Stonestreet Green Solar

Environmental Statement
Volume 4: Appendices
Chapter 11: Land Contamination
Appendix 11.3: Ground Investigation Report

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Ground Investigation Location Plan **(ES Volume 3, Figure 11.1 (Doc Ref 5.3))**	1 : 2,500 @ A0

EXECUTIVE SUMMARY

The Site is located to the north and west of the village of Aldington, Kent (National Grid Reference ('NGR') TR 05898 37766) and is currently used as agricultural land and pastureland. The Project will include a generating station (incorporating solar arrays) with a total capacity exceeding 50 megawatts.

The ES Volume 4, Appendix 11.2: Phase 1 Geoenvironmental and Geotechnical Desk Study (Doc Ref. 5.4) produced in March 2022 to be included in **the ES Volume 4, Appendix 1.1: EIA Scoping Report (Doc Ref. 5.4)** recorded the Site to be at a very low to low risk of contamination noting that a change in proposed use for the Site would require re-assessment due to concerns of potential ground gas generation. Following the finalisation of the Project's Order limits and Works Plans, **ES Volume 4, Appendix 11.2: Phase 1 Geoenvironmental and Geotechnical Desk Study (Doc Ref. 5.4)** was updated in May 2024 and concluded a very low to low risk of contamination.

The Phase 1 identified several possible sources of contamination primarily associated with the Made Ground deposits related to the High Speed 1 (HS1)/Channel Tunnel Rail Link (CTRL) and the South Eastern Main Line (SEML) railway, farm and associated waste exemptions, and electrical infrastructure. As such, the ground investigation locations were designed to investigate these potential sources.

The ground conditions encountered generally comprised of natural superficial deposits of organic soil, clay, sand, and occasional deposits of gravel to a maximum recorded depth of 5.00 mbgl. No Made Ground was encountered across the Site. However, anthropogenic materials (fragments of brick, cement and ceramics) were encountered in some locations. As these materials were encountered sporadically in the ground and not in discernible bands/strata, this does not constitute definitive Made Ground strata and instead suggests that these materials existed at depth due to soil turnover activities such as ploughing.

Laboratory contamination testing was undertaken from selected samples taken from the trial pits and windowless sample boreholes. No solids exceeded their corresponding General Assessment Criteria (GACs) for solids for commercial land use and therefore the risk to human health is considered to be low. Given that the materials tested were first generation material with no definable Made Ground having been

encountered, the impermeable nature of the near surface deposits and the reservoir of contaminants being low, the overall risk to controlled waters is concluded to be low.

Following the intrusive ground investigation works, it was concluded that the overall risk to the Site and the proposed Project by contaminated land is considered Very Low to Low.

1 INTRODUCTION

1.1 Introduction

1.1.1 This Ground Investigation Report has been prepared on behalf of EPL 001 Limited ('the Applicant') to summarise the findings of the intrusive ground investigation works undertaken across the Site and support its suitability in relation to the Development Consent Order ('DCO') application for Stonestreet Green Solar ('the Project').

1.2 The Project

1.2.1 The Project comprises the construction, operation, maintenance, and decommissioning of solar photovoltaic ('PV') arrays and energy storage, together with associated infrastructure and an underground cable connection to the existing Sellindge Substation.

1.2.2 The Project will include a generating station (incorporating solar arrays) with a total capacity exceeding 50 megawatts ('MW'). The agreed grid connection for the Project will allow the export and import of up to 99.9 MW of electricity to the grid. The Project will connect to the existing National Grid Sellindge Substation via a new 132 kilovolt ('kV') substation constructed as part of the Project and cable connection under the Network Rail and High Speed 1 ('HS1') railway.

1.2.3 The location of the Project is shown on **ES Volume 3, Figure 1.1: Site Location Plan (Doc Ref. 5.3)**. The Project will be located within the Order limits (the land shown on the **Works Plans (Doc Ref. 2.3)** within which the Project can be carried out). The Order limits plan is provided as **ES Volume 3, Figure 1.2: Order Limits (Doc Ref. 5.3)**. Land within the Order limits is known as the 'Site'.

1.3 Instruction and Background

1.3.1 Wardell Armstrong ('WA') were commissioned on 5th July 2022 by the Applicant to undertake intrusive ground investigation works to confirm the presence of Made Ground beneath the Site and where present determine its extent and depth. Further the ground investigation works would assess the geo-environmental characteristics of the Made Ground and superficial deposits beneath the Site.

1.3.2 The intrusive ground investigation works were designed on the findings of the Phase 1 Geoenvironmental and Geotechnical Desk Study (including Site walkover survey) (ES Volume 4, Appendix 11.2 (Doc Ref. 5.4)) produced by

WA in March 2022 which has subsequently been updated and finalised in May 2024.

1.4 Scope and Objectives

1.4.1 In support of the proposed DCO application, the EIA Scoping Report (**ES Volume 4, Appendix 1.1 (Doc Ref. 5.4)**) was submitted to the Planning Inspectorate. This scoping report included an earlier version of **ES Volume 4, Appendix 11.2: Phase 1 Geoenvironmental and Geotechnical Desk Study (Doc Ref. 5.4)**. Whilst the Planning Inspectorate agreed that contamination is unlikely to be significant, given there is potential for Made Ground on the Site, further assessment was required to confirm the risks were very low to low.

1.4.2 The purpose of the commissioned scope is to investigate the potential presence of Made Ground identified in the **ES Volume 4, Appendix 11.2: Phase 1 Geoenvironmental and Geotechnical Desk Study (Doc Ref. 5.4)** and provide a preliminary assessment of the likely ground conditions present across the Site including the Cable Route Corridor area. This report uses information provided within **ES Volume 4, Appendix 11.2: Phase 1 Geoenvironmental and Geotechnical Desk Study (Doc Ref. 5.4)** plus additional information collected as part of these intrusive investigations to provide information relating to the:

- Past and current users of the Site and its surrounding area.
- The environmental setting including geology, mining, hydrogeology, and hydrology.
- The potential contamination sources, pathways, and receptors through the production of a preliminary conceptual model.
- A provisional assessment of the contamination issues that need to be considered during the construction, operation and decommissioning of the Site.

1.4.3 This report does not consider broader development constraints such as services, geotechnics, land drainage, flood risk, ecology or invasive species.

1.5 Site Limitations

1.5.1 This report has been prepared for the exclusive benefit of the Applicant for the purpose of providing geo-environmental recommendations for the Site, with specific focus on establishing the potential risks associated with contaminated land. The report contents shall only be used in that context. Furthermore, new information, changes in practice or new legislation may necessitate revised

interpretation of the report after the date of its production.

1.5.2 The purpose of the ground investigation was to target the potential presence of contamination on Site (e.g. Made Ground) identified within the **ES Volume 4, Appendix 11.2: Phase 1 Geoenvironmental and Geotechnical Desk Study (Doc Ref. 5.4)** and Site walkover survey, rather than target features of the proposed Project. Geotechnical testing was limited to Standard Penetration Testing (SPTs) for the purposes of this investigation. SPT testing was undertaken to provide characteristic values for the in-situ density of the strata on Site.

1.5.3 The scope and locations of the ground investigation works were confirmed in January 2023. Site All ground investigations rely upon the determination of information from 'point sources' such as the windowless sample boreholes and trial pits and the interpretation of data between investigation points.

1.5.4 The actual conditions between investigation points may vary generally or seasonally, and impact upon the future development, and it is the responsibility of the developer to determine whether further ground investigation may be needed to support detailed design of the construction works.

1.5.5 The ground investigations were restricted in places due to the presence of services, archaeological potential, field boundaries and current land uses. Exploratory hole locations were positioned at locations to avoid these constraints or minimise disruption to the current land uses and were based on the information provided in the **ES Volume 4, Appendix 11.2, Phase 1 Geoenvironmental and Geotechnical Desk Study (Doc Ref. 5.4)**. WA has carried out an appropriate level of checking third party supplied information, however WA cannot be held liable for any inaccuracies, inconsistencies or omissions in such information (should there be any).

1.5.6 WA has used reasonable skill and care in the design of the ground investigation work for the proposed Project area to comply with currently available industry guidance and to meet the requirements of the commission.

2 BASELINE CONDITIONS

2.1 Summary of WA Phase 1 Geoenvironmental and Geotechnical Desk Study (ES Volume 4, Appendix 11.2 (Doc Ref. 5.4)

2.1.1 A summary of the Site history, existing land use, geology, hydrogeology, hydrology and mining is contained within **ES Volume 4, Appendix 11.2, Phase 1 Geoenvironmental and Geotechnical Desk Study (Doc Ref. 5.4)**. .

2.1.2 **ES Volume 4, Appendix 11.2: Phase 1 Geoenvironmental and Geotechnical Desk Study (Doc Ref. 5.4)** concluded the following:

- There is the potential for Made Ground to exist beneath the Site at an unknown thickness and composition due to HS1/CTRL and SEML, farm and associated waste exemptions, and electrical infrastructure present across the Site;
- There is a very low to low risk on Site associated with potential contamination;
- That a ground investigation should be undertaken to assess the following:
  - Ascertain the characteristics of any Made Ground (targeted investigation locations shown in in Table 2.1); and
  - Reduce any existing uncertainties regarding the potential geoenvironmental suitability of the Made Ground and superficial deposits.

2.2 Justification of Ground Investigation Locations

2.2.1 The justification of each ground investigation location is detailed in the table below.

Table 2.1: Justification of ground investigation locations

Location	Justification of position
TP01	Non-targeted to provide a representative spread of investigation locations.
TP02	
TP03	Investigate the presence of a historic substation.
TP04	Investigate ground conditions present along the grid connection.
TP05	Investigate potential Made Ground associated with HS1/CTRL and SEML.
WS01	Investigate the land around the Bank Farm waste exemption.

Table 2.1: Justification of ground investigation locations	
Location	**Justification of position**
WS02	Investigate Clap Hill historical landfill (situated immediately off-site)
WS03	Investigate the grid connection and potential Made Ground associated with HS1/CTRL and SEML.
WS04	Investigate the land around waste exemption reference: WEX216477.
WS05	Non-targeted to provide a representative spread of investigation locations.
WS06	
WS07	Non-targeted to provide a representative spread of investigation locations.
WS08	
WS09	
WS10	Investigate potential Made Ground associated with HS1/CTRL and SEML.
WS11	Non-targeted to provide a representative spread of investigation locations.

3 PHASE II GROUND INVESTIGATION WORKS

3.1 Ground Investigation Works

3.1.1 The ground investigation (GI) was designed to target areas of potential Made Ground identified in **ES Volume 4, Appendix 11.2: Phase 1 Geoenvironmental and Geotechnical Desk Study (Doc Ref. 5.4)** and assess the general geo-environmental condition of the Site and identify the presence or absence of contamination and Made Ground on site.

3.1.2 The justification of the GI locations is detailed within Table 2.1 of this report. In summary 8 No. investigation locations were targeted, with two locations targeting the HS1/CTRL and SEML, and the remainder positioned across the Site (including the grid connection) to provide a representative data set to quantify the extent of any contamination encountered on Site.

3.1.3 Several constraints on Site limited the location that the ground investigations were able to be undertaken in, these include:

- Current land use;
- Services (including the presence of overhead power cables and electrical substation);
- Field boundaries; and
- Medium/High archaeological potential.

3.1.4 The GI locations are presented on WA Drawing Number GM12014-038. A series of Site photographs taken during the ground investigation works are presented in **Annex A**.

3.1.5 The GI was undertaken between 15 and 17 February 2023 under the full-time supervision of a WA Engineering Geologist. The GI works comprised of the following:

- 5 No. Trial pits (TP) were excavated across the Site excavated to a maximum depth of 2.30 mbgl. TP02 was terminated at a shallower depth of 1.50 mbgl due to the intercept with the local limestone bedrock. The trial pit logs are attached as **Annex B**. The trial pits were undertaken in order to:
  - To investigate the nature, distribution and thickness of the near-surface deposits; and
  - Obtain samples for laboratory chemical testing.

- 11 No. windowless sampler boreholes (WS) were drilled to a maximum depth of 5.00 mbgl and the borehole logs are attached at **Annex C**. The boreholes were drilled in order to:
  - Allow for the installation of gas and groundwater monitoring boreholes with one follow up round of monitoring; and
  - Allow in-situ Standard Penetration Testing to be carried out.
- In total, 32no. solid soil samples were subject to laboratory chemical analysis. The following suite of laboratory chemical testing was undertaken:
  - Heavy Metals (Arsenic, Boron, Cadmium, Copper, Chromium III, Chromium VI, Lead, Mercury, Nickel, Selenium, and Zinc);
  - Total Organic Carbon (TOC);
  - Soil Organic Matter (SOM);
  - Water Soluble Sulphate;
  - pH;
  - USEPA 16 Polycyclic Aromatic Hydrocarbons (PAH's);
  - Total Petroleum Hydrocarbons (TPH's) (TPH total >C6-C40); and
  - Asbestos ID.
- A summary of the laboratory geo-environmental testing results is attached at **Annex D**.
- A subsequent environmental monitoring round was undertaken on 6th April 2023, with the results attached in **Annex E**.

4 RESULTS OF PHASE II GROUND INVESTIGATION

4.1 Ground Conditions

4.1.1 The results of the GI have broadly confirmed the conjectured geological setting of the Site with the general sequence of strata being topsoil overlying natural superficial deposits of organic soil, clay, sand, and occasional deposits of gravel. A summary of the ground conditions encountered during the GI works are presented below. The trial pit and borehole engineer's logs are presented in **Annex B** and **Annex C** respectively.

4.2 Made Ground

4.2.1 Anthropogenic materials such as brick, cement and ceramics were recorded in TP01, TP02, TP05, WS02, WS04, WS05 and WS08 to a maximum depth of 0.80 mbgl across the site.

4.2.2 As the materials were encountered sporadically in the ground and not in discernible bands/strata, this does not constitute definitive Made Ground strata and instead suggests that these materials existed at depth due to soil turnover activities such as ploughing.

4.3 Natural Superficial Deposits

4.3.1 Natural superficial deposits were encountered in all trial pits and windowless sampler boreholes across the Site and proven to a maximum recorded depth of 5.00 mbgl. A summary of the distribution of the natural superficial deposits is detailed in Table 4.1.

Table 4.1: Distribution of natural superficial deposits across the site

Strata	Descriptions	Depth Range (mbgl)	Thickness Range (m)
Topsoil	(Soft) brown slightly silty slightly sandy CLAY with rootlets throughout and occasional gravel. Sand is fine. Occasional gravel; angular to subangular fine to medium of brick, pottery, and mixed natural lithologies.	0.00 – 0.15	0.10 – 0.15
Organic Soil	(Soft) brown slightly silty slightly sandy CLAY with occasional gravel and rare rootlets. Sand is fine. Occasional gravel; subangular to subrounded fine to medium of mixed natural lithologies.	0.10 – 0.45	0.20 – 0.35

Table 4.1: Distribution of natural superficial deposits across the site			
Strata	**Descriptions**	**Depth Range (mbgl)**	**Thickness Range (m)**
Sand	Loose to very dense light brownish yellow slightly silty slightly clayey slightly gravelly (to gravelly) fine to medium SAND. Gravel is angular to subrounded fine to medium of mixed natural lithologies. (Loose) light brownish grey with occasional orange mottle slightly clayey fine to medium SAND.	0.30 – 3.70	0.40 – 2.60
Gravel	Loose light yellowish brown silty GRAVEL. Gravel is subangular to subrounded fine to medium of mixed natural lithologies.	2.00 – 2.70	0.70
Clay	Soft to firm greyish yellow slightly silty slightly sandy CLAY. Sand is fine to medium. Firm to stiff grey with orange mottle slightly silty slightly sandy (rare gravel to gravelly) CLAY. Sand is fine to medium. Gravel is subangular to subrounded fine of mixed natural lithologies. Stiff blueish grey CLAY.	0.45 – 5.00	0.10 – 3.40

4.4 Solid Geology

4.4.1 Rockhead was only encountered in one position during the GI, TP02, at 1.50 mbgl. However, several trial pits were terminated due to hard digging (possible rockhead). Where encountered, solid geology was recorded as "(Medium strong) light grey sandy partially weathered LIMESTONE with rare fragmented fossil content (> 1.00 cm)".

4.5 In-situ Geotechnical Testing

Standard Penetration Tests (SPTs)

4.5.1 SPTs were carried out in all WS boreholes. Uncorrected SPT "N Values" range from 2 to refusal. Two SPT refusals were recorded in the following locations:

- WS01 at 3.00 mbgl; and
- WS05 at 4.00 mbgl.

4.5.2 A summary of the SPT results is provided in Table 4.2 below alongside an inferred descriptive strength value for the strata based on Tables 8, 9 and 10 contained within BS5930:2015+A1:2020.

