	
		Δ.	Accreditation Status				
Analytical Parameter	5	Limit of detection	ered Sta				
(Soil Analysis)	Units	ctic o	itus				
		n n	, <u>ci</u>				
VOCs	<u> </u>		_				
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	
Chloroethane	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	
Bromomethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0 < 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether) 1,1-Dichloroethane	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
2,2-Dichloropropane	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	
Trichloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
1,2-Dichloropropane Trichloroethene	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
Dibromomethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
Bromodichloromethane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	
Dibromochloromethane Tetrachloroethene	μg/kg	1	ISO 17025 MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
1,2-Dibromoethane	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	
Chlorobenzene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
p & m-Xylene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
Styrene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
Tribromomethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
o-Xylene 1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
Isopropylbenzene	μg/kg μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	
Bromobenzene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	
2-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	
4-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	
1,3,5-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	
tert-Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	
1 2 4-Trimethylbenzene sec-Butylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0 < 1.0	< 1.0 < 1.0	
sec-Butylbenzene 1,3-Dichlorobenzene	μg/kg μg/kg	1	NONE ISO 17025	< 1.0 < 1.0	< 1.0	< 1.0 < 1.0	
p-Isopropyltoluene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	
1,2-Dichlorobenzene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	
1,2-Dibromo-3-chloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0	





Lab Sample Number	458244	458245	458246					
Sample Reference				BH204	BH204	BH204		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				1.00	3.00	3.60		
Date Sampled				23/06/2015	23/06/2015	23/06/2015		
Time Taken	_			1100	1120	1150		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1		
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2		
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Hexachloroethane Nitrobenzene	mg/kg	0.05	MCERTS MCERTS	< 0.05 < 0.3	< 0.05 < 0.3	< 0.05 < 0.3	1	
4-Methylphenol	mg/kg mg/kg	0.3	NONE	< 0.2	< 0.2	< 0.2		
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Naphthalene	mg/kg	0.05	MCERTS	0.31	0.49	0 55		
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1		
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1		
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2 0.5	< 0.2		
2-Methylnaphthalene 2-Chloronaphthalene	mg/kg mg/kg	0.1	NONE MCERTS	0.7 < 0.1	< 0.1	0.5 < 0.1		
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Acenaphthylene	mg/kg	0.1	MCERTS	0.37	< 0.10	< 0.10		
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
2 4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
Dibenzofuran	mg/kg	0.2	MCERTS	0.5	< 0.2	< 0.2		
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3		
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
Fluorene	mg/kg	0.1	MCERTS	0.45	< 0.10	< 0.10	1	
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Bromophenyl phenyl ether Hexachlorobenzene	mg/kg	0.2	MCERTS MCERTS	< 0.2 < 0.3	< 0.2 < 0.3	< 0.2 < 0.3		
Phenanthrene	mg/kg mg/kg	0.3	MCERTS	1.6	0.45	0.54	1	
Anthracene	mg/kg	0.1	MCERTS	0.61	0.43	0.16		
Carbazole	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Fluoranthene	mg/kg	0.1	MCERTS	2.0	0.63	0 85		
Pyrene	mg/kg	0.1	MCERTS	1.5	0.50	0.71		
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3]	
Benzo(a)anthracene	mg/kg	0.1	MCERTS	1.0	0.37	0 53		
Chrysene	mg/kg	0.05	MCERTS	0.81	0.36	0.47		
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	0.88	0.62	0.79		
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.41	0.18	0 35		
Benzo(a)pyrene Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	0.67	0.46	0 58		
Dibenz(a,h)anthracene	mg/kg mg/kg	0.1	MCERTS MCERTS	0.38 < 0.10	0.32 < 0.10	0.45 < 0.10	1	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.43	0.39	0.10		
Delizo(grii/per yierie	mg/kg	0.03	PICENTO	עדיי	0.33	0.37		





Project / Site name: London Paramount Entertainment Resort

Your Order No:

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

"The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

Any material greater than 16mm is considered as Bulk sample and reported separately, asbestos content (if any) is not included in the final Quantitative analysis. The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
458244	BH204	1.00	128	Loose Fibres	Chrysotile	< 0.001	< 0.001
458245	BH204	3.00	94	Loose Fibres	Chrysotile	< 0.001	< 0.001
458246	BH204	3.60	106	Loose Fibres	Chrysotile	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
458244	BH204	None Supplied	1 00	Beige sandy loam with gravel.
458245	BH204	None Supplied	3 00	Light grey clay and loam with gravel.
458246	BH204	None Supplied	3 60	Light grey clay and loam with gravel.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification	The analysis was carried out using documented inhouse method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a diazonium salt which forms chromophore which is	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





Emma Leivers

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i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, **WD18 8YS**

t: 01923 225404 f: 01923 237404

e: reception@i2analytical.com

Analytical Report Number: 15-74166

London Paramount Entertainment Samples received on: Project / Site name: 19/06/2015

Resort

Your job number: 30766 Samples instructed on: 24/06/2015

Your order number: Analysis completed by: 30/06/2015

Report Issue Number: Report issued on: 30/06/2015

Samples Analysed: 1 soil sample

Signed:

Dr Claire Stone Quality Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting - 2 weeks from reporting

asbestos - 6 months from reporting





Lab Sample Number				458162			I	1
Sample Reference				BH704				
Sample Number								
				None Supplied 1.80				
Depth (m)				18/06/2015				
Date Sampled Time Taken								
тіте такен		1		None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	12				
Total mass of sample received	kg	0.001	NONE	2.0				
rotal mass of sample reserved	9	0.001	HOLLE	2.0			•	
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected				
Consul Insuranies								
General Inorganics	all 11-2	NI/A	MCERTC	0.7	1	1	1	1 1
pH Electrical Conductivity	pH Units	N/A	MCERTS	8.3		 	 	
Electrical Conductivity	μS/cm	10	NONE	130		 	 	
Total Cyanide	mg/kg	1	MCERTS	< 1		<u> </u>		
Complex Cyanide	mg/kg	1	NONE	< 1		l	1	
Free Cyanide	mg/kg	1 50	NONE MCERTS	< 1 500		!	1	
Total Sulphate as SO ₄	mg/kg							
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	0 037				
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	37				
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	0 019				
Sulphide	mg/kg	1	MCERTS	< 1.0				
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	15				
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5				
Organic Matter	%	0.1	MCERTS	0.9				
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	3.8				
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20				
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0				
Total Phenois	<u> </u>							
			MCEDIC	. 1.0		T .	1	1
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0				
Speciated PAHs								
		0.05	MOERTO	. 0.05	ı	1	ı	1
Naphthalene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10		<u> </u>		
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10		 	 	
Fluorene	mg/kg	0.1	MCERTS	< 0.10		l	1	1
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10		!	1	
Anthracene	mg/kg	0.1	MCERTS	< 0.10		_	_	
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10		_	_	
Pyrene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10				
Chrysene	mg/kg	0.05	MCERTS	< 0.05				
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10				
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10				
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05				
Coronene	mg/kg	0.05	NONE	< 0.05				
		-	-		-	-	-	
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6				
-	<u> </u>					*	=	-





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				458162			
Sample Reference				BH704			
Sample Number				None Supplied			
Depth (m)				1.80			
Date Sampled				18/06/2015			
Time Taken				None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids							
Aluminium (aqua regia extractable)	mg/kg	30	NONE	13000			
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	1.4			
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	7.6			
Barium (aqua regia extractable)	mg/kg	1	MCERTS	57			
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.7			
Boron (water soluble)	mg/kg	0.2	MCERTS	1.0			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2			
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	30			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	6.8			
Iron (aqua regia extractable)	mg/kg	40	MCERTS	22000			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	7.8			
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	260			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3			
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	< 0.3			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	16			
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	370			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0			
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	41			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	35			
Calcium (aqua regia extractable)	mg/kg	20	NONE	25000			
Magnesium (agua regia extractable)	mg/kg	20	ISO 17025	2800	 		
Potassium (aqua regia extractable)	mg/kg	20	NONE	2100	1	1	
Monoaromatics	3,119		•			*	
Benzene	μg/kg	1	MCERTS	< 1.0			
Toluene	μg/kg	1	MCERTS	< 1.0	†	<u> </u>	
Ethylbenzene	μg/kg	1	MCERTS	< 1.0			
p & m-xylene	μg/kg	1	MCERTS	< 1.0	† †		
o-xylene	μg/kg	1	MCERTS	< 1.0	† †		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	† †		
(,,,)	P3/19			* 2.0			

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1			
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0			
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0			
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0			
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10			
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1			
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1			
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1			
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0			
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	3.0			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10			
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	·		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10			





Lab Sample Number				458162			
Sample Reference				BH704			
Sample Number				None Supplied			
Depth (m)				1.80			
Date Sampled				18/06/2015			
Time Taken				None Supplied			
			A				
Analytical Davanatas	_	ded	Accreditation Status				
Analytical Parameter	Units	Limit of detection	edi				
(Soil Analysis)	ß	tio of	동				
		3	9				
VOCs							·
Chloromethane	μg/kg	1	ISO 17025	< 1.0			
Chloroethane	μg/kg	1	ISO 17025	< 1.0			
Bromomethane	μg/kg	1	ISO 17025	< 1.0			
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0			
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0			
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0			
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0			
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0			
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0			
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0			
Trichloromethane	μg/kg	1	MCERTS	< 1.0			
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0			
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0 < 1.0			
1,1-Dichloropropene	μg/kg	1	NONE NONE				
Trans-1,2-dichloroethene Benzene	μg/kg μg/kg	1	MCERTS	< 1.0 < 1.0			
Tetrachloromethane	μg/kg μg/kg	1	MCERTS	< 1.0			
1,2-Dichloropropane	μg/kg μg/kg	1	MCERTS	< 1.0			
Trichloroethene	μg/kg μg/kg	1	MCERTS	< 1.0			
Dibromomethane	μg/kg μg/kg	1	MCERTS	< 1.0			
Bromodichloromethane	μg/kg	1	NONE	< 1.0			
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0			
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0			
Toluene	μg/kg	1	MCERTS	< 1.0			
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0			
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0			
Dibromochloromethane	μg/kg	1	ISO 17025	< 1.0			
Tetrachloroethene	μg/kg	1	MCERTS	< 1.0			
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0			
Chlorobenzene	μg/kg	1	MCERTS	< 1.0			
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0			
Ethylbenzene	μg/kg	1	MCERTS	< 1.0			
p & m-Xylene	μg/kg	1	MCERTS	< 1.0			
Styrene	μg/kg	1	MCERTS	< 1.0			
Tribromomethane	μg/kg	1	MCERTS	< 1.0			
o-Xylene 1,1,2,2-Tetrachloroethane	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0		 	
Isopropylbenzene		1	NONE	< 1.0			
Bromobenzene	μg/kg μg/kg	1	MCERTS	< 1.0			
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0			
2-Chlorotoluene	μg/kg	1	NONE	< 1.0			
4-Chlorotoluene	μg/kg	1	NONE	< 1.0			
1,3,5-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0			
tert-Butylbenzene	μg/kg	1	NONE	< 1.0			
1 2 4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0			
sec-Butylbenzene	μg/kg	1	NONE	< 1.0			
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0			
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0			
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0			
1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0			
Butylbenzene	μg/kg	1	NONE	< 1.0			
1,2-Dibromo-3-chloropropane	μg/kg	1	ISO 17025	< 1.0			
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0			
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0			
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	<u> </u>	I	





Lab Sample Number			458162				
Sample Reference				BH704			
Sample Number				None Supplied			
Depth (m)				1.80			
Date Sampled				18/06/2015			
Time Taken		None Supplied					
		요 _	Accreditation Status				
Analytical Parameter	Units	imi	redi				
(Soil Analysis)	its	Limit of detection	tus				
		5 T	ğ				
SVOCs							
Aniline	mg/kg	0.1	NONE	< 0.1			
Phenol	mg/kg	0.2	ISO 17025	< 0.2			
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1			
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2			
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1			
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
Bis(2-chloroisopropyl)ether 2-Methylphenol	mg/kg	0.1	MCERTS MCERTS	< 0.1 < 0.3		1	
Z-Metryiphenoi Hexachloroethane	mg/kg mg/kg	0.05	MCERTS	< 0.05			
Nitrobenzene	mg/kg	0.03	MCERTS	< 0.3			
4-Methylphenol	mg/kg	0.2	NONE	< 0.2			
Isophorone	mg/kg	0.2	MCERTS	< 0.2			
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3			
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3			
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3			
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3			
Naphthalene	mg/kg	0.05	MCERTS	< 0.05			
2,4-Dichlorophenol 4-Chloroaniline	mg/kg	0.3	MCERTS	< 0.3			
4-Cnioroaniline Hexachlorobutadiene	mg/kg	0.1	NONE MCERTS	< 0.1 < 0.1			
4-Chloro-3-methylphenol	mg/kg mg/kg	0.1	NONE	< 0.1			
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1			
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2			
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1			
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1			
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1			
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1			
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10			
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10			
2 4-Dinitrotoluene Dibenzofuran	mg/kg mg/kg	0.2	MCERTS MCERTS	< 0.2 < 0.2			
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.2			
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2			
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2			
Fluorene	mg/kg	0.1	MCERTS	< 0.10			
Azobenzene	mg/kg	0.3	MCERTS	< 0.3			
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2		<u> </u>	
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3			
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10			
Anthracene Carbazole	mg/kg	0.1	MCERTS MCERTS	< 0.10 < 0.3			
Carbazole Dibutyl phthalate	mg/kg mg/kg	0.3	MCERTS	< 0.2		1	
Anthraquinone	mg/kg	0.3	MCERTS	< 0.2			
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10			
Pyrene	mg/kg	0.1	MCERTS	< 0.10			
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3			
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10			
Chrysene	mg/kg	0.05	MCERTS	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10			
Dibenz(a,h)anthracene Benzo(ghi)perylene	mg/kg	0.1	MCERTS MCERTS	< 0.10 < 0.05		1	
ренго(диг)регутене	mg/kg	0.03	MCEKIS	< 0.05	1	I	





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
458162	BH704	None Supplied	1 80	Light brown clay and sand.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Sample Deviation Report



Samp	le ID	BH704
Othe	er ID	
Sample	е Туре	S
Job Nu	umber	15-74166
Sample	Number	458162
Deviation	on Code	С
Test Name	Method no	
Sulphide in soil	L010-PL	С





Emma Leivers

Geotechnical Engineering Ltd Centurion House Olympus Park Quedgeley Gloucester GL2 4NF

t: 01452 527 743 f: 01452 729 314

e: emma.leivers@geoeng.co.uk

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404 f: 01923 237404

e: reception@i2analytical.com

Analytical Report Number: 15-74029

Project / Site name: London Paramount Entertainment Samples received on: 17/06/2015

Resort

Your job number: 30766 Samples instructed on: 19/06/2015

Your order number: Analysis completed by: 26/06/2015

Report Issue Number: 1 Report issued on: 26/06/2015

Samples Analysed: 1 soil sample

Signed:

Dr Claire Stone Quality Manager

For & on behalf of i2 Analytical Ltd.

Reporting Manager

Signed:

Rexona Rahman

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





Lab Sample Number				457390				
Sample Reference				BH705				
Sample Number				None Supplied				-
Depth (m)				1.00				+
Date Sampled				17/06/2015				
Time Taken				0955				
Time taken	1			0933				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	12				
Total mass of sample received	kg	0.001	NONE	2.0				
					•		•	
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected				
			'					
General Inorganics								
pH	pH Units	N/A	MCERTS	8.2				
Electrical Conductivity	µS/cm	10	NONE	90		1		
Total Cyanide	mg/kg	1	MCERTS	< 1				
Complex Cyanide	mg/kg	1	NONE	< 1				
Free Cyanide	mg/kg	1	NONE	< 1		1		
Total Sulphate as SO ₄	mg/kg	50	MCERTS	430				
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	0 030				
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	30				
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	0 015				
Sulphide	mg/kg	1	MCERTS	< 1.0				
Water Soluble Chloride (2:1)		1		3.3				
	mg/kg		MCERTS	< 0.5				
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS					
Organic Matter	%	0.1	MCERTS	< 0.1				
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0				
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20				
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0				
Total Phenois								
				1.0	1		I	
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0]
Consider A DAIL								
Speciated PAHs		0.05		2.25	1		I	
Naphthalene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10		1		├
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10				
Fluorene	mg/kg	0.1	MCERTS	< 0.10		1		├
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10		1		├
Anthracene	mg/kg	0.1	MCERTS	< 0.10				
Fluoranthene	mg/kg	0.1	MCERTS	0.28		1		igwdot
Pyrene	mg/kg	0.1	MCERTS	0.24		1		igwdot
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.15				
Chrysene	mg/kg	0.05	MCERTS	0.16				
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10				
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10				
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05				
Coronene	mg/kg	0.05	NONE	< 0.05				
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6				
		_				-		





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				457390			
Sample Reference				BH705			
Sample Number				None Supplied		1	
Depth (m)				1.00			
Date Sampled				17/06/2015			
Time Taken				0955			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids							
Aluminium (aqua regia extractable)	mg/kg	30	NONE	9300			
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0			
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	7.0			
Barium (aqua regia extractable)	mg/kg	1	MCERTS	50			
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.7			
Boron (water soluble)	mg/kg	0.2	MCERTS	0.4			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2			
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	25			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	8.7			
Iron (aqua regia extractable)	mg/kg	40	MCERTS	22000			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	7.7			
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	300			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3			
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	< 0.3			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	18			
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	750			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0			
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	34			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	32			
Calcium (aqua regia extractable)	mg/kg	20	NONE	63000			
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	3800			
Potassium (aqua regia extractable)	mg/kg	20	NONE	2400			
Monoaromatics							
Benzene	μg/kg	1	MCERTS	< 1.0			
Toluene	μg/kg	1	MCERTS	< 1.0	 		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0			
p & m-xylene	μg/kg	1	MCERTS	< 1.0			
o-xylene	μg/kg	1	MCERTS	< 1.0	 		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0			

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0		
TPH-CWG - Aromatic >EC12 - EC16 TPH-CWG - Aromatic >EC16 - EC21	mg/kg mg/kg	10	MCERTS MCERTS	< 2.0 < 10		
		2 10 10				





Lab Sample Number				457390			
Sample Reference				BH705			
Sample Number				None Supplied			
Depth (m)				1.00			
Date Sampled				17/06/2015			
Time Taken				0955			
		0	Accreditation Status				
Analytical Parameter	드	Limit of detection	Sta				
(Soil Analysis)	Units	it o	dita				
		on of	v či				
VOCs							
Chloromethane	μg/kg	1	ISO 17025	< 1.0	I	I	
Chloroethane	μg/kg	1	ISO 17025	< 1.0			
Bromomethane	μg/kg	1	ISO 17025	< 1.0			
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0			
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0			
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0			
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0			
Cis-1,2-dichloroethene MTBE (Methyl Tertiary Butyl Ether)	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0		 	
1,1-Dichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0			
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0			
Trichloromethane	μg/kg	1	MCERTS	< 1.0			
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0			
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0			
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0			
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0			
Benzene Tetrachloromethane	μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0			
1,2-Dichloropropane	μg/kg μg/kg	1	MCERTS	< 1.0			
Trichloroethene	μg/kg	1	MCERTS	< 1.0			
Dibromomethane	μg/kg	1	MCERTS	< 1.0			
Bromodichloromethane	μg/kg	1	NONE	< 1.0			
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0			
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0			
Toluene	μg/kg	1	MCERTS	< 1.0			
1,1,2-Trichloroethane 1,3-Dichloropropane	μg/kg μg/kg	1	MCERTS ISO 17025	< 1.0 < 1.0			
Dibromochloromethane	μg/kg μg/kg	1	ISO 17025	< 1.0			
Tetrachloroethene	μg/kg	1	MCERTS	< 1.0			
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0			
Chlorobenzene	μg/kg	1	MCERTS	< 1.0			
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0			
Ethylbenzene	μg/kg	1	MCERTS	< 1.0			
p & m-Xylene	μg/kg	1	MCERTS	< 1.0			
Styrene Tribromomethane	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0			
o-Xylene	μg/kg μg/kg	1	MCERTS	< 1.0			
1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0			
Isopropylbenzene	μg/kg	1	NONE	< 1.0			
Bromobenzene	μg/kg	1	MCERTS	< 1.0			
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0			
2-Chlorotoluene	μg/kg	1	NONE	< 1.0			
4-Chlorotoluene	μg/kg	1	NONE TCO 1702E	< 1.0 < 1.0			
1,3,5-Trimethylbenzene tert-Butylbenzene	μg/kg μg/kg	1	ISO 17025 NONE	< 1.0 < 1.0		 	
1 2 4-Trimethylbenzene	μg/kg μg/kg	1	ISO 17025	< 1.0			
sec-Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0			
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0			
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0	 		
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0			
1 4-Dichlorobenzene	μg/kg "	1	MCERTS	< 1.0			
Butylbenzene	μg/kg	1	NONE TCO 1702E	< 1.0			
1,2-Dibromo-3-chloropropane 1,2,4-Trichlorobenzene	μg/kg	1	ISO 17025 MCERTS	< 1.0 < 1.0		 	
Hexachlorobutadiene	μg/kg μg/kg	1	NONE	< 1.0		 	
1,2,3-Trichlorobenzene	μg/kg μg/kg	1	NONE	< 1.0		1	
, ,					-	•	





