

WEST BURTON C POWER STATION

FACTUAL REPORT ON GROUND INVESTIGATION

Report No A7102-17

February 2018

Client: EDF Energy CGR Ltd. West Burton Power Station Retford Nottinghamshire DN22 9BL

Principal Contractor: Firbeck Construction Limited 7 Lawn Court Lawn Road Industrial Estate Carlton-in-Lindrick Worksop Nottinghamshire S81 9ED

Investigation Supervisor: Sir Robert McAlpine Design Group No. 5 Booths Park Chelford Road Knutsford Cheshire WA16 8GS





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Report No A7102-17

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1 INTRODUCTION

In November 2017 SOCOTEC UK Limited (SOCOTEC) was commissioned by Firbeck Construction Limited (FCL), on behalf of EDF Energy CGR Limited (EDF), to carry out a ground investigation at West Burton Power Station, Nottinghamshire. The investigation was required to obtain geotechnical and geoenvironmental information for the proposed development of West Burton C and D gas turbine power plants, adjacent to the existing station.

The Investigation Supervisor was Sir Robert McAlpine Design Group (SRM).

The scope of the investigation was specified by SRM and comprised cable percussion, dynamic sampling and rotary drilled boreholes, trial pits, in situ testing and laboratory testing. The investigation was performed in accordance with the contract specification, and the general requirements of BS 5930 (2015), BS EN 1997-2 (2007), BS EN ISO 22475-1 (2006) and other relevant related standards identified below. The fieldwork took place between 4 and 21 December 2017.

This report presents the factual records of the fieldwork and laboratory testing. The information is also presented as digital data as defined in AGS (2017).

2 SITE SETTING

2.1 Location and Description

West Burton Power Station is located on the River Trent between Retford and Gainsborough, approximately 7 km south west from Gainsborough. The National Grid reference is SK 803 862, see Site Location Plan in Appendix A.

The site of the ground investigation is on the north-eastern side of the West Burton B CCGT power station, in an area formerly used for disposal of ash from West Burton A coal power station and subsequently landscaped. Most of the site area is currently a flower meadow, while the perimeter is partially wooded.

To the north and west of the site are areas currently used for processing ash from West Burton A. To the east is a series of ponds with the River Trent beyond, to the northwest is a small sewage



treatment plant and to the southwest is West Burton B. To the west is the rail merry-go-round loop and coal store of West Burton A, with the Retford to Gainsborough railway line beyond.

2.2 Published Geology

The published geological map covering the site (BGS sheet 101, 1967) and the BGS Geology of Britain Viewer (2018) shows the site underlain by Alluvium and River Terrace Deposits. Bedrock is shown to be the Mercia Mudstone Group consisting of mudstones with subordinate siltstone and beds of gypsum.

Information provided by SRM indicates that ash fill and other made ground is present associated with the historical use of the site. This was confirmed by the investigation.

3 FIELDWORK

3.1 General

The exploratory hole locations were selected by SRM; they were set out by EDF and SOCOTEC from local features. Co-ordinates and reduced levels of the as dug locations were surveyed by SOCOTEC to National Grid and Ordnance Datum. The exploratory hole locations are shown on the Site Plan in Appendix A.

3.2 Exploratory Holes

The exploratory holes are briefly summarised in the table below and in further detail in the Exploratory Hole Summary included in Appendix B.

ТҮРЕ	QUANTITY	MAXIMUM DEPTH (m)	REMARKS
Cable Percussion Boreholes	12	15.60	WS101 to WS112
Dynamic Sampling extended by Rotary Core Drilling	6	30.30	BH101 to BH106
Rotary Open Hole Drilling	2	30.00	BH107 and BH108
Trial pits (machine excavated)	14	3.70	TP02 to TP08 and TP10 to TP116 TP101 and TP109 were removed by SRM. TP107 and TP110 were hand excavated.

TABLE 1 : EXPLORATORY HOLES



The exploratory hole logs are presented in Appendix B. These provide information including the equipment and methods used, samples taken, tests carried out, water observations and descriptions of the strata encountered. Explanation of the terms and abbreviations used on the logs is given in the Key to Exploratory Hole Records in Appendix B, together with other explanatory information. The logging of soil and rock materials is in accordance with BS 5930 (2015). Material of the Mercia Mudstone Group has been divided according to the weathering grades defined in Spink and Norbury (1993).

Standard penetration tests (SPT) in the boreholes were carried out in accordance with BS EN ISO 22476-3+A1 (2011) and the SPT hammer energy ratio certificates are included in Appendix B. The SPT results are presented on the logs as uncorrected N values.

Photographs of the trial pits and rotary drilled core are presented in Appendix E.

On completion of the fieldwork geotechnical samples were transported to the Doncaster laboratory of SOCOTEC for testing and temporary retention.

3.3 Instrumentation

Gas and groundwater monitoring Instrumentation was installed in selected exploratory holes as instructed by SRM; details are shown on the relevant borehole logs and summarised in Appendix C.

SOCOTEC were not required to undertake post fieldwork monitoring of the instrumentation.



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3.4 In Situ Testing

(HPD)

Cross Hole

Seismic Survey

In situ testing was carried out in accordance with the relevant standards as tabulated below. The testing is summarised in the following table and the results are presented under separate cover.

TYPE	QUANTITY	STANDARDS	REPORT
Self Boring Pressuremeter	4 tests at 2 locations – BH101 and BH102	BS 5930 (2015)	SOCOTEC Report A7104-17
High Pressure Dilatometer Test	6 tests at 2 locations –	BS 5930 (2015)	SOCOTEC Report A7104-17

TABLE 2: SUMMARY OF IN SITU TESTING

BH101 and BH102

3 locations – BH101,

BH107, BH108

LABORATORY TESTING 4

Geotechnical laboratory testing was scheduled by SRM and was carried out in accordance with BS 1377 (1990) and ISRM (2007) unless otherwise stated. The testing is summarised below and the results are presented in Appendix D.

- Φ **Moisture Content Determination**
- Atterberg Limits Determination
- Particle Size Distribution Analysis
- Unconsolidated Undrained Triaxial Compression Testing
- Dry Density / Moisture Content Relationship
- Point Load index Testing
- Iniaxial Compressive Strength of Rock
- pH value and Water Soluble Sulphate, Acid Soluble Sulphate and Total Sulphur Contents of Soils. Test methods are BS 1377 or others recognised in BRE Special Digest 1 (2005)
- Organic Matter Content



REFERENCES

AGS : 2017 : Electronic transfer of geotechnical and geoenvironmental data (Edition 4.0.4 February 2017). Association of Geotechnical and Geoenvironmental Specialists.

BGS England and Wales Sheet 101 : 1967 : East Retford. 1:63,360 geological map (solid and drift). British Geological Survey.

BGS Geology of Britain Viewer : 2018. www.bgs.ac.uk. British Geological Survey.

BRE Special Digest 1 : 2005 : Concrete in aggressive ground. Building Research Establishment.

BS 1377 : 1990 : Methods of test for soils for civil engineering purposes. British Standards Institution.

BS 5930 : 2015 : Code of practice for ground investigations. British Standards Institution.

BS EN 1997-2 : 2007 : Eurocode 7 - Geotechnical design - Part 2 Ground investigation and testing. British Standards Institution.

BS EN ISO 22475-1 : 2006 : Geotechnical investigation and testing – Sampling methods and groundwater measurements - Part 1 Technical principles for execution. British Standards Institution.

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

ISRM : 2007 : The Complete ISRM Suggested Methods for Rock Characterisation, Testing and Monitoring (1974-2006). Commission on Testing Methods, International Society for Rock Mechanics (Editors Ulusay R & Hudson JA).

Spink TW and Norbury DR : 1993 : The Engineering Geological Description of Weak Rocks and Overconsolidated Soils. Proc 26th Regional Meeting of Engineering Group of Geological Society, Leeds.



APPENDIX A FIGURES AND DRAWINGS

Site Location Plan	A1
Site Plan	A2

Site Location Plan









APPENDIX B EXPLORATORY HOLE RECORDS

Exploratory Hole Summary Table B1 Key to Exploratory Hole Records SPT Hammer Energy Ratio Report SPT Hammer Reference AR868, AR932, AR1121, AR1777, ESG01 and SM39 **Borehole Logs** BH101 to BH108 and WS101 to WS112 **Trial Pit Logs** TP102 to TP108 and TP110 to TP116

Key

Exploratory Hole Summary



Hole ID	Hole Depth, (m)	Hole Type	Eastings, (m)	Northings, (m)	Ground Level, (m AOD)	Hole Remarks
WS101	15.15	СР	480231.61	386503.03	8.12	Standpipe installed on completion
WS102	10.88	CP	480348.04	386411.84	7.29	Standpipe installed on completion
WS103	15.00	CP	480254.22	386326.59	13.22	Standpipe installed on completion
WS104	15.00	СР	480272.49	386292.43	12.79	Standpipe installed on completion
WS105	15.45	CP	480251.34	386272.33	13.13	-
WS106	15.00	СР	480244.24	386241.68	13.20	Standpipe installed on completion
WS107	15.45	CP	480327.97	386173.12	13.16	-
WS108	14.60	СР	480245.66	386190.35	13.48	Standpipe installed on completion
WS109	15.45	СР	480283.38	386135.14	13.38	Standpipe installed on completion
WS110	15.00	CP	480341.80	386305.04	11.58	Standpipe installed on completion
WS111	15.60	СР	480324.71	386100.72	13.41	Standpipe installed on completion
WS112	15.00	СР	480186.50	386432.19	9.42	Standpipe installed on completion
BH101	30.30	DS+RC	480314.02	386252.60	12.95	SBP and HPD carried out - see Report A7104-17 Cross Hole Seismic Survey - see Report L7104-17
BH102	30.07	DS+RC	480272.23	386209.16	13.01	SBP and HPD carried out - see Report A7104-17
BH103	29.80	DS+RC	480278.51	386251.64	12.70	-
BH104	30.10	DS+RC	480328.16	386217.30	13.09	Standpipe installed on completion
BH105	29.50	DS+RC	480217.44	386221.29	13.31	Standpipe installed on completion
BH106	29.80	DS+RC	480274.50	386160.19	13.05	-
BH107	30.00	RO	480311.89	386247.30	12.91	Cross Hole Seismic Survey - see Report L7104-17
BH108	28.00	RO	480309.31	386240.77	12.91	Cross Hole Seismic Survey - see Report L7104-17
TP101	-	-	-	-	-	Removed from scope of works by SRM
TP102	3.00	MDTP	480408.46	386336.14	4.47	-
TP103	3.50	MDTP	480453.61	386316.81	3.87	-
TP104	3.70	MDTP	480252.25	386159.36	13.09	-
TP105	3.50	MDTP	480285.71	386122.08	13.44	-
TP106	3.50	MDTP	480340.80	386082.01	13.10	-
TP107	1.20	HDTP	480379.49	385939.43	12.45	Hand dug
TP108	3.50	MDTP	480348.08	385895.45	12.16	-
TP109	-	-	-	-	-	Removed from scope of works by SRM
TP110	1.20	HDTP	480443.30	385913.17	4.40	Hand dug
TP111	3.50	MDTP	480507.00	385914.62	4.80	-
TP112	3.50	MDTP	480499.87	385841.23	7.01	-
TP113	3.50	MDTP	480293.20	386304.89	13.01	-
TP114	3.50	MDTP	480277.31	386312.39	13.05	-
TP115	3.50	MDTP	480216.45	386425.20	9.12	-
TP116	3.50	MDTP	480289.44	386467.15	13.55	-

MDTP = Machine Dug Trial Pit HDTP = Hand Dug Trial Pit Notes: Table Project

Project No.

AGS	

WEST BURTON C POWER STATION A7102-17 Carried out for Firbeck Construction Limited

Key to Exploratory Hole Records



SAMPLES

See report text for full references of standards. Updated October 2017	Project No. A7102-17 Carried out for Firbeck Construction Limited	Key
Notes:		
 ▼ Groundw ∇ Depth to 	rater entry groundwater after standing period	
GROUNDWATER		
CRF Core rec AZCL Assessed	overed (length in m) in the following run d zone of core loss	
Flush returns, estimated percer	ntage with colour where relevant, are given in the Records column	
RQD Rock Qu If Fracture NI The term NA Used wh	ality Designation, % spacing, mm. Minimum, typical and maximum spacing measurements are present non-intact (NI) is used where the core is fragmented. here a measurement is not applicable (eg. If, SCR and RQD in non-rock materials).	ted.
TCR Total Col	re Recovery, %	
The mechanical indices (TCR/S	SCR/RQD & If) are defined in BS 5930:2015	
DRILLING RECORDS	Tovided in Field Records column (one value per stage for packer tests)	
IV in situ va HV Hand var PP Pocket p KFH, KRH, KPI Permeab	Ine shear strength, peak (p) and remoulded (r) ne shear strength, peak (p) and remoulded (r) ienetrometer test, converted to shear strength pility tests (KFH = falling head, KRH = rising head; KPI = packer inflow); rewided in Field Records column (on your parategy for packer total)	
The Stan The incre and any number of total blow	reneration rest is defined in BS EN ISO 22476-3:2005+A1:2011. emental blow counts are given in the Field Records column; each increment is 75 r penetration under self-weight in mm (SW) is noted. Where the full 300 mm test dr of blows for the test drive is presented as $N = **$ in the Test column. Where the test v count beyond the seating drive is given (without the N = prefix).	nm unless stated otherwise ive is achieved the total t drive blows reach 50 the
SPT S or SPT C Standard	I Penetration Test, open shoe (S) or solid cone (C)	
IN SITU TESTS		
Specime	ens for point load testing undertaken on site (or other non-lab location) are not show	vn on the log.
Samples hole logs	taken from borehole installations (ie water or gas) after hole construction are not s	shown on the exploratory
Comments Sample r attempt	reference numbers are assigned to every sample taken. A sample reference of 'NF was made to take a tube sample, there was no recovery.	R' indicates that, while an
ENvironn ES Soil sam EW Water sa	nental chemistry samples (in more than one container where appropriate) ple ample	
Other W Water sa G Gas sam	ample Iple	
Disturbed D Small sa B Bulk sam	mple nple	
C / CS Core san AMAL Amalgan	nple (from rotary core) taken for laboratory testing. nated sample	
CBR CBR more BLK Block sai	uld sample mple	
TW Pushed t P Pushed p	thin wall tube sample piston sample	
Undisturbed U Driven tu UT Driven th	ube sample inominally 100 mm diameter and full recovery unless oth	nerwise stated

Key to Exploratory Hole Records





Sheet 2 of 3

Key to Exploratory Hole Records



	0000110
NOTES	
1	Soils and rocks are described in accordance with BS EN ISO 14688-1:2002+A1:2013 and 14689-1:2003 respectively as amplified by BS 5930:2015.
2	For fine soils, consistency determined during description is reported for those strata where undisturbed samples are available. Where the logger considers that the sample may not be representative of the condition in situ, for whatever reason, the reported consistency is given in brackets. The reliability of the sample is indicated by Probably or Possibly as appropriate. Hence (Probably firm) indicates the logger is reasonably confident of the assessment, but (Possibly firm) means less certainty. Where the samples available are too disturbed to allow a reasonable assessment of the in situ condition, no consistency is given.
3	Evidence of the occurrence of very coarse particles (cobbles and boulders) is presented on the logs. However, because of their size in relation to the exploratory hole these records may not be fully representative of their size and frequency in the ground mass.
4	The declination of bedding and joints is given with respect to the normal to the core axis. Thus in a vertical borehole this will be the dip.
5	The assessment of SCR, RQD and Fracture Spacing excludes artificial fractures.
6	Observations of discernible groundwater entries during the advancement of the exploratory hole are given at the foot of the log and in the Legend column. The absence of a recorded groundwater entry should not, however, be interpreted as a groundwater level below the base of the borehole. Under certain conditions groundwater entry may not be observed, for instance, drilling with water flush or overwater, or boring at a rate faster than water can accumulate in the borehole. Similarly, where water entry observations do exist, groundwater may also be present at higher elevations in the ground than where recorded in the borehole. In addition, where appropriate, water levels in the hole at the time of recovering individual samples or carrying out in situ tests and at shift changes are given in the Records column.
	The borehole logs present the results of Standard Penetration Tests recorded in the field without correction or interpretation. However, in certain ground conditions (eg high hydraulic head or where very coarse particles are present) some judgement may be necessary in considering whether the results are representative of in situ mass conditions.
REFERENCES	
1	BS EN ISO 14688-1:2002+A1 : 2013 : Geotechnical investigation and testing - Identification and classification of soil. Part 1 Identification and description. British Standards Institution
2	BS EN ISO 14689-1 : 2003 : Geotechnical investigation and testing - Identification and classification of rock. Part 1 Identification and description. British Standards Institution
3	BS EN ISO 22476-3:2005+A1 : 2011 : Geotechnical investigation and testing - Field testing. Part 3 Standard penetration test. British Standards Institution
4	BS 5930 : 2015 : Code of practice for ground investigations. British Standards Institution

Notes:	Project	WEST BURTON C POWER STATION	
See report text for full references of standards.	Project No.	A7102-17	Key
Updated October 2017	Carried out for	Firbeck Construction Limited	Sheet 3 of 3

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING AINLEYS INDUSTRIAL ESTATE ELLAND WEST YORKSHIRE HX5 9JP

Instrumented Rod Data

Diameter d _r (mm):	54
Wall Thickness t _r (mm):	6.0
Assumed Modulus E _a (GPa):	208
Accelerometer No.1:	7080
Accelerometer No.2:	11609

SPT Hammer Ref:	AR868
Test Date:	16/08/2017
Report Date:	16/08/2017
File Name:	AR868.spt
Test Operator:	SH

SPT Hammer Information

Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	10.0

Comments / Location CALIBRATION



The recommended calibration interval is 12 months

SPT Hammer Energy Test Report

AR932

19/12/2016

19/12/2016

AR932.spt

SH

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING AINLEYS INDUSTRIAL ESTATE ELLAND WEST YORKSHIRE HX59JP

Instrumented Rod Data

Diameter d _r (mm):	54
Wall Thickness t _r (mm):	6.1
Assumed Modulus Ea (GPa):	208
Accelerometer No.1:	7080
Accelerometer No.2:	7079

SPT Hammer Information

SPT Hammer Ref:

Test Date:

File Name:

Report Date:

Test Operator:

Hammer Mass	m (kg):	63.5
Falling Height	h (mm):	760
SPT String Len	gth L (m):	10.0

Comments / Location CALIBRATION

Force 200 150 100 NX N 50 0 -50 7 8 2 9 5 6 10 0 1 3 4 Time (ms)



Calculations

Area of Rod A (mm2):		918
Theoretical Energy E _{theor}	(J):	473
Measured Energy E _{meas}	(J):	288
		-

Energy Ratio Er (%):

61

The recommended calibration interval is 12 months





Hammer Energy Report



Date of test:	03/01/2018	Hammer ID: Hammer mass (<i>m</i>)	AR1121 63.5 kg
Instrumented rod:		Fall height (<i>h</i>)	0.76 m
Туре	NWY	Test type:	SPT
Cross-sectional area (A a)	11.30 cm ²	Manufacturer:	Archway
Young's modulus (<i>E</i> a)	207000 MPa	Model:	Automatic Trip Hammer
Length	0.60 m		
		Rig:	Beretta T51
Test rod type:	NWY	Rig ID:	R62
		Туре:	Rotary
		Foreman:	D Strong

Remarks:

Data obtained from test carried out in BH1, located in the SOCOTEC UK Doncaster yard. Test carried out at depth of 4.96 mbgl, with a total blow count of 20. Energy determined from every blow.



SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING AINLEYS INDUSTRIAL ESTATE ELLAND WEST YORKSHIRE HX59JP

Instrumented Rod Data

Diameter d _r (mm):	54
Wall Thickness tr (mm):	6.0
Assumed Modulus E _a (GPa):	208
Accelerometer No.1:	7080
Accelerometer No.2:	11609

SPT Hammer Ref:	AR1777
Test Date:	13/04/2017
Report Date:	13/04/2017
File Name:	AR1777.spt
Test Operator:	SH

SPT Hammer Information

Hammer Mass m (kg): 63.5 Falling Height h (mm): 760 SPT String Length L (m): 10.0

Comments / Location

CALIBRATION





Calculations

Energy Ratio E. (%	(6):	72	
Measured Energy Emeas	(J):	340	
Theoretical Energy Etheor	(J):	473	
Area of Rod A (mm2):		905	

The recommended calibration interval is 12 months





Hammer Energy Report



Date of test:	19/05/2017	Hammer ID: Hammer mass (<i>m</i>)	ESG01 63.5 kg
Instrumented rod:		Fall height (h)	0.76 m
Туре	BW	Test type:	SPT
Cross-sectional area (A a)	11.30 cm ²	Manufacturer:	Archway
Young's modulus (<i>E</i> a)	207000 MPa	Model:	Automatic Trip Hammer
Length	0.60 m		
		Rig:	Beretta T41
Test rod type:	NWY	Rig ID:	R29
		Туре:	Rotary
		Foreman:	J Govan

Remarks:

Data obtained from test carried out in BH1, located in ESG Doncaster yard. Test carried out at depth of 5.70 mbgl, with a total blow count of 19. Energy determined from every blow.



SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING AINLEYS INDUSTRIAL ESTATE ELLAND WEST YORKSHIRE HX59JP

Instrumented Rod Data

Diameter d _r (mm):	54
Wall Thickness t _r (mm):	6.0
Assumed Modulus E _a (GPa):	208
Accelerometer No.1:	7080
Accelerometer No.2:	11609

SPT Hammer Ref:	SM39
Test Date:	29/06/2017
Report Date:	06/07/2017
File Name:	SM39.spt
Test Operator:	SH

SPT Hammer Information

Hammer Mass m (kg): 63.5 Falling Height h (mm): 760 SPT String Length L (m): 10.0

Comments / Location

CALIBRATION





Calculations

Area of Rod A (mm2):		905
Theoretical Energy E _{theor}	(J):	473
Measured Energy E _{meas}	(J):	290

Energy Ratio E_r (%):

61	

The recommended calibration interval is 12 months









Drill Log Che	led SS Iged RT ecked MS	Start 18/12/2017 End	Equipment, Methods and Rem Dando 175. Cable percussion boring. SPT Hammer ID: ARI777, Rod t	p arks ype: 54mm ^v	Whitworth.	Depth from to Dia (m) (m) (1.20 15.15	ameter Casing Depth (mm) (m) 150 13.50	Ground Level Coordinates (m) National Grid		8.12 mOD E 480231.61 N 386503.03
App Sa	moles and	20/12/2017				Strata Description				
Ē	Depth	Type & No	. Records	Date	Time	Main	Detail	Depth, Level	Legend	Backfill
-			0.00-1.20 Hand excavated	Casing	water	Grey slightly gravelly sandy SILT. Gravel is	-	(Thickness)		°.4 0
Ē	0.30	D 1	inspection pit.			subangular fine to medium of clinker and brick. (MADE GROUND - Pulverised Fuel Ash)		-		٩ŀ
-	0.50 - 1.00	B 2						(1.20)		- KIK
F							-			
F								-		
F	1.20 - 1.65 1.20	UT 4 D 3	42 blows 100% rec	1.20	Dry	Grey slightly sandy SILT.	-	1.20 +6.92		M
_						(MADE GROUND - Pulvensed Fuel Ash)				ИИ
-	1.65 - 1.85 1.85 - 2.30	D 5 SPTS	N=13 (3 3/3 4 3 3)	1 50	Do			-		
E	1.85 - 2.30	D 6	10 (0,00,4,0,0)	18/12/17	1620					
E				1.50	Dry		-	-		ÍAL
F				19/12/17 1.50	0800 Dry			-		
E								(3.20)		- KIK
F	3.00 - 3.45	UT 7	28 blows 100% rec	3.00	Dry					- KIK
Ē							-			- M
F	3.45 - 3.65	D 8						-		- PIP
Ē	3.65 - 4.10 3.65 - 4.10	SPTS D 9	N=9 (2,3/2,3,2,2)	3.00	Dry					ЛY
L								-		МИ
F							-	-		
E	4.50 - 4.95	UT 10	37 blows 100% rec	4.50	Drv	Soft to firm grey and greyish brown, mottled		4.40 +3.72		
F					,	orangish brown, slightly sandy silty CLAY with frequent gravel size pockets of black silt.	-	-	×	
E	4.95 - 5.15	D 11				(Possible ALLUVIUM)	-	-	××	
F	5.15 - 5.60	SPTS	N=12 (3,3/3,3,3,3)	4.50	Dry		-	(1.40)	××	
F	5.15 - 5.00	DIZ					-		××	
E							-	-	××	- KIK
F	5.80	D 13			_	Soft to firm orangish brown, mottled dark greyish	-	5.80 +2.32	×	- KIK
E	6.00 - 6.45	01 14	23 blows 100% rec	6.00	Damp	pockets (<5mm) of orange sand. Frequent		(0.50)	×× 1	P ///
F	6 45 - 6 65	D 15				(ALLUVIUM)	1 =	6.30 +1.82	$\times \times \times \times$	A
Ē	6.65 - 7.10	SPTS	N=8 (2,1/2,2,2,2)	6.00	Damp	frequent pockets (<1mm) and partings (<2mm) of		-	$(\times \times \times \times)$	ТИИ
F	6.65 - 7.10	D 16				orange fine sand. (ALLUVIUM)	-	(1.30)	$ \times \times \times \times $ 1	
-								(1.50)	$\times \times \times \times$	
Ē							-	-	(X, X, X, X)	
F	7.50 - 7.95	UT 17	17 blows 100% rec	7.50	Damp	Soft grevish brown slightly sandy SILT		7.60 +0.52		
Ē	705 0/5	5.49				(ALLUVIUM)	-			
-	7.95 - 8.15 8.15 - 8.60	SPTS	N=2 (1.0/1.0.1.0)	8.15	2.10			-		
Ē	8.15 - 8.60	D 19	(.,,.,.,.,.)				-			- KIK
F							-	1		- M
Ē							-	(2.40)	$(\times \times \times)$	- KIK
F	9.00 - 9.65 9.00 - 9.65	UT NR B 20	8 blows No Recovery	9.00	2.00			-	$\times \times \times \times$	- Maria
Ē							-	1	$\times \times \times \times$	- #]
-	9 65 - 10 10	SDIS	N=10 (2 2/4 2 2 2)	0.00	3 10			-	$(\times \times \times)$	ĭĦ]
F	9.65 - 10.10 9.65 - 10.10	D 21	N = 10 (2, 2/4, 2, 2, 2)	9.00	3.10		-	-	$(\times \times \times)$	_ l°₽
F								10.00 -1.88	<u>k:x:x:x:</u> x	
Gr	oundwater Entrie	s				Depth Related Remarks		Hard Boring		
No 1	b. Depth Strike 6.80	(m) Remarks Rose to 6.10	m after 20 minutes.	Depth Se 12.	aled (m) 10	Depths (m) Remarks 8.00 - 12.10 Water added to assist boring.		Depths (m)	Duration (min	s) Tools used
Note	es: For explanatio	n of symbols and	abbreviations Project	t	WE	ST BURTON C POWER STATION		Borehole		
see redu brac	Key to Explorator uced levels in metrickets in depth colu	y Hole Records. A res. Stratum thick mn.	All depths and ness given in Proiect	No.	A71	02-17		۱ I	N S101	
Sc	© Co cale 1:50	oyright SOCOTE	C UK Limited AGS Carried	l out for	Firb	eck Construction Limited			Sheet 1 of 2	



Drilled SS Logged RT Checked MS	Start 18/12/2017 End	Equipment, Methods and Rema Dando 175. Cable percussion boring. SPT Hammer ID: ARI777, Rod ty	arks rpe: 54mm Whitworth.	Depth from to Di (m) (m) 1.20 15.15	ameter Casing Depth (mm) (m) 150 13.50	Ground Level Coordinates (m) National Grid	8.12 mOD E 480231.61 N 386503.03
Approved TC	20/12/2017			Strata Description			
Samples a		Becorde	Date Time	Strata Description	Deteil	Depth, Level	Legend Backfill
Depth	Type & No	o. Records	Casing Water	Main Medium dense reddish brown slightly gravelly silty	Detail	(Thickness)	
- - - - - - - - - -	5 SPTS 5 D 22	N=24 (2,3/4,6,6,8)	10.50 4.10	fine to coarse SAND. Gravel is subangular to subrounded fine to medium of flint and mudstone. (RIVER TERRACE DEPOSITS)		(1.30)	
 11.40 	D 23			Greyish brown slightly sandy GRAVEL. Gravel is predominantly angular to subangular fine to coarse of mudstone and occasionally subrounded fine to coarse of sandstone.		11.30 -3.18 (0.80)	
- 12.00 - 12.4 - 12.00 - 12.4 - 12.00 - 12.4 	5 SPTS 5 D 24	N=10 (2,2/3,3,2,2)	12.00 3.20 19/12/17 1610 12.00 3.20 20/12/17 0810 12.00 6.10	Soft to firm reddish brown, bluish grey, dark brown and grey, silty CLAY. (MERCIA MUDSTONE - Class Dc)		12.10 -3.98	
13.00 	D 25					(2.60)	
- 13.50 - 13.99 - 13.50 - 13.99 	5 SPTS 5 D 26	N=10 (2,2/2,3,2,3)	13.50 8.80			(2.00)	
- 14.50 - 14.70 - 15.11 - 14.70 - 15.11 - 14.70 - 15.11 	D 27 5 SPTS 5 D 28	N=49 (3,3/4,9,11,25)	13.50 9.10 20/12/17 1300 13.50 9.10	Firm reddish brown, mottled brownish grey and grey, sitty CLAY with frequent powdery white gypsum. (MERCIA MUDSTONE - Class Dc) END OF EXPLORATORY HOLE		14.70 -6.58 (0.45) 15.15 -7.03	
Groundwater En No. Depth Stri	tries ke (m) Remarks		Depth Sealed (m)	Depth Related Remarks Depths (m) Remarks		Hard Boring Depths (m) D	Duration (mins) Tools used
Notes: For explana see Key to Explora reduced levels in n brackets in depth c © Scale 1:50	tion of symbols and tory Hole Records etres. Stratum thick olumn. Copyright SOCOTE 05/	abbreviations All depths and mess given in C UK Limited 02/2018 12:27:37	WE No. A71 out for Firt	ST BURTON C POWER STATION 02-17 eeck Construction Limited		Borehole V	VS101 Sheet 2 of 2



Drilled JJ	Start	Equipment, Methods and Rem	arks		Depth from to Di	iameter Casing Depth	Ground Level		7.29 mOD
Logged RT	15/12/2017	Dando 3000.			(m) (m) 1.20 10.88	(mm) (m) 150 8.50	Coordinates (m)		E 480348.04
Checked MS	End	Cable percussion boring. SPT Hammer ID: AR932, Rod ty	pe: 54mm White	worth.		l	National Grid		N 386411.84
Approved TC	18/12/2017					l	1		
Samples an	d Tests	<u>.</u>			Strata Description		1		
Donth	Turne & N	- Booorde	Date	Time	Main	Dotail	Depth, Level	Legend	Backfill
Depui	Iype a nu	0. Recorus	Casing	Water			(Thickness)	*****	
0.00 - 0.30	81	0.00-1.20 Hand excavated inspection pit.	Τ		Dark grey slightly sandy SILT with some angular to subangular fine to coarse gravel of ash to	Τ =	4		°. 4 °
0.30	D 2			I	0.30m.	-			PHF
				I	(MADE GROUND - Puiverised Fuei Asn)		(1 20)		- KIK
F				I		-	(1.20)		MV
F				I					$ \lambda $
- -	ODTO			5		-			- KIK,
- 1.20 - 1.65 - 1.20 - 1.65	D 3	N=24 (4,4/5,6,6,7)		Dry	Light brownish grey slightly sandy SILT with rare	1 =	1.20 +ช.บช		V
-				I	(MADE GROUND - Pulverised Fuel Ash)	_	1		AV
-				I		=			11/
- -				I		=			- KIK.
-				I		-	1		'ИИ
-				I		=	-		
-				I		_	4		
-				I		-	(2.80)		- KIK
_				I		=			MV
3.00 - 3.45	SPTS	N=4 (1,1/1,1,1,1)	3.00	Dry		_			11/
3.00 - 3.45	B 4			I		-			- KIK
				I			-		NY
				I		-	-		
-				I		-			
-				I	Soft grangish brown mottled reddish brown silty		4.00 +3.29		- MM
-				I	CLAY with lenses of orangish brown fine sand	-	1	××	177
-				I	(<1mm) and rare black rootlet relicts.	-	4	×	11/
— 4.50 - 4.95 —	UT 6	41 blows 100% rec	4.00	Dry	(ALLOVION)				- KIK
_				1					-MV
4.90 - 5.35	SPTS	N=25 (4,6/6,6,6,7)	4.50	Dry			(2.00)	<u>×</u> ×	1//
- 4.90 - 5.35 - 4.95	D8 D7			I		-	(2.00)	××	EYIY.
F				I		=		<u></u>	MV
-				I		_	-		-[7]
_				I			4	××	- Y J Y J
_			15/12/17	1600 Drv				<u>×</u> ×	V
6.00 - 6.45	SPTS	N=3 (0,0/0,1,1,1)	4.00		Brown slightly sandy SILT with occasional gravel		6.00 +1.29	× <u>×</u> .×.×.×.	
6.00	B 9		4.50	Dry	size pockets of orange fine sand.	-		(
_				1	(ALLUVIUM)			$(\times \times \times)$	V
-				1		-	-	$(\times \times \times)$	AV
				1		-	1	$\times \times \times \times$	11/
-				1		_	-	××××	EKIK.
_				1		=	(0.50)	$(X \times X)$	MV
L				1		-	(2.50)	$(\mathbf{x}, \mathbf{x}, \mathbf{x})$	$ \lambda $
7.50 - 7.95	SPTS	N=4 (0,0/1,1,1,1)	7.50	Dry		7.50 reddish brown, -	-	$\times \times \times \times$	− Kat
- 7.50	B 11			1		orange fine sand.		$\times \times \times \times$	- lõĦ c
_				I		7.95 dark greyish	-	$\times \times \times \times$	ΓĦ
 F				1		brown silt _		$(\times \times \times)$	∣оҢс
-				1		-	-	× × × × ×	Шď
8.50	D 13			I			8.50 -1.21	$\times \times \times \times$	ЬЦ
				I	Firm reddish brown, mottled bluish grey, silty CLAY with lenses of bluish arev relict mudstone	=	0.00	×	юң
				I	and occasional bluish grey veins. Rare angular	-	-		∣оҐс
9.00 - 9.45	SPTS	N=50 (5,6/9,12,14,15)	9.00	Dry	coarse gravel size fragments of bluish grey	_	-	× <u> </u>	
- 9.00 - 9.45 -	D 14			1	(MERCIA MUDSTONE - Class Db)	-	-	XX	
F				1		=	1	××	Цďс
_				1		-	-	<u>×_×</u> _	oH
_				1		_	(2.38)		юЦ
								××	∣оЦс
			T						
Groundwater Entri					Donth Related Remarks		Hard Boring		
No. Depth Strike	.s (m) Remarks		Depth Sealed	i (m)	Depths (m) Remarks	l	Depths (m)	Duration (mins)) Tools used
			·	•	0.00 - 10.88 No groundwater encountered during drilling	. I			
				I		l	1		
1-t Fer exploratio	-fmholo on	Project		•ME	TO TAKE A DOWER STATION		2 hele		
Notes: For explanation see Key to Explorator	y Hole Records.	All depths and		VV E.	T BURTON C POWER STATION	l	Borenoie		
reduced levels in metr brackets in depth colu	es. Stratum truce	kness given in Project	No.	A71	02-17	l		WS102	
© Cor Scale 1:50	pyright SOCOTE	EC UK Limited AGS	out for	Firt	eck Construction Limited	I		Sheet 1 of 2	



Drilled JJ	Start	Equipment, Methods and Rema	arks	D	epth from to (m) (m)	Diameter Casing Depth (mm) (m)	Ground Level		7.29 mOD
Logged RT Checked MS	15/12/2017 End	Cable percussion boring. SPT Hammer ID: AR932. Rod tvi	e: 54mm Whitworth.		1.20 10.88	150 8.50	Coordinates (m) National Grid	E	E 480348.04
Approved TC	18/12/2017								
Samples and	l Tests			Strata Description					
Depth	Type & No	. Records	Date Time Casing Water	Main		Detail	Depth, Level (Thickness)	Legend	Backfill
 	SPTS	50 (6,7/9,15,26 for 75mm)	Dry	Firm reddish brown, mottled CLAY with lenses of bluish g and occasional bluish grey coarse gravel size fragment mudstone.	l bluish grey, silty grey relict mudstone veins. Rare angular s of bluish grey				
- 10.50 - 10.88 - 10.50	D 16 B 15		18/12/17 1600 8.50 Dry	(MERCIA MUDSTONE - Cla	ass Db)	-		× ×	
	SPTS D 16 B 15	50 (6,7/9,15,26 for 75mm)	Dry 18/12/17 1600 8.50 Dry	coarse gravel size fragment mudstone. (MERCIA MUDSTONE - Cla END OF EXPLOR.	s of bluish grey ass Db) ATORY HOLE		10.88 -3.59		
F							1		
Groundwater Entrie No. Depth Strike	s m) Remarks		Depth Sealed (m)	Depth Related Remarks Depths (m) Remarks			Hard Boring Depths (m)	Duration (mins)	Tools used
Notes: For explanation see Key to Explorator reduced levels in metr brackets in depth colu © Cop Scale 1:50	n of symbols and / Hole Records. A es. Stratum thick mn. byright SOCOTE	aboreviations Project All depths and iness given in C UK Limited AGS Carried	WE No. A71 out for Firb	21 BURTON C POWER STATION 02-17 eck Construction Limited			Borehole	NS102	



Drilled JJ Logged RT/DP	Start E 13/12/2017 [Equipment, Methods and Rema Dando 3000. Cable percussion boring.	arks	oitworth.	Depth from to Di (m) (m) 1.20 15.00	ameter Casing Depth (mm) (m) 150 13.50	Ground Level Coordinates (m))	13.22 mOD E 480254.22
Approved TC	14/12/2017		Je. 0-41111	Ilworu			National Grid		N 300320.55
Samples and	d Tests			71	Strata Description				
Depth	Type & No.	. Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
0.00 - 0.80	B 2	0.00-1.20 Hand excavated inspection pit.			Soft to firm reddish brown slightly sandy CLAY	<u>-</u>	-		°. a 0
0.40	D 1			I	(MADE GROUND)		(0.80)		
F				I		-			- YIY
0.80 - 1.20	B 4			I	Soft to firm dark brownish arev silty CLAY with		- 0.80 +12.4	2	- KIK
1.00	D 3			I	frequent rootlets and occasional roots (<10mm).		1		M
- 1.20 - 1.65 - 1.20 - 1.65	SPTS D 5	N=4 (1,1/1,1,1,1)	1.20	Dry	(MADE GROUND)	-	- (1.00)		ИΖ
				I			-		
É				I			1 R0 +11.4	, .	1//
				I	Dark grey slightly sandy SILT. (MADE GROUND - Pulverised Fuel Ash)]	1.00	- -	-Y.L
				I		-	-		- KIK
				I			-		- KIK
				I					ИY
				I		-	-		NV
3.00 - 3.50 	UT 6	87 blows 100% rec	3.00	Dry			-		
É				I			-		1XIZ
- 3.50 - 3.78 - 3.50	SPTS D 7	50 (15,15/25,25 for 50mm)	3.00	Dry			-		- Kara
- 3.50 - 3.95 -	D 8			I		-	-		- KIK
-				I		_	-		- KIK
E				I			1		MZ
4.50 - 5.00	UT 9	36 blows 100% rec	4.50	Dry					NV
F				- 1		-	-		1712
- 	PDTS	N=40 (0 0 0 0 0 0 0 1)	E 00	Dov			-		
5.00 - 5.40 5.00 5.00 - 5.45	D 10	N=13 (2,3/3,3,3,4)	5.00	ыу]		- YIY
5.00 - 5.40 -				I]		YN.
F				I		-	-		NY
F				I			-		ИV
6.00 - 6.50	UT 12	14 blows 100% rec	6.00	Dry			(8.50)		
F				I		-	1		147
6.50 - 6.95	SPTS	N=17 (2,2/3,4,5,5)	6.00	Dry			-		- Kar
- 6.50 - 6.50 - 6.95	D 13 D 14		13/12/17	1630			-		- KIK
E			6.00	Dry		_]		- KIK
F			6.00	Dry		-	-		ИV
	117.46	0711 ···· 4000/ rea		Dev			-		
7.50 - 8.00	ULID	87 blows 100% rec	7.50	Dry			-		1X1Z
F				I		-	1		
8.00 - 8.45 8.00	SPTS D 16	N=24 (9,9/7,7,5,5)	8.00	Dry		-	-		- KIK
8.00 - 8.45	D 17			I			-		- KIK
F				I			1		MY
F				I			-		ИИ
9.00 - 9.50	B 18			I		_	-		M
E				I			-		1XIZ
9.50 - 9.95	SPTS	N=13 (3,3/3,3,4,3)	9.00	Dry			-		
- 9.50 - 10.00 -	D 19			- 1		-	-		- KIK
F							-		
Groundwater Entrie No. Depth Strike	≫s (m) Remarks		Depth Seale	ed (m)	Depth Related Remarks Depths (m) Remarks 0.00 - 15.00 No water encountered during drilling.		Hard Boring Depths (m)	Duration (mins)	Tools used
. For contensitie	f webste and	Designed							
see Key to Explorator	n of symbols and a ry Hole Records. A tree Stratum thickr	Abbreviations Project Il depths and press given in		WE	T BURTON C POWER STATION		Borenoie		
brackets in depth colu © Co	umn. ppyright SOCOTEC	C UK Limited AGS	No.	A71	02-17			WS103	
Coolo 4.50		Corried	out for	Firr	eck Construction Limited			Shoot 1 of 2	