Table 4.2: Summary of SPT results			
Material	N Value		Inferred Descriptive Strength (BS 5930:2015+A1:2020 – Tables 8, 9 and 10)
	Range	Average	
Sand	8 - 16	11	Medium dense
Gravel	10	10	Loose
Clay	4 - 26	13	Stiff

Gas & Groundwater Monitoring

4.5.3 Gas and groundwater monitoring apparatus was installed within WS01, WS05, WS06, WS07, WS09 and WS10.

Groundwater Monitoring

4.5.4 Groundwater was recorded during excavation with the slow ingress of water summarised at the following locations in Table 4.3.

Table 4.3: Summary of groundwater recordings during the ground investigation		
Location	Depth to Groundwater (mbgl)	Speed of ingress
TP01	1.15	Slow
TP05	1.45	Slow
WS03	2.70	Slow
WS04	2.30	Slow

Ground Gas and Groundwater Monitoring

4.5.5 Following the ground investigation works, 1no. round of ground gas monitoring (6th April 2023) has been undertaken. Ground gas monitoring results are attached at **Annex E**. A summary of ground gas results is displayed within Table 4.4.

4.5.6 The environmental monitoring only recorded a measurable methane concentration within monitoring borehole WS07 of 0.10% v/v, and a positive peak gas flow in WS06 of 15.6 l/hour, it should be noted that this peak flow dropped to lower than detection steady flow rate. However, 3no. monitoring boreholes (WS01, WS07, and WS09) returned carbon dioxide concentration of greater than 1% v/v.

Table 4.4: Summary of gas monitoring data.

Location	Max CH_4 (%)	Max CO_2 (%)	Max Flow Rate (l/hr)
WS01	-0.10*	6.20	0.00
WS05	-0.10*	0.70	0.00
WS06	0.00	0.80	15.60
WS07	0.10	1.50	0.00
WS09	-0.10*	1.60	0.00
WS10	0.00	0.20	0.00

5 GEOTECHNICAL SUMMARY

5.1 General

5.1.1 The assessment of geotechnical data collected during this GI in respect to foundations for the Project was beyond the scope of the commissioned ground investigation works. Once the final designs have been approved, specialist foundation designers should be consulted, and designs prepared accordingly.

5.2 Excavation and Dewatering

5.2.1 Throughout the GI, groundwater was only recorded as slow ingress in four of the 16 positions as detailed in Table 4.3. Groundwater was recorded during the intrusive works and environmental monitoring round from 0.36 mbgl (WS10 during monitoring) to 2.70 mbgl (WS03 during intrusive works). Therefore, it is likely that during the excavation of any construction trenches or pits that some de-watering precautions may be required.

5.3 Stability

5.3.1 All trial pits were recorded as stable throughout the works. Minor collapse of WS03 between 2.00 mbgl and 2.70 mbgl was recorded which resulted in limited advance of the WS borehole to the intended depth of 5.00 mbgl. Therefore, it is unlikely that temporary works trench support and/or benching of excavations will be required during the planning, design and construction phases of the Project.

5.4 Buildings and Infrastructure

5.4.1 Sulphates and acids within the ground can be destructive to concrete and result in expansion and/or softening. The laboratory chemical analysis along with the soil type and water levels have been used to assess the potential for chemical attack on buried concrete to be used in new structures on the Site.

5.4.2 The current method in use to determine the correct classification of a Sulphate resistant concrete to control this risk of attack is detailed in the BRE Special Digest 1:2005 3rd Edition Concrete in Aggressive Ground guidance[1].

5.4.3 The rate of chemical attack depends upon the concentration of aggressive ions and their replenishment rate. The replenishment rate is dependent upon water levels and the permeability of the ground.

5.4.4 The sampling and testing of the soil recorded the following:

- The soil pH level across the Site ranges from pH 5.06 to pH 8.45

(average pH 7.77); and

- Water soluble sulphate levels range from 0.01 g/l to 0.21 g/l (average 0.06 g/l).

5.4.5 Based upon the use of the methodology set out in BRE Special Digest 1:2005 3rd Edition Concrete in Aggressive Ground[1], the Design Sulphate class for this Site is DS-1 and the Aggressive Chemical Environment for Concrete (ACEC) classification for the Site is AC-1s. However, it should be noted that further consideration should be made during the detailed construction design stage.

5.5 Services

5.5.1 Excavations required for services should take into consideration the ground conditions on the Site. Potential obstructions not encountered in the GI may still be present and should be considered in construction risk assessments.

6 CONTAMINATION ASSESSMENT

6.1 Introduction

6.1.1 A primary purpose of the ground investigation was to provide an assessment of the significance of any ground contamination that may be encountered during the development of the Site.

6.1.2 In the UK, contaminated land is regulated by the planning and development control system and the contaminated land regime set out in Part 2A of the Environmental Protection Act (EPA) 1990[2].

6.1.3 Environment Agency guidance 'Land Contamination Risk Assessment (LCRM)[3]' provides advice on the approach for the investigation and assessment of contamination on a site. This approach includes the production of a conceptual site model depicting the environmental processes that occur on and in the vicinity of the site and identifying the potential pollution linkages. The assessment of the significance of these pollution linkages can then be carried out through the risk assessment process.

6.2 Human Health

Initial Screening Criteria

6.2.1 Laboratory chemical analysis has been undertaken on samples of soil taken from across the Site. The significance of the recorded concentrations has been determined through a comparison with generic assessment criteria (GACs) published by Land Quality Management & Chartered Institute of Environmental Health[4], and Department for Environment Food and Rural Affairs[5] . Based on the lack of Made Ground encountered on the Site, the testing suite described in Section 3.1.5 has been used to provide a general screening of potential contaminants on Site.

6.2.2 GACs are derived based on generic conceptual site models for a number of land-uses and making generic assumptions about receptor type and behaviour and building and soil properties.

6.2.3 The land uses included under the GAC include residential development, with and without the consumption of homegrown vegetables, allotments, commercial and industrial, open space and parks and playing fields. The assessment for this development i.e., construction of a solar farm, infrastructure and associated switch & storage rooms, will therefore be undertaken using the values for "Commercial" land use. It is also assumed that the future Site users

will be involved only in the maintenance and operation and decommissioning of the Site, and there will be no full-time occupation of any Site buildings.

6.2.4 There is no one source that publishes values for all contaminants and so the following sources have been used in the following order of preference. Results that are reported lower than the limit of detection have been discounted.

Category 4 Screening Levels (C4SL)

6.2.5 In March 2014, the Department for Environment, Food and Rural Affairs (DEFRA) published six Category 4 Screening Levels within their report "Development of Category 2 Screening Levels for Assessment of Land Affected by Contamination". These GACs are generated using the CLEA model, although the toxicology and exposure parameters have been modified so that the values represent "*a more pragmatic approach to contaminated land risk assessment (albeit still strongly precautionary)*". DEFRA state that the Category 4 Screening Levels will be used as generic screening criteria.

Suitable For Use Levels (S4UL)

6.2.6 Land Quality Management (LQM) and Chartered Institute of Environmental Health (CIEH) have published Suitable For Use Levels (S4UL's) for 82 substances. These values, contained within the publications "LQM/CIEH S4ULs for Human Health Risk Assessment" (2015), replace the previous values contained within "Generic Assessment Criteria for Human Health Risk Assessment (2nd Edition)" dated 2009, and reflect the greater knowledge of relevant toxicology and further consideration of exposure scenarios.

6.2.7 Separate S4UL values have been published for three soil organic matter (SOM) contents (i.e. 1%, 2.5% and 6%). The SOM across the Site ranged from 0.1% to 3.9%. Due to the variable nature of the SOM a value of 1% has been chosen for the initial screen as it is the most conservative approach.

6.3 Laboratory Chemical Analysis

6.3.1 The comparison of the results of the solid laboratory chemical testing with the GACs discussed above showed no exceedances against the relevant screening criteria.

6.3.2 The GI was designed to characterise the geo-environmental condition of the Site and target areas of potential Made Ground associated with the HS1/CTRL and SEML, farm and associated waste exemptions, and electrical infrastructure present across the Site.

Asbestos

6.3.3 During the GI works, no asbestos or asbestos containing material (ACMs) were recorded.

6.3.4 Asbestos identification analysis was undertaken on 32no. samples taken from across the Site and asbestos was not detected within any of these samples, therefore the risk from asbestos is considered to be low.

6.3.5 Should potential ACMs be encountered during either any enabling works or construction works, works should stop, this material should be isolated, sampled and analysed for asbestos and the risk assessment for asbestos should be updated accordingly.

6.4 Controlled Waters Risk Assessment

6.4.1 The GI has proven the near surface deposits are relatively low permeability in nature (clay) which consequently reduces the hydraulic conductivity of contaminants and therefore unlikely to support the infiltration and migration of groundwater. In addition, the results of the solid analysis concluded that there were no exceedances of GACs for commercial land use and this indicates that the reservoir of contaminants present beneath the Site is low.

6.4.2 Given that the materials tested were first generation material with no definable Made Ground having been encountered, the low permeability nature of the near surface deposits and the reservoir of contaminants being low, the overall risk to controlled waters is concluded to be low.

6.4.3 It is recommended that the main area of focus for the protection of controlled waters receptors is through ensuring environmental best practice throughout the lifespan of the Project but primarily during earthworks associated with construction and decommissioning phase works. The use of environmental best practice (e.g control of run off, stockpiling etc.) is detailed in the **Outline CEMP** and **Outline DEMP (Doc Ref. 7.8 and Doc Ref. 7.12)**.

6.5 Ground Gas and Groundwater Monitoring

6.5.1 Using CIRIA C665[6] and the gas monitoring results recorded from WS06 (as a worst-case scenario for the Site) an overall gas screening value (GSV) of 0.12 l/hr for carbon dioxide has been used to undertake an indicative ground gas risk assessment, as shown in Table 6.1.

6.5.2 Based upon the measured concentrations of dioxide in monitoring borehole WS06 and the derived GSV, a worst-case classification for the Site is Gas CS

2 (CIRIA C665), using the Modified Wilson and Card classification. However, it should be noted that due to the recorded CO_2 concentrations of >1% v/v that boreholes WS01, WS07 and WS09 are also provisionally considered to be Gas CS 2. The monitoring results recorded for the remaining 2no. monitoring boreholes indicate Gas CS 1.

Table 6.1: Summary of Gas Monitoring Data

Location	Max CH_4 (%)	Max CO_2 (%)	Max Flow Rate (l/hr)	GSV (l/hr)		CS Number	Water Level (mbgl)
				CH_4	CO_2		
WS01	-0.10*	6.20	0.00	0	0	2	1.80
WS05	-0.10*	0.70	0.00	0	0	1	0.72
WS06	0.00	0.80	15.60	0	0.12	2	0.82
WS07	0.10	1.50	0.00	0	0	2	1.03
WS09	-0.10*	1.60	0.00	0	0	2	0.88
WS10	0.00	0.20	0.00	0	0	1	0.36

* -0.10 % v/v gas concentrations recorded by monitoring equipment considered 0% v/v for GSV calculations.

6.5.3 The records of the environmental monitoring visit undertaken on 6th April 2023 indicate that the majority of the Site would provisionally be classified as Gas Characteristic Situation (CS) 2, as per CIRIA C665. This is due to elevated carbon dioxide concentrations of > 1% v/v (WS01, WS07 and WS09) or gas screening value of greater than 0.07l/hour (WS06). The remaining two monitoring boreholes (WS05 and WS10) were classified as Gas CS1.

6.5.4 The Project Substation, and Intermediate Substations, are situated in Field 26. This is where WS10 and the Gas CS 1 area is located, indicating that any proposed enclosed spaces across the area are unlikely to require ground gas protection measures.

6.5.5 The development proposed across the areas classified as Gas CS 2 comprise the PV Arrays, Inverter Stations (including BESS), Intermediate Substations, Project Substation and Sellindge Substation Extension.

6.5.6 As the PV Arrays are in the open-air with no confined areas for the potential accumulation of gases, this therefore removes the pathway for ground gas migration and accumulation.

6.5.7 All other infrastructure (e.g. Inverter Stations, Intermediate Substations, Project Substation and Sellindge Substation Extension) will be sited on concrete or skid foundations which will help to break the pollutant pathway between ground and containers.

6.5.8 It is understood that any works during the operational phase involving containerised Inverters will be undertaken outside of the units in the open air therefore removing the potential for inhalation pathway by human health receptors.

6.5.9 The BESS, the Intermediate Substations and the Project Substation buildings will have active and/or passive ventilation systems installed thereby removing the potential for ground gas accumulation.

6.5.10 Additionally, the Project Substation buildings are expected to be raised to allow cable infrastructure to enter from beneath. The void space between the foundations and the Project Substation building will allow for dispersion and prevent potential accumulation of any ground gases.

6.5.11 It is considered unlikely that the proposed buildings located across the areas provisionally designated as Gas CS2 would require any additional ground gas protection measures.

6.6 Ecological Receptors

6.6.1 The results of the solid laboratory chemical testing indicate that the preliminary risk assessment of Very Low to Low for ecological receptors (local fauna and flora) presented in the **ES Volume 4, Appendix 11.2:** Phase 1 Geoenvironmental and Geotechnical Desk Study **(Doc Ref. 5.4)** has been downgraded to Very Low.

7 CONCLUSIONS AND RECOMMENDATIONS

7.1 Summary

7.1.1 Ground contamination, as identified within **ES Volume 4, Appendix 11.2: Phase 1 Geoenvironmental and Geotechnical Desk Study (Doc Ref. 5.4)** and investigated by GI, is unlikely to preclude the proposed Project on the Site. The key conclusions and recommendations relating to the development of the Site are summarised below.

7.2 Contamination Assessment

7.2.1 Following laboratory contamination testing, it was shown that no solids exceeded their corresponding GACs for solids for commercial land use and therefore the risk to human health is considered to be low. Therefore, it is considered that risk management actions are not necessary in order to mitigate against the risks posed to human health.

7.2.2 The reservoir of contaminants present beneath the Site has been proven to be low. Therefore, the overall risk to controlled waters is concluded to be low.

7.2.3 During the works, 32 No. samples were tested from across the Site for asbestos. Following analysis, none of the samples obtained were recorded to contain asbestos. Therefore, it is considered that the overall risk of asbestos is considered low.

7.2.4 Some anthropogenic materials such as brick, cement and ceramics were recorded in TP01, TP02, TP05, WS02, WS04, WS05 and WS08 to a maximum depth of 0.80 mbgl across the Site. As these materials were encountered sporadically and not in discernible bands/strata, it was concluded that this did not constitute definitive Made Ground and instead these materials existed at depth due to soil turnover activities such as ploughing.

7.2.5 The records of the environmental monitoring visit undertaken on 6th April 2023 indicate that the majority of the Site would provisionally be classified as Gas CS 2, as per CIRIA C665, due to elevated carbon dioxide concentrations of greater 1% v/v (WS01, WS07 and WS09) or gas screening value of greater than 0.07l/hour (WS06). The remaining 2no. monitoring boreholes (WS05 and WS10) were classified as Gas CS 1. It is understood that the substation and associated infrastructure of the roposed Project are to be situated in Field 26, where WS10 is located a Gas CS 1 area, indicating that any enclosed spaces in the area are unlikely to require ground gas protection measures. Furthermore, given the development proposed across the areas designated as

Gas CS 2, it is considered unlikely that ground gas protection measures will be necessary. It may be considered prudent to consider the use of respiratory protection equipment if any confined space working is undertaken during construction.

7.3 Additional Comments

7.3.1 The GI represents a broad-based assessment of the Site. As such and whilst considered to be unlikely, there may be matters relating to the Site that have not been identified by the researches or the intrusive investigation work carried out to date, which might affect the future development of the Site. Regardless of this, if any such matters do come to light, then they will need to be investigated and dealt with by seeking appropriate professional advice.

References

[1] British Research Establishment (2005). Special Digest 1: Concrete in aggressive ground. *Accessed May 2023*.

[2] HM Government (1990). Environmental Protection Act (EPA) 1990. *Accessed May 2023.* Available at https://www.legislation.gov.uk/ukpga/1990/43

[3] Environment Agency (2020). Land Contamination Risk Management. *Accessed May 2023*. Available at: https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm.

[4] Land Quality Management Ltd, Chartered Institute of Environmental Health (2015). *The LQM/CIEH S4UL's for Human Health Risk Assessment*. Copyright Land Quality Management Limited and reproduced with permission under Publication Number S4UL3056. ISBN 978-0-9931084-0-2. *Accessed May 2023*.