Lab Sample Number				457390			
Sample Reference				BH705			
Sample Number				None Supplied			
Depth (m)				1.00			
Date Sampled				17/06/2015			
Time Taken				0955			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs							
Aniline	mg/kg	0.1	NONE	< 0.1			
Phenol	mg/kg	0.2	ISO 17025	< 0.2			
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1			
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2			
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1			
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
Bis(2-chloroisopropyl)ether 2-Methylphenol	mg/kg	0.1	MCERTS MCERTS	< 0.1 < 0.3			
Z-Methylphenol Hexachloroethane	mg/kg mg/kg	0.05	MCERTS	< 0.05			
Nitrobenzene	mg/kg	0.03	MCERTS	< 0.3			
4-Methylphenol	mg/kg	0.2	NONE	< 0.2			
Isophorone	mg/kg	0.2	MCERTS	< 0.2			
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3			
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3			
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3			
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3			
Naphthalene	mg/kg	0.05	MCERTS	< 0.05			
2,4-Dichlorophenol 4-Chloroaniline	mg/kg	0.3	MCERTS	< 0.3 < 0.1			
Hexachlorobutadiene	mg/kg mg/kg	0.1	NONE MCERTS	< 0.1			
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1			
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1			
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2			
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1			
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1			
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1			
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1			
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10 < 0.10			
Acenaphthene 2 4-Dinitrotoluene	mg/kg mg/kg	0.1	MCERTS MCERTS	< 0.10			
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2			
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3			
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2			
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2			
Fluorene	mg/kg	0.1	MCERTS	< 0.10			
Azobenzene	mg/kg	0.3	MCERTS	< 0.3			
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2			
Hexachlorobenzene Phenanthrene	mg/kg mg/kg	0.3	MCERTS MCERTS	< 0.3 < 0.10			
Anthracene	mg/kg mg/ka	0.1	MCERTS	< 0.10			
Carbazole	mg/kg	0.3	MCERTS	< 0.3			
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2			
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3			
Fluoranthene	mg/kg	0.1	MCERTS	0.28			
Pyrene	mg/kg	0.1	MCERTS	0.24			
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3			
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.15			
Chrysene	mg/kg	0.05	MCERTS	0.16			
Benzo(b)fluoranthene Benzo(k)fluoranthene	mg/kg	0.1	MCERTS MCERTS	< 0.10 < 0.10			
Benzo(k)fluorantnene Benzo(a)pyrene	mg/kg mg/kg	0.1	MCERTS	< 0.10			
Indeno(1,2,3-cd)pyrene	mg/kg mg/kg	0.1	MCERTS	< 0.10			
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05			
S B T T T	319				-	-	





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sam Numbe		Sample Number	Depth (m)	Sample Description *
457390	BH705	None Supplied	1 00	Light brown sand.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a diazonium salt which forms chromophore which is	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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Analytical Report Number: 15-74028

Replaces Analytical Report Number: 15-74028, issue no. 1

Project / Site name: London Paramount Entertainment Samples received on: 11/06/2015

Resort

Your job number: 30766 Samples instructed on: 19/06/2015

Your order number: 29/06/2015

Report Issue Number: 2 Report issued on: 29/06/2015

Samples Analysed: 1 soil sample

Rexona Rahman Reporting Manager

Signed:

For & on behalf of i2 Analytical Ltd.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





Lab Sample Number				457389				
Sample Reference				BH202				
Sample Number				None Supplied				
Depth (m)				10.50				
Date Sampled				11/06/2015				
Time Taken				1030				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	46				
Total mass of sample received	kg	0.001	NONE	2.0				
						-		
Asbestos in Soil Screen / Identification Name	Туре	N/A	ISO 17025	Chrysotile				
Asbestos in Soil	Type	N/A	ISO 17025	Detected				
Asbestos Quantification	%	0.001	ISO 17025	< 0.001				
General Inorganics								
pH	pH Units	N/A	MCERTS	8.4				
Electrical Conductivity	μS/cm	10	NONE	3200				
Total Cyanide	mg/kg	1	MCERTS	< 1				
Complex Cyanide	mg/kg	1	NONE	< 1				
Free Cyanide	mg/kg	1	NONE	< 1				
Total Sulphate as SO ₄	mg/kg	50	MCERTS	5300				
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	4.5				
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	4500				
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	2.2				
Sulphide	mg/kg	1	MCERTS	620				
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	2500				
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	170				
Organic Matter	%	0.1	MCERTS	6.3				
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0				
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20				
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0				
Total Phenols	- <u>-</u>	<u>-</u>	-	-	-	-	-	-
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0				
	J, J,				<u></u>			
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	Ì	1	1	
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10				
Fluorene	mg/kg	0.1	MCERTS	< 0.10				
Phenanthrene	mg/kg	0.1	MCERTS	0.16				
Anthracene	mg/kg	0.1	MCERTS	< 0.10				
Fluoranthene	mg/kg	0.1	MCERTS	0.38				
Pyrene	mg/kg	0.1	MCERTS	0.37				
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.24				
Chrysene	mg/kg	0.05	MCERTS	0.24				
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	0.24				
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.17				
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.20				
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10				
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05				
Coronene	mg/kg	0.05	NONE	< 0.05				
				_		_	_	
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	2.0				
		_						





Sample Reference	None Supplied 10.50 Date Sampled 10.5		
Depth (m)	Depth (m) Date Sampled 11,06/2015 11/06/2015 1		
Date Sampled	Time Taken		
Analytical Parameter (Soil Analysis)	Time Taken		
Analytical Parameter Set	Heavy Metals / Metalloids Malminium (aqua regia extractable) mg/kg 1 MCERTS 17 MCERTS 17 MCERTS 18 MCERTS 17 MCERTS 17 MCERTS 18 MCERTS 19 MCERTS 10 MCERTS		
Aluminum (aqua regia extractable)	Heavy Metals / Metalloids Aluminium (aqua regia extractable) mg/kg 30 NONE 17000 Antimony (aqua regia extractable) mg/kg 1 ISO 17025 < 1.0 Arsenic (aqua regia extractable) mg/kg 1 MCERTS 17 Barium (aqua regia extractable) mg/kg 1 MCERTS 47 Beryllium (aqua regia extractable) mg/kg 0.06 MCERTS 1.2 Boron (water soluble) mg/kg 0.0 MCERTS 6.0 Cadmium (aqua regia extractable) mg/kg 0.2 MCERTS 6.0 Cadmium (aqua regia extractable) mg/kg 0.2 MCERTS < 0.2 Chromium (hexavalent) mg/kg 4 MCERTS < 4.0 Chromium (aqua regia extractable) mg/kg 1 MCERTS 35 Copper (aqua regia extractable) mg/kg 1 MCERTS 35 Copper (aqua regia extractable) mg/kg 1 MCERTS 22 Iron (aqua regia extractable) mg/kg 1		
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Phosphorus (aqua regia extractable) mg/kg 20 NONE 600 Selenium (aqua regia extractable) mg/kg 1 MCERTS < 1.0	Phosphorus (aqua regia extractable) mg/kg 20 NONE 600 Selenium (aqua regia extractable) mg/kg 1 MCERTS < 1.0		
Selenium (aqua regia extractable) mg/kg 1 MCERTS < 1.0	Monoaromatics Monoaromati		
Vanadium (aqua regia extractable) mg/kg 1 MCERTS 62 Zinc (aqua regia extractable) mg/kg 1 MCERTS 86 Calcium (aqua regia extractable) mg/kg 20 NONE 30000 Magnesium (aqua regia extractable) mg/kg 20 ISO 17025 7600 Potassium (aqua regia extractable) mg/kg 20 NONE 5600 Monoaromatics Benzene μg/kg 1 MCERTS < 1.0	Vanadium (aqua regia extractable) mg/kg 1 MCERTS 62 Zinc (aqua regia extractable) mg/kg 1 MCERTS 86 Calcium (aqua regia extractable) mg/kg 20 NONE 30000 Magnesium (aqua regia extractable) mg/kg 20 ISO 17025 7600 Potassium (aqua regia extractable) mg/kg 20 NONE 5600 Monoaromatics Benzene µg/kg 1 MCERTS < 1.0		
Magnesian (aqua regia extractable) mg/kg 1 MCERTS 86	Zinc (aqua regia extractable) mg/kg 1 MCERTS 86 Calcium (aqua regia extractable) mg/kg 20 NONE 30000 Magnesium (aqua regia extractable) mg/kg 20 ISO 17025 7600 Potassium (aqua regia extractable) mg/kg 20 NONE 5600 Monoaromatics Benzene µg/kg 1 MCERTS < 1.0		
Calcium (aqua regia extractable) mg/kg 20 NONE 30000 Magnesium (aqua regia extractable) mg/kg 20 ISO 17025 7600 Potassium (aqua regia extractable) mg/kg 20 NONE 5600 Monoaromatics Benzene μg/kg 1 MCERTS < 1.0	Calcium (aqua regia extractable) mg/kg 20 NONE 30000 Magnesium (aqua regia extractable) mg/kg 20 ISO 17025 7600 Potassium (aqua regia extractable) mg/kg 20 NONE 5600 Monoaromatics Benzene μg/kg 1 MCERTS < 1.0		
Magnesium (aqua regia extractable) mg/kg 20 ISO 17025 7600 Potassium (aqua regia extractable) mg/kg 20 NONE 5600 Monoaromatics Benzene μg/kg 1 MCERTS < 1.0	Magnesium (aqua regia extractable) mg/kg 20 ISO 17025 7600 Potassium (aqua regia extractable) mg/kg 20 NONE 5600 Monoaromatics Benzene μg/kg 1 MCERTS < 1.0		
Magnesium (aqua regia extractable) mg/kg 20 ISO 17025 7600 Potassium (aqua regia extractable) mg/kg 20 NONE 5600 Monoaromatics Benzene μg/kg 1 MCERTS < 1.0	Magnesium (aqua regia extractable) mg/kg 20 ISO 17025 7600 Potassium (aqua regia extractable) mg/kg 20 NONE 5600 Monoaromatics 3enzene μg/kg 1 MCERTS < 1.0		
Potassium (aqua regia extractable) mg/kg 20 NONE 5600 Monoaromatics Benzene μg/kg 1 MCERTS < 1.0	Monoaromatics μg/kg 1 MCERTS < 1.0 Toluene μg/kg 1 MCERTS < 1.0	- +	
Monoaromatics Benzene μg/kg 1 MCERTS < 1.0	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	- + +	
Benzene $\mu g/kg$ 1 MCERTS < 1.0 Toluene $\mu g/kg$ 1 MCERTS < 1.0	Benzene $\mu g/kg$ 1 MCERTS < 1.0 Toluene $\mu g/kg$ 1 MCERTS < 1.0		<u>_</u>
Benzene μg/kg 1 MCERTS < 1.0 Toluene μg/kg 1 MCERTS < 1.0	Benzene μg/kg 1 MCERTS < 1.0 Toluene μg/kg 1 MCERTS < 1.0		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Toluene $\mu g/kg$ 1 MCERTS < 1.0 Ethylbenzene $\mu g/kg$ 1 MCERTS < 1.0 $\mu g/kg$ 1 MCERTS < 1.0		
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Ethylbenzene µg/kg 1 MCERTS < 1.0		
p & m-xylene	,		
o-xylene µg/kg 1 MCERTS < 1.0	D & M-xviene Lid/kd 1 MCERTS < LU		
	15/15		
	MTBE (Methyl Tertiary Butyl Ether) µg/kg 1 MCERTS < 1.0	1	

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1			
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	6.9			
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	15			
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0			
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	22			
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1			
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1			
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1			
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0			
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	58			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	110	•		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	12	·		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	180	•		





Lab Sample Number				457389			
Sample Reference				BH202			
Sample Number				None Supplied			
Depth (m)				10.50			
Date Sampled				11/06/2015			
Time Taken				1030			
Tanto.				1030			
		유 _	Accreditation Status				
Analytical Parameter	Units	Limit of detection	red				
(Soil Analysis)	its	<u>€</u> . ∺					
		3 4	* €				
			_				
VOCs				1.0	1	1	
Chloromethane	μg/kg	1	ISO 17025	< 1.0			
Chloroethane	μg/kg	1	ISO 17025	< 1.0			
Bromomethane	μg/kg "	1	ISO 17025	< 1.0			
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0			
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0			
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0			
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0			
Cis-1,2-dichloroethene	μg/kg	1	MCERTS MCERTS	< 1.0			
MTBE (Methyl Tertiary Butyl Ether) 1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0 < 1.0	1	1	
2,2-Dichloropropane	μg/kg μg/kg	1	NONE	< 1.0	1	1	
Z,Z-Dicnioropropane Trichloromethane	µg/кg µg/kg	1	MCERTS	< 1.0 < 1.0	1	1	
1,1,1-Trichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0	1	1	
1,2-Dichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0	1	1	
1,1-Dichloropene	μg/kg μg/kg	1	NONE	< 1.0	1		
Trans-1,2-dichloroethene	μg/kg μg/kg	1	NONE	< 1.0			
Benzene	μg/kg μg/kg	1	MCERTS	< 1.0			
Tetrachloromethane	μg/kg μg/kg	1	MCERTS	< 1.0			
1,2-Dichloropropane	μg/kg μg/kg	1	MCERTS	< 1.0			
Trichloroethene	μg/kg	1	MCERTS	< 1.0			
Dibromomethane	μg/kg	1	MCERTS	< 1.0			
Bromodichloromethane	μg/kg	1	NONE	< 1.0			
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0			
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0			
Toluene	μg/kg	1	MCERTS	< 1.0			
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0			
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0			
Dibromochloromethane	μg/kg	1	ISO 17025	< 1.0			
Tetrachloroethene	μg/kg	1	MCERTS	< 1.0			
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0			
Chlorobenzene	μg/kg	1	MCERTS	< 1.0			
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0			
Ethylbenzene	μg/kg	1	MCERTS	< 1.0			
p & m-Xylene	μg/kg	1	MCERTS	< 1.0			
Styrene	μg/kg	1	MCERTS	< 1.0			
Tribromomethane	μg/kg	1	MCERTS	< 1.0			
o-Xylene	μg/kg	1	MCERTS	< 1.0			
1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0			
Isopropylbenzene	μg/kg	1	NONE	< 1.0			
Bromobenzene	μg/kg	1	MCERTS	< 1.0			
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0			
2-Chlorotoluene	μg/kg	1	NONE	< 1.0			
4-Chlorotoluene	μg/kg	1	NONE	< 1.0			
1,3,5-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0			
tert-Butylbenzene	μg/kg "	1	NONE	< 1.0			
1 2 4-Trimethylbenzene	μg/kg "	1	ISO 17025	< 1.0	<u> </u>	1	
sec-Butylbenzene	μg/kg	1	NONE	< 1.0	<u> </u>	1	
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0			
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0			
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0			
1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0			
Butylbenzene	μg/kg	1	NONE TCO 1702E	< 1.0			
1,2-Dibromo-3-chloropropane	μg/kg	1	ISO 17025	< 1.0			
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0 < 1.0			
Hexachlorobutadiene 1,2,3-Trichlorobenzene	μg/kg μg/kg	1	NONE NONE	< 1.0	1		
TICIO THURIOLOGIZATIO	µg/kg	1	INOINE	\ 1.0	<u> </u>	I	





Lab Sample Number		457389					
Sample Reference				BH202			
Sample Number				None Supplied			
Depth (m)				10.50			
Date Sampled				11/06/2015			
Time Taken				1030			
		요 L	Accreditation Status				
Analytical Parameter	Units	e ii	red Sta				
(Soil Analysis)	its	Limit of detection	ita				
		ă f	Ö				
SVOCs			_				
Aniline	mg/kg	0.1	NONE	< 0.1			
Phenol	mg/kg	0.1	ISO 17025	< 0.1			
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1			
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2			
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1			
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	 		
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3		<u> </u>	
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05			
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3			
4-Methylphenol	mg/kg	0.2	NONE	< 0.2			
Isophorone 2-Nitrophenol	mg/kg	0.2	MCERTS MCERTS	< 0.2 < 0.3			
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3			
Bis(2-chloroethoxy)methane	mg/kg mg/kg	0.3	MCERTS	< 0.3			
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3			
Naphthalene	mg/kg	0.05	MCERTS	< 0.05			
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3			
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1			
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1			
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1			
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1			
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2			
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1			
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1			
Dimethylphthalate 2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1 < 0.1			
2,6-Dinitrotoluene Acenaphthylene	mg/kg mg/kg	0.1	MCERTS MCERTS	< 0.10			
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10			
2 4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.10			
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2			
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3			
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2			
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	 		
Fluorene	mg/kg	0.1	MCERTS	< 0.10			
Azobenzene	mg/kg	0.3	MCERTS	< 0.3			
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2			
Hexachlorobenzene Dhenanthrone	mg/kg	0.3	MCERTS	< 0.3			
Phenanthrene Anthracene	mg/kg mg/ka	0.1	MCERTS MCERTS	0.16 < 0.10		1	
Carbazole	mg/kg	0.1	MCERTS	< 0.10			
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2			
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3			
Fluoranthene	mg/kg	0.1	MCERTS	0.38			
Pyrene	mg/kg	0.1	MCERTS	0.37			
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3			
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.24	 		
Chrysene	mg/kg	0.05	MCERTS	0.24			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	0.24			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.17			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.20			
Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(ghi)perylene	mg/kg	0.1	MCERTS MCERTS	< 0.10 < 0.05		1	
penzo(grii)pei yierie	mg/kg	0.03	MICERIS	< 0.05		I	





Project / Site name: London Paramount Entertainment Resort

Your Order No:

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

"The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

Any material greater than 16mm is considered as Bulk sample and reported separately, asbestos content (if any) is not included in the final Quantitative analysis. The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
457389	BH202	10.50	101	Loose Fibres	Chrysotile	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

	Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
[457389	BH202	None Supplied	10.50	Light grey clay and loam with gravel.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

	lace water (SW) Fotable water (FW) Ground			1	1
Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification	The analysis was carried out using documented inhouse method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a diazonium salt which forms chromophore which is	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





Emma Leivers

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Croxley Green
Business Park,
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t: 01923 225404 f: 01923 237404

e: reception@i2analytical.com

11/06/2015

Analytical Report Number: 15-74028

Project / Site name: London Paramount Entertainment Samples received on:

Resort

Your job number: 30766 Samples instructed on: 19/06/2015

Your order number: Analysis completed by: 26/06/2015

Report Issue Number: 1 Report issued on: 26/06/2015

Samples Analysed: 1 soil sample

For & on behalf of i2 Analytical Ltd.

- 4 weeks from reporting

Signed:

Dr Claire Stone Quality Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Signed:

soils

Rexona Rahman

Reporting Manager

Excel copies of reports are only valid when accompanied by this PDF certificate.





Lab Sample Number				457389			
				BH202			
Sample Reference							
Sample Number				None Supplied			
Depth (m)				10.50			
Date Sampled				11/06/2015			
Time Taken				1030			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1			
Moisture Content	%	N/A	NONE	46			
Total mass of sample received	kg	0.001	NONE	2.0			
Total mass of sample received	кg	0.001	HOHE	2.0			
Asbestos in Soil Screen / Identification Name	Туре	N/A	ISO 17025	Amosite- Loose fibres			
Asbestos in Soil	Type	N/A	ISO 17025	Detected		<u> </u>	
General Inorganics pH Electrical Conductivity	pH Units μS/cm	N/A 10	MCERTS NONE	8.4 3200			
Total Cyanide	mg/kg	1	MCERTS	< 1			
Complex Cyanide	mg/kg	1	NONE	< 1			
Free Cyanide	mg/kg	1	NONE	< 1			
Total Sulphate as SO ₄	mg/kg	50	MCERTS	5300			
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	4.5			
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	4500			
	q/l	0.00125		2.2			
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)			MCERTS		-	-	
Sulphide	mg/kg	1	MCERTS	620	-	-	
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	2500			
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	170			
Organic Matter	%	0.1	MCERTS	6.3			
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0			
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20			
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0			
Total Phenois							
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0			
Speciated PAHs Naphthalene		0.05	MCEDIC	< 0.05			
Acenaphthylene	mg/kg	0.05	MCERTS MCERTS	< 0.10	 	 	
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	 	 	
Acenaphthene Fluorene	mg/kg	0.1		< 0.10	-		
	mg/kg		MCERTS		 	-	-
Phenanthrene	mg/kg	0.1	MCERTS	0.16			
Anthracene	mg/kg	0.1	MCERTS	< 0.10			
Fluoranthene	mg/kg	0.1	MCERTS	0.38	 	 	
Pyrene	mg/kg	0.1	MCERTS	0.37	 	 	ļ
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.24	-		
Chrysene	mg/kg	0.05	MCERTS	0.24	 	!	.
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	0.24			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.17			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.20			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	ļ	<u> </u>	<u> </u>
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	ļ	<u> </u>	<u> </u>
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05			
Coronene	mg/kg	0.05	NONE	< 0.05			
Total PAH					 		
Total WAC-17 PAHs	mg/kg	1.6	NONE	2.0			





Lab Sample Number				457389			
Sample Reference				BH202			
Sample Number				None Supplied			
Depth (m)				10.50			
Date Sampled				11/06/2015			
Time Taken				1030			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids							
Aluminium (aqua regia extractable)	mg/kg	30	NONE	17000			
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0			
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	17			
Barium (aqua regia extractable)	mg/kg	1	MCERTS	47			
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.2			
Boron (water soluble)	mg/kg	0.2	MCERTS	6.0			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2			
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	35			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	22			
Iron (aqua regia extractable)	mg/kg	40	MCERTS	41000			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	38			
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	220			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3			
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.4			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	29			
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	600			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0			
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	62			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	86			
Calcium (agua regia extractable)	mg/kg	20	NONE	30000	ı	1	
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	7600			
Potassium (aqua regia extractable)	mg/kg	20	NONE	5600			
Monoaromatics	під/ку	20	NONE	3000	<u> </u>		
Benzene	μg/kg	1	MCERTS	< 1.0			
Toluene	μg/kg	1	MCERTS	< 1.0			
Ethylbenzene	μg/kg	1	MCERTS	< 1.0			
p & m-xylene	μg/kg	1	MCERTS	< 1.0			
o-xylene	μg/kg	1	MCERTS	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0			_

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	6.9		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	15		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	22		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	58		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	110		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	12		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	180		