Drilled JJ Logged RT/DP	Start Eq 13/12/2017 Da Ca Ca	uipment, Methods and Remaindo 3000. ble percussion boring.	arks	Depth from to Di (m) (m) 1.20 15.00	ameter Casing Depth (mm) (m) 150 13.50	Ground Level Coordinates (m)	13.22 mOD E 480254.22
Approved TC	⊑na SP 14/12/2017	r nammer iD. AK932, K00 ty	Je. 94mm Whitworth.			wational Grid	N 386326.59
Samples and	d Tests		_	Strata Description			
Depth	Type & No.	Records	Date Tim Casing Wate	r Main	Detail	Depth, Level (Thickness)	Legend Backfil
- - - - 10.50 - 11.00 - 10.50 - 11.00	UT NR B 20	19 blows No Recovery	10.50 Dr	Dark grey slightly sandy SILT. (MADE GROUND - Pulverised Fuel Ash) Orangish brown, mottled light brown, SILT. (ALLUVIUM)		10.30 +2.92	
- 11.00 - 11.45 - 11.00 - 11.45 	SPTS D 21	N=13 (2,3/3,3,3,4)	10.50 Dr	,	11.00-11.45 slightly sandy - - - - - - - - - -	(1.70)	
_ 	UT NR B 22	23 blows No Recovery	12.00 Dr	Dark grey, mottled orangish brown, slightly sandy SILT.		12.00 +1.22	
- - - - - - - - - - - - - - - - - - -	SPTS D 23	N=14 (2,2/3,3,4,4)	12.00 Dr	(ALLUVIUM)	12.50-14.50 no mottling 		
_ 13.50 - 14.00 13.50 - 14.00 	UT NR B 24	31 blows No Recovery	13.50 Dr	,		(2.50)	
14.00 - 14.45 	SPTS	N=28 (3,3/3,7,9,9)	13.50 Dr	,		- - - - -	
			14/12/17 163 13.50 Dr	(MERCIA MUDSTONE - Class Dc)		(0.50) 15.00 -1.78	
				Doub Polotod Romarka		Lard Paring	
Groundwater Entrie	s (m) Remarks		Depth Sealed (m)	Depth Related Remarks Depths (m) Remarks		Hard Boring Depths (m)	Duration (mins) Tools used
Notes: For explanation see Key to Explorator reduced levels in metri brackets in depth colu © Cop Scale 1:50	n of symbols and abb y Hole Records. All d es. Stratum thicknes mn. pyright SOCOTEC U 05/02/20	Project Project Project K Limited 018 12:27:38	W No. A7 out for Fil	IN I BUR ION C POWER STATION		Borehole	VS103 Sheet 2 of 2



Drill Log Che	ed LM ged RT/DP cked MS	Start 13/12/2017 End	Equipment, Methods and Rem Dando 175. Cable percussion boring. SPT Hammer ID: AR1777, Rod t	arks ype: 54mm V	Vhitworth.	Depth from to D (m) (m) 1.20 15.00	iameter Casing Depth (mm) (m) 150 14.50	Ground Level Coordinates (m) National Grid		12.79 m E 480272 N 386292	OD .49 .43
Арр	roved TC	15/12/2017									
Sa	mples and	Tests		Date	Time	Strata Description		Depth Level	Legend	Back	fill
L_	Depth	Type & No	Records	Casing	Water		Detail	(Thickness)	~~~~~	0	
F	0.20	D.1	inspection pit.			Firm brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse of		(0.50)		°. 4	0
E	0.50	B2				(MADE GROUND)		0.50 +12.29		Л	\square
-						Dark grey slightly sandy SILL (MADE GROUND - Pulverised Fuel Ash)	-				
E	1.00	03					-	-			
E	1.20 - 1.65	UT 5	60 blows 89% rec	1.20	Dry			-			
F	1.20	B 4					-	-			Ľ
E	1.70 - 2.15	SPTS	N=21 (2.4/5.4.5.7)	1.50	Drv			-			Ľ
E	1.70 1.70	D 6 D 7	() - , , , , ,		,		-	-			Ľ
E	2 20	D 8						-		Δ	\mathbb{Z}
E	2.20						-	-			\mathbb{V}
F	0.70 0.45	117.0	70 hlave 400% are	0.70	Des			-		И	
E	2.70 - 3.15	019	70 blows 100% rec	2.70	Dry		-	-			
_							-	-			
E	3.20	D 10						-			
F								-			1
F				14/12/17	0830		-	-			Ľ
-				2.50	1600		_	-			Ľ
F	4.20 - 4.65	UT 12	40 blows 100% rec	2.50	Dry			-			Y.
F							-	-			\vee
E	4.70 - 5.15 4.70	SPTS D 13	N=6 (2,1/2,1,1,2)	4.50	Dry		-	-			\vee
E	4.70	D 14						-			
F	5.20	D 15					-	-			
E							-	-			
F	5.70 - 6.15	UT 16	30 blows 100% rec	5.70	Dry		- 5.70 slightly gravelly	-			
E							-	-			Ľ
E	6.20 - 6.65	SPTS	N=39 (4,9/10,9,10,10)	6.00	Dry		-	-			Ľ
F	6.20 6.20	D 17 D 18			-		-	-			\mathbb{Z}
E	6 70	D 19					-	-			
E	0.10	5.10					-	(12.50)			\vee
-	7 20 7 65	UT 20	60 blows 100% ros	7 20	Do			-			
E	1.20 - 1.05	0120	00 010 00 70 100	7.20	Diy			-			
-		0.570			_		-	-			
E	7.70 - 8.15 7.70 7.70	D 21	N=34 (7,777,9,9,9)	7.50	Dry		-	-			
-	1.10	0 22						-			Ľ
E	8.20	D 23						-	1.	<u> </u>	Ľ
-								-	i	-	K
F	8.70 - 9.15	UT 24	20 blows 100% rec	8.70	8.40		-	-	1	•//	\mathbb{Z}
E							_	-			K
E	9.20 - 9.65 9.20	SPTS D 25	N=15 (2,3/2,4,4,5) No sample	9.00	Damp		-	-		Ĭ	≱∽
E	9.20	D 26						-			10
F	9.70	D 27						-			<u> </u>
F								-			10
Ļ		-				Double Delated Demo					
Gro	oundwater Entrie: . Depth Strike (s m) Remarks		Depth Sea	led (m)	Depth Related Remarks Depths (m) Remarks		Hard Boring Depths (m)	Duration (mins)	Tools	used
1	8.70	Rose to 8.40 inflow) m after 20 minutes. Medium								
Note see	es: For explanation Key to Exploratory	of symbols and Hole Records.	abbreviations Project All depths and	_	WE	ST BURTON C POWER STATION		Borehole			
redu brac	iced levels in metri kets in depth colu	es. Stratum thick mn.	Rness given in Project	No.	A71	02-17		\	NS104		
Sc	© Cop ale 1:50	oyright SOCOTE	C UK Limited AGS 02/2018 12:27:38 Carried	out for	eck Construction Limited			Sheet 1 of 2			



Drilled	LM	Start	Equipment, Methods and Rema	ırks		Depth from to (m) (m)	Diame	ter Casing Depth) (m)	Ground Level		12.79 mOD
Logge	d RT/DP	13/12/2017	Dando 175. Cable percussion boring. SPT Hammer ID: AP1777 Rod b	ne: 54mm \\	/bitworth	1.20 15.00	0 150	0 14.50	Coordinates (m)		E 480272.49
Approv	ved TC	15/12/2017	SFT Hammer ID. AK 1777, Kou tj	pe. 54mm v	vintworth.				National Grid		IN 300292.43
Sam	ples and	Tests				Strata Description					
	Depth	Type & No	. Records	Date	Time Wator	Main		Detail	Depth, Level	Legend	Backfill
-				Casing	Water	Dark grey slightly sandy SILT.					OR
-						(MADE GROUND - Pulverised Fuel Ash)		-	-		∣oĦo
E								-			loĦo
- 1	0.70 - 11.15 10.70	SPTS D 28	N=15 (2,2/3,3,3,6)	10.50	Damp			-			- Ac
-								_	-		_ o]∏ _
E	11.20	D 29						-			
È.								_			ĽĦŬ
Ē								-			ΠHΟ
_								-	-		L A C
- 1	2.20 - 12.65	UT 30	20 blows 100% rec	12.00	Damp			-			- IŏĦ, -
_								-			oĦo
- 1	2.70 - 13.30	SPTS	N=2 (1,0/0,0,1,1) SW=150	12.00	Dry			-	-		oHo
E	12.70 12.70	D 31 D 32		14/12/17 12.00	1600 Dry			_	13.00 -0.21		- Ac
F				15/12/17 12.00	0800 12.20	Firm dark reddish brown, mottled light bluish g silty CLAY.	grey,	-	0.21	×	⊵ ∏
_	13 50	D 33				(MERCIA MUDSTONE - Class Dc)		-		××	
_	10.00	5.00						-		××	
_								_	(2.00)	××	ĽЪ
- 1	4.20 - 14.65	UT 34	60 blows 100% rec	14.20	Damp			-	(2.00)	××	
_								-	-	×	o∐
	4.70 - 15.15	SPTS	N=14 (2.2/2.4.4.4)	14.50	Damp			-		×	77
Ē				15/12/17 14.50	1225 Damp			-		×	
E						END OF EXPLORATORY HOLE			15.00 -2.21		
_								-			
_								-			
Ē								-			
-								-			
_								-			
_								-	-		
_								-			
_											
_								-			
E											
F								-	1		
F											
F								-	1		
F								-			
F								-	-		
F								_			
F								-	4		
F								-	4		
E											
L											
Grour No.	ndwater Entries Depth Strike (s m) Remarks		Depth Seal	ed (m)	Depth Related Remarks Depths (m) Remarks			Hard Boring Depths (m)	Duration (mins) Tools used
	·				-					-	
L											
Notes: see Ke	For explanation y to Exploratory	of symbols and Hole Records.	abbreviations Project All depths and		WE	T BURTON C POWER STATION			Borehole		
reduce bracket	d levels in metre	es. Stratum thick mn.	Project	No.	A71)2-17			\	VS104	
Scale	© Cop 1:50	oyngni SOCOTE 05/0	02/2018 12:27:38 Carried	out for	Firb	eck Construction Limited				Sheet 2 of 2	



Drilled JJ	Start	Equipment, Methods and Remain	arks	Depth from to Dia	ameter Casing Depth	Ground Level		13.13 mOD
Logged RT	11/12/2017	Dando 3000. Cable percussion boring.		(m) (m) (1.20 15.45	mm) (m) 150 13.00	Coordinates (m)	,	E 480251.34
Checked MS	End	SPT Hammer ID: AR932, Rod tyr	pe: 54mm Whitworth.			National Grid	I	N 386272.33
Approved TC	12/12/2017	<u> </u>				1		
Samples and	1 Tests		Data Tirr	Strata Description		=	• • • •	7
Depth	Type & No.	. Records	Casing Wat	r Main	Detail	Depth, Level (Thickness)	Legend	Backfill
_	1	0.00-1.20 Hand excavated	<u> </u>		0.00-0.30 frequent rootlets	(0.40)		777
F		inspection pic.		(Driller's description)	-	(0.40)		YZ,
-				Firm brown slightly sandy CLAY.	1 -	0.40 +12.73		
-						(U.40) 0.80 +12.33		
-				Soft dark grey slightly sandy SILT. (MADE GROUND - Pulverised Fuel Ash)]	0.00		
1 20 - 1.65	SPTS	N=7 (2 2/1 2 2 2)	1 20 D]		
- 1.20 - 1.65	D1	14-7 (<u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u>	1.20			_		/
 						_		\vee
-						4		
-						4		1//
-					-	-		/
-						-		
 -						4		
F						-		
- - 3.00 - 3.45	UT 2	41 blows 100% rec	3.00 Dr	,		-		×/,
-						-		
- - 3.45 - 3.90	D 4					-		
3.50 - 3.95 3.55	SPTS D 3	N=1 (2,2/1,2,2,2)	ات 3.45		-	-		
					-	-		×//
_						-		ΥZ.
E]		
4 50 - 4.80	UT 5	20 blows 100% rec	4.00 D		4 50 occasional —]		
4.00 - 4.00	0.0	20 010/03 100 /0100	11/12/17 170	,	pockets (<2mm) of -			
4.90 - 5.35	SPTS	N=3 (0.0/0.1.1.1)	12/12/17 080]		Υ/
4.90 - 5.35 	D 6		4.00 Dr			_		
_						1		
-						1		Ĭ / /
F						1		×7,
E						(10.10)		
6.00 - 6.45 	UT 7	21 blows 80% rec	6.00 Dr	1		-		
E .					_	-		$\left \right / /$
6.45 - 6.90	SPTS	N=27 (3,4/5,6,8,8)	6.45 Dr	4		-		/
_ 0.40 _	Do					-		
F						-		
-					-	-		
-						1		×7,
- - 7.50 - 7.95	SPTS	N=3 (0,0/0,1,1,1)	7.50 Dr	,		-		
- 7.50 - 7.95 - 7.50	UT NR D 9	15 blows No Recovery	7.50 Dr			1		
- 7.50 -	B 11					-		
F						-		× / /
-						-		YZ.
F						-		
_					-	-		//
-	SPTS		0.00 D	1	0.00-9.45 rare-	-		1//
- 9.00	D 10	N=0 (U,U/U,2,3,5)	9.00		subangular fine	-		YZ.
- 9.00 - 9.40 -	Dip				graver or asin	_		V/
E								///
F						-		
-								
	T						_	
Groundwater Entrie	÷s		<u> </u>	Depth Related Remarks		Hard Boring		
No. Depth Strike ((m) Remarks		Depth Sealed (m)	Depths (m) Remarks		Depths (m)	Duration (mins)	Tools used
				0.00 - 15.45 No groundwater encountered during drawing.				
Notes: For explanation	n of symbols and	abbreviations Project	w	ST BURTON C POWER STATION		Borehole		
reduced levels in metro	es. Stratum thick	.ness given in	No A'	102_17		I \	NS105	
© Cop	mn. pyright SOCOTE(C UK Limited AGS	out for E	heek Construction Limited		-		



Dr Lo Cł	illed JJ ogged RT necked MS	Start 11/12/2017 End	Equipment, Methods and Rema Dando 3000. Cable percussion boring. SPT Hammer ID: AR932, Rod ty	arks De: 54mm Whitworth.	Depth from to Dia (m) (m) (1.20 15.45	ameter Casing Depth mm) (m) 150 13.00	Ground Level Coordinates (m) National Grid	13.13 mO E 480251.3 N 386272.3	D i4 i3
A¢	proved TC	12/12/2017			Strata Decarintian				
P	amples and	Turne & No	Beservele	Date Time	Strata Description	Detail	Depth, Level	Legend Backfi	JI .
L	Depth	Type & No	. Recoras	Casing Water	Soft dark grev slightly sandy SILT.	Detail	(Thickness)		_
	10.50 - 10.95 10.90 - 11.35 - 10.90	UT 16 SPTS D 17	51 blows 100% rec N=25 (4,4/5,5,7,8)	10.50 Dry 10.90 Dry	(MADE GROUND - Pulverised Fuel Ash) Firm dark greyish brown, mottled reddish brown, sith CLAY with rare black sit veins (1/10mm) and	10.80-10.90 occasional gravel size pockets of grey	10.90 +2.23		
	- 12.00 - 12.45 12.00 - 12.45 12.00 - 12.45	UT NR D 20 B 21	40 blows No Recovery	12.00 Dry	rare pockets (<2mm) of lignite. Slight organic odour. (ALLUVIUM)	tine sand, rare black - silt and rare reddish - brown fine sand - - - - - - - - - - - - -	(1.60)		
					Soft dark brown slightly sandy SILT. (ALLUVIUM)		12.50 +0.63 (1.30)		
	13.50 - 13.95 13.50 13.50 - 13.95 13.50 - 13.95	SPTS UT NR D 24 B 23	N=34 (6,6/8,8,9,9) 21 blows No Recovery	13.00 Dry 13.00 Dry	Firm reddish brown, mottled dark brown and greyish blue, silty CLAY. (MERCIA MUDSTONE - Class Dc)		13.80 -0.67		
	- 15.00 - 15.45 15.00 - 15.45	SPTS D 25	N=29 (6,6/5,8,8,8)	13.00 Dry 12/12/17 1700 13.00 Dry	END OF EXPLORATORY HOLE		(1.65) 15.45 -2.32		
G	iroundwater Entrie: Io. Depth Strike (s m) Remarks		l Depth Sealed (m)	Depth Related Remarks Depths (m) Remarks		Hard Boring Depths (m) I	Duration (mins) Tools us	⊧ed
No se rec bra	otes: For explanation e Key to Exploratory duced levels in metri ackets in depth colur © Cop Scale 1:50	of symbols and Hole Records. A es. Stratum thick nn. yright SOCOTEC	abbreviations All depths and hess given in C UK Limited 2/2018 12:27:39 AGS	WE No. A71 out for Firb	ST BURTON C POWER STATION 02-17 seck Construction Limited		Borehole	VS105 Sheet 2 of 2	_



Drilled DD	Start	Fouinment Methods and Rem	arks		Depth from to	Diameter Casing Depth	Ground Level		13 20 mOD
	41/10/2017	Dando 175	dinə		(m) (m)	(mm) (m)	Ground Level		E 400044 04
Logged Ki	11/12/2017	Cable percussion boring.			1.20 15.00	150 15.00	Coordinates (m)		E 480244.24
Checked MS	End	SPT Hammer ID: ESG01, Rod ty	/pe: 54mm Vvr	hitworth.	I		National Grid		N 386241.68
Approved TC	12/12/2017								
Samples and	d Tests			'	Strata Description				
Depth	Type & Nr	o. Records	Date	Time	Main	Detail	Depth, Level	Legend	Backfill
		0.00-1.20 Hand excavated	Casing	Wate.	Firm brown slightly sandy CLAY with rare		(THICKNESS)		• •
- 0.20	D 1	inspection pit.		1	subangular fine to medium gravel size fragments	-	- (2.00)		
-				1	of ash and brick. Frequent rootlets to 0.20m. (MADE GROUND)	-	- (0.60)		
- 0.60	D 2			1			- 0.60 +12.60		E LIL
- 0.60 - 1.00	В 3			1	MADE GROUND - Pulverised Fuel Ash)	subangular to - subrounded fine to -	-		V
-				1		medium gravel of -	-		
- 	SPTS	N=16 (5.6/6,4,3,3)	1.20	Dn		-	-		- Ľ X L
- 1.20	D 4	······································		-		-	-		- ZIY
_				1			-		ПΖ
_				I			-		
-				1			-		E KIK.
-				1		-	-		V
-				1		-	-		$-\Delta V$
-				1		-	-		
-				1		-	-		- KIK
-				1		-			$-\Delta V$
- 3.00 - 3.45	UT 5	17 blows 100% rec	3.00	Dry			-		
_				1		-	-		
-	0010			De		-	-		-NV
- 3.50 - 3.95 - 3.50	D6	N=14 (4,9/4,4,3,3)	3.50	Dry		-	-		
-				1		-	-		E KIR
				1		3.90-3.95 firm - reddish brown-	-		- $ $ $/$ $ $ $/$
_				1		slightly gravelly clay.	-		
-				1		subangular fine to	-		
- 4.50 - 4.95		23 blows No Recovery	4.50	Damp		sandstone	-		- VIY
- 4.50 - 5.00 -	В /			1		-	1		
-				1		-	-		- K J L
	SPTS D 8	N=14 (4,4/4,3,3,4)	5.00	Damp			_		- MY
			11/12/17	1731		-	-		-1/V
5.50	D9		5.00	Damp		- 5 50 firm reddish -	(9.60)		- Ľ X I Z
 T			12/12/17 5.00	075∠ Damp		brown slightly -	-		E KIK
- 	10			1		is subangular fine to	-		ИΖ
6.00 - 6.45	UT 11	24 blows 100% rec	6.00	Dry		sandstone	-		
-				1		-	-		E LIT.
-				5-		-	1		
— 6.50-6.95 - 6.50	D 12	N=15 (2,2/3,3,4,5)	6.50	Diy		-	-		
- 6.50	D 13			I		-	-		- [<i> </i>] /
-				1			-		- KIK
-				1		-	-		- MV
_				1		-	-		
- 7.50 - 7.95	UT 14	27 blows 100% rec	7.50	Dry			-		- Kir
-				1		-	-		1₽//
- 200 945	ODTO	17 (2 2)4 4 4 5)	0.00	Dn			-		
- 8.00 - 8.45 - 8.00	D 15	N=1/ (2,3/4,4,4,0)	8.00	Diyi		-	-		T I I
- 8.00	D 16			1		-	-		V
-				1		-	-		A
-				1		-	-		
-				1		-	_		Y
9.00 - 9.45	UT NR B 18	52 blows No Recovery	9.00	Dry		9 10-9 50 dark grev -	-		₁╘┟╂╆
- 9.10	D 17			1		gravelly silty fine to -	-		′⁻ĽЊ
-	ODTO		0.50	8 O(is subangular fine to	-		_ ⊈ ⁽
- 9.50 - 9.50 - 9.50	D 19	N=15 (4,4/4,4,4,5)	9.50	0.90		medium of clinker	-		ºH
-				1		-	-		_ l°₽,
-							-		
				1					
Groundwater Entrie	÷s				Depth Related Remarks		Hard Boring		
No. Depth Strike	(m) Remarks	20 - offer 00 minutes Medium	Depth Seal	led (m)	Depths (m) Remarks		Depths (m)	Duration (mir	ns) Tools used
ິ ອ.ເບ	inflow	J m atter 20 minutes, meanin	3.10	I					
				1					
Notes: For explanation	n of symbols and	d abbreviations Project		WE	T BURTON C POWER STATION		Borehole		
see Key to Exploratory reduced levels in metr	y Hole Records. res. Stratum thicl	All depths and kness given in	· NI -				Ι,	NS106	2
brackets in depth colu © Co	.mn. pyright SOCOTE	EC UK Limited AGS	NO.	A/ 1	J2-17		'	140100	,
Scale 1:50		Cameu	, out for	FILE	eck Construction Limited			Sheet 1 of 2	

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Drilled DD Logged RT	Start E 11/12/2017 D	quipment, Methods and Rema Dando 175. Cable percussion boring.	ırks	Depth from to Di (m) (m) 1.20 15.00	ameter Casing Depth (mm) (m) 150 15.00	Ground Level Coordinates (m)	13.20 mOD E 480244.24
Checked MS	End S	PT Hammer ID: ESG01, Rod ty	pe: 54mm Whitworth.			National Grid	N 386241.68
Approved TC	12/12/2017			Strata Description			
Samples and			Date Time			Depth, Level	Legend Backfil
Depth	Type & No.	Records	Casing Water	Main	Detail	(Thickness)	
- 10.20 - 10.50 - 10.95	D 20 UT 21	37 blows 100% rec	10.50 Dry	Uark grey slightly sandy SILI. (MADE GROUND - Pulverised Fuel Ash) Soft reddish brown slightly sandy clayey SILT. (ALLUVIUM)		10.20 +3.00	
- - - 11.00 - 11.45 - 11.00 -	SPTS D 22	N=7 (1,1/1,2,2,2)	11.00 Dry		10.95 very soft reddish brown mottled grey silty clay	(1.80)	
 12.00 - 12.45 	UT 23	37 blows 100% rec	12.00 Dry	Soft to firm dark brown, mottled reddish brown, silty CLAY with frequent lenses of reddish brown		12.00 +1.20	
- - 12.50 - 12.95 - 12.50 - 12.50 - - -	SPTS D 24 D 25	N=28 (3,3/5,7,8,8)	12.50 Dry	silt. (MERCIA MUDSTONE - Class Dc)			
- - - - - - - - - - - - - - - - - - -	UT 26	89 blows 56% rec	13.50 Dry			(3.00)	
- 14.00 - 14.45 - 14.00 - 14.00 	SPTS D 27	N=26 (3,3/4,7,7,8)	14.00 Dry				
			12/12/17 1707 15.00 Dry	END OF EXPLORATORY HOLE		15.00 -1.80	
- - - - - - -							
- - - - - - -							
							I
Groundwater Entrie No. Depth Strike	s m) Remarks		Depth Sealed (m)	Depth Related Remarks Depths (m) Remarks		Hard Boring Depths (m) [Juration (mins) Tools used
Notes: For explanation see Key to Explorator reduced levels in metri brackets in depth colu © Cop Scale 1:50	n of symbols and a / Hole Records. All es. Stratum thickno mn. pyright SOCOTEC 05/02	bbreviations I depths and ess given in UK Limited (2016 12:27:39	WE No. A71 out for Firt	ST BURTON C POWER STATION 02-17 eck Construction Limited		Borehole V	VS106 Sheet 2 of 2



Drille	d SS	Start Eq	uipment, Methods and Rem	arks		Depth from to D	iameter Casing Depth	Ground Level	13.16 mOI
Logg	ed RT	05/12/2017 Da	ando 175.			(m) (m) 1.20 15.45	(mm) (m) 150 14.20	Coordinates (m)	E 480327.9
Chec	ked MS	End SP	ble percussion boring. T Hammer ID: ARI777, Rod ty	pe: 54mm Whit	tworth.			National Grid	N 386173.1
Appre	oved TC	06/12/2017		F					
Sar	nnles and	Tests				Strata Description			
	Danéh		Beeerdo	Date	Time	Main	Detail	Depth, Level	Legend Backfil
L_	Deptn	Type & NO.		Casing	Water		Detail	(Thickness)	-
_			0.00-1.20 Hand excavated inspection pit.		I	Soft dark grey slightly gravelly SILL. Gravel is subangular fine to coarse of concrete. Occasional		(0.50)	
L					1	soft dark brown clay pockets (<25mm).	-	(U.SU)	
F	0.50	D 1			1	Dark greyish brown, locally mottled orangish		0.50 +12.66	
L					I	brown, slightly sandy SILT. (MADE GROUND)	-	-	
L	1.00	D 2			1			-	
_	1.20 - 1.65	UT 3	100 blows 100% rec	1.20	Dry		-	(1.15)	
_							-	-	
_	1 05 4 95				1				
L	1.65 - 1.85	0070	24 (7 10/40 00 for 70mm)		5-	Dark grey slightly sandy SILT.	1 =	1.65 +11.51	
_	1.85 - 2.14 1.85 - 2.15	D 5	34 (7,10/12,22 for 70mm)	1.50	Dry	(MADE GROUND - Pulvenseu Puer Asin)		-	▓▓▓▓▏▎▕▁/
_					1		-	-	
_					I				
F					1				
E					1		-	_	₩₩₩₩ / /
-	3 00 - 3 45	UT6	32 blows 100% rec	3.00	Drv			(0.70)	
E	3.00 - 3.40	010	32 DIOWS 100 /0100	3.00	,,,,			(2.75)	
-					1			-	
F	3.45 - 3.65	D 7			1			-	▓▓▓▌▎▎/
_	3.65 - 4.10 3.65 - 4.10	SPTS D 8	N=16 (3,4/4,4,4,4)	3.00	Dry			-	
					1			-	
-					1			-	
-					1		-		▓▓▓▌▎▎╯╭╯
-	4.40 4.50 - 4.95	U 9 UT 10	34 blows 100% rec	4.50	Dry	Firm reddish brown, mottled dark brown, slightly	1 -	4.40 +8./o	
_					1	subangular fine to coarse of sandstone and	-	. (0.55)	▓▓▓▌▎▎/▁
F	4 95 - 5 15	D 11			1		-	+8.21	
F	5 15 - 5 60	SPTS	N=20 (3 4/5 5 6 4)	4 50	Drv	Dark grey slightly sandy SILT.	5.00-5.15 rare tine to medium gravel of -	4.00	▓▓▓▕▕/ /
F	5.15 - 5.60	D 12	N-20 (3,4/3,3,0,4/	4.00	,,,,	(MADE GROUND - Pulverised Fuel Ash)	clinker –	-	
F					1			-	
È.					I		-	-	▓▓▓▌▎▎/
F				05/12/17 6.00	1600 Dry			-	
	6.00 - 6.45	UT 13	52 blows 100% rec	06/12/17	0750			-	
È.				6.00	Dry		-	-	
_	6.45 - 6.65	D 14			I		6.45-6.65	-	
E	6.65 - 7.10	SPTS	N=12 (5,3/3,3,3,3)	6.00	Dry		occasional pockets (<10mm) of soft		
E	6.65 - 7.10	D 15			1		reddish brown clay		
_					I				
E					I			-	▓▓▓▌▎▎▎
F.	7 50 7 05	UT 16	28 blows 100% rec	7.50	Dni		_	-	
-	1.50 - 1.55	01 10	28 DIOWS 100 /0 rec	7.50	ועיט			-	
F					1		-	-	₩₩₩₩ / /
_	7.95 - 8.10	D 17	N-40 (4 0/0 0 0 0)	7.50	Dni		_	-	
F	8.10 - 6.55 8.10 - 8.55	D 18	N=12 (4,3/3,3,3,3)	1.50	Бу		-	-	
F					1		-	(6.75)	
-					1		-	-	▓▓▓▌▎▎╯/
F					1		-	-	
F	9.00 - 9.45	UT 19	48 blows 100% rec	9.00	Damp		9.00-9.45 rare	-	XXXXX / / .
F					1		subangular fine to - medium gravel of -	-	₩₩₩₩ [/
_	0.45 0.65	D 30			1		lignite -	-	
_	9.45 - 9.00		1 47 (4 0/5 4 5 0)		1 20				▓▓▓₁╘│∕ ノ
L	9.65 - 10.10	D 21	N=17 (4,3/5,4,5,3)	9.00	1.20			-	
-									🗱 K 🖊
					1				
Grou	undwater Entries	3		<u> </u>		Depth Related Remarks		Hard Boring	
No.	Depth Strike (r	m) Remarks		Depth Sealed	(m) t	Depths (m) Remarks		Depths (m)	Duration (mins) Tools us
1	9.60	Rose to 1.20 m	after 20 minutes.	12.20					
Notes	: For explanation	of symbols and ab	breviations Project		WE	ST BURTON C POWER STATION		Borehole	
see K	ey to Exploratory	Hole Records. All d	lepths and					Ľ,	
brack	ets in depth colun	nn.	Project	No.	A71	D2-17		V	VS107
_	© ∪up	yright SOCOTED D	K Limited		- · ·	Is O		1	Obset 4 sf 2


Dril Log Che	lled SS gged RT ecked MS	Start I 05/12/2017 I End S	Equipment, Methods and Rema Dando 175. Cable percussion boring. SPT Hammer ID: ARI777, Rod ty	arks pe: 54mm Whitwor	۱.	Depth from to Dia (m) (m) (1.20 15.45	ameter Casing Depth mm) (m) 150 14.20	Ground Level Coordinates (m) National Grid		13.16 mOD E 480327.97 N 386173.12
App	proved TC	06/12/2017			Strata Descripti					
30	Denth	Type & No	Records	Date Ti		Main	Detail	Depth, Level	Legend	Backfil
-	Doptil	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Casing Wa	Dark grey slightly sand	ly SILT.	-	(Thickness)	2	ř / /
	10.50 - 11.15	UT NR	16 blows No Recovery	10.50 Da	(MADE GROUND - Pu	lverised Fuel Ash)				
	11.00 11.15 - 11.60 11.15 - 11.60	D 22 SPTS D 23	N=10 (1,2/3,2,3,2)	10.50 Da	qr					
	11.70 12.00 - 12.45	D 24 UT 25	22 blows 100% rec	12.00 Da	Very soft reddish brow sandy clayey SILT. (Possible ALLUVIUM) Soft dark brown SILT v (<5mm) of lignite.	n, mottled grey, slightly vith occasional pockets		11.70 +1.46 (0.30) 12.00 +1.16		
	12.45 - 12.65 12.65 - 13.10 12.65 - 13.10	D 26 SPTS D 27	N=13 (2,3/3,3,3,4)	12.00 Da	(ALLUVIUM)		12.45-12.65 rare subangular fine to medium gravel of sandstone	(1.40)		
	13.40 13.50 - 13.95 13.50 - 13.95	D 28 SPTS D 29	N=16 (2,3/4,4,4,4)	13.50 10	30 Soft to firm reddish bro blue, silty CLAY with o (MERCIA MUDSTONE	wm, mottled light greyish ccasional grey silt veins. - Class Dc)	- 13.40 occasional – gravel size pockets – of fine to coarse – sand, occasional – subangular fine to – medium gravel of sandstone	13.40 -0.24	× × × × × × × × × × × × × × × × × × ×	
	14.50	D 30					13.50-14.00 occasional gravel size pockets of grey fine sand	(2.05)	×X ×X ×X ×X ×X ×X	
	15.00 - 15.45 15.00 - 15.45	SPTS D 31	N=17 (3,3/4,4,4,5)	14.20 06/12/17 15 14.20	ry DO ry			45.45 0.00	×× ××	
-					END OF EXP	LORATORY HOLE	-	15.45 -2.29		
E							-			
E										
_							-			
Ē										
F										
F							-			
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							<u> </u>		I	l
Gr No 2	oundwater Entries D. Depth Strike (13.10	s m) Remarks Rose to 10.05	5 m after 20 minutes.	Depth Sealed (m 13.70	Depth Related Remarks Depths (m) Remarks			Hard Boring Depths (m)	Duration (mins) Tools used
Ļ	F 1 - "					TION		Danak		
Not see redu	es: For explanation Key to Exploratory uced levels in metro	or symbols and a Hole Records. A es. Stratum thickr	appreviations Project Il depths and ness given in		IN C POWER ST			Borenole	NG107	
brad So	ckets in depth colur © Cop cale 1:50	nn. yright SOCOTEC	UK Limited AGS Project Carried	No.	7102-17 irbeck Construction Limited			'	Sheet 2 of 2	



Drille	ed SS	Start	Equipment, Methods and Rema	arks		Depth from to Di	ameter Casing Depth	Ground Level		13.48 mOD
Logo	ged RT	07/12/2017	Dando 175. Cable percussion boring.			(m) (m) 0.00 14.60	(mm) (m) 150 13.50	Coordinates (m)		E 480245.66
Cheo	cked MS	End	SPT Hammer ID: ARI777, Rod ty	pe: 54mm Whitwor	h.			National Grid		N 386190.35
Appr	roved TC	07/12/2017								
Sa	mples and	l Tests		Date Ti	Strata Descriptio	on				
	Depth	Type & No.	Records	Casing Wa	ter	Main	Detail	Depth, Level (Thickness)	Legend	Backfil
-	0.00 - 0.50	B 1	0.00-1.20 Hand excavated inspection pit.		TOPSOIL.		-	(0.20)		°. 4 0 '
-	0.50 - 1.00	В 2			Firm brown slightly sand rootlets. (MADE GROUND) Dark grey slightly sandy (MADE GROUND - Pulv	ly CLAY with frequent SILT. verised Fuel Ash)	0.50-1.00 occasional pockets (<2mm) of soft reddish brown clay	0.20 +13.28 (0.40) 0.60 +12.88		
-	1.20 - 1.65	UT 3	98 blows 100% rec	1.20	ry					
	1.65 - 1.85 1.85 - 2.30 1.85 - 2.30	D 4 SPTS D 5	N=36 (5,7/8,9,11,8)	1.20	ry		1.65-1.85 slightly gravelly. Gravel is subangular fine of pulverised fuel ash			
	3.00 - 3.45	UT 6	22 blows 100% rec	3.00	ıry					
È	3.45 - 3.65	D 7					-	-		
	3.65 - 4.10 3.65 - 4.10	SPTS D 8	N=13 (3,3/4,3,3,3)	3.00	ny					
-	4.50 - 4.95	UT 9	15 blows 100% rec	4.50	ıry					
<u> </u>	4.95 - 5.15	D 10					4.95-5.15 firm	-		
	5.15 - 5.60 5.15 - 5.60	SPTS D 11	N=42 (4,5/5,5,10,22)	4.50	ry		slightly gravelly clay. Gravel is angular to - subangular fine to - medium of - sandstone.			
	6.00 - 6.45	UT 12	88 blows 100% rec	6.00	ry		size pockets of light - grey silt. 5.15-5.60 firm grey - slightly sandy silty - clay. Occasional -	(10.90)		
	6.45 - 6.65 6.65 - 7.10 6.65 - 7.10	D 13 SPTS D 14	N=31 (5,5/7,8,9,7)	6.00	ıry		gravel size pockets of grey and greenish grey fine sand/silt. Rare fine gravel size fragments of brick 6.45-6.65 occasional coarse			
-	7.50 - 8.15	UT NR	10 blows No Recovery	7.50 Da	np		fragments of slightly – cemented slightly – sandy silt –			
E	7.90	D 15					-			
-	8.15 - 8.60 8.50	SPTS D 16	N=1 (1,0/0,0,1,0)	8.15 Da	np					
	9.00 - 9.45 9.00 - 9.45	SPTS D 17	N=10 (1,2/2,3,3,2)	9.00 Da	ηp					
Gro No.	oundwater Entrie	s m) Remarks		Depth Sealed (m	Depth Related Remarks Depths (m) Remarks			Hard Boring Depths (m)	Duration (min	is) Tools used
Notes see h reduc brack	s: For explanation Key to Explorator ced levels in metr kets in depth colu © Cop ale 1:50	n of symbols and a / Hole Records. A es. Stratum thickr mn. pyright SOCOTEC	abbreviations III depths and hess given in C UK Limited 2/2018 12:27:40	No. A	VEST BURTON C POWER STAT 7102-17 irbeck Construction Limited	ION		Borehole	NS108 Sheet 1 of 2	}

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Drilled SS	Start Eq	uipment, Methods and Re	marks		Depth from to Di	iameter Casing Depth	Ground Level	13.48 mOD
Logged RT	07/12/2017 Dat	ndo 175.			(m) (m) 0.00 14.60	(mm) (m) 150 13.50	Coordinates (m)	E 480245.66
Checked MS	End SP	ble percussion boring. T Hammer ID: ARI777, Rod	type: 54mm W	hitworth.			National Grid	N 386190.35
Approved TC	07/12/2017							
Samples an	d Tests				Strata Description		1	
 Denth	Type & No	Records	Date	Time	Main	Detail	Depth, Level	Legend Backfill
	. , , , , , , , , , , , , , , , , , , ,		Casing	Water	Dark arey slightly sandy SILT		(fhickness)	
-					(MADE GROUND - Pulverised Fuel Ash)		-	
-						-	-	
- 10.50 - 10.95 - 10.50 - 10.95	SPTS D 18	N=7 (1,0/2,1,2,2)	10.50	8.70			-	
-						-	-	
-							-	
-						-	-	In the second se
E .						-	-	
— 11.50 —	D 19				Very soft reddish brown, mottled grey, slightly		- 11.50 +1.98	
-					sandy clayey SILT with occasional pockets of orange fine sand.		-	
– — 12.00 - 12.45	UT 20	15 blows 100% rec	12.00	Damp	(ALLUVIUM)	_	-	
_						-	- (1.40)	
-	5.04					-	-	KAR KHO
12.45 - 12.65	D 21					_		
12.65 - 13.10 12.65 - 13.10	D 22	N=18 (3,3/3,5,5,5)	12.00	Damp			-	KXXX IOHO
L					Firm reddish brown, mottled bluish grey silty	1 _	12.90 +0.58	E d'a
L						-	1	F I
E					(MERCIA WODO I ONE - Class DC)	-		
13.50 - 13.95 	UT 23	9 blows 100% rec	13.50	Damp		-	1	⊢ IoH c
E						-	(1.70)	
13.95 - 14.10	D 24					_	-	
- 14.10 - 14.55	SPTS	N=13 (2,2/3,2,3,5)	13.50	Damp		-	-	
- 14.10 - 14.60	D 25		07/10/17	1620		-	-	
F			13.50	Damp		_	-	
Ē					END OF EXPLORATORY HOLE	-	-14.00 -1.12	
_						-	-	
-							-	
-						-	-	
<u> </u>							-	
-						-	-	
F						-	-	
-						-	1	
F						-	1	
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<u> </u>							-	
L						=	1	
E						-	1	
							+	
Groundwater Entrie No. Depth Strike	es (m) Remarks		Depth Seal	ed (m)	Depth Related Remarks Depths (m) Remarks		Hard Boring Depths (m)	Duration (mins) Tools used
1 10.40	Rose to 8.70 m	after 20 minutes.	12.00)				
Noton Francis 1	n of our total to the total		-				Barakala	
see Key to Explorator	y Hole Records. All d	lepths and	ci	WE	DI BURTUN G PUWER STATION		Dorenôlê	
reduced levels in met brackets in depth colu	res. Stratum thicknes	rs given in Proje	ct No.	A71)2-17		V	NS108
© Co Scale 1:50	pyright SOCOTEC U	K Limited AGS Carrie	ed out for	Firb	eck Construction Limited			Sheet 2 of 2



Drilled KP Logged RT	Start 07/12/2017	Equipment, Methods and Rem Dando 175.	arks		Depth from to D (m) (m) 1.20 15.45	iameter Casing Depth (mm) (m) 150 15.00	Ground Level Coordinates (m)		13.38 mC E 480283.	DD .38
Checked MS	End	Cable percussion boring. SPT Hammer ID: ESG01, Rod ty	vpe: 54mm Whitwo	orth.			National Grid	I	N 386135.	.14
Approved TC	08/12/2017									
Samples a	nd Tests		Dete	Times	Strata Description					
Depth	Type & No	o. Records	Casing V	Vater	Main	Detail	Depth, Level (Thickness)	Legend	Backf	ñi:
_		0.00-1.20 Hand excavated			TOPSOIL.	-	(0.40)		°. 4	٥
- - - 0.50 - 0.50 - 1.00	D 1 B 2				Dark grey slightly sandy SILT. (MADE GROUND - Pulverised Fuel Ash)		(0.40) 0.40 +12.98		0	•
	D3				、 、	slightly sandy clay				
– 1.20 - 1.65 – 1.20	SPTS D 4	N=30 (3,4/4,8,10,8)	1.20	Dry						
							-			
- 										
- 3.00 - 3.45 - 3.00 - 3.00 	SPTS D 5	N=18 (2,4/4,4,5,5)	3.00	Dry		3.00-3.45 rare gravel size lenses of				
- - - - - -						Clinker				
— 4.50 - 4.95 — — —	UT 6	54 blows 100% rec	4.50	Dry						
5.05 - 5.50 5.05 5.05 	SPTS D7 D8	N=23 (3,4/5,6,6,6)	5.05	Dry						
6.00 - 6.65 	UT 9	70 blows 100% rec	6.00	Dry						
6.55 - 7.00 6.55 6.55 6.55 -	SPTS D 10 D 11	N=13 (4,4/3,3,4,3)	6.55	Dry			(13.00)			
_ 7.50 - 7.95 _ _ _	UT 12	25 blows 100% rec	7.50	Dry						
- 8.05 - 8.50 - 8.05 - 8.05 - 8.05 	SPTS D 13 D 14	N=38 (8,10/11,9,9,9)	8.05	Dry						
- 9.00 - 9.45 	UT 15	15 blows 100% rec	9.00 E)amp			-			
9.65 - 10.10 9.65 9.65 9.65	SPTS D 16 D 17	N=47 (7,9/9,10,15,13)	9.65 E 07/12/17 10.10 E)amp 1630)amp						
Groundwater Ent No. Depth Strif	ries ke (m) Remarks		Depth Sealed (m)	Depth Related Remarks Depths (m) Remarks		Hard Boring Depths (m)	Duration (mins)	Tools u	sed
Notes: For explana see Key to Explora reduced levels in m brackets in depth c © (Scale 1:50	tion of symbols and tory Hole Records. ietres. Stratum thic olumn. Copyright SOCOTE	d abbreviations All depths and kness given in CC UK Limited	No. out for	WE A71 Firt	ST BURTON C POWER STATION 02-17 reck Construction Limited		Borehole	VS109 Sheet 1 of 2		