[5] Department for Environment Food and Rural Affairs (2014). Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination. *Accessed May 2023*. Available at: https://randd.defra.gov.uk/ProjectDetails?ProjectID=18341

[6] CIRIA (2007). C665 Assessing risks posed by hazardous ground gases to buildings. *Accessed May 2023.*

Annex A

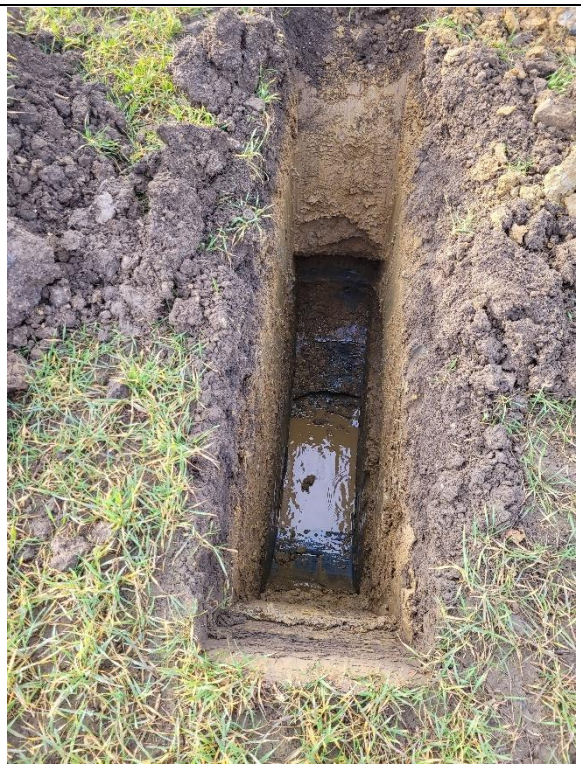
Wardell Armstrong LLP Site Photographs

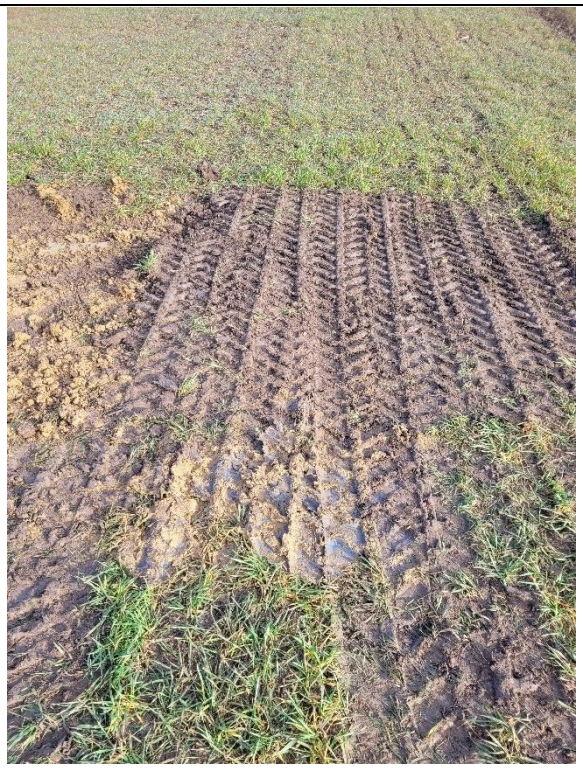
Photograph Survey

CLIENT:	EPL 001 Limited
PROJECT:	Stonestreet Green
SITE VISIT:	Preliminary Ground Investigation
SITE VISIT DATE:	15-17/02/23
JOB NO.:	GM12014
PREPARED BY:	James Entwistle
CAMERA USED:	Phone camera with a 35mm Focal Lense

Photo Locations are shown ES Figure 11.1 Ground Investigation Location Plan **(ES Volume 3, Figure 11.1 (Doc Ref 5.3))** which should be read in conjunction with this Photograph Survey.

Photo Location 1





TP01

Photograph Survey

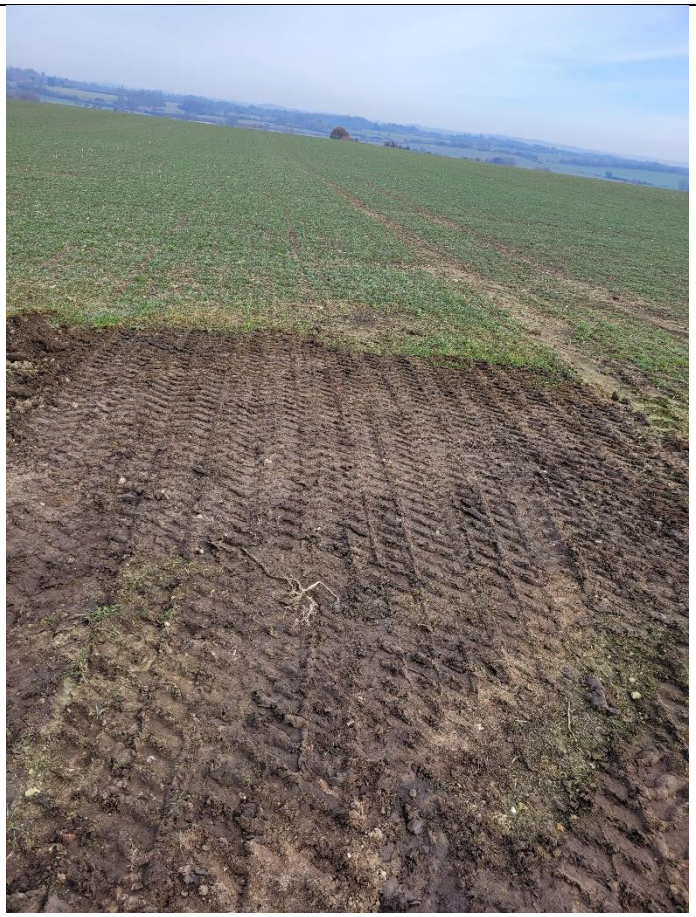
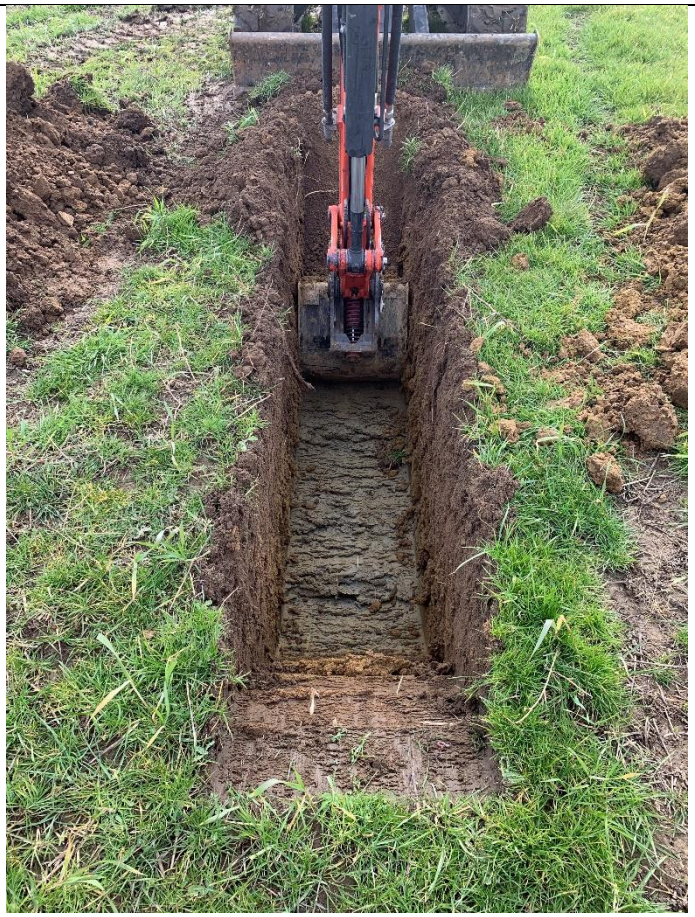
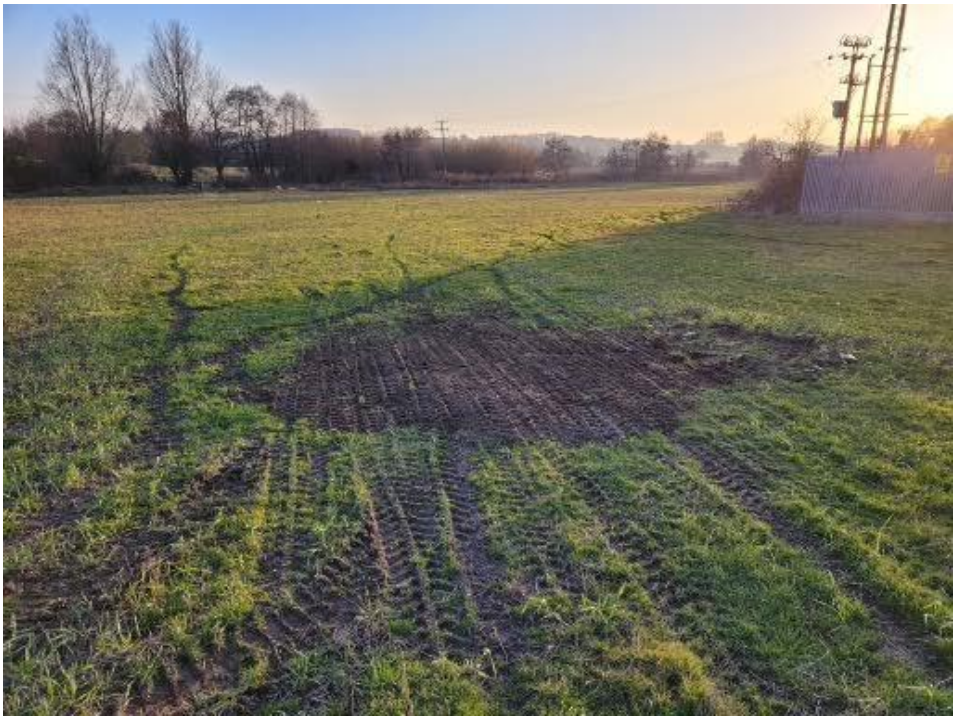
Photo Location 2