Lab Sample Number				457389			
Sample Reference				BH202			
Sample Number				None Supplied			
Depth (m)				10.50			
Date Sampled				11/06/2015			
Time Taken				1030			
			Ac				
Analytical Parameter	_	Limit of detection	Accreditation Status				
(Soil Analysis)	Units	Limit of detection	reditat Status				
(Soli Alialysis)	v	할 육	atic				
			š				
VOCs							
Chloromethane	μg/kg	1	ISO 17025	< 1.0			
Chloroethane	μg/kg	1	ISO 17025	< 1.0			
Bromomethane	μg/kg	1	ISO 17025	< 1.0			
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0			
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0			
1,1-Dichloroethene	μg/kg 	1	MCERTS	< 1.0			
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0 < 1.0	 		
Cis-1,2-dichloroethene MTBE (Methyl Tertiary Butyl Ether)	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0		-	
1,1-Dichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0		 	
2,2-Dichloropropane	μg/kg μg/kg	1	NONE	< 1.0		 	
Trichloromethane	μg/kg μg/kg	1	MCERTS	< 1.0		†	
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0			
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0		İ	
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0			
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0			
Benzene	μg/kg	1	MCERTS	< 1.0			
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0			
1,2-Dichloropropane	μg/kg	1	MCERTS	< 1.0			
Trichloroethene	μg/kg	1	MCERTS	< 1.0			
Dibromomethane	μg/kg	1	MCERTS	< 1.0			
Bromodichloromethane	μg/kg	1	NONE	< 1.0			
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0			
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0			
Toluene	μg/kg	1	MCERTS	< 1.0			
1,1,2-Trichloroethane	μg/kg	1	MCERTS ISO 17025	< 1.0 < 1.0			
1,3-Dichloropropane Dibromochloromethane	μg/kg μg/kg	1	ISO 17025	< 1.0			
Tetrachloroethene	μg/kg μg/kg	1	MCERTS	< 1.0			
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0			
Chlorobenzene	μg/kg	1	MCERTS	< 1.0			
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0			
Ethylbenzene	μg/kg	1	MCERTS	< 1.0			
p & m-Xylene	μg/kg	1	MCERTS	< 1.0			
Styrene	μg/kg	1	MCERTS	< 1.0			
Tribromomethane	μg/kg	1	MCERTS	< 1.0			
o-Xylene	μg/kg	1	MCERTS	< 1.0		ļ	
1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0			
Isopropylbenzene	μg/kg 	1	NONE	< 1.0			
Bromobenzene	μg/kg	1	MCERTS	< 1.0			
n-Propylbenzene	μg/kg μα/kg	1	ISO 17025	< 1.0 < 1.0		 	
2-Chlorotoluene 4-Chlorotoluene	μg/kg μg/kg	1	NONE NONE	< 1.0		 	
1,3,5-Trimethylbenzene	μg/kg μg/kg	1	ISO 17025	< 1.0		 	
tert-Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0			
1 2 4-Trimethylbenzene	μg/kg μg/kg	1	ISO 17025	< 1.0		1	
sec-Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0			
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0			
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0			
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	 		
1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	 		
Butylbenzene	μg/kg	1	NONE	< 1.0			
1,2-Dibromo-3-chloropropane	μg/kg	1	ISO 17025	< 1.0			
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0			
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0			
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0		I	





Lab Sample Number		457389					
Sample Reference				BH202			
Sample Number				None Supplied			
Depth (m)				10.50			
Date Sampled				11/06/2015			
Time Taken				1030			
		요 L	Accreditation Status				
Analytical Parameter	Units	e ii	red Sta				
(Soil Analysis)	its	Limit of detection	ita				
		ă f	Ö				
SVOCs			_				
Aniline	mg/kg	0.1	NONE	< 0.1			
Phenol	mg/kg	0.1	ISO 17025	< 0.1			
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1			
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2			
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1			
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2			
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	 		
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3		<u> </u>	
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05			
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3			
4-Methylphenol	mg/kg	0.2	NONE	< 0.2			
Isophorone 2-Nitrophenol	mg/kg	0.2	MCERTS MCERTS	< 0.2 < 0.3			
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3			
Bis(2-chloroethoxy)methane	mg/kg mg/kg	0.3	MCERTS	< 0.3			
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3			
Naphthalene	mg/kg	0.05	MCERTS	< 0.05			
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3			
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1			
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1			
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1			
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1			
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2			
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1			
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1			
Dimethylphthalate 2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1 < 0.1			
2,6-Dinitrotoluene Acenaphthylene	mg/kg mg/kg	0.1	MCERTS MCERTS	< 0.10			
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10			
2 4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.10			
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2			
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3			
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2			
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	 		
Fluorene	mg/kg	0.1	MCERTS	< 0.10			
Azobenzene	mg/kg	0.3	MCERTS	< 0.3			
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2			
Hexachlorobenzene Dhenanthrone	mg/kg	0.3	MCERTS	< 0.3			
Phenanthrene Anthracene	mg/kg mg/ka	0.1	MCERTS MCERTS	0.16 < 0.10		1	
Carbazole	mg/kg	0.1	MCERTS	< 0.10			
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2			
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3			
Fluoranthene	mg/kg	0.1	MCERTS	0.38			
Pyrene	mg/kg	0.1	MCERTS	0.37			
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3			
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.24	 		
Chrysene	mg/kg	0.05	MCERTS	0.24			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	0.24			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.17			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.20			
Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(ghi)perylene	mg/kg	0.1	MCERTS MCERTS	< 0.10 < 0.05		1	
penzo(grii)pei yierie	mg/kg	0.03	MICERIS	< 0.05		I	





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
457389	BH202	None Supplied	10.50	Light grey clay and loam with gravel.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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Analytical Report Number: 15-74027

London Paramount Entertainment 17/06/2015 Project / Site name: Samples received on:

Resort

Your job number: 30766 Samples instructed on: 19/06/2015

Your order number: Analysis completed by: 26/06/2015

Report Issue Number: Report issued on: 26/06/2015

Samples Analysed: 1 soil sample

Signed:

Dr Claire Stone Quality Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Rexona Rahman Reporting Manager

Signed:

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting - 2 weeks from reporting

asbestos - 6 months from reporting





Lab Sample Number		457388						
Sample Reference				BH704				
Sample Number				None Supplied				
Depth (m)				0.50				
Date Sampled				17/06/2015				
Time Taken				1255				
Time taken	1			1233				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	12				
Total mass of sample received	kg	0.001	NONE	2.0				
				•	•	•	•	•
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected				
General Inorganics								
pH	pH Units	N/A	MCERTS	7.3				
Electrical Conductivity	µS/cm	10	NONE	110				
Total Cyanide	mg/kg	1	MCERTS	< 1				
Complex Cyanide	mg/kg	1	NONE	< 1				
Free Cyanide	mg/kg	1	NONE	< 1				
Total Sulphate as SO ₄	mg/kg	50	MCERTS	670				
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	0 027				
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	27				
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/I	0.00125	MCERTS	0 014				
Sulphide	mg/kg	1	MCERTS	< 1.0				
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	7.5				
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5				
Organic Matter	mg/kg %	0.3	MCERTS	0.9				
Water Soluble Nitrate (2:1) as N		2	NONE	6.5				
Water Soluble Nitrite (2:1) as N	mg/kg μg/kg	20	NONE	< 20				
Total Oxidised Nitrogen (TON)		5	NONE	6.5				
Total Oxidised Nitrogen (TON)	mg/kg	5	INOINE	0.5	l		l	<u> </u>
Total Phenois								
			MOEDTO	. 1.0	I	I	I	1
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0				
Speciated PAHs								
		0.05	MOEDTO	. 0.05	I	I	I	<u> </u>
Naphthalene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10				
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10 < 0.10	-			
Fluorene	mg/kg		MCERTS					
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10				
Anthracene	mg/kg	0.1	MCERTS	< 0.10				
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10				
Pyrene	mg/kg	0.1	MCERTS	< 0.10	<u> </u>		<u> </u>	
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10				
Chrysene	mg/kg	0.05	MCERTS	< 0.05				
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10				
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10				
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05				
Coronene	mg/kg	0.05	NONE	< 0.05				
Total PAH				1				
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6		<u> </u>		





Lab Sample Number				457388		
Sample Reference				BH704		
Sample Number				None Supplied		
Depth (m)			0.50			
Date Sampled				17/06/2015		
Time Taken				1255		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status			
Heavy Metals / Metalloids						
Aluminium (aqua regia extractable)	mg/kg	30	NONE	13000		
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0		
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	13		
Barium (aqua regia extractable)	mg/kg	1	MCERTS	73		
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.8		
Boron (water soluble)	mg/kg	0.2	MCERTS	1.5		
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2		
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	35		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	14		
Iron (aqua regia extractable)	mg/kg	40	MCERTS	26000		
Lead (aqua regia extractable)	mg/kg	1	MCERTS	39		
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	250		
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3		
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	< 0.3		
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	20		
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	900		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0		
/anadium (aqua regia extractable)	mg/kg	1	MCERTS	49		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	58		
Calcium (aqua regia extractable)	mg/kg	20	NONE	17000		
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	3200		
Potassium (aqua regia extractable)	mg/kg	20	NONE	2700		
Monoaromatics						
Benzene	μg/kg	1	MCERTS	< 1.0		
Toluene	μg/kg	1	MCERTS	< 1.0		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0		
0 & m-xylene	μg/kg	1	MCERTS	< 1.0		
o-xylene	μg/kg	1	MCERTS	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0		

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10		
TPH-CWG - Aromatic >EC16 - EC21 TPH-CWG - Aromatic >EC21 - EC35		10 10	MCERTS MCERTS	< 10 < 10		





Lab Sample Number				457388			
Sample Reference				BH704			
Sample Number				None Supplied			
Depth (m)				0.50			
Date Sampled				17/06/2015			
Time Taken				1255			
		0	Accreditation Status				
Analytical Parameter	띡	Limit of detection	Sta				
(Soil Analysis)	Units	it o	dita				
		on of	v či				
VOCs			_		<u> </u>	<u> </u>	
Chloromethane	μg/kg	1	ISO 17025	< 1.0	I	I	
Chloroethane	μg/kg	1	ISO 17025	< 1.0			
Bromomethane	μg/kg	1	ISO 17025	< 1.0			
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0			
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0			
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0			
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0			
Cis-1,2-dichloroethene MTBE (Methyl Tertiary Butyl Ether)	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	 	 	
1,1-Dichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0			
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0			
Trichloromethane	μg/kg	1	MCERTS	< 1.0			
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0			
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0			
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0			
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0			
Benzene Tetrachloromethane	μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0			
1,2-Dichloropropane	μg/kg μg/kg	1	MCERTS	< 1.0			
Trichloroethene	μg/kg	1	MCERTS	< 1.0			
Dibromomethane	μg/kg	1	MCERTS	< 1.0			
Bromodichloromethane	μg/kg	1	NONE	< 1.0			
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0			
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0			
Toluene	μg/kg	1	MCERTS	< 1.0			
1,1,2-Trichloroethane 1,3-Dichloropropane	μg/kg μg/kg	1	MCERTS ISO 17025	< 1.0 < 1.0			
Dibromochloromethane	μg/kg μg/kg	1	ISO 17025	< 1.0			
Tetrachloroethene	μg/kg	1	MCERTS	< 1.0			
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0			
Chlorobenzene	μg/kg	1	MCERTS	< 1.0			
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0			
Ethylbenzene	μg/kg	1	MCERTS	< 1.0			
p & m-Xylene	μg/kg	1	MCERTS	< 1.0			
Styrene Tribromomethane	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0			
o-Xylene	μg/kg μg/kg	1	MCERTS	< 1.0			
1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0			
Isopropylbenzene	μg/kg	1	NONE	< 1.0			
Bromobenzene	μg/kg	1	MCERTS	< 1.0			
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0			
2-Chlorotoluene	μg/kg	1	NONE	< 1.0			
4-Chlorotoluene	µg/kg	1	NONE TCO 1702F	< 1.0 < 1.0			
1,3,5-Trimethylbenzene tert-Butylbenzene	μg/kg μg/kg	1	ISO 17025 NONE	< 1.0			
1 2 4-Trimethylbenzene	μg/kg μg/kg	1	ISO 17025	< 1.0			
sec-Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0			
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0			
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0			
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0			
1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0			
Butylbenzene	μg/kg	1	NONE	< 1.0			
1,2-Dibromo-3-chloropropane	μg/kg	1	ISO 17025	< 1.0			
1,2,4-Trichlorobenzene Hexachlorobutadiene	μg/kg μg/kg	1	MCERTS NONE	< 1.0 < 1.0	 	 	
1,2,3-Trichlorobenzene	μg/kg μg/kg	1	NONE	< 1.0			
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Lab Sample Number		457388	I					
Sample Reference				BH704				
Sample Number				None Supplied				
Depth (m)				0.50				
Date Sampled				17/06/2015				
Time Taken				1255				
			>	1233				
	_	de Li	Accreditation Status					
Analytical Parameter	Units	Limit of detection	edi					
(Soil Analysis)	ß	eti of	us					
		3 "	Ö					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1				
Phenol	mg/kg	0.2	ISO 17025	< 0.2				
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1				
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2				
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2				
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1				
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2				
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1				
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3				
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05				
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3				
4-Methylphenol	mg/kg	0.2	NONE	< 0.2				
Isophorone	mg/kg	0.2	MCERTS	< 0.2				
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3				
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3				
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3				
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3				
Naphthalene	mg/kg	0.05	MCERTS	< 0.05				
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3				
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1 < 0.1				
Hexachlorobutadiene 4-Chloro-3-methylphenol	mg/kg mg/kg	0.1	MCERTS NONE	< 0.1				
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1				
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.1				
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1				
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1				
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1				
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1				
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10				
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10				
2 4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2				
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2				
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3				
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2				
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2				
Fluorene	mg/kg	0.1	MCERTS	< 0.10				
Azobenzene Disease al la la serial attracti	mg/kg	0.3	MCERTS	< 0.3	1		ļ	
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2				
Hexachlorobenzene Phenanthrene	mg/kg	0.3	MCERTS MCERTS	< 0.3 < 0.10			-	
A blo	mg/kg	0.1	MOEDTO	< 0.10	1		 	
Anthracene Carbazole	mg/kg mg/kg	0.1	MCERTS	< 0.10			 	
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2				
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3			†	
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10			1	
Pyrene	mg/kg	0.1	MCERTS	< 0.10			İ	
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3				
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10				
Chrysene	mg/kg	0.05	MCERTS	< 0.05				
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10				
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10				
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05				
				· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·		





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
457388	BH704	None Supplied	0 50	Brown loam and clay with gravel.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a diazonium salt which forms chromophore which is	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





Emma Leivers

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e: emma.leivers@geoeng.co.uk

i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, **WD18 8YS**

t: 01923 225404 f: 01923 237404

e: reception@i2analytical.com

Analytical Report Number: 15-73713

London Paramount Entertainment Project / Site name:

Resort

Your job number: 30766

Your order number: Analysis completed by: 26/06/2015

Report Issue Number:

Samples Analysed: 1 wac multi sample

16/06/2015 Samples received on:

Samples instructed on: 17/06/2015

Report issued on: 26/06/2015

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting - 2 weeks from reporting asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





i2 Analytical

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	15-73713				
			Cli t	CEOENC	
			Client:	GEOENG	
Lone	don Paramount Entertai	nment Resort			
	455513		Landfill		e Criteria
					1
	BH706			reactive	
Depth (m) 2.80 Waste Analysis			Inert Waste Landfill	HAZARDOUS waste in non- hazardous Landfill	Hazardous Waste Landfil
					6%
				+	10%
				+	
				!	
9.0					To be evaluate
			Limit valu		eaching test
2:1	8:1	Cumulative 10:1			
mg/l mg/kg					
< 0.010	< 0.010	< 0.050	0.5	2	25
0.034	0.018	0.21	20	100	300
					5
					70
					100
					2
					30 40
					50
					5
					7
					200
					25000
					500
2.2	0.45	6.9	1000	20000	50000
60	40	430	4000	60000	100000
< 0.13	< 0.13	< 0.50	1	=	-
1.6	1.8	18	500	800	1000
< 0.1					
1.4					
93					
7.5					
0.24					
	i I	i		1	1
	< 0.1 2.5 < 10 < 0.30 < 10 < 1.6 8.3 9.0 2:1 mg/l < 0.010 0.034 < 0.0005 0.0072 0.0024 < 0.0015 < 0.0030 < 0.0050 < 0.010 0.0073 < 4.0 0.16 2.2 60 < 0.13 1.6	A55513	A55513	Client: London Paramount Entertainment Resort	Client: GEOENG Clie

^{*=} UKAS accredited (liquid eluate analysis only)

** = MCERTS accredited





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
455513	BH706	None Supplied	2 80	Light brown loam and clay.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance	L046-PL	W	NONE
BTEX (Sum of BTEX compounds) in soil	Determination of BTEX in soil by headspace GC- MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Chloride in WAC leachate (BS EN 12457-3 Prep)	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
DOC in WAC leachate (BS EN 12457- 3 Prep)	Determination of dissolved organic carbon in leachate by TOC/DOC NDIR analyser.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L037-PL	w	NONE
Fluoride in WAC leachate (BS EN 12457-3 Prep)	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.				
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L047-PL	D	MCERTS
Metals in WAC leachate (BS EN 12457 3 Prep)	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	ISO 17025
Mineral Oil in Soil	Determination of dichloromethane/hexane extractable hydrocarbons in soil by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
PCB's by GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	MCERTS
Phenol Index in WAC leachate (BS EN 12457-3 Prep)	Determination of monohydric phenols in leachate by continuous flow analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Seciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate in WAC leachate (BS EN 12457-3 Prep)	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	ISO 17025
TDS in WAC leachate (BS EN 12457-3 Prep)	Determination of total dissolved solids in leachate by electrometric measurement.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L004-PL	W	NONE
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





Emma Leivers

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i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, **WD18 8YS**

t: 01923 225404 f: 01923 237404

e: reception@i2analytical.com

Analytical Report Number: 15-73711

London Paramount Entertainment Project / Site name:

Resort

Your job number: 30766

Your order number: Analysis completed by:

Report Issue Number:

Samples Analysed: 1 soil sample Samples received on:

16/06/2015

Samples instructed on:

17/06/2015

23/06/2015

Report issued on:

23/06/2015

Signed:

Dr Claire Stone Quality Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting - 2 weeks from reporting asbestos - 6 months from reporting

Iss No 15-73711-1





Lab Sample Number				455511		1	I	
Sample Reference				BH706				
Sample Number								
				None Supplied 2.00		-		
Depth (m)								
Date Sampled Time Taken				15/06/2015				
Time Taken				1545				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	8.2				
Total mass of sample received	kg	0.001	NONE	1.2				
Total mass of sumple received	ĸg	0.001	NONE	1.2			1	
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected				
General Inorganics								
pH	pH Units	N/A	MCERTS	8.5		1	1	i 1
Electrical Conductivity	μS/cm	10	NONE	110			!	
Total Cyanide	mg/kg	10	MCERTS	< 1				
Complex Cyanide	mg/kg	1	NONE	< 1				
Free Cyanide		1		< 1				
Total Sulphate as SO ₄	mg/kg mg/kg	50	NONE ISO 17025	680		 	 	
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	0.011				
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2 5	MCERTS	11				
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	0.0053				
Sulphide	mg/kg	1	MCERTS	< 1.0				
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	23				
Ammoniacal Nitrogen as N	mg/kg	0 5	MCERTS	< 0.5				
Organic Matter	%	0.1	MCERTS	< 0.1				
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0				
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20				
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0				
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0				
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10				
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10				
Fluorene	mg/kg	0.1	MCERTS	< 0.10			1	
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10			1	
Anthracene	mg/kg	0.1	MCERTS	< 0.10			1	
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10		1	1	
Pyrene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10				
Chrysene	mg/kg	0.05	MCERTS	< 0.05		 	 	
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.10		 	 	
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10		1	1	
				< 0.10		1	1	
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10			1	
Indeno(1,2,3-cd)pyrene	mg/kg		MCERTS				 	
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10		1	1	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05		1	1	
Coronene	mg/kg	0.05	NONE	< 0.05		I	ı	
Total PAH					1		•	
Total WAC-17 PAHs	mg/kg	16	NONE	< 1.6		<u> </u>	l	