Dri Log	lled KP gged RT	Start 07/12/2017 End	Equipment, Methods and Rem Dando 175. Cable percussion boring. BT Hammer ID: ESC01 Ded b	arks	tworth	Depth from to D (m) (m) 1.20 15.45	iameter Casing Depth (mm) (m) 150 15.00	Ground Level Coordinates (m)	I	13.38 mOD E 480283.38
Ap	proved TC	End 3	SPT Hammer ID. ESGUT, ROUT	/pe. 54mm vm	tworth.			National Grid	r	386135.14
S	amples and	l Tests				Strata Description				
	Depth	Type & No.	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
	10.50 - 10.95 10.50	SPTS D 18	N=7 (1,2/2,1,2,2)	08/12/17 10.10 10.50	0800 Damp 7.00	Dark grey slightly sandy SILT. (MADE GROUND - Pulverised Fuel Ash)				
	12.00 - 12.45	UT 19	72 blows 67% rec	12.00	Damp		12.40 dark brownish			
	13.40 13.50 - 13.95	D 20 UT 21	45 blows 100% rec	13.50	Damp	Firm reddish brown, mottled grey and brown, slightly sandy silty CLAY. (MERCIA MUDSTONE - Class Dc)		13.40 -0.02		
	14.05 - 14.50 14.05 14.05	SPTS D 22 D 23	N=10 (3,3/2,2,3,3)	14.05	Damp			(2.05)	×	
	15.00 - 15.45 15.00	SPTS D 24	N=16 (4,3/4,3,4,5)	15.00 08/12/17 15.45	Damp	END OF EXPLORATORY HOLE		15.45 -2.07		
	roundwater Entrie o. Depth Strike (tes: For explanation	s m) Remarks	abbreviations Project	Depth Seale	d (m) WE	Depth Related Remarks Depths (m) Remarks T BURTON C POWER STATION		Hard Boring Depths (m) Borehole	Duration (mins)	Tools used
see red bra S	 Ney to Exploratory luced levels in metrickets in depth colu © Cop cale 1:50 	n Fiole Records. A es. Stratum thickr mn. pyright SOCOTEC 05/0:	Project UK Limited Carried	No. out for	A71 Firb)2-17 sek Construction Limited		V V	VS109 Sheet 2 of 2	



Drill	ed	DD	Start	Equipment, Methods and Rem	arks			Depth from	to Dia	ameter Casing Depth	Ground Level		11.58 m	IOD
Log	aed	RT/DP	13/12/2017	Dando 175.				(m) 1.20	(m) (15.00	mm) (m) 150 15.00	Coordinates (m)		E 480341	1.80
Che	ckod	MS	End	Cable percussion boring. SPT Hammer ID: ESG01 Rod to	ne: 54mm Wi	hitworth		1.20	10.00	10.00	National Grid		N 386304	5.04
4.00	rovod		14/12/2017		po. o						Nutional Ond		1000000	
App	rovea						Otrata Decerintia				4			
Sa	mp	ies and	Tests		Date	Time	Strata Description				Don'the Local	Lawrend	Devi	
	0	Depth	Type & No	o. Records	Casing	Water	M	ain		Detail	(Thickness)	Legena	Dace	ani
F		0.10	D 1	0.00-1.20 Hand excavated			Soft dark brown slightly g	ravelly CLAY v	with	-	(0.20)		°.4	0
F		0.20	D 2	inspection pit.			subrounded fine to mediu	s subangular t m of flint, brick	to k and	-	- 0.20 +11.38			
L							sandstone.			0.40 plastic -	(0.40)			\vee
_	0.6	0 - 1.00	B 3				Soft brown slightly sandy	gravelly CLAY	. Gravel is	0.60-1.00 rare	0.60 +10.98			
E							subangular to subrounde	d fine to coars	e of	subrounded fine to	-			Ĺ
F							(MADE GROUND)	Occasional To	oliels.	clinker	-			Y
E	1.2	0 - 1.65	SPTS	N=23 (2,4/4,5,5,9)	1.20	Dry	Dark grey slightly sandy	SILT. Irigad Fuel Ack	2)	-				
-		1.20	04						1)	-	-			
-										-	-			Y.
F										-	-		И	
F										_	-			
F										-	-			
F										-	-			Y
-											-			\vee
F										-	-		ÍX	
E	3.0	0 - 3.45	UT 5	79 blows 89% rec	3.00	Dry					-			Y.
F						-				-	-			V
E										-	-			
F	3.5	i0 - 3.95 3.50	SPTS D 6	N=37 (4,6/8,9,10,10)	3.50	Dry					-			
E											-			Y.
_											-		И	
E											-			
E											(7.40)			
F	4.5	i0 - 4.95	UT 7	68 blows 100% rec	4.50	Dry								Y
E										-	-			
F	5.0	0 E 4E	ODTO	N=20 (4 5/5 7 0 0)	5.00	Dec				-	-		Í	
F	5.0	5.00	D8	N=30 (4,5/5,7,9,9)	5.00	Diy					-			ľ,
F		5.00	D 9		13/12/17 5.00	1708 Drv				-	-			\boldsymbol{V}
F					14/12/17	0800				-	-			
F					5.00	Dry				-	-			
F			117.40	10.1.1		-				-	-			Ľ
-	6.0	10 - 6.45	01 10	48 blows 100% rec	6.00	Dry					-			\vee
F										-				
F	6.5	0 - 6.95	SPTS	N=25 (4,5/5,6,6,8)	6.50	Dry				-	-		Í	
F		6.50 6.50	D 11 D 12							-	-			Y.
F											-			\vee
-										7.00-7.50 mottled light greyish brown	-			
F										-	-			
F	7.5	0 - 7.95	UT NR	37 blows No Recovery	7.50	Damp					-			Y.
F	7.5	60 - 8.00	B 13							-	-			\vee
F						-				-			$ \lambda $	
F	8.0	0 - 8.45 8.00	D 14	N=18 (4,4/4,4,5,5)	8.00	Damp	Dark greyish brown, moth	led orangish b	rown,	1 -	- ×.UU +3.58		ľ	1
F		8.20	D 15				pockets (<10mm) of dark	orange fine sa	and.	-		$(\times \times \times)$		Y
F							(ALLUVIUM)				-	X X X X X X X X	$ \Lambda $	V
F										-	(1.50)	$\times \times \times \times$		
F										-	(1.00)	XXXX		Ĺ
F	9.0	0 - 9.45	UT 16	39 blows 89% rec	9.00	Damp					-	(Y
F										-	-	$(\mathbf{x} \mathbf{x} \mathbf{x})$		
L	9.5	i0 - 9.95	SPTS	N=12 (2,3/3,3,3,3)	9.50	Dry	Dark grouigh brown alight	ly aandy CILT	with roro		9.50 +2.08	$(\times \times \times \times)$		
F		9.50 9.50	D 17 D 18				relict rootlets.	ly sandy SILT	with rare	-	-	$\times \times \times \times$		Ľ
F							(ALLUVIUM)			-	-	$\times \times \times \times$		\boldsymbol{V}
Gro	undw	vater Entries	5				Depth Related Remarks				Hard Boring			
No.	. De	epth Strike (i	m) Remarks		Depth Seal	ed (m)	Depths (m) Remarks				Depths (m)	Duration (mins)	Tools	used
Note see I	es: For Key to	explanation	of symbols and Hole Records.	abbreviations Project		WE	ST BURTON C POWER STATIO	DN			Borehole			
redu brac	ced le kets in	vels in metre depth colur	es. Stratum thick	Rness given in Project	No.	A71	02-17				\	NS110		
Sca	ale	© Cop 1:50	vright SOCOTE	C UK Limited AGS Carried	out for	Firb	eck Construction Limited					Sheet 1 of 2		



Dri Log	lled DD gged RT/DP	Start 13/12/2017	Equipment, Methods and R Dando 175. Cable percussion boring.	emarks	16. iš	Depth from to D (m) (m) 1.20 15.00	iameter Casing Depth (mm) (m) 150 15.00	Ground Level Coordinates (m)		11.58 mOD E 480341.80
Ch Ap	ecked MS proved TC	End 14/12/2017	SPT Hammer ID: ESG01, Ro	d type: 54mm W	nitworth.			National Grid		N 386305.04
S	amples and	l Tests				Strata Description				
	Depth	Type & No	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
	10.50 - 10.95	UT 19	34 blows 100% rec	10.50	Dry	Dark greyish brown slightly sandy SILT with rare relict rootlets. (ALLUVIUM)		(1.50)		
	11.00 - 11.45 11.00 11.00 11.30	SPTS D 20 D 21 D 22	N=16 (2,2/3,3,4,6)	11.00	Dry	Firm to stiff dark reddish brown silty CLAY with occasional pockets of light bluish grey clayey SILT (<10mm). (MERCIA MUDSTONE - Class Dc)		11.00 +0.58		
-	12.00 - 12.45	UT 23	84 blows 100% rec	12.00	Dry			-	××	
	12.50 - 12.95 12.50 12.50	SPTS D 24 D 25	N=24 (3,3/5,6,6,7)	12.50	Dry			(4.00)		
	13.50 - 13.95	UT 26	87 blows 100% rec	13.50	Dry		-		×× ××	
	14.00 - 14.45 14.00 14.00	SPTS D 27 D 28	N=25 (4,5/5,7,7,6)	14.00	Dry					
	15.00	D 29		14/12/17	1748 Dry	END OF EXPLORATORY HOLE		15.00 -3.42		
F									<u> </u>	
Gi N(roundwater Entrie o. Depth Strike (s m) Remarks	obbrovictions In	Depth Seal	led (m)	Depth Related Remarks Depths (m) Remarks		Hard Boring Depths (m)	Duration (mins) Tools used
Not see red bra	tes: For explanation e Key to Exploratory uced levels in metr ckets in depth colu © Cor	n of symbols and / Hole Records. A es. Stratum thick mn. pyright SOCOTE(abbreviations Il depths and ness given in C UK Limited	ect ect No.	WE	02-17		Borehole	NS110	
s	cale 1:50	05/0	2/2018 12:27:41 Carr	ied out for	Firb	eck Construction Limited			Sheet 2 of 2	



Drilled KP Logged RT Checked MS	Start Eq 05/12/2017 Da Ca End SP	uipment, Methods and Remaindo 175. ble percussion boring. 'T Hammer ID: ESG01, Rod ty	arks pe: 54mm Whitworth.	Depth from to Dia (m) (m) (0.00 15.60	ameter Casing Depth mm) (m) 150 15.60	Ground Level Coordinates (m) National Grid	13 E 4 N 3	3.41 mOD 80324.71 886100.72
Approved TC	06/12/2017			Strata Description				
Donth	Type & No	Pacarde	Date Time		Dotail	Depth, Level	Legend	Backfil
	Type a no.	0.00-1.20 Hand excavated	Casing Water	Soft to firm dark reddish brown and dark grev silty		(Thickness)	*****	• []a
- 0.50 - 1.00 - 1.00 - 1.00 - 1.20 - 1.65 - 1.20	B 1 D 2 D 3 SPTS D 4	inspection pit. N=17 (4,4/3,5,4,5)	1.20 Dry	CLAY. Occasional subangular to subrounded fine to coarse gravel of sandstone. (MADE GROUND) Dark grey, frequently slightly sandy, SILT. (MADE GROUND - Pulverised Fuel Ash)		(0.40) 0.40 +13.01		
2.70 - 3.15 2.70 2.70	SPTS D 5	N=26 (7,7/6,5,8,7)	2.70 Dry					
- 4.20 - 4.65 - 4.20 - 4.20	SPTS D 6	N=7 (2,1/2,1,2,2)	4.65 Dry					
- 5.60 - 5.70 - 6.15 	D7 UT8	60 blows 100% rec	5.70 Dry			(11.30)		
6.25 - 6.70 6.25 6.25 - - - - -	SPTS D 10 D 9	N=14 (3,4/3,4,3,4)	6.25 Damp					
 7.65 - 8.10 7.65 	SPTS D 12	N=13 (4,2/2,3,2,6)	7.65 Damp 05/12/17 1630 8.15 Damp 06/12/17 0800 8.15 Damp					
- 8.70 - 9.15 	SPTS	N=18 (2,3/4,3,5,6)	8.70 Dry					
					J		********	
Groundwater Entrie No. Depth Strike	s m) Remarks		Depth Sealed (m)	Depth Related Remarks Depths (m) Remarks		Hard Boring Depths (m)	Duration (mins)	Tools used
Notes: For explanation	of symbols and abl	breviations Project	WE	ST BURTON C POWER STATION		Borehole		
reduced levels in metr brackets in depth colu	es. Stratum thicknes mn.	ss given in JK Limited AGS	No. A71	02-17		\	NS111	
Scale 1:50	05/02/2	018 12:27:41 Carried	out for Firk	eck Construction Limited			Sheet 1 of 2	



Dri	led KP	Start	Equipment, Methods and Rem	arks	Depth from to Dia	meter Casing Depth	Ground Level	13.41 mOD
Log	iged RT	05/12/2017	Dando 175.		(m) (m) (1) 0.00 15.60	mm) (m) 150 15.60	Coordinates (m)	E 480324.71
Ch	ecked MS	End	Cable percussion boring. SPT Hammer ID: ESG01, Rod ty	pe: 54mm Whitworth.			National Grid	N 386100.72
Ap	proved TC	06/12/2017						
Sa	amples and	Tests			Strata Description			
	Donth	Type & No	Bacarde	Date Time	Main	Dotail	Depth, Level	Legend Backfill
_	Depai	iype u ite		Casing Water	Dark grov froquently slightly sandy SILT	Detail	(Thickness)	
	10.20 - 10.70 10.20 - 10.70 10.80	UT NR B 14 D 15	31 blows No Recovery	10.20 Damp	(MADE GROUND - Pulverised Fuel Ash)			
	11.70 - 12.15 11.70	SPTS D 16	N=8 (1,1/2,3,1,2)	11.70 Damp	Reddish brown, mottled light grey and grey, slightly sandy clayey SILT. (ALLUVIUM)		11.70 +1.71 (1.50)	
	13.20 - 13.65 13.20	SPTS D 17	N=9 (1,1/1,2,2,4)	13.20 Damp	Soft to firm, mottled greyish brown and reddish brown, silty CLAY.	– 13.20-13.65 slightly – organic odour – –	13.20 +0.21	
	13.65 - 14.10	UT 18	44 blows 100% rec	13.65 Damp	(IMERCIA MUDO I UNE - GIBSS DC)			
	14.20	D 19					(2.40)	
	15.00 - 15.45	UT 20	31 blows 100% rec	15.00 Damp		- 		
	15.60	D 21		06/12/17 1600 15.60 Dry	END OF EXPLORATORY HOLE		15.60 -2.19	
G N	oundwater Entrie	s m) Remarks		Depth Sealed (m)	Depth Related Remarks Depths (m) Remarks		Hard Boring Depths (m) [Puration (mins) Tools used
Not see red bra	es: For explanation Key to Explorator uced levels in metrickets in depth colu	n of symbols and / Hole Records es. Stratum thick mn. wright SOCOTE	All depths and cress given in	WE No. A71	ST BURTON C POWER STATION		Borehole	VS111
S	ale 1:50	7511911 30001E	02/2018 12:27:41 Carried	out for Firt	eck Construction Limited			Sheet 2 of 2



Drill	ed DD	Start	Equipment, Methods and Rema	arks		Depth from to Dia	ameter Casing Depth	Ground Level		9.42 m	OD
Log	ged DP/RT	15/12/2017	Dando 175.			(m) (m) (1.20 15.00	mm) (m) 150 14.50	Coordinates (m)		E 480186	.50
Che	cked MS	End	SPT Hammer ID: ESG01, Rod ty	pe: 54mm Whitwo	rth.			National Grid		N 386432	.19
App	roved TC	18/12/2017									
Sa	mples and	d Tests				Strata Description		1			
	Depth	Type & No.	Records	Date T	ime	Main	Detail	Depth, Level	Legend	Back	fill
┣	0.10	D1	0.00-1.20 Hand excavated	Casing w	ater	Brown slightly sandy SILT with frequent rootlets		(Thickness)	*****	٥	<u>ہ</u>
Ē	0.10		inspection pit.			and frequent pockets (<50mm) of soft reddish brown clay from 0.50m.		-		۸. م	
-	0.50 - 1.00	B 2				(MADE GROUND)		(1.00)			
Ē	1.00	D 3				Stiff dark brown slightly sandy gravelly CLAY.		1.00 +8.42			
Ē	1.20 - 1.50 1.20	SPTS D 4	50 (7,12/24,26 for 70mm)	1.20	Dry	Gravel is angular to subangular fine to medium of brick, ceramics and siltstone. (MADE GROUND)		(0.70)			K
F	1.70	D 5				Dark grey slightly gravelly sandy SILT. Gravel is	- 1.70 clayey -	1.70 +7.72			
						clinker. (MADE GROUND - Pulverised Fuel Ash)					1
Ē							-	(1.30)			Ľ
Ē							-	- - -			
Ē	3.00 - 3.45	UT 6	24 blows 89% rec	3.00	Dry	Light brownish grey slightly sandy slightly gravelly SILT. Gravel is angular fine of clinker/slag.		3.00 +6.42			Z
Ē	3.50 - 3.95 3.50	SPTS D 7	N=6 (1,2/2,2,1,1)	3.50	Dry	(MADE GROUND - Pulverised Fuel Ash)	3.50-3.95 some – subangular medium –				K
Ē	3.50	D 8					gravel size nodules - of poorly cemented - silt -				
E								-			1
-	4.50 - 4.95	UT 9	19 blows 100% rec	4.50	Dry			(3.30)			K
E	5.00 - 5.45	SPTS	N=7 (2,2/2,2,2,1)	15/12/17 1 4.50	734 Dry 400		5.00-5.45				
Ē	5.00	D 10		4.50	Dry		occasional gravel - size pockets of - black silt -				
Ē								-			K
Ē	6.00 - 6.45	UT 11	30 blows 100% rec	6.00	Dry			-			
Ē	6 50 6 05	ODTO	N-7 (4 0/0 0 0 4)	6.50	Dec	Brownish grey slightly sandy SILT with rare gravel		6.30 +3.12			/
Ē	6.50 - 6.95 6.50 6.50	D 12 D 13	N=7(1,2/2,2,2,1)	6.50	Dry	(ALLUVIUM)		-	× × × × < × × × × × × × ×		\langle
Ē											
E	7.50 - 7.95	UT 14	26 blows 100% rec	7.50	Dry		- - 7.50-7.95	-	$(\times \times \times)$		1
Ē							occasionally mottled - grey -				K
-	8.00 - 8.45 8.00 8.00	SPTS D 15 D 16	N=8 (1,1/1,2,2,3)	8.00	Dry		8.00-9.30 orangish brown mottled, - occasional gravel -	(3.40)			
Ē							size pockets of				1
-	9.00 - 9.45	117 17	17 blows 100% roo	9.00	Dret					1	K
Ļ	9.00 - 9.40		TT DIOWS TOU /0 TEC	5.00	y יש						
-	9.50 - 9.95 9.50 9.50	SPTS D 18 D 19	N=6 (1,1/1,2,2,1)	9.50	Dry			9.70 -0.28			K
<u> </u>	0.00					Readish brown gravelly very silty fine to medium SAND with lenses of soft brownish grey clay	=		$\left[\begin{array}{c} \times & \times \\ \times & \times \end{array} \right] $ 1	7	Ľ
Gro	oundwater Entrie	s				Depth Related Remarks		Hard Boring			
No.	. Depth Strike	(m) Remarks		Depth Sealed (m	1)	Depths (m) Remarks		Depths (m)	Duration (mins	s) Tools u	ised
Note see	es: For explanation Key to Explorator	n of symbols and y Hole Records. A	abbreviations Project		WE	ST BURTON C POWER STATION		Borehole			
redu brac	ced levels in metr kets in depth colu © Col	es. Stratum thicki mn. pyright SOCOTEC	ness given in C UK Limited AGS	No. out for	A71 Firb	02-17 eck Construction Limited		\	NS112		
SC	ale 1.50	05/0	2/2018 12:27:42	out ion					Sheet 1 of 2		



Dri Lo Ch	illed DD gged DP/RT necked MS	Start 15/12/2017 End	Equipment, Methods a Dando 175. Cable percussion boring SPT Hammer ID: ESG0	n d Remarks g. 1, Rod type: 54mm \	Whitworth.	Depth from to Di (m) (m) 15.00	iameter Casing Depth (mm) (m) 150 14.50	Ground Level Coordinates (m) National Grid		9.42 mOD E 480186.50 N 386432.19
Ap	proved TC	18/12/2017								
S	amples an	d Tests		Date	Time	Strata Description		Depth Level	Legend	Backfill
L	Depth	Type & No.	. Records	Casing	Water	Main	Detail	(Thickness)	Legend	Dackini
	10.50 - 10.95 10.50 - 11.00	UT NR B 20	36 blows No Reco	overy 10.50	Dry	(<50mm). Gravel is subangular to rounded fine to medium of flint, mudstone and sandstone. (RIVER TERRACE DEPOSTS)		(1.40)		
	11.00 - 11.45 11.00 11.00 - 11.50	SPTS D 21 B 22	N=14 (2,3/3,3,4,4)	11.00	Dry	Medium dense reddish brown fine to coarse SAND with rare subangular to subrounded fine to coarse gravel of mudstone and sandstone. (RIVER TERRACE DEPOSITS)		11.10 -1.68		
	12.50 - 12.95 12.50 12.50 - 13.00 12.90	SPTS D 0 B 23 D 24	N=12 (4,2/2,2,4,4)	12.50	7.90	Soft to firm reddish brown, mottled bluish grey, slightly sandy silty CLAY. (MERCIA MUDSTONE - Class Dc)		12.90 -3.48		
	14.00 - 14.45	UT 25	72 blows 100% re	c 14.00	Dry	Firm bluish grey and light grey, mottled reddish brown, slightly sandy slightly gravelly silty CLAY. Gravel is subangular to subrounded fine to coarse of mudstone. Abundant gravel size pockets of	- 14.00-15.00 bluish- grey and light grey, - mottled reddish - brown, slightly - gravelli c -	(1.10) 14.00 -4.58		
	14.50 - 14.95 14.50 14.50	SPTS D 26 D 27	N=18 (3,3/4,4,5,5)	14.50 18/12/17 14.50	Dry 1737 Dry	dark grey silt.	subrounded fine to coarse of poorly cemented grey	(1.00)		
·····································	roundwater Entrie	25 (m) Remarks Rose to 9.90 inflow	m after 20 minutes. Mer	Depth Se dium 11.1	aled (m) 10	Depth Related Remarks Depths (m) Remarks	size pockets of dark grey sit = 	Hard Boring Depths (m)	Duration (mins)	Tools used
No sec rec	tes: For explanation e Key to Explorator duced levels in met	n of symbols and y Hole Records. A res. Stratum thick	abbreviations Il depths and ness given in	Project	WE	ST BURTON C POWER STATION		Borehole	NS112	
S	© Cc © Cc Scale 1:50	pyright SOCOTEC	C UK Limited AGS	Carried out for	Firb	eck Construction Limited			Sheet 2 of 2	



Drilled DS	Start	Eq	uipment, Methods and Rem	arks		Depth from to Di	iameter Casing Depth	Ground Level		12.95 mOD
Logged DP	08/12/2017	7 Co	omacchio 305.			(m) (m) 1.20 30.30	(mm) (m) 121 16.00	Coordinates (m)		E 480314.02
Checked MS	End	Dyr SP	namic sampling followed by ro T Hammer ID: AR868, Rod ty	otary core drilli pe: NWY.	ing (PW⊦	size) using water flush.		National Grid		N 386252.60
Approved TC	15/12/2017	7 SB	P and HPD testing at selected	d depths.						
Samples and	d Tests		,			Strata Description		1		
Donth	TCR	If	Pocorde/Samples	Date	Time	Main	Dotail	Depth, Level	Legend	Backfil
Depui	RQD		0.00-1.20 Hand excavated	Casing	Water		Detan	(Thickness)	V//XV//A	
- - 0.25 - 1.20	B3		inspection pit.		I			(0.25) 0.25 +12.70		N
0.20 - 1.20	55				1	Dark grey slightly sandy SILT.] =	0.20		
- 0.50	D1				1		-	-		- KI K
-					1	l l	-	-		
- 1.00	D 2				1	l l	_	4		N
- - 1.20 - 1.65	SPTS		N=32 (4,5/7,8,8,9)		1	l l	-	4		-NF
1.20 - 2.20 1.20	L 5 D 4				1	l l	-	-		- KI K
-					1	l l	-	-		
-					1	l l	-	1		N
—				08/12/17	1630	l l		1		- KI K
- 2.20 - 2.65	SPTS		N=20 (3.3/4,7,4,5)	2.20	Dry		=	1		- 11
2.20	D6		14 20 (0,0,. , .,. ,	11/12/17 2 20	0800 Drv		-	_		-1 $+1$
-				2.20	L.,	l l		(4.75)		-NP
, -					1	l		(4./0)		- KI K
- 					1	l	3 00 Self boring	-		
					1	l	pressuremeter test	-		N
-					1			-		-Nh
- 3.50 - 3.95	SPTS		N=9 (2,2/3,2,2,2)	2.20	1.95			-		- K I K
- 3.50 - 4.50 - 3.50	Lð D7				1		-	-		
-					1	l		-		N
-					1		-	-		
-					I	l l		-		- K1 K
- 4.50 - 4.95	SPTS		N=12 (3,2/3,3,3,3)	2.20	3.55	l l		-		Y
4.50 - 5.20	L 9				I	l	-	-		-NP
-					1	l	-			- KI K
-					1	Firm dark red, mottled bluish grey, gravelly CLAY.	 5.00 Self boring pressuremeter test 	5.00 +7.95 (0.20)		
-					1	Gravel is angular coarse of poorly cemented		5.20 +7.75		N
- 5.50 - 5.95	SPTS		N=24 (3.4/5.5.6,8)	5.50	3.10		/	<u> </u>		
5.50 - 6.50	L 12				- 1	Dark grey slightly sandy SILL (MADE GROUND - Pulverised Fuel Ash)	5.70-6.00 clayey -	_		- K I K
5.50	D 11				1			_		
					1	l	_	-		-NP
					I	l l	=	-		- KI K
6 50 - 6.95	SPTS		N-54 (6 9/10 13 15.16)	E 50	3.90	l l		-		-k1k
6.50 - 7.00	L 14		N=04 (0,0/10,10,.0,,	5.50	0.0 -	l l		-		Y
0.50	DIJ				I	l l	-	-		
- 7.00 - 8.50	L 15				I	l l	7.00-7.50 brownish	-		- K I K
					I	l l	giey _	1		
-					I	l l		1		$-N\Gamma$
-					I	l	-	-		
-					I	l	-	(5.10)		- K I K
					I	l	_	-		
					1	l	-	-		
						l	-	-		
- 8.50 - 8.95 - 8.50 - 9.50	SPTS L 17		N=26 (5,5/6,6,7,7)	8.50	4.65	l	-	-		-k1k
8.50	D 16				1	l	-	1		Y
					1	l		_		
-					1	l	-	1		- K I K
-					1	l	=	1		
9.50 - 10.50	L 18				1	l	9.50-10.00 slightly -	_		$-N\Gamma$
-					1	l	angular to -	·		
-							clinker and poorly			\perp
							cemented sittstone			
Groundwater Entrif				<u> </u>		Depth Related Remarks		Chiselling Detai	ils	
No. Depth Strik	ke Remarks	s		Depth Se	aled	Depths (m) Remarks		Depths (m)	Duration (mins)) Tools use
					I	I				
					I	I				
Notes: For explanatio	of symbols	and ab	hreviations Project	,	WE			Borehole		
ee Key to Explorator	y Hole Record	ds. All c	depths and		•	Burrow of one content of the content		Doronene		
rackets in depth colu	Jmn.		Project	No.	A71	02-17			BH101	
© Uu	pyright SOCO	JIEC O	JK Limited AGO	l out for	Firt	eck Construction Limited			Check 1 of 4	



Drilled DS	Start	Equ	ipment, Methods and Rema	rks		Depth from to Di	ameter Casing Depth	Ground Level		12.95 mOD
Logged DP	08/12/2017	Cor	nacchio 305. Jamic sampling followed by rot	ary core drilling	(PWF	(m) (m) 1.20 30.30	(mm) (m) 121 16.00	Coordinates (m)		E 480314.02
Checked MS	End	SPT	F Hammer ID: AR868, Rod typ	e: NWY.	(1 11)	size) using water nush.		National Grid		N 386252.60
Approved TC	15/12/2017	Cro	ss Hole Seismic Survey on co	aeptns. mpletion.						
Samples and	l Tests					Strata Description				
Depth	TCR SCR	lf	Records/Samples	Date Casing	Time	Main	Detail	Depth, Level	Legend	Backfill
_	RQD			Casing	vvalei	Dark grey slightly sandy SILT.		(Thickness)	******	
-						(MADE GROUND - Pulverised Fuel Ash)		10.30 +2.65		
- 10.50 - 10.95	SPTS		N=11 (5.3/3.2.3.3)	9.00	4.15	Firm greyish brown silty CLAY. Strong organic odour.		(0.30)	× <u>×</u> ×	
- 10.50 - 12.00 - 10.50	L 20 D 19					(ALLUVIUM)		10.60 +2.35	$\frac{X}{X \times X}$	NN
-	5.10					and grey, becoming dark brown, clayey SILT.				- KIK`
-						Slight organic odour. (ALLUVIUM)			XXXX	
-							-	-		
_								-	$\begin{array}{c} \times \times \times \times \\ \times \times \times \times \end{array}$	-NN
-										- KIK
-								-		
— 12.00 - 13.50 -	L 21						-	-		
-							-		$\left \begin{array}{c} \times \times \times \times \\ \times \times \times \end{array} \right $	
-							-	-	$\overline{X} \times \overline{X} \times \overline{X}$	
-							-		xxxx	
-							-	(4.60)	$\times \times \times \times$	
E							-			-NN
E				11/12/17	1630					-NN
- 13.50 - 13.95 - 13.50 - 14.50	SPTS		N=9 (3,3/2,2,2,3)	12/12/17	0.10					- KIKI
-	2207			9.00	7.50				$\times \times \times \times$	
_										
F									XXXX	-NN
-							-	-		- NK
— 14.50 - 16.00 —	L 22								$\begin{array}{c} x \times x \times x \\ x \times x \times x \end{array}$	
_							-			
-										
-						Firm raddish brown locally mattled light groonish		15.20 -2.25		
-						grey, CLAY.	-	-		
-						(MERCIA MUDSTONE - Class Dc)		-		
-				12/12/17	1707		-	(1.25)		
- 16.00 - 16.45			N=15 (3,4/3,4,4,4)	16.00	3.00		_		F	-NN
- 16.00		NA	D 23	16.00	3.60		-			
_		-	-					16.45 -3.50		
E	100					grey, mottled reddish brown, MUDSTONE, locally	16.60 High pressure -			
16.00 - 17.50	40 0	NI				reduced to subrounded fine gravel size fragments in a clay matrix. Fractures are subhorizontal, very				-NN
_		30				closely spaced, undulating and planar, smooth.	17 10 10 degree -	(1.15)		
_		60				(MERCIA MODSTONE - Class B)	5mm band of white -			
-							17.35 subhorizontal			
F		_				Stiff reddish brown, locally mottled light greenish	fibrous gypsum	17.60 -4.65		-NN
– – 17.50 - 18.30	100 34	NA	Flush: 16.00 - 19.80 Water			grey, CLAY, locally reduced to subrounded fine to coarse very stiff clay to extremely weak mudstone	-	(0.45)		NK
18.05 - 18.16	25		100% CS 24				/ -	18.05 -5.10		
F						Very weak to weak very thinly bedded light	-	4		
F						greenish grey, locally mottled light reddish brown, MUDSTONE with 20 degree subhorizontal bands		1		-NN
F						(up to 20mm) of white fibrous gypsum. Fractures		1		-NN
18.83 - 19.05	87	NI 100	CS 25			planar and smooth.	-	(1.85)		- KIK
18.30 - 19.80	82 59	200				(MERCIA MUDSTONE - Class B)	19.15 subhorizontal	(1.00)		
E							40mm spaced bands of white]		
E							fibrous gypsum 19,53 10 degree			-NN
19.80 _ 19.94			SPTC 50 (25 for 70mm/50	16.00	1 00		30mm bands of			-NK
-			for 70mm)	10.00	1.90		gypsum. –	19.90 -6.95		
Groundwater Entrie	s					Depth Related Remarks		Chiselling Deta	ls	
No. Depth Strik	e Remarks			Depth Sealed	d	Depths (m) Remarks		Depths (m)	Duration (mins	Tools used
Notes: For explanation see Key to Explorator	of symbols a	nd abb s. All de	reviations Project epths and		WE	ST BURTON C POWER STATION		Borehole		
brackets in depth colu	es. stratum th mn.	ICKNES	s given in Project N	No.	A71	02-17			BH101	
Scale 1:50	yrigrit SOCO	1 EC UP	Carried Carried o	out for	Firb	eck Construction Limited			Sheet 2 of 4	



Drilled DS	Start 08/12/201	Equ 7 Con	ipment, Methods and Rema	rks	Depth from to Di (m) (m) 1.20 30.30	iameter Casing Depth (mm) (m) 121 16.00	Ground Level Coordinates (m)		12.95 mOD E 480314.02
Checked MS	End	Dyn SPT	amic sampling followed by rot Hammer ID: AR868, Rod typ	tary core drilling (PWI e: NWY.	size) using water flush.		National Grid		N 386252.60
Approved TC	15/12/201	7 Cros	P and HPD testing at selected ss Hole Seismic Survey on co	depths. mpletion.					
Samples and	Tests				Strata Description				
Depth	TCR SCR	lf	Records/Samples	Date Time	Main	Detail	Depth, Level	Legend	Backfill
_	RQD			Casing wate	Extremely weak thinly laminated dark reddish		(Thickness)		
 19.80 - 21.30 	100 23 0	NI 10 30	Flush: 19.80 - 21.30 Water 90%		brown MUDSTONE, locally disintegrating to subrounded fine to medium gravel size fragments in a clay matrix. Fractures are subhorizontal, very closely spaced, undulating, rough. (MERCIA MUDSTONE - Class B)	20.40 High pressure – dilatometer test – –	(1.25)		
21.30 - 22.80 22.50 - 22.59 22.80 - 22.92 22.88 - 23.19 22.80 - 24.30	100 37 19 10 97 75	NI 20 120	Flush: 21.30 - 22.80 Water 85% CS 26 SPTC 50 (25 for 50mm/50 for 70mm) CS 27 Flush: 22.80 - 24.30 Water 100%	13/12/17 1615 16.00 3.60 14/12/17 0800 16.00 7.60	Extremely weak very thinly bedded light reddish brown MUDSTONE, locally reduced to subangular and subrounded fine to coarse lithorelicts of very stiff clay to extremely weak mudstone. Fractures are subhorizontal, very closely spaced, planar, rough. (MERCIA MUDSTONE - Class B) Very weak to weak, locally very weak, very thinly bedded dark reddish brown, becoming light greenish grey, locally mottled reddish brown, MUDSTONE with 10 degree subhorizontal, closely spaced (up to 10mm) bands of white fibrous gypsum. Fractures are subhorizontal, closely, locally medium spaced, planar, smooth. (MERCIA MUDSTONE - Class B)	21.50 20 degree 10mm band of off white fibrous gypsum 21.70 subhorizontal 30mm band of off white fibrous gypsum 21.80 subhorizontal 30mm band of off white fibrous 22.05-22.10 20 degree stepped 10mm band of off white fibrous gypsum 22.05-22.10 20 degree stepped 10mm band of off white fibrous subangular to subangular to subangular to subangular to subangular to 30mm band of mite ithorelics of mudstone 23.30 subhorizontal 30mm band of white	21.15 -8.20 (1.00) 22.15 -9.20 (2.70)		
- 24.50 - 24.69 - 24.30 - 25.60 - 25.82 - 25.92	92 62 51		CS 28 Flush: 24.30 - 27.10 Water 50%		Extremely weak very thinly bedded dark reddish brown MUDSTONE, locally turning to (up to 50mm) clay bands and subangular to subrounded fine to coarse gravel size mudstone lithorelicts. Fractures are subhorizontal, closely spaced, undulating, smooth. (MERCIA MUDSTONE - Class B)	and band of white fibrous gypsum 23.40 High pressure dilatometer test 23.85 subhorizontal 60mm band of white fibrous gypsum 24.10 10 degree 10mm band of white fibrous gypsum 24.25 20 degree 10mm band of white fibrous gypsum 24.30-24.35 subhorizontal and 80 degree bands	24.85 -11.90		
25.60 - 27.10 27.10 - 27.25 27.30 - 27.43	80 27 19	NI 100 140	CS 29 SPTC 50 (19,6 for 15mm/50 for 60mm) CS 30	14/12/17 143(16.00 1.10 15/12/17 080(16.00 8.9(fibrous gypsum 24.65 10 degree _ 50mm band of white 25.70-25.90 subhorizontal and 70 degree 5mm - band of withe fibrous gypsum 26.25 10 degree - 30mm band of white fibrous gypsum 26.70 subhorizontal 30mm band of fibrous white	(3.10)		
27.10 - 28.70	94 43 43		Flush: 27.10 - 30.30 Water		Extremely weak thinly laminated dark reddish brown, becoming light greenish grey, MUDSTONE, locally reduced to clay and angular to subrounded fine to coarse gravel size mudstone lithorelicts. Fractures are randomly orientated, extremely closely locally, very closely snaced smooth nanar	gypsum 26.70-27.10 AZCL. Core loss assumed to be more - weathered material 27.15 10 degree - 20mm band of - fibrous white - gypsum	27.95 -15.00		
 28.70 - 30.30 	94 50 0	NI NI 8	80%		(MERCIA MUDSTONE - Class B)		(2.35)		
Groundwater Entrie No. Depth Strik	s Remark	S	L	Depth Sealed	Depth Related Remarks Depths (m) Remarks		Chiselling Detai Depths (m)	ls Duration (mins	a) Tools used
Notes: For explanation	of symbols	and abb	reviations Project	WE	ST BURTON C POWER STATION		Borehole		
see Key to Exploratory reduced levels in metr brackets in depth colu © Cop Scale 1:50	Hole Recores. Stratum nn. yright SOC	rds. All de thickness DTEC Uk 05/02/20	Eptins and s given in C Limited 18 13:06:08	No. A7 put for Fir	102-17 beck Construction Limited			BH101 Sheet 3 of 4	



Drilled DS	Start	Equ	ipment, Methods and Rem	arks		Depth from to Di	ameter Casing Depth	Ground Level		12.95 mOD
Logged DP	08/12/20	17 Com	nacchio 305. amic sampling followed by re	tary core drilling	1 (PWF	(m) (m) 1.20 30.30	mm) (m) 121 16.00	Coordinates (m)	I	E 480314.02
Checked MS	End	SPT	Hammer ID: AR868, Rod ty	pe: NWY.	y (i ⁻ VV⊢	Size, Joing Water Hubit.		National Grid	1	386252.60
Approved TC	15/12/20	17 Cros	ss Hole Seismic Survey on co	ompletion.						
Samples and	l Tests					Strata Description				
Depth	TCR SCR	lf	Records/Samples	Date	Time	Main	Detail	Depth, Level	Legend	Backfill
	RQD			15/12/17	1630	Extremely weak thinly laminated dark reddish		(Thickness)		NIN
_				16.00	Dry	brown, becoming light greenish grey,	=	30.30 -17.35		
-						to subrounded fine to coarse gravel size				÷
_						mudstone lithorelicts. Fractures are randomly orientated, extremely closely locally, very closely				
_						spaced, smooth, planar.	-			
<u> </u>						END OF EXPLORATORY HOLE				
_								-		
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<u>F</u>	<u> </u>									
Groundwater Entrie	s			L		Depth Related Remarks		Chiselling Details	3	
No. Depth Strike	e Remari	ks		Depth Seal	əd	Depths (m) Remarks		Depths (m)	Duration (mins)	Tools used
Notes: For explanation see Key to Exploratory	of symbols Hole Reco	and abbr	Project Project		WE	BT BURTON C POWER STATION		Borehole		
brackets in depth colu	es. Stratum mn.	INICKNESS	Project	No.	A7 1	02-17		E	3H101	
© Cop	oyright SOC	UTEC UK	Carried Carried	out for	Firt	eck Construction Limited			Sheet 4 of 4	