TP02

Photo Location 3

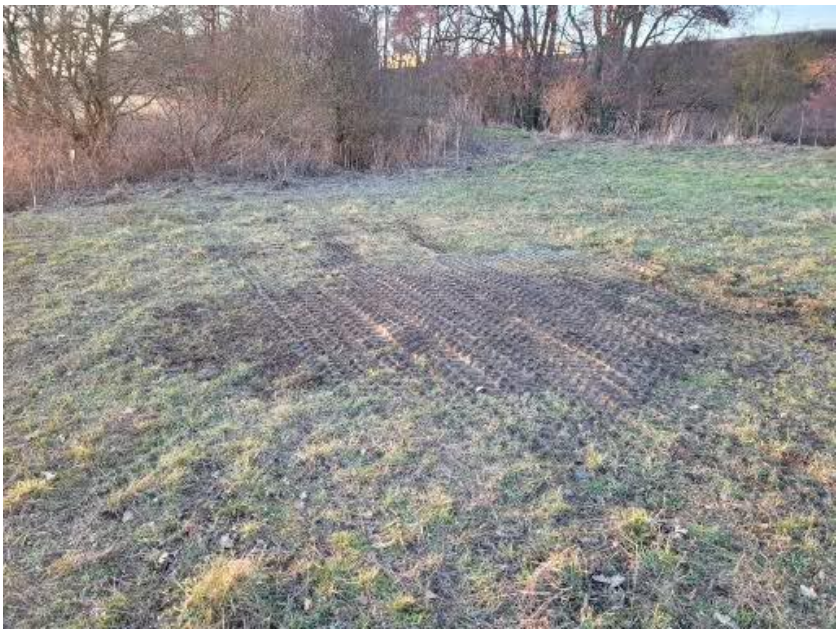




TP03

Photograph Survey

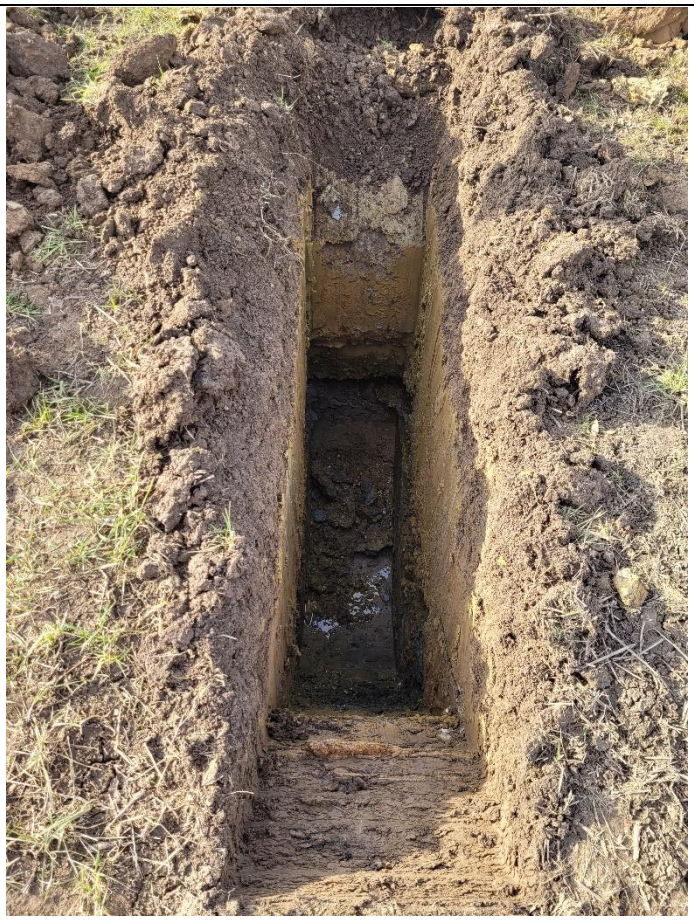
Photo Location 4

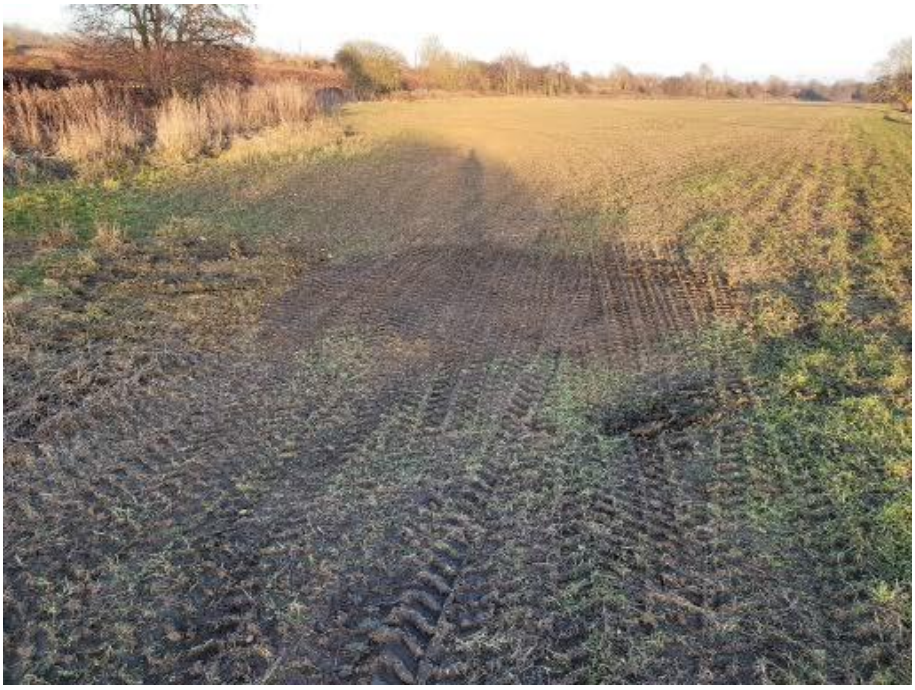


TP04

Photograph Survey

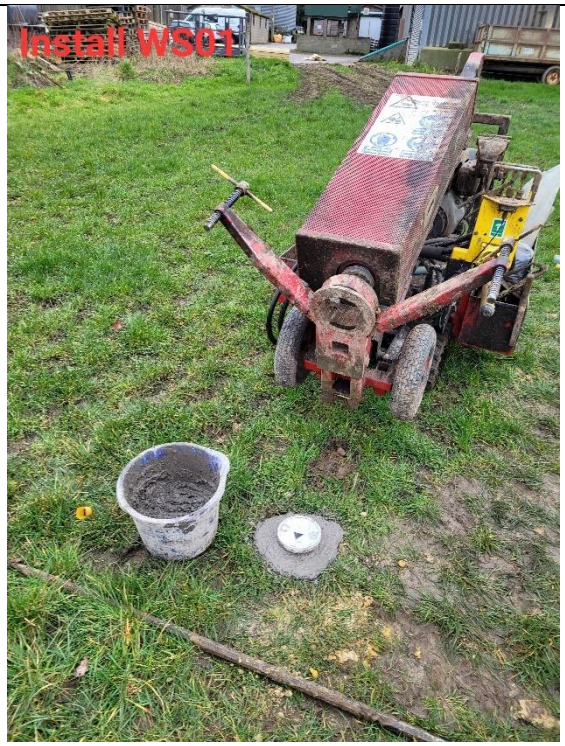
Photo Location 5





TP05

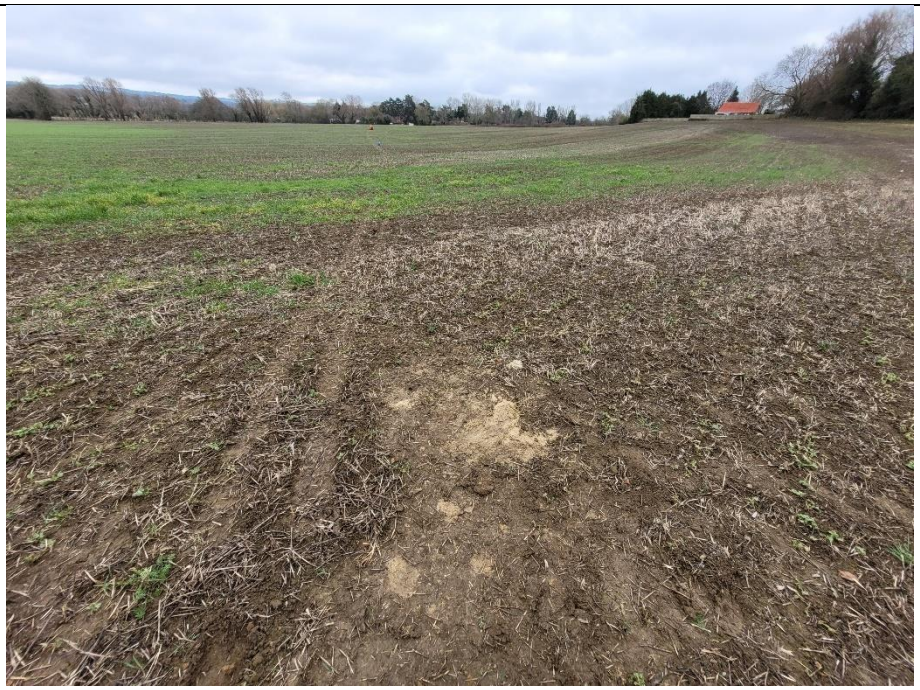
Photo Location 6

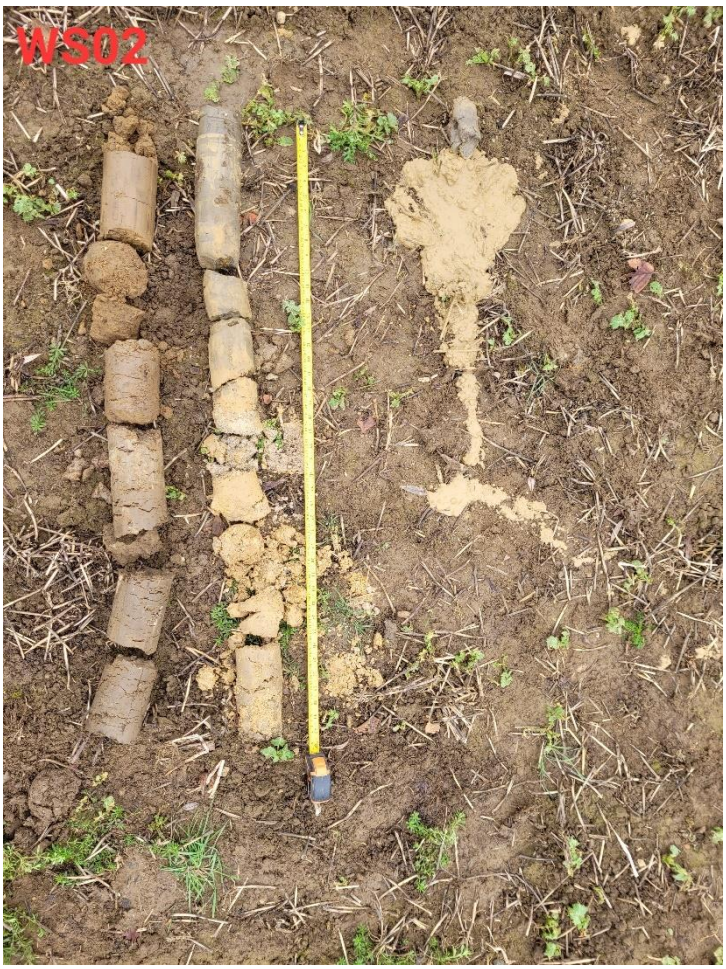


WS01

Photograph Survey

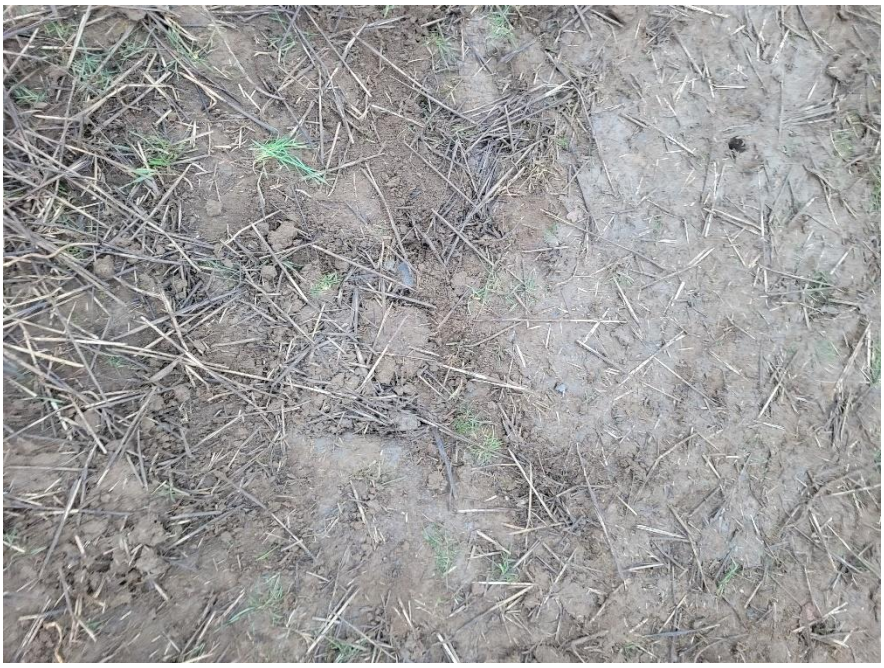
Photo Location 7





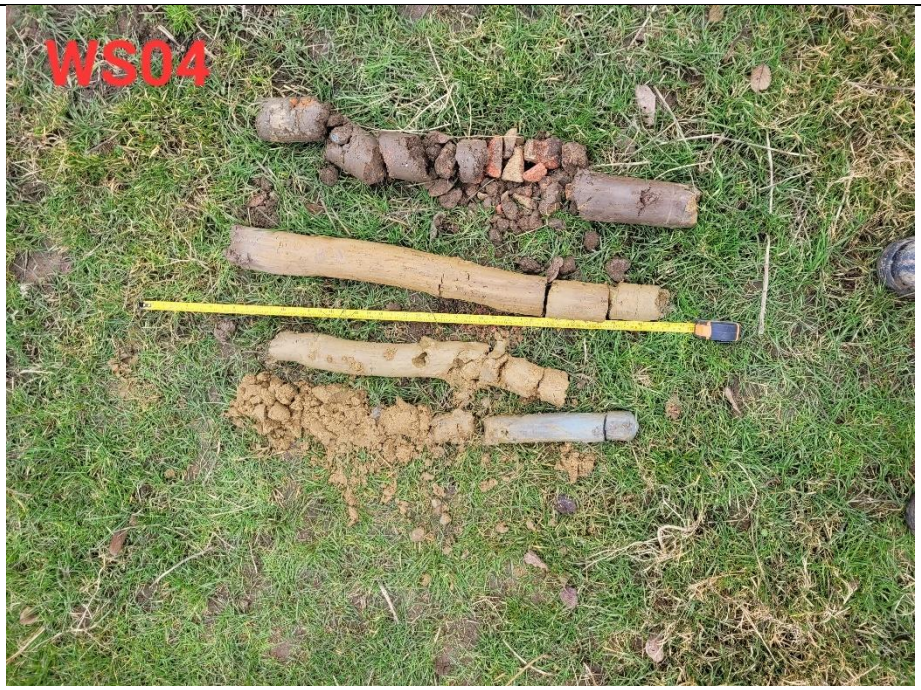
WS02

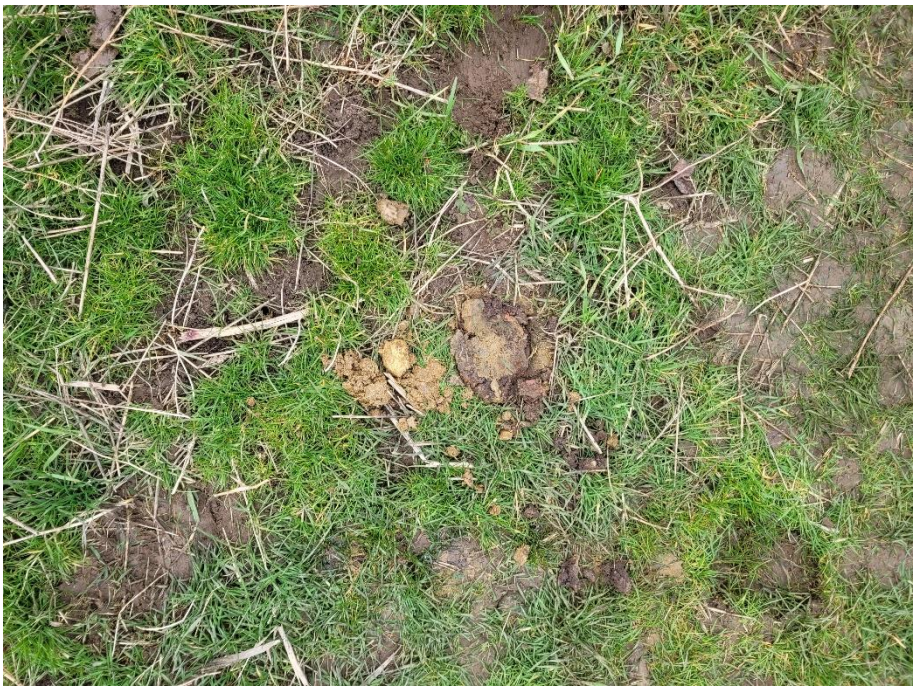
Phot Location 8



WS03

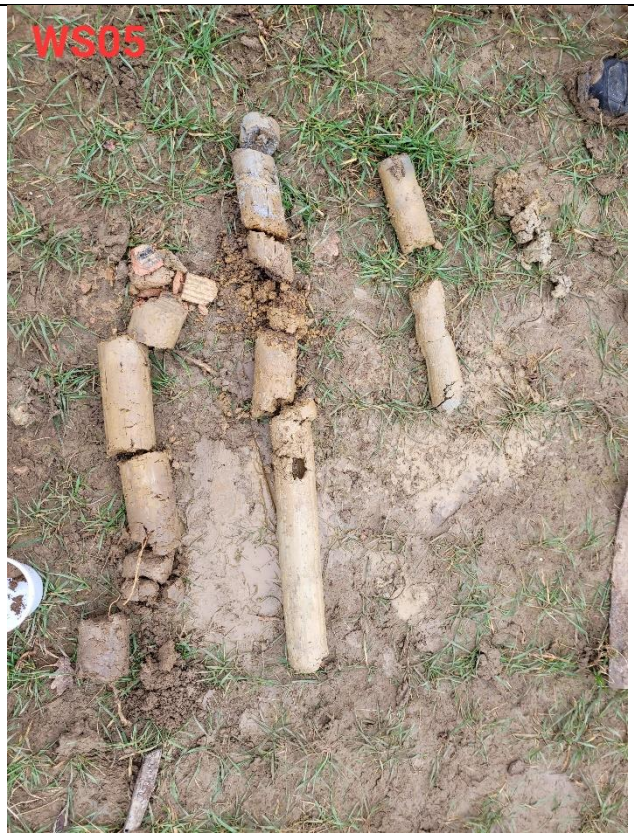
Photo Location 9

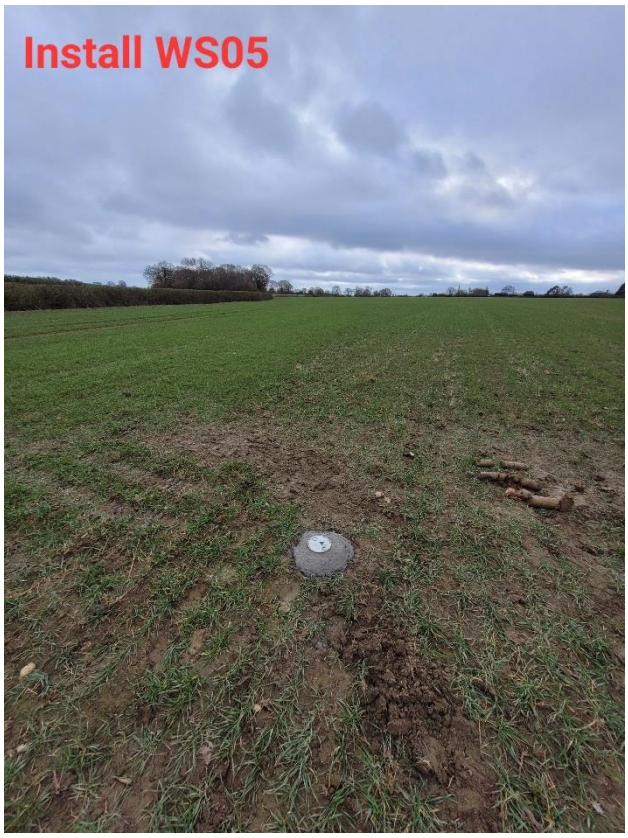




WS04

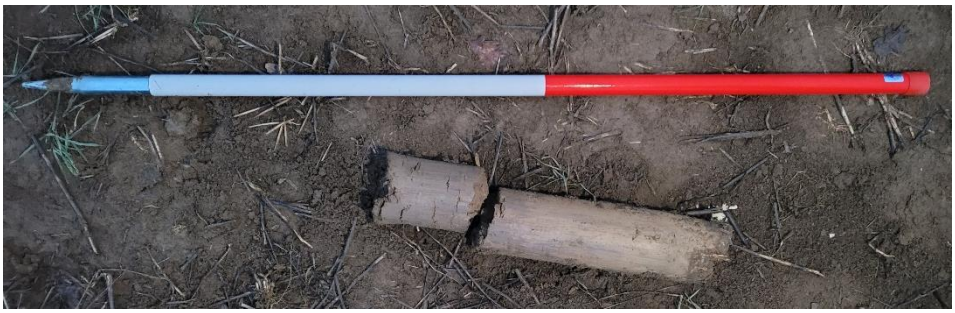
Photo Location 10

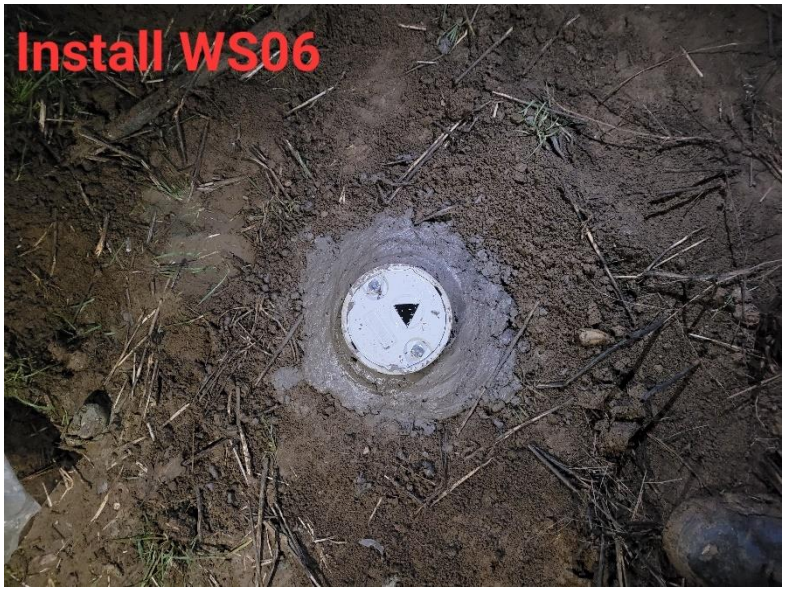




WS05

Photo Location 11





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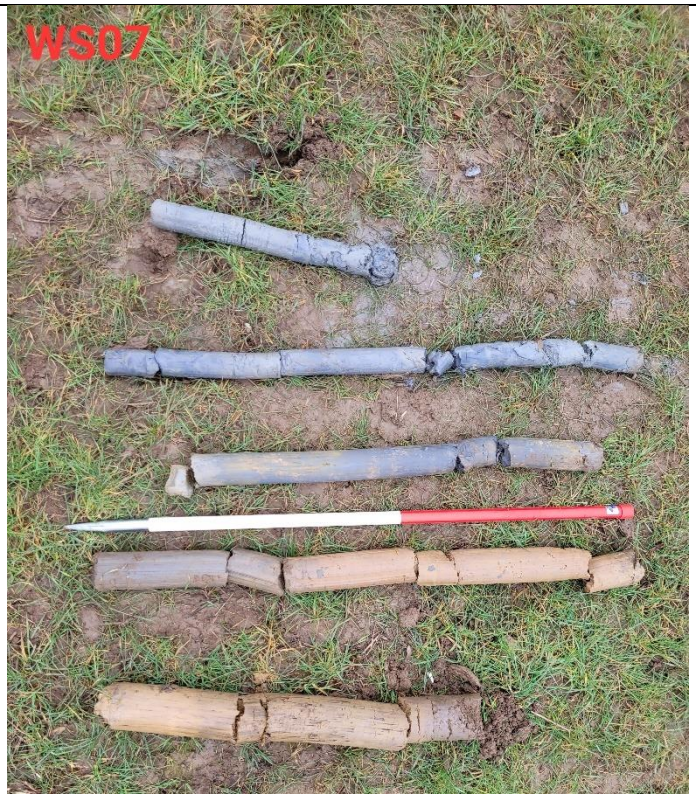
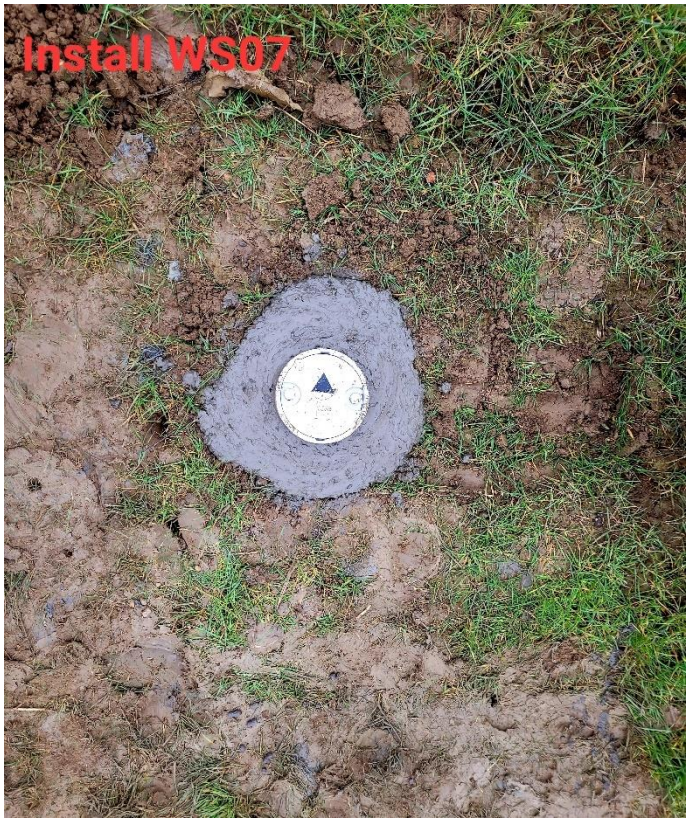
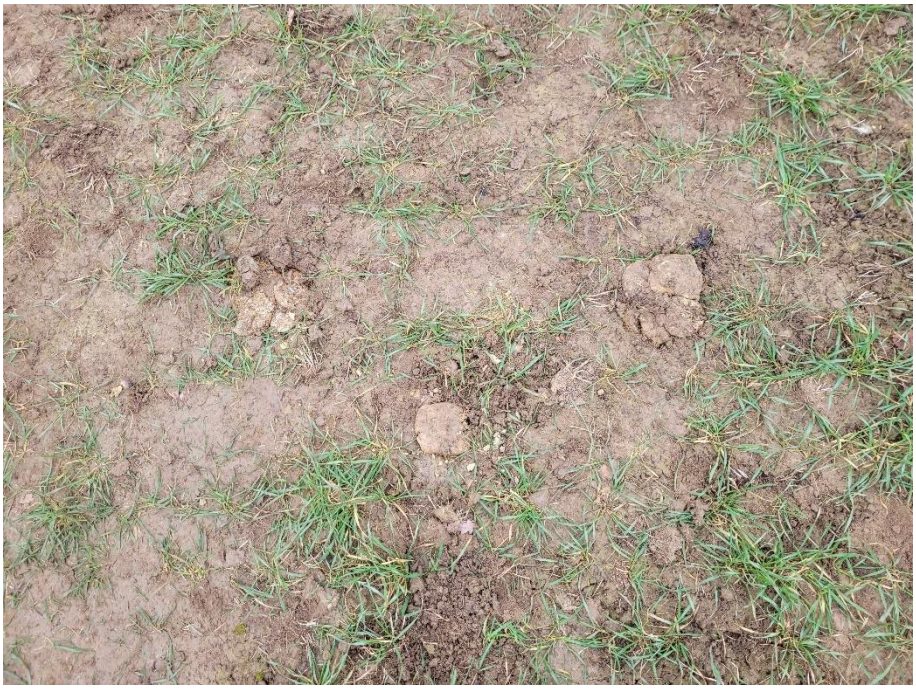




WS07

Photo Location 13



WS08

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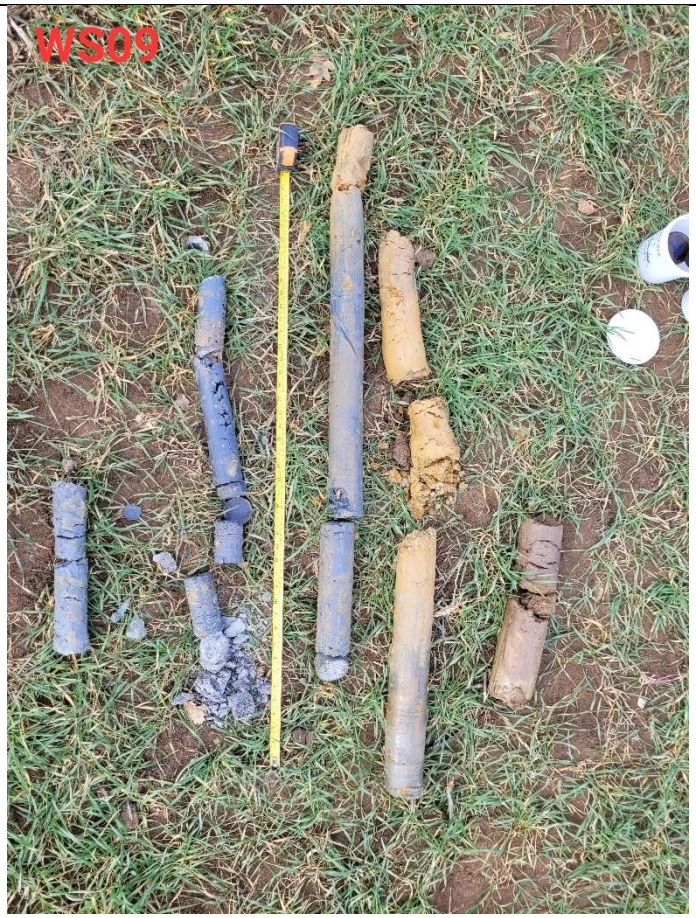

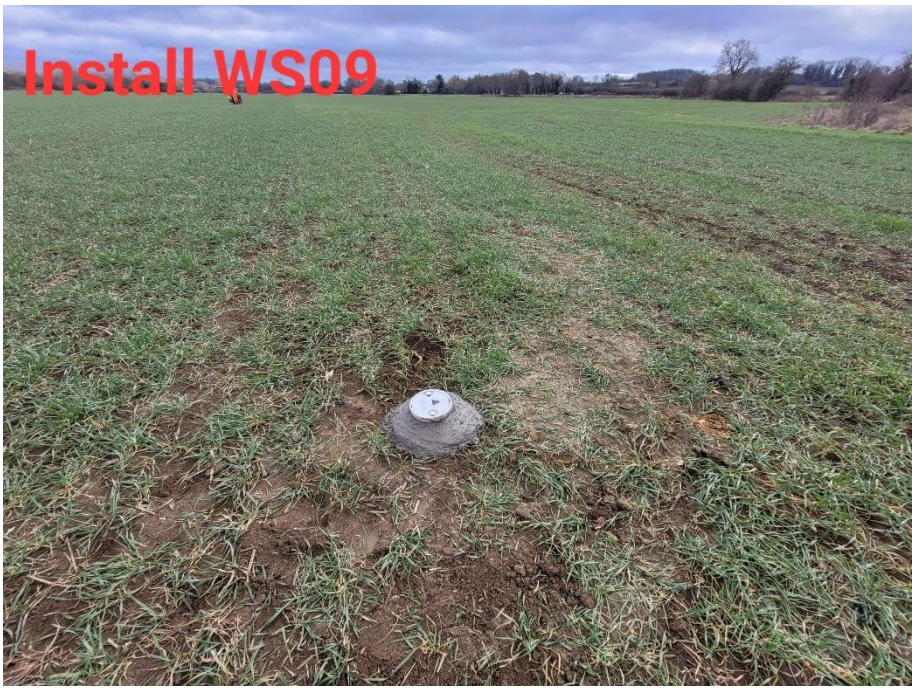

WS09

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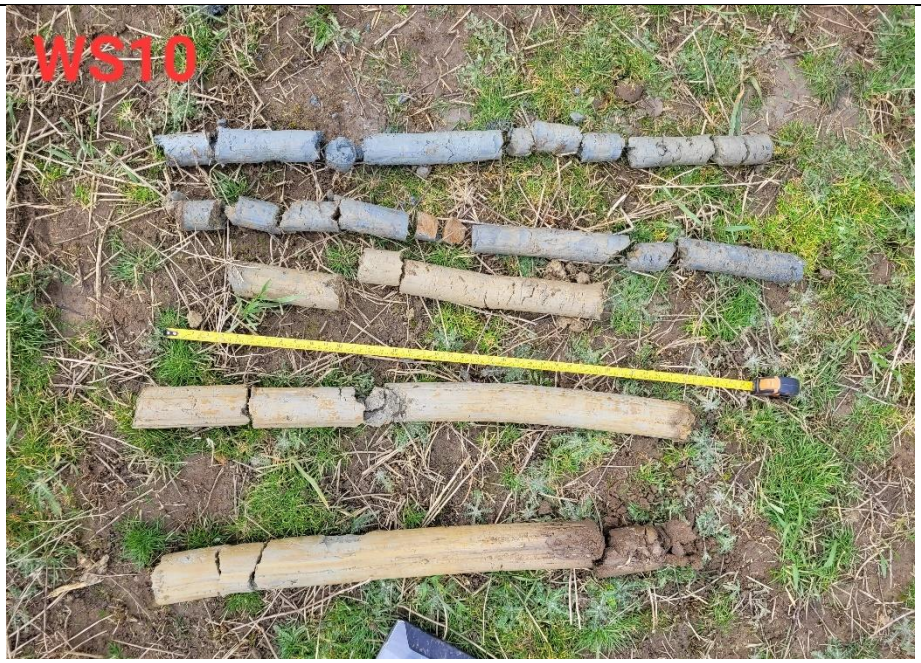

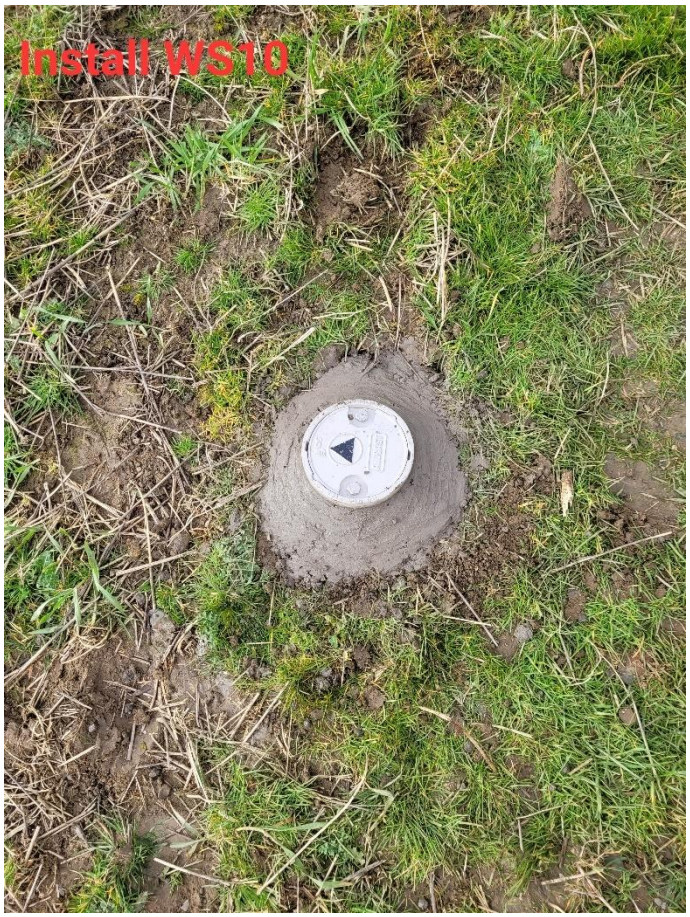

WS10

Annex B

Wardell Armstrong LLP Trial Pit Logs

Trial Pit Log

Project Name: Stonestreet Green Solar	Client: EPL 001	Date: 15/02/2023
Location: As shown on ES Volume 3: 11.1 (Doc Ref 5.3)	Contractor: SI Ground Investigation Limited	Co-ords: E606370.00 N137633.00
Project No. : GM12014	Crew Name: DM	Equipment: Kubota 3T Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP01	TP	46.40m AoD	JE	1:20	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	46.40		(Soft) grass topped brown slightly silty CLAY with rootlets throughout and occasional gravel. Gravel is angular to subangular fine to medium of brick and mixed natural lithologies. (TOPSOIL)
		0.30	ES					(Soft) brown slightly silty CLAY with occasional rootlets.
					0.40	46.30		(Soft to firm) greyish yellow slightly silty slightly sandy CLAY. Sand is fine to medium.
		1.00	ES					*Becoming sandy,*
	▽				1.50	46.00		(Firm) blueish grey CLAY.
								Becoming stiff and friable.
		2.00	ES					
					2.30	44.90		End of Borehole at 2.300m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
2.50	0.45	Minor collapse of sandy CLAY at 1.4m.					

Remarks