Project / Site name: London Paramount Entertainment Resort

BH706 Sample Number	Lab Sample Number				455511				
None Supplied Depth (m)									
Depth (m) 2.00									
15/06/2015 1545 1	-								
Time Taken									
Heavy Metals / Metalloids Majking 30 NONE 15000 Mathematical part Majking 1 NORTS 1.0 Majking 1 MCERTS 1.0 MCER									
Heavy Metals / Metalloids Mulninium (aqua regia extractable) mg/kg 30 NoNE 15000 Notinium (aqua regia extractable) mg/kg 1 ISO 17025 < 1.0 NoNE	Time Taken	I			1373				
Aluminium (aqua regia extractable) mg/kg 30 NONE 15000 Antimony (aqua regia extractable) mg/kg 1 ISO 17025 < 1.0 Arsenic (aqua regia extractable) mg/kg 1 MCERTS 10 Barium (aqua regia extractable) mg/kg 1 MCERTS 51 Beryllium (aqua regia extractable) mg/kg 0.06 MCERTS 0.7 Boron (water soluble) mg/kg 0.2 MCERTS 0.2 Cadmium (aqua regia extractable) mg/kg 0.2 MCERTS 0.2 Cadmium (aqua regia extractable) mg/kg 0.2 MCERTS 0.2 Chromium (aqua regia extractable) mg/kg 1 MCERTS 2.5 Copper (aqua regia extractable) mg/kg 1 MCERTS 32 Copper (aqua regia extractable) mg/kg 1 MCERTS 30 Lead (aqua regia extractable) mg/kg 1 MCERTS 340 Manganese (aqua regia extractable) mg/kg 1 MCERTS 340		Units	Limit of detection	Accreditation Status					
Antimony (aqua regia extractable) mg/kg 1 ISO 17025 < 1.0 Arsenic (aqua regia extractable) mg/kg 1 MCERTS 10 Baryllium (aqua regia extractable) mg/kg 1 MCERTS 51 Beryllium (aqua regia extractable) mg/kg 0.06 MCERTS 0.7 Boron (water solluble) mg/kg 0 MCERTS 0.2 Cadmium (aqua regia extractable) mg/kg 0 MCERTS 0.2 Chromium (hexavalent) mg/kg 4 MCERTS 2.0.2 Chromium (aqua regia extractable) mg/kg 1 MCERTS 2.5 Copper (aqua regia extractable) mg/kg 1 MCERTS 2.5 Lead (aqua regia extractable) mg/kg 1 MCERTS 30000 Lead (aqua regia extractable) mg/kg 1 MCERTS 9.4 Mercury (aqua regia extractable) mg/kg 1 MCERTS 4.0 Mercury (aqua regia extractable) mg/kg 0.3 MCERTS < 0.3	Heavy Metals / Metalloids								
Arsenic (aqua regia extractable) mg/kg 1 MCERTS 10 Barlum (aqua regia extractable) mg/kg 1 MCERTS 51 Beryllium (aqua regia extractable) mg/kg 0.06 MCERTS 0.7 Boron (water soluble) mg/kg 0.2 MCERTS 0.2 Cadmium (aqua regia extractable) mg/kg 4 MCERTS <0.2	Aluminium (aqua regia extractable)	mg/kg	30	NONE	15000				
Barium (aqua regia extractable) mg/kg 1 MCERTS 51		mg/kg	1	ISO 17025					
Beryllium (aqua regia extractable) mg/kg 0.06 MCERTS 0.7	Arsenic (aqua regia extractable)	mg/kg	1	MCERTS					
Boron (water soluble)	Barium (aqua regia extractable)	mg/kg	1	MCERTS	51				
Cadmium (aqua regia extractable) mg/kg 0.2 MCERTS < 0.2	Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.7				
Chromium (hexavalent) mg/kg 4 MCERTS < 4.0 Chromium (aqua regia extractable) mg/kg 1 MCERTS 25 Copper (aqua regia extractable) mg/kg 1 MCERTS 42 Iron (aqua regia extractable) mg/kg 40 MCERTS 30000 Lead (aqua regia extractable) mg/kg 1 MCERTS 340 Manganese (aqua regia extractable) mg/kg 1 MCERTS 340 Mercury (aqua regia extractable) mg/kg 1 MCERTS <0.3	Boron (water soluble)	mg/kg	02	MCERTS	0.2				
Chromium (aqua regia extractable) mg/kg 1 MCERTS 25 Copper (aqua regia extractable) mg/kg 1 MCERTS 42 Iron (aqua regia extractable) mg/kg 40 MCERTS 30000 Lead (aqua regia extractable) mg/kg 1 MCERTS 9.4 Manganese (aqua regia extractable) mg/kg 1 MCERTS 340 Mercury (aqua regia extractable) mg/kg 0.3 MCERTS <0.3	Cadmium (aqua regia extractable)	mg/kg	0 2	MCERTS	< 0.2				
Copper (aqua regia extractable) mg/kg 1 MCERTS 42 Iron (aqua regia extractable) mg/kg 40 MCERTS 30000 Lead (aqua regia extractable) mg/kg 1 MCERTS 9.4 Manganese (aqua regia extractable) mg/kg 1 MCERTS 340 Mercury (aqua regia extractable) mg/kg 0.3 MCERTS <0.3	Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0				
Iron (aqua regia extractable)	Chromium (aqua regia extractable)	mg/kg	1	MCERTS	25				
Lead (aqua regia extractable) mg/kg 1 MCERTS 9.4 9.4 Manganese (aqua regia extractable) mg/kg 1 MCERTS 340 Mercury (aqua regia extractable) mg/kg 0.3 MCERTS < 0.3	Copper (aqua regia extractable)	mg/kg	1	MCERTS	42				
Manganese (aqua regia extractable) mg/kg 1 MCERTS 340 Mercury (aqua regia extractable) mg/kg 0.3 MCERTS < 0.3	Iron (aqua regia extractable)	mg/kg	40	MCERTS	30000				
Mercury (aqua regia extractable) mg/kg 0.3 MCERTS < 0.3	Lead (aqua regia extractable)	mg/kg	1	MCERTS	9.4				
Molybdenum (aqua regia extractable) Molybdenum	Manganese (aqua regia extractable)	mg/kg	1	MCERTS	340				
Nickel (aqua regia extractable) mg/kg 1 MCERTS 20 Phosphorus (aqua regia extractable) mg/kg 20 NONE 950 Selenium (aqua regia extractable) mg/kg 1 MCERTS < 1.0 Vanadium (aqua regia extractable) mg/kg 1 MCERTS 38 Sinc (aqua regia extractable) mg/kg 1 MCERTS 39 Sinc (aqua regia extractable) mg/kg 1 MCERTS 39 Sinc (aqua regia extractable) mg/kg 20 NONE 79000 Sinc (aqua regia extractable) mg/kg 20 NONE 79000 Sinc (aqua regia extractable) mg/kg 20 NONE 79000 Sinc (aqua regia extractable) mg/kg 20 NONE 79000 Sinc (aqua regia extractable) mg/kg 20 NONE 79000 Sinc (aqua regia extractable) mg/kg 20 NONE 79000 Sinc (aqua regia extractable) mg/kg 20 NONE 79000 Sinc (aqua regia extractable) mg/kg 1 MCERTS 4700 Sinc (aqua regia extractable) MOONOB Sinc (aqua regia extractable) mg/kg 1 MCERTS 47.0 Sinc (aqua regia extractable) MOONOB Sinc (aqua regia extractable) M	Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3				
Phosphorus (aqua regia extractable) mg/kg 20 NONE 950 Selenium (aqua regia extractable) mg/kg 1 MCERTS < 1.0	Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	< 0.3				
Selenium (aqua regia extractable) mg/kg 1 MCERTS < 1.0	Nickel (aqua regia extractable)	mg/kg	1	MCERTS	20				
Vanadium (aqua regia extractable) mg/kg 1 MCERTS 38	Phosphorus (aqua regia extractable)	mg/kg	20	NONE	950				
Zinc (aqua regia extractable) mg/kg 1 MCERTS 39 Calcium (aqua regia extractable) mg/kg 20 NONE 79000 Magnesium (aqua regia extractable) mg/kg 20 ISO 17025 4700 Potassium (aqua regia extractable) mg/kg 20 NONE 2600 Monoaromatics Benzene μg/kg 1 MCERTS < 1.0	Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0				
Calcium (aqua regia extractable) mg/kg 20 NONE 79000	Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	38				
Magnesium (aqua regia extractable) mg/kg 20 ISO 17025 4700	Zinc (aqua regia extractable)	mg/kg	1	MCERTS	39				
Magnesium (aqua regia extractable) mg/kg 20 ISO 17025 4700									
Monoaromatics μg/kg 1 MCERTS < 1.0	Calcium (aqua regia extractable)	mg/kg	20	NONE	79000				
Monoaromatics Benzene μg/kg 1 MCERTS < 1.0	Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	4700				
Benzene μg/kg 1 MCERTS < 1.0 Toluene μg/kg 1 MCERTS < 1.0	Potassium (aqua regia extractable)	mg/kg	20	NONE	2600				
Toluene µg/kg 1 MCERTS < 1.0	Monoaromatics	-	-	-		-	-	-	
	Benzene	μg/kg	1	MCERTS	< 1.0				
	Toluene	μg/kg	1	MCERTS	< 1.0				
μg/kg 1 MCERTS < 1.0	Ethylbenzene	μg/kg	1	MCERTS	< 1.0				
p & m-xylene μg/kg 1 MCERTS < 1.0	,		1						
o-xylene			1						
	MTBE (Methyl Tertiary Butyl Ether)		1						

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10		





Lab Sample Number			455511				
Sample Reference				BH706	†		
Sample Number				None Supplied			
Depth (m)				2.00	1		
Date Sampled				15/06/2015			
Time Taken				1545			
Analytical Parameter	Units	Limit of detection	Accreditation Status				
(Soil Analysis)	its	ctio	itat				
		5 7	ion				
VOCs	<u> </u>						
Chloromethane	μg/kg	1	ISO 17025	< 1.0	I		
Chloroethane	μg/kg	1	ISO 17025	< 1.0			
Bromomethane	μg/kg	1	ISO 17025	< 1.0			
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0			
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0			
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0			
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg "	1	ISO 17025	< 1.0			
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0			
MTBE (Methyl Tertiary Butyl Ether) 1,1-Dichloroethane	μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	-		
2,2-Dichloropropane	μg/kg μg/kg	1	NONE	< 1.0 < 1.0	 		
Z,Z-Dichloropropane Trichloromethane	µg/kg µg/kg	1	MCERTS	< 1.0			
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0			
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0			
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0			
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0			
Benzene	μg/kg	1	MCERTS	< 1.0			
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0			
1,2-Dichloropropane	μg/kg	1	MCERTS	< 1.0			
Trichloroethene	μg/kg	1	MCERTS	< 1.0			
Dibromomethane Bromodichloromethane	μg/kg	1	MCERTS NONE	< 1.0 < 1.0			
Cis-1,3-dichloropropene	μg/kg μg/kg	1	ISO 17025	< 1.0			
Trans-1,3-dichloropropene	μg/kg μg/kg	1	ISO 17025	< 1.0			
Toluene	μg/kg	1	MCERTS	< 1.0			
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0			
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0			
Dibromochloromethane	μg/kg	1	ISO 17025	< 1.0			
Tetrachloroethene	μg/kg	1	MCERTS	< 1.0			
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0			
Chlorobenzene	μg/kg	1	MCERTS	< 1.0			
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0			
Ethylbenzene p & m-Xylene	μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	-		
p & m-xylene Styrene	μg/kg μg/kg	1	MCERTS	< 1.0	 	1	
Tribromomethane	μg/kg μg/kg	1	MCERTS	< 1.0			
o-Xylene	μg/kg μg/kg	1	MCERTS	< 1.0	1		
1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0			
Isopropylbenzene	μg/kg	1	NONE	< 1.0			
Bromobenzene	μg/kg	1	MCERTS	< 1.0			
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0			
2-Chlorotoluene	μg/kg	1	NONE	< 1.0			
4-Chlorotoluene	μg/kg	1	NONE	< 1.0			
1,3,5-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0			
tert-Butylbenzene 1 2 4-Trimethylbenzene	μg/kg	1	NONE TCO 1702E	< 1.0 < 1.0			
sec-Butylbenzene	μg/kg μg/kg	1	ISO 17025 NONE	< 1.0 < 1.0	 		
1,3-Dichlorobenzene	μg/kg μg/kg	1	ISO 17025	< 1.0			
p-Isopropyltoluene	μg/kg μg/kg	1	ISO 17025	< 1.0	1		
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0			
1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0			
Butylbenzene	μg/kg	1	NONE	< 1.0			
1,2-Dibromo-3-chloropropane	μg/kg	1	ISO 17025	< 1.0			
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0			
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0			
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	I	<u> </u>	





			4555.	1	1		
Lab Sample Number				455511			
Sample Reference				BH706			
Sample Number Depth (m)				None Supplied 2.00			
,				15/06/2015			
Date Sampled Time Taken				15/06/2015			
Time Tuken				1343			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs							
Aniline	mg/kg	0.1	NONE	< 0.1			
Phenol	mg/kg	0 2	ISO 17025	< 0.2			
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1			
Bis(2-chloroethyl)ether	mg/kg	0 2	MCERTS	< 0.2			
1,3-Dichlorobenzene	mg/kg	0 2	MCERTS	< 0.2			
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1			
1,4-Dichlorobenzene	mg/kg	0 2	MCERTS	< 0.2			
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1			
2-Methylphenol Hexachloroethane	mg/kg	0.3	MCERTS	< 0.3			
Nitrobenzene	mg/kg mg/kg	0.05	MCERTS MCERTS	< 0.05 < 0.3	1	1	
4-Methylphenol	mg/kg mg/kg	0.2	NONE	< 0.3			
Isophorone	mg/kg	02	MCERTS	< 0.2			
2-Nitrophenol	mg/kg	03	MCERTS	< 0.3			
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3			
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3			
1,2,4-Trichlorobenzene	mg/kg	0 3	MCERTS	< 0.3			
Naphthalene	mg/kg	0.05	MCERTS	< 0.05			
2,4-Dichlorophenol	mg/kg	0 3	MCERTS	< 0.3			
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1			
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1			
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1			
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1 < 0.2			
2,4,5-Trichlorophenol 2-Methylnaphthalene	mg/kg mg/kg	0.1	MCERTS NONE	< 0.1			
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1			
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1			
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1			
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10			
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10			
2 4-Dinitrotoluene	mg/kg	0 2	MCERTS	< 0.2			
Dibenzofuran	mg/kg	0 2	MCERTS	< 0.2			
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3			
Diethyl phthalate	mg/kg	0 2	MCERTS	< 0.2			
4-Nitroaniline	mg/kg	02	MCERTS	< 0.2			
Fluorene	mg/kg	0.1	MCERTS MCERTS	< 0.10 < 0.3			
Azobenzene Bromophenyl phenyl ether	mg/kg	0.3	MCERTS	< 0.3			
Hexachlorobenzene	mg/kg mg/kg	0.3	MCERTS	< 0.2			
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10			
Anthracene	mg/kg	0.1	MCERTS	< 0.10			
Carbazole	mg/kg	0.1	MCERTS	< 0.3			
Dibutyl phthalate	mg/kg	0 2	MCERTS	< 0.2			
Anthraquinone	mg/kg	0 3	MCERTS	< 0.3			
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10			
Pyrene	mg/kg	0.1	MCERTS	< 0.10	<u> </u>	<u> </u>	
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3			
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10			
Chrysene	mg/kg	0.05	MCERTS	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10 < 0.10	1	1	
Benzo(a)pyrene Indeno(1,2,3-cd)pyrene	mg/kg mg/kg	0.1	MCERTS MCERTS	< 0.10	1	1	
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05			
penso(grii)pei yierie	ilig/kg	0.05	PICENTO	\ U.UJ	I	 I	





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
455511	BH706	None Supplied	2 00	Light brown loam and sand.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

	I I I I I I I I I I I I I I I I I I I	1		ı	1
Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	ISO 17025
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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t: 01923 225404 f: 01923 237404

e: reception@i2analytical.com

Analytical Report Number: 15-73643

London Paramount Entertainment Project / Site name:

Resort

Your job number: 30766

Your order number: Analysis completed by: 25/06/2015

Report Issue Number:

Samples Analysed: 1 wac multi sample

12/06/2015 Samples received on:

Samples instructed on: 15/06/2015

Report issued on: 25/06/2015

Signed:

Emma Winter

Assistant Reporting Manager For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Rexona Rahman Reporting Manager

Signed:

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting - 2 weeks from reporting asbestos - 6 months from reporting

Iss No 15-73643-1





i2 Analytical

7 Woodshots Meadow Croxley Green Business Park Watford, WD18 8YS

Telephone: 01923 225404 Fax: 01923 237404

email:reception@i2analytical.com

Report No:		15-73643				
•						
				Clianto	GEOENG	
				Client:	GEOENG	
Location	Lone	don Paramount Entertai	nment Resort			
Lab Reference (Sample Number)		455161		Landfill	Waste Acceptance	e Criteria
Sampling Date		12/06/2015			Limits Stable Non-	1
Sample ID		BH707			reactive	
Depth (m)		3.85-3.95		Inert Waste Landfill	HAZARDOUS waste in non- hazardous Landfill	Hazardous Waste Landfil
Solid Waste Analysis						
TOC (%)**	2.0			3%	5%	6%
oss on Ignition (%) **	6.1					10%
BTEX (µg/kg) **	< 10			6000		
Sum of PCBs (mg/kg) ** Mineral Oil (mg/kg)	< 0.30 < 10			500		
Mineral Oil (mg/kg) Fotal PAH (WAC-17) (mg/kg)	< 1.6			100		
otal rAiT (WAC-17) (IIIg/kg) OH (units)**	8.0				>6	
Acid Neutralisation Capacity (mol / kg)	10				To be evaluated	To be evaluate
· · · · · · ·				Limit volu	es for compliance l	
Eluate Analysis	2:1	8:1	Cumulative 10:1		N 12457-3 at L/S 10	
BS EN 12457 - 3 preparation utilising end over end leaching procedure)	mg/l mg/kg -					(פייופייי) כייי
Arsenic *	< 0.010	< 0.010	0.051	0.5	2	25
Barium *	0.13	0.099	1.0	20	100	300
Cadmium *	< 0.0005	< 0.0005	< 0.0020	0.04	1	5
Chromium *	< 0.0010	< 0.0010	< 0.0050	0.5	10	70
Copper *	0.0030	< 0.0030	0.022	2	50	100
Mercury *	< 0.0015	< 0.0015	< 0.010	0.01	0.2	2
Molybdenum *	0.020	0.0080	0.090	0.5	10	30
Vickel *	0.0018	0.0018	0.018	0.4	10	40
_ead * Antimony *	< 0.0050 < 0.0050	< 0.0050 < 0.0050	0.023 0.039	0.5	10 0.7	50 5
Selenium *	< 0.0050	< 0.0030		0.06	0.7	7
Zinc *	0.0029	0.0022	< 0.040 0.023	4	50	200
Chloride *	5.7	< 4.0	< 15	800	4000	25000
Fluoride	1.1	1.0	10	10	150	500
Sulphate *	500	140	1700	1000	20000	50000
TDS	590	230	2600	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.13	< 0.13	< 0.50	1	-	-
рос	13	7.1	76	500	800	1000
Leach Test Information						
Stone Content (%)	< 0.1					
Sample Mass (kg)	1.2				 	
Ory Matter (%) Moisture (%)	76 24					
Stage 1	۷٦.				+	
/olume Eluate L2 (litres)	0.31					
Filtered Eluate VE1 (litres)	0.31					
	0.13					
					1	İ

^{*=} UKAS accredited (liquid eluate analysis only)

** = MCERTS accredited





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
455161	BH707	None Supplied	3.85-3.95	Brown clay and gravel with chalk.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance	L046-PL	W	NONE
BTEX (Sum of BTEX compounds) in soil	Determination of BTEX in soil by headspace GC- MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Chloride in WAC leachate (BS EN 12457-3 Prep)	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
DOC in WAC leachate (BS EN 12457- 3 Prep)	Determination of dissolved organic carbon in leachate by TOC/DOC NDIR analyser.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L037-PL	W	NONE
Fluoride in WAC leachate (BS EN 12457-3 Prep)	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L033-PL	W	NONE
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L047-PL	D	MCERTS
Metals in WAC leachate (BS EN 12457- 3 Prep)	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	ISO 17025
Mineral Oil in Soil	Determination of dichloromethane/hexane extractable hydrocarbons in soil by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
PCB's by GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	MCERTS
Phenol Index in WAC leachate (BS EN 12457-3 Prep)	Determination of monohydric phenols in leachate by continuous flow analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Seciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate in WAC leachate (BS EN 12457-3 Prep)	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	ISO 17025
TDS in WAC leachate (BS EN 12457-3 Prep)	Determination of total dissolved solids in leachate by electrometric measurement.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L004-PL	W	NONE
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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Analytical Report Number: 15-73642

Replaces Analytical Report Number: 15-73642, issue no. 1

Project / Site name: London Paramount Entertainment Samples received on: 12/06/2015

Resort

Your job number: 30766 Samples instructed on: 15/06/2015

Your order number: Analysis completed by: 24/06/2015

Report Issue Number: 2 Report issued on: 24/06/2015

Samples Analysed: 2 soil samples

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





Lab Sample Number		455159	455160					
Sample Reference				BH707	BH706			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.35-2.45	0.50			
Date Sampled				12/06/2015	11/06/2015			
Time Taken		0905	1520					
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1			
Moisture Content	%	N/A	NONE	16	10			
Total mass of sample received	kg	0.001	NONE	1.2	1.8			
								<u> </u>
Asbestos in Soil Screen / Identification Name	Туре	N/A	ISO 17025	Chrysotile	-			
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected			
Asbestos Quantification	%	0.001	ISO 17025	< 0.001	-			
General Inorganics		_					_	
pH	pH Units	N/A	MCERTS	7.6	7.9			
Electrical Conductivity	μS/cm	10	NONE	590	100			
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1			
Complex Cyanide	mg/kg	1	NONE	< 1	< 1			
Free Cyanide	mg/kg	1	NONE	< 1	< 1			
Total Sulphate as SO ₄	mg/kg	50	ISO 17025	2400	480			
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	1.6	0.018			
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2 5	MCERTS	1600	18			
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	0 82	0.0091			
Sulphide	mg/kg	1	MCERTS	6.1	< 10			
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	20	21			
Ammoniacal Nitrogen as N	mg/kg	0 5	MCERTS	< 0.5	< 0.5			
Organic Matter	%	0.1	MCERTS	1.9	1.0			
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	< 2 0			
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20	< 20			
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0	< 5 0			
Total Phenols	-	=	-	-	-	-	-	-
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 10			
Speciated PAHs			•					
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		<u> </u>	
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		-	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05			
Total PAH Total WAC-17 PAHs	mallia	16	NONE	~ 1 G	< 16		1	
TOTAL WAC-17 PARS	mg/kg	ТΩ	INUNE	< 1.6	< 10		<u> </u>	





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				455159	455160		
Sample Reference				BH707	BH706		
Sample Number				None Supplied	None Supplied		
Depth (m)		2.35-2.45	0.50				
Date Sampled		12/06/2015	11/06/2015				
Time Taken				0905	1520		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	0,505	1020		
(Son Analysis)	v	· 이 아	ation IS				
Heavy Metals / Metalloids							
Aluminium (aqua regia extractable)	mg/kg	30	NONE	13000	17000		
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	< 10		
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	8.7	8.6		
Barium (aqua regia extractable)	mg/kg	1	MCERTS	83	80		
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.7	0.7		
Boron (water soluble)	mg/kg	02	MCERTS	3.0	1.3		
Cadmium (aqua regia extractable)	mg/kg	0 2	MCERTS	< 0.2	< 0.2		
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 40		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23	22		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	14	14		
Iron (aqua regia extractable)	mg/kg	40	MCERTS	25000	30000		
Lead (aqua regia extractable)	mg/kg	1	MCERTS	42	21		
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	260	600		
Mercury (aqua regia extractable)	mg/kg	03	MCERTS	< 0.3	< 0.3		
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.3	0.3		
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	19	18		
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	680	1300		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 10		
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	35	35		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	51	52		
Calcium (aqua regia extractable)	mg/kg	20	NONE	130000	24000		
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	3700	3200		
Potassium (aqua regia extractable)	mg/kg	20	NONE	2800	2800		
Monoaromatics							
Benzene	μg/kg	1	MCERTS	< 1.0	< 10		
Toluene	μg/kg	1	MCERTS	< 1.0	< 10		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 10		
p & m-xylene	μg/kg	1	MCERTS	< 1.0	< 10		
o-xylene	μg/kg	1	MCERTS	< 1.0	< 10		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 10		