Drilled	DS	Start	Eq	uipment, Methods and Rema	arks		Depth from to Dia	ameter Casing Depth	Ground Level		13.01 mOD
Logged	DP	05/12/2017	Cor	macchio 305.	tarv core drilli	ina (PWF	(m) (m) (n) 1.20 30.07	mm) (m) 121 12.30	Coordinates (m)		E 480272.23
Checked	I MS	End	SP SE	'T Hammer ID: AR868, Rod typ	Je: NWY.	ig (i	Size) Using water rush.		National Grid	,	N 386209.16
Approve	d TC	08/12/2017	02.	P allu HFD teating at sciences	depuis.						
Samp	oles and	Tests				-	Strata Description				
	Depth	TCR SCR RQD	lf	Records/Samples	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfil
-			_	0.00-1.20 Hand excavated			TOPSOIL.	-	(0.25)		
– – 0.	0.20 .20 - 1.20	D 1 B 4		inspection pit.		l	Dark grev slightly sandy SILT.		0.25 +12.76		¥7,
È.	0.50	D 2				ļ	(MADE GROUND - Pulverised Fuel Ash)		-		V/
-						ļ		-	-		//
F						ļ		=	-		×//
F	1.00	D 3				I			-		
- 1. - 1.	.20 - 1.65 .20 - 2.20	SPTS L 6		N=58 (2,8/12,16,16,14)		Dry		-	-		
F	1.20	D 5				I			-		
F						ļ		-	-		
F						ļ					
F						I		_	-		
_						I		-	(3.95)		
L						I			_		$\langle \rangle \rangle$
F						I			-		
F						I			_		
F						I		3.00 Self boring			1//
E						ļ		pressuremeter test]		
E ,	50 3 05	CDTQ		N-22 /2 5/5 7 0 11)	1 50	2 30			-		\vee
F	3.50	D7		N=32 (3,3/3,7,8,11)	1.50	2.00		-	-		
– s.	.50 - 4.00	Вδ				I		-	-		
- 4.	.00 - 5.30	L 9				I		4.00-4.15 AZCL	-		
F						I	Firm dark grevish brown slightly sandy slightly		4.20 (0.10) +8.81		
F						I	gravelly CLAY. Gravel is angular to subrounded	/ =	- 4.30 (0		
F						ļ	(MADE GROUND)	-	- (0.70)		/
F						ļ	Firm reddish brown, locally mottled light bluish	4.70-4.75 light grey - angular coarse -			
F						I	grey, slightly sandy slightly gravely CLAY. Gravel is angular to subrounded fine to medium of	gravel of quartzite	- 5.00 +8.01		//
F						I	clinker. Frequent pockets (up to 20mm) of light	1 -	(0.50)		
F					05/12/17	1630 0,10	(MADE GROUND)	_	(0.50)		
F					06/12/17	0800	Firm thinly laminated brown and dark grey slightly	_	- 5.50 +7.51		
F					5.50	0.35	gravel of clinker.	-	_		
F						I	(MADE GROUND)	6 00 Self boring	_		$\langle \rangle \rangle$
E						I	(MADE GROUND - Pulverised Fuel Ash)	pressuremeter test -	-		
E						I		-			
6.	.50 - 6.95	SPTS		N=2 (1,0/0,1,0,1)	6.00	3.90		_]		1//
	6.50	D 9A				I			-		\times
F						I		angular fine to	-		
F						I		medium gravel or brick	-		//
F						I			-		
- 7.	.50 - 8.80	L 11				I			-		
F						I			(4.25)		
È .						I		-	-		
F						I			-		$\langle \rangle \rangle$
F						I		-	-		
F						I			1		
F						I		-	-		1//
- 8. 8.	.80 - 9.25	SPTS		N=10 (2,3/2,2,3,3)	6.00	6.30			_		$\langle \rangle \rangle$
F	8.80	D 12				ļ		_	_		\vee
E						ļ		-	-		
-						ļ			-		\times
E						I		-	-		
- 9.8	80 - 11.30	L 14				ļ	Firm dark greyish brown, becoming dark brown,	1 -	9.75 +3.26		
F		+		+		!	silty CLAY with rare relict roots (<2x<120mm).		1	- $ -$	
						!					
Ground	water Entries	s Secondaria			Trath Car		Depth Related Remarks		Chiselling Detail	ls	t- yead
No.	Depth Strike	Remarks			Depth Sea	iled	Depths (m) Remarks		Deptns (m)	Duration (mins)	Tools useu
						ļ					
						!					
Notes: Fo	or explanation	of symbols ar	nd abr	breviations Project		WE	T BURTON C POWER STATION		Borehole		
reduced I	levels in metre	es. Stratum thi	icknes	ss given in Project	No.	A71	02-17		I F	BH102	
Scale	© Cop	yright SOCOT	TEC U	JK Limited AGS Carried	out for	Firt	eck Construction Limited			Sheet 1 of 4	



Logged DP Checked MS	05/12/20 End	17 Cor Dyr SP SBI	mark, wethods and kerna macchio 305. namic sampling followed by ro T Hammer ID: AR868, Rod typ P and HPD testing at selected	tary core drilling e: NWY. depths.	g (PWF	bepth from to Dia (m) (m) (1.20 30.07	ameter Casing Depth mm) (m) 121 12.30	Ground Level Coordinates (m) National Grid		13.01 mOD E 480272.23 N 386209.16
Approved TC	08/12/20	17				Strata Description				
Samples and	TCR) If	Becords/Samples	Date	Time		Detail	Depth, Level	Legend	Backfill
	RQD	"	Records/Samples	Casing	Water	Faint organic odour.	Detail	(Thickness)		
						(ALLUVIUM)	- 10.30-10.50 mottled dark greyish green	(0.75)	× ×	
-						Thinly laminated dark orangish brown, mottled brown and light grey, slightly sandy clayey SILT	-	10.50 +2.51	$\begin{array}{c} \times \times \times \times \\ \times \times \times \end{array}$	
-						with rare relict rootlets. Rare pockets (up to 5mm) of dark purple fine sand.	-		$\times \times \times \times$	
_ _ _ 11 20 11 75	ODTO		N=11 (0 1/0 2 2 2 0)	0.00	2.65	(ALLUVIUM)		(1.30)		
- 11.30 - 12.70 - 11.30	L 16 D 15		N=11 (2, 1/2, 3, 5, 5)	5.00	5.05					
-						Thinky loginated dark brown clightly condy clayou	-	11.80 +1.21		
-						SILT with rare relict roots (<3x<40mm).				
E							-	(0.90)	$\overline{\times \times \times \times}$	
-				40.50			12.60-12.70 firm -	40.70 0.04	$\begin{array}{c} \times \times \times \times \\ \times \times \times \times \end{array}$	
- 12.70 - 13.15 - 12.70 -			N=36 (6,6/7,8,10,11) D 17	10.50	6.55	Firm, mottled greenish brown, silty CLAY. (MERCIA MUDSTONE - Class Dc)	mottled light bluish - grey, silty clay -	12.70 +0.31		
	86							(0.70)	<u>^×</u> ×	
_ 12.70 - 13.80 _	NA NA					Firm reddish brown, locally mottled light greenish	silt –	13.40 -0.39	· · · · · · ·	
-				06/12/17 12.30	1703 3.90	grey and brown, slightly gravelly CLAY. Gravel is subangular fine lithorelicts of extremely weak	-			
-		NA		07/12/17 12.30	0800 3.90	mudstone. (MERCIA MUDSTONE - Class Da)	-			
-		-					14.10-14.15 light – greenish grey – clavey silt –	(1.84)		
– 	97 4							(1.04)		
-	0						14.70 High pressure – dilatometer test –			
-							14.90-15.24 firm - thinly laminated bluish grey, mottled -			
			- 20 40			Extremely weak thinly laminated light reddish	light reddish brown, clayey SILT	15.24 -2.23 (0.26)	· · · · · · ·	
-			_ 60			MUDSTONE with frequent white gypsum	-	15.50 -2.49	· · · · · ·	
-	67	- -	-			closely spaced, undulating, rough. (MERCIA MUDSTONE - Class B)	- - 15 95 subborizontal	(U.4U) 15.90 -2.89		
15.30 - 16.80 	17 0	NI 20 50				Soft to firm dark reddish brown, mottled light greenish grey, gravelly CLAY with rare subvertical	10mm band of white			
-		-	-			bands (up to 5mm) of white fibrous gypsum. Gravel is tabular fine to coarse lithorelicts of	16.15 subhorizontal _ 50mm band of white _ fibrous gypsum _			
-		-				extremely weak mudstone. ((MERCIA MUDSTONE - Class Da)	16.20 High pressure – dilatometer test –			
- 16.80 - 16.86 - 16.90 - 17.00			SPTC 50 (25 for 30mm/50 for 30mm) CS 18	12.30	3.60	laminated light grey, locally dark grey, dark	reduced to - subrounded coarse	(0.05)		
-						MUDSTONE with subhorizontal undulating bands (up to 20mm) of white fibrous gypsum. Fractures	gravel	(2.35)		
	100 43	NI 40 60				are subhorizontal, extremely closely to closely spaced, undulating, planar, rough, smooth.	17.25-17.30 reduced to clay			
- 17.70 - 17.78 -	7		CS 19			(MERCIA MUDSTONE - Class B)	bound tabular gravel size mudstone lithorelicts			
18.00 - 18.15 			CS 20				17.60-17.70 reduced to clay			
			1			Very stiff thinly laminated dark reddish brown,	size mudstone – lithorelicts –	18.25 -5.24		
 - -		NA -				moulou dani groomon groy, OLAT.	17.75-17.80 mottled	(0.60)		
-	100		NI 20			Extremely weak thinly laminated dark grey	subhorizontal very - closely spaced, -	18.85 _{0.10)} -5.84 18.95 -5.94		
18.30 - 19.80 	5 0		30			MUDSTONE with very closely spaced, 30 degree bands (up to 5mm) of white fibrous gypsum.	undulating bands (<5mm) of white			
-		- NA				Fractures are subhorizontal, very closely spaced, undulating, rough.	18.50 20 degree 20mm band of white	(1.15)		
_ _ _ 10.80 _ 10.88		-	SPTC 50 (25 for 40mm/50	12 30	2 00	Stiff fissured reddish brown, locally mottled bluish arev CLAY locally reduced to clay bound tabular	18.95-19.05 60 _ degree 2mm bands _	(1.13)		
-			for 40mm)	-2.00	2.00	fine to coarse gravel size lithorelicts of mudstone.	of white fibrous			
Groupdwater Entrie	<u>s</u>					Depth Related Remarks		Chiselling Data	s	
No. Depth Strik	e Remar	ks		Depth Seal	ed	Depths (m) Remarks		Depths (m)	Duration (mins)	Tools used
Notes: For explanatio see Key to Explorator reduced levels in met	n of symbols y Hole Reco res. Stratum	s and abb ords. All d thicknes	epths and s given in		WE	ST BURTON C POWER STATION		Borehole		
brackets in depth colu © Co Scale 1:50	mn. oyright SOC	COTEC U	K Limited Carried	No. out for	A71 Firb	02-17 eck Construction Limited			Sheet 2 of 4	



Drilled DS	Start	E	quipment, Methods and Rema	urks —		Depth from to Dia	ameter Casing Depth	Ground Level		13.01 mOD
Logged DP	05/12/20	17 C	Comacchio 305.			(m) (m) (1.20 30.07	mm) (m) 121 12.30	Coordinates (m)		E 480272.23
Checked MS	End	D	ynamic sampling followed by ro PT Hammer ID: AR868, Rod tvo	tary core drilling e: NWY.	(PWF	size) using water flush.		National Grid		N 386209.16
	08/12/20	17 S	BP and HPD testing at selected	depths.						11000200.10
		17				Strata Description		4		
Samples and	TCR	5 		Date	Time	Strata Description		Donth Loval	Logond	Bookfill
Depth	SCR RQD	lf	Records/Samples	Casing N	Water	Main	Detail	(Thickness)	Legenu	Dackin
- 20.13 - 20.26			NI 100			Fissures are randomly orientated, very closely	19.15 subhorizontal	20.10 -7.09		
-			120			(MERCIA MUDSTONE)	fibrous gypsum	(0.25)		
	100		CS 21			Extremely weak dark reddish brown, mottled dark	20mm band of white	20.33 -7.34		
19.60 - 21.30	21	NA				closely spaced, undulating, smooth.	fibrous gypsum – 19.75-19.80 –	(0.60)	· · · · · ·	
_	15	-				(MERCIA MUDSTONE - Class B)	extremely weak -			
-		NI	_			grey, gravelly CLAY. Gravel is angular to	bluish grey	20.95 -7.94		
F		30 30				subrounded fine to medium of extremely weak	19.80-19.85	-		
- 21.30 - 21.38 -		<u> </u>	for 30mm)	12.30	3.00	(MERCIA MUDSTONE - Class C)	subvertical 2mm - bands of white -			
_ 21.57 - 21.90		110 NI	Flush: 12.70 - 30.00 Water 100%			Extremely weak to very weak thinly laminated light	fibrous gypsum	-		
-		330	CS 22			MUDSTONE, locally reduced to clay bound	subhorizontal very	-		
-	100					tabular gravel size lithorelicts. Fractures are	bands (<5mm) of	(2.15)		
21.30 - 22.80	45 27					smooth.	white fibrous gypsum	(2.10)		
E		NI				(MERCIA MUDSTONE - Class B)	20.30-20.35 tending			
-		30					tabular gravel size -	-		
-		100					20.50 subhorizontal	1		
F		1					20mm band of white - fibrous gypsum -			V/
-		L					20.70 High pressure	23.10 -10.09	· · ·	
-						with very closely spaced, 30 degree bands	21.45-21.50 40	(0.35)		
-	100					(<10mm) of white fibrous gypsum. Gravel is	of white fibrous	23.45 -10.44	· · · · ·	
_ 22.80 - 24.30	7	NI 5				weak mudstone. Fissures are randomly	gypsum 21.95 subhorizontal	-		
F		10				orientated, very closely spaced, undulating,	20mm undulating	-		
- -						planar, rougn. (MERCIA MUDSTONE)	fibrous gypsum			
-			_			Extremely weak to weak thinly bedded dark	22.70-22.80 2No. – 50mm bands of –	-		
- 24.30 - 24.39 -			SPTC 50 (25 for 50mm/50 for 40mm)	12.30	3.10	reddish brown MUDSTONE, locally reduced to clav bound tabular coarse gravel size lithorelicts.	white fibrous -	-		
<u> </u>		60 130				Fractures are subhorizontal, very closely to	22.80 subhorizontal	-		
24.72 - 24.85		200	CS 23			medium spaced, planar, undulating, rough, smooth.	fibrous gypsum			
F	100		_			(MERCIA MUDSTONE - Class B)	24.00-24.20 _ subhorizontal very _	-		
24.30 - 25.80	33						closely spaced bands (<5mm) of	(3.20)		
-	25						white fibrous	-		
_								-		
-							subhorizontal very _ closely spaced _	-		
_		-					bands (<10mm) of	-		
-		NI					gypsum-	-		
-							20mm band of white -	-		
-	100						fibrous gypsum - 25.10-25.30 40 -			
25.80 - 27.30	13		CS 24				degree very closely	26.65 -13.64		
_ 20.02 - 20.73	13					Extremely weak to very weak dark reddish brown	(<5mm) of white	(0.20)		
<u> </u>			_			subhorizontal bands (<2mm) of white fibrous	25.55 subhorizontal	(0.15) -13.99		
_				07/12/17	1630	gypsum. Fractures are subhorizontal, closely	10mm band of white fibrous gypsum			
- 27.30 - 27.42		NI	SPTC 50 (25 for 70mm/50	09/12/17	4.00	(MERCIA MUDSTONE - Class B)	26.60-26.70 dark	(0.80)		
-		60	lor Sommy	12.30	8.23	Soft dark reddish brown slightly gravelly CLAY.	27.00-27.10 30 —	(0.00)		
F						to extremely weak lithorelicts of mudstone.	of white fibrous -	07.00 11		V/
F	100					(MERICA MUDSTONE - Class Da) Extremely weak to very weak dark reddish brown	gypsum – 27.90 subhorizontal –	21.80 -14.79		
27.30 - 28.80	8	NI NI				and bluish grey MUDSTONE, locally reduced to	20mm band of white fibrous gypsum	(0.60)		
Ē		30				clay bound tabular medium to coarse gravel size	28.20 subhorizontal	1		\vee
È.			-			very closely spaced, undulating, smooth.	fibrous gypsum	28.40 -15.39		
_						(MERICA MUDSTONE - Class B) Extremely weak bluish grey MUDSTONE locally	=			1//
E		1				reduced to subrounded coarse gravel size				/
⊢		NI				(MERCIA MUDSTONE - Class B)	_	-		
F		NI				Extremely weak thinly bedded reddish brown	-	(1.50)		1/1
- 28.80 - 30.00	100 13	50				MUDSTONE. Fractures are randomly orientated,	-			Y / .
F	0					(MERCIA MUDSTONE - Class B)	29.50-29.70 dark	1		
L							with subrounded			1/1
			10	08/12/17 12.30	1130 Drv		gypsum	29.90 -16.89 (0.17)		
			30		- 7			()		
Groundwater Entrie	5	I		I		Depth Related Remarks		Chiselling Detail	s	
No. Depth Strike	e Remar	ks		Depth Sealed	d	Depths (m) Remarks		Depths (m)	Duration (mins)) Tools used
Notes: For ovelenet	ofermer	e and -	hbreviations		\A/=-			Borobolo		
see Key to Exploratory	Hole Reco	ords. All	I depths and ess given in		**=3	ST BORTON OF FOTTER STATION		Dorentole		
brackets in depth colu	nn.			No.	A71	02-17		6	3H102	
© Cop Scale 1:50	yright SOC	OIEC	Carried	out for	Firb	eck Construction Limited		l i	Sheet 3 of 4	



Drilled DS	Start	Equ	ipment, Methods and Rema	rks		Depth from to	Diame	ter Casing Depth	Ground Level		13.01 mOD
Logged DP	05/12/2017	Con	nacchio 305.			(m) (m) 1.20 30.07	(mm 121) (m) 1 12.30	Coordinates (m)	E	480272.23
Chacked MS	End	Dyn	amic sampling followed by rol	ary core drilling (PWF	size) using water flush.	1.20 00.07	12	12.50	National Grid		1 296200 16
		SBF	and HPD testing at selected	depths.					National Gru	ľ	1 300209.10
Approved TC	08/12/2017	, 									
Samples and	Tests				Strata Description	n					
Depth	TCR SCR	lf	Records/Samples	Date Time	м	ain		Detail	Depth, Level	Legend	Backfill
30.00 - 30.07	RQD		SPTC 50 (25 for 30mm/50	Casing water	Weak white fibrous CVP	SLIM Eractures are			(Inickness)	V. V. V. V	
			for 40mm)		subhorizontal, very close	ly spaced, undulating,			30.07 -17.06		
_					smooth.			-			
_					END OF EXPLO	RATORY HOLE					
-								_			
_								-			
—											
F								_			
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-								-			
È i								-			
Groundwater Entries	5 5				Depth Related Remarks				Chiselling Details	3	
No. Depth Strike	Remarks	•		Depth Sealed	Depths (m) Remarks				Depths (m)	Duration (mins)	Tools used
Notes: For evplanation	of symbole	and abb	reviations Project	W.E.		N			Borehole		
see Key to Exploratory	Hole Record	is. All de	epths and	VVE	ST BORTON O FOWER STATIC	214			Dorenole		
reduced levels in metre brackets in depth colur	es. Stratum th nn.	nickness	s given in Project I	No. A71	02-17				E	3H102	
© Cop	yright SOCO	TEC UM	Limited AGS	out for Firb	eck Construction Limited					Sheet 4 of 4	



Drilled SR	Start	E/	quipment, Methods and Rem	arks		Depth from to Dia	ameter Casing Depth	Ground Level		12.70 mOD
Logged DT	04/12/2017	7 C	omacchio 305.	· · · · · · · · · · · · · · · · · · ·		(m) (m) (n 1.20 29.80	mm) (m) 121 15.30	Coordinates (m)	I	E 480278.51
Checked MS	End	Dy Sl	ynamic sampling and rotary cor PT Hammer ID: SM39, Rod typ	re drilling (Pw pe: NWY.	√F size) u	sing water flush.	l	National Grid	I	N 386251.64
Approved TC	08/12/2017	,					l	1		
Samples an	d Tests					Strata Description		1		
Denth	TCR	If	Pocorde/Samples	Date	Time	Main	Dotail	Depth, Level	Legend	Backfill
Deptin	RQD		0.00.1.20 Hand excavated	Casing	Water	Wani	Detan	(Thickness)	~///X	_
-			inspection pit.		1	IOPSUIL.		(0.20) 0.20 +12.50		
-					1	MADE GROUND - Pulverised Fuel Ash)	=			
- 0.50 - 0.50 - 1.00	D 1 B 2				1		_			YZ,
_					1		=			
- 1.00	D 3				1			4		//
- 1.00 - 1.20 - 1.20 - 1.65	B 4 SPTS		N=47 (3.4/7.10.15.15)		Drv					×//
1.20 - 2.10	L5		N-47 (0,, 10, 12, 12)		1		_			Y
_					1		_			
_					1		-			
F_{-}					I			-		\times
- 2.10 - 3.10	L 6				1		_			
F					1		_	(4.30)		
-					1					
F					1		-	-		YZ,
F					1		-			
- 3.10 - 3.58	SPTS		N=3 (1,0/1,0,1,1) SW=25	3.00	Dry		_	-		
– 3.10 - 4.10 –	L 7				1		-	1		
– –					1			1		
-					1		=			
E					1		=			$\left[\right] /$
4.10 - 4.70	1.8				I		_	-		Υ/,
					1		_			
F				05/10/17	1630		_	4 50 48 20		//
-	ODTO		50 (05 far 35mm/50 for	4.00	Dry	Dark reddish brown and grey subangular to	1 -	4.50 +0.20		× / /
- 4./U-4./U -	SPIC		20mm)	06/12/17	0730	concrete and mudstone.		(0.50)		V /
-				4.00	Dry	(MADE GROUND)		5.00 +7.70		$\parallel / /$
-			Flush: 4.70 - 5.50 Water 100%		1	(MADE GROUND - Pulverised Fuel Ash)	_			1//
E					I		_			/
5.50 - 6.40	L 9				1		5.50-5.52 very	1		\vee
_					1		5.50-6.20 clayey	-		1//
F					1			1		ΥZ,
-					1		_	1		V/
					1			1		1//
- 6.40 - 7.40 	L 10				I					ľ/,
-					I		_	4		V
_					I		=			
-					I		_	(4.00)		1//
-					1		_			ΥZ,
7.40 - 7.85	SPTS		N=38 (1,2/4,6,11,17)	5.15	Damp		7.40-8.10 clayey	-		
- 7.40 - 0.30	L 11				1		-			//
_					1		-	-		$Y \neq $
-					1		_			
F					1		=			$\parallel / /$
- 8.30 - 9.30 -	L 12				1		-			ľ/,
-					I		_			
_					1		8 80 relic wood -			
-					1		fragments -	3 70		
-					1	Firm dark greyish brown slightly sandy silty CLAY.	(80x2mm) 8.90 rare coarse -	9.00 +3.10	×	$\langle \rangle$
– – 9.30 - 9.75	SPTS		N=11 (3,2/3,3,2,3)	9.15	Damp	(ALLUVIUM)	gravel of siltstone	1		
– 9.30 - 10.30 –	L 13				1		_		×—×	
–					1		=	(1.30)	XX	\mathbb{Y}
L					1		=		× – ×	\vee
	+			+						
Groundwater Entrie	es ko Pomarks	_			bolo	Depth Related Remarks		Chiselling Detail	S Suration (mins)	
No. Depui ou	Ke Kelliarka			Depth So	aleu	Depths (III) Kelliarka		Depuis (iii)	Duration (mms)	10015 1354
					I			1		
Notes: For explanation see Key to Explorator	on of symbols a ry Hole Record	and ab ds. All	breviations Project depths and		WE	ST BURTON C POWER STATION	l	Borehole		
reduced levels in met brackets in depth col	tres. Stratum th umn.	lickne	ess given in Project	No.	A71	02-17	l	I F	3H103	
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Drilled SR	Start	Equ	uipment, Methods and Ren	narks	_	Depth from to Dia	meter Casing Depth	Ground Level		12.70 mOD
Logged DT	04/12/20	17 Cor	macchio 305.		(F)	(m) (m) (r 1.20 29.80	nm) (m) 121 15.30	Coordinates (m)		E 480278.51
Checked MS	End	Dyr SP	namic sampling and rotary of T Hammer ID: SM39, Rod ty	pre drilling (PM pe: NWY.	VF size) us	sing water flush.		National Grid		N 386251.64
Approved TC	08/12/20	17								
Samples an	d Tests	;				Strata Description				
Depth	TCR	If	Records/Samples	Date	Time	Main	Detail	Depth, Level	Legend	Backfill
	RQD		Records/oumpies	Casing	Water	Firm dark gravish brown slightly sandy silty CLAY	Detail	(Thickness)		
-						(ALLUVIUM)	=	- 	×	
- 10.30 - 11.30 -	L 14					Dark greyish brown, occasionally mottled	wood fragments -	10.30 +2.40		
-						brownish brange, slightly sandy clayey SILT.	(<40x2mm) — _	(0.60)	$\overline{\times} \times \overline{\times} \times$	
-							-	40.00 4.00		
				00/10/17	4000	Thinly laminated dark grey slightly sandy clayey		10.90 +1.80	$\times \times \times \times$	
				9.15	Damp	(ALLUVIUM)	-	(0.40)		
- 11.30 - 12.30 -	L 15			07/12/17	0730	NO RECOVERY.	-	11.30 +1.40		
-				9.15	Damp		-			
-							=	(1.00)		
							_	-		
-							=			
- 12.30 - 13.30 -	L 16					Dark greyish brown slightly sandy SILT.	– 12.30-12.50 very clayey –	12.30 +0.40		
-						(ALLUVIUM)	12.60 becoming -	-	$(\times \times \times)$	
-							thinly laminated –	(0.85)	$\times \times \times \times$	
-							12.90-13.05 thickly – laminated clayey silt	-	$\times \times \times \times$	
_						NO RECOVERY - MUDSTONE.	-	13.15 -0.45		
– 13.30 - 13.75 –			N=28 (8,3/4,5,7,12)	12.30	0.60	(Driller's description)	- 13.30-15.30 no recovery	-		
-							-			
– – 13.30 - 14.30	0						-			
-	0						_			
_							-	(2.15)		
_							-	(2.10)		
-										
- - 14.30 - 15.30	0	- NA					-			
	Ō	-					-	-		
_							-	-		
_		1				Firm reddish brown, locally mottled light greenish	-	15.30 -2.60		
_						grey, CLAY.	-			
_ 	100						-	(1.00)		
	ō						_	(1.00)		
-							-			
- 16.30 - 16.44			SPTS 50 (13,12 for	15.30	0.60	Firm to very stiff reddish brown sandy gravelly	16.23-16.30 extremely weak	16.30 -3.60		
_			251111/501014511111)			CLAY. Gravel is subangular to subrounded fine to	greenish grey mudstone	-		
F						weak mudstone. Fissures are randomly	=			
F	100	- NA				orientated, extremely closely to closely spaced,	=	(1.35)		
16.30 - 17.80	22 0	-				(MERCIA MUDSTONE - Class C)	17.05-17.06 white fibrous gypsum	(
F							17.30-17.32 white -	-		
_							17.35-17.38 white -	-		
F			1			Extremely weak and very weak thinly laminated to	tibrous gypsum –	17.65 -4.95		//
-]				very thinly bedded greenish grey and reddish brown, locally calcareous, MUDSTONE, Fractures	-			
-		NI 40				are subhorizontal to subvertical, very closely		(0.95)		
F		90				spaced, undulating rough, locally infilled with clay and gypsum.	fibrous gypsum	1		$\langle \rangle$
17.80 - 19.30	100 19					(MERCIA MUDSTONE - Class B)	-	19.60 5.55		
F	0		1			Firm to very stiff fissured greenish grey sandy		18.60 -5.90		1//
F		- NA				subrounded fine to medium of extremely weak	fibrous gypsum	(0.70)		
-		-				mudstone and very stiff clay lithorelicts. Fissures		····-/		
- 19.30 - 19.42			SPTC 50 (18,7 for	15.30	0.80	spaced, planar to undulating, rough.	19.20-19.24 white – fibrous gypsum –	19.30 -6.60		
F			30mm/50 for 20mm)			\(MERCIA MUDS ONE - Class C) Stiff to very stiff fissured reddish brown. locally	– 19.50 gypsum 40 –	1		1/1
F						mottled greenish grey, slightly sandy slightly	- degree - 19.60 gypsum 40	1		
F						subrounded fine to medium of extremely weak	degree			V /
							_			
Groundwater Entri	ies					Depth Related Remarks		Chiselling Detail	s	
No. Depth Stri	ke Remar	ks		Depth Se	aled	Depths (m) Remarks		Depths (m)	Duration (mins)	Tools used
Notes: For explanation see Key to Exploration	on of symbol ry Hole Reco	s and abb ords. All d	previations Projec	t	WE	ST BURTON C POWER STATION		Borehole		
reduced levels in me brackets in depth col	tres. Stratum umn.	thicknes	s given in Projec	t No.	A71	02-17		E	3H103	
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Drilled SR	Start	Ed	quipment, Methods and Rema	arks		Depth from to Dia	ameter Casing Depth	Ground Level		12.70 mOD
Logged DT	04/12/20	17 Co	omacchio 305.		- · 、	(m) (m) (1.20 29.80	mm) (m) 121 15.30	Coordinates (m)		E 480278.51
Checked MS	End	SF	namic sampling and rotary cor PT Hammer ID: SM39, Rod type	e drilling (PW e: NWY.	F size) us	ang water flush.		National Grid		N 386251.64
Approved TC	08/12/20	17								
Samples and	d Tests	;				Strata Description		1		
Depth	TCR	If	Pacarde/Samplas	Date	Time	Main	Dotail	Depth, Level	Legend	Backfill
	RQD	"	Records/Samples	Casing	Water	wan		(Thickness)		
19.30 - 20.80						and subvertical, planar to undulating, rough. Rare	gypsum vein	-		
-	100 4					fissures at 40-60 degree infilled with off white	20.30-20.34 very - weak mudstone -	(2.10)		
_	0	_		07/12/17	1630	(MERCIA MUDSTONE - Class C)				
- 20.80 - 20.88		NA	SPTC 50 (25 for 30mm/50	15.30	3.70		gypsum vein			
- 20.80 - 20.88		-	for 45mm)	08/12/17	0730		-	-		
-				15.30	1.80		-	-		
-							21.30-21.31 white -	-		
-	100					Very weak to weak thinly bedded greenish grey,	fibrous gypsum - 21.40-21.70 reddish -	21.40 -8.70		
	15		100%			locally calcareous, MUDSTONE, locally tending to clay with gravel size mudstone lithorelicts	brown locally -			
-						Fractures are subhorizontal and subvertical, very	grey	-		
22.08 - 22.21			CS 17			closely to closely spaced, planar, occasionally undulating smooth	subvertical			
-						(MERCIA MUDSTONE - Class B)	undulating rough	-		
_							-	-		
22.55 - 22.65		NI 50	CS 18				-	(2.50)		
-		150						(2.00)		
-	100							-		
22.30 - 23.80	0						-	-		
_							23.30-23.33 white -			
_								-		
F				15.00				-		
- 23.80 - 23.90 - 23.80 - 23.87			for 60mm)	15.30	0.80	Stiff fissured reddish brown, locally mottled	fibrous gypsum -	23.90 -11.20	ر ب همر ، ا م در ا	
-			CS 19			greenish grey, slightly sandy slightly gravelly		-	그 그 그	
_						CLAY. Gravel is subangular to subrounded fine to	-	-		
	100					stiff clay lithorelicts. Fissures are subhorizontal to		-		
23.80 - 25.30	0					subvertical, planar, smooth, locally infilled with	-			
_						(MERCIA MUDSTONE - Class C)	-	-		
								-		
-								-		
-							fibrous gypsum	-		
-							_			
_								-		
-	100	-					_			
25.30 - 26.80	0	NA -					26.15-26.17	(4.30)		
_							extremely weak	-		
-							26 55 26 58	-		
-							extremely weak	-		
- 26.80 - 26.86 -			SPTC 50 (25 for 30mm/50 for 35mm)	15.30	0.80		mudstone _	-		
								-		
_							27.25-27.28 fine to			
-	100						medium gravel of	-	그 그 그	
26.80 - 28.30	0						mudstone _	-		
-	-						medium gravel of	-		
F							gypsum and – mudstone	-		V/
F			4			Variatiff indicting the former of the	=	28.20 -15.50		
Ę		1				gravely sum indistinctly fissured greenish grey gravely to very gravelly CLAY. Gravel is	_	1		× / ,
–						subangular to subrounded fine to coarse of		_		
E						are randomly orientated, extremely closely	-			
- 28.95 - 29.01	100	-	CS 20			spaced, planar, smooth.	28.95-29.01 white	(1.00)		(//
28.30 - 29.80	0	NA -	0020			(MERCIA MUDSTONE - Class C)	fibrous gypsum	(1.60)		
-	0						-	-		
-								-	· · · · · ·	
_				08/12/17	1630			-	· · · · · ·	
_			_	10.00	0.00	END OF EXPLORATORY HOLE		29.80 -17.10		_ / /
Groundwater Entrie	s e Remari	ks		Depth Sea	aled	Depth Related Remarks Depths (m) Remarks		Chiselling Detail Depths (m)	ls Duration (mins) Tools used
	- nomali					(iii)		2 openo (m)		,
								1		
Notes: For explanation	n of symbols	s and at	breviations Project		WES	ST BURTON C POWER STATION		Borehole		
see Key to Explorator reduced levels in met	y Hole Reco es. Stratum	ords. All thickne	depths and ss given in						20102	
brackets in depth colu © Co	mn. oyright SOC	OTEC I	JK Limited AGS	No.	A71	02-17		1 [50103	
Scale 1:50		05/02/2	2018 13:06:10 Carried	out for	Firb	eck Construction Limited		1	Sheet 3 of 3	



Drilled SR	Start	Equipment, Methods and Rem	arks		Depth from to	Diameter Casing Depth	Ground Level		13.09 mC	D
Logged DP	11/12/2017	Comacchio 205.	re drilling (PWF size)	using water flush.	(m) (m) 1.20 30.10	(mm) (m) 121 15.20	Coordinates (m)		E 480328.1	16
Checked MS	End	SPT Hammer ID: SM39, Rod typ	e: NWY.	Joing water nach.			National Grid		N 386217.3	30
Approved TC	15/12/2017	<u> </u>					4			
Samples and	I Tests		Date Tim	Strata Descripti	on		Durath Lawal		Deeld	
Depth	SCR RQD	If Records/Samples	Casing Wat	ər	Main	Detail	Depth, Levei (Thickness)	Legena	Васки	ан
-	+	0.00-1.20 Hand excavated inspection pit.		TOPSOIL.		-			^	0
-		hispector p				-	(0.60)		v	4
0.50	D1					-	+12.49		- ÷-	ŀ-
U.00 - 0.00	D∠			Dark grey, locally grey, (MADE GROUND - Pt	, slightly sandy SILT.	7			ЦI	\vee
1.00	D 3			(11.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	,		_			1/
- 1.00 - 1.20 - 1.20 - 1.65	B 4 SPTS	N=8 (2,2/2,2,2,2)	Dr	v		-	-		-ľ / I	[/
1.20 - 2.20	L 5					-	-		- Kiti	ľ,
 -						-	-			K.
-						-	-		ЦI	\vee
							-			1/
2.20 - 3.20	L6					-			-ľ / I	[/
-						-	-		- K J I	ľ,
-						-	(4.10)			Y,
-						-	-			V
-						-	-			1/
- 3.20 - 3.00 - 3.20 - 4.20	SPIS L7	N=10 (2,3/3,2,3,2)	id 3.00	1		-	-		-ľ / I	[/
F						-	-		- Kiti	ľ,
										K,
E										V
- - 4.20 - 4.90	L8					-	-			1/
F						-	-		-ľ / I	[/
-						-			- Kiti	ľ,
4 00 - 4 97		50 (25 for 45mm/50 for	D	Soft to firm reddish bro	wn slightly sandy gravelly		- 4.70 +0.00 (0.20) +8.19			K,
- 4.90 - 7.07	40	30mm)		coarse of quartzite and	d clinker.	/ -	4.90		- MI	\vee
4.90 - 5.40	NA NA		11/12/17 163 [/] 4 70 0.8	ן (MADE GROUND) Dark grey slightly sand	Jy slightly gravelly SILT.	_/	5.30 +7.79			1/
- 5.40 - 5.85 5.40 - 6.10		SPTS N=5 (1,2/1,1,2,1)	4.70	Gravel is angular to rou siltstone and concrete	unded fine to medium of	A	(0.40)		-ľ / I	[/
			4.70 0.80) (MADE GROUND)	the conductive or aveily CLAY.	_/ .	5.70 +7.39		- K J I	ľ,
Ę				Gravel is angular to ro	unded fine to medium of	/ -	-			Y,
- 6.10 - 7.10		L 10		(MADE GROUND)	1ker.		-			V
E				Dark grey slightly sand (MADE GROUND - Pt	ly SILT. Ilverised Fuel Ash)	-	-		/	\vee
Ē				(11.1.1.2.2.1.2.	,	-			- Î / I	1/
F						-	-		ľĮI	Ĺź
E						-	-		- K []	Y,
- 7.10 - 7.55 - 7.18 - 8.00		SPTS N=21 (1,3/4,3,6,8) L 11	4.70 Dam	2		-	-			V
F						-	-			1/
F						-	-		-í Al	[/
F						-	-		- K J I	ľ,
8.00 - 9.00		L 12					-			Y,
E						-	_			V
F						-	(5.65)			1/
-						-	- (0.00,		-ľ / I	[/
			Dan			-	-		- K J I	ľ,
9.00 - 9.45 9.00 - 10.00		SPTS N=10 (2,3/3,2,3,∠) L 13	7.00 Danij	ί		9.10-10.00 sandy -	-			K.
F						-	-		- MI	\vee
E						-	_			V
L						-	_		- Î A I	1/
-	<u> </u>			_			-		_ĽIJ	Ĺ
Groundwater Entries	s Pomarks		Donth Sealed	Depth Related Remarks			Chiselling Detail	Is Duration (mins)		hee
NO. Deputouni	Keillains		Deptil Searco	Depths (m) Remarks			Depuis (iii)	Duration (mins)	10015 43	seu
Notes: For explanation	n of symbols an	nd abbreviations Project	. w	EST BURTON C POWER STA	ATION		Borehole			
see Key to Exploratory reduced levels in metro	/ Hole Records es. Stratum thic	All depths and ickness given in					Ι,	<u>¤H104</u>		
brackets in depth colu	mn. ovright SOCOT	EC UK Limited AGS	NO. A/	102-17			-			



Drilled SR	Start	Eq	uipment, Methods and Rema	arks		Depth from to Dia	meter Casing Depth	Ground Level		13.09 mOD
Logged DP	11/12/201	7 Co Dv	macchio 205. namic sampling and rotary cor	e drillina (PW	F size) u	(m) (m) (n 1.20 30.10	mm) (m) 121 15.20	Coordinates (m)		E 480328.16
Checked MS	End	SP	T Hammer ID: SM39, Rod type	e: NWY.	,			National Grid		N 386217.30
Approved TC	15/12/201	7								
Samples and	d Tests			D-4-	T '	Strata Description		<u> </u>	_	
Depth	TCR SCR RQD	lf	Records/Samples	Casing	Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
10.00 - 11.00			L 14			Dark grey slightly sandy SILT.	-	-		
-						(MADE GROUND - Pulverised Fuel Ash)	-	-		
_							-	-		
_							-	-		$-\Delta V$
- - 11.00 - 11.45			SPTS N=0 (2 1/2 3 2 2)	10.70	Damo		_	-		
11.00 - 11.45			L 15	10.70	Damp		-			δĄ
_						Thinly laminated light brown mottled orangish	-	11.35 +1.74		∣o∏o
_						brown, clayey SILT.		(0.35)	XXXX	
F						(ALLUVIUM) Dark brown, locally dark greyish brown, clayey		11.70 +1.39	XXXX	ТH
- - 12.00 - 13.00			L 16			SILT.	-	-	$\times \times \times \times$	- LA C
-							-	-		ЬН
-							-	(1.30)		lõHo
-								-		L H -
-				12/12/17	1630		-	-	$\times \times \times \times$	ĽB
- 13.00 - 13.45			SPTS N=26 (3,4/6,6,6,8)	13.00	Damp	Medium dense brown mottled light brown silty		- 13.00 +0.09	$\times \times \times \times$	¶ _
- 13.00 - 14.50 -			L 17	13/12/17	11.20	fine to coarse SAND.	-	-	××××	
E						(ALLOVIOM)	-	(1.00)	Îx x x	- MH o
E							-	(1.00)	× × ×	- I_H -
_							-		× × ×	PHO
						Firm, locally stiff, dark reddish brown, locally light		-14.00 -0.91		
-						bluish grey, CLAY.		-		
<u> </u>			_							
-	71						-			
14.50 - 15.20	0						-	-	L1	
-	0							-		
-							-	(2.45)		
-		-					-	-		
-		NA -					-	-		
– – 15.20 - 16.60	100						-	-		
-	0						-	-		
-							-	-		
- - - 16.60 - 16.70			SPTS 50 (25 for 50mm/50	15 20	0.80	Dark reddish brown, becoming light grey, clayey		16.45 -3.36	· · · · · · · · · · · · · · · · · · ·	
- 16.79 - 16.90			for 45mm)	10.20	0.00	extremely weak mudstone lithorelicts.	16.70-16.80 -	(U.35) 16.80 -3.71		
			03 18			(MERCIA MUDSTONE - Class C)	dark grey mudstone	0.00		
_						locally light bluish grey, slightly gravelly CLAY.	50mm band of white	(0.50)		
16.60 - 18.10	100		CS 19			Gravel is angular to subrounded fine to medium of extremely weak mudstone lithorelicts.	TIDFOUS GYPSUM _	17.30 -4.21	<u>, </u>	
17.40 - 17.60 	13					(MERCIA MUDSTONE - Class C)		17.55 -4.46		
-		NI				greenish grey, mottled dark reddish brown,	17.70-17.75 angular – fine to medium –	(0.25) 17.80 -4.71		$\langle Y \rangle$
È.		60 100				subhorizontal (<2mm) bands of white fibrous	gravel of gypsum -	-		
– 18.10 - 18.21 –			CS 20			gypsum. Fractures are subhorizontal, closely spaced, rough, undulating.		(0.85)		
F						(MERCIA MUDSTONE - Class B)	-	-		
E						brown, locally mottled light greenish grey,	18.60 subhorizontal	18.65 -5.56		
18.10 - 19.60	100 17					MUDSTONE. Fractures are randomly orientated, extremely closely spaced. rough. undulating.	fibrous gypsum	(0.45)		
F	7					(MERCIA MUDSTONE - Class B)		19.10 6.01	* * * * * * *	
E						grey, locally mottled reddish brown, MUDSTONE,	19.20-19.30 -	-0.01	· · · · · · ·	///
L						locally reduced to clay bound angular gravel size lithorelicts. Fractures are subhorizontal closely	closely spaced -		· · · · · · ·	
– 19.60 - 19.71 –	$\left - \right $		SPTC 50 (25 for 60mm/50 for 50mm)	15.20	0.60	spaced, locally NI, rough, undulating.	fibrous gypsum	-	· · · · · · ·	
-						angular to subangular fine to medium of extremely		-	· · · · · ·	
							5mm band of white fibrous gypsum			
Groundwater Entri						Denth Related Remarks	57F · · ·	Chisolling Deta	ile	
No. Depth Strik	e Remark	s		Depth Se	aled	Depths (m) Remarks		Depths (m)	Duration (mins	s) Tools used
								1		
								1		
Notes: For explanatio	n of symbols	and abl	breviations Project		WE	ST BURTON C POWER STATION		Borehole		
see Key to Explorator reduced levels in met	y Hole Recor es. Stratum f	as. All d thicknes	ss given in	No	A 74	02-17			BH104	
Constant Con	pyright SOCO	DTEC U	IK Limited AGS	out for	Firb	·· eck Construction Limited		'	Sheet 2 of 4	
00010 1.00		05/02/20	018 13:06:10					(01100L 2 UI 4	