SERVICES: Area checked using C.A.T 4 and Genny prior to excavation. GROUNDWATER: Slow ingress of water at 1.10m to 1.20m depth. TESTING: Environmental samples obtained at 0.30m, 1.00m, and 2.00m depth. BACKFILL: Trial pit backfilled with arisings. TERMINATION: Trial pit terminated due to maximum reach of the excavator.

Trial Pit Log

Project Name: Stonestreet Green Solar	Client: EPL 001	Date: 15/02/2023
Location: As shown on ES Volume 3: 11.1 (Doc Ref 5.3)	Contractor: SI Ground Investigation Limited	Co-ords: E605201.00 N137573.00
Project No. : GM12014	Crew Name: DM	Equipment: Kubota 3T Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP02	TP	63.30m AoD	JE	1:20	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	63.30		(Soft) grass topped brown slightly silty slightly gravelly CLAY with rootlets throughout. Gravel is subangular to subrounded fine of brick and mixed natural lithologies. (TOPSOIL)
					0.20	63.20		(Soft) brown slightly silty slightly gravelly CLAY. Gravel is subangular to subrounded fine of brick and mixed natural lithologies.
		0.30	ES					(Loose to medium dense) pale grey slightly silty slightly cobbly gravelly fine to coarse SAND with rare limestone boulders. Gravel is subrounded fine to coarse of limestone. Cobbles are subrounded of limestone up to 250mm across.
		1.00	ES					
					1.50	63.10		Bedrock - Hythe Formation (Limestone)
								End of Borehole at 1.500m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.00	0.45	Trial pit stable throughout.					

Remarks

SERVICES: Area checked using C.A.T 4 and Genny prior to excavation. GROUNDWATER: Not recorded. TESTING: Environmental samples obtained at 0.30m and 1.00m depth. BACKFILL: Trial pit backfilled with arisings. TERMINATION: Trial pit terminated due to intercept with bedrock.

Trial Pit Log

Project Name: Stonestreet Green Solar	Client: EPL 001	Date: 15/02/2023
Location: As shown on ES Volume 3: 11.1 (Doc Ref 5.3)	Contractor: SI Ground Investigation Limited	Co-ords: E606613.00 N138206.00
Project No. : GM12014	Crew Name: DM	Equipment: Kubota 3T Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP03	TP	49.80m AoD	JE	1:20	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	49.80		(Soft) grass topped brown slightly silty slightly sandy CLAY with rootlets throughout. Sand is fine. (TOPSOIL)
		0.30	ES					(Soft to firm) yellowish brown silty slightly sandy CLAY with occasional rootlets. Sand is fine. *Rootlets present.*
					0.80	49.70		(Firm to stiff) blueish grey slightly silty CLAY. *Occasional relic rootlets.*
		1.00	ES					
					2.20	49.00		End of Borehole at 2.200m

1 2 3 4

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
2.90	0.45	Trial pit stable throughout.					