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	5, 5	0.1	MCERTS	< 0.1	< 0.1		
	mg/kg						
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 10		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 20		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8 0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8 0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 10		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	8.4	2.7		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	31	< 10		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	40	< 10	•	





Lab Sample Number		455159	455160				
Sample Reference		BH707	BH706				
Sample Number		None Supplied	None Supplied				
Depth (m)				2.35-2.45	0.50		
Date Sampled				12/06/2015	11/06/2015		
Time Taken		0905	1520				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
VOCs							
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 10		
Chloroethane	μg/kg	1	ISO 17025	< 1.0	< 10		
Bromomethane	μg/kg	1	ISO 17025	< 1.0	< 10		
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0	< 10		
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0	< 10		
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0	< 10		
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0	< 10		
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0	< 10		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 10		
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 10		
2,2-Dichloropropane	μg/kg	1	NONE MCERTS	< 1.0 < 1.0	< 10		
Trichloromethane 1.1.1-Trichloroethane	μg/kg μg/kg	1	MCERTS	< 1.0 < 1.0	< 1 0 < 1 0		
1,2-Dichloroethane	µg/кд µg/kg	1	MCERTS	< 1.0	< 10		
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0	< 10		
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0	< 10		
Benzene	μg/kg	1	MCERTS	< 1.0	< 10		
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0	< 10		
1,2-Dichloropropane	μg/kg	1	MCERTS	< 1.0	< 10		
Trichloroethene	μg/kg	1	MCERTS	< 1.0	< 10		
Dibromomethane	μg/kg	1	MCERTS	< 1.0	< 10		
Bromodichloromethane	μg/kg	1	NONE	< 1.0	< 10		
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 10		
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 10		
Toluene	μg/kg "	1	MCERTS	< 1.0	< 10		
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 10		
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0 < 1.0	< 10		
Dibromochloromethane Tetrachloroethene	μg/kg	1	ISO 17025 MCERTS	< 1.0	< 1 0 < 1 0		
1,2-Dibromoethane	μg/kg μg/kg	1	ISO 17025	< 1.0	< 10		
Chlorobenzene	μg/kg	1	MCERTS	< 1.0	< 10		
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0	< 10		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 10		
p & m-Xylene	μg/kg	1	MCERTS	< 1.0	< 10		
Styrene	μg/kg	1	MCERTS	< 1.0	< 10		
Tribromomethane	μg/kg	1	MCERTS	< 1.0	< 10		
o-Xylene	μg/kg	1	MCERTS	< 1.0	< 10		
1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0	< 10		
Isopropylbenzene	μg/kg 	1	NONE	< 1.0	< 10		
Bromobenzene	μg/kg	1	MCERTS	< 1.0	< 10		
n-Propylbenzene	μg/kg	1 1	ISO 17025	< 1.0	< 10		
2-Chlorotoluene	μg/kg	1	NONE	< 1.0 < 1.0	< 1 0 < 1 0		
4-Chlorotoluene 1,3,5-Trimethylbenzene	μg/kg μα/ka	1	NONE ISO 17025	< 1.0 < 1.0	< 10		
tert-Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0	< 10		
1 2 4-Trimethylbenzene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 10		
sec-Butylbenzene	μg/kg μg/kg	1	NONE	< 1.0	< 10		
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0	< 10		
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0	< 10		
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 10		
1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 10		
Butylbenzene	μg/kg	1	NONE	< 1.0	< 10		
1,2-Dibromo-3-chloropropane	μg/kg	1	ISO 17025	< 1.0	< 10		
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 10		
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0	< 10		
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	< 10	<u> </u>	





Lab Sample Number				455159	455160		
Sample Reference				BH707	BH706		
Sample Number				None Supplied	None Supplied		
Depth (m)				2.35-2.45	0.50		
Date Sampled				12/06/2015	11/06/2015		
Time Taken				0905	1520		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs			_		l .		
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1		
Phenol	mg/kg	0.1	ISO 17025	< 0.2	< 0.2		
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
Bis(2-chloroethyl)ether	mg/kg	0 2	MCERTS	< 0.2	< 0.2		
1,3-Dichlorobenzene	mg/kg	0 2	MCERTS	< 0.2	< 0.2		
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
1,4-Dichlorobenzene	mg/kg	0 2	MCERTS	< 0.2	< 0.2		
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	 	
2-Methylphenol Hexachloroethane	mg/kg	0.05	MCERTS MCERTS	< 0.3 < 0.05	< 0.05	 	
Nitrobenzene	mg/kg mg/kg	0.05	MCERTS	< 0.05	< 0.05	 	
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2		
Isophorone	mg/kg	02	MCERTS	< 0.2	< 0.2	1	
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3		
2,4-Dimethylphenol	mg/kg	03	MCERTS	< 0.3	< 0.3		
Bis(2-chloroethoxy)methane	mg/kg	0 3	MCERTS	< 0.3	< 0.3		
1,2,4-Trichlorobenzene	mg/kg	0 3	MCERTS	< 0.3	< 0.3		
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
2,4-Dichlorophenol	mg/kg	0 3	MCERTS	< 0.3	< 0.3		
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1		
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
4-Chloro-3-methylphenol 2,4,6-Trichlorophenol	mg/kg	0.1	NONE MCERTS	< 0.1 < 0.1	< 0.1 < 0.1		
2,4,5-Trichlorophenol	mg/kg mg/kg	0.1	MCERTS	< 0.1	< 0.1		
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1		
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
2 4-Dinitrotoluene	mg/kg	02	MCERTS	< 0.2	< 0.2		
Dibenzofuran	mg/kg	02	MCERTS	< 0.2	< 0.2	1	
4-Chlorophenyl phenyl ether Diethyl phthalate	mg/kg	03	ISO 17025 MCERTS	< 0.3 < 0.2	< 0 3 < 0 2		
4-Nitroaniline	mg/kg mg/kg	02	MCERTS	< 0.2	< 0.2	 	
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	1	
Azobenzene	mg/kg	0.1	MCERTS	< 0.3	< 0.10		
Bromophenyl phenyl ether	mg/kg	02	MCERTS	< 0.2	< 0.2		
Hexachlorobenzene	mg/kg	03	MCERTS	< 0.3	< 0.3		
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Carbazole	mg/kg	03	MCERTS	< 0.3	< 0.3	!	
Dibutyl phthalate	mg/kg	02	MCERTS	< 0.2	< 0.2	-	
Anthraquinone Fluoranthene	mg/kg mg/kg	0.1	MCERTS MCERTS	< 0.3 < 0.10	< 0.3 < 0.10	-	
Pyrene	mg/kg mg/kg	0.1	MCERTS	< 0.10	< 0.10	 	
Butyl benzyl phthalate	mg/kg	0.1	ISO 17025	< 0.10	< 0.10		
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	1	
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	l	





Project / Site name: London Paramount Entertainment Resort

Your Order No:

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

"The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

Any material greater than 16mm is considered as Bulk sample and reported separately, asbestos content (if any) is not included in the final Quantitative analysis. The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
455159	BH707	2.35-2.45	129	Loose Fibres	Chrysotile	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
455159	BH707	None Supplied	2.35-2.45	Brown clay and gravel with chalk.
455160	BH706	None Supplied	0 50	Light brown clay and sand.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name Analytical Method Description		Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification	The analysis was carried out using documented inhouse method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	ISO 17025
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a diazonium salt which forms chromophore which is	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





Emma Leivers

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11/06/2015

Analytical Report Number: 15-73575

Project / Site name: London Paramount Entertainment Samples received on:

Resort

Your job number: 30766 Samples instructed on: 12/06/2015

Your order number: Analysis completed by: 18/06/2015

Report Issue Number: 1 Report issued on: 18/06/2015

Samples Analysed: 1 wac multi sample

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





i2 Analytical

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email:reception@i2analytical.com

Report No:	Results	15-73575				
				Client:	GEOENG	
Location	Lon	don Paramount Entertai	nment Resort			
Lab Reference (Sample Number)		454788		Landfill	Waste Acceptanc	e Criteria
					Limits	
Sampling Date Sample ID		11/06/2015 BH708			Stable Non- reactive	
Depth (m)	2.40-2.50			Inert Waste Landfill	HAZARDOUS waste in non- hazardous Landfill	Hazardous Waste Landfill
Solid Waste Analysis						
TOC (%)**	1.0			3%	5%	6%
Loss on Ignition (%) **	3.9	 				10%
BTEX (µg/kg) ** Sum of PCBs (mg/kg) **	< 10 < 0.30	 		6000		
Mineral Oil (mg/kg)	< 0.30 17	 		500		
Total PAH (WAC-17) (mg/kg)	2.7	 		100		
pH (units)**	7.7				>6	
Acid Neutralisation Capacity (mol / kg)	6.7				To be evaluated	To be evaluated
Eluate Analysis					es for compliance le	
Eluate Analysis	2:1	8:1	Cumulative 10:1			
(BS EN 12457 - 3 preparation utilising end over end leaching procedure)	mg/l	mg/l	using BS Ef	N 12457-3 at L/S 10	l/kg (mg/kg)	
Arsenic *	< 0.010	< 0.010	0.080	0.5	2	25
Barium *	0.077	0.058	0.60	20	100	300
Cadmium *	< 0.0005	< 0.0005	< 0.0020	0.04	1	5
Chromium *	< 0.0010	0.0030	0.027	0.5	10	70
Copper *	0.0030	0.0043	0.041	2	50	100
Mercury *	< 0.0015	< 0.0015	< 0.010	0.01	0.2	2
Molybdenum *	0.023	0.0082	0.099	0.5	10	30
Nickel *	0.0015	0.0022	0.022	0.4	10	40
Lead *	< 0.0050	< 0.0050	0.039	0.5	10	50
Antimony *	< 0.0050	< 0.0050	0.023	0.06	0.7	5
Selenium *	< 0.010	< 0.010	0.062	0.1	0.5	7
Zinc *	0.0020	0.0106	0.096	4	50	200
Chloride *	5.6	< 4.0	< 15	800	4000	25000
Fluoride	0.71	0.56 32	5.7 490	1000	150	500
Sulphate * TDS	170 220	80	960	1000 4000	20000 60000	50000 100000
Phenol Index (Monhydric Phenols) *	< 0.13	< 0.13	< 0.50	1	-	-
DOC	12	5.7	65	500	800	1000
Leach Test Information						
Stone Content (%)	< 0.1					
Sample Mass (kg)	2.0					
Dry Matter (%)	82					
Moisture (%)	18					
Stage 1						
Volume Eluate L2 (litres)	0.32					
Filtered Eluate VE1 (litres)	0.21					
		1			1	

results are expressed in a dry weight course, after correction for institute content we Stated limits are for guidance only and 12 cannot be held respons ble for any discretainty.

*= UKAS accredited (liquid eluate analysis only)

** = MCERTS accredited





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
454788	BH708	None Supplied	2.40-2.50	Brown clay and loam with gravel.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance	L046-PL	W	NONE
BTEX (Sum of BTEX compounds) in soil	Determination of BTEX in soil by headspace GC- MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Chloride in WAC leachate (BS EN 12457-3 Prep)	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
DOC in WAC leachate (BS EN 12457- 3 Prep)	Determination of dissolved organic carbon in leachate by TOC/DOC NDIR analyser.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L037-PL	W	NONE
Fluoride in WAC leachate (BS EN 12457-3 Prep)	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L033-PL	W	NONE
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L047-PL	D	MCERTS
Metals in WAC leachate (BS EN 12457 3 Prep)	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	ISO 17025
Mineral Oil in Soil	Determination of dichloromethane/hexane extractable hydrocarbons in soil by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
PCB's by GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	MCERTS
Phenol Index in WAC leachate (BS EN 12457-3 Prep)	Determination of monohydric phenols in leachate by continuous flow analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Seciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate in WAC leachate (BS EN 12457-3 Prep)	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	ISO 17025
TDS in WAC leachate (BS EN 12457-3 Prep)	Determination of total dissolved solids in leachate by electrometric measurement.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L004-PL	W	NONE
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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e: reception@i2analytical.com

Analytical Report Number: 15-73574

Project / Site name: London Paramount Entertainment Samples received on: 11/06/2015

Resort

Your job number: 30766 Samples instructed on: 12/06/2015

Your order number: Analysis completed by: 18/06/2015

Report Issue Number: 1 Report issued on: 18/06/2015

Samples Analysed: 3 soil samples

Signed:

Dr Claire Stone Quality Manager For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Colin Everett Senior Analyst

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting





Lab Sample Number				454785	454786	454787	
Sample Reference				BH703	BH708	BH708	
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				1.90-2.10	1.80-2.00	3.50-3.70	
					11/06/2015		
Date Sampled			10/06/2015 1555	11/06/2015	11/06/2015 1150		
Time Taken	1	1	1	1555	1103	1150	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	
Moisture Content	%	N/A	NONE	14	17	15	
Total mass of sample received	kg	0.001	NONE	1.9	16	2.0	
		•	•	•	•	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	
General Inorganics		•	•			-	<u> </u>
рН	pH Units	N/A	MCERTS	6.4	6.7	7.5	
Electrical Conductivity	μS/cm	10	NONE	100	640	320	
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	
Complex Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	
Free Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	
Total Sulphate as SO ₄	mg/kg	50	ISO 17025	720	1100	860	
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	0.11	0.75	0.24	
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	110	750	240	
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	g/l	0.00125	MCERTS	0.053	0.37	0.12	
Sulphide	mg/kg	1	MCERTS	< 1.0	7 0	< 1.0	
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	4.0	26	24	
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	7.7	< 0.5	
Organic Matter	%	0.1	MCERTS	1.5	2 2	< 0.1	
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	2.9	< 2.0	
Water Soluble Nitrite (2:1) as N	ua/ka	20	NONE	< 20	< 20	< 20	
Total Oxidised Nitrogen (TON)	ma/ka	5	NONE	< 5.0	< 5.0	< 5.0	
				-	-		•
Total Phenois							
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	i
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	i
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	i
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	i
Pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	i
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Indeno(1 2 3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	i
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	
oor on one	■ mg/xg	0.00	INDINE	, 5.05	. 0.00	` 0.00	I
Total PAH							
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6	< 1.6	< 1.6	
			-				





Lab Sample Number				454785	454786	454787	I	
Sample Reference				BH703	BH708	BH708		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				1.90-2.10	1.80-2.00	3.50-3.70		
Date Sampled				10/06/2015	11/06/2015	11/06/2015		
Time Taken				1555	1103	1150		
			Þ				ì	
	_	de Li	Accreditation Status					
Analytical Parameter	Units	Limit of detection	edir					
(Soil Analysis)	ផ	tior	tati us					
		_	9					
Heavy Metals / Metalloids	.		-		=		=	
Aluminium (agua regia extractable)	mg/kg	30	NONE	11000	12000	8000		
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	10	9 3	7.4		
Barium (aqua regia extractable)	mg/kg	1	MCERTS	110	55	76		
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.7	0.7	0.7		
Boron (water soluble)	mg/kg	0.2	MCERTS	1.7	2 3	0.3		
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23	24	31		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	13	15	5.1		
Iron (aqua regia extractable)	mg/kg	40	MCERTS	24000	24000	25000		
Lead (aqua regia extractable)	mg/kg	1	MCERTS	150	21	7.3 78		
Manganese (agua regia extractable) Mercury (agua regia extractable)	mg/kg mg/kg	0.3	MCERTS MCERTS	260 < 0.3	270 < 0.3	< 0.3		
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.3	0.4	< 0.3		
Nickel (agua regia extractable)	mg/kg	1	MCERTS	18	19	15		
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	410	590	260		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	35	38	38		
Zinc (agua regia extractable)	mg/kg	1	MCERTS	46	53	35		
					•	-	-	
Calcium (aqua regia extractable)	mg/kg	20	NONE	3900	64000	5200		
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	2100	3000	2600		
Potassium (aqua regia extractable)	mg/kg	20	NONE	2000	2500	3100		
Monoaromatics					I			
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Toluene	μg/kg "	1	MCERTS	< 1.0	< 1.0	< 1.0		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
p & m-xylene o-xylene	µg/kg µg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µд/кд µд/ка	1	MCERTS	< 1.0	< 1.0	< 1.0		
MITBE (MELLIYI TELLIALY BULYI ELLIEL)	ру/ку		IVICERTS	< 1.0	< 1.0	< 1.0	<u>.</u>	
Petroleum Hydrocarbons								
, , , , , , , , , , , , , , , , , , , ,								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10		
TRULOWO Acception FOR FOR		0.1	MOEDTO	0.4	0.1	0.1	Т	
TPH-CWG - Aromatic > EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
TPH-CWG - Aromatic > EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
TPH-CWG - Aromatic > EC8 - EC10	mg/kg	0.1	MCERTS MCERTS	< 0.1 < 1.0	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12 TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 1.0	< 1.0 < 2.0	< 1.0 < 2.0		
TPH-CWG - Aromatic >EC12 - EC16 TPH-CWG - Aromatic >EC16 - EC21	mg/kg mg/kg	10	MCERTS	< 2.0	< 2.0 < 10	< 2.0		
TPH-CWG - Aromatic >EC10 - EC21 TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10		





Lab Sample Number				454785	454786	454787	ſ	
Sample Reference				BH703	BH708	BH708		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				1.90-2.10	1.80-2.00	3.50-3.70		
Date Sampled				10/06/2015	11/06/2015	11/06/2015		
Time Taken		1555	1103	1150				
Time raken				1000	1100	1100		
		2 –	Accreditation Status					
Analytical Parameter	Units	Limit of detection	red Sta					
(Soil Analysis)	<u>r</u>	Ct o	itat					
		5 T	i di					
VOC-	<u>. </u>				<u> </u>	<u> </u>	<u> </u>	<u> </u>
VOCs		-	100 17005	1.0				
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Chloroethane	μg/kg	1	ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0		
Bromomethane	μg/kg	1	ISO 17025	< 1.0		< 1.0		
Vinyl Chloride Trichlorofluoromethane	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
1,1-Dichloroethene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Cis-1,2-dichloroethene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	1	
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	i	
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Trichloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1 1-Dichloropropene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Benzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Tetrachloromethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,2-Dichloropropane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Trichloroethene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Dibromomethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Bromodichloromethane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Toluene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Dibromochloromethane	μg/kg 	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tetrachloroethene	μg/kg 	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,2-Dibromoethane	μg/kg 	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Chlorobenzene	μg/kg 	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
p & m-Xylene	μg/kg	1	MCERTS	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0		
Styrene Tribromomethane	μg/kg	1	MCERTS MCERTS	< 1.0	< 1.0	< 1.0 < 1.0		
o-Xylene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1 1 2 2-Tetrachloroethane	µg/kg µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Isopropylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Bromobenzene	μg/kg μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
n-Propylbenzene	μg/kg μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	1	
2-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
4-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
1 3 5-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
tert-Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
1 2 4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
sec-Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Butylbenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
1,2-Dibromo-3-chloropropane	μg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,4-Trichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	< 1.0	< 1.0		





Lab Cample Number				45 4705	45.4707	45 4707	
Lab Sample Number				454785	454786	454787	
Sample Reference Sample Number				BH703 None Supplied	BH708 None Supplied	BH708 None Supplied	
Depth (m)				1.90-2.10	1.80-2.00	3.50-3.70	
Date Sampled				10/06/2015	11/06/2015	11/06/2015	
Time Taken				1555	1103	1150	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs	<u> </u>						
Aniline	ma/ka	0.1	NONE	< 0.1	< 0.1	< 0.1	
Phenol	mg/kg mg/kg	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	
1 3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
1 4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
2-Methylphenol Hexachloroethane	mg/kg	0.3	MCERTS	< 0.3 < 0.05	< 0.3	< 0.3	
Hexachioroethane Nitrobenzene	mg/kg mg/kg	0.05	MCERTS MCERTS	< 0.05 < 0.3	< 0.05 < 0.3	< 0.05 < 0.3	
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	
2 4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	
2 4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	
4-Chloroaniline Hexachlorobutadiene	mg/kg mg/kg	0.1	NONE MCERTS	< 0.1 < 0.1	< 0.1 < 0.1	< 0.1 < 0.1	
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
2 4 5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Acenaphthylene Acenaphthene	mg/kg	0.1	MCERTS MCERTS	< 0.10 < 0.10	< 0.10 < 0.10	< 0.10 < 0.10	
2,4-Dinitrotoluene	mg/kg mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	
Bromophenyl phenyl ether Hexachlorobenzene	mg/kg	0.2	MCERTS MCERTS	< 0.2 < 0.3	< 0.2 < 0.3	< 0.2 < 0.3	
Phenanthrene	mg/kg mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Carbazole	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Butyl benzyl phthalate Benzo(a)anthracene	mg/kg	0.3	ISO 17025 MCERTS	< 0.3 < 0.10	< 0.3 < 0.10	< 0.3 < 0.10	
Chrysene	mg/kg mg/kg	0.05	MCERTS	< 0.10	< 0.10	< 0.10	
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
454785	BH703	None Supplied	1.90-2.10	Brown loam and clay with gravel.
454786	BH708	None Supplied	1.80-2.00	Grey clay and loam with gravel.
454787	BH708	None Supplied	3.50-3.70	Light brown clay and sand.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal	In-house method based on USEPA 8270	L064-PL	D	NONE
	Determination of Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques. Determination of water soluble boron in soil by hot water extract followed by ICP-OES. Determination of BTEX in soil by headspace GC-MS. Determination of cations in soil by aqua-regia digestion followed by ICP-OES. Determination of Chloride colorimetrically by discrete analyser. Determination of complex cyanide by distillation followed by colorimetry. Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement. Determination of free cyanide by distillation followed by colorimetry. Determination in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry. Determination of metals in soil by aqua-regia digestion followed by ICP-OES. Moisture content, determined gravimetrically. Determination of phenois in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry. Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate. Determination of PH in soil by addition of water followed by electrometric measurement.	Determination of Ammonium/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques. Determination of water soluble boron in soil by hot water extract followed by ICP-OES. Determination of ETEX in soil by headspace GC-MS. Determination of Cations in soil by aqua-regia digestion followed by ICP-OES. Determination of Cations in soil by aqua-regia digestion followed by ICP-OES. Determination of Cations in soil by aduation of Soil. Determination of Cations in soil by aduation of Soil. Determination of Cations in soil by aduation of Soil. Determination of Coloride colorimetrically by distribution of Coloride Colorimetrically by distribution of Soil. Determination of Complex cyanide by distribution followed by colorimetry. Determination of electrical conductivity in soil by aduation of saturated calcium sulphate followed by colorimetry. Determination of free cyanide by distillation followed by colorimetry. Determination of heavavalent chromium in soil by extraction in water that by acidification, addition of Soil. Moisture content, determined gravimetrically. Determination of phenois in soil by aqua-regia digestion followed by ICP-OES. Moisture content, determined gravimetrically. Determination of phenois in soil by aqua-regia digestion followed by ICP-OES. Determination of phenois in soil by extraction with soil undersometic phenois in soil by aduation of water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) Determination of phenois in soil by adua-regia digestion followed by ICP-OES. Determination of phenois in soil by extraction with soil by aduation of water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) Determination of phenois in soil by extraction with inor (II) sulphate. Determination of Phenois in soil by addition of water followed by ICP-OES. Determination of Phenois in soil by addition of water followed by electromet	Determination of Carbon (1997) Determination of Carbon (1997)	Analysis Analysis Analysis Determination of Analysis In house method based on Exemination of Analysis Analysis In house method based on Exemination of