Drilled SR	Start	Eq ^r	uipment, Methods and Rema	arks	_	Depth from to Di (m) (m)	ameter Casing Depth (mm) (m)	Ground Level		13.09 mOD
Logged DP	11/12/20	17 Dyr	macchio 205. mamic sampling and rotary cor	re drilling (PW	/F size) u	sing water flush. 1.20 30.10	121 15.20	Coordinates (m)		E 480328.10
Checkea Mo	15/12/2(017	ו Hammer וט. סוווטש, דעע נאדע	3: IN VV T.				National Griu		N 380217.30
Samples and	Toste	<u></u>				Strata Description		1		
Samples and	TCR	, 	T	Date	Time		1	Depth, Level	Leaend	Backfill
Depth	SCR RQD	lt	Records/Samples	Casing	Water	Main	Detail	(Thickness)		
	T	[-	weak mudstone lithorelicts. (MERCIA MUDSTONE - Class C)	<u> </u>	(1.90)	· · · · · · ·	$\neg//$
19.60 - 21.10						Firm to stiff fissured dark reddish brown, locally	20.25-20.30 30 _ degree 5mm band _	-	· · · · · ·	ľZ,
-	100 7	NA				Gravel is angular to subangular fine to medium of	of white fibrous	-		- V /
	7	-				extremely weak mudstone lithorelicts. Fissures	20.40-20.50 50 _	-		
						are randomly orientated, very closely spaceu, smooth planar.	of white fibrous	-	· · · · · ·	ſŹ,
-						(MERCIA MUDSTONE - Class C)	gypsum- 20.90 subhorizontal -	21.00 -7.91		
			100			Extremely weak very thinly bedded dark reduisri	10mm band of white - fibrous avpsum -	21.30 -8.21		
						closely spaced, rough, undulating.	21.00 20 degree			$ /\rangle$
		- NI				(MERCIA MUDSTONE - Class B) Extremely weak very thinly bedded light reddish	fibrous gypsum	- (0.90)		Y Z
21.10 - 22.60	100 15	-				brown MUDSTONE, locally reduced to clay bound	-	(0.00)		V/
- 22.05 - 22.15	7		CS 21			angular gravel size mudstone lithorelicts. Fractures are randomly orientated, very closely	22.05-22.10 20	1		
22.00 2			1			spaced, smooth, planar.	degree bands	- 22.10 -9.01		
			Flush: 14.50 - 30.10 Water 100%	13/12/17	1630	(MERCIA MUDSTONE - Class B)	fibrous gypsum	-		
- 22.67			SPTC 50 (25 for 30mm/50	15.20	1.80	reddish brown MUDSTONE, locally reduced to	22.30 subhorizontal 30mm band of white	-		
22.00	Γ	1	for 40mm)	14/12/17	0730	clay bound angular to subangular extremely weak	fibrous gypsum -	-		Y Z
				15.20	1.00	subhorizontal, closely spaced, locally NI, rough,	20mm band of white -	-		
-		NI					fibrous peat 22.80 subhorizontal	-		
- 32 04 40	100	60 200				(MERCIA MUDS I UNE - Class D)	40mm band of white -	. (2.15)		ľZ.
22.60 - 24.10 23.40 - 23.52	47 13		CS 22				fibrous gypsum _	-		V/
-							-	-		
							-	1		YZ.
_								-		V/
		1				l	-	41.16		
			-			Firm fissured dark reddish brown slightly gravelly	24.30-24.35 angular -	24.25 -11.10		ľZ.
-						CLAY. Gravel is angular to subrounded time to coarse of extremely weak mudstone lithorelicts.	gravel of gypsum	-		\vee /
	40	NA				Fissures are randomly orientated, closely spaced.	24.50 subhorizontal 2mm band of white	(0.85)	· · · · · ·	//
24.10 - 25.60	0	-				(MERCIA MUDSTONE - Class C)	fibrous gypsum	-	· · · · · ·	ΥZ.
-	0						band of white			V/
			1			Extremely weak to very weak thinly bedded dark	fibrous gypsum	- 20.10		
						MUDSTONE, locally tending to clay bound tabular	25.40 subhorizontal -	1		
25.60 - 25.70			SPTC 50 (25 for 60mm/50	15.20	0.80	gravel size mudstone lithorelicts. Fractures are	20mm band of white	-		1/
		NI 10	for 45mm)			randomly orientated, occasionally 10 degree, very closely spaced, smooth, planar.	25.60-25.80 clay	(1.35)		
		30				(MERCIA MUDSTONE - Class B)				Y Z
-	1.2							1		V/
25.60 - 27.00	13 7						-	-		
26.39 - 26.51	0					Extremely weak thinly laminated dark reddish		26.45 -13.36		
-			50			brown MUDSTONE. Fractures are subhorizontal,	-	(0.25)		V/
			100			closely spaced, undulating, rough.	л <u>-</u>	- 20.70 10.0.		$\left[\right] $
		4				Firm dark reddish brown gravelly CLAY. Gravel is	26.95 subhorizontal	1	· · · · · · · · · · · · · · · · · · ·	Y Z
-						angular to subrounded fine to coarse of extremely	fibrous gypsum	-		
	100					weak mudstone lithorelicts. (MERCIA MUDSTONE - Class C)	_	(1.20)	· · · · · ·	
27.00 - 27.90	NA NA					(11) (11) (11) (11) (11) (11) (11) (11)	-	-		
								-	· · · · · · · · · · · · · · · · · · ·	V/
		4				Off forward raddich brown, becoming light		- 27.90 -14.81		$ /\rangle$
	100					areenish grey, gravelly CLAY. Gravel is angular to	_	_		Y Z
. 27.90 - 28.60	100	- NA				subangular fine to coarse of extremely weak	-	-		
	0	-				mudstone lithorelicts. (MERCIA MUDSTONE - Class C)		-	· · · · · · · · · · · · · · · · · · ·	
- 28.60 - 28.70		4	SPTC 50 (25 for 50mm/50	15.20	0.60		28.50 SUDNORZONIA 20mm band of white -	-		
			for 45mm)			l	fibrous gypsum	_	· · · · ·	
-								(2.00)		$ /\rangle$
-	100						-	-	· · · · · ·	Y /
28 60 - 30.10	9						-	-		
29.45 - 29.53	0		CS 24				29.40-29.47 very - weak mudstone with -	-	* <u>*</u> * <u>*</u> *	
-						l	rounded gypsum -	_		
			NI	14/12/17	1630		29.70-29.77 very		· · · · · · ·	V/
	+	F		15.20	4.60		rounded gypsum	(0.20)		_[_/_
			NI				inclusions (<10mm)			
Groundwater Entries No. Depth Strike	a Rema	rks		Depth Se	aled	Depth Related Remarks Depths (m) Remarks		Chiselling Detail Depths (m)	s Duration (mins	3) Tools use
· ·				-						,
Notes: For explanation	of symbol	Is and abl	breviations Project		WE	ST BURTON C POWER STATION		Borehole		
ee Key to Exploratory educed levels in metr	Hole Rect es. Stratur	ords. All u n thicknes	ss given in		.7			l p	24104	
prackets in deptn couu © Cor	nn. ovright SOC	COTEC U	JK Limited AGS	No.	Ar.	02-17				
Soolo 1.50	J. J		Carried	out for	Firr	peck Construction Limited			Sheet 3 of 4	



Drilled Logged	SR DP	Start 11/12/2017	Equipment, Methods and Remarks Comacchio 205. Dynamic sampling and rotary core drilling (PWF siz SPT Hammer ID: SM39, Rod type: NWY.				Depth from to Diameter Casing Depth from (m) (m) (mm) (m) size) using water flush. 1.20 30.10 121 15.20				sing Depth (m) 15.20	Ground Level Coordinates (m)		13.09 mOD E 480328.16
Арргоу	a MS ed TC	Ena 15/12/2017	SPT Hammer ID. SW	59, Rou type	. NVV T.							National Grid		N 386217.30
Sam	ples and	Tests				ę	Strata Description	ו						
	Depth	TCR SCR ROD	If Records/S	amples	Date T Casing V	'ime Vater	Ма	ain		Det	ail	Depth, Level (Thickness)	Legend	Backfill
Checke Approv Sam 	d MS ed TC ples and Depth		Dynamic sampling ar SPT Hammer ID: SM	amples	drilling (PWF sit NWY. Date T Casing V	ze) usi	ng water flush. Strata Description Ma Extremely weak dark rede Fractures are randomly o spaced, smooth planar. (MERCIA MUDSTONE) END OF EXPLO	1.20 1 ain Jish brown MU rientated, very Class B) RATORY HO	IDSTONE. closely LE		iail	Depth, Level (Thickness) 30.10 -17.01	Legend	Backfill
						\dashv]		<u> </u>	
	durate - E						Danth Dalata d Da					Chier Was T 1		
Groun No.	dwater Entries Depth Strike	Remarks			Depth Sealed	i	Depth Related Remarks Depths (m) Remarks					Chiselling Detail Depths (m)	s Duration (mins)	Tools used
Notes: F see Key reduced brackets Scale	For explanation to Exploratory l levels in metres in depth colum © Copy 1:50	of symbols and Hole Records. s. Stratum thic nn. yright SOCOTE	d abbreviations All depths and kness given in C UK Limited 02/2018 13:06:10	Project Project N Carried o	o. ut for	WES A710 Firbe	T BURTON C POWER STATIC 2-17 ck Construction Limited	DN				Borehole	3H104 Sheet 4 of 4	



Drilled SS	Start	Eq	uipment, Methods and Rem	arks		Depth from to D	iameter Casing Depth	Ground Level		13.31 mO	D
Logged DP	11/12/2017	7 Be	retta T41.	t-s: sero drillin	- (D)//E	(m) (m) 1.20 29.50	(mm) (m) 121 15.00	Coordinates (m)		E 480217.4	44
Checked MS	End	SP	PT Hammer ID: AR1777, Rod t	ype: NWY.	ig (Pvvr	size) using water flush.		National Grid	,	N 386221.2	29
Approved TC	15/12/2017	7									
Samples and	d Tests					Strata Description		l			
Depth	TCR SCR POD	lf	Records/Samples	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfi	ill
-			0.00-1.20 Hand excavated		••••	TOPSOIL.	-	(,		°. 4	0
			inspection pit.					(0.50)		o	4
						Light grouigh brown clightly gandy slightly gravely		0.50 +12.81		H	-
						SILT. Gravel is angular to subangular fine to	-				
						coarse of clinker and poorly cemented silt. (MADE GROUND - Pulverised Fuel Ash)	-	-			
-					_	(11) 12 0.100.12		-			K,
1.20 - 1.65 1.20 - 1.65	D 1		N=16 (3,4/4,4,5,3)		Dry		-				Y
											V
							_			Ι/I	1/
										- Kur	ľ,
-							_	(3.40)			K.
								(0.70)		И	\vee
							_	-			1/
2.70 - 3.15 2 70 - 3.15	SPTS		N=15 (2,4/3,4,4,4)		Dry		2 80-2.85 clavey -	-			Ĺ
2.70 0.10											Y.
											\vee
								-			//
							_	-		ľ	Ĺ
											Y,
-				11/12/17	1600	Dark grey slightly sandy SILT.	1 _	3.90 +9.41			\vee
4.20 - 4.65	SPTS		N=20 (3,4/6,7,3,4)	3.00	Dry	(MADE GROUND - Pulverised Fuel Ash)	4.20-5.30 driller -	4			\vee
4.20 - 4.65	D 3			12/12/17 3.00	0800 Dry		notes void -	4		ÍЛ	[/
							-	-		- K J I	ľ,
							-	-			Y
-							5.00-5.30 clayey	-			\vee
					_		-	-		1 A I	//
5.30 - 5.75 5.30 - 5.75	SPTS D 4		N=14 (4,2/3,4,3,4)	4.50	Dry		5.30 slightly gravelly -	-			ľ,
							-	-			Y
								1			\vee
6.00 - 6.30	SPTS		39 (4,17/20,19 for 75mm)	6.00	Dry			-		Ι / I	//
6.00 - 6.30	0.5									ΥJ	ľ,
							-				Y.
											\vee
											17
-							_	(6.10)		- K J I	ľ,
											Ľ
							-				\vee
							-			ľ	Ĺ
-							8.00-8.50 slightly-	-			Y,
							angular fine to -	-			\vee
							cemented silt _	-			
8.70 - 9.15	SPTS		N=13 (5.4/3,3,3,4)	7.50	Dry			-		ľЛ	[/
8.70 - 9.15	D 6				•			4		- K I I	ľ,
-								4			V
							_	4			
								-		ТЛ	/ ا
								4			Υ,
											Y
								10.00 +3.5T	LAALX AAA		
Groundwater Entrie	:S					Depth Related Remarks		Chiselling Detai	ls Desetter (selec)		
No. Depth Strik	e Remarks	5		Depth Sea	ieu	Depuis (m) Remarks		Deptits (m)	Duration (mins)	TOOIS US	sea
otes: For explanation ee Key to Explorator	n of symbols a y Hole Record	and abl ds. All (breviations Project		WE	ST BURTON C POWER STATION		Borehole			
rackets in depth colu	imn.		K Limited	No.	A71	02-17			3H105		
Scale 1.50	Jyright SOCO	JIEC U	Carried	out for	Firt	eck Construction Limited			Shoot 1 of 2		



Drilled SS Logged DP Checked MS	Start 11/12/2017 End	Eqı א Ber Dyı SP	uipment, Methods and Rema retta T41. namic sampling followed by ro 'T Hammer ID: AR1777, Rod ty	rks tary core drilli ype: NWY.	ing (PWF	size) using water flush.	iameter Casing Depth (mm) (m) 121 15.00	Ground Level Coordinates (mֲ National Grid)	13.31 mOD E 480217.44 N 386221.29
Approved TC	15/12/2017	L				Strata Description				
Depth	TCR	lf	Records/Samples	Date	Time	Main	Detail	Depth, Level	Legend	Backfil
					Viato.	Thinly laminated orangish brown, mottled brownish grey, clayey SILT with rare pockets (<5mm) of dark purple silt. (ALLUVIUM)		(0.70)		
-						Soft greenish brown, mottled greenisn grey, siity CLAY with slight organic odour. (ALLUVIUM)		(0.50)		
- - - 11.50 - 11.95 - 11.50 - 11.95			− N=12 (2,2/2,3,3,4) D 7	12/12/17 10.50 13/12/17	1600 6.50 0800	Medium dense dark grey silty fine to coarse SAND. (ALLUVIUM)		111.20 T2.1		
-			0,	10.50	8.50	The second		(0.00) - - - 12.05 +1.2	6 × × ×	
- 11.50 - 13.00 - - -	100 0 0					Thinly to thickly laminated orangish brown, mottled brownish grey, clayey SILT. (ALLUVIUM)		(0.95)		
			0 0 SPTS 34 (10,19/17,17 for 75mm)	13.00	8.50	Firm reddish brown, mottled greenish grey, slightly gravelly CLAY. Gravel is angular to subangular fine to medium of mudstone. (Description from SPT only)		13.00 +0.3 ⁻		
13.30 - 14.80	0 0 0	- NA	0.8			(MERCIA MUDSTONE - Class Uc)		(1.80)		
- - - 14.80 - 15.11		-	SPTC 37 (6,9 for 14mm/12,10,15 for 75mm)	13/12/17 14.80 14/12/17 14.80	1615 0.50 0800 3.50	Firm reddish brown, mottled bluish grey, CLAY. (MERCIA MUDSTONE - Class Dc)	- - - - - -	- - - 14.80 -1.45		
14.80 - 16.00 	25 0 0							(1.20)		
- - 16.00 - 17.50	90 8					Firm fissured bluish grey, locally mottled reddish brown, slightly gravelly CLAY. Gravel is subangular to rounded fine to medium of mudstone. Fissures are randomly orientated, extremely closely spaced, rough undulating. (MERCIA MUDSTONE - Class Dc)	16.20-16.26 - subhorizontal bands - (<15mm) of white - fibrous gypsum - 16.37 subhorizontal - 15mm band of white -	16.00 -2.69 (0.55) 16.55 -3.24 (0.20) 16.75 -3.4		
- - - 17.50 - 17.80		NI 10 50		15.00	3.50	MUDSTONE, locally reduced to subangular gravel size lithorelicts. Fractures are subvertical, locally non-intact, smooth, planar. (MERCIA MUDSTONE - Class B) Stiff fissured reddish brown, locally mottled bluish arev, gravelly CLAY. Gravel is subangular to	fibrous gypsum 16.69 subhorizontal 10mm band of white fibrous gypsum 16.75-16.85 subhorizontal bands (<10mm) of white fibrous gypsum	(0.35) 17.10 -3.79 (0.70)		
	100 15		50 130 SPTC 42 (7,10/19,23 for 75mm) CS 9			subrounded fine to coarse of extremely weak mudstone lithorelicts. Fissures are randomly orientated, very closely spaced, smooth, planar. (MERCIA MUDSTONE - Class C) Extremely weak to weak very thinly bedded reddish brown mottled greenish grey.	17.40-17.50 soft - reddish brown, - mottled greenish - grey, clay- 17.50 30 degree - 10mm band of -	17.80 -4.49)	
-	9	NA -	- NI 20			MUDSTONE. Fractures are randomly orientated, very closely spaced, undulating, planar, smooth. (MERCIA MUDSTONE - Class B) Firm fissured greenish grey, becoming reddish brown, gravelly CLAY. Gravel is angular to	gypsum - 17.73-17.76 reduced to clay - 17.76-18.00 - subhorizontal 40mm - band of white_	(1.10) 	9	
19.00 - 20.50	100 11 0		- 50			Subfounded fine to coarse of extremely weak mudstone lithorelicts. Fissures are randomly orientated, very closely spaced, rough, undulating. (MERCIA MUDSTONE - Class C) Extremely weak very thinly bedded dark reddish brown MUDSTONE. Fractures are subhorizontal, very closely spaced, smooth, undulating. (MERCIA MUDSTONE - Class B)	fibrous gypsum	19.10 ⁷ -5.75	<pre>}</pre>	
Groundwater Entries	Domarku	_		Donth So		Depth Related Remarks	subhorizontal 10mm bands of white fibrous gypsum	Chiselling Deta	ails	
No. Deptn Strike	Remarks			Depth Sea	ılea	Depths (m) Remarks		Depths (m)	Duration (mins) Tools use
lotes: For explanation of iee Key to Exploratory I educed levels in metre: prackets in depth colum © Copy	of symbols a Hole Record s. Stratum tr n. vright SOCC	ind abb is. All d hicknes	Project Project Project Sigiven in JK Limited	No.	WE:	ST BURTON C POWER STATION		Borehole	BH105	



Drilled SS	Start	Eq	uipment, Methods and Rema	rks		Depth from to D	ameter Casing Depth	Ground Level		13.31 mOD
Loaged DP	11/12/20	17 Bei	retta T41.			(m) (m) 1 20 29.50	(mm) (m) 121 15.00	Coordinates (m)		E 480217.44
Checked MS	Fnd	Dyı SP	namic sampling followed by ro T Hammer ID: AR1777, Rod to	ary core drillin	ng (PWF	size) using water flush.	161 1212	National Grid		N 386221.29
Approved TC	15/12/20	17	, , , , , , , , , , , , , , , , , , ,	pc				Nutional and		1.00022
Samples and	Tosts					Strata Description				
Samples and	TCR)		Date	Time			Depth. Level	Leaend	Backfill
Depth	SCR RQD	lf	Records/Samples	Casing	Water	Main	Detail	(Thickness)		
_						Firm to stiff reddish brown, locally mottled	19.98 subhorizontal 15mm band of white	(1.85)	· · · · · ·	
-						subangular to subrounded fine to coarse of	fibrous gypsum			
		NA	SPTC N=39	15.00	3.50	extremely weak mudstone lithorelicts.	30mm band of white			
-		-	(8,10/10,8,12,9)				20.30-20.40 very -			
-							stiff	20.95 .7.64		
21.08 - 21.28	03		CS 10			Very weak to weak very thinly bedded reddish		20.33 -7.04		
20.50 - 22.00	47					MUDSTONE. Fractures are subhorizontal, closely	21.30-21.35 40 -	-		
-	30		Flush: 13.30 - 29.50 Water			spaced, smooth, stepped. (MERCIA MUDSTONE - Class B)	degree 20mm band -	-		
- 21.60 - 21.72			CS 11				gypsum -	-		
_		NI					degree band of	(105)		
		200	CS 12				white fibrous gypsum	(1.95)		
- 22.10 - 22.30			CS 12				22.00 subhorizontal			
-							fibrous gypsum			
-	100						subhorizontal bands	-		
22.00 - 23.50	51						(<5mm) of white _ fibrous gypsum _	-		
-	27		-			Extremely weak light greenish grey MUDSTONE,		22.90 -9.59		
_		NI				locally reduced to claybound tabular subangular to	-	(0.60)		
-		NI				lithorelicts. Fractures are randomly orientated,	-	(0.00)		
- 23.50 - 23.65			SPTC 25 (20 for 75mm/25	15.00	3.50	extremely closely spaced, smooth, undulating.	23.45 subhorizontal	23.50 -10.19		
-			for 75mm)			NO RECOVERY.	fibrous gypsum			
-						Red clay/mudstone/gypsum.	-	-		
-	0					(Driller's description)		-		
23.50 - 25.00	0	NA					-	(1.50)	· · · · ·	
-	0	-						-		
-							-	-	· · · · · ·	
-				14/12/17	1600		-	-		
-			_	15.00	3.50	Extremely weak thinly hedded light greenish grey		25.00 -11.69	· · · · ·	
-		NI 10		15/12/17 15.00	0800 3.50	becoming dark reddish brown, MUDSTONE.	-	(0.50)		
-		60				Fractures are subhorizontal, very closely spaced,	-	(0.50)		
-	100		-			(MERCIA MUDSTONE - Class B)		25.50 -12.19		
25.00 - 26.50	100 42		CS 13			Extremely weak to very weak, locally very weak,		-		
_ 25.78 - 25.88	33					mottled greenish grey, MUDSTONE with	-			
-						subhorizontal bands (<5mm) of white fibrous	26.10 subhorizontal -	-		
-						spaced, smooth, planar and undulating.	fibrous gypsum	-		
-		-				(MERCIA MUDSTONE - Class B)	26.10-26.40 locally - reduced to -	1		
-							claybound tabular	-		
-							mudstone lithorelicts	-		
-							50mm band of white	-		
27.16 - 27.31 26.50 - 28.00	80 53		CS 14				fibrous gypsum _ 26.50-26.90 drilling _	_		
-	26	NI 70					disturbed firm clay _ 26 98-27 15 40	(4.00)		
-		90					degree closely -	(4.00)		
-							undulating fractures -			
		-	SPTC 47 (9,6/20,27 for	15.00			27.35 subhorizontal - 30mm band of white-			
28.16 - 28.27			75mm) CS 15				fibrous gypsum	-		
-							28.30-28.40 locally - reduced to -	-		
_							claybound tabular	-		
28.00 - 29.50	57 35						mudstone lithorelicts			
-	24						28.35 subhorizontal 10mm band of white	-		
-							fibrous gypsum			
-				15/12/17	1600		10mm band of white	-		
-			_	15.00			tibrous gypsum _	29.50 -16.19		
-						END OF EXPLORATORY HOLE		1		
-							-	-		
									L	<u>I</u>
Groundwater Entries	B Remar	ks		Denth Soa	iled	Depth Related Remarks Depths (m) Remarks		Chiselling Detai	Is Duration (mine	s) Tools used
				2000000				20pail (iii)	_ 3.4.301 (millio	.,
Notes: For explanation	of symbol	s and abl	previations Project		WF	ST BURTON C POWER STATION		Borehole		
see Key to Exploratory reduced levels in metro	Hole Reco	ords. All d thicknes	lepths and s given in	1.	VVE			Sorenole		
brackets in depth colur © Cop	nn. yright SOC	OTEC U	K Limited AGS	NU.	A71	vz-11				
Scale 1:50			Carried	JULT TOP	Firb	eck Construction Limited			Sheet 3 of 3	



Drilled DS	Start	Equipment, Methods and Rem	narks		Depth from to Dia	meter Casing Depth	Ground Level		13.05 mOD
Logged DP	16/12/2017	Comacchio 305.			(m) (m) (i) 120 29.80	nm) (m)	Coordinates (m)	F	480274.50
Checked MS	End	Dynamic sampling followed by r SPT Hammer ID: AR1121 Rod	otary core dril	ling (PWF	size) using water flush.	121 10.00	National Grid		386160 10
	EIIU	or i Hammer ID. Art 121, tou	type. NWT.				National Grid	IN IN	360100.19
Approved 10	19/12/2017				Otrete Deserietier				
Samples and			Date	Timo	Strata Description				
Depth	SCR	If Records/Samples	Casing	Water	Main	Detail	(Thickness)	Legena	Backfill
_		0.00-1.20 Hand excavated			TOPSOIL.		(0.20)		
0.20 - 1.20	B 3	inspection pit.			Dark grey, locally grey, slightly sandy slightly	-	0.20 +12.85		
- 0.50	D1				gravelly SILT. Gravel is angular fine to medium of clinker and poorly comented silt	-	-		
_					(MADE GROUND - Pulverised Fuel Ash)	-	-		
_						-			
	D 2					_	-		
- 1.20 - 1.65	SPTS	N=56 (5,10/10,15,15,16)		Dry		-			///
- 1.20 - 2.20 - 1.20	L 5 D 4					-			
-						-			
-						-	-		
-							-		
– – 2.20 - 3.60	L 6					-	-		
_						-	-		
-							-		
-						-	-		
-						_	-		
_						-	-		
_						-			
	ODTO	N-19 (2 2/2 4 5 6)	2 00	Dov		_			
- 3.60 - 4.60	L8	N=10 (2,0/3,4,3,0)	5.00	Diy		-			
	07					_	-		
_						-	-		
-						-	-		
4 60 5 60						_	-		
- 4.60 - 5.60 -	La					-			
-						4.80-4.95 clayey, - mottled brown -	(0.55)		
-							(3.33)		
-						-	-		
-						-	-		
- 5.60 - 6.05 - 5.60 - 6.20	SPTS L 11	N=14 (3,3/2,3,4,5)	3.00	Dry		-	-		
- 5.60 -	D 10					-	-		
-							-		
- 6.20 - 7.70 -	L 12					-	-		
-						-	-		
_						-	-		
-						-	-		
-						7.00-7.50 clayey	-		
-						-	-		
_						-	-		
- 7 70 - 8 15	SPTS	N=20 (1 2/1 3 7 9)	6.00	Drv		-	-		
7.70 - 9.40	L 14	1 20 (1,2 1,0,1,0)	0.00	2.,		-			
	015								
-						-	-		
_						-	-		
-						-	-		
-						-			
_							1		
-						-			
– – 9.40 - 10.40	L 15					-			
-									
-					Medium dense dark grey slightly gravelly silty fine	-	9.75 +3.30		
			-		to coarse SAND. Gravel is angular to subrounded				
Groundwater Entri					Denth Related Remarks		Chiselling Detail	•	
No. Depth Strik	e Remarks		Depth Se	ealed	Depths (m) Remarks		Depths (m)	Ouration (mins)	Tools used
Notes: For explanation	n of symbols and	d abbreviations Proiect	t	WE	ST BURTON C POWER STATION		Borehole		
see Key to Explorator reduced levels in met	y Hole Records. res. Stratum thic	All depths and kness given in	No		02.47		F	3H106	
© Co	pyright SOCOTE	EC UK Limited AGS Carried	i out for	A/1 Firb	eck Construction Limited		'	Sheet 1 of 4	
Scale 1:50	05	#PUD40 40,00,40					-		



Drilled DS	Start	Eq	uipment, Methods and Rema	urks		Depth from to Dia	ameter Casing Depth	Ground Level		13.05 mOD
Logged DP	16/12/201	17 Cor	macchio 305.	-1-101-		(m) (m) (n 1.20 29.80	mm) (m) 121 16.00	Coordinates (m)		E 480274.50
Checked MS	End	Dyn SP	amic sampling followed by rot T Hammer ID: AR1121, Rod ty	.ary core drillinç /pe: NWY.	g (PW⊦	size) using water flush.	I	National Grid		N 386160.19
Approved TC	19/12/201	17					I	1		
Samples and	Tests					Strata Description		1		
Death	TCR		D arda/Samploo	Date	Time		Datail	Depth, Level	Legend	Backfill
Deptn	SCR RQD	IT	Records/Samples	Casing	Water	Main	Detail	(Thickness)		
	T		P P	<u> </u>		fine to coarse of clinker and slag. (MADE GROUND)				$\neg / /$
10 40 - 10 85	SPTS		N=13 (2 2/3 3 4 3)	10.40	2 10			·		× / /
10.40 - 10.00	L 16		N=13 (2,2/3,3,4,3)	10.40	2.10	1		-		\vee
-			'	1	ľ	1	-	- (1.90)		
-				1	I	1	10.95-11.00 soft	-		
11.00 - 12.50	L 17		'	1	I	1	dark grey silty clay _	<u> </u>		
F.			'	1	ľ	1	-	-		
F			'	1	ľ	1		-		ſ / /
F			'	1	ľ		11.65 soft dark _	11.65 +1.40		Y
F			'	1	ľ	Orangish brown, mottled brown and grey, dayey	greenish grey silty _	-		
F			'	1	I	(MADE GROUND)		(0.05)		
F			'	1	ľ	1	-	. (U.85)		×7,
Ł			'	1	I	1	-	_		V/
12.50 - 12.95 - 12.50 - 13.70	SPTS		N=10 (1,2/1,2,3,4)	12.00	3.00	Loose to medium dense dark brownish grey	1 _	- 12.50 +0.55		//
12.50	D 18		'	1	ľ	gravelly slightly clayey fine to coarse SAND.		-		ΎΖ,
F			'	1	ľ	Gravel is angular tine of clinker. (MADE GROUND)	12.90-13.00 soft -	(0.70)		V/
F			'	1	I		orangish brown clay	-		//
E			'	1	ľ	Dark brown thinly laminated clayey SILT.	1 _	- 13.20 -0.15 (0.20)		×7,
F			'	1	ľ	(ALLUVIUM)		- 13.40 -0.35		V /
			'	1	ľ	reddish brown, silty CLAY. Slight organic odour.		(0.30)	$\xrightarrow{\times} \xrightarrow{\times} \xrightarrow{\times} \xrightarrow{\times} \xrightarrow{\times}$	//
13.70 - 15.15	L ZU		'	1	ľ	(ALLUVIUM)	1 -	- 13.70 -0.00	XXXXXX	Ύ/,
É.			'	1	I	Dark brown clayey SiLi. (ALLUVIUM)		(0.65)	XXXXX	\vee
Ł			'	1	I	(,		(0.00)	$\frac{\times}{\times} \times \frac{\times}{\times} \times \frac{\times}{\times} \times$	//
ŀ			'	1	ľ	2-ft to firm raddiab brown, mottled bluish grey		14.35 -1.30	<u>×°×°×</u>	
F			'	1	ľ	CLAY.		-	E=1	V/
F			'	1	ľ	(MERCIA MUDSTONE - Class Dc)	-	-	F	//
É .			'	1	ľ	1	-	(1 15)	h- <u></u> 1	ΥZ,
	SPTS		N=22 (2.3/5.5.6.6)	15 00	3.00	1		(1.10)	F	\vee /
15.10 - 16.00	L 22		N=22 (2,0,0,0,0,0,0,0)	15.00	0.0.	1	-	-		//
- 15.10 -	D 21		'	1	I	l	-	- 245	[]	ľ/,
F			'	1	I	Bluish grey SILT with frequent pockets (<30mm)	-	15.50 -2.40 (0.30)	XXXXXX	V/
L .			'	16/12/17	1530	of clayey silt.		15.80 -2.75	<u>×××××</u>	//
F			'	15.60	0.90	Stiff fissured bluish grey CLAY. Fissures are		-	E=1	ΥZ,
F		1	'	18/12/17	0800	randomly orientated, extremely closely spaced,	disturbed, soft -	(0.70)	F	V/
16.25 - 16.32		i	CS 22A	15.00	0.00	(MERCIA MUDSTONE - Class Dc)	16.25-16.30 _ subhorizontal 50mm _	-	L1	//
16.00 - 17.05	100 0	i	'	1	ľ	Stiff financed raddish brown CLAY Fissures are	band of white	- 16.50 -3.45		1//
É.	0	i	'	1	ľ	subhorizontal, undulating, rough.	16.70 20 degree -	-		
Ł		i	'	1	ľ	(MERCIA MUDSTONE - Class Dc)	10mm band of white -	(0.65)		
17.05 - 17.18		i	SPTC 50 (25 for 70mm/50	16.00	2.90	1	17.00 subhorizontal	-		ľ/,
F	1 1	i NA	for 60mm)	1	I	Stiff, locally very stiff, fissured dark reddish brown	fibrous gypsum with	17.15 -4.10		V /
F	1 1	1 -	'	1	ľ	slightly gravelly CLAY. Gravel is subangular to	mudstone inclusions	-		
E		i	'	1	ľ	clay to extremely weak mudstone. Fissures are	10mm band of white	-		
17 05 - 18.55	100	i	'	1	ľ	randomly orientated, extremely closely spaced,	17.50-17.68			
	ŏ	i		1	I	planar, smooth. (MERCIA MUDSTONE - Class Da)	subvertical 2mm _ band of white	(1.40)		
F		i	'	1	ľ		fibrous gypsum _	-		ľ/,
Ē	1 1	i	'	1	I	1	degree very closely -	-		V /
E.		ı	'	1	I	l	spaced bands - (<5mm) of white -			
F.		ı	1 '	1	I	Extremely weak thinly laminated dark reddish	fibrous gypsum -	18.55 -0.00		ľ/,
F 10.00 10.01	1 1	I		1	ľ	brown, locally light greenish grey, MODELONE, locally reduced to claybound tabular gravel size	20mm band of white	-		//
- 18.90 - 19.0 i	1 1	NI 1 60	CS 23	1	ľ	mudstone lithorelicts. Fractures are subhorizontal,	fibrous gypsum	(0.95)		//
E	100	100	'	1	ľ	very closely spaced, undulating smooth and	10mm band of white			ľ/,
18.55 - 20.05	25 7	i	'	1	ľ	rougn. (MERCIA MUDSTONE - Class B)	fibrous gypsum _ 18.95 subhorizontal	-		\vee /
F		·	- '	1	ľ	Extremely weak thinly laminated light greenish	20mm band of white	- 19.50 -6.45		//
F		i NI	'	1	ľ	grey MUDSTONE. Predominantly recovered as a	mudstone inclusions _	(0 EE)		ľ/,
E		1 -	'	1	ľ	claybound angular to subrounded coarse gravel.	19.20 subangular - fine and medium -	(0.55)		\vee
	+			<u> </u>		Flattures are faildonly orientated, extremely	gypsum gravel-	<u> </u>		
		<u> </u>	!	<u> </u>		l		<u> </u>		
Groundwater Entries	3			Pag		Depth Related Remarks		Chiselling Detail	is	
No. Depth Strike	Remark	.5		Depth Sear	ed	Depths (m) Remarks	I	Depths (m)	Duration (mins)) Tools usea
1					I	1	I	1		
Notes: For explanation see Key to Exploraton	of symbols	and abb	previations Project		WE	ST BURTON C POWER STATION		Borehole		
reduced levels in metro	es. Stratum	thicknes	s given in	No	A71	∩ე_17	I	1 r	RH106	
© Cor	yright SOC	OTEC U	K Limited AGS	10.		22-11	I	1 -		



Drilled DS	Start	Equ	uipment, Methods and Rema	urks		Depth from to Di	ameter Casing Depth	Ground Level		13.05 mOD
Logged DP	16/12/20	17 Cor	macchio 305.			(m) (m) 1.20 29.80	(mm) (m) 121 16.00	Coordinates (m)		E 480274.50
Checked MS	End	Dyr SP	namic sampling followed by ro T Hammer ID: AR1121, Rod ty	tary core drilling (pe: NWY.	PWF	size) using water flush.		National Grid		N 386160.19
Approved TC	19/12/20	17		-						
Samples and	Tests					Strata Description				
	TCR		5	Date T	ime			Depth, Level	Legend	Backfill
Depth	SCR RQD	IT	Records/Samples	Casing V	Vater	Main	Detail	(Thickness)		
20.05 - 20.19		50	SPTC 50 (25 for 50mm/32,18 for 15mm)	16.00	3.05	closely spaced, planar, smooth. (MERCIA MUDSTONE - Class B)	19.30 30 degree _ band of white _	20.05 -7.00		
		100	CS 24			Extremely weak very thinly bedded light greenish	fibrous gypsum _	(0.40)		
_			-			subhorizontal, very closely spaced bands (<5mm)	-	20.45 -7.40		
- 20.05 - 21.55	90 35					of white fibrous gypsum. Fractures are	20.75 subhorizontal			
	19					stepped, smooth.	15mm band of white _ fibrous gypsum with			
-						(MERCIA MUDSTONE - Class B)	mudstone _			
-						grey, becoming dark reddish brown, gravelly	-			
_						CLAY. Gravel is tabular angular to subrounded fine to coarse lithorelicts of extremely weak	-			
-						mudstone. Fissures are randomly orientated, very	21.70-22.70 -	1		
- - 21.55 - 22.30	100 0					closely spaced, planar, smooth. (MERCIA MUDSTONE - Class C)	 subhorizontal bands – (<15mm) of white – 	-		
-	0	-					fibrous gypsum	-		
- - 22.30 - 22.42		NA -	SPTC 50 (25 for 65mm/50	16.00	3.00		50mm band of white	(3.45)		
_			for 55mm)				22.20-22.30	-		
-							extremely weak			
E			Eluch: 16.00 - 20.00 Mater				dark reddish brown			
22.30 - 23.80	100 0		100%					-		
F	0						-	-		
-							- 23.45 subborizontal	-		
-							40mm band of white	-		
-							tibrous gypsum _	-		
- 23.90 - 24.00		00	CS 25			Extremely weak to very weak thickly laminated	23.90 subhorizontal -	23.90 -10.85		
_		80				reddish brown, locally mottled light greenish grey,	fibrous gypsum	(0.45)		
-		160	-			spaced bands (<3mm) of white fibrous gypsum.	-	24.35 -11.30		
23.80 - 25.30	100 25					Fractures are subhorizontal, very closely spaced,	A –			
	11					(MERCIA MUDSTONE - Class B)	-			
-		NA				Firm dark reddish brown CLAY, locally reduced to		(1.05)		
-		-				gravel size extremely weak mudstone lithorelicts.		4		
- 25.30 - 25.39			SPTC 50 (25 for 40mm/50	16.00	3.10	(MERCIA MUDSTONE - Class C)		-		
			for 50mm)	10.00	0.10	Extremely weak thinly laminated dark reddish		25.40 -12.35		
_		NI 20				brown MUDSTONE. Fractures are randomly	-	(0.60)		
-		60				spaced, planar, smooth.	25.80-25.90 -	(0.00)		
25.30 - 26.80	100 20		-			(MERCIA MUDSTONE - Class B)	 subhorizontal bands – (<10mm) of white 	26.00 -12.95		
	0					becoming light greenish grey, CLAY, locally	fibrous gypsum –			
-		- NA				reduced to claybound tabular subrounded fine to		(0.80)		
-		-				weak mudstone. Fissures are randomly	26.50 subhorizontal – 30mm band of white –	-		
-						orientated, very closely spaced, planar, smooth.	fibrous gypsum	26.80 -13.75		
-						Dark reddish brown MUDSTONE. Recovered as	í <u> </u>			
- 27.10 - 27.19			CS 26			angular to subrounded fine to coarse gravel.	-	(0.55)		
L								27.35 -14.30		
	70 9					brown, locally mottled light greenish grev.	-	-		
F	0					MUDSTONE. Fractures are randomly orientated,		(0.95)		
F						Predominantly non-intact.	60mm band of white	(0.00)		
-		NI		18/12/17	1630	(MERCIA MUDSTONE - Class B)	fibrous gypsum 28.12 subhorizontal	1		
– – 28.30 - 28.40			SPTC 50 (25 for 50mm/50	16.00	3.25	Extremely weak dark reddish brown, mottled	80mm band of white	28.20 -15.15		
È i			for 50mm)	19/12/17 16.00	0800 6,10	greenish grey MUDSTONE. Recovered as angular to subrounded fine to coarse gravel		-		/ / /
-				10.00	0.10	(MERCIA MUDSTONE - Class C)		-		
-								(1.20)		
	67 5						-	-		
F	0						-]		
- 29.40 - 29.48			CS 27			Very weak to weak yery thinly bedded dark		29.40 -16.35		
-		NI NI		19/12/17	1530	reddish brown MUDSTONE. Fractures are	-	(0.40)		
-		80	_	16.00	Dry	randomly orientated, extremely and very closely	29.70 subhorizontal - 40mm band of white -	29.80 -16.75		_ / /
_						opacca, pianai, omootin.	fibrous gypsum			
Groundwater Entrie	s Romer	ks		Depth Soulod		Depth Related Remarks		Chiselling Deta	ls Duration (min)	
	e nemdf			Doptil Sealed				Dopuis (III)		o, 10013 useu
Notes: For explanation	of symbol:	s and abb	epths and		WE	ST BURTON C POWER STATION		Borehole		
reduced levels in metr brackets in depth colu	es. Stratum mn.	thicknes	s given in	No.	A71	02-17			BH106	
Scale 1:50 © Co	oyright SOC	OTEC UI	K Limited AGS Carried	out for	Firb	eck Construction Limited				



Drilled DS	Start	Equ	ipment, Methods and Rema	rks		Depth from	to Di	ameter Casing Depth	Ground Level		13.05 mOD
Logged DP	16/12/2017	Com	acchio 305.			(m) 1.20	(m) (29.80	(mm) (m) 121 16.00	Coordinates (m)	E	E 480274.50
Chacked MS	End	Dyna	amic sampling followed by rot Hammer ID: AR1121 Rod ty	ary core drilling (PWF	size) using water flush.	1.20	20.00	121 10.00	National Grid	- -	1 386160 10
		51 1		pe. 19991.					National Gru	ľ	1 300 100.19
Approved TC	19/12/2017										
Samples and	d Tests				Strata Descriptio	n					
Depth	TCR SCR	lf	Records/Samples	Date Time	м	ain		Detail	Depth, Level	Legend	Backfill
	RQD			Casing Water	MERCIA MUDSTONE -	Class B)			(THICKNESS)		
-					END OF EXPLO	DRATORY HOI	LE	/			
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E	1										
F	1							-			
Groundwater Entrie	s				Depth Related Remarks				Chiselling Details	3	
No. Depth Strik	e Remarks			Depth Sealed	Depths (m) Remarks				Depths (m)	Duration (mins)	Tools used
Notes: For explanation	n of symbols an	d abbr	eviations Project	WE	ST BURTON C POWER STATI	ON			Borehole		
reduced levels in metr	es. Stratum thic	. All de ckness	given in		00.47						
brackets in depth colu © Col	mn. ovright SOCOT	EC UK	Limited AGS	NO. A71	UZ-17					001110	
Scale 1:50	,		Carried of	out for Firb	eck Construction Limited					Sheet 4 of 4	