Remarks

SERVICES: Area checked using C.A.T 4 and Genny prior to excavation. GROUNDWATER: Not recorded. TESTING: Environmental samples obtained at 0.30m and 1.00m depth. BACKFILL: Trial pit backfilled with arisings. TERMINATION: Trial pit terminated due to maximum reach of the excavator.

Trial Pit Log

Project Name: Stonestreet Green Solar	Client: EPL 001	Date: 15/02/2023
Location: As shown on ES Volume 3: 11.1 (Doc Ref 5.3)	Contractor: SI Ground Investigation Limited	Co-ords: E608520.00 N138027.00
Project No. : GM12014	Crew Name: DM	Equipment: Kubota 3T Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP04	TP	50.90m AoD	JE	1:20	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	50.90		(Soft) grass topped brown slightly silty CLAY with occasional rootlets and rare fine sand. (TOPSOIL)
		0.30	ES					(Soft to firm) brown with orange mottle slightly silty CLAY with rare fine sand.
					0.40	50.80		(Medium dense) pale yellowish brown slightly clayey fine to medium SAND.
		1.00	ES					
					1.15	50.50		(Stiff) dark blueish grey CLAY.
					2.30	49.75		End of Borehole at 2.300m

1
2
3
4

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
2.30	0.45	Trial pit stable throughout.					

Remarks

SERVICES: Area checked using C.A.T 4 and Genny prior to excavation. GROUNDWATER: Not recorded. TESTING: Environmental samples obtained at 0.30m and 1.00m depth. BACKFILL: Trial pit backfilled with arisings. TERMINATION: Trial pit terminated due to maximum reach of the excavator.

Trial Pit Log

Project Name: Stonestreet Green Solar	Client: EPL 001	Date: 15/02/2023
Location: As shown on ES Volume 3: 11.1 (Doc Ref 5.3)	Contractor: SI Ground Investigation Limited	Co-ords: E606916.00 N138223.00
Project No. : GM12014	Crew Name: DM	Equipment: Kubota 3T Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP05	TP	47.20m AoD	JE	1:20	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	47.20		(Soft) grass topped brown slightly silty slightly gravelly CLAY with rootlets throughout. Gravels are angular to subrounded fine to medium of brick flint and mixed natural lithologies. (TOPSOIL)
		0.30	ES					(Soft) brown slightly silty slightly gravelly CLAY with occasional rootlets. Gravels are angular to subrounded fine to medium of brick flint and mixed natural lithologies.
					0.50	47.10		(Firm) pale yellow slightly silty slightly sandy CLAY. Sand is fine to medium.
		1.00	ES					
								Becoming slightly gravelly: subangular to subrounded fine to coarse of mixed natural lithologies.
	▽							*Occasional grey clay inclusions.*
					1.60	46.70		(Firm to stiff) blueish grey CLAY.
					2.20	45.60		End of Borehole at 2.200m

1 2 3 4

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.00	0.45	Trial pit stable throughout.					

Remarks

SERVICES: Area checked using C.A.T 4 and Genny prior to excavation. GROUNDWATER: Slow ingress of water at 1.40m depth. TESTING: Environmental samples obtained at 0.30m and 1.00m depth. BACKFILL: Trial pit backfilled with arisings. TERMINATION: Trial pit terminated due to maximum reach of the excavator.

Annex C

Wardell Armstrong LLP Windowless Sample Logs

Windowless Sampling Log

Project Name: Stonestreet Green Solar	Client: EPL 001	Date: 17/02/2023
Location: As shown on ES Volume 3: 11.1 (Doc Ref 5.3)	Contractor: SI Ground Investigation Limited	Co-ords: E605428.00 N137196.00
Project No. : GM12014	Crew Name: SE	Drilling Equipment: Dart Competitor Windowless Sample Rig

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS01	WLS	71.00m AoD	JE	1:51	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	70.90		(Soft) grass topped brown slightly silty sandy CLAY. Sand is fine. (TOPSOIL)
		0.30	ES		0.20	70.80		(Soft) brown slightly silty sandy CLAY with rootlets throughout. Sand is fine.
								Firm light yellowish brown slightly silty slightly sandy CLAY. Sand is fine to medium.
		1.00	SPT	N=9 (2,2/2,2,2,3)				*Lense of fine to medium sand.*
		1.20	ES		1.10	69.90		Medium dense light brownish yellow with occasional orange mottle slightly silty clayey fine to medium SAND.
		2.00	SPT	N=16 (3,3/3,4,4,5)				
								Strong orange iron oxide staining.
		3.00	SPT	N=58 (8,8/12,15,16,15)	3.10	67.90		Very dense light yellow clayey fine to medium SAND with occasional gravels. Gravel is subangular to subrounded fine to medium of sandstone.
					3.70	67.30		Very stiff light greyish yellow slightly silty sandy CLAY. Sand is fine.
		4.00	SPT	N=21 (4,4/5,6,5,5)				*(Soft) CLAY.*
					4.30	66.70		(Medium dense) light yellow slightly clayey fine to coarse SAND.
					4.40	66.60		(Stiff) light greyish yellow slightly silty sandy CLAY. Sand is fine.
		5.00	SPT	N=23 (2,2/3,4,6,10)	5.00	66.00		End of Borehole at 5.000m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

SERVICES: Area checked using C.A.T 4 and Genny prior to excavation. GROUNDWATER: Not recorded. STABILITY: Stable throughout. TESTING: Environmental samples obtained at 0.30mbgl and 1.20mbgl, Standard Penetration Test (SPT) conducted between 1.00mbgl and 5.00mbgl. BACKFILL: Backfilled with plain pipe with bentonite surround from 5.00mbgl to 4.00mbgl, slotted pipe with gravel surround from 4.00mbgl to ground level, and sealed with bentonite. TERMINATION: Borehole terminated at required depth.

Windowless Sampling Log

Project Name: Stonestreet Green Solar	Client: EPL 001	Date: 17/02/2023
Location: As shown on ES Volume 3: 11.1 (Doc Ref 5.3)	Contractor: SI Ground Investigation Limited	Co-ords: E605972.00 N137283.00
Project No. : GM12014	Crew Name: SE	Drilling Equipment: Dart Competitor Windowless Sample Rig

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS02	WLS	56.40m AoD	JE	1:51	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	56.30		(Soft) grass topped brown slightly silty slightly gravely sandy CLAY. Sand is fine. Gravel is subangular to subrounded fine to medium of brick and mixed natural lithologies. (TOPSOIL)
		0.30	ES		0.45	55.95		
					0.55	55.85		(Soft to firm) brown slightly silty slightly gravely sandy CLAY with rootlets throughout. Sand is fine. Gravel is subangular to subrounded fine to medium of brick and mixed natural lithologies.
		0.80	ES					
		1.00	SPT	N=8 (1,1/2,2,2,2)	1.00	55.40		
					1.10	55.30		(Soft to firm) grey with orange mottle slightly sandy CLAY with occasional rootlets. Sand is fine.
					1.65	54.75		(Medium dense) brown slightly silty slightly clayey fine SAND.
								Becoming clayey.
		2.00	SPT	N=8 (2,2/2,2,2,2)				(Soft) brown sandy CLAY. Sand is fine to medium
								Loose light greyish yellow slightly silty slightly gravelly fine to coarse SAND. Gravel is subrounded to rounded fine of mixed natural lithologies,
		3.00	SPT	N=12 (2,3/3,3,3,3)				Firm to stiff grey CLAY with occasional fine to coarse sand.
		4.00	SPT	N=17 (3,3/4,4,4,5)	4.00	52.40		End of Borehole at 4.000m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

SERVICES: Area checked using C.A.T 4 and Genny prior to excavation. GROUNDWATER: Not recorded. STABILITY: Borehole stable throughout. TESTING: Environmental samples obtained 0.30m and 0.80m depth, SPT conducted between 1.00mbgl and 4.00mbgl. BACKFILL: Borehole backfilled with arisings. TERMINATION: Borehole terminated at required depth.

Windowless Sampling Log

Project Name: Stonestreet Green Solar	Client: EPL 001	Date: 16/02/2023
Location: As shown on ES Volume 3: 11.1 (Doc Ref 5.3)	Contractor: SI Ground Investigation Limited	Co-ords: E607493.00 N138234.00
Project No. : GM12014	Crew Name: SE	Drilling Equipment: Dart Competitor Windowless Sample Rig

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS03	WLS	49.10m AoD	JE	1:51	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	49.00		(Soft) grass topped brown slightly silty slightly sandy CLAY with rootlets throughout. Sand is fine. (TOPSOIL)
		0.30	ES		0.25	48.85		(Soft) brown slightly silty slightly sandy CLAY with rootlets throughout. Sand is fine.
					0.85	48.25		(Firm) brownish grey with orange mottle slightly silty slightly sandy CLAY. Sand is fine.
		1.00	SPT	N=14 (1,1/11,1,1,1)	1.10	48.00		(Medium dense) light brown slightly clayey fine to medium SAND.
		1.20	ES					Firm brownish grey slightly gravelly sandy CLAY. Sand is fine to medium. Gravel is angular to subangular fine of mixed natural lithologies.
					1.75	47.35		*Dark grey.*
		2.00	SPT	N=10 (2,2/2,3,3,2)	2.00	47.10		(Stiff) blueish grey CLAY.
	▽							Loose light yellowish brown silty GRAVEL. Gravel is subangular to subrounded fine to medium of mixed natural lithologies.
					2.70	46.40		Stiff dark blueish grey CLAY.
		3.00	SPT	N=10 (1,1/1,2,3,4)				
					4.00	45.10		End of Borehole at 4.000m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

SERVICES: Area checked using C.A.T 4 and Genny prior to excavation. GROUNDWATER: Water strike at 2.70mbgl. STABILITY: Collapse of borehole wall between 2.00mbgl and 2.70mbgl. TESTING: Environmental samples obtained 0.30m and 1.20m depth, SPT conducted between 1.00mbgl and 4.00mbgl. BACKFILL: Borehole backfilled with arisings. TERMINATION: Borehole terminated due to ingress of water and sediment.

Windowless Sampling Log

Project Name: Stonestreet Green Solar	Client: EPL 001	Date: 17/02/2023
Location: As shown on ES Volume 3: 11.1 (Doc Ref 5.3)	Contractor: SI Ground Investigation Limited	Co-ords: E606627.00 N138172.00
Project No. : GM12014	Crew Name: SE	Drilling Equipment: Dart Competitor Windowless Sample Rig

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS04	WLS	48.40m AoD	JE	1:51	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.30	ES		0.10	48.30		(Soft) grass topped brown slightly silty slightly sandy CLAY with occasional gravel and rootlets throughout. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of brick and mixed natural lithologies. (TOPSOIL)
		1.00 1.10	SPT ES	N=6 (1,1/1,1,2,2)	0.95	47.45		MADE GROUND: (Soft to firm) brown slightly silty slightly sandy CLAY with occasional gravel. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of brick and mixed natural lithologies.
								Fragmented brick and cement.
		2.00	SPT	N=8 (1,1/2,2,2,2)				Firm grey with orange mottle slightly sandy silty CLAY with occasional 1-2mm black organic inclusions. Sand is fine to coarse.
					2.30	46.10		*Becoming sandy.*
		3.00	SPT	N=10 (2,2/2,2,3,3)				Medium dense light yellowish brown slightly clayey slightly gravelly fine to coarse SAND. Gravel is subangular to sub-rounded fine to medium of mixed natural lithologies.
					3.70	44.70		Stiff blueish grey CLAY.
		4.00	SPT	N=15 (2,2/2,4,4,5)				*Becoming (very stiff).*
					5.00	43.40		End of Borehole at 5.000m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
								0.00	5.00	90	

Remarks

SERVICES: Area checked using C.A.T 4 and Genny prior to excavation. GROUNDWATER: Water strike at 2.30mbgl rising to 1.50mbgl after 20 minute interval. STABILITY: Borehole stable throughout. TESTING: Environmental samples obtained 0.30m and 1.10m depth, SPT conducted between 1.00mbgl and 4.00mbgl. BACKFILL: Borehole backfilled with arisings. TERMINATION: Borehole terminated at required depth.

Windowless Sampling Log

Project Name: Stonestreet Green Solar	Client: EPL 001	Date: 16/02/2023
Location: As shown on ES Volume 3: 11.1 (Doc Ref 5.3)	Contractor: SI Ground Investigation Limited	Co-ords: E604771.00 N137710.00
Project No. : GM12014	Crew Name: SE	Drilling Equipment: Dart Competitor Windowless Sample Rig

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS05	WLS	48.10m AoD	JE	1:51	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.30	ES		0.10	48.00		(Soft) grass topped brown slightly silty CLAY with occasional gravels and rare sand. Gravel is angular to subangular fine to medium of mixed natural lithologies. Sand is fine. (TOPSOIL)
		1.00	ES		1.00	47.10		MADE GROUND: (Soft to firm) brown slightly silty CLAY with occasional gravels and rare sand. Gravel is angular to subangular fine to medium of mixed natural lithologies. Sand is fine.
		1.00	SPT	N=16 (2,2/3,4,4,5)				*Ceramic/ brick fragments.*
					1.40	46.70		Medium dense light brownish yellow slightly clayey slightly gravelly fine to coarse SAND. Gravel is angular to subrounded fine to medium of mixed natural lithologies.
		2.00	SPT	N=4 (1,1/1,1,1,1)				Soft to firm blueish grey CLAY.
		3.00	SPT	N=10 (1,1/1,2,3,4)				*Becoming dark grey.*
		4.00	SPT	N=59 (1,1/2,3,4,50)				
					4.20	43.90		End of Borehole at 4.200m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

SERVICES: Area checked using C.A.T 4 and Genny prior to excavation. GROUNDWATER: Not recorded. STABILITY: Borehole stable throughout. TESTING: Environmental samples obtained 0.30m and 1.00m depth, SPT conducted between 1.00mbgl and 4.00mbgl. BACKFILL: Borehole installed with plain pipe with bentonite surround from 4.20mbgl to 3.20mbgl, slotted pipe with gravel surround from 3.20mbgl to ground level, and sealed with bentonite. TERMINATION: Borehole terminated due to intercept with bedrock.

Windowless Sampling Log

Project Name: Stonestreet Green Solar	Client: EPL 001	Date: 16/02/2023
Location: As shown on ES Volume 3: 11.1 (Doc Ref 5.3)	Contractor: SI Ground Investigation Limited	Co-ords: E607106.00 N138080.00
Project No. : GM12014	Crew Name: SE	Drilling Equipment: Dart Competitor Windowless Sample Rig

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS06	WLS	48.40m AoD	JE	1:51	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	48.30		(Soft) grass topped brown slightly silty CLAY. (TOPSOIL)
		0.30	ES		0.20	48.20		(Soft to firm) brown slightly silty CLAY.
								Firm greyish brown with orange mottle CLAY with rare silt and sand. Sand is fine.
		1.00	ES					
		1.00	SPT	N=8 (2,2/2,2,2,2)				
					1.30	47.10		Firm light greyish brown sandy silty CLAY. Sand is fine.
		2.00	SPT	N=8 (2,2/2,2,2,2)				*Becoming slightly silty.*
					2.20	46.20		(Loose to medium dense) light yellowish brown slightly gravelly silty fine to medium SAND. Gravel is angular to subangular fine to medium of mixed natural lithologies.
					2.60	45.80		Siff dark blueish grey CLAY.
		3.00	SPT	N=12 (3,3/3,3,3,3)				*Becoming stiff.*
		4.00	SPT	N=16 (3,3/4,4,4,4)				
					4.40	44.00		End of Borehole at 4.400m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

SERVICES: Area checked using C.A.T 4 and Genny prior to excavation. GROUNDWATER: Not recorded. STABILITY: Borehole stable throughout. TESTING: Environmental samples obtained 0.30m and 1.00m depth, SPT conducted between 1.00mbgl and 4.00mbgl. BACKFILL: Borehole installed with plain pipe with bentonite surround from 4.40mbgl to 3.40mbgl, slotted pipe with gravel surround from 3.40mbgl to ground level, and sealed with bentonite. TERMINATION: Borehole terminated at required depth.