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	ISO 17025
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
	I Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





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10/06/2015

Analytical Report Number: 15-73390

Project / Site name: London Paramount Entertainment Samples received on:

Resort

Your job number: 30766 Samples instructed on: 11/06/2015

Your order number: Analysis completed by: 18/06/2015

Report Issue Number: 1 Report issued on: 18/06/2015

Samples Analysed: 7 soil samples

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Iss No 15-73390-1





Lab Sample Number				453665	453666	453667	453668	453669
Sample Reference				453665 BH202	453666 BH202	453667 BH202	453668 BH202	453669 BH703
Sample Number				None Supplied	None Supplied	None Supplied		
•					- ''		None Supplied	None Supplied
Depth (m)				0.50 09/06/2015	2.50 09/06/2015	6.00 10/06/2015	8.10 10/06/2015	0.50 09/06/2015
Date Sampled Time Taken				1300	1655	0910	10/06/2015	1510
Time taken	1		1	1300	1655	0910	1000	1510
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	52	33	40	48	10
Total mass of sample received	kg	0.001	NONE	1.5	1.1	1.4	1.6	1.7
		•	•		•		•	
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
General Inorganics								
pH	pH Units	N/A	MCERTS	7.2	10.6	12.3	10.4	7 0
Electrical Conductivity	μS/cm	10	NONE	2000	1900	14000	10000	220
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO ₄	mg/kg	50	ISO 17025	60000	52000	72000	31000	810
Water Soluble Sulphate (Soil Equivalent)	q/l	0.0025	MCERTS	7.1	6.2	17	13	0.11
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2 5	MCERTS	7100	6200	17000	13000	110
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	q/l	0.00125	MCERTS	3.5	3.1	8.3	6.7	0.054
Sulphide	mg/kg	1	MCERTS	< 1.0	10	48	24	< 1.0
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	50	100	6500	5600	31
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	< 0.5	31	< 0.5	< 0.5
Organic Matter	%	0.1	MCERTS	0.3	0.6	0.6	1.3	0.3
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	14	< 2.0	< 2.0	< 2.0
Water Soluble Nitrate (2:1) as NO ₃	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20	< 20	< 20	< 20	< 20
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0	14	< 5.0	< 5.0	< 5.0
					8		2	
Total Phenois								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Speciated PAHs Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.26	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	0.28	0.95	< 0.10	< 0.10
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.28	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	0.34	0.80	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	< 0.10	0.28	0.68	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	0.23	0.65	< 0.10	< 0.10
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.14	0.40	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.35	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.40	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	0.16	0.43	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.25	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.28	< 0.05	< 0.05
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
	9/19	0.00	JITE	. 3.03	. 5.05	. 3.03	. 5.05	. 3.03
Total PAH								
Total WAC-17 PAHs	mg/kg	16	NONE	< 1.6	< 16	5.7	< 1.6	< 1.6
	. Jr3							





Project / Site name: London Paramount Entertainment Resort

None Supplied None Supplied Supplied None Supplied None Supplied Supplied Supplied Supplied Supplied Supplied Supplied Supplied Supplied Supplied Supplied Supplied Supplied Supplied	Lab Sample Number				453665	453666	453667	453668	453669
Depth (m) Date Sampled	Sample Reference				BH202	BH202	BH202	BH202	BH703
Depth (m) Date Sampled	Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter Set	Depth (m)								
Analytical Parameter Set	Date Sampled				09/06/2015	09/06/2015	10/06/2015	10/06/2015	09/06/2015
Aluminium (aqua regia extractable)	Time Taken				1300	1655	0910	1000	1510
Aluminium (aqua regia extractable) mg/kg 30 NONE 14000 16000 12000 27000 8500	Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Antimony (aqua regia extractable) mg/kg 1 ISO 17025 2.8 2.8 4.0 3.4 1.1 Ansenic (aqua regia extractable) mg/kg 1 MCERTS 9.3 16 110 19 8 6 Barium (aqua regia extractable) mg/kg 1 MCERTS 120 110 40 260 56 6 Beryllium (aqua regia extractable) mg/kg 0.06 MCERTS 0.7 0.8 0.3 2.0 0 6 Beryllium (aqua regia extractable) mg/kg 0.2 MCERTS 0.7 0.8 0.3 2.0 0 6 Boron (water soluble) mg/kg 0.2 MCERTS 3.9 4.2 9.4 8.5 < 0.2									
Arsenic (aqua regia extractable) mg/kg 1 MCERTS 9.3 16 110 19 8 6 Barium (aqua regia extractable) mg/kg 1 MCERTS 1.20 110 40 260 56 Beryllium (aqua regia extractable) mg/kg 0.06 MCERTS 0.7 0.8 0.3 2.0 0 6 Boron (water soluble) mg/kg 0.2 MCERTS 0.7 0.8 0.3 2.0 0 6 Cadmium (aqua regia extractable) mg/kg 0.2 MCERTS 3.9 4.2 9.4 8.5 < 0.2 Chromium (hexavalent) mg/kg 4 MCERTS 2.0 31 23 26 21 Chromium (aqua regia extractable) mg/kg 1 MCERTS 2.0 31 23 26 21 Chromium (aqua regia extractable) mg/kg 1 MCERTS 20 31 23 26 21 Copper (aqua regia extractable) mg/kg 1 MCERTS 20	Aluminium (aqua regia extractable)								
Barium (aqua regia extractable) mg/kg 1 MCERTS 120 110 40 260 56	Antimony (aqua regia extractable)	mg/kg							
Beryllium (aqua regia extractable) mg/kg 0.06 MCERTS 0.7 0.8 0.3 2.0 0.6	Arsenic (aqua regia extractable)	mg/kg	1						
Boron (water soluble)	Barium (aqua regia extractable)	mg/kg		MCERTS					
Cadmium (aqua regia extractable) mg/kg 0.2 MCERTS 3.9 4.2 9.4 8.5 < 0.2 Chromium (hexavalent) mg/kg 4 MCERTS < 4.0	Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.7	0.8	0.3	2.0	0 6
Chromium (hexavalent)	Boron (water soluble)	mg/kg	0 2	MCERTS	8.1	3.7	1.3	13	< 0.2
Chromium (aqua regia extractable) mg/kg 1 MCERTS 20 31 23 26 21	Cadmium (aqua regia extractable)	mg/kg	0 2	MCERTS	3.9	4.2	9.4	8.5	< 0.2
Copper (aqua regia extractable) mg/kg 1 MCERTS 22 47 52 89 14 Iron (aqua regia extractable) mg/kg 40 MCERTS 16000 13000 16000 13000 23000 Lead (aqua regia extractable) mg/kg 1 MCERTS 74 140 660 280 16 Manganese (aqua regia extractable) mg/kg 1 MCERTS 240 250 170 270 310 Mercury (aqua regia extractable) mg/kg 0.3 MCERTS 2.0.3 < 0.3	Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 40	< 4.0	< 4.0	< 4.0
Marganese (aqua regia extractable) mg/kg 40 MCERTS 16000 13000 16000 13000 23000	Chromium (aqua regia extractable)	mg/kg	1	MCERTS	20	31	23	26	21
Lead (aqua regia extractable) mg/kg 1 MCERTS 74 140 660 280 16	Copper (aqua regia extractable)	mg/kg	1	MCERTS	22	47	52	89	14
Manganese (aqua regia extractable) mg/kg 1 MCERTS 240 250 170 270 310 Mercury (aqua regia extractable) mg/kg 0.3 MCERTS < 0.3	Iron (aqua regia extractable)	mg/kg	40	MCERTS	16000	13000	16000	13000	23000
Mercury (aqua regia extractable) mg/kg 0.3 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 Molybdenum (aqua regia extractable) mg/kg 0.25 MCERTS 1.0 0.4 2.3 1.6 < 0.3	Lead (aqua regia extractable)	mg/kg	1	MCERTS	74	140	660	280	16
Molybdenum (aqua regia extractable) mg/kg 0.25 MCERTS 1.0 0.4 2.3 1.6 < 0.3 Nickel (aqua regia extractable) mg/kg 1 MCERTS 26 16 14 38 19 Phosphorus (aqua regia extractable) mg/kg 20 NONE 1000 730 400 680 410 Selenium (aqua regia extractable) mg/kg 1 MCERTS 9.5 5.6 9.8 9.8 < 1.0	Manganese (aqua regia extractable)	mg/kg	1	MCERTS	240	250	170	270	310
Mickel (aqua regia extractable) mg/kg 1 MCERTS 26 16 14 38 19 Phosphorus (aqua regia extractable) mg/kg 20 NONE 1000 730 400 680 410 Selenium (aqua regia extractable) mg/kg 1 MCERTS 9.5 5.6 9.8 9.8 < 1.0 Vanadium (aqua regia extractable) mg/kg 1 MCERTS 100 39 53 120 34 Zinc (aqua regia extractable) mg/kg 1 MCERTS 56 140 210 220 36 Calcium (aqua regia extractable) mg/kg 20 NONE 450000 450000 460000 400000 36000 Magnesium (aqua regia extractable) mg/kg 20 NONE 45000 45000 2800 19000 2900 Potassium (aqua regia extractable) mg/kg 20 NONE 3600 7700 29000 33000 2000 Monoaromatics Benzene µg/kg 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 Toluene µg/kg 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 Ethylbenzene µg/kg 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 Pc m-xylene µg/kg 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 Pc m-xylene µg/kg 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 Pc m-xylene µg/kg 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 Pc m-xylene µg/kg 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 Pc m-xylene µg/kg 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 Pc m-xylene µg/kg 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 Pc m-xylene µg/kg 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 Pc m-xylene µg/kg 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 Pc m-xylene µg/kg 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 Pc m-xylene µg/kg 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 Pc m-xylene µg/kg 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 Pc m-xylene µg/kg 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 Pc m-xylene µg/kg 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 Pc m-xylene µg/kg 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 Pc m-xylene µg/kg 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 Pc m-xylene µg/k	Mercury (aqua regia extractable)	mg/kg	03	MCERTS	< 0.3	< 0 3	< 0.3	< 0.3	< 0.3
Phosphorus (aqua regia extractable) mg/kg 20 NONE 1000 730 400 680 410 Selenium (aqua regia extractable) mg/kg 1 MCERTS 9.5 5.6 9.8 9.8 < 1.0	Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	1.0	0.4	2.3	1.6	< 0.3
Selenium (aqua regia extractable) mg/kg 1 MCERTS 9.5 5.6 9.8 9.8 4.1.0	Nickel (aqua regia extractable)	mg/kg	1	MCERTS	26	16	14	38	19
Vanadium (aqua regia extractable) mg/kg 1 MCERTS 100 39 53 120 34 Zinc (aqua regia extractable) mg/kg 1 MCERTS 56 140 210 220 36 Calcium (aqua regia extractable) mg/kg 20 NONE 450000 450000 460000 400000 36000 Magnesium (aqua regia extractable) mg/kg 20 ISO 17025 5100 4500 2800 19000 2900 Potassium (aqua regia extractable) mg/kg 20 NONE 3600 7700 29000 33000 2900 Potassium (aqua regia extractable) mg/kg 20 NONE 3600 7700 29000 33000 2900 Monare gia extractable) mg/kg 20 NONE 3600 7700 29000 33000 2000 Monare gia extractable) mg/kg 1 MCERTS <1.0	Phosphorus (aqua regia extractable)	mg/kg	20	NONE	1000	730	400	680	410
More Magnesia extractable mg/kg 1 MCERTS 56 140 210 220 36	Selenium (aqua regia extractable)	mg/kg	1	MCERTS	9.5	5.6	9.8	9.8	< 1.0
Magnesium (aqua regia extractable) mg/kg 20 NONE 450000 450000 460000 400000 36000 Magnesium (aqua regia extractable) mg/kg 20 ISO 17025 5100 4500 2800 19000 2900 2000 2000 2000 2000 2000 2000 2000 2000 2000 200	Vanadium (agua regia extractable)	mg/kg	1	MCERTS	100	39	53	120	34
Magnesium (aqua regia extractable) mg/kg 20 ISO 17025 5100 4500 2800 19000 2900 Potassium (aqua regia extractable) mg/kg 20 NONE 3600 7700 29000 33000 2000 Monoaromatics Benzene μg/kg 1 MCERTS < 1.0	Zinc (aqua regia extractable)	mg/kg	1	MCERTS	56	140	210	220	36
Magnesium (aqua regia extractable) mg/kg 20 ISO 17025 5100 4500 2800 19000 2900 Potassium (aqua regia extractable) mg/kg 20 NONE 3600 7700 29000 33000 2000 Monoaromatics Benzene μg/kg 1 MCERTS < 1.0									
Potassium (aqua regia extractable) mg/kg 20 NONE 3600 7700 29000 33000 2000 Monoaromatics Benzene μg/kg 1 MCERTS < 1.0	Calcium (aqua regia extractable)	mg/kg	20	NONE	450000	450000	460000	400000	36000
Monoaromatics Benzene μg/kg 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0<	Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	5100	4500	2800	19000	2900
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Potassium (aqua regia extractable)	mg/kg	20	NONE	3600	7700	29000	33000	2000
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Monoaromatics	<u>-</u>							
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Benzene	μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Toluene	μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
p & m-xylene	Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
$\mu g/kg$ 1 MCERTS < 1.0 < 1.0 < 1.0 < 1.0 < 1.0	p & m-xylene		1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
	o-xylene		1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
	MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 20	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8 0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	17	< 8 0	< 8.0	12	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	17	< 10	< 10	12	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 20	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10





Lab Sample Number				453665	453666	453667	453668	453669
Sample Reference				BH202	BH202	BH202	BH202	BH703
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	2.50	6.00	8.10	0.50
Date Sampled				09/06/2015	09/06/2015	10/06/2015	10/06/2015	09/06/2015
Time Taken				1300	1655	0910	1000	1510
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
VOCs								
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Chloroethane	μg/kg	1	ISO 17025	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Bromomethane	μg/kg	1	ISO 17025	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Vinyl Chloride	μg/kg	1	ISO 17025	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0	< 10	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene 1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	MCERTS ISO 17025	< 1.0 < 1.0	< 1 0 < 1 0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
Cis-1,2-dichloroethene	μg/kg μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	μg/kg μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Trichloromethane	μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	μg/kg	1	NONE	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	μg/kg	1	NONE	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Benzene	μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Tetrachloromethane 1,2-Dichloropropane	μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 1 0 < 1 0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
Trichloroethene	μg/kg μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Dibromomethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Bromodichloromethane	μg/kg	1	NONE	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Toluene	μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Dibromochloromethane Tatus phlass others	μg/kg	1	ISO 17025 MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Tetrachloroethene 1,2-Dibromoethane	μg/kg μg/kg	1	ISO 17025	< 1.0 < 1.0	< 10 < 10	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
Chlorobenzene	μg/kg μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
p & m-Xylene	μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Styrene	μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Tribromomethane	μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
o-Xylene	μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Isopropylbenzene Bromobenzene	μg/kg	1	NONE MCERTS	< 1.0 < 1.0	< 10 < 10	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
5 "	μg/kg μα/ka	•	700 47005	. 1.0	. 1 0	. 1.0	< 1.0	< 1.0 < 1.0
n-Propylbenzene 2-Chlorotoluene	μg/kg μg/kg	1	NONE	< 1.0 < 1.0	< 10	< 1.0 < 1.0	< 1.0	< 1.0
4-Chlorotoluene	μg/kg μg/kg	1	NONE	< 1.0	< 10	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 10	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	μg/kg	1	NONE	< 1.0	< 10	< 1.0	< 1.0	< 1.0
1 2 4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 10	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	μg/kg	1	NONE	< 1.0	< 10	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0	< 10	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0	< 10	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
1 4-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Butylbenzene 1,2-Dibromo-3-chloropropane	μg/kg μg/kg	1	NONE ISO 17025	< 1.0 < 1.0	< 1 0 < 1 0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0
1,2,4-Trichlorobenzene	μg/kg μg/kg	1	MCERTS	< 1.0	< 10	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	μg/kg	1	NONE	< 1.0	< 10	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	< 10	< 1.0	< 1.0	< 1.0





	Lab Sample Number						453667	453668	453669
Depth (m) Depth (m) Depth (m) Depth (sampled De	Sample Reference				BH202	BH202	BH202	BH202	BH703
Description Description	Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Second Company	Depth (m)								
Analytical Parameter									
Note	Time Taken				1300	1655	0910	1000	1510
Aniline mg/hg 0,1 NOVE < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1	Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Pienel	SVOCs								
MCRESTS C. 0.1	Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Big2 - Discretably either	Phenol	mg/kg	0 2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
12-Delchrophezenee	Bis(2-chloroethyl)ether	mg/kg	02	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1.4-Dickhorbenzene	1,3-Dichlorobenzene	mg/kg	0 2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Big2Chromosoproplylether	1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1		< 0.1	< 0.1	< 0.1
2-Methylphenol mg/kg 0.3 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.	1,4-Dichlorobenzene	mg/kg		MCERTS					
Heardhirostehane	Bis(2-chloroisopropyl)ether								
Nitrobensene									
Hethylphenol									
Sopherone									
2-Nitrophenol	, ,								
2,4-Dimethylphenol mg/kg 0.3 MCERTS 0.03 0.3 0.05 0.05									
BisQ2-chloroethory)methane									
12,4-FTrichlorobenzene									
Naphthalene	, ,,								
2,4-Dichlorophenol									
AChiconaline									
Hexachirorbutadiene									
AChioro-3-methylphenol									
2.4,6-Trichlorophenol									
2.4.5=Trichlorophenol mg/kg 0.2 MCERTS < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	, ,								
2-Methylnaphthalene									
2-Chioroaphthalene									
Dimethylphthalate									
Cab Dinitrotoluene			0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene mg/kg 0.1 MCERTS < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.1	2,6-Dinitrotoluene		0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
24-Dinitrotoluene	Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Diberzofuran mg/kg 0.2 MCERTS < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3		mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
4-Chlorophenyl phenyl ether mg/kg 0.3 ISO 17025 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3	2 4-Dinitrotoluene	mg/kg	0 2	MCERTS			< 0.2	< 0.2	< 0.2
Diethyl phthalate mg/kg 0.2 MCERTS < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 <		mg/kg							
4-Nitroaniline mg/kg 0.2 MCERTS < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2									
Fluorene									
Azobenzene mg/kg 0.3 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.1 MCERTS < 0.10 0.28 0.95 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10									
Bromophenyl phenyl ether									
Hexachlorobenzene mg/kg									
Phenanthrene mg/kg 0.1 MCERTS < 0.10 0.28 0.95 < 0.10 < 0.10 Anthracene mg/kg 0.1 MCERTS < 0.10									
Anthracene mg/kg 0.1 MCERTS < 0.10 0.28 < 0.10 < 0.10 Carbazole mg/kg 0.3 MCERTS < 0.3									
Carbazole mg/kg 0.3 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.1 < 0.10 < 0.10 < 0.28 0.68 < 0.10 < 0.10 < 0.10 < 0.28 0.68 < 0.10 < 0.10 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3									
Dibutyl phthalate		9,9					V		
Anthraquinone mg/kg 0.3 MCERTS < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.28 0.68 < 0.10 < 0.10 < 0.10 < 0.10 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3									
Fluoranthene	Anthraquinone								
Pyrene mg/kg 0.1 MCERTS < 0.10 0.28 0.68 < 0.10 < 0.10 Butyl benzyl phthalate mg/kg 0.3 ISO 17025 < 0.3									
Butyl benzyl phthalate mg/kg 0.3 ISO 17025 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 < 0.3 Benzo(a)anthracene mg/kg 0.1 MCERTS < 0.10 0.23 0.65 < 0.10 < 0.10 Chrysene mg/kg 0.05 MCERTS < 0.05 0.14 0.40 < 0.05 < 0.05 Benzo(b)fluoranthene mg/kg 0.1 MCERTS < 0.10 < 0.10 0.35 < 0.10 < 0.10 Benzo(k)fluoranthene mg/kg 0.1 MCERTS < 0.10 < 0.10 0.40 < 0.10 < 0.10 Benzo(a)pyrene mg/kg 0.1 MCERTS < 0.10 0.16 0.43 < 0.10 < 0.10 Indeno(1,2,3-cd)pyrene mg/kg 0.1 MCERTS < 0.10 < 0.10 0.25 < 0.10 < 0.10 Dibenz(a,h)anthracene mg/kg 0.1 MCERTS < 0.10 < 0.10 < 0.10 < 0.10 O.10 O.25 < 0.10 < 0.10 < 0.10 O.10 O.10 < 0.10 < 0.10 O.10 O.10 < 0.10 < 0.10 O.10 O.10 O.10 < 0.10 < 0.10 O.10 O.10 O.10 < 0.10									
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Butyl benzyl phthalate								
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Benzo(a)anthracene		0.1						
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.14	0.40	< 0.05	< 0.05
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10		0.35	< 0.10	< 0.10
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Benzo(k)fluoranthene	mg/kg							
Dibenz(a,h)anthracene mg/kg 0.1 MCERTS < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10	Benzo(a)pyrene								
	Indeno(1,2,3-cd)pyrene								
Penzo(abi)nerviene ma/ka 0.05 MCERTS < 0.05 0.05 0.08 < 0.05 < 0.05	Dibenz(a,h)anthracene								
USO 1000 1000 1000 1000 1000 1000 1000 10	Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.28	< 0.05	< 0.05