Drilled SS	Start	Equ	ipment, Methods and Rema	arks		Depth from (m)	to Dia (m) (ameter (mm)	Casing Depth (m)	Ground Level		12.91 mOD
Logged SS	16/12/2017	Ber Rot	etta T41. ary open hole drilling using w	ater flush.		1.20	30.00	168	14.00	Coordinates (m)		E 480311.89
Approved TC	18/12/2017	Cro	ss Hole Seismic Survey on co	ompletion.						National Grid	ľ	N 366247.30
Samples and	d Tests				Strata Description	on						
Depth	TCR SCR	lf	Records/Samples	Date Tim	e or	Main			Detail	Depth, Level	Legend	Backfill
-	RQD		0.00-1.20 Hand excavated	Casing Wa	Pulverised fuel ash.					(
-			inspection pit.		(MADE GROUND) (Driller's description)				-	-		
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-									-	-		-KIK
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	<u> </u>									1		ΝL
Creative to a to a					Denth Deleted D					Objective: D. C.		
Groundwater Entrie No. Depth Strik	es ke Remarks			Depth Sealed	Depth Related Remarks Depths (m) Remarks					Chiselling Detai Depths (m)	is Duration (mins)	Tools used
Notes: For explanation	n of symbols an	nd abb	reviations Project	v	EST BURTON C POWER STAT	ION				Borehole		
reduced levels in met brackets in depth colu	res. Stratum thi	cknes	s given in Project	No. A	7102-17						BH107	
© Co Scale 1:50	pyright SOCOT	EC U	Carried	out for F	irbeck Construction Limited						Sheet 1 of 3	



Drilled SS	Start	Equ	ipment, Methods and Rema	arks		Depth from	to D	iameter	Casing Depth	Ground Level		12.91 mOD
Logged SS	16/12/2017	Bere	etta T41.	eter fluch		(m) 1.20	(m) 30.00	(mm) 168	(m) 14.00	Coordinates (m)		E 480311.89
Checked MS	End	Cro								National Grid		N 386247.30
Approved TC	18/12/2017	Cito	SS Hole Seisinic Survey on co	mpleuon.								
Samples and	Tests				Strata Descriptio	n						
Depth	TCR SCR ROD	lf	Records/Samples	Date Lime Casing Water	м	lain			Detail	Depth, Level (Thickness)	Legend	Backfill
Approved 10 L		If .	Records/Samples	Date Casing Time Water 16/12/17 1600 14.00 4.00 18/12/17 0800 18/12/17 0800 14.00 4.50	Strata Descriptio	I			Detail	(9.00)		Backfill
-	<u> </u>											
Groundwater Entries No. Depth Strike	Remarks			Depth Sealed	Depth Related Remarks Depths (m) Remarks					Chiselling Detail Depths (m)	s Duration (mins)) Tools used
Notes: For explanation see Key to Exploratory reduced levels in metre brackets in depth colur © Cop Scale 1:50	of symbols and Hole Records. es. Stratum thic nn. syright SOCOTE	d abbr All de kness EC UF	reviations epths and s given in K Limited AGS Carried	WE No. A71 out for Eirt	ST BURTON C POWER STATI	ON				Borehole	3H107	



Drilled SS	Start	Equ	ipment, Methods and Rema	rks		Depth from (m)	to Dia (m) (i	imeter mm)	Casing Depth (m)	Ground Level		12.91 mOD
Logged SS	16/12/2017 End	Rota	etta 141. ary open hole drilling using wa	ter flush.		1.20	30.00	168	14.00	Coordinates (m)		E 480311.89
Approved TC	18/12/2017	Cros	ss Hole Seismic Survey on co	mpletion.						National Onu		14 300247.30
Samples and	Tests				Strata Description	ו						
Depth	TCR SCR	lf	Records/Samples	Date Time	 Ma	iin			Detail	Depth, Level	Legend	Backfill
Samples and Depth -	TOR SCO S	If	Records/Samples	Date Time Casing Water 18/12/17 1600 14.00 Depth Sealed	END OF EXPLO Depth Related Remarks Depths (m) Remarks	nin			Detail	Depth, Level (Thickness) 24.00 -11.09 (6.00) 30.00 -17.09 Depths (m)	Legend	Backfill
Notes E		4								Barah 1		
Notes: For explanation see Key to Exploratory reduced levels in metr brackets in depth colu © Cop Scale 1:50	of symbols and Hole Records. es. Stratum thic nn. syright SOCOTE	d abbi All de kness EC UK	reviations epths and s given in C Limited AGS	WES	ST BURTON C POWER STATIC 02-17 eck Construction Limited	IN				Borehole	BH107	
Borehole Log



Drilled JG	Start	Eq	uipment, Methods and Rem	arks			Depth from	to Di	iameter	Casing Depth	Ground Level		12.91 m(DC
Logged JG	15/12/2018	8 R3	7 Commachio 205.	ter fluch			(m) 1.20	(m) 28.00	(mm) 143	(m) 13.60	Coordinates (m)		E 480309	.31
Checked MS	End	Cr		atter nush.							National Grid		N 386240	.77
Approved TC	19/12/2018	3	ISS Hole Seismic Survey on co	impleuon.										
Samples and	J Tests					Strata Descriptio	'n							
Depth	TCR SCR POD	lf	Records/Samples	Date Casing	Time Wate	N	Main		Τ	Detail	Depth, Level (Thickness)	Legend	Back	fill
	KQD	—	0.00-1.20 Hand excavated	Gusing		Pulverised fuel ash.			+					$ \Box$
-			inspection pit.			(MADE GROUND) (Driller's description)				-				
-						(Dimor o dooonpasti)				-	-			
-										-	-			\setminus
-										-				K
				15/12/17 0.00	1701 Dry	,				-	-			
-				16/12/17	0735	j				-	-			$\left \right\rangle$
-				0.00	Dry					-	-			\wedge
-										-	-			K
-										-	-			
F											-			
-										-	-		$ \mathbf{N} $	
-										-	(5.10)			K
F										-				K
E_										-	-			$\left \right\rangle$
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										-				K
_										-	-			
-										_	_			$\left \right>$
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-										-	_			K
 _										-	_			
-										-	-			
-										_	-			\mathbb{N}
-						Mercia mudstone fill.			-	-	5.10 +7.81			K
-						(MADE GROUND) (Driller's description)				-	- (0.30) - 5.40 +7.51			
-						Pulverised fuel ash.			΄	-	-			
F						(Driller's description)				-	-		$ \mathbf{N} $	\mathbb{N}
-										_	-			K
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_										-	(8.60)			
_										-	(0)			
	+		-	+										<u> </u>
Groundwater Entrie No. Depth Strik	s e Remark:	s		Depth Se	aled	Depth Related Remarks Depths (m) Remarks					Chiselling Detail Depths (m)	is Duration (mins	a) Tools (used
												-• ·· •		
Notes: For explanatio	in of symbols	and ab'	breviations Project		WE	ST BURTON C POWER STAT					Borehole			_
see Key to Explorator	y Hole Record	ds. All d	Jepths and		•••						Dorenois			
brackets in depth colu	imn.	TEC I	Project	No.	A71	102-17					1	3H10 8		
Scale 1:50	Jyright SOCO	IEC OF	K Limited Carried	out for	Fir!	beck Construction Limited					1	Sheet 1 of 3		

Borehole Log



Drilled	JG	Start	Equ	uipment, Methods and Rema	rks		Depth from	to Diar	neter Casing D	epth Ground Level		12.91 mOD
Logged	JG	15/12/2018	R3	7 Commachio 205.	tor fluch		(m) (1.20 28	(m) (m 8.00	1m) (m) 143 13.60	Coordinates (n	ו)	E 480309.31
Checke	d MS	End	Rot	ary open note dritting using wa	iter flush.					National Grid		N 386240.77
Approv	ed TC	19/12/2018	Cro 3	iss Hole Seismic Survey on co	mpletion.							
Sam	ples and	Tests				Strata Descriptio	n			_		
	Donth	TCR	If	Basarda/Samplas	Date Time		lain		Detail	Depth, Leve	Legend	Backfill
L	Sopur	RQD	"		Casing Wate	r Ruhvericod fuel ach			Detail	(Thickness)		
Checke Approv Sam 	d MS ed TC ples and Depth	End 19/12/2018 Tests TCR ROD	If	Flush: 1.20 - 28.00 Water	mpletion. Date Time Casing Wate 16/12/17 1600 9.60 1.33 18/12/17 0753 9.60 1.30	Strata Descriptio	n		Detail	National Grid	Legend 0	Backfil!
- - - - -												
Ground No.	dwater Entries Depth Strike	Remarks	3		Depth Sealed	Depth Related Remarks Depths (m) Remarks				Chiselling De Depths (m)	ails Duration (mins)	Tools used
Notes: F see Key reduced brackets Scale	or explanation to Exploratory levels in metre in depth colun © Copy 1:50	of symbols a Hole Record s. Stratum th nn. yright SOCO	and abb ds. All d nicknes TEC U	reviations epths and s given in K Limited	We No. A7 Dut for Fir	EST BURTON C POWER STATI 102-17 beck Construction Limited	ON			Borehole	BH108 Sheet 2 of 3	

Borehole Log



Drilled JG	Start	Equ	ipment, Methods and Rema	irks	_		Depth from	to Di	ameter	Casing Depth	Ground Level		12.91 mOD
Logged JG	15/12/2018	R37	Commachio 205.				(m) 1.20	(m) 28.00	(mm) 143	(m) 13.60	Coordinates (m)		E 480309.31
Checked MS	End	Rota	ary open hole drilling using wa	ater flush.							National Grid		N 386240.77
	19/12/2018	Cros	ss Hole Seismic Survey on co	mpletion.									
Samples and	Tosts					Strata Descriptio	n				1		
	TCR			Date	Time						Depth, Level	Legend	Backfil
Depth	SCR RQD	lf	Records/Samples	Casing	Water	M	ain			Detail	(Thickness)		
						Mercia MUDSTONE.				_			$\neg N $
F						(Differ a description)				-	-		- KIK
-										_			
-										-			-NN
-										-	-		- KIK
_											(14.00)		
-										-	-		-NN
-										-			- KIK
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-										-	-		N
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_										-			
_										_			-NN
F										-	-		- KIK
F										-			
F										-	-		-NN
F										-	1		- KIK
<u>-</u>										-	-		
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E										-			- NK
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-										-			- $ $ $ $ $ $ $ $
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-										-	-		- K1K
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-										-	-		
-										-	-		
-										-	-		-NN
-										-	-		- KIK
-										-	-		
-													-NP
_										-	-		- NK
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-										_	-		
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-										-	-		-NN
-										-	-		- KIK
E Contraction of the second se				18/12/17	1700					-	-		
<u>-</u>				13.60	1.60						28.00 -15.00		
-						END OF EXPLO	DRATORY HC	DLE			-10.00		Ų.
F										-	-		
_										-			
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F										-	1		
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L										-			
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F										-			
-													
Groundwater Entrie	s		1	1		Depth Related Remarks					Chiselling Deta	ils	
No. Depth Strike	e Remarks			Depth Se	aled	Depths (m) Remarks					Depths (m)	Duration (min	s) Tools used
Notes: For explanation	of symbols an	d abb	reviations Project		WE	ST BURTON C POWER STATI	ON				Borehole		
see Key to Exploratory reduced levels in metr	Hole Records. es. Stratum thic	All de	eptris and s given in			00.47							2
prackets in depth colu © Cor	mn. oyright SOCOTE	EC UM	Limited AGS	NO.	A71	vz-1/							,
Scale 1:50			Carried	out for	Firt	eck Construction Limited						Sheet 3 of 3	



	Start	Equipment, Methods and Re	marks	Dimension and Orientation		Ground Level		4.47 mOD
Logged DP	14/12/2017	360 tracked excavator.		٨		Coordinates (m)		E 480408 46
Checked MS	End	Machine excavated.		Width 0.60 m	3 •• 000 (D)	National Grid		N 386336 14
Approved TC	14/10/0017			Length 2.70 m	290 (Deg)	National Griu		11 000000.14
	14/12/2017					4		
Samples and	d lests		Strata Description					
Depth	Type & No.	Records	Main		Detail	Depth, Level (Thickness)	Legend	Backfill
			Dark brown slightly sandy slightly gravelly SIL	Г.			******	
_			(MADE GROUND - Pulverised Fuel Ash)		-			
-					-	-		
-					-	(0.60)		
-					-	-		
- 0.50	D1					-		
-						0.60 +3.87		
_			Soft to firm reddish brown slightly sandy grave to subrounded fine to coarse of brick and cond	elly CLAY. Gravel is angular crete.				
_			(MADE GROUND)		-	(0.30)		
-					-			
-	5.0		Soft to firm light brown slightly sandy silty CLA	Y.	-	- 0.90 +3.57		
1.00 	D2		(ALLOVION)		-		<u>~~~×</u>	
-					-		××	
-					-	-	×	
			1			(0.90)	<u> </u>	
						()		
— 1.50 —	D3		1		-		××	
-			1		-	-	×	
F			1		-]	×	
F			Light brown, mottled grangish brown, alightly	andy clayer SILT		1.80 +2.67		
F			(ALLUVIUM)	andy dayby OILT.	-	1		
- 2.00	D4					-	$\times \times \times \times$	
					-	-	$\overline{\times \times \times \times}$	
_						-	$\times \times \times \times$	
_					-	-		
-					-	(4.00)		
-					-	(1.20)	$\times \times \times \times$	
- 2.50 -	D5				2.50-3.00 wet -	-	XXXX	1 -
-					-	-	$ \begin{bmatrix} \times \times \times \\ \times \times \\ \times \\ \times \\ \times \\ \times \\ \times \\ \times \\$	
-					-	-	$\overline{x \times x}$	
_		14/12/17				-	$\begin{array}{c} \times \times \times \times \\ \times \times \times \end{array}$	
_					=		$\overline{\times \times \times}$	
3.00	D6		END OF EXPLORATOR	YHOLE		3.00 +1.47	<u> </u>	
-					-	-		
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-			1					
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- 						1		
			1					
Groundwater Entrie	s		Remarks					
No. Depth Strike	(m) Remarks		Depth (m) Remarks			Stability Un:	stable	
1 2.50	vvet		3.00 I rial pit terminated due to collapse.			Shoring Nor	пе	
						Weather Ove	ercast	
Notes: For explanatio	n of symbols and	abbreviations	Project WEST BURTON C POWER STATE	ON		Trial Pit		
see Key to Explorator	y Hole Records. A	All depths and					TD 4	
brackets in depth colu	imn.		Project No. A7102-17				12102	
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	Start	Equipment, Methods and Rer	marks	Dimension and Orientation		Ground Level		3.87 mOD
Logged DP	14/12/2017	360 tracked excavator.				Coordinates (m)		E 480453 61
Checked MS	T=/12/2017	Machine excavated.		Width 0.60 m		Notional Ordel		L 400433.01
Approved TC	Enđ			Length 2.80 m	105 (Deg)	National Grid		N 386316.81
	14/12/2017			- 0				
Samples and	d Tests		Strata Description					
Denth	Type & No	Records	Main		Detail	Depth, Level	Legend	Backfill
	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					(Thickness)	V//XV//X	
-			Black organic SILT with abundant rootlets. (TOPSOIL)		-	-		
-					-			
-					-	(0.50)		
_					-	-		
-	54				-	0.50 .3.37		
- 0.50	Di		Soft light brown, mottled orangish brown, sligh	tly sandy silty CLAY with		0.50 +3.57	×—×	
-			(ALLUVIUM)		-	-	×	
_			()		-	-	$\overline{}$ $\overline{\times}$ $\overline{}$	
-					-	(0.70)		
-					-	(0.70)	×	
- 1.00	D2					-	×	
					-		$\equiv \times \uparrow$	
-					-		X—X	
-			Light brown, mottled orange, slightly sandy cla	iyey SILT.		1.20 +2.67	$\times \times \times \times$	
			(ALLUVIUM)			1	$\begin{bmatrix} \times \times \times \\ \times \times \\ $	
						1	XXXX	
- 1.50	D3				_	-		
-					_	(0.80)	$\left \frac{1}{2} \right = \frac{1}{2} \left \frac{1}{2} \right $	
						-		
-					-	-		
-					-	1		
					_	1		
2.00	D4	-	Dark grey clayey SILT with abundant relict roo	ts. Strong organic odour.		2.00 +1.87		
-			Frequent bands of fine dark grey sand (up to 3	80mm).	-	-		
-			(ALLUVIUM)		-	-	XXXX	
_						-		
-						-		
-					-		<u>xxx</u>	
— 2.50 —	D5	-				-	$\times \times \times \times$	
-					-	-	$X \times X $	
-					-			
-					-	(1.50)	XXXX	
_						-		
-					-	-		
- 3.00	D6					-	XXXX	
_					-	-		
-						-		
-		14/12/17 3.50			-	-		
-					-	-	$\overline{\times \times \times \times}$	
- 3.50	D7				-	3.50 +0.37		1
-	51		END OF EXPLORATOR	YHOLE		0.00		
					-			
-					-	-		
						-		
-						-		
_					_	4		
-					-	1		
E					_	1		
					-	1		
-					-	4		
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					_	4		
-						1		
-					-	-		
-						1		
						1		
<u> </u>						-		
Groundwater Entrie	es (m) Barnarita		Remarks			Stability Sta	ble	
1 3.50	Fast inflow		Depui (iii) Remarks					
						Shoring Nor	ne	
						Weather Ove	ercast	
Notes: For explanation	n of symbols and	abbreviations	Project WEST BURTON C POWER STATION	ON		Trial Pit		
see Key to Explorator	y Hole Records. A	All depths and				.		
brackets in depth colu	umn.		Project No. A7102-17				IP103	5
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Longed DD	Start	Equipment, Methods and Re	marks	Dimension and Orientation		Ground Level		13.09 mOD
Logged DP	13/12/2017	360 tracked excavator.		Midth 0.60 m A		Coordinates (m)		E 480252.25
	End	Machine excavated.			3 🗭 140 (Deg)	National Grid		N 386159.36
Approved 10	13/12/2017			C C				
Samples an	d Tests		Strata Description					
Depth	Type & No.	Records	Main		Detail	Depth, Level (Thickness)	Legend	Backfill
Depth	Type & No. D1 D2 D3	Records	Main Soft brown slightly sandy CLAY with abundant (TOPSOIL) Dark grey slightly sandy SILT. (MADE GROUND - Pulverised Fuel Ash) Dark grey slightly sandy, locally slightly gravel to subangular fine to coarse of extremely wea cobbles of siltstone. (MADE GROUND - Pulverised Fuel Ash)	y, SILT. Gravel is angular	Detail	Depth, Level (Thickness) 0.20 +12.89 (1.00) 1.20 +11.89 (1.10)	Legend	Backfill
2.00	D4							
2.50	D5		Dark grey slightly sandy SILT. (MADE GROUND - Pulverised Fuel Ash)			2.30 +10.79		
3.00	D6					(1.40)		
- 3.50	D7	13/12/17 Dry	END OF EXPLORATOR	YHOLE		3.70 +9.39		
							1	
Groundwater Entrie No. Depth Strike	Groundwater Entries No. Depth Strike (m) Remarks		Remarks Depth (m) Remarks 0.00 - 3.70 No groundwater encountered during excavation.			Stability Sta Shoring Nor Weather Ove	ble ne ercast	
Notes: For explanation see Key to Explorator reduced levels in met brackets in depth colo © Cr Scale 1:25	n of symbols and ry Hole Records. / res. Stratum thick umn. opyright SOCOTE	abbreviations All depths and ness given in C UK Limited	Project WEST BURTON C POWER STATIO Project No. A7102-17 Carried out for Firbeck Construction Limited			Trial Pit	TP104	



Logged DP	Start	Equipment, Methods and Re	marks	Dimension and Orientation		Ground Level		13.44 mOD
Checked MS	12/12/2017	360 tracked excavator. Machine excavated.		Width 2.80 m		Coordinates (m)		E 480285.71
Approved TC	End			Length 0.60 m	B 🗭 150 (Deg)	National Grid		N 386122.08
, ipp. or ou	12/12/2017			ç t				
Samples and	d Tests		Strata Description					
Depth	Type & No.	Records	Main		Detail	Depth, Level (Thickness)	Legend	Backfill
Depth 0.50 1.00 2.00 2.50	туре & No.	Records	Main Soft brown slightly sandy CLAY with abundant (TOPSOIL) Dark grey, becoming light brownish grey, sligh becoming frequent, gravel size pockets of fine (MADE GROUND - Pulverised Fuel Ash)	tly sandy SILT with rare, sand.	Detail	Depth, Level (Thickness) 0.30 +13.14 (3.20)	Legend	Backfill
_		12/12/17 Dry			-			
- 	D7				-	3.50 +9.94		
Groundwater Entrie	Ur 195 (m) Remarks	abbreviations	END OF EXPLORATOR	Y HOLE xcavation.		Stability Sta Shoring Nor Weather Ove	ble	
Notes: For explanation of symbols and abbreviations Project WEST BURTON C POWER STATION see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in						Trial Pit		
brackets in depth colu © Co Scale 1:25	umn. opyright SOCOTE	C UK Limited AGS	Project No. A7102-17 Carried out for Firbeck Construction Limited			Sheet 1 of 1		



Learned DD	Start	Equipment, Methods and Rei	narks	Dimension and Orientation		Ground Level		13.10 mOD
Logged DP	12/12/2017	360 tracked excavator.		Midth 0.60 mA		Coordinates (m)		E 480340.80
Checked MS	End	Machine excavated.		Width 0.60 m D	B 🗭 120 (Deg)	National Grid		N 386082.01
Approved 1C	12/12/2017			Length 2.70 m C				
Samples and	l Tests		Strata Description					
Depth	Type & No.	Records	Main		Detail	Depth, Level	Legend	Backfill
Depth 0.50 1.00 2.00 2.50 3.00 3.50	Туре & No. D1 D2 D3 D4 D5 D6 D6 D7	Records 12/12/17 Dry	Main Brown slightly sandy CLAY with abundant roo (TOPSOIL) Light brown silty angular to subrounded fine to and sandstone. (MADE GROUND) Dark grey, becoming light brownish grey, sligh (MADE GROUND - Pulverised Fuel Ash) END OF EXPLORATOR END OF EXPLORATOR	v coarse GRAVEL of brick tly sandy SILT.	Detail	(Thickness) (0.40) 0.40 +12.70 0.50 +12.60 (3.00) 3.50 +9.60		
Groupdweter Fat :			Bomarka					
Groundwater Entrie No. Depth Strike	s m) Remarks		Remarks Depth (m) Remarks			Stability Sta	ble	
	,		0.00 - 3.50 No groundwater encountered during e	xcavation.		0		
						Shoring Nor	ie	
						Weather Ove	ercast	
Notes: For explanation	of symbols and Hole Records	abbreviations	Project WEST BURTON C POWER STATI			Trial Pit		
reduced levels in metr	es. Stratum thick	ness given in				·		
© Co	pyright SOCOTE	C UK Limited AGS	Corrige out for Firbeck Construction Limited					



	Start	Equipment, Methods and Rei	narks	Dimension and Orientation		Ground Level	12.	45 mOD
Logged RT	20/12/2017	Hand avapuated		A A		Coordinates (m)	E 48	0379.49
Checked MS	End	Hanu excavateu.		Viath 0.40 m D	90 (Deg)	National Grid	N 38	5939.43
Approved IC	20/12/2017			C				
Samples an	d Tests		Strata Description					
Depth	Type & No.	Records	Main		Detail	Depth, Level (Thickness)	Legend	Backfill
Samples and Depth	20/12/2017 d Tests Type & No. D1 B2 D3	Records	Strata Description Main Firm dark brownish grey slightly sandy slightly gravelly 3 glass. (MADE GROUND) Firm dark grey slightly sandy slightly gravelly 3 pockets of firm orangish brown clay with low c subangular to subrounded fine to coarse of file Cobbles are subangular of concrete 100x90x5 (MADE GROUND - Pulverised Fuel Ash)	gravelly CLAY. Gravel is t, brick, concrete and SILT with occasional obble content. Gravel is t, sandstone and brick. Jomm. Y HOLE	Detail	Depth, Level (Thickness) 0.10 •12.35 (1.10) +12.35 1.20 +11.25	Legend	Backfill
Groundwater Entrie	20		Remarks					
Groundwater Entrie	Groundwater Entries No. Depth Strike (m) Remarks		Remarks Depth (m) Remarks 0.00 - 1.20 No possible asbestos containing material identified. No groundwater encountered during excavation.			Stability Stable Shoring None Weather Overcast		
Notes: For explanation see Key to Explorator	n of symbols and y Hole Records. A	abbreviations III depths and	Project WEST BURTON C POWER STATION			Trial Pit		
reduced levels in met	res. Stratum thick	ness given in	Project No. A7102-17			7	ГР107	
© Co Scale 1:25	opyright SOCOTE	C UK Limited AGS	Carried out for Firbeck Construction Limited		Sheet 1 of 1			



	Start	Equipment, Methods and Re	marks	Dimension and Orientation		Ground Level		12.16 mOD
Logged DP	14/12/2017	360 tracked excavator.		A A		Coordinates (m)		E 480348.08
Unecked MS	End	waunne excavated.		Vvidth 0.60 m D	B 🗭 210 (Deg)	National Grid		N 385895.45
Approved TC	14/12/2017			Length 2.80 m C				
Samples an	d Tests		Strata Description					
Depth	Type & No.	Records	Main		Detail	Depth, Level	Legend	Backfill
			Brown slightly sandy gravelly SILT with abund angular to subrounded fine to coarse of brick ((MADE GROUND) Firm brown slightly sandy slightly gravelly CLA	ant rootlets. Gravel is and ceramics. Y. Gravel is angular to	0.10-0.20 - orangish brown - gravelly silt Gravel is angular to subangular fine - to medium of brick (Face B)	(0.40) 0.40 +11.76		
0.50	D1		subrounded fine to coarse of brick and cerami (MADE GROUND)	cs.	0.30 80x110mm copper pipe fragment - - - - - - -	(0.60)		
- 1.00 	D2		Dark grey slightly sandy, locally slightly gravel to subangular fine to coarse of poorly cemente (MADE GROUND - Pulverised Fuel Ash)	y, SILT. Gravel is angular d silt.		1.00 +11.16		
- 1.50 	D3							
2.00	D4					(2.50)		
2.50	D5							
3.00	D6	14/12/17 Dry						
	D7		END OF EXPLORATOR	Y HOLE		3.50 +8.66		
- - - Groundwater Entri No. Depth Strike	es (m) Remarks		Remarks Depth (m) Remarks 0.00 - 3.50 No groundwater encountered during e	xcavation.		Stability Stat Shoring Nor Weather Ove	ble	
Notes: For explanation see Key to Explorato reduced levels in me brackets in depth col © C Scale 1:25	on of symbols and ry Hole Records. , tres. Stratum thick umn. opyright SOCOTE	abbreviations All depths and cness given in EC UK Limited	Project WEST BURTON C POWER STATH Project No. A7102-17 Carried out for Firbeck Construction Limited	ИС		Trial Pit	TP108 Sheet 1 of 1	



	Start	Equipment. Methods and Re	marks	Dimension and Orientation		Ground Level	4.4	0 mOD
Logged RT	20/12/2017	- 4 - 1		Δ		Coordinates (m)	E 480	1443.30
Checked MS	End	Hand excavated.		Width 0.40 m	3 - 00 (Dog)	National Grid	– N 385	5013 17
Approved TC	20/12/2017			Length 0.40 m	90 (Deg)	Hadional Ond	11000	
Samulaa an			Strata Decerintian			•		
Samples and			Strata Description			Donth Loval	Logond B	Backfill
Depth	Type & No.	Records	Main		Detail	(Thickness)	Legend	ackin
Approved TC Samples and Depth 0.30 0.50 - 1.00 1.20 1.20 1.20 1.20 1.20 1.20 1.20	20/12/2017 d Tests D1 B2 D3	Records Image: Control of the second of the secon	Strata Description Main Dark grey slightly sandy subangular to subrou GRAVEL of ash and clinker with frequent root (MADE GROUND - Pulverised Fuel Ash) Dark grey slightly sandy slightly gravelly SILT. subrounded fine to coarse of brick and clinker (MADE GROUND - Pulverised Fuel Ash) END OF EXPLORATOR	Y HOLE	Detail	Depth, Level (Thickness) 0.15 +4.25 (1.05) + 1.20 +3.20	Legend E	Jackfill
Groundwater Entrie	es		Remarks			Ctability Cta		
No. Depth Strike	(m) Remarks		Depth (m) Remarks 0.00 - 1.20 No possible asbestos containing mate	rial identified.		Stability Sta	JIE	
			No groundwater encountered during e	xcavation.		Shoring Nor	ie	
						Weather Ove	ercast	
Notes: For evolution	in of symbole and	abbreviations		ON		Trial Pit		
see Key to Explorator	ry Hole Records. A	ll depths and	FIDJECL WEST BURTON C POWER STAT					
reduced levels in met	res. Stratum thickr umn.	ness given in	Project No. A7102-17			l .	TP110	
Scale 1:25	opyright SOCOTEC	C UK Limited AGS	Corrigion Limited				Cheat 1 of 1	



	Start	Equipment, Methods and Re	marks	Dimension and Orientation		Ground Level		4.80 mOD
Checked MS	14/12/2017	360 tracked excavator. Machine excavated.		Width 0.60 m		Coordinates (m)		E 480507.00
	End			Length 2.70 m	B 🗭 120 (Deg)	National Grid		N 385914.62
Approved	14/12/2017			C C				
Samples a	Ind Tests		Strata Description					
Depth	Type & No.	Records	Main		Detail	Depth, Level (Thickness)	Legend	Backfill
Depth	Type & No. D1 D2 D3 D4	Records	Main Soft brown, becoming light brown, clayey SIL subrounded medium gravel of siltstone. (ALLUVIUM) Soft light brown silty CLAY with frequent relict (ALLUVIUM)	Г. Frequent rootlets. Rare	Detail	Depth, Level (Thickness) (1.30)	Legend X X <t< th=""><th>Backfill</th></t<>	Backfill
- 2.50 - 2.50 	D5 D6		Dark grey SILT with frequent relict rootlets. (ALLUVIUM)			(1.70) 3.00 +1.80		×
- - - -		14/12/17				(0.50)		
	htries ike (m) Remarks) Wet		END OF EXPLORATOR Remarks Depth (m) Remarks	YHOLE		3.50 +1.30 Stability Stat Shoring Nor Weather Sun	ble	
Notes: For explan	ation of symbols an	abbreviations	Project WEST BURTON C POWER STATI	ON		Trial Pit	y	
ee Key to Exploratory Hole Records. All depths and educed levels in metres. Stratum thickness given in rackets in depth column.			Project No. A7102-17 Carried out for Firbeck Construction Limited			· ·	TP111 Sheet 1 of 1	



	Start	Equipment, Methods and Rei	marks	Dimension and Orientation		Ground Level		7.01 mOD
	14/12/2017	360 tracked excavator. Machine excavated		Width 0.60 m		Coordinates (m)		E 480499.87
	End			Length 2 80 m	B 🗭 155 (Deg)	National Grid		N 385841.23
Approved 10	14/12/2017			C C				
Samples an	d Tests		Strata Description				1	
Depth	Type & No.	Records	Main		Detail	Depth, Level (Thickness)	Legend	Backfill
Depth 0.50 1.00 2.00 2.50	туре & No. D1 D2 D3 D4 D5 D6	Records	Main Soft brown slightly sandy CLAY with abundant odour. (TOPSOIL) Dark brown slightly sandy gravelly SILT. Grave fine to coarse of brick. (MADE GROUND) Stiff reddish brown, mottled light bluish grey, s pockets (up to 50mm) of light grey silt. (MADE GROUND - Reworked mercia mudsto	rootlets. Strong organic	2.50 subangular to subrounded fine to coarse gravel of mudstone	Depth, Level (Thickness) 0.15 +6.86 (0.35) 0.50 +6.51 (2.50) (2.50)	Legend	Backfill
	D7	14/12/17 Dry	(ALLŬVIŬM) END OF EXPLORATOR END OF EXPLORATOR	Y HOLE		(0.50) 3.50 +3.51 Stability Sta Shoring Nor	<pre></pre>	
Notes: For explanatio see Key to Explorator reduced levels in met brackets in depth colu © Co Scale 1:25	n of symbols and y Hole Records. , res. Stratum thick imn. opyright SOCOTE	abbreviations All depths and cness given in CC UK Limited AGS	Project WEST BURTON C POWER STATH Project No. A7102-17 Carried out for Firbeck Construction Limited	DN		Weather Ove	TP112	



	Start	Equipment, Methods and Rei	marks	Dimension and Orientation		Ground Level		13.01 mOD
Logged DP	13/12/2017	360 tracked excavator.		Midth 200 m A		Coordinates (m)		E 480293.20
Checked MS	End	wachine excavated.		Viath 2.90 m D	B 🗭 55 (Deg)	National Grid		N 386304.89
Approved 10	13/12/2017			C				
Samples and	d Tests		Strata Description					
Depth	Type & No.	Records	Main		Detail	Depth, Level	Legend	Backfill
Samples and Depth	d Tests Type & No. D1 D2 D3 D4 D5 D6 D6 D7	Records	Strata Description Main Soft to firm brown, mottled orangish brown, sli frequent rootlets. Rare angular coarse gravel (MADE GROUND) Firm dark grey slightly sandy silty CLAY. Stront (MADE GROUND) Dark grey slightly sandy SILT. (MADE GROUND - Pulverised Fuel Ash) END OF EXPLORATOR	ghtly sandy CLAY with of brick. g organic odour.	Detail	Depth, Level (Thickness) (0.80) 0.80 +12.21 (1.00) 1.80 +11.21 (1.70) 3.50 +9.51	Legend	Backfill
Groundwater Entric	es (m) Remarks	abbreviations	Remarks Depth (m) Remarks 0.00 - 3.50 No groundwater encountered during e Project WEST BURTON C POWER STATH	xcavation.		Stability Sta Shoring Nor Weather Ove	ble	
see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. © Copyright SOCOTEC UK Limited Scale 1.25 conserved one to							TP113 Sheet 1 of 1	



Longert DD	Start	Equipment, Methods and Re	marks	Dimension and Orientation		Ground Level		13.05 mOD
Logged DP	13/12/2017	360 tracked excavator.		Width 0.60 m A		Coordinates (m)	I	E 480277.31
	End	Machine excavated.		Length 2.80 m	B 🍑 36 (Deg)	National Grid	r	N 386312.39
Approved 10	13/12/2017			C				
Samples and	d Tests		Strata Description					
Depth	Type & No.	Records	Main		Detail	Depth, Level (Thickness)	Legend	Backfill
Depth 0.50 1.00 1.50 1.50	D1 D1 D2 D3	Records	Main Soft to firm brown, mottled orangish brown, sli abundant rootlets. (TOPSOIL) Firm dark grey slightly sandy silty CLAY with a (MADE GROUND) Dark grey slightly sandy SILT. (MADE GROUND - Pulverised Fuel Ash)	ghtly sandy CLAY with sbundant roots (5x60mm).	Detail	Depth, Level (Thickness) (1.00) 1.00 +12.05 (0.65) 1.65 +11.40	Legend	Backfill
- 2.00 	D4 D5 D6	13/12/17 Drv				(1.85)		
-					-	-		
- 3.50 - 3.50 	D7		END OF EXPLORATOR	YHOLE		3.50 +9.55	ble	
			U.UU - 3.50 No groundwater encountered during e	xcavation.		Shoring Not	ne	
						Weather Ove	ercast	
Notes: For explanatio see Key to Explorator reduced levels in met brackets in depth colu © Co Scale 1:25	n of symbols and y Hole Records. A res. Stratum thick mn. pyright SOCOTE	abbreviations All depths and ness given in C UK Limited	Project WEST BURTON C POWER STATH Project No. A7102-17 Carried out for Firbeck Construction Limited	ON		Trial Pit	TP114 Sheet 1 of 1	



Lawred DD	Start	Equipment, Methods and Re	marks	Dimension and Orientation		Ground Level		9.12 mOD
Logged DP	13/12/2017	360 tracked excavator.		Width 0.60 m A		Coordinates (m)		E 480216.45
	End				30 (Deg)	National Grid		N 386425.20
Approved	13/12/2017			C				
Samples a	nd Tests		Strata Description					
Depth	Type & No.	Records	Main		Detail	Depth, Level (Thickness)	Legend	Backfill
			Light yellowish grey silty CLAY with abundant (MADE GROUND) Soft dark brown slightly sandy gravelly CLAY, subrounded fine to coarse of brick and clinker (MADE GROUND)	rootlets. Gravel is angular to . Rare rebar.		0.10 +9.02		
0.50 	D1					(0.90)		
- - - - - - - - - -	D2		Firm orangish brown gravelly CLAY. Gravel is brick. (MADE GROUND) Light greyish brown slightly gravelly sandy SIL sand. Gravel is angular to subrounded fine to	angular fine to coarse of T, locally grading to silty coarse of clinker/slag.		1.00 +8.12 (0.20) 1.20 +7.92		
- - - - - - - - - - - -	D3		(MADE GROUND - Pulverised Fuel Ash)					
2.00	D4					(2.20)		
2.50	D5					(2.30)		
- 3.00 - 3.00 	D6	13/12/17 Dry						
-					-	-		
- 3.50 	D7		END OF EXPLORATOR	YHOLE		3.50 +5.62		
Groundwater Ent	ries		Remarks					
Grounawater Entries No. Depth Strike (m) Remarks			Depth (m) Remarks 0.00 - 3.50 No groundwater encountered during excavation.			Stability Stable Shoring None Weather Raining		
Notes: For explanation see Key to Exploration	ion of symbols and ory Hole Records	abbreviations All depths and	Project WEST BURTON C POWER STATI	ON		Trial Pit		
reduced levels in m brackets in depth c © Scale 1:25	etres. Stratum thick olumn. Copyright SOCOTE	CC UK Limited	Project No. A7102-17 Carried out for Firbeck Construction Limited			.	TP115 Sheet 1 of 1	



	Start	Equipment, Methods and Rer	marks	Dimension and Orientation		Ground Level		13.55 mOD
Logged DP	13/12/2017	360 tracked excavator.		AA		Coordinates (m)	E 480289.44	
Checked MS	End	Machine excavated.		Width 0.60 m	B 🗭 150 (Deg)	National Grid		N 386467.15
Approved TC	13/12/2017							
Samples an	d Tests		Strata Description			1		
Denth	Type & No	Records	Main		Dotail	Depth, Level	Legend	Backfill
- -	Type a No.		Soft to firm reddish brown slightly sandy grave content. Gravel is angular to subrounded fine i concrete. Frequent rootlets. Cobbles are suba	Ily CLAY with low cobble to coarse of brick and ngular of concrete.	-	(Thickness)		
0.50	D1		(MADE GROUND) Dark grey slightly sandy gravelly SILT. Gravel fine to coarse of clinker, brick and concrete. R (MADE GROUND - Pulverised Fuel Ash)	is angular to subrounded are rebar.		(0.50) 0.50 +13.05		
- 1.00	D2				0.80 fabric - sheeting in centre - of Face A - - - - - - - -	(0.80)		
- - - - - 1.50	D3		Firm slightly sandy gravelly CLAY. Gravel is an coarse of brick, clinker and concrete. (MADE GROUND)	igular to subrounded fine to		1.30 +12.25		
2.00	D4					(1.00)		
- - - - - - 2.50	D5		Dark grey slightly sandy gravelly SILT. Gravel fine to medium of clinker. (MADE GROUND - Pulverised Fuel Ash)	is angular to subrounded		2.30 +11.25		
- - - - - - - - - -	D6	13/12/17 Dry				(1.20)		
F					concrete boulder - with rebar -	-		
	D7	_			-	3.50 +10.05		
-								
-					_			
		-						[
	<u> </u>							
Groundwater Entries No. Depth Strike (m) Remarks			Remarks Depth (m) Remarks 0.00 - 3.50 No groundwater encountered during excavation.			Stability Stable Shoring None		
Notes: For explanatio	on of symbols and	abbreviations	Project WEST BURTON C POWER STATIC	ON		Trial Pit	-	
Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. © Copyright SOCOTEC UK Limited Scale = 125 Carried out for Firbeck Construction Limited						•	TP116	1



APPENDIX C

Installation Details

Table C1

Installation Details



Instrument Reference	Instrument Type (See Notes)	Installation Date, dd/mm/yyyy	Pipe Diameter, mm	Instrument Base, mbgl	Response Zone Range, mbgl	Pipe Top Details	Headworks	Remarks
BH101 (1)	-	15/12/2017	90	30.30	-	Open	Raised cover	Plain pipe installed for geophysical survey
BH104 (1)	SP	15/12/2017	50	14.00	11.00 to 14.00	Gas tap	Raised cover	
BH105 (1)	SP	15/12/2017	50	14.00	11.00 to 14.00	Gas tap	Raised cover	
BH107 (1)	-	18/12/2017	90	28.00	-	Open	Raised cover	Plain pipe installed for geophysical survey
BH108 (1)	-	19/12/2017	90	28.00	-	Open	Raised cover	Plain pipe installed for geophysical survey
WS101 (1)	SP	20/12/2017	50	12.00	9.00 to 12.00	Gas tap	Raised cover	
WS102 (1)	SP	18/12/2017	50	10.50	7.50 to 10.50	Gas tap	Raised cover	
WS103 (1)	SP	14/12/2017	50	15.00	12.00 to 15.00	Gas tap	Raised cover	
WS104 (1)	SP	15/12/2017	50	14.50	9.00 to 14.50	Gas tap	Raised cover	
WS106 (1)	SP	13/12/2017	50	10.50	9.00 to 10.50	Gas tap	Raised cover	
WS108 (1)	SP	08/12/2017	50	11.00	11.00 to 14.10	Gas tap	Raised cover	
WS109 (1)	SP	08/12/2017	50	13.50	9.00 to 13.50	Gas tap	Raised cover	
WS110 (1)	SP	15/12/2017	50	15.00	12.00 to 15.00	Gas tap	Raised cover	
WS111 (1)	SP	06/12/2017	50	15.00	12.00 to 15.00	Gas tap	Raised cover	
WS112 (1)	SP	19/12/2017	50	14.00	11.00 to 14.00	Gas tap	Raised cover	

Notes: Type: SP - Standpipe, SPIE - Standpipe Piezometer, HPIE - Hydraulic Piezometer, PPIE -Pneumatic Piezometer, EPIE - Vibrating Wire Piezometer, PWEL - Pumping Well

Project Projec

Table



APPENDIX D GEOTECHNICAL LABORATORY TEST RESULTS

Index Properties – Summary of Results	INDX
Particle Size Distribution Analyses	PSD 1 to 23
Unconsolidated Undrained Triaxial Compression Tests – Summary of Results	UUSUM
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Point Load Test Results	PLT 1 to 4
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INDEX PROPERTIES - SUMMARY OF RESULTS