Windowless Sampling Log

Project Name: Stonestreet Green Solar	Client: EPL 001	Date: 16/02/2023
Location: As shown on ES Volume 3: 11.1 (Doc Ref 5.3)	Contractor: SI Ground Investigation Limited	Co-ords: E607116.00 N136871.00
Project No. : GM12014	Crew Name: SE	Drilling Equipment: Dart Competitor Windowless Sample Rig

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS07	WLS	60.20m AoD	JE	1:51	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	60.10		(Soft) grass topped brown slightly silty CLAY with rootlets throughout. (TOPSOIL)
		0.30	ES		0.25	59.95		Stiff brown slightly silty CLAY.
		1.00	ES					Stiff yellowish brown slightly silty slightly sandy CLAY with occasional gravel and 1-2mm black organic inclusions. Sand is fine to medium. Gravel is subangular to subrounded fine to medium of mixed natural lithologies.
		1.00	SPT	N=12 (2,2/3,2,3,4)				
					1.55	58.65		Stiff blueish grey CLAY with rare fine sand.
		2.00	SPT	N=11 (2,2/2,3,2,4)				
		3.00	SPT	N=16 (3,3/3,4,4,5)				
		4.00	SPT	N=18 (3,3/4,4,4,6)				
		5.00	SPT	N=24 (4,5/5,7,6,6)	5.00	55.20		*Gravel inclusions: angular fine of mudstone.*
								End of Borehole at 5.000m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

SERVICES: Area checked using C.A.T 4 and Genny prior to excavation. GROUNDWATER: Not recorded. STABILITY: Borehole stable throughout. TESTING: Environmental samples obtained 0.30m and 1.00m depth, SPT conducted between 1.00mbgl and 5.00mbgl. BACKFILL: Borehole installed with plain pipe with bentonite surround from 5.00mbgl to 4.00mbgl, slotted pipe with gravel surround from 4.00mbgl to ground level, and sealed with bentonite. TERMINATION: Borehole terminated at required depth.

Windowless Sampling Log

Project Name: Stonestreet Green Solar	Client: EPL 001	Date: 16/02/2023
Location: As shown on ES Volume 3: 11.1 (Doc Ref 5.3)	Contractor: SI Ground Investigation Limited	Co-ords: E605020.00 N137145.00
Project No. : GM12014	Crew Name: SE	Drilling Equipment: Dart Competitor Windowless Sample Rig

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS08	WLS	56.90m AoD	JE	1:51	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	ES		0.10	56.80		(Soft) grass topped brown slightly silty to silty CLAY. (TOPSOIL)
					0.30	56.60		(Soft) brown slightly silty to silty slightly gravelly CLAY with rootlets throughout. Gravel is angular to subrounded fine to medium of brick and mixed natural lithologies.
		1.00	ES					Stiff grey with orange mottle slightly silty slightly sandy CLAY with rare gravels. Sand is fine to medium. Gravel is subangular to subrounded fine of mixed natural lithologies.
		1.00	SPT	N=12 (1,2/2,3,3,4)				
					1.45	55.45		Very stiff blueish grey CLAY.
								Yellow staining.
		2.00	SPT	N=23 (2,3/4,4,7,8)				*Becoming dark blueish grey.*
								Red oxide staining.
								Yellow staining.
		3.00	SPT	N=26 (5,5/6,6,6,8)				*Becoming dry and friable.*
					3.70	53.20		End of Borehole at 3.700m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

SERVICES: Area checked using C.A.T 4 and Genny prior to excavation. GROUNDWATER: Water strike at 2.30mbgl rising to 1.50mbgl after 20minute interval. STABILITY: Borehole stable throughout. TESTING: Environmental samples obtained 0.20m and 1.00m depth, SPT conducted between 1.00mbgl and 3.00mbgl. BACKFILL: Borehole backfilled with arisings. TERMINATION: Borehole terminated at required depth.

AGS

Windowless Sampling Log

Project Name: Stonestreet Green Solar	Client: EPL 001	Date: 17/02/2023
Location: As shown on ES Volume 3: 11.1 (Doc Ref 5.3)	Contractor: SI Ground Investigation Limited	Co-ords: E605995.00 N137951.00
Project No. : GM12014	Crew Name: SE	Drilling Equipment: Dart Competitor Windowless Sample Rig

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS09	WLS	44.90m AoD	JE	1:51	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	44.80		(Soft) grass topped brown slightly silty slightly sand CLAY with rootlets throughout. Sand is fine to coarse. (TOPSOIL)
		0.40	ES		0.30	44.60		(Soft) brown slightly silty slightly sandy CLAY with occasional rootlets. Sand is fine to coarse.
		1.00	ES					Firm grey with orange mottle CLAY with occasional sand. Sand is fine to medium.
		1.00	SPT	N=8 (1,1/2,2,2,2)	1.25	43.65		(Loose) light brownish yellow slightly silty slightly clayey slightly gravelly fine to medium SAND. Gravel is angular to subrounded fine to medium of mixed natural lithologies.
					1.40	43.50		
					1.65	43.25		(Firm) light grey with orange mottle slightly sandy CLAY with rare gravel. Sand is fine to coarse. Gravel is subangular to subrounded fine to medium of mixed natural lithologies.
		2.00	SPT	N=8 (2,2/2,2,2,2)	2.00	42.90		(Stiff) dark blueish grey CLAY.
					2.10	42.80		Loose light brownish grey with orange mottle slightly clayey fine to medium SAND.
		3.00	SPT	N=12 (2,3/3,3,3,3)				Stiff dark blueish grey CLAY.
		4.00	SPT	N=17 (3,3/4,4,4,5)				*Potential mudstone cobble: (Weak) light grey laminated partially weathered mudstone. Becoming slightly gravelly; angular fine to medium of MUDSTONE.*
					4.90	40.00		End of Borehole at 4.900m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

SERVICES: Area checked using C.A.T 4 and Genny prior to excavation. GROUNDWATER: Not recorded. STABILITY: Borehole stable throughout. TESTING: Environmental samples obtained 0.40m and 1.00m depth, SPT conducted between 1.00mbgl and 4.00mbgl. BACKFILL: Borehole installed with plain pipe with bentonite surround from 4.90mbgl to 3.90mbgl, slotted pipe with gravel surround from 3.90mbgl to ground level, and sealed with bentonite. TERMINATION: Borehole terminated at required depth.

Windowless Sampling Log

Project Name: Stonestreet Green Solar	Client: EPL 001	Date: 17/02/2023
Location: As shown on ES Volume 3: 11.1 (Doc Ref 5.3)	Contractor: SI Ground Investigation Limited	Co-ords: E606818.00 N138371.00
Project No. : GM12014	Crew Name: SE	Drilling Equipment: Dart Competitor Windowless Sample Rig

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS10	WLS	55.30m AoD	JE	1:51	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	55.20		(Soft) grass topped brown slightly silty slightly sandy CLAY with rootlets throughout. (TOPSOIL)
		0.40	ES		0.35	54.95		(Firm) brown slightly silty slightly sandy CLAY with occasional rootlets. Sand is fine.
								Firm grey with orange mottle slightly sandy CLAY. Sand is fine.
		1.00	SPT	N=7 (1,1/1,2,2,2)				*Rare fine sand.*
		1.20	ES					
		2.00	SPT	N=8 (1,1/2,2,2,2)				*Becoming slightly silty.*
					2.80	52.50		
		3.00	SPT	N=11 (2,2/2,2,3,4)				Stiff dark blueish grey CLAY with occasional iron staining.
		4.00	SPT	N=12 (2,2/3,3,3,3)				
		5.00	SPT	N=13 (3,3/3,3,3,4)	5.00	50.30		End of Borehole at 5.000m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

SERVICES: Area checked using C.A.T 4 and Genny prior to excavation. GROUNDWATER: Not recorded. STABILITY: Borehole stable throughout. TESTING: Environmental samples obtained 0.40m and 1.20m depth, SPT conducted between 1.00mbgl and 4.00mbgl. BACKFILL: Borehole installed with plain pipe with bentonite surround from 5.00mbgl to 4.00mbgl, slotted pipe with gravel surround from 4.00mbgl to ground level, and sealed with bentonite. TERMINATION: Borehole terminated at required depth.

Windowless Sampling Log

Project Name: Stonestreet Green Solar	Client: EPL 001	Date: 16/02/2023
Location: As shown on ES Volume 3: 11.1 (Doc Ref 5.3)	Contractor: SI Ground Investigation Limited	Co-ords: E606850.00 N137149.00
Project No. : GM12014	Crew Name: SE	Drilling Equipment: Dart Competitor Windowless Sample Rig

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS11	WLS	52.50m AoD	JE	1:51	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	52.40		(Soft) grass topped brown slightly silty slightly sandy CLAY with rootlets throughout. Sand is fine. (TOPSOIL)
		0.30	ES		0.20	52.30		(Soft) brown slightly silty slightly sandy CLAY with occasional rootlets. Sand is fine.
					0.70	51.80		(Soft to firm) light yellowish brown slightly silty slightly sandy CLAY with occasional gravel. Sand is fine to medium. Gravel is angular to subangular fine to medium of mixed natural lithologies.
		1.00	ES					(Firm to stiff) light grey CLAY.
								Orange iron oxide mottle.
								Iron staining throughout with small millimetre scale iron oxide deposits.
								Becoming dark grey.
								Gravel inclusions: angular fine to medium of mudstone.
					4.00	48.50		End of Borehole at 4.000m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

SERVICES: Area checked using C.A.T 4 and Genny prior to excavation. GROUNDWATER: Not recorded. STABILITY: Borehole stable throughout. TESTING: Environmental samples obtained 0.30m and 1.00m depth. BACKFILL: Borehole backfilled with arisings. TERMINATION: Borehole terminated at required depth.

Annex D

Laboratory Geo-environmental Testing Results

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT
SUPPLEMENT TO TEST REPORT 23/01472/1

Amendments: Re-issue following query/investigation

Envirolab Job Number: 23/01472
Issue Number: 2 **Date:** 22 March, 2023

Client:
Wardell Armstrong (Bolton)
41-50 Futura Park
Aspinall Way
Middlebrook
Bolton
Lancashire
UK
BL6 6SU

Project Manager: James Entwistle
Project Name: Stonestreet Green Solar
Project Ref: GM12014
Order No: GM4633
Date Samples Received: 20/02/23
Date Instructions Received: 21/02/23
Date Analysis Completed: 03/03/23

Approved by:

[redacted]

Danielle Brierley
Deputy Client Services Supervisor

Envirolab Job Number: 23/01472

Client Project Name: Stonestreet Green Solar

Client Project Ref: GM12014

Lab Sample ID	23/01472/1	23/01472/2	23/01472/3	23/01472/4	23/01472/5	23/01472/6	23/01472/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP01	TP01	TP02	TP02	TP03	TP03	TP04			
Depth to Top	0.30	2.00	0.30	1.00	0.30	1.00	0.30			
Depth To Bottom										
Date Sampled	15-Feb-23	15-Feb-23	15-Feb-23	15-Feb-23	15-Feb-23	15-Feb-23	15-Feb-23			
Sample Type	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D			
Sample Matrix Code	6AE	6A	4A	5A	4AE	5A	6AE			
% Moisture at <40C$_A$	19.7	20.0	18.0	16.9	18.1	14.4	20.8	% w/w	0.1	A-T-044
Dry Matter (Dry Solids) at 105C	-	-	-	-	-	-	-	% w/w	0.1	Calc-no stones
% Stones >10mm$_A$	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.95	8.05	8.12	8.11	7.21	8.45	8.21	pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	<0.01	0.09	<0.01	<0.01	<0.01	<0.01	<0.01	g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	560	590	500	650	340	<200	340	mg/kg	200	A-T-028s
Cyanide (free)$_A$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-042sFCN
Cyanide (complex)$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	Calc
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-042sTCN
Thiocyanate$_A$	<5	<5	<5	<5	<5	<5	<5	mg/kg	5	A-T-041s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Sulphide$_A$	<5	<5	<5	<5	<5	<5	66	mg/kg	5	A-T-043-s
Organic Matter$_D$$^{M\#}$	3.7	2.4	1.8	0.5	1.7	0.1	1.5	% w/w	0.1	A-T-032s
SEM (Solvent Extractable Matter) - Dichloromethane$_D$	-	-	-	-	-	-	-	mg/kg	100	A-T-039s
Arsenic$_D$$^{M\#}$	5	22	8	7	4	3	5	mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	1.2	2.9	1.4	<1.0	<1.0	<1.0	1.0	mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	1.2	1.5	1.0	0.7	0.9	<0.5	1.0	mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	25	37	11	8	7	6	12	mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	35	41	29	25	24	21	30	mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-040s
Chromium (trivalent)	35	41	29	25	24	21	30	mg/kg	1	Calc
Lead$_D$$^{M\#}$	30	29	14	11	15	10	17	mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	1.44	2.44	<0.17	<0.17	0.27	mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	26	47	28	27	19	21	24	mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	93	166	55	45	41	49	48	mg/kg	5	A-T-024s
TPH total (>C6-C40)$_A$$^{M\#}$	130	14	43	12	<10	<10	<10	mg/kg	10	A-T-007s

Envirolab Job Number: 23/01472

Client Project Name: Stonestreet Green Solar

Client Project Ref: GM12014

Lab Sample ID	23/01472/1	23/01472/2	23/01472/3	23/01472/4	23/01472/5	23/01472/6	23/01472/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP01	TP01	TP02	TP02	TP03	TP03	TP04			
Depth to Top	0.30	2.00	0.30	1.00	0.30	1.00	0.30			
Depth To Bottom										
Date Sampled	15-Feb-23	15-Feb-23	15-Feb-23	15-Feb-23	15-Feb-23	15-Feb-23	15-Feb-23			
Sample Type	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D			
Sample Matrix Code	6AE	6A	4A	5A	4AE	5A	6AE			
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

Envirolab Job Number: 23/01472

Client Project Name: Stonestreet Green Solar

Client Project Ref: GM12014

Lab Sample ID	23/01472/1	23/01472/2	23/01472/3	23/01472/4	23/01472/5	23/01472/6	23/01472/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP01	TP01	TP02	TP02	TP03	TP03	TP04			
Depth to Top	0.30	2.00	0.30	1.00	0.30	1.00	0.30			
Depth To Bottom										
Date Sampled	15-Feb-23	15-Feb-23	15-Feb-23	15-Feb-23	15-Feb-23	15-Feb-23	15-Feb-23			
Sample Type	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D			
Sample Matrix Code	6AE	6A	4A	5A	4AE	5A	6AE			
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.31	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.31	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.47	<0.05	0.07	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.29	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	0.14	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.41	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.73	<0.08	0.11	<0.08	<0.08	<0.08	<0.08	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.27	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.27	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.66	<0.07	0.10	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	3.95	<0.08	0.28	<0.08	<0.08	<0.08	<0.08	mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/01472

Client Project Name: Stonestreet Green Solar

Client Project Ref: GM12014

Lab Sample ID	23/01472/8	23/01472/9	23/01472/10	23/01472/11	23/01472/12	23/01472/13	23/01472/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP04	TP05ws	TP05ws	TP06	TP06	WS01	WS01			
Depth to Top	1.00	0.30	1.00	0.30	1.00	0.30	1.20			
Depth To Bottom										
Date Sampled	15-Feb-23	16-Feb-23	16-Feb-23	15-Feb-23	15-Feb-23	17-Feb-23	17-Feb-23			
Sample Type	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D			
Sample Matrix Code	5A	3	6A	6A	5A	6A	5A			
% Moisture at <40C$_A$	15.8	17.7	15.5	25.5	17.0	17.4	16.7	% w/w	0.1	A-T-044
Dry Matter (Dry Solids) at 105C	-	-	-	-	-	-	-	% w/w	0.1	Calc-no stones
% Stones >10mm$_A$	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.08	7.53	8.24	7.86	8.07	7.87	8.11	pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.05	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	<200	310	<200	730	<200	<400	<200	mg/kg	200	A-T-028s
Cyanide (free)$_A$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-042sFCN
Cyanide (complex)$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	Calc
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-042sTCN
Thiocyanate$_A$	<5	<5	<5	<5	<5	<5	<5	mg/kg	5	A-T-041s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Sulphide$_A$	<5	<5	<5	59	<5	<5	<5	mg/kg	5	A-T-043-s
Organic Matter$_D$$^{M\#}$	0.1	1.5	0.8	3.9	0.2	0.5	0.2	% w/w	0.1	A-T-032s
SEM (Solvent Extractable Matter) - Dichloromethane$_D$	-	-	-	-	-	-	-	mg/kg	100	A-T-039s
Arsenic$_D$$^{M\#}$	6	6	23	7	10	31	7	mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0	1.8	<1.0	<1.0	<1.0	mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	0.8	1.1	2.4	1.4	1.0	1.4	0.6	mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	11	7	23	14	8	8	5	mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	22	32	25	44	23	23	17	mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-040s
Chromium (trivalent)	22	32	25	44	23	23	17	mg/kg	1	Calc
Lead$_D$$^{M\#}$	10	13	20	24	9	16	9	mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	0.21	<0.17	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	26	21	35	31	24	40	18	mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	38	47	67	74	27	42	33	mg/kg	5	A-T-024s
TPH total (>C6-C40)$_A$$^{M\#}$	<10	<10	<10	90	<10	<10	<10	mg/kg	10	A-T-007s