Lab Sample Number				453670	453671			1
Sample Reference				BH707	BH708		1	
Sample Number				None Supplied	None Supplied			
Depth (m)				1.00	0.50-0.70		+	
Date Sampled				10/06/2015	10/06/2015		+	
Time Taken				1214	1214		+	
Time Taken	1	1		1217	1217			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1			
Moisture Content	%	N/A	NONE	13	5.5			
Total mass of sample received	kg	0.001	NONE	1.6	1.7			
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Not-detected			
7 55C5C65 III 50II	1700	14/71	130 17023	Not detected	Hot detected			
General Inorganics								
pH	pH Units	N/A	MCERTS	7.6	7.5			
Electrical Conductivity	μS/cm	10	NONE	200	720	l	1	1
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1			
Complex Cyanide	mg/kg	1	NONE	< 1	< 1			
Free Cyanide	mg/kg	1	NONE	< 1	< 1			
Total Sulphate as SO ₄	mg/kg	50	ISO 17025	850	1400			
Water Soluble Sulphate (Soil Equivalent)	q/l	0.0025	MCERTS	0.11	0.89			
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	110	890			
Water Soluble SO4 (BRE SD 2:1 Leach Equivalent)	q/l	0.00125	MCERTS	0.054	0.44			
Sulphide	mg/kg	1	MCERTS	3.3	1.8			
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	14	14			
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	< 0.5			
Organic Matter	%	0.1	MCERTS	1.3	1.4			
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	< 2.0			
Water Soluble Nitrate (2:1) as NO ₃	mg/kg	10	NONE	< 10	< 10			
Water Soluble Nitrite (2:1) as N	μg/kg	20	NONE	< 20	< 20			
Total Oxidised Nitrogen (TON)	mg/kg	5	NONE	< 5.0	< 5 0			
Total Phenois	-	-	-	-	-	-	-	-
Total Phenois (monohydric)	mg/kg	1	MCERTS	< 1.0	< 10			
Total Friends (monoriyanc)	ilig/kg	1	MCERTS	< 1.0	< 10		1	
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.16			
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	0.12			
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		1	
Phenanthrene	mg/kg	0.1	MCERTS	0.34	1.5	1	1	1
Anthracene	mg/kg	0.1	MCERTS	< 0.10	0.33		1	
Fluoranthene	mg/kg	0.1	MCERTS	0.77	1.5	1	1	1
Pyrene	mg/kg	0.1	MCERTS	0.70	1.2	Ì	1	
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.48	0.66	Ì	1	
Chrysene	mg/kg	0.05	MCERTS	0.49	0.63	Ì	1	
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	0.49	0.38	l	1	1
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.19	0.49	Ì	1	
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.42	0.41	1	1	
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	0 29	0.28			
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.40	0.42			
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05			
			•			-	•	•
Total PAH								
Total WAC-17 PAHs	mg/kg	16	NONE	4.7	8.1			
		•						





Project / Site name: London Paramount Entertainment Resort

Lab Sample Number				453670	453671		
Sample Reference				BH707	BH708		
Sample Number				None Supplied	None Supplied		
Depth (m)				1.00	0.50-0.70		
Date Sampled				10/06/2015	10/06/2015		
Time Taken				1214	1214		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
(Soli Alialysis)	o	· 이 아	ation IS				
Heavy Metals / Metalloids							
Aluminium (aqua regia extractable)	mg/kg	30	NONE	6900	7800		
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	1.4	1.2		
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	6.5	7.6		
Barium (aqua regia extractable)	mg/kg	1	MCERTS	91	47		
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.6	0.7		
Boron (water soluble)	mg/kg	02	MCERTS	< 0.2	< 0.2		
Cadmium (aqua regia extractable)	mg/kg	02	MCERTS	< 0.2	< 0.2		
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 40		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	19	21		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	16	13		
Iron (aqua regia extractable)	mg/kg	40	MCERTS	17000	20000		
Lead (aqua regia extractable)	mg/kg	1	MCERTS	22	17		
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	260	230		
Mercury (aqua regia extractable)	mg/kg	0 3	MCERTS	< 0.3	< 0.3		
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	< 0.3	0.6		
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	15	19		
Phosphorus (aqua regia extractable)	mg/kg	20	NONE	440	880		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 10		
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	28	31		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	41	38		
Calcium (agua regia extractable)	mg/kg	20	NONE	93000	45000		
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	2800	2200		
Potassium (aqua regia extractable)	mg/kg	20	NONE	1700	1800		
Monoaromatics	<u>-</u>						
Benzene	μg/kg	1	MCERTS	< 1.0	< 10		
Toluene	μg/kg	1	MCERTS	< 1.0	< 10		
Ethylbenzene	μg/kg	1	MCERTS	< 1.0	< 10		
p & m-xylene	μg/kg	1	MCERTS	< 1.0	< 10		
o-xylene	μg/kg	1	MCERTS	< 1.0	< 10		
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 10		

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 10		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 20		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8 0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8 0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 10		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 20		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10		





Lab Sample Number	b Sample Number							
Sample Reference				453670 BH707	453671 BH708			
Sample Number				None Supplied	None Supplied			
Depth (m)				1.00	0.50-0.70			
Date Sampled				10/06/2015	10/06/2015			
Time Taken				1214	1214			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
VOCs							1	
Chloromethane	μg/kg	1	ISO 17025	< 1.0	< 10			
Chloroethane	μg/kg	1	ISO 17025	< 1.0	< 10			
Bromomethane	μg/kg	1	ISO 17025	< 1.0	< 10		1	
Vinvl Chloride	μg/kg	1	ISO 17025	< 1.0	< 10			
Trichlorofluoromethane	μg/kg	1	ISO 17025	< 1.0	< 10			
1,1-Dichloroethene	μg/kg	1	MCERTS	< 1.0	< 10			
1,1,2-Trichloro 1,2,2-Trifluoroethane	μg/kg	1	ISO 17025	< 1.0	< 10			
Cis-1,2-dichloroethene	μg/kg	1	MCERTS	< 1.0	< 10			
MTBE (Methyl Tertiary Butyl Ether)	μg/kg	1	MCERTS	< 1.0	< 10			
1,1-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 10			
2,2-Dichloropropane	μg/kg	1	NONE	< 1.0	< 10			
Trichloromethane	μg/kg	1	MCERTS	< 1.0	< 10			
1,1,1-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 10		 	
1,2-Dichloroethane	μg/kg	1	MCERTS	< 1.0	< 10			
1,1-Dichloropropene	μg/kg	1	NONE NONE	< 1.0	< 10			
Trans-1,2-dichloroethene Benzene	μg/kg μg/kg	1	MCERTS	< 1.0 < 1.0	< 1 0 < 1 0			
Tetrachloromethane	μg/kg μg/kg	1	MCERTS	< 1.0	< 10			
1,2-Dichloropropane	μg/kg μg/kg	1	MCERTS	< 1.0	< 10		1	
Trichloroethene	μg/kg	1	MCERTS	< 1.0	< 10			
Dibromomethane	μg/kg	1	MCERTS	< 1.0	< 10			
Bromodichloromethane	µg/kg	1	NONE	< 1.0	< 10			
Cis-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 10			
Trans-1,3-dichloropropene	μg/kg	1	ISO 17025	< 1.0	< 10			
Toluene	μg/kg	1	MCERTS	< 1.0	< 10			
1,1,2-Trichloroethane	μg/kg	1	MCERTS	< 1.0	< 10			
1,3-Dichloropropane	μg/kg	1	ISO 17025	< 1.0	< 10			
Dibromochloromethane	μg/kg	1	ISO 17025	< 1.0	< 10			
Tetrachloroethene	μg/kg	1	MCERTS	< 1.0	< 10			
1,2-Dibromoethane	μg/kg	1	ISO 17025	< 1.0	< 10			
Chlorobenzene	μg/kg "	1	MCERTS	< 1.0	< 10			
1,1,1,2-Tetrachloroethane	μg/kg	1	NONE	< 1.0	< 10			
Ethylbenzene	μg/kg	1	MCERTS	< 1.0 < 1.0	< 1 0 < 1 0		-	
p & m-Xylene Styrene	μg/kg μg/kg	1	MCERTS MCERTS	< 1.0 < 1.0	< 10		 	
Tribromomethane	µg/кg µg/kg	1	MCERTS	< 1.0	< 10		 	
o-Xylene	μg/kg μg/kg	1	MCERTS	< 1.0	< 10			
1,1,2,2-Tetrachloroethane	μg/kg	1	MCERTS	< 1.0	< 10		1	
Isopropylbenzene	μg/kg	1	NONE	< 1.0	< 10			
Bromobenzene	μg/kg	1	MCERTS	< 1.0	< 10			
n-Propylbenzene	μg/kg	1	ISO 17025	< 1.0	< 10			
2-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 10			
4-Chlorotoluene	μg/kg	1	NONE	< 1.0	< 10			
1,3,5-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 10			
tert-Butylbenzene	μg/kg	1	NONE	< 1.0	< 10			
1 2 4-Trimethylbenzene	μg/kg	1	ISO 17025	< 1.0	< 10			
sec-Butylbenzene	μg/kg	1	NONE	< 1.0	< 10			
1,3-Dichlorobenzene	μg/kg	1	ISO 17025	< 1.0	< 10		 	
p-Isopropyltoluene	μg/kg	1	ISO 17025	< 1.0	< 10		 	
1,2-Dichlorobenzene	μg/kg	1	MCERTS	< 1.0	< 10		 	
1 4-Dichlorobenzene Butylbenzene	μg/kg	1	MCERTS NONE	< 1.0 < 1.0	< 1 0 < 1 0		 	
1,2-Dibromo-3-chloropropane	μg/kg μg/kg	1	ISO 17025	< 1.0 < 1.0	< 10		 	
1,2,4-Trichlorobenzene	μg/kg μg/kg	1	MCERTS	< 1.0	< 10		 	
Hexachlorobutadiene	μg/kg μg/kg	1	NONE	< 1.0	< 10			
1,2,3-Trichlorobenzene	μg/kg	1	NONE	< 1.0	< 10		i	
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Lab Sample Number				453670	453671		
Sample Reference				BH707	BH708		
Sample Number				None Supplied	None Supplied		
Depth (m)				1.00	0.50-0.70		
Date Sampled				10/06/2015	10/06/2015		
Time Taken				1214	1214		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs							
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1		
Phenol	mg/kg	0 2	ISO 17025	< 0.2	< 0.2		
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
Bis(2-chloroethyl)ether	mg/kg	0 2	MCERTS	< 0.2	< 0.2		
1,3-Dichlorobenzene	mg/kg	0 2	MCERTS	< 0.2	< 0.2		
1 2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
1,4-Dichlorobenzene Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS MCERTS	< 0.2 < 0.1	< 0.2 < 0.1		
2-Methylphenol	mg/kg mg/kg	0.1	MCERTS	< 0.1	< 0.1		
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05		
Nitrobenzene	mg/kg	0.03	MCERTS	< 0.3	< 0.03		
4-Methylphenol	mg/kg	02	NONE	< 0.2	< 0.2		
Isophorone	mg/kg	02	MCERTS	< 0.2	< 0.2		
2-Nitrophenol	mg/kg	03	MCERTS	< 0.3	< 0.3	 	
2,4-Dimethylphenol	mg/kg	0 3	MCERTS	< 0.3	< 0.3		
Bis(2-chloroethoxy)methane	mg/kg	03	MCERTS	< 0.3	< 0.3		
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3		
Naphthalene 2,4-Dichlorophenol	mg/kg	0.05	MCERTS MCERTS	< 0.05 < 0.3	0.16 < 0.3		
4-Chloroaniline	mg/kg mg/kg	0.1	NONE	< 0.1	< 0.1		
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1		
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
2,4,5-Trichlorophenol	mg/kg	02	MCERTS	< 0.2	< 0.2		
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1		
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
2,6-Dinitrotoluene Acenaphthylene	mg/kg	0.1	MCERTS MCERTS	< 0.1 < 0.10	< 0.1 < 0.10		
Acenaphthene	mg/kg mg/kg	0.1	MCERTS	< 0.10	0.10		
2 4-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.10	< 0.12		
Dibenzofuran	mg/kg	02	MCERTS	< 0.2	< 0.2		
4-Chlorophenyl phenyl ether	mg/kg	03	ISO 17025	< 0.3	< 0.3		
Diethyl phthalate	mg/kg	02	MCERTS	< 0.2	< 0.2		
4-Nitroaniline	mg/kg	0 2	MCERTS	< 0.2	< 0.2		
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Azobenzene Promonhonyl phonyl other	mg/kg	03	MCERTS	< 0.3	< 0 3 < 0 2		
Bromophenyl phenyl ether Hexachlorobenzene	mg/kg mg/kg	02	MCERTS MCERTS	< 0.2 < 0.3	< 0.2	1	
Phenanthrene	mg/kg	0.1	MCERTS	0.34	1.5		
Anthracene	mg/kg	0.1	MCERTS	< 0.10	0.33		
Carbazole	mg/kg	0.3	MCERTS	< 0.3	< 0 3		
Dibutyl phthalate	mg/kg	02	MCERTS	< 0.2	< 0.2		
Anthraquinone	mg/kg	0 3	MCERTS	< 0.3	< 0.3		
Fluoranthene	mg/kg	0.1	MCERTS	0.77	1.5		
Pyrene	mg/kg	0.1	MCERTS	0.70	1.2		
Butyl benzyl phthalate Benzo(a)anthracene	mg/kg	03	ISO 17025	< 0.3	< 0.3		
Benzo(a)anthracene Chrysene	mg/kg mg/kg	0.1	MCERTS MCERTS	0.48 0.49	0.66 0.63		
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.49	0.88		
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.49	0.49		
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.42	0.41		
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	0 29	0.28		
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10		
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.40	0.42		





Project / Site name: London Paramount Entertainment Resort

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
453665	BH202	None Supplied	0 50	Beige sandy clay with gravel.
453666	BH202	None Supplied	2 50	Beige sandy clay.
453667	BH202	None Supplied	6 00	Light grey clay and sand.
453668	BH202	None Supplied	8.10	Black clay and sand with chalk.
453669	BH703	None Supplied	0 50	Light brown loam with vegetation.
453670	BH707	None Supplied	1 00	Brown loam and sand with chalk.
453671	BH708	None Supplied	0.50-0.70	Brown sandy loam with gravel and vegetation.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests. 2:1 extraction.	L082-PL	D	MCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of soil	Determination of electrical conductivity in soil by addition of saturated calcium sulphate followed by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Nitrate, water soluble, in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP- OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP- OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total oxidised nitrogen in soil	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton		D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	ISO 17025
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Water Soluble Nitrite (2:1) as N in soil	Determination of nitrite in soil by extraction with water followed by with 4-aminobenzene sulphonamide reagent in the presence of orthophosphoric acid at pH 1.9 to form a	In-house method based on ISO:EN 26777:1993 nitrite.	L078-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





Emma Leivers

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Analytical Report Number: 15-80823

Replaces Analytical Report Number: 15-80823, issue no. 1

Project / Site name: London Paramount Entertainment Samples received on: 19/10/2015

Resort

Your job number: 30766 Samples instructed on: 19/10/2015

Your order number: Analysis completed by: 26/10/2015

Report Issue Number: 2 Report issued on: 25/11/2015

Samples Analysed: 3 water samples

Signed:

Dr Irma Doyle Assistant Quality Manager For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter
Assistant Reporting Manager
For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting

Iss No 15-80823-2





Lab Sample Number				497122	497123	497124		
Sample Reference				WS101	WS102	WS202		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				3 88	3.96	6.02		
Date Sampled				14/10/2015	14/10/2015	14/10/2015		
Time Taken				1130	1200	1230		
			Ā					
Analytical Parameter	_	Limit of detection	Accreditation Status					
(Water Analysis)	Units	nit ecti	함					
(Water Analysis)	V 1	· 아	s					
			ă					
Constant to the constant								
General Inorganics pH	pH Units	N/A	ISO 17025	7.6	13.0	13.2	1	
Electrical Conductivity	μS/cm	10	NONE	120000	33000	51000	 	
Total Cyanide	μ3/CIII μg/l	10	ISO 17025	< 10	< 10	< 10	 	
Complex Cyanide	μg/l μg/l	10	NONE	< 10	< 10	< 10	+	
Free Cyanide	μg/l μg/l	10	ISO 17025	< 10	< 10	< 10		
Sulphate as SO ₄	μg/l μg/l	45	ISO 17025	14000000	1760000	15000000		
Sulphide	μg/l	5	NONE	< 5.0	< 5.0	< 5.0		
Chloride	mg/l	0.15	ISO 17025	31000	3800	4800	 	
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	420000	5800	26000		
Nitrate as N	mg/l	0.01	ISO 17025	1.07	0.19	0.26		
Nitrate as NO ₃	mg/l	0.05	ISO 17025	4.75	0.84	1.15		
Nitrite as N	μq/l	1	ISO 17025	21	290	860		
Nitrite as NO ₂	μg/l	5	ISO 17025	69	950	2800		
Chemical Oxygen Demand (Total)	mg/l	2	ISO 17025	400	140	220		
BOD (Biochemical Oxygen Demand)	mg/l	1	ISO 17025	11	< 1.0	< 1.0		
Total Oxidised Nitrogen (TON)	mg/l	0.3	NONE	1.1	0 5	1.1		
Total Phenois		40	T	10	10	1000	· · · · · · · · · · · · · · · · · · ·	
Total Phenols (monohydric)	μg/l	10	ISO 17025	< 10	< 10	1000		
Speciated PAHs								
Naphthalene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Acenaphthylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Fluorene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Phenanthrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	i	
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Chrysene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Indeno(1,2,3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Dibenz(a,h)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Coronene	μg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Total DAII								
Total PAH Total EPA-16 PAHs	μg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2		
Total WAC-17 PAHs	μg/I μg/I	0.2	NONE	< 0.2	< 0.2	< 0.2	 	
TOTAL WAC-1/ FALIS	μ9/1	0.2	INOINE	₹ 0.2	₹ 0.2	₹ 0.2	l L	





Sample Reference	Lab Sample Number				497122	497123	497124		
None Supplied None Supplie									
Depth (m) 3.88 3.98 6.02									
Time Taken									
Analytical Parameter	Date Sampled				14/10/2015	14/10/2015	14/10/2015		
	Time Taken				1130	1200	1230		
				Ac					
	Analytical Parameter	⊆	et Lin	St Cle					
		<u> </u>	ecti ecti	atu dita					
	(Tracer ranaryers)		을 뜻	s tio					
Albaminim (dissolved)	Harris Makala / Makallatida			3					
Antimorry (dissolved) April 0.4 190 1023 4.0 4.7 4.3.5 April (dissolved) 94 0.15 159 17025 4.0 7.4 3.5 April (dissolved) 94 0.15 159 17025 6.6 28 15 April (dissolved) 94 0.15 159 17025 6.6 28 15 April 10 150 17025 6.6 28 15 April 10 150 17025 6.6 28 15 April 10 150 17025 6.6 28 15 April 10 150 17025 6.6 28 15 April 10 150 17025 6.6 28 15 April 10 150 17025 6.6 28 15 April 10 150 17025 6.6 0.1 0.1 April 10 150 17025 6.6 0.1 0.1 April 10 150 17025 6.6 0.1 0.1 April 10 150 17025 6.6 0.1 0.1 April 10 150 17025 6.6 0.1 0.1 April 10 150 17025 6.6 0.1 0.1 April 10 150 17025 6.6 0.1 0.1 April 10 150 17025 6.6 0.1 April 10 150 17025 6.6 0.1 April 10 150 17025 6.6 0.1 April 10 150 17025 6.6 0.1 April 10 150 17025 1.0 April 1		/	0.001	TCO 1702F	1 55	16.4	1 77		
Assentic (dissolved)									
Bartum (dissolved)									
Beryllum (dissolved)									
Born (dissolved)									
Chromium (Decavalent)			10	ISO 17025	850	14	34		
Chronium (dissolved)	. ,	μg/l							
Copper (dissolved)									
Iron (dissolved)									
Lead (dissolved)									
Manganese (dissolved)									
Mercury (dissolved)									
Molybdochum (dissolved)									
Nickel (dissolved)									
Selentum (dissolved)									
Pig/1 0.5 ISO 17025 19 10 < 0.5	, ,								
Calcium (dissolved) mg/l 0.012 ISO 17025 250 10 61	Vanadium (dissolved)	μg/l	0.2	ISO 17025	28	68	65		
Magnesium (dissolved) mg/l 0.005 ISO 17025 340 < 0.005 < 0.005 Potassium (dissolved) mg/l 0.025 ISO 17025 23000 6800 18000 Phosphorus (total) µg/l 20 ISO 17025 23000 32 53 Monaromatics Benzene µg/l 1 ISO 17025 < 1.0	Zinc (dissolved)	μg/l	0.5	ISO 17025	19	10	< 0.5		
Magnesium (dissolved) mg/l 0.005 ISO 17025 340 < 0.005 < 0.005 Potassium (dissolved) mg/l 0.025 ISO 17025 23000 6800 18000 Phosphorus (total) µg/l 20 ISO 17025 23000 32 53 Monaromatics Benzene µg/l 1 ISO 17025 < 1.0									
Magnesium (dissolved) mg/l 0.005 ISO 17025 340 < 0.005 < 0.005 Potassium (dissolved) mg/l 0.025 ISO 17025 23000 6800 18000 Phosphorus (total) µg/l 20 ISO 17025 23000 32 53 Monaromatics Benzene µg/l 1 ISO 17025 < 1.0									
Potassium (dissolved)									
Phosphorus (total)	, ,								
Monoaromatics Benzene µg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0									
Benzene	Thosphorus (cocar)	P9/1	20	130 17023	15000	32	33		
Benzene									
Toluene	Monoaromatics								
Ethylbenzene									
p & m-xylene									
O-xylene μg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 MTBE (Methyl Tertiary Butyl Ether) μg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 Petroleum Hydrocarbons TPH-CWG - Aliphatic >C5 - C6 μg/l 10 NONE < 10	,								
MTBE (Methyl Tertiary Butyl Ether) μg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 < 1.0									
Petroleum Hydrocarbons TPH-CWG - Aliphatic > C5 - C6									
TPH-CWG - Aliphatic >C5 - C6	PITE (Plearly Terdary Bucyl Ediel)	μу/1	1	130 17023	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aliphatic >C5 - C6	Petroleum Hydrocarbons								
TPH-CWG - Aliphatic > C6 - C8 µg/l 10 NONE < 10 < 10 < 10 TPH-CWG - Aliphatic > C8 - C10 µg/l 10 NONE < 10									
TPH-CWG - Aliphatic > C10 µg/l 10 NONE < 10	TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C10 - C12 µg/l 10 NONE < 10		μg/l							
TPH-CWG - Aliphatic >C12 - C16 μg/l 10 NONE < 10		μg/l							
TPH-CWG - Aliphatic >C16 - C21 μg/l 10 NONE < 10									
TPH-CWG - Aliphatic >C21 - C35 μg/l 10 NONE < 10 < 10 < 10 TPH-CWG - Aliphatic (C5 - C35) μg/l 10 NONE < 10									
TPH-CWG - Aliphatic (C5 - C35) μg/l 10 NONE < 10 < 10 < 10 TPH-CWG - Aromatic > C5 - C7 μg/l 10 NONE < 10									
TPH-CWG - Aromatic > C5 - C7 μg/l 10 NONE < 10	The state of the s								
TPH-CWG - Aromatic > C7 - C8 μg/l 10 NONE < 10	care raipinate (do coo)	P9/1	10	HONE	- 10	` 10	- 10	1	
TPH-CWG - Aromatic > C7 - C8 μg/l 10 NONE < 10	TPH-CWG - Aromatic >C5 - C7	μg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic > C8 - C10 μg/l 10 NONE < 10									
TPH-CWG - Aromatic >C12 - C16 μg/l 10 NONE < 10			10				< 10		
TPH-CWG - Aromatic >C16 - C21 μg/l 10 NONE < 10 < 10 < 10 TPH-CWG - Aromatic >C21 - C35 μg/l 10 NONE < 10 < 10 < 10									
TPH-CWG - Aromatic >C21 - C35 μg/l 10 NONE < 10 < 10 < 10									
1.57									
PER-CARG - ALDIHARU (CS - CSS) PB/I 10 NOINE < 10 < 10 < 10									
	TEN-CWG - ATOMACIC (C5 - C55)	μg/I	10	NUNE	< 10	< 10	< 10		