	Sample					р	p $p_{\rm d}$ W < 425		WL	W _P	IР	ps		
Hole No.	No	Dept	th (m)	tune	Soil Description				µm sieve					Remarks
	NU.	from	to	iyhe		Mg	/m3	%	%	%	%		Mg/m3	
BH102	3	1.00		D	Grey slightly sandy SILT.			26	99	43 b	NP			
BH102	15	11.30		D	Brown slightly sandy silty CLAY.			29	100	38 a	26	12		
BH104	7	3.20		L	Grey slightly sandy clayey SILT.			29	100	29 b	NP			
BH104	12	8.00		L	Grey slightly sandy slightly gravelly SILT.			29	99	31 b	NP			
BH105	4	5.30		D	Grey slightly sandy slightly gravelly clayey SILT.			27	88	32 b	NP			
BH106	14	7.70		L	Grey slightly sandy slightly gravelly SILT.			25	97	27 b	NP			
TP102	3	1.50		D	Brown slightly sandy SILT with clay pockets.			31	100	42 a	24	18		
TP103	7	3.50		D	Brown slightly sandy clayey SILT.			40	100	47 a	NP			
TP104	4	2.00		D	Dark grey slightly sandy SILT.			19	99	28 b	NP			
TP106	2	1.00		D	Dark brown slightly gravelly sandy SILT.			24	89	39 b	NP			
TP108	4	2.00	<u> </u>	D	Grey slightly sandy SILT.			17	99	27 b	NP			
TP111	2	1.00		D	Brown slightly sandy clayey SILT with rare rootlets.			33	100	43 a	28	15		
TP113	3	1.50		D	Brown slightly sandy CLAY with rare rootlets.			34	98	58 a	31	27		
TP115	5	2.50		D	Brown slightly gravelly sandy SILT with rare rootlets.			17	64	42 b	NP			
WS101	4	1.20		UT	Grey slightly sandy SILT.			24	100	33 b	NP			
WS101	7	3.00		UT	Grey slightly gravelly slightly silty SAND.			20	65	60 b	NP			
WS101	28	14.70		D	Brown slightly sandy silty CLAY.			43	94	48 a	30	18		
WS102	6	4.50		UT	Brown slightly sandy SILT.	$\left \right $		21	100	35 b	NP			
WS103	24	13.50		в	Brown slightly sandy clayey SILT.	$\left \right $		79	100	35 b	NP			
WS104	16	5.70		UT	Grey slightly sandy slightly gravelly SILT.	$\left \right $		21	81	28 b	NP			
WS105	16	10.50		υт	Firm to stiff brown slightly sandy clayey SILT with	$\left \right $		28	100	44 a	25	19		
WS106	11	6.00		υт	Grey slightly sandy SILT.	$\left \right $			100	27 b	NP			
WS106	21	10.50		υт	Light brown slightly sandy SILT.	$\left \right $			99	36 a	NP			
WS106	26	13.50		UT	Stiff reddish brown mottled grey slightly sandy	$\left \right $			100	41 a	30	11		
WS107	6	3.00		UT	Grey slightly sandy SILT.	\vdash		28	99	37 b	NP			
WS108	17	9.00	+		Grey slightly sandy SILT with rare rootlets.	+		27	100	30 b	NP			
WS108	20	12.00	+		Brown slightly sandy clayey SILT.	+			100	36 a	NP			
W/S110	20	12.00			Firm to stiff brown silty CLAY	\vdash			100	46.9	21	15		
W0110	10	12.65			Very soft multicoloured slightly sandy silty CLAY	\mid			05	40 a		24		
W0111	10	13.00	──		Grey slightly sandy slightly gravelly clayey SILT	\vdash		07	90	01a	21	34	<u> </u>	
W0112	9	4.50			Brown slightly gravelly sandy clayey SILT.	\square	<u> </u>	21	ბ ა	32 a	25	(<u> </u>	
WS112	20	10.50	<u> </u>	В				27						
General notes:	All above f	tests carrie	ed out to E	3S1377	: 1990 unless annotated otherwise. See Remarks	s for furth	ner detai	ils						
Key :	p	bulk den:	sity, linear	t	WL Liquid limit	WP	Plastic	limit		<425un	n prepar	ation		ps particle density
	pd	dry densi	ity		a 4 point cone test	NP	non - pl	lastic		n from	natural	soil		-g = gas jar
	w *	moisture	content	RS EN !	b 1 point cone test	IP	Plasticit	y Index		s sieve	ad spec	imen		-p = small pyknometer
21.0-(
QA Ret SLR 1		1			Project No A7	102-17	7						Fig	ure
Rev 2.91				1	Project Name WE	EST BI	JRTO	N C/D	POW	ER S	ΓΑΤΙΟ	N		INDX
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		S	00	:0	Opinions and interpretations ex accreditation. © Copyright 2017	<pressed 7 SOCO</pressed 	I herein TEC UK	are outs	side the s d	scope of	UKAS		Pr	rinted: 06/02/2018 09:13














































UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TESTS WITHOUT MEASUREMENT OF PORE PRESSURE - SUMMARY OF RESULTS

		Sam	nple				Der	nsity	w	Test	Dia.	ó3	At fail	ure / ei	nd of s	tage	Membrane	
Hole No.	No.	Dept	h (m)	tvpe	Soil Dese	cription	bulk	dry		type			Axial strain	ó1 - ó:	си	M O	Thickness	Remarks
		from	to				Mg	/m3	%		mm	kPa	%	kPa	kPa	D E	mm	
WS104	34	14.20		UT	Stiff brown mottled grey sl CLAY.	lightly sandy silty	1.99	1.53	29	UU	103	275	19.3	311	155	с	0	
WS106	21	10.50		UT	Light brown sandy SILT.		2.12	1.65	29	UU	100.9	206	20.3	173	86	Ρ	0	
WS106	26	13.50		UT	Stiff reddish brown mottlee CLAY	d grey slightly sandy	1.82	1.4	30	UU	102.2	263	20	279	140	с	0	
WS108	20	12.00		UT	Brown sandy clayey SILT.		2.01	1.52	32	UU	103.2	235	20.6	128	64	Ρ	0	
WS110	16	9.00		UT	Firm to stiff brown sandy \$	SILT	1.95	1.49	31	UU	102.7	178	15.4	739	369	в	0	
WS110	23	12.00		UT	Stiff brown slightly sandy (CLAY	2.02	1.58	28	UU	102.2	234	10.9	319	160	в	0	
WS110	26	13.50		UT	Firm to stiff brown clayey	SILT	1.94	1.47	32	UU	103.6	263	4.5	196	98	в	0	
WS111	18	13.65		UT	Very soft multicoloured cla	ayey SILT	1.8	1.15	57	UU	101.4	266	18.4	58	29	Ρ	0	
WS112	25	14.00		UT	Firm to stiff brown mottled silty CLAY.	grey slightly sandy	1.86	1.34	39	υυ	103.4	270	13.9	133	67	с	0	
General notes:	Tests c	arried ou	t in acco	rdance	e with BS1377: Part 7: 19	190, clause 8 for sing	le stan	e, claus	se 9 for	multista	ige tests	s. Spen	imens	nomina	ally 2:1	heia	ht diameter	ratio and tested
	at a rate	e of strai	n of 2%/i	minute	, unless annotated other	wise. Latex rubber me	embrar	ne used	and me	embrane	e correc	tion ap	plied ir	accor	dance	with I	BS1377-7 8.	5.1.4 unless stated.
Legend	UU - sir	ngle stag	e test (r	nay be	in sets of specimens)		ó3 ó1 - ó	3	cell pre	essure			Mode	of failu	re	P B		plastic
	suffix R	- remou	Ided or r	ecomp	acted		cu	.0	undrair	ned shea	ar strenç	gth				С		compound
QA Ref SLR 2 Rev 2.7 Apr 15						Project No Project Name		A710 WES	02-17 ST BU	RTON	I C/D	POW	'ER S	TATI	ON		Figur	• UUSUM
	UKA TESTIN 1157	G	sc		OTEC	Opinions and interp accreditation. © Co	oretatio pyright	ns expi 2015 \$	ressed I SOCOT	nerein a EC UK I	re outsie Limited	de the s	scope o	of UKA	S		Print	ed: 06/02/2018 09:22









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All specimens tested at as received water content unless shown otherwise Test Type Diametral Axial Block/irregular lump																				
Test Type	Avial I	- Irroc	uular l	ump	B . (Block		Diam	etral			Aک	kial		Blo	ck/irreg	ular lur	np		
D - Diametral, A - Direction (U = u	Inknowr	or ra	indon	-ump 1)	, Б - с	DIOCK			P				⊥P				P			
L - parallel to pla P - perpendicular	nes of w to plan	reakne es of	ess weak	ness			1		V					2	Lne	7	• /	D _{ps}		
Dimensions	- otween r	alaten	e (nl:	oton s	enar:	l	D _{ps}			W	Dp	s 🖣	W	•	•	W	•	/		
Dps' - at failure	SIMCCU P	Jaten	2 (hi	aten a	epair		۲ · ا	4				↓ (J						
Lne - Length from W - Width of she	n platen: ortest di	s to n mens	eares ion p	t free erpen	end dicul	ar to load, P		ne	1											
			,							r –					1	D :		1		
			Ð	ef	pth		Test see	Type ISRM	(N/)		Dime	nsions		LOAD	eter,	Point Lo	ad Index Pa			
shole	t) t	ole Re	le Typ	nen R	en De	Rock type	Fig 5	and 8	alid ()					Р	be t diam	F = (De	/50)0.45	Remarks		
Bore	Dep	Samp	Sampl	Specin	pecime	Rook type	oe I, B)	tion or U)	lure V	Lne	w	Dps	Dps'	1.51	ivalen m	1-	10(50)			
			0.	05	у С		Tyr (D, A,	Direc (L, P -	Fai	mm	mm	mm	mm	KIN	edni	IS	IS(5U)			
BH101	18.05	24	CS	1		MUDSTONE	D	U	Y	50.0	86.1	86.0	84.0	0.60	85.04	0.08	0.11			
BH101	18.05	24	CS	2		MUDSTONE	А	Р	Y		86.1	58.0	48.0	3.00	72.54	0.57	0.67			
BH101	22.50	26	CS	1		MUDSTONE	D	L	N	39.0	76.6	77.0	73.0	0.80	74.78	0.14	0.17			
BH101	22.50	26	CS	2		MUDSTONE	А	Р	Y		76.6	55.0	43.0	1.10	64.76	0.26	0.29			
BH101	24.50	28	CS	1		MUDSTONE	D	L	Y	50.0	82.9	71.0	78.0	0.30	80.41	0.05	0.06	Laminated		
BH101	24.50	28	CS	2		MUDSTONE	A	Р	N		82.9	58.0	48.0	0.90	71.18	0.18	0.21	Laminated		
BH101	25.82	29	CS	1		MUDSTONE	D	L	Y	45.0	84.6	85.0	81.0	0.40	82.78	0.06	0.07			
BH101	25.82	29	CS	2		MUDSTONE	A	L	N		84.6	52.0	50.0	0.20	73.39	0.04	0.04			
BH101	27.30	30	cs	1		MUDSTONE	D	U	N	60.0	85.1	85.0	70.0	1.60	77.18	0.27	0.33			
BH101	27.30	30	CS	2		MUDSTONE	A	Р	Y		85.1	60.0	41.0	1.40	66.65	0.32	0.36			
BH102	16.90	18	CS	1		MUDSTONE	D	L	N	45.0	82.7	80.0	77.0	0.30	79.80	0.05	0.06			
BH102	16.90	18	CS	2		MUDSTONE	A	U	Y		82.7	67.0	57.0	1.00	77.47	0.17	0.20			
BH102	17.70	19	CS	1		MUDSTONE	A	Р	N		85.2	67.0	57.0	1.30	78.63	0.21	0.26			
BH102	17.70	19	CS	2		MUDSTONE	I	L	Y	34.0	55.3	52.0	51.0	1.00	59.92	0.28	0.30			
BH102	18.00	20	CS	1		MUDSTONE	D	L	N	43.0	85.6	86.0	85.0	0.20	85.30	0.03	0.03			
BH102	18.00	20	CS	2		MUDSTONE	A	Р	N		85.6	50.0	47.0	0.50	71.57	0.10	0.11			
BH102	20.13	21	CS	1		MUDSTONE	D	L	Y	45.0	60.6	61.0	58.0	1.60	59.29	0.46	0.49			
BH102	20.13	21	CS	2		MUDSTONE	A	Ρ	Y		60.6	50.0	41.0	2.00	56.24	0.63	0.67			
QA Ref	â					Proje	ect No		A	7102-1	17					Fig	ure			
Rev 2.5 Jan 17				8		Proje	ect Nar	me	W	'EST E	BURTO	ON C/I	D POWER STATION PLT							

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All specimens tested at as received water content unless shown otherwise Test Type Diametral Axial Block/irregular lump																					
Test Type	Avial I	- Irroc	uular l	ump	B _ 5	Block		Diam	etral			Aک	cial		Blo	ck/irreg	ular lur	np			
D - Diametral, $A - Diametral, A - Direction (U = L$	inknowr	or ra	andon	Lump 1)	, Б - С	DIOCK			P				P				P				
L - parallel to pla P - perpendicular	nes of w to plan	/eakn es of	ess weak	ness			^		<u> </u>				\mathbb{T}	2	L _{ne}	/	' /	D _{ps}			
Dimensions						[D _{ps}			+ w	Dp	s 🖣		•		10/	····•••				
Dps - Distance be Dps' - at failure	etween p	olaten	is (pla	aten s	epara	ation)	• (∢ i	>			↓ (vv	J		VV					
Lne - Length from	n platen	s to n	eares	t free	end			∟ne													
w - width of she	ortest di	mens	ion p	erpen	aicui	ar to load, P															
							Test	Туре	~						er,	Point Lo	ad Index				
٥	ε	Ref	ype	Ref	Depth		see Fia 5	ISRM and 8	N/Y) h		Dime	nsions		P	amete		ra				
oreho	epth,	nple I	T aldr	cimen	men I	Rock type	°	- -	· Valic						ent di mm	F = (De	/50)0.45	Remarks			
ă	Õ	Sar	San	Spe	Speci		ype A, I, E	or L	ailure	Lne	W	Dps	Dps'	kN	luivale	ls	ls(50)				
					.,		ц, т (D, т	(L, F	ш						be						
BH102	24.72	23	CS	1		MUDSTONE	D	L	N	47.0	85.5	86.0	84.0	0.70	84.75	0.10	0.12				
BH102	24.72	23	CS	2		MUDSTONE	А	L	Y		85.5	65.0	63.0	0.90	82.81	0.13	0.16				
BH102	26.62	24	CS	1		MUDSTONE	D	L	Y	45.0	85.0	85.0	84.0	0.20	84.50	0.03	0.04				
BH102	26.62	24	CS	2		MUDSTONE	A	Ρ	N		85.0	52.0	50.0	0.90	73.56	0.17	0.20				
BH103	22.08	17	CS	1		MUDSTONE	D	U	Y	56.0	86.2	86.0	84.0	2.20	85.09	0.30	0.39				
BH103	22.08	17	CS	2		MUDSTONE	A	Ρ	N		86.2	65.0	53.0	2.00	76.27	0.34	0.42				
BH103	22.55	18	CS	1		MUDSTONE	D	L	N	42.0	83.3	83.0	82.0	0.90	82.65	0.13	0.17				
BH103	22.55	18	CS	2		MUDSTONE	A	Ρ	Y		83.3	63.0	52.0	2.50	74.26	0.45	0.54				
BH103	23.80	19	CS	1		GYPSUM	A	U	Y		84.2	69.0	68.0	2.40	85.38	0.33	0.42				
BH103	23.80	19	CS	2		GYPSUM	I	Ρ	Y	41.0	69.5	50.0	49.0	1.70	65.85	0.39	0.44				
BH103	28.95	20	CS	1		GYPSUM/MUD STONE	A	Ρ	N		82.3	71.0	60.0	1.30	79.29	0.21	0.25				
BH103	28.95	20	CS	2		GYPSUM/MUD STONE	I	L	Y	38.0	61.1	56.0	54.0	0.90	64.81	0.21	0.24				
BH104	16.79	18	CS	1		MUDSTONE	A	Р	N		86.1	77.0	58.0	0.50	79.74	0.08	0.10				
BH104	16.79	18	CS	2		MUDSTONE	I	L	Y	41.0	64.6	58.0	56.0	0.30	67.87	0.07	0.07				
BH104	18.10	20	CS	1		MUDSTONE	D	U	N	53.0	85.0	85.0	83.0	1.50	83.99	0.21	0.27				
BH104	18.10	20	CS	2		MUDSTONE	A	Р	N		85.0	78.0	75.0	1.20	90.09	0.15	0.19				
BH104	22.05	21	CS	1		SILTSTONE	D	U	Y	60.1	86.1	84.0	76.0	1.20	80.89	0.18	0.23				
BH104	22.05	21	CS	2		SILTSTONE	A	U	Y		85.8	49.0	44.0	0.90	69.33	0.19	0.22				
QA Ref	~^ ^		1			Proie	ect No		A	7102-'	17					Fig	ure				
ISRM 85 Rev 2.5	- Hand					Proje	ct No	me	1	FSTF			ר פע				ד ום				
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All specimens test	Il specimens tested at as received water content unless shown otherwise est Type Diametral Axial Block/irregular lump - Diametral, A - Axial, I - Irregular Lump, B - Block																	
Test Type	Avial I	- Irroc	ular l	ump	B-I	Plack	l	Diam	etral			Aک	kial		Blo	ck/irreg	jular lur	np
D - Diametral, A - Direction $(U = u)$	Inknowr	or ra	indon	_ump າ)	, в - с	SIOCK]P				P			_	P	
L - parallel to pla P - perpendicular	nes of w r to plan [,]	eakne es of	ess weaki	ness			1		•					2	L _{ne}	/	' /	D _{ps}
Dimensions Dps - Distance be	etween r	olaten	s (nl:	aten s	separa	ation)	D _{ps}			tw	Dp	s 🗣	W	•	•	W	•	
Dps' - at failure	n nloton	. to n	o (p.	+ froo	ond	,	I	L _{ne}	•			÷ (
W - Width of sh	ortest di	mens	ion p	erpen	idicul	ar to load, P			:									
							Test	Type							5	Point Lo	ad Index	
e	ε	Ref	ype	Ref	Depth		see Fig 5	ISRM and 8	(N/λ) F		Dime	nsions		LOAD P	amete	M	Pa	
3oreho	Jepth,	ample	mple T	scimer	simen	Rock type	B	εĴ	e Valic						De lent di mm	F = (De	/50)0.45	Remarks
ш		Se	Sai	Spe	Spec		Type , A, I,	irectio , P or I	Failur	Lne mm	W mm	Dps mm	Dps' mm	kN	equiva	ls	ls(50)	
BH104	23.40	22	CS	1		SILTSTONE	U) D	U U	Y	71.5	85.6	84.0	81.0	0.20	83.27	0.03	0.04	
BH104	23.40	22	CS	2		SILTSTONE	A	U	Y		84.9	83.0	79.0	0.40	92.41	0.05	0.06	
BH104	26.39	23	CS	1		SILTSTONE	D	U	Y	64.8	82.1	80.0	75.0	1.10	78.47	0.18	0.22	
BH104	26.39	23	CS	2		SILTSTONE	А	U	Y		80.9	63.0	58.0	1.30	77.29	0.22	0.26	
BH104	29.45	24	CS	1		SILTSTONE	D	U	Y	58.1	87.1	86.0	81.0	1.10	83.99	0.16	0.20	
BH104	29.45	24	CS	2		SILTSTONE	A	U	Y		86.5	42.0	40.0	0.80	66.37	0.18	0.21	
BH105	17.50	9	CS	1		MUDSTONE	D	U	Y	79.5	84.2	83.0	78.0	1.50	81.04	0.23	0.28	
BH105	17.50	9	CS	2		MUDSTONE	A	U	Y		83.9	52.0	46.0	1.70	70.10	0.35	0.40	
BH105	21.60	11	CS	1		MUDSTONE	D	U	Y	70.5	84.2	82.0	73.0	1.40	78.40	0.23	0.28	
BH105	21.60	11	CS	2		MUDSTONE	A	U	Y		84.0	53.0	47.0	1.20	70.90	0.24	0.28	
BH105	25.78	13	CS	1		MUDSTONE	D	U	Y	62.8	83.2	82.0	80.0	0.40	81.58	0.06	0.07	
BH105	25.78	13	CS	2		MUDSTONE	A	U	Y		82.9	48.0	37.0	0.40	62.49	0.10	0.11	
BH105	27.16	14	CS	1		GYPSUM	D	U	Y	62.1	85.1	83.0	82.0	0.30	83.54	0.04	0.05	
BH105	27.16	14	CS	2		GYPSUM	A	U	Y		85.0	45.0	43.0	0.60	68.22	0.13	0.15	
BH105	28.16	15	CS	1		SILTSTONE	D	U	Y	53.1	84.9	83.0	80.0	0.40	82.41	0.06	0.07	
BH105	28.16	15	CS	2		SILTSTONE	A	U	Y		84.8	45.0	41.0	0.80	66.53	0.18	0.21	
BH106	16.25	22A	CS	1		GYPSUM	D	U	Y	50.0	87.3	84.0	78.0	1.00	82.52	0.15	0.18	
BH106	16.25	22A	CS	2		GYPSUM	I	U	Y	54.5	87.1	55.0	50.0	1.70	74.46	0.31	0.37	
QA Ref	â					Proje	ect No		А	7102-′	17					Fig	ure	
Rev 2.5						Proje	ect Nar	me	W	EST E	BURTO	DN C/I	D POV	VER ST	ATION		PLT	
	JKAS				8													
	testing 1157	S	0	c	Т	EC Opiniaccre	ions and ditation.	interpret © Copyr	tations e right 20 ⁻	expresse	d herein	are out K Limite	side the d	scope of U	KAS	06	Printed 6/02/2018	: 09:20



Uniaxial Compressive Strength Of Rock - Summary of Results

		San	nple			S Dir	pecime nensio	en ns ²	Bulk	Water		Uniaxia	al Compressio	on ³	
Hole No.	No.	Dept	:h (m)	type	Rock Type	Dia.	Height	H/D	Density ²	Content ¹	Load Rate	Time to failure	Mode of failure	UCS	Remarks
		from	to	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		mm	mm		Mg/m ³	%	kN/min	secs		MPa	
BH101	27	22.88		CS	MUDSTONE	67.2	164.7	2.5	2.23	20.4	2	182	shear	3.93	
BH102	22	21.57		CS	CLAY/MUDSTO NE	85.1	218.3	2.6	2.24	14.5	2	369	shear	3.45	
BH104	19	17.40		CS	MUDSTONE	86.0	175.6	2.0	2.25	15.3	2	593	multiple shear	4.6	Outside ISRM Specification
BH105	10	21.08		CS	MUDSTONE	83.6	170.1	2.0	2.23	19.2	2	183	multiple shear	2.53	Outside ISRM Specification
BH105	12	22.10		CS	MUDSTONE	83.7	150.4	1.8	2.22	16.3	2	75	multiple shear	1.33	Outside ISRM Specification
Notes : 1 2 3	Test Spe ISRM p8 ISRM p86 ISRM p16 above p2	cification : 7 test 1, w 5 clause (^v 53 part 1, tes apply	Internat ater conte vii), Calipe determina	ional Soo nt at 105 er methoo tion of U	tiety for Rock Mecl ± 3 oC, specimen d used for determin niaxial Compressiv otherwise in the roc	hanics, T as recei nation of ve Streng	he comp ved at th bulk volu th (UCS	lete ISR e labora me and 5) of Ro	M suggested tory derivation of t ck Materials	methods for Ro	ock Chara	cterizatio	n Testing and Mor Mode of failure : S - Single shear AC - Axial cleava	nitoring, 200	7 MS - multiple shear F - Fragmented
QA Ref RLR 2 Rev 2.16 Apr 15						Proj	ect No ect Na	me	A7102 WEST	2-17 BURTON	C/D PC	WER	STATION	Figure	RUCS
	U K / TESTI 115		so		DTEC	Opir accr	nions and editation	interpre	etations expres	ssed herein are	e outside th mited	ne scope	of UKAS	Printe	d: 06/02/2018 09:23

TEST REPORT



Report No. EFS/182228 (Ver. 1)

SOCOTEC UK Limited Doncaster Askern Road Carcroft Doncaster South Yorkshire DN6 8DG

Site: A7102-17 West Burton

The 1 sample described in this report were registered for analysis by SOCOTEC UK Limited on 16-Jan-2018. This report supersedes any versions previously issued by the laboratory. The analysis was completed by: 23-Jan-2018

Tests where the accreditation is set to N or No, and any individual data items marked with a * are not UKAS accredited. Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

The following tables are contained in this report:

Table 1 Main Analysis Results (Page 2) Analytical and Deviating Sample Overview (Page 3) Table of Method Descriptions (Page 4) Table of Report Notes (Page 5) Table of Sample Descriptions (Appendix A Page 1 of 1)

On behalf of SOCOTEC UK Li Tim Barnes



Date of Issue: 23-Jan-2018

Tests marked '^' have been subcontracted to another laboratory.

Where samples have been flagged as deviant on the Analytical and Deviating Sample Overview, for any reason, the data may not be representative of the sample at the point of sampling and the validity of the data may be affected. SOCOTEC UK Limited accepts no responsibility for any sampling not carried out by our personnel.

	Units :	mg/kg	mg/l	%	pH Units								
	Method Codes : Method Reporting Limits	ICPACIDS 20	ICPWSS 10	TSBRE1	WSLM50								
	UKAS Accredited :	Yes	Yes	0.005 No	No								
LAB ID Number CL/	Client Sample Description	SO4 (acid sol)	SO4 (H2O sol) mg/l	Total Sulphur.	pH (BS1377)								
1890119	WS107 UT 6 3.00	4610	1550	0.182	8.6								
		Client N	ame	SOCOT		Ooncaster				Sam	mple Analysis		
1	Rrethy Business Park Ashby Road	USINGU	•						Date Pri	nted	2	3- lan-2019	
	Purton on Trant. Staffordabira, DE15.0VZ								Date Pill	lumbor	2	CC/400000	
	Durton-on- ment, Statfordshire, DE15 UYZ			A7'	102-17 We	st Bur	ton		Report	umber	E	-3/182228	
	Tel +44 (0) 1283 554400			2					Table Nu	Imber		1	
	Fax +44 (0) 1283 554422												

Sample Analysis

SOCOTEC UK Ltd Environmental Chemistry **Analytical and Deviating Sample Overview**

Customer Site Report No	SOCOTEC UK Limited De A7102-17 West Burton S182228	oncaster				-	Cons Date	signm Logg	ient N ged 16 Rono	lo S7′ ∂-Jan∙	2018	- 2n-2(-	
Please note the res	sults for any subcontracted analy	sis (identified	with a	a '^') is	s likel	y to ta	ake up	o to a	n add	itiona	five	workir	ng day	vs.
		MethodID	CustServ	Dep.Opt			ICPACIDS	ICPBRE	ICPWSS	KONECL	KoneNO3	TSBRE1	WSLM50	
ID Number	Description	Sampled	REPORT A	DO CI if pH<5.5	DO Mg if SO4(W)>3000	DO NO3 if pH<5.5	SO4 (acid sol)	Magnesium (BRE)	SO4 (H2O sol) mg/l	Chloride:(2:1)	Nitrate (BRE 2:1): mg/l	Total Sulphur.	pH (BS1377)	
							✓		✓					
CL/1890119	WS107 3.00-3.45	D	D	D	D	D	D	D	D	D	D	D	D	

Note: We will endeavour to prioritise samples to complete analysis within	Deviating Sample Key
holding time; however any delay could result in samples becoming	A The sample was received in an inappropriate container for this analysis
deviant whilst being processed in the laboratory.	B The sample was received without the correct preservation for this analysis
	C Headspace present in the sample container
If sampling dates are missing or matrices unclassified then results will	D The sampling date was not supplied so holding time may be compromised - applicable to all analysis
not be ISO 17025 accredited. Please contact us as soon as possible to	E Sample processing did not commence within the appropriate holding time
provide missing information in order to reinstate accreditation.	F Sample processing did not commence within the appropriate handling time
	Requested Analysis Key
	Analysis Required
	Analysis dependant upon trigger result - Note: due date may be affected if triggered
	No analysis scheduled
	 Analysis Subcontracted - Note: due date may vary

Method Descriptions

Matrix	MethodID	Analysis	Method Description
		Basis	
Soil	ICPACIDS	Oven Dried	Determination of Total Sulphate in soil samples by Hydrochloric
		@ < 35°C	Acid extraction followed by ICPOES detection
Soil	ICPWSS	Oven Dried	Determination of Water Soluble Sulphate in soil samples by water
		@ < 35°C	extraction followed by ICPOES detection
Soil	TSBRE1	Oven Dried	Determination of Total Carbon and/or Total Sulphur in solid
		@ < 35°C	samples by high temperature combustion/infrared detection
Soil	WSLM50	Oven Dried	Determination of pH of 2.5:1 deionised water to soil extracts using
		@ < 35°C	pH probe.

Generic Notes

Soil/Solid Analysis

Unless stated otherwise,

- Results expressed as mg/kg have been calculated on the basis indicated in the Method Description table.
 All results on MCERTS reports are reported on a 105°C dry weight basis with the exception of pH and conductivity.
- Sulphate analysis not conducted in accordance with BS1377
- Water Soluble Sulphate is on a 2:1 water:soil extract

Waters Analysis

Unless stated otherwise results are expressed as mg/l NiI: Where "NiI" has been entered against Total Alkalinity or Total Acidity this indicates that a measurement was not required due to the inherent pH of the sample.

Oil analysis specific

Unless stated otherwise,

- Results are expressed as mg/kg
- SG is expressed as g/cm³@ 15°C

Gas (Tedlar bag) Analysis

Unless stated otherwise, results are expressed as ug/I

Asbestos Analysis

CH Denotes ChrysotileTR Denotes TremoliteCR Denotes CrocidoliteAC Denotes ActinoliteAM Denotes AmositeAN Denotes AnthophyliteNAIIS No Asbestos Identified in SampleNADIS No Asbestos Detected In Sample

Symbol Reference

^ Sub-contracted analysis.

\$\$ Unable to analyse due to the nature of the sample

- ¶ Samples submitted for this analyte were not preserved on site in accordance with laboratory protocols.
- This may have resulted in deterioration of the sample(s) during transit to the laboratory.

Consequently the reported data may not represent the concentration of the target analyte present in the sample at the time of sampling

¥ Results for guidance only due to possible interference

& Blank corrected result

I.S Insufficient sample to complete requested analysis

I.S(g) Insufficient sample to re-analyse, results for guidance only

Intf Unable to analyse due to interferences

N.D Not determined N.Det Not detected

N.F No Flow

NS Information Not Supplied

Req Analysis requested, see attached sheets for results

P Raised detection limit due to nature of the sample

* All accreditation has been removed by the laboratory for this result

‡ MCERTS accreditation has been removed for this result

§ accreditation has been removed for this result as it is a non-accredited matrix

Note: The Laboratory may only claim that data is accredited when all of the requirements of our Quality System have been met. Where these requirements have not been met the laboratory may elect to include the data in its final report and remove the accreditation from individual data items if it believes that the validity of the data has not been affected. If further details are required of the circumstances which have led to the removal of accreditation then please do not hesitate to contact the laboratory.

Sample Descriptions

Client :	SOCOTEC UK Limited Doncaster
Site :	A7102-17 West Burton
Report Number :	S18_2228

Note: major constituent in upper case

Lab ID Number	Client ID	Description
CL/1890119	WS107 UT 6 3.00	SILT

TEST REPORT



Report No. EFS/182229 (Ver. 1)

SOCOTEC UK Limited Doncaster Askern Road Carcroft Doncaster South Yorkshire DN6 8DG

Site: A7102-17 West Burton

The 1 sample described in this report were registered for analysis by SOCOTEC UK Limited on 16-Jan-2018. This report supersedes any versions previously issued by the laboratory. The analysis was completed by: 22-Jan-2018

Tests where the accreditation is set to N or No, and any individual data items marked with a * are not UKAS accredited. Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

The following tables are contained in this report:

Table 1 Main Analysis Results (Page 2) Analytical and Deviating Sample Overview (Page 3) Table of Method Descriptions (Page 4) Table of Report Notes (Page 5) Table of Sample Descriptions (Appendix A Page 1 of 1)

On behalf of SOCOTEC UK Lim Tim Barnes

Operations Director Energy & Waste Services Date of Issue: 22-Jan-2018

Tests marked '^' have been subcontracted to another laboratory.

Where samples have been flagged as deviant on the Analytical and Deviating Sample Overview, for any reason, the data may not be representative of the sample at the point of sampling and the validity of the data may be affected. SOCOTEC UK Limited accepts no responsibility for any sampling not carried out by our personnel.

	Units :	mg/kg	mg/l	%	%	pH Units								
	Method Codes :	ICPACIDS	ICPWSS	ORGMAT	TSBRE1	WSLM50								
	Method Reporting Limits :	20 Xoc	10 Voc	0.1 No	0.005 No	No								
	UNAS ACCIEULIEU .	165	165	INU	INU	INU								
LAB ID Number CL/	Client Sample Description	SO4 (acid sol)	SO4 (H2O sol) mg/l	Organic Matter %	Total Sulphur.	pH (BS1377)								
1890120	WS103 B 24 13.50	1930	778	1.9	0.234	7.9								
		ļ												
	SOCOTEC Client Name		ame	SOCOT	EC UK L	imited D	oncaster				Sam	ple Analysis		
	Deathy Dusinger Deals Ashby Dead	Contact								Data Dri	ntod		2 Jan 2040	
	Dieluy Dusiness Fain, Asiluy rudu										lumbar		2-Jaii-2018	
	Durtori-ori-i rent, Stattorosnire, DE15 UYZ			A71	102-1	7 Wes	st Bur	ton		Report N	umper	E	ro/182229	
	Tel +44 (0) 1283 554400				•					Table Nu	umber		1	
	Fax +44 (0) 1283 554422													

Sample Analysis

SOCOTEC UK Ltd Environmental Chemistry **Analytical and Deviating Sample Overview**

Customer Site	SOCOTEC UK Limited De A7102-17 West Burton			-	Consignment No S71743 Date Logged 16-Jan-2018									
Report No	S182229						In-Ho	ouse l	Repo	rt Due	e 24-J	an-20)18	
Please note the res	sults for any subcontracted analys	sis (identified	with a	ι '^') is	likely	/ to ta	ike up	to ar	n addi	itional	five	workir	ng day	ys.
		MethodID	CustServ	Dep.Opt			ICPACIDS	ICPBRE	ICPWSS	KONECL	KoneNO3	ORGMAT	TSBRE1	WSLM50
ID Number	Description	Sampled	REPORT A	DO CI if pH<5.5	DO Mg if SO4(W)>3000	DO NO3 if pH<5.5	SO4 (acid sol)	Magnesium (BRE)	SO4 (H2O sol) mg/l	Chloride:(2:1)	Nitrate (BRE 2:1): mg/l	Organic Matter %	Total Sulphur.	pH (BS1377)
	1						✓		✓					
CL/1890120	WS103 13.50-14.00	D	D	D	D	D	D	D	D	D	D	D	D	D

Note: We will endeavour to prioritise samples to complete analysis within	Deviating Sample Key
holding time; however any delay could result in samples becoming	A The sample was received in an inappropriate container for this analysis
deviant whilst being processed in the laboratory.	B The sample was received without the correct preservation for this analysis
	C Headspace present in the sample container
If sampling dates are missing or matrices unclassified then results will	D The sampling date was not supplied so holding time may be compromised - applicable to all analysis
not be ISO 17025 accredited. Please contact us as soon as possible to	E Sample processing did not commence within the appropriate holding time
provide missing information in order to reinstate accreditation.	F Sample processing did not commence within the appropriate handling time
	Requested Analysis Key
	Analysis Required
	Analysis dependant upon trigger result - Note: due date may be affected if triggered
	No analysis scheduled
	Analysis Subcontracted - Note: due date may vary

Method Descriptions

Matrix	MethodID	Analysis	Method Description
		Basis	
Soil	ICPACIDS	Oven Dried	Determination of Total Sulphate in soil samples by Hydrochloric
		@ < 35°C	Acid extraction followed by ICPOES detection
Soil	ICPWSS	Oven Dried	Determination of Water Soluble Sulphate in soil samples by water
		@ < 35°C	extraction followed by ICPOES detection
Soil	ORGMAT	Oven Dried	Acid Dichromate oxidation of the sample followed by colorimetric
		@ < 35°C	analysis of the extract
Soil	TSBRE1	Oven Dried	Determination of Total Carbon and/or Total Sulphur in solid
		@ < 35°C	samples by high temperature combustion/infrared detection
Soil	WSLM50	Oven Dried	Determination of pH of 2.5:1 deionised water to soil extracts using
		@ < 35°C	pH probe.

Generic Notes

Soil/Solid Analysis

Unless stated otherwise,

- Results expressed as mg/kg have been calculated on the basis indicated in the Method Description table.
 All results on MCERTS reports are reported on a 105°C dry weight basis with the exception of pH and conductivity.
- Sulphate analysis not conducted in accordance with BS1377
- Water Soluble Sulphate is on a 2:1 water:soil extract

Waters Analysis

Unless stated otherwise results are expressed as mg/l NiI: Where "NiI" has been entered against Total Alkalinity or Total Acidity this indicates that a measurement was not required due to the inherent pH of the sample.

Oil analysis specific

Unless stated otherwise,

- Results are expressed as mg/kg
- SG is expressed as g/cm³@ 15°C

Gas (Tedlar bag) Analysis

Unless stated otherwise, results are expressed as ug/I

Asbestos Analysis

CH Denotes ChrysotileTR Denotes TremoliteCR Denotes CrocidoliteAC Denotes ActinoliteAM Denotes AmositeAN Denotes AnthophyliteNAIIS No Asbestos Identified in SampleNADIS No Asbestos Detected In Sample

Symbol Reference

^ Sub-contracted analysis.

\$\$ Unable to analyse due to the nature of the sample

- ¶ Samples submitted for this analyte were not preserved on site in accordance with laboratory protocols.
- This may have resulted in deterioration of the sample(s) during transit to the laboratory.

Consequently the reported data may not represent the concentration of the target analyte present in the sample at the time of sampling

¥ Results for guidance only due to possible interference

& Blank corrected result

I.S Insufficient sample to complete requested analysis

I.S(g) Insufficient sample to re-analyse, results for guidance only

Intf Unable to analyse due to interferences

N.D Not determined N.Det Not detected

N.F No Flow

NS Information Not Supplied

Req Analysis requested, see attached sheets for results

P Raised detection limit due to nature of the sample

* All accreditation has been removed by the laboratory for this result

‡ MCERTS accreditation has been removed for this result

§ accreditation has been removed for this result as it is a non-accredited matrix

Note: The Laboratory may only claim that data is accredited when all of the requirements of our Quality System have been met. Where these requirements have not been met the laboratory may elect to include the data in its final report and remove the accreditation from individual data items if it believes that the validity of the data has not been affected. If further details are required of the circumstances which have led to the removal of accreditation then please do not hesitate to contact the laboratory.

Sample Descriptions

Client :	SOCOTEC UK Limited Doncaster
Site :	A7102-17 West Burton
Report Number :	S18_2229

Note: major constituent in upper case

Lab ID Number	Client ID	Description
CL/1890120	WS103 B 24 13.50	SILT

TEST REPORT



Report No. EFS/182237 (Ver. 1)

SOCOTEC UK Limited Doncaster Askern Road Carcroft Doncaster South Yorkshire DN6 8DG

Site: A7102-17 West Burton

The 1 sample described in this report were registered for analysis by SOCOTEC UK Limited on 17-Jan-2018. This report supersedes any versions previously issued by the laboratory. The analysis was completed by: 22-Jan-2018

Tests where the accreditation is set to N or No, and any individual data items marked with a * are not UKAS accredited.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

The following tables are contained in this report:

Table 1 Main Analysis Results (Page 2) Analytical and Deviating Sample Overview (Page 3) Table of Method Descriptions (Page 4) Table of Report Notes (Page 5) Table of Sample Descriptions (Appendix A Page 1 of 1)

On behalf of SOCOTEC UK Lim Tim Barnes

Operations Director Energy & Waste Services Date of Issue: 22-Jan-2018

Tests marked $\ensuremath{^{\prime\prime}}$ have been subcontracted to another laboratory.

Where samples have been flagged as deviant on the Analytical and Deviating Sample Overview, for any reason, the data may not be representative of the sample at the point of sampling and the validity of the data may be affected. SOCOTEC UK Limited accepts no responsibility for any sampling not carried out by our personnel.

	Units :	mg/kg	mg/l	%	pH Units									
	Method Codes :	ICPACIDS	ICPWSS	TSBRE1	WSLM50									
	Method Reporting Limits :	20	10	0.005										
	UKAS Accredited :	Yes	Yes	No	No									
LAB ID Number CL/	Client Sample Description Date	SO4 (acid sol)	SO4 (H2O sol) mg/l	Total Sulphur.	pH (BS1377)									
1890132	WS112 B 20 10.50	635	185	0.130	8.1									
SOCOTEC Client Name				SOCOTEC UK Limited Doncaster					Sample Analysis					
	Prethy Rusinger Rode Ashby Ros-	Contact								Data Dri-	atod		2 Jan 2010	
	Dietuy dusiness Park, Asnoy Koad									Date Printed 22-Jan			2-Jan-2018	
Burton-on-Irent, Staffordshire, DE15 0YZ				A7'	102-17 Wes	st Bur	ton			Report Number EFS/1822			-5/182237	
	Tel +44 (0) 1283 554400								Table Number 1			1		
	Fax +44 (0) 1283 554422													

Sample Analysis

CL/1890132

WS112 10.50-11.00

SOCOTEC UK Ltd Environmental Chemistry Analytical and Deviating Sample Overview

Customer Site Report No Please note the res	SOCOTEC UK Limited Doncaster A7102-17 West Burton S182237 esults for any subcontracted analysis (identified with a '^') is likely to								Consignment No S71743 Date Logged 17-Jan-2018 In-House Report Due 24-Jan-2018 Datake up to an additional five working days.					
		MethodID	CustServ	Dep.Opt			ICPACIDS	ICPBRE	ICPWSS	KONECL	KoneNO3	TSBRE1	WSLM50	
ID Number	Description	Sampled	REPORT A	DO CI if pH<5.5	DO Mg if SO4(W)>3000	DO NO3 if pH<5.5	SO4 (acid sol)	Magnesium (BRE)	SO4 (H2O sol) mg/l	Chloride:(2:1)	Nitrate (BRE 2:1): mg/l	Total Sulphur.	pH (BS1377)	

D D D D

D

Note: We will endeavour to prioritise samples to complete analysis within	Dev	viating Sample Key					
holding time; however any delay could result in samples becoming	A	A The sample was received in an inappropriate container for this analysis					
deviant whilst being processed in the laboratory.	В	The sample was received without the correct preservation for this analysis					
	С	Headspace present in the sample container					
If sampling dates are missing or matrices unclassified then results will	D	The sampling date was not supplied so holding time may be compromised - applicable to all analysis					
not be ISO 17025 accredited. Please contact us as soon as possible to	E	Sample processing did not commence within the appropriate holding time					
provide missing information in order to reinstate accreditation.	F	Sample processing did not commence within the appropriate handling time					
	Ree	quested Analysis Key					
		Analysis Required					
		Analysis dependant upon trigger result - Note: due date may be affected if triggered					
		No analysis scheduled					
	^	Analysis Subcontracted - Note: due date may vary					

✓

D

✓

D D D D

D D

Method Descriptions

Matrix	MethodID	Analysis	Method Description					
		Basis						
Soil	ICPACIDS	Oven Dried	Determination of Total Sulphate in soil samples by Hydrochloric					
		@ < 35°C	Acid extraction followed by ICPOES detection					
Soil	ICPWSS	Oven Dried	Determination of Water Soluble Sulphate in soil samples by water					
		@ < 35°C	extraction followed by ICPOES detection					
Soil	TSBRE1	Oven Dried	Determination of Total Carbon and/or Total Sulphur in solid					
		@ < 35°C	samples by high temperature combustion/infrared detection					
Soil	WSLM50	Oven Dried	Determination of pH of 2.5:1 deionised water to soil extracts using					
		@ < 35°C	pH probe.					