Sample Reference	Lab Sample Number	Lab Sample Number				497123	497124	I	
None Suppled None Suppled None Suppled None Suppled Debts Sampled None Supple Supple S	Sample Reference				497122 WS101				
Date Sampled	Sample Number				None Supplied				
Time Taken	Depth (m)								
Analytical Parameter									
VOCC Chromethane	Time Taken	ī	ſ		1130	1200	1230		
VOCC Chromethane			<u> </u>	Acc					
VOCC Chromethane	Analytical Parameter	S	et mi	redi Sta					
VOCC Chromethane	(Water Analysis)	द्ध	t of	tati					
Chloromethane			3 "	g					
Chlorochlane	VOCs	•	•					•	
Stronomethane	Chloromethane	μg/l	1			< 1.0	< 1.0		
Vinyl Chioride									
Tichlordupromethane									
11-Dichforochene	,								
1,1,2-17-fothoro-1,2,2-inflororethane									
MTBE (Methyl Tetriary Butyl Ether)	1,1,2-Trichloro-1,2,2-trifluoroethane			ISO 17025					
1,1-Dichiproprape	Cis-1,2-dichloroethene								
Page 1 150 1702 1.10									
Titchiromethane	,								
1,1,1-Tichforcethane									
1,2-Dichloropropene	1,1,1-Trichloroethane								
Tans 1 2 dictioncethene	1,2-Dichloroethane			ISO 17025					
Benzene	1,1-Dichloropropene								
Tetrachiromethane									
1,2-Dictorropropane									
Trichloroethene μg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 Dibromomethane μg/l 1 ISO 17025 < 1.0									
Dibromethane									
1 150 17025 1.0	Dibromomethane								
Trans-1,3-dichloropropene µg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 Toluene µg/l 1 ISO 17025 < 1.0	Bromodichloromethane								
Toluene									
1 2-Trichloroethane									
1,3-Dichloropropane									
Dibromochloromethane μg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0									
1,2-Dibromoethane µg/l 1 ISO 17025 < 1.0	Dibromochloromethane		1	ISO 17025		< 1.0	< 1.0		
Chlorobenzene									
1,1,1,2-Tetrachloroethane	,								
Ethylbenzene									
D & m-Xylene									
Styrene	,								
o-Xylene μg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 1,1,2,2-Tetrachloroethane μg/l 1 ISO 17025 < 1.0	Styrene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,2,2-Tetrachloroethane μg/l 1 ISO 17025 < 1.0	Tribromomethane								
Isopropylbenzene									
Bromobenzene μg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 n-Propylbenzene μg/l 1 ISO 17025 < 1.0									
n-Propylbenzene μg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 2-Chlorotoluene μg/l 1 ISO 17025 < 1.0									
2-Chlorotoluene μg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 <	n-Propylbenzene								
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2-Chlorotoluene	μg/l			< 1.0	< 1.0	< 1.0		
tert-Butylbenzene μg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 1 2 4-Trimethylbenzene μg/l 1 ISO 17025 < 1.0	4-Chlorotoluene								
$\begin{array}{cccccccccccccccccccccccccccccccccccc$									
sec-Butylbenzene μg/l 1 ISO 17025 < 1.0 < 1.0 < 1.0 1,3-Dichlorobenzene μg/l 1 ISO 17025 < 1.0									
$\begin{array}{cccccccccccccccccccccccccccccccccccc$									
$\begin{array}{cccccccccccccccccccccccccccccccccccc$									
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	p-Isopropyltoluene			ISO 17025	< 1.0	< 1.0	< 1.0		
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1,2-Dichlorobenzene								
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$									
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$									
Hexachlorobutadiene $\mu g/l$ 1 ISO 17025 < 1.0 < 1.0 < 1.0									





Lab Sample Number				497122	497123	497124	
Sample Reference				WS101	WS102	WS202	
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				3 88	3.96	6.02	
Date Sampled				14/10/2015	14/10/2015	14/10/2015	
Time Taken				1130	1200	1230	
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs	<u> </u>						
Aniline	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Phenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2-Chlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Bis(2-chloroethyl)ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
1,3-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
1 2-Dichlorobenzene	μg/l	0.05	NONE	< 0.05 < 0.05	< 0.05	< 0.05	
1,4-Dichlorobenzene Bis(2-chloroisopropyl)ether	μg/l	0.05	NONE NONE	< 0.05	< 0.05 < 0.05	< 0.05 < 0.05	
2-Methylphenol	μg/l μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Hexachloroethane	μg/l μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Nitrobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
4-Methylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Isophorone	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2-Nitrophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2,4-Dimethylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Bis(2-chloroethoxy)methane	μg/l	0.05	NONE	< 0.05 < 0.05	< 0.05	< 0.05	
1,2,4-Trichlorobenzene Naphthalene	μg/l μg/l	0.05	NONE ISO 17025	< 0.05	< 0.05 < 0.01	< 0.05 < 0.01	
2,4-Dichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
4-Chloroaniline	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Hexachlorobutadiene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
4-Chloro-3-methylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2,4,6-Trichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2,4,5-Trichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2-Methylnaphthalene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2-Chloronaphthalene Dimethylphthalate	μg/l μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	
2,6-Dinitrotoluene	μg/l μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Acenaphthylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
2 4-Dinitrotoluene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Dibenzofuran	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
4-Chlorophenyl phenyl ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Diethyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
4-Nitroaniline Fluorene	μg/l μg/l	0.05	NONE ISO 17025	< 0.05 < 0.01	< 0.05 < 0.01	< 0.05 < 0.01	
Azobenzene	μg/l	0.01	NONE	< 0.05	< 0.05	< 0.05	
Bromophenyl phenyl ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Hexachlorobenzene	μg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	
Phenanthrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Carbazole	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Dibutyl phthalate Anthraquinone	μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	
Fluoranthene	μg/l μg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	
Pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Butyl benzyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Chrysene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Benzo(a)pyrene Indeno(1,2,3-cd)pyrene	μg/l	0.01	ISO 17025 ISO 17025	< 0.01	< 0.01	< 0.01	
Dibenz(a,h)anthracene	μg/l μg/l	0.01	ISO 17025 ISO 17025	< 0.01 < 0.01	< 0.01 < 0.01	< 0.01 < 0.01	
Benzo(ghi)perylene	μg/I μg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
= ±= (3/1/po. //one	P9/1	<u> </u>		. 5.01	. 5.01	. 5.01	

U/S = Unsuitable Sample I/S = Insufficient Sample

 $[\]ensuremath{^{**}}\ensuremath{\mathsf{Raised}}$ LOD due to colour interference.

^{*}Discrepancies between the total and hexavalent chromium due to method differences.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Biological oxygen demand of water	Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.	In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care.	L086-PL	W	ISO 17025
Boron in water	Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	w	ISO 17025
Chemical Oxygen Demand in Water (Total)	Determination of total COD in water by reflux oxidation with acidified K2Cr2O7 followed by colorimetry. Accredited matrices: SW, PW, GW.	HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)	L065-PL	W	ISO 17025
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082 B	W	ISO 17025
Complex cyanide in water	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton(Skalar)	L080-PL	W	NONE
Electrical conductivity of water	Determination of electrical conductivity in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in water	Determination of free cyanide by distillation followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrate in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrite in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by colorimetry.Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L077-PL	W	ISO 17025
pH in water	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L070-UK	W	NONE
Speciated WAC-17 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L070-UK	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L010-PL	W	NONE
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN-82/C-04579.08	L078-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-UK	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





Emma Leivers

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Analytical Report Number: 15-80991

Project / Site name: London Paramount Entertainment Samples received on: 21/10/2015

Resort

Your job number: 30766 Samples instructed on: 21/10/2015

Your order number: Analysis completed by: 29/10/2015

Report Issue Number: 1 Report issued on: 29/10/2015

Samples Analysed: 3 water samples

Signed:

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

Signed:

Emma Winter Assistant Reporting Manager

For & on behalf of i2 Analytical Ltd.

soils - 4 weeks from reporting

leachates - 2 weeks from reporting waters - 2 weeks from reporting

asbestos - 6 months from reporting





Lab Sample Number				498036	498037	498038	I
Sample Reference				WS101	WS102	WS202	
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				3.88	3.97	8.09	
Date Sampled				21/10/2015	21/10/2015	21/10/2015	
Time Taken				1100	1100	1100	
			>				
Analytical Developments	_	de Li	Accreditation Status				
Analytical Parameter (Water Analysis)	Units	Limit of detection	edit.				
(Water Analysis)	v,	<u>g</u> 9,	atio				
			-				<u> </u>
General Inorganics							
рН	pH Units	N/A	ISO 17025	7.7	13 0	13.2	
Electrical Conductivity	μS/cm	10	NONE	16000	24000	26000	
Total Cyanide	μg/l	10	ISO 17025	< 10	< 10	< 10	
Complex Cyanide	μg/l	10	NONE	< 10	< 10	< 10	
Free Cyanide	μg/l	10	ISO 17025	< 10	< 10	< 10	
Sulphate as SO ₄	μg/l	45	ISO 17025	13000000	2220000	16000000	
Sulphide	μg/l	5	NONE	< 5.0	< 5.0	< 5.0	
Chloride	mg/l	0.15	ISO 17025	33000	4100	5500	
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	460000	6300	30000	
Nitrate as N	mg/l	0.01	ISO 17025	0.88	0.14	0.24	
Nitrate as NO ₃	mg/l	0.05	ISO 17025	3.92	0.63	1.04	
Nitrite as N	µg/l	1	ISO 17025	18	330	960	
Nitrite as NO ₂	μg/l	5	ISO 17025	59	1100	3100	
Chemical Oxygen Demand (Total)	mg/l	2	ISO 17025	610	200	420	
BOD (Biochemical Oxygen Demand)	mg/l	1	ISO 17025	8.5	< 1.0	1.6	
Total Oxidised Nitrogen (TON)	mg/l	0.3	NONE	0.9	0.5	1.2	<u>_</u>
Total Phenois							
Total Phenols (monohydric)	μg/l	10	ISO 17025	< 10	22	970	
Considered PAUL							
Speciated PAHs		0.01	100 17005	0.01	0.01	0.01	
Naphthalene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Acenaphthylene Acenaphthene	μg/l	0.01	ISO 17025	< 0.01 < 0.01	< 0.01 < 0.01	< 0.01 < 0.01	
Fluorene	μg/l μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Phenanthrene	µд/I µд/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	+
Anthracene	μg/I μg/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	+
Fluoranthene	µд/I µд/I	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Pyrene	ug/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Benzo(b)fluoranthene	ug/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	†
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	İ
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	İ
Indeno(1 2 3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	1
Dibenz(a,h)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Coronene	μg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	
	- 1 1/		-				•
Total PAH	_						
Total EPA-16 PAHs	μg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	
Total WAC-17 PAHs	μg/l	0.2	NONE	< 0.2	< 0.2	< 0.2	





Lab Sample Number				498036	498037	498038	
Sample Reference				WS101	WS102	WS202	
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				3.88	3.97	8.09	
Date Sampled				21/10/2015	21/10/2015	21/10/2015	
Time Taken				1100	1100	1100	
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids							
Aluminium (dissolved)	mg/l	0.001	ISO 17025	0.211	19.4	0.432	
Antimony (dissolved)	μg/l	0.4	ISO 17025	< 0.4	1.9	0.8	
Arsenic (dissolved)	μg/l	0.15	ISO 17025	34.4	23 6	11.0	
Barium (dissolved)	μg/l	0.06	ISO 17025	42	26	14	
Beryllium (dissolved)	μg/l	0.1	ISO 17025	0.1	< 0.1	< 0.1	
Boron (dissolved)	μg/l	10	ISO 17025	710	28	33	
Cadmium (dissolved)	μg/l	0.02	ISO 17025	3.2	0.08	0.08	
Chromium (hexavalent)	μg/l	5	ISO 17025	< 5.0	< 5.0	1600**	
Chromium (dissolved)	μg/l	0.2	ISO 17025	17	16	1200**	
Copper (dissolved)	μg/l	0.5	ISO 17025	13	64	19	
Iron (dissolved)	mg/l	0.004	ISO 17025	0.26	0.086	0.027	
Lead (dissolved)	μg/l	0.2	ISO 17025	5.9	51	1.6	
Manganese (dissolved)	μg/l	0.05	ISO 17025	110	1.1	0.45	
Mercury (dissolved)	μg/l	0.05	ISO 17025	< 0.05	1.17	< 0.05	
Molybdenum (dissolved)	μg/l	0.05	ISO 17025	2.7	120	350	
Nickel (dissolved)	μg/l	0.5	ISO 17025	15	7.8	150	
Selenium (dissolved)	μg/l	0.6	ISO 17025	2.9	230	610	
Vanadium (dissolved)	μg/l	0.2	ISO 17025	23	76	64	
Zinc (dissolved)	μg/l	0.5	ISO 17025	8.8	9.8	< 0.5	
Calcium (dissolved)	mg/l	0.012	ISO 17025	220	7.8	27	
Magnesium (dissolved)	mg/l	0.005	ISO 17025	120	< 0.005	< 0.005	
Potassium (dissolved)	mg/l	0.025	ISO 17025	13000	5600	16000	
Phosphorus (total)	ua/l	20	ISO 17025	58000	460	26	





Lab Sample Number				498036	498037	498038	
Sample Reference				WS101	WS102	WS202	
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				3.88	3.97	8.09	
Date Sampled				21/10/2015	21/10/2015	21/10/2015	
Time Taken				1100	1100	1100	
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
Monoaromatics							
Benzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	
Toluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	
Ethylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	
p & m-xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	
o-xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	
Petroleum Hydrocarbons							
TPH-CWG - Aliphatic >C5 - C6	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C6 - C8	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C8 - C10	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C10 - C12	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C12 - C16	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C16 - C21	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C21 - C35	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aliphatic (C5 - C35)	μg/l	10	NONE	< 10	< 10	< 10	
TRU OWO A		10	NONE	10	10	10	
TPH-CWG - Aromatic > C5 - C7	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aromatic >C7 - C8	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aromatic >C8 - C10	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aromatic >C10 - C12	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aromatic >C12 - C16	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aromatic > C16 - C21	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aromatic >C21 - C35	μg/l	10	NONE	< 10	< 10	< 10	
TPH-CWG - Aromatic (C5 - C35)	μg/l	10	NONE	< 10	< 10	< 10	





Lab Cample Number			400007	400007	400000	1		
Lab Sample Number Sample Reference				498036 WS101	498037 WS102	498038 WS202	+	
Sample Reference Sample Number				WS101 None Supplied	None Supplied	WS202 None Supplied		
Depth (m)				3.88	3.97	8.09		
Date Sampled				21/10/2015	21/10/2015	21/10/2015		
Time Taken				1100	1100	1100		
			Αc					
Analytical Parameter	_	Limit of detection	Accreditation Status					
(Water Analysis)	Units	ection air	dita					
` , ,		3 5	v ti					
VOCs			_					
Chloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Bromomethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Vinyl Chloride	μg/l	1	NONE	< 1.0	< 1.0	< 1.0		
Trichlorofluoromethane	μg/l	1	NONE	< 1.0	< 1.0	< 1.0		
1,1-Dichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloro-1,2,2-trifluoroethane Cis-1,2-dichloroethene	μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	μg/l μg/l	1	ISO 17025	< 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
1,1-Dichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	+	
2,2-Dichloropropane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trichloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,1-Trichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1-Dichloropropene Trans-1,2-dichloroethene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
Benzene	μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichloropropane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trichloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Dibromomethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Bromodichloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Cis-1,3-dichloropropene Trans-1,3-dichloropropene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,3-Dichloropropane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Dibromochloromethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tetrachloroethene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dibromoethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Chlorobenzene 1 1 1 2-Tetrachloroethane	μg/l μg/l	1	ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p & m-Xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Styrene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tribromomethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
o-Xylene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1 1 2 2-Tetrachloroethane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Isopropylbenzene Bromobenzene	µg/l µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0 < 1.0	+	
n-Propylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
2-Chlorotoluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
4-Chlorotoluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1 3 5-Trimethylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
tert-Butylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	+	
1 2 4-Trimethylbenzene sec-Butylbenzene	µд/I µд/I	1	ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
1,3-Dichlorobenzene	μg/I μg/I	1	ISO 17025	< 1.0	< 1.0	< 1.0	+	
p-Isopropyltoluene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1 2-Dichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,4-Dichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Butylbenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dibromo-3-chloropropane	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,4-Trichlorobenzene Hexachlorobutadiene	μg/l μg/l	1	ISO 17025 ISO 17025	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0		
1,2,3-Trichlorobenzene	μg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
.,_,	P9/1		.00 1/020	, 1.0	, 1.0	, 1.0		





Lab Sample Number				498036	498037	498038	
Sample Reference				WS101	WS102	WS202	
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				3.88	3.97	8.09	
Date Sampled Time Taken				21/10/2015 1100	21/10/2015 1100	21/10/2015 1100	
Time Taken	1			1100	1100	1100	
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs			1				
Aniline	μg/l	0.05	NONE	< 0.05	< 0.05	1.0	
Phenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2-Chlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Bis(2-chloroethyl)ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
1 3-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
1,2-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
1 4-Dichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Bis(2-chloroisopropyl)ether	μg/l	0.05	NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	
2-Methylphenol Hexachloroethane	μg/l μg/l	0.05	NONE NONE	< 0.05	< 0.05	< 0.05	
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
4-Methylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Isophorone	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2-Nitrophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2,4-Dimethylphenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Bis(2-chloroethoxy)methane	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
1,2,4-Trichlorobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Naphthalene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
2 4-Dichlorophenol	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
4-Chloroaniline Hexachlorobutadiene	µд/I µд/I	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	
4-Chloro-3-methylphenol	μg/l μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2 4 5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2-Methylnaphthalene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2-Chloronaphthalene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Dimethylphthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2,6-Dinitrotoluene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Acenaphthylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
2,4-Dinitrotoluene Dibenzofuran	μg/l	0.05	NONE NONE	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	
4-Chlorophenyl phenyl ether	μg/l μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Diethyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
4-Nitroaniline	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Fluorene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Azobenzene	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Bromophenyl phenyl ether	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Hexachlorobenzene	μg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	
Phenanthrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Carbazole Dibutul phtholata	μg/l	0.05	NONE	< 0.05 < 0.05	< 0.05	< 0.05	
Dibutyl phthalate Anthraquinone	µд/I µд/I	0.05	NONE NONE	< 0.05	< 0.05 < 0.05	< 0.05 < 0.05	
Fluoranthene	µg/I	0.03	ISO 17025	< 0.03	< 0.03	< 0.03	
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Butyl benzyl phthalate	μg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Chrysene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Indeno(1,2,3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Dibenz(a,h)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	

^{**}The dissolved chromium and hexavalent chromium analysis has been repeated but the results remain contrary.





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Biological oxygen demand of water	Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.	In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care.	L086-PL	W	ISO 17025
Boron in water	Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025
Chemical Oxygen Demand in Water (Total)	Determination of total COD in water by reflux oxidation with acidified K2Cr2O7 followed by colorimetry. Accredited matrices: SW, PW, GW.	HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)	L065-PL	W	ISO 17025
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082 B	W	ISO 17025
Complex cyanide in water	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Electrical conductivity of water	Determination of electrical conductivity in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	NONE
Free cyanide in water	Determination of free cyanide by distillation followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrate in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Nitrite in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by colorimetry.Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	LO77-PL	W	ISO 17025
pH in water	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025
				ISS NO 15	1.2ngg1_1





Project / Site name: London Paramount Entertainment Resort

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L070-UK	W	NONE
Speciated WAC-17 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L070-UK	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L010-PL	W	NONE
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN-82/C-04579 08	L078-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-UK	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.