Generic Notes

Soil/Solid Analysis

Unless stated otherwise,

- Results expressed as mg/kg have been calculated on the basis indicated in the Method Description table.
- All results on MCERTS reports are reported on a 105°C dry weight basis with the exception of pH and conductivity. Sulphate analysis not conducted in accordance with BS1377
- Water Soluble Sulphate is on a 2:1 water:soil extract

Waters Analysis

Unless stated otherwise results are expressed as mg/l **NiI**: Where "NiI" has been entered against Total Alkalinity or Total Acidity this indicates that a measurement was not required due to the inherent pH of the sample.

Oil analysis specific

Unless stated otherwise,

- Results are expressed as mg/kg
- SG is expressed as g/cm³@ 15°C

Gas (Tedlar bag) Analysis

Unless stated otherwise, results are expressed as ug/I

Asbestos Analysis

CH Denotes ChrysotileTR Denotes TremoliteCR Denotes CrocidoliteAC Denotes ActinoliteAM Denotes AmositeAN Denotes AnthophyliteNAIIS No Asbestos Identified in SampleNADIS No Asbestos Detected In Sample

Symbol Reference

^ Sub-contracted analysis.

\$\$ Unable to analyse due to the nature of the sample

- ¶ Samples submitted for this analyte were not preserved on site in accordance with laboratory protocols.
- This may have resulted in deterioration of the sample(s) during transit to the laboratory.

Consequently the reported data may not represent the concentration of the target analyte present in the sample at the time of sampling

¥ Results for guidance only due to possible interference

& Blank corrected result

I.S Insufficient sample to complete requested analysis

I.S(g) Insufficient sample to re-analyse, results for guidance only

Intf Unable to analyse due to interferences

N.D Not determined N.Det Not detected

N.F No Flow

NS Information Not Supplied

Req Analysis requested, see attached sheets for results

P Raised detection limit due to nature of the sample

* All accreditation has been removed by the laboratory for this result

‡ MCERTS accreditation has been removed for this result

§ accreditation has been removed for this result as it is a non-accredited matrix

Note: The Laboratory may only claim that data is accredited when all of the requirements of our Quality System have been met. Where these requirements have not been met the laboratory may elect to include the data in its final report and remove the accreditation from individual data items if it believes that the validity of the data has not been affected. If further details are required of the circumstances which have led to the removal of accreditation then please do not hesitate to contact the laboratory.

Sample Descriptions

Client :	SOCOTEC UK Limited Doncaster
Site :	A7102-17 West Burton
Report Number :	S18_2237

Note: major constituent in upper case

Lab ID Number	Client ID	Description
CL/1890132	WS112 B 20 10.50	Brown SILT


Report No. EFS/182238 (Ver. 2)

SOCOTEC UK Limited Doncaster Askern Road Carcroft Doncaster South Yorkshire DN6 8DG

Site: A7102-17 West Burton

The 1 sample described in this report were registered for analysis by SOCOTEC UK Limited on 17-Jan-2018. This report supersedes any versions previously issued by the laboratory. The analysis was completed by: 05-Feb-2018

Tests where the accreditation is set to N or No, and any individual data items marked with a * are not UKAS accredited. Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

The following tables are contained in this report:

Table 1 Main Analysis Results (Page 2) Analytical and Deviating Sample Overview (Page 3) Table of Method Descriptions (Page 4) Table of Report Notes (Page 5) Table of Sample Descriptions (Appendix A Page 1 of 1)

On behalf of SOCOTEC UK Lim Tim Barnes

Operations Director Energy & Waste Services Date of Issue: 05-Feb-2018

Tests marked '^' have been subcontracted to another laboratory.

	Units :	mg/kg	mg/l	%	%	pH Units									
	Method Codes :	ICPACIDS	ICPWSS	ORGMAT	TSBRE1	WSLM50									
	Method Reporting Limits :	20	10	0.1	0.005										
	UKAS Accredited :	Yes	Yes	No	No	No									
LAB ID Number CL/	Client Sample Description	SO4 (acid sol)	SO4 (H2O sol) mg/l	Organic Matter %	Total Sulphur.	pH (BS1377)									
1890133	WS102 UT 6 4.50	723	227	1.0	0.050	8.3									
	SOCOTEC Client Name SOCOTEC UK Limited Doncaster Sample Analysis														
		Contact			6						Data Data	- t - d		5 Fab 2040	
Bretby Business Park, Ashby Road											Date Fillieu U3-FeD-2018				
Burton-on-i rent, Stattordshire, DE15 UYZ					A7102-17 West Burton						Report Number EFS/182238				
	Tel +44 (0) 1283 554400			, , , , ,							Table Nu	ımber		1	
	Fax +44 (0) 1283 554422														

SOCOTEC UK Ltd Environmental Chemistry Analytical and Deviating Sample Overview

Customer	SOCOTEC UK Limited D	oncaster					Cons	signm	ent N	lo S71	743			
Site	A7102-17 West Burton		Date Logged 17-Jan-2018											
Report No	S182238						In-Ho	ouse	Repo	rt Due	907-F	eb-20	018	
Please note the re	sults for any subcontracted analy	sis (identified	l with	a '^')	is like	ely to	take	up to	an ac	ditio	nal fiv	e wo	rking	days.
		MethodID	CustServ	Dep.Opt			ICPACIDS	ICPBRE	ICPWSS	KONECL	KoneNO3	ORGMAT	TSBRE1	WSLM50
ID Number	Description	Sampled	REPORT A	DO CI if pH<5.5	DO Mg if SO4(W)>3000	DO NO3 if pH<5.5	SO4 (acid sol)	Magnesium (BRE)	SO4 (H2O sol) mg/l	Chloride:(2:1)	Nitrate (BRE 2:1): mg/l	Organic Matter %	Total Sulphur.	pH (BS1377)
							✓		✓					
CL/1890133	WS102 4.50-4.95	D	D	D	D	D	D	D	D	D	D	D	D	D

Note: We will endeavour to prioritise samples to complete analysis within	Deviating Sample Key
holding time; however any delay could result in samples becoming	A The sample was received in an inappropriate container for this analysis
deviant whilst being processed in the laboratory.	B The sample was received without the correct preservation for this analysis
	C Headspace present in the sample container
If sampling dates are missing or matrices unclassified then results will	D The sampling date was not supplied so holding time may be compromised - applicable to all analysis
not be ISO 17025 accredited. Please contact us as soon as possible to	E Sample processing did not commence within the appropriate holding time
provide missing information in order to reinstate accreditation.	F Sample processing did not commence within the appropriate handling time
	Requested Analysis Key
	Analysis Required
	Analysis dependant upon trigger result - Note: due date may be affected if triggered
	No analysis scheduled
	 Analysis Subcontracted - Note: due date may vary

Where individual results are flagged see report notes for status.

Matrix	MethodID	Analysis	Method Description
		Basis	
Soil	ICPACIDS	Oven Dried	Determination of Total Sulphate in soil samples by Hydrochloric
		@ < 35°C	Acid extraction followed by ICPOES detection
Soil	ICPWSS	Oven Dried	Determination of Water Soluble Sulphate in soil samples by water
		@ < 35°C	extraction followed by ICPOES detection
Soil	ORGMAT	Oven Dried	Acid Dichromate oxidation of the sample followed by colorimetric
		@ < 35°C	analysis of the extract
Soil	TSBRE1	Oven Dried	Determination of Total Carbon and/or Total Sulphur in solid
		@ < 35°C	samples by high temperature combustion/infrared detection
Soil	WSLM50	Oven Dried	Determination of pH of 2.5:1 deionised water to soil extracts using
		@ < 35°C	pH probe.

Soil/Solid Analysis

Unless stated otherwise,

- Results expressed as mg/kg have been calculated on the basis indicated in the Method Description table.
- All results on MCERTS reports are reported on a 105°C dry weight basis with the exception of pH and conductivity. - Sulphate analysis not conducted in accordance with BS1377
- Water Soluble Sulphate is on a 2:1 water:soil extract

Waters Analysis

Unless stated otherwise results are expressed as mg/l **NiI**: Where "NiI" has been entered against Total Alkalinity or Total Acidity this indicates that a measurement was not required due to the inherent pH of the sample.

Oil analysis specific

Unless stated otherwise,

- Results are expressed as mg/kg
- SG is expressed as g/cm³@ 15°C

Gas (Tedlar bag) Analysis

Unless stated otherwise, results are expressed as ug/I

Asbestos Analysis

CH Denotes ChrysotileTR Denotes TremoliteCR Denotes CrocidoliteAC Denotes ActinoliteAM Denotes AmositeAN Denotes AnthophyliteNAIIS No Asbestos Identified in SampleNADIS No Asbestos Detected In Sample

Symbol Reference

^ Sub-contracted analysis.

\$\$ Unable to analyse due to the nature of the sample

- ¶ Samples submitted for this analyte were not preserved on site in accordance with laboratory protocols.
- This may have resulted in deterioration of the sample(s) during transit to the laboratory.

Consequently the reported data may not represent the concentration of the target analyte present in the sample at the time of sampling

¥ Results for guidance only due to possible interference

& Blank corrected result

I.S Insufficient sample to complete requested analysis

I.S(g) Insufficient sample to re-analyse, results for guidance only

Intf Unable to analyse due to interferences

N.D Not determined N.Det Not detected

N.F No Flow

NS Information Not Supplied

Req Analysis requested, see attached sheets for results

P Raised detection limit due to nature of the sample

* All accreditation has been removed by the laboratory for this result

‡ MCERTS accreditation has been removed for this result

§ accreditation has been removed for this result as it is a non-accredited matrix

Client :	SOCOTEC UK Limited Doncaster
Site :	A7102-17 West Burton
Report Number :	S18_2238

Lab ID Number	Client ID	Description
CL/1890133	WS102 UT 6 4.50	Brown SILT



Report No. EFS/182239 (Ver. 1)

SOCOTEC UK Limited Doncaster Askern Road Carcroft Doncaster South Yorkshire DN6 8DG

Site: A7102-17 West Burton

The 1 sample described in this report were registered for analysis by SOCOTEC UK Limited on 17-Jan-2018. This report supersedes any versions previously issued by the laboratory. The analysis was completed by: 23-Jan-2018

Tests where the accreditation is set to N or No, and any individual data items marked with a * are not UKAS accredited. Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

The following tables are contained in this report:

Table 1 Main Analysis Results (Page 2) Analytical and Deviating Sample Overview (Page 3) Table of Method Descriptions (Page 4) Table of Report Notes (Page 5) Table of Sample Descriptions (Appendix A Page 1 of 1)

On behalf of SOCOTEC UK Lim Tim Barnes

Operations Director Energy & Waste Services Date of Issue: 23-Jan-2018

Tests marked '^' have been subcontracted to another laboratory.

	Units :	mg/kg	mg/l	%	pH Units									
	Method Codes :	ICPACIDS	ICPWSS	TSBRE1	WSLM50									
	Method Reporting Limits :	20	10	0.005										
	UKAS Accredited :	Yes	Yes	No	No									
LAB ID Number CL/	Client Sample Description Date	SO4 (acid sol)	SO4 (H2O sol) mg/l	Total Sulphur.	pH (BS1377)									
1890134	WS109 UT 15 9.00	5840	1430	0.276	9.2									
		ļ												
	SOCOTEC Client Name SOCOTEC UK Limited Doncaster Sample Analysis													
	Prethy Rusinger Rode Ashby Ros-	Contact								Data Dri	atod		2 Jan 2010	
	Dieluy dusiness Park, Ashiby Kuad									Date Pfl		Z·	5-Jan-2018	
	Burton-on- i rent, Statfordshire, DE15 UYZ			A7'	102-17 Wes	st Bur	ton			Report N	iumper	E	-5/182239	
	Tel +44 (0) 1283 554400									Table Nu	Imber		1	
	Fax +44 (0) 1283 554422													

SOCOTEC UK Ltd Environmental Chemistry Analytical and Deviating Sample Overview

Customer	SOCOTEC UK Limited Do	oncaster					Cons	signm	ent N	o S71	1743			
Site	A7102-17 West Burton						Date Logged 17-Jan-2018							
Report No	S182239						In-House Report Due 24-Jan-2018							
Please note the re	sults for any subcontracted analy	sis (identified	l with	a '^')	is like	ely to	take	up to	an ac	lditio	nal fiv	e wor	rking	days.
		MethodID	CustServ	Dep.Opt			ICPACIDS	ICPBRE	ICPWSS	KONECL	KoneNO3	TSBRE1	WSLM50	

ID Number	Description	Sampled	REPORT A	DO CI if pH<5.5	DO Mg if SO4(W)>3000	DO NO3 if pH<5.5	SO4 (acid sol)	Magnesium (BRE)	SO4 (H2O sol) mg/l	Chloride:(2:1)	Nitrate (BRE 2:1): mg/l	Total Sulphur.	pH (BS1377)	
							✓		✓					
CI /1890134	WS109 9.00-9.45	D	D	D	D	D	D	D	D	D	D	D	D	1

Note: We will endeavour to prioritise samples to complete analysis within	Deviating Sample Key
holding time; however any delay could result in samples becoming	A The sample was received in an inappropriate container for this analysis
deviant whilst being processed in the laboratory.	B The sample was received without the correct preservation for this analysis
	C Headspace present in the sample container
If sampling dates are missing or matrices unclassified then results will	D The sampling date was not supplied so holding time may be compromised - applicable to all analysis
not be ISO 17025 accredited. Please contact us as soon as possible to	E Sample processing did not commence within the appropriate holding time
provide missing information in order to reinstate accreditation.	F Sample processing did not commence within the appropriate handling time
	Requested Analysis Key
	Analysis Required
	Analysis dependant upon trigger result - Note: due date may be affected if triggered
	No analysis scheduled
	Analysis Subcontracted - Note: due date may vary

Matrix	MethodID	Analysis	Method Description
		Basis	
Soil	ICPACIDS	Oven Dried	Determination of Total Sulphate in soil samples by Hydrochloric
		@ < 35°C	Acid extraction followed by ICPOES detection
Soil	ICPWSS	Oven Dried	Determination of Water Soluble Sulphate in soil samples by water
		@ < 35°C	extraction followed by ICPOES detection
Soil	TSBRE1	Oven Dried	Determination of Total Carbon and/or Total Sulphur in solid
		@ < 35°C	samples by high temperature combustion/infrared detection
Soil	WSLM50	Oven Dried	Determination of pH of 2.5:1 deionised water to soil extracts using
		@ < 35°C	pH probe.

Soil/Solid Analysis

Unless stated otherwise,

- Results expressed as mg/kg have been calculated on the basis indicated in the Method Description table.
 All results on MCERTS reports are reported on a 105°C dry weight basis with the exception of pH and conductivity.
- Sulphate analysis not conducted in accordance with BS1377
- Water Soluble Sulphate is on a 2:1 water:soil extract

Waters Analysis

Unless stated otherwise results are expressed as mg/l NiI: Where "NiI" has been entered against Total Alkalinity or Total Acidity this indicates that a measurement was not required due to the inherent pH of the sample.

Oil analysis specific

Unless stated otherwise,

- Results are expressed as mg/kg
- SG is expressed as g/cm³@ 15°C

Gas (Tedlar bag) Analysis

Unless stated otherwise, results are expressed as ug/I

Asbestos Analysis

CH Denotes ChrysotileTR Denotes TremoliteCR Denotes CrocidoliteAC Denotes ActinoliteAM Denotes AmositeAN Denotes AnthophyliteNAIIS No Asbestos Identified in SampleNADIS No Asbestos Detected In Sample

Symbol Reference

^ Sub-contracted analysis.

\$\$ Unable to analyse due to the nature of the sample

- ¶ Samples submitted for this analyte were not preserved on site in accordance with laboratory protocols.
- This may have resulted in deterioration of the sample(s) during transit to the laboratory.

Consequently the reported data may not represent the concentration of the target analyte present in the sample at the time of sampling

¥ Results for guidance only due to possible interference

& Blank corrected result

I.S Insufficient sample to complete requested analysis

I.S(g) Insufficient sample to re-analyse, results for guidance only

Intf Unable to analyse due to interferences

N.D Not determined N.Det Not detected

N.F No Flow

NS Information Not Supplied

Req Analysis requested, see attached sheets for results

P Raised detection limit due to nature of the sample

* All accreditation has been removed by the laboratory for this result

‡ MCERTS accreditation has been removed for this result

§ accreditation has been removed for this result as it is a non-accredited matrix

Client :	SOCOTEC UK Limited Doncaster
Site :	A7102-17 West Burton
Report Number :	S18_2239

Lab ID Number	Client ID	Description
CL/1890134	WS109 UT 15 9.00	Brown SILT



Report No. EFS/182504 (Ver. 1)

SOCOTEC UK Limited Doncaster Askern Road Carcroft Doncaster South Yorkshire DN6 8DG

Site: A7102-17 West Burton C/D Power Station

The 1 sample described in this report were registered for analysis by SOCOTEC UK Limited on 25-Jan-2018. This report supersedes any versions previously issued by the laboratory.

The analysis was completed by: 30-Jan-2018

Tests where the accreditation is set to N or No, and any individual data items marked with a * are not UKAS accredited. Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

The following tables are contained in this report:

Table 1 Main Analysis Results (Page 2) Analytical and Deviating Sample Overview (Page 3) Table of Method Descriptions (Page 4) Table of Report Notes (Page 5) Table of Sample Descriptions (Appendix A Page 1 of 1)

On behalf of SOCOTEC UK Li Tim Barnes



Date of Issue: 30-Jan-2018

Tests marked '^' have been subcontracted to another laboratory.

		Units :	ma/ka	ma/l	%	pH Units							
	Metho	d Codes :	ICPACIDS	ICPWSS	TSBRE1	WSLM50							
	Method Reportin	ng Limits :	20	10	0.005								
	UKAS Ac	credited :	Yes	Yes	No	No							
LAB ID Number CL/	Client Sample Description	Sample Date	SO4 (acid sol)	SO4 (H2O sol) mg/l	Total Sulphur.	pH (BS1377)							
1891268	WS111 UT 18 13.65		1950	811	0.293	8.0							
	+												
	l												
			1										
			1										
			<u> </u>			1	1	<u> </u>	1		1		
SOCOTEC Client		Client N Contact	ame	SOCOT	T EC UK L	imited Doncaster			Sam	ple Ana	alysis		
	Brethy Business Park, Ashby Road									Date Printed		30- Jan-2018	
	Burton-on-Tront Staffordehire DE15.0V7									Donort Number		EEQ/102504	
Burton-on-Trent, Stattordshire, DE15 0YZ			A 7	7102- ⁻	17 We	est Bu	rton C/D P	ower Static	on			EF3/182504	
	Tel +44 (0) 1283 554400								Table Number		1		
	Fax +44 (0) 1283 554422												

SOCOTEC UK Ltd Environmental Chemistry Analytical and Deviating Sample Overview

Customer Site Report No Please note the re	SOCOTEC UK Limited De A7102-17 West Burton C S182504 sults for any subcontracted analys	oncaster /D Power \$ sis (identified	Statio	on a '^') is	s likel ^ı	y to ta	Cons Date In-Ho	signm Logg ouse l	ent N jed 25 Repoi	o S71 5-Jan- rt Due itional	981 2018 30-J	an-20 workir)18 ng day	ys.
		MethodID	CustServ	Dep.Opt			ICPACIDS	ICPBRE	ICPWSS	KONECL	KoneNO3	TSBRE1	WSLM50	
ID Number	Description	Sampled	REPORT A	DO CI if pH<5.5	DO Mg if SO4(W)>3000	DO NO3 if pH<5.5	SO4 (acid sol)	Magnesium (BRE)	SO4 (H2O sol) mg/l	Chloride:(2:1)	Nitrate (BRE 2:1): mg/l	Total Sulphur.	pH (BS1377)	
							✓		✓					
CL/1891268	WS111 13.65-14.10	D	D	D	D	D	D	D	D	D	D	D	D	1

Note: We will endeavour to prioritise samples to complete analysis within	Deviating Sample Key
holding time; however any delay could result in samples becoming	A The sample was received in an inappropriate container for this analysis
deviant whilst being processed in the laboratory.	B The sample was received without the correct preservation for this analysis
	C Headspace present in the sample container
If sampling dates are missing or matrices unclassified then results will	D The sampling date was not supplied so holding time may be compromised - applicable to all analysis
not be ISO 17025 accredited. Please contact us as soon as possible to	E Sample processing did not commence within the appropriate holding time
provide missing information in order to reinstate accreditation.	F Sample processing did not commence within the appropriate handling time
	Requested Analysis Key
	Analysis Required
	Analysis dependant upon trigger result - Note: due date may be affected if triggered
	No analysis scheduled
	Analysis Subcontracted - Note: due date may vary

Matrix	MethodID	Analysis	Method Description
		Basis	
Soil	ICPACIDS	Oven Dried	Determination of Total Sulphate in soil samples by Hydrochloric
		@ < 35°C	Acid extraction followed by ICPOES detection
Soil	ICPWSS	Oven Dried	Determination of Water Soluble Sulphate in soil samples by water
		@ < 35°C	extraction followed by ICPOES detection
Soil	TSBRE1	Oven Dried	Determination of Total Carbon and/or Total Sulphur in solid
		@ < 35°C	samples by high temperature combustion/infrared detection
Soil	WSLM50	Oven Dried	Determination of pH of 2.5:1 deionised water to soil extracts using
		@ < 35°C	pH probe.

Soil/Solid Analysis

Unless stated otherwise,

- Results expressed as mg/kg have been calculated on the basis indicated in the Method Description table.
- All results on MCERTS reports are reported on a 105°C dry weight basis with the exception of pH and conductivity. Sulphate analysis not conducted in accordance with BS1377
- Water Soluble Sulphate is on a 2:1 water:soil extract

Waters Analysis

Unless stated otherwise results are expressed as mg/l **NiI**: Where "NiI" has been entered against Total Alkalinity or Total Acidity this indicates that a measurement was not required due to the inherent pH of the sample.

Oil analysis specific

Unless stated otherwise,

- Results are expressed as mg/kg
- SG is expressed as g/cm³@ 15°C

Gas (Tedlar bag) Analysis

Unless stated otherwise, results are expressed as ug/I

Asbestos Analysis

CH Denotes ChrysotileTR Denotes TremoliteCR Denotes CrocidoliteAC Denotes ActinoliteAM Denotes AmositeAN Denotes AnthophyliteNAIIS No Asbestos Identified in SampleNADIS No Asbestos Detected In Sample

Symbol Reference

^ Sub-contracted analysis.

\$\$ Unable to analyse due to the nature of the sample

- ¶ Samples submitted for this analyte were not preserved on site in accordance with laboratory protocols.
- This may have resulted in deterioration of the sample(s) during transit to the laboratory.

Consequently the reported data may not represent the concentration of the target analyte present in the sample at the time of sampling

¥ Results for guidance only due to possible interference

& Blank corrected result

I.S Insufficient sample to complete requested analysis

I.S(g) Insufficient sample to re-analyse, results for guidance only

Intf Unable to analyse due to interferences

N.D Not determined N.Det Not detected

N.F No Flow

NS Information Not Supplied

Req Analysis requested, see attached sheets for results

P Raised detection limit due to nature of the sample

* All accreditation has been removed by the laboratory for this result

‡ MCERTS accreditation has been removed for this result

§ accreditation has been removed for this result as it is a non-accredited matrix

Client :	SOCOTEC UK Limited Doncaster
Site :	A7102-17 West Burton C/D Power Station
Report Number :	S18_2504

Report Number :

Lab ID Number	Client ID	Description
CI /1801268	W6111 UT 18 13 65	
CL/1891268	WS111 UT 18 13.65	CLAT

Report No. EFS/182533 (Ver. 1)

SOCOTEC UK Limited Doncaster Askern Road Carcroft Doncaster South Yorkshire DN6 8DG

Site: A7102-17 West Burton

The 4 samples described in this report were registered for analysis by SOCOTEC UK Limited on 25-Jan-2018. This report supersedes any versions previously issued by the laboratory. The analysis was completed by: 29-Jan-2018

The following tables are contained in this report:

Table 1 Main Analysis Results (Page 2) Analytical and Deviating Sample Overview (Page 3) Table of Method Descriptions (Page 4) Table of Report Notes (Page 5) Table of Sample Descriptions (Appendix A Page 1 of 1)

On behalf of SOCOTEC UK Lim Tim Barnes

Operations Director Energy & Waste Services Date of Issue: 29-Jan-2018

Tests marked '^' have been subcontracted to another laboratory.

		Units ·	%												
Method Codes		d Codes :	ORGMAT												
	Method Reportin	g Limits :	0.1												
LAB ID Number CL/	Client Sample Description	Sample Date	Organic Matter %												
1891366	WS106 UT 21 10.50	25-Jan-18	1.5												
1891367	WS108 UT 20 12.00	25-Jan-18	1.2												
1891368	BH104 L 12 8.00	25-Jan-18	1.7												
1891369	BH103 L 14 10.30	25-Jan-18	2.6												
		Client N Contact	ame	SOCOT Mike Star	T EC UK L	imited Doncaste	r			Sam	ple Ana	alysis			
	Bretby Business Park, Ashby Road					,				Date Priv	nted		29	9-Jan-2018	
Burton-on-Trent Staffordshire DE15.0V7										Poport Number EES/49252			FS/182533		
Tel +44 (0) 1283 554400			A7102-17 West Burton					Table Number		1					
Fax +44 (0) 1283 554422															

SOCOTEC UK Ltd Environmental Chemistry **Analytical and Deviating Sample Overview**

Customer SOCOTEC UK Limited Doncaster Consignment No S72004 Site A7102-17 West Burton Date Logged 25-Jan-2018 S182533 **Report No** In-House Report Due 29-Jan-2018 Please note the results for any subcontracted analysis (identified with a '^') is likely to take up to an additional five working days.

		MethodID	CustServ	ORGMAT
ID Number	Description	Sampled	72hr T/R	Organic Matter %
CL /1901266	WS106 10 50 10 05	25/01/10		
CL/1891300	WS100 10.50-10.95	25/01/18		
CL/1091307	PLI404 0 00 0 00	25/01/18		
CL/1891368	BH104 8.00-9.00	25/01/18		
CL/1891369	BH103 10.30-11.30	25/01/18		

Note: We will endeavour to prioritise samples to complete analysis within	Deviating Sample Key
holding time; however any delay could result in samples becoming	A The sample was received in an inappropriate container for this analysis
deviant whilst being processed in the laboratory.	B The sample was received without the correct preservation for this analysis
	C Headspace present in the sample container
If sampling dates are missing or matrices unclassified then results will	D The sampling date was not supplied so holding time may be compromised - applicable to all analysis
not be ISO 17025 accredited. Please contact us as soon as possible to	E Sample processing did not commence within the appropriate holding time
provide missing information in order to reinstate accreditation.	F Sample processing did not commence within the appropriate handling time
	Requested Analysis Key
	Analysis Required
	Analysis dependant upon trigger result - Note: due date may be affected if triggered
	No analysis scheduled
	Analysis Subcontracted - Note: due date may vary

Matrix	MethodID	Analysis Basis	Method Description
Soil	ORGMAT	Oven Dried	Acid Dichromate oxidation of the sample followed by colorimetric
		@ < 35°C	analysis of the extract

Soil/Solid Analysis

Unless stated otherwise,

- Results expressed as mg/kg have been calculated on the basis indicated in the Method Description table.
- All results on MCERTS reports are reported on a 105°C dry weight basis with the exception of pH and conductivity. Sulphate analysis not conducted in accordance with BS1377
- Water Soluble Sulphate is on a 2:1 water:soil extract

Waters Analysis

Unless stated otherwise results are expressed as mg/l **NiI**: Where "NiI" has been entered against Total Alkalinity or Total Acidity this indicates that a measurement was not required due to the inherent pH of the sample.

Oil analysis specific

Unless stated otherwise,

- Results are expressed as mg/kg
- SG is expressed as g/cm³@ 15°C

Gas (Tedlar bag) Analysis

Unless stated otherwise, results are expressed as ug/I

Asbestos Analysis

CH Denotes ChrysotileTR Denotes TremoliteCR Denotes CrocidoliteAC Denotes ActinoliteAM Denotes AmositeAN Denotes AnthophyliteNAIIS No Asbestos Identified in SampleNADIS No Asbestos Detected In Sample

Symbol Reference

^ Sub-contracted analysis.

\$\$ Unable to analyse due to the nature of the sample

- ¶ Samples submitted for this analyte were not preserved on site in accordance with laboratory protocols.
- This may have resulted in deterioration of the sample(s) during transit to the laboratory.

Consequently the reported data may not represent the concentration of the target analyte present in the sample at the time of sampling

¥ Results for guidance only due to possible interference

& Blank corrected result

I.S Insufficient sample to complete requested analysis

I.S(g) Insufficient sample to re-analyse, results for guidance only

Intf Unable to analyse due to interferences

N.D Not determined N.Det Not detected

N.F No Flow

NS Information Not Supplied

 $\ensuremath{\text{Req}}$ Analysis requested, see attached sheets for results

P Raised detection limit due to nature of the sample

* All accreditation has been removed by the laboratory for this result

‡ MCERTS accreditation has been removed for this result

§ accreditation has been removed for this result as it is a non-accredited matrix

Client :	SOCOTEC UK Limited Doncaster
Site :	A7102-17 West Burton
Report Number :	S18_2533

Lab ID Number	Client ID	Description
CI /1891366	WS106 LIT 21 10 50	SILT
CL/1891367	WS108 UT 20 12 00	SILT
CL/1891368	BH104 L 12 8.00	SILT
CL/1891369	BH103 L 14 10.30	SILT

Report No. EFS/182589 (Ver. 1)

SOCOTEC UK Limited Doncaster Askern Road Carcroft Doncaster South Yorkshire DN6 8DG

Site: A7102-17 West Burton

The 1 sample described in this report were registered for analysis by SOCOTEC UK Limited on 26-Jan-2018. This report supersedes any versions previously issued by the laboratory. The analysis was completed by: 29-Jan-2018

The following tables are contained in this report:

Table 1 Main Analysis Results (Page 2) Analytical and Deviating Sample Overview (Page 3) Table of Method Descriptions (Page 4) Table of Report Notes (Page 5) Table of Sample Descriptions (Appendix A Page 1 of 1)

On behalf of SOCOTEC UK Lim Tim Barnes

Operations Director Energy & Waste Services Date of Issue: 29-Jan-2018

Tests marked '^' have been subcontracted to another laboratory.

		Units :	%										
Method Codes		d Codes :	ORGMAT										
Method Reporting Limits		g Limits :	0.1										
LAB ID Number CL/	Client Sample Description	Sample Date	Organic Matter %										
1891568	BH101 L 22 14.50		0.4									-	
			Client N Contact	ame	SOCOT Neil Cook	EC UK L	imited Doncaster		Sam	ple Ana	alysis		
	Bretby Business Park, Ashby Road				•				Date Printed		29-Jan-2018		
	Burton-on-Trent, Staffordshire, DE15 0YZ								Report Number		EFS/182589		
	Tel +44 (0) 1283 554400				Α7΄	102-17	7 West Bur	ton	Table Number		1		
	Fax +44 (0) 1283 554422												

Site

SOCOTEC UK Ltd Environmental Chemistry **Analytical and Deviating Sample Overview**

Customer SOCOTEC UK Limited Doncaster Consignment No S72057 A7102-17 West Burton Date Logged 26-Jan-2018 S182589 **Report No** In-House Report Due 30-Jan-2018

Please note the results for any subcontracted analysis (identified with a '^') is likely to take up to an additional five working days.

		MethodID	CustServ	ORGMAT	
ID Number	Description	Sampled	72hr T/R	Organic Matter %	
<u></u>					
ICL/1891568	IBH101 14.50-16.00	ID	D	I D	

Note: We will endeavour to prioritise samples to complete analysis within	g Sample Key		
holding time; however any delay could result in samples becoming	e sample was received in	an inappropriate container for this analysis	
deviant whilst being processed in the laboratory.	e sample was received wi	thout the correct preservation for this analysis	
	adspace present in the sa	mple container	
If sampling dates are missing or matrices unclassified then results will	e sampling date was not s	upplied so holding time may be compromised - applicable to all analysis	
not be ISO 17025 accredited. Please contact us as soon as possible to	mple processing did not c	ommence within the appropriate holding time	
provide missing information in order to reinstate accreditation.	mple processing did not c	ommence within the appropriate handling time	
	Requested Analysis Key		
	alysis Required		
	alysis dependant upon trig	ger result - Note: due date may be affected if triggered	
	analysis scheduled		
	alysis Subcontracted - No	te: due date may vary	

Matrix	MethodID	Analysis	Method Description
		Basis	
Soil	ORGMAT	Oven Dried	Acid Dichromate oxidation of the sample followed by colorimetric
		@ < 35°C	analysis of the extract

Soil/Solid Analysis

Unless stated otherwise,

- Results expressed as mg/kg have been calculated on the basis indicated in the Method Description table.
- All results on MCERTS reports are reported on a 105°C dry weight basis with the exception of pH and conductivity. Sulphate analysis not conducted in accordance with BS1377
- Water Soluble Sulphate is on a 2:1 water:soil extract

Waters Analysis

Unless stated otherwise results are expressed as mg/l **NiI**: Where "NiI" has been entered against Total Alkalinity or Total Acidity this indicates that a measurement was not required due to the inherent pH of the sample.

Oil analysis specific

Unless stated otherwise,

- Results are expressed as mg/kg
- SG is expressed as g/cm³@ 15°C

Gas (Tedlar bag) Analysis

Unless stated otherwise, results are expressed as ug/I

Asbestos Analysis

CH Denotes ChrysotileTR Denotes TremoliteCR Denotes CrocidoliteAC Denotes ActinoliteAM Denotes AmositeAN Denotes AnthophyliteNAIIS No Asbestos Identified in SampleNADIS No Asbestos Detected In Sample

Symbol Reference

^ Sub-contracted analysis.

\$\$ Unable to analyse due to the nature of the sample

- ¶ Samples submitted for this analyte were not preserved on site in accordance with laboratory protocols.
- This may have resulted in deterioration of the sample(s) during transit to the laboratory.

Consequently the reported data may not represent the concentration of the target analyte present in the sample at the time of sampling

¥ Results for guidance only due to possible interference

& Blank corrected result

I.S Insufficient sample to complete requested analysis

I.S(g) Insufficient sample to re-analyse, results for guidance only

Intf Unable to analyse due to interferences

N.D Not determined N.Det Not detected

N.F No Flow

NS Information Not Supplied

Req Analysis requested, see attached sheets for results

P Raised detection limit due to nature of the sample

* All accreditation has been removed by the laboratory for this result

‡ MCERTS accreditation has been removed for this result

§ accreditation has been removed for this result as it is a non-accredited matrix

Client :	SOCOTEC UK Limited Doncaster
Site :	A7102-17 West Burton
Report Number :	S18_2589

Lab ID Number	Client ID	Description
CL/1891568	BH101 L 22 14.50	SILT

Report No. EFS/182590 (Ver. 1)

SOCOTEC UK Limited Doncaster Askern Road Carcroft Doncaster South Yorkshire DN6 8DG

Site: A7102-17 West Burton

The 1 sample described in this report were registered for analysis by SOCOTEC UK Limited on 26-Jan-2018. This report supersedes any versions previously issued by the laboratory. The analysis was completed by: 29-Jan-2018

The following tables are contained in this report:

Table 1 Main Analysis Results (Page 2) Analytical and Deviating Sample Overview (Page 3) Table of Method Descriptions (Page 4) Table of Report Notes (Page 5) Table of Sample Descriptions (Appendix A Page 1 of 1)

On behalf of SOCOTEC UK Lim Tim Barnes

Operations Director Energy & Waste Services Date of Issue: 29-Jan-2018

Tests marked 'A' have been subcontracted to another laboratory.

		I I - -	0/				1	I	
	Math	Units :							
	Method Reporting Limits :								
			0.1						
LAB ID Number CL/	Client Sample Description	Sample Date	Organic Matter %						
1891569	BH106 15.10-16.00		0.7						
	SOCOTEC	1	Client N	ame	SOCO		imited D	oncaster	1
	Drothy Dupinges Devis Asking Data								
	Bretby Business Park, Ashby Road								
	Burton-on-Trent, Staffordshire, DE15 0YZ				Δ7	102-1	7 Wes	st Bur	to
	Tel +44 (0) 1283 554400				<i>•</i> \ 1				••
	Fax +44 (0) 1283 554422								

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сот	FEC UK L	imited D	oncaster				Samı	ole Ana	lvsis		
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Cook	Ke						_			_	
						Date Prir	nted		29-	Jan-2018	
Δ7٬	102_17	7 Waa	t Rur	ton		Report N	lumber		El	-S/182590	
						Table Nu	Imber			1	

Site

SOCOTEC UK Ltd Environmental Chemistry Analytical and Deviating Sample Overview

Customer **SOCOTEC UK Limited Doncaster** Consignment No S72057 A7102-17 West Burton Date Logged 26-Jan-2018 S182590 **Report No** In-House Report Due 30-Jan-2018

Please note the results for any subcontracted analysis (identified with a '^') is likely to take up to an additional five working days.

		MethodID	CustServ	ORGMAT	
ID Number	Description	Sampled	72hr T/R	Organic Matter %	
			_		
ICL/1891569	BH106 15.10-16.00	D	D	D	

Note: We will endeavour to prioritise samples to complete analysis within	Deviating Sample Key
holding time; however any delay could result in samples becoming	A The sample was received in an inappropriate container for this analysis
deviant whilst being processed in the laboratory.	B The sample was received without the correct preservation for this analysis
	C Headspace present in the sample container
If sampling dates are missing or matrices unclassified then results will	D The sampling date was not supplied so holding time may be compromised - applicable to all analysis
not be ISO 17025 accredited. Please contact us as soon as possible to	E Sample processing did not commence within the appropriate holding time
provide missing information in order to reinstate accreditation.	F Sample processing did not commence within the appropriate handling time
	Requested Analysis Key
	Analysis Required
	Analysis dependant upon trigger result - Note: due date may be affected if triggered
	No analysis scheduled
	Analysis Subcontracted - Note: due date may vary

S182590

Matrix	MethodID	Analysis	Method Description
		Basis	
Soil	ORGMAT	Oven Dried	Acid Dichromate oxidation of the sample followed by colorimetric
		@ < 35°C	analysis of the extract

Soil/Solid Analysis

Unless stated otherwise,

- Results expressed as mg/kg have been calculated on the basis indicated in the Method Description table.
- All results on MCERTS reports are reported on a 105°C dry weight basis with the exception of pH and conductivity. - Sulphate analysis not conducted in accordance with BS1377
- Water Soluble Sulphate is on a 2:1 water:soil extract

Waters Analysis

Unless stated otherwise results are expressed as mg/l **Nil**: Where "Nil" has been entered against Total Alkalinity or Total Acidity this indicates that a measurement was not required due to the inherent pH of the sample.

Oil analysis specific

Unless stated otherwise,

- Results are expressed as mg/kg
- SG is expressed as g/cm³@ 15°C

Gas (Tedlar bag) Analysis

Unless stated otherwise, results are expressed as ug/I

Asbestos Analysis

CH Denotes ChrysotileTR Denotes TremoliteCR Denotes CrocidoliteAC Denotes ActinoliteAM Denotes AmositeAN Denotes AnthophyliteNAIIS No Asbestos Identified in SampleNADIS No Asbestos Detected In Sample

Symbol Reference

^ Sub-contracted analysis.

\$\$ Unable to analyse due to the nature of the sample

- **¶** Samples submitted for this analyte were not preserved on site in accordance with laboratory protocols.
- This may have resulted in deterioration of the sample(s) during transit to the laboratory.

Consequently the reported data may not represent the concentration of the target analyte present in the sample at the time of sampling

¥ Results for guidance only due to possible interference

& Blank corrected result

I.S Insufficient sample to complete requested analysis

I.S(g) Insufficient sample to re-analyse, results for guidance only

Intf Unable to analyse due to interferences

N.D Not determined N.Det Not detected

N.F No Flow

NS Information Not Supplied

Req Analysis requested, see attached sheets for results

P Raised detection limit due to nature of the sample

* All accreditation has been removed by the laboratory for this result

‡ MCERTS accreditation has been removed for this result

§ accreditation has been removed for this result as it is a non-accredited matrix

SOCOTEC UK Limited Doncaster Client : Site : A7102-17 West Burton S18_2590

Report Number :

Lab ID Number	Client ID	Description
CL/1891569	BH106 15.10-16.00	SILT
	1	


APPENDIX E PHOTOGRAPHS

Trial Pits Rotary Cores

Plate 1 to 30 Plate 31 to 47











3



Project	WEST BURTON C POWER STATION	Plate
Project No.	A7102-17	
Carried out for	Firbeck Construction Limited	











Firbeck Construction Limited

Carried out for









TP104 – Post-excavation

Notes:	Project	WEST BURTON C POWER STATION	Plate	
	Project No.	A7102-17		7
	Carried out for	Firbeck Construction Limited		







Project No.

Carried out for

A7102-17













Carried out for

















Notes:	Project	WEST BURTON C POWER STATION	Plate	
	Project No.	A7102-17		15
	Carried out for	Firbeck Construction Limited		









Carried out for





Notes:	Project	WEST BURTON C POWER STATION	Plate	
	Project No.	A7102-17		18
	Carried out for	Firbeck Construction Limited		