Envirolab Job Number: 23/01472

Client Project Name: Stonestreet Green Solar

Client Project Ref: GM12014

Lab Sample ID	23/01472/8	23/01472/9	23/01472/10	23/01472/11	23/01472/12	23/01472/13	23/01472/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP04	TP05ws	TP05ws	TP06	TP06	WS01	WS01			
Depth to Top	1.00	0.30	1.00	0.30	1.00	0.30	1.20			
Depth To Bottom										
Date Sampled	15-Feb-23	16-Feb-23	16-Feb-23	15-Feb-23	15-Feb-23	17-Feb-23	17-Feb-23			
Sample Type	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D			
Sample Matrix Code	5A	3	6A	6A	5A	6A	5A			
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_D^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual)$_D$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_D$	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_D$	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

Envirolab Job Number: 23/01472

Client Project Name: Stonestreet Green Solar

Client Project Ref: GM12014

Lab Sample ID	23/01472/8	23/01472/9	23/01472/10	23/01472/11	23/01472/12	23/01472/13	23/01472/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP04	TP05ws	TP05ws	TP06	TP06	WS01	WS01			
Depth to Top	1.00	0.30	1.00	0.30	1.00	0.30	1.20			
Depth To Bottom										
Date Sampled	15-Feb-23	16-Feb-23	16-Feb-23	15-Feb-23	15-Feb-23	17-Feb-23	17-Feb-23			
Sample Type	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D			
Sample Matrix Code	5A	3	6A	6A	5A	6A	5A			
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	0.17	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	<0.04	<0.04	0.20	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	<0.05	<0.05	0.31	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05	<0.05	0.17	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	0.11	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	<0.06	<0.06	0.27	<0.06	<0.06	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	<0.08	<0.08	0.44	<0.08	<0.08	<0.08	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	<0.03	<0.03	0.16	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	<0.03	<0.03	0.11	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	<0.07	<0.07	0.42	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08	<0.08	<0.08	2.36	<0.08	<0.08	<0.08	mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/01472

Client Project Name: Stonestreet Green Solar

Client Project Ref: GM12014

Lab Sample ID	23/01472/15	23/01472/16	23/01472/17	23/01472/18	23/01472/19	23/01472/20	23/01472/21	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS02	WS02	WS03	WS03	WS04	WS04	WS05			
Depth to Top	0.30	0.80	0.30	1.20	0.30	1.10	0.30			
Depth To Bottom										
Date Sampled	17-Feb-23	17-Feb-23	16-Feb-23	16-Feb-23	17-Feb-23	17-Feb-23	16-Feb-23			
Sample Type	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D			
Sample Matrix Code	6AE	5A	3	5A	6AB	3	6AE			
% Moisture at <40C$_A$	18.1	18.7	25.5	24.0	21.4	18.6	19.5	% w/w	0.1	A-T-044
Dry Matter (Dry Solids) at 105C	-	-	-	-	-	-	-	% w/w	0.1	Calc-no stones
% Stones >10mm$_A$	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.92	8.01	7.69	7.11	7.86	8.14	7.76	pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	<0.01	<0.01	<0.01	0.05	0.01	0.01	<0.01	g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	510	300	530	300	470	<200	540	mg/kg	200	A-T-028s
Cyanide (free)$_A$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-042sFCN
Cyanide (complex)$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	Calc
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-042sTCN
Thiocyanate$_A$	<5	<5	<5	<5	<5	<5	<5	mg/kg	5	A-T-041s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Sulphide$_A$	<5	<5	<5	<5	<5	<5	<5	mg/kg	5	A-T-043-s
Organic Matter$_D$$^{M\#}$	2.7	1.4	3.3	1.9	3.0	0.3	3.4	% w/w	0.1	A-T-032s
SEM (Solvent Extractable Matter) - Dichloromethane$_D$	-	-	-	-	-	-	-	mg/kg	100	A-T-039s
Arsenic$_D$$^{M\#}$	8	6	8	1	5	6	8	mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	1.4	<1.0	<1.0	<1.0	<1.0	mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	0.9	0.7	1.9	<0.5	0.9	0.9	1.1	mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	11	5	16	10	23	11	16	mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	22	16	51	17	24	21	25	mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-040s
Chromium (trivalent)	22	16	51	17	24	21	25	mg/kg	1	Calc
Lead$_D$$^{M\#}$	19	12	21	9	33	11	22	mg/kg	1	A-T-024s
Mercury$_D$	0.49	<0.17	<0.17	<0.17	0.30	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	22	16	34	14	18	25	13	mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	49	33	80	30	92	31	49	mg/kg	5	A-T-024s
TPH total (>C6-C40)$_A$$^{M\#}$	<10	<10	<10	24	28	23	<10	mg/kg	10	A-T-007s

Envirolab Job Number: 23/01472

Client Project Name: Stonestreet Green Solar

Client Project Ref: GM12014

Lab Sample ID	23/01472/15	23/01472/16	23/01472/17	23/01472/18	23/01472/19	23/01472/20	23/01472/21	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS02	WS02	WS03	WS03	WS04	WS04	WS05			
Depth to Top	0.30	0.80	0.30	1.20	0.30	1.10	0.30			
Depth To Bottom										
Date Sampled	17-Feb-23	17-Feb-23	16-Feb-23	16-Feb-23	17-Feb-23	17-Feb-23	16-Feb-23			
Sample Type	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D			
Sample Matrix Code	6AE	5A	3	5A	6AB	3	6AE			
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

Envirolab Job Number: 23/01472

Client Project Name: Stonestreet Green Solar

Client Project Ref: GM12014

Lab Sample ID	23/01472/15	23/01472/16	23/01472/17	23/01472/18	23/01472/19	23/01472/20	23/01472/21	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS02	WS02	WS03	WS03	WS04	WS04	WS05			
Depth to Top	0.30	0.80	0.30	1.20	0.30	1.10	0.30			
Depth To Bottom										
Date Sampled	17-Feb-23	17-Feb-23	16-Feb-23	16-Feb-23	17-Feb-23	17-Feb-23	16-Feb-23			
Sample Type	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D			
Sample Matrix Code	6AE	5A	3	5A	6AB	3	6AE			
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/01472

Client Project Name: Stonestreet Green Solar

Client Project Ref: GM12014

Lab Sample ID	23/01472/22	23/01472/23	23/01472/24	23/01472/25	23/01472/26	23/01472/27	23/01472/28	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS05	WS06	WS06	WS07	WS07	WS08	WS08			
Depth to Top	1.00	0.30	1.00	0.30	1.00	0.20	1.00			
Depth To Bottom										
Date Sampled	16-Feb-23	16-Feb-23	16-Feb-23	16-Feb-23	16-Feb-23	16-Feb-23	16-Feb-23			
Sample Type	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D			
Sample Matrix Code	6ABE	3	5A	5A	3	6AE	6A			
% Moisture at <40C$_A$	19.1	22.8	18.2	18.7	18.2	20.4	20.2	% w/w	0.1	A-T-044
Dry Matter (Dry Solids) at 105C	-	-	-	-	-	-	-	% w/w	0.1	Calc-no stones
% Stones >10mm$_A$	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.03	7.71	7.91	7.34	8.25	7.91	5.06	pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.21	<0.01	<0.01	<0.01	0.02	<0.01	0.08	g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	500	<400	<200	250	280	480	800	mg/kg	200	A-T-028s
Cyanide (free)$_A$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-042sFCN
Cyanide (complex)$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	Calc
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-042sTCN
Thiocyanate$_A$	<5	<5	<5	<5	<5	<5	<5	mg/kg	5	A-T-041s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Sulphide$_A$	<5	<5	<5	21	<5	<5	<5	mg/kg	5	A-T-043-s
Organic Matter$_D$$^{M\#}$	0.6	1.7	0.6	1.0	0.4	3.2	0.5	% w/w	0.1	A-T-032s
SEM (Solvent Extractable Matter) - Dichloromethane$_D$	-	-	-	-	-	-	-	mg/kg	100	A-T-039s
Arsenic$_D$$^{M\#}$	10	7	5	5	9	10	22	mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	1.7	1.1	<1.0	<1.0	<1.0	<1.0	1.7	mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	2.1	1.3	0.9	0.8	1.2	1.1	1.3	mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	28	11	12	6	18	16	30	mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	27	41	25	23	38	25	34	mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-040s
Chromium (trivalent)	27	41	25	23	38	25	34	mg/kg	1	Calc
Lead$_D$$^{M\#}$	22	16	11	13	19	22	21	mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	66	29	24	21	30	15	41	mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1	1	<1	<1	<1	mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	96	77	36	36	62	48	87	mg/kg	5	A-T-024s
TPH total (>C6-C40)$_A$$^{M\#}$	<10	<10	<10	<10	<10	<10	<10	mg/kg	10	A-T-007s

Envirolab Job Number: 23/01472

Client Project Name: Stonestreet Green Solar

Client Project Ref: GM12014

Lab Sample ID	23/01472/22	23/01472/23	23/01472/24	23/01472/25	23/01472/26	23/01472/27	23/01472/28	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS05	WS06	WS06	WS07	WS07	WS08	WS08			
Depth to Top	1.00	0.30	1.00	0.30	1.00	0.20	1.00			
Depth To Bottom										
Date Sampled	16-Feb-23	16-Feb-23	16-Feb-23	16-Feb-23	16-Feb-23	16-Feb-23	16-Feb-23			
Sample Type	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D			
Sample Matrix Code	6ABE	3	5A	5A	3	6AE	6A			
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_D^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual)$_D$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_D$	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_D$	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

Envirolab Job Number: 23/01472

Client Project Name: Stonestreet Green Solar

Client Project Ref: GM12014

Lab Sample ID	23/01472/22	23/01472/23	23/01472/24	23/01472/25	23/01472/26	23/01472/27	23/01472/28	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS05	WS06	WS06	WS07	WS07	WS08	WS08			
Depth to Top	1.00	0.30	1.00	0.30	1.00	0.20	1.00			
Depth To Bottom										
Date Sampled	16-Feb-23	16-Feb-23	16-Feb-23	16-Feb-23	16-Feb-23	16-Feb-23	16-Feb-23			
Sample Type	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D			
Sample Matrix Code	6ABE	3	5A	5A	3	6AE	6A			
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/01472

Client Project Name: Stonestreet Green Solar

Client Project Ref: GM12014

Lab Sample ID	23/01472/29	23/01472/30	23/01472/31	23/01472/32				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS09	WS09	WS10	WS10						
Depth to Top	0.40	1.00	0.40	1.20						
Depth To Bottom										
Date Sampled	17-Feb-23	17-Feb-23	17-Feb-23	17-Feb-23						
Sample Type	Soil - D	Soil - D	Soil - D	Soil - D						
Sample Matrix Code	3	3	5A	3						
% Moisture at <40C$_A$	22.9	20.6	19.5	23.0				% w/w	0.1	A-T-044
Dry Matter (Dry Solids) at 105C	-	-	-	-				% w/w	0.1	Calc-no stones
% Stones >10mm$_A$	<0.1	<0.1	<0.1	<0.1				% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.43	7.95	7.25	7.55				pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	<0.01	<0.01	<0.01	<0.01				g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	420	<200	<200	<200				mg/kg	200	A-T-028s
Cyanide (free)$_A$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-042sFCN
Cyanide (complex)$^{M\#}$	<1	<1	<1	<1				mg/kg	1	Calc
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-042sTCN
Thiocyanate$_A$	<5	<5	9	<5				mg/kg	5	A-T-041s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2				mg/kg	0.2	A-T-050s
Sulphide$_A$	370	<5	<5	<5				mg/kg	5	A-T-043-s
Organic Matter$_D$$^{M\#}$	1.7	0.6	0.4	0.3				% w/w	0.1	A-T-032s
SEM (Solvent Extractable Matter) - Dichloromethane$_D$	-	-	-	-				mg/kg	100	A-T-039s
Arsenic$_D$$^{M\#}$	2	3	11	5				mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	1.0	1.0	0.8	0.7				mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	11	7	7	9				mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	35	30	15	23				mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1				mg/kg	1	A-T-040s
Chromium (trivalent)	35	30	15	23				mg/kg	1	Calc
Lead$_D$$^{M\#}$	13	11	13	19				mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17				mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	22	26	36	31				mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	64	61	23	40				mg/kg	5	A-T-024s
TPH total (>C6-C40)$_A$$^{M\#}$	<10	<10	<10	<10				mg/kg	10	A-T-007s

Envirolab Job Number: 23/01472

Client Project Name: Stonestreet Green Solar

Client Project Ref: GM12014

Lab Sample ID	23/01472/29	23/01472/30	23/01472/31	23/01472/32				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS09	WS09	WS10	WS10						
Depth to Top	0.40	1.00	0.40	1.20						
Depth To Bottom										
Date Sampled	17-Feb-23	17-Feb-23	17-Feb-23	17-Feb-23						
Sample Type	Soil - D	Soil - D	Soil - D	Soil - D						
Sample Matrix Code	3	3	5A	3						
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_D$#	NAD	NAD	NAD	NAD						A-T-045
Asbestos Matrix (visual)$_D$	-	-	-	-						A-T-045
Asbestos Matrix (microscope)$_D$	-	-	-	-						A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_D$	N/A	N/A	N/A	N/A						A-T-045

Envirolab Job Number: 23/01472

Client Project Name: Stonestreet Green Solar

Client Project Ref: GM12014

Lab Sample ID	23/01472/29	23/01472/30	23/01472/31	23/01472/32				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS09	WS09	WS10	WS10						
Depth to Top	0.40	1.00	0.40	1.20						
Depth To Bottom										
Date Sampled	17-Feb-23	17-Feb-23	17-Feb-23	17-Feb-23						
Sample Type	Soil - D	Soil - D	Soil - D	Soil - D						
Sample Matrix Code	3	3	5A	3						
PAH-16MS										
Acenaphthene$_{A}^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Acenaphthylene$_{A}^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Anthracene$_{A}^{M\#}$	<0.02	<0.02	<0.02	<0.02				mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_{A}^{M\#}$	<0.04	<0.04	<0.04	<0.04				mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_{A}^{M\#}$	<0.04	<0.04	<0.04	<0.04				mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_{A}^{M\#}$	<0.05	<0.05	<0.05	<0.05				mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_{A}^{M\#}$	<0.05	<0.05	<0.05	<0.05				mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_{A}^{M\#}$	<0.07	<0.07	<0.07	<0.07				mg/kg	0.07	A-T-019s
Chrysene$_{A}^{M\#}$	<0.06	<0.06	<0.06	<0.06				mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_{A}^{M\#}$	<0.04	<0.04	<0.04	<0.04				mg/kg	0.04	A-T-019s
Fluoranthene$_{A}^{M\#}$	<0.08	<0.08	<0.08	<0.08				mg/kg	0.08	A-T-019s
Fluorene$_{A}^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_{A}^{M\#}$	<0.03	<0.03	<0.03	<0.03				mg/kg	0.03	A-T-019s
Naphthalene $_{A}^{M\#}$	<0.03	<0.03	<0.03	<0.03				mg/kg	0.03	A-T-019s
Phenanthrene$_{A}^{M\#}$	<0.03	<0.03	<0.03	<0.03				mg/kg	0.03	A-T-019s
Pyrene$_{A}^{M\#}$	<0.07	<0.07	<0.07	<0.07				mg/kg	0.07	A-T-019s
Total PAH-16MS$_{A}^{M\#}$	<0.08	<0.08	<0.08	<0.08				mg/kg	0.01	A-T-019s

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and interpretations expressed are outside the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

Soil chemical analysis:

All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any “A” subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis.
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve
Subscript "^" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.
EPH CWG results have humics mathematically subtracted through instrument calculation
TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

v2

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Wardell Armstrong (Bolton), 41-50 Futura Park, Aspinall Way, Middlebrook, Bolton, Lancashire, UK, BL6 6SU

Project: Stonestreet Green Solar

Clients Project No: GM12014

Project No: 23/01472

Date Received: 21/02/2023 (am)

Cool Box Temperatures (°C): 12.9, 11.5, 12.0, 12.5

NO DEVIATIONS IDENTIFIED with respect to sampling dates or containers received.

Note: If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/01472/1	23/01472/2	23/01472/3	23/01472/4	23/01472/5	23/01472/6	23/01472/7	23/01472/8	23/01472/9	23/01472/10	23/01472/11	23/01472/12
Client Sample No												
Client Sample ID/Depth	TP01 0.30m	TP01 2.00m	TP02 0.30m	TP02 1.00m	TP03 0.30m	TP03 1.00m	TP04 0.30m	TP04 1.00m	TP05ws 0.30m	TP05ws 1.00m	TP06 0.30m	TP06 1.00m
Date Sampled	15/02/23	15/02/23	15/02/23	15/02/23	15/02/23	15/02/23	15/02/23	15/02/23	16/02/23	16/02/23	15/02/23	15/02/23
A-T-007s	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023
A-T-019s	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023
A-T-024s	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023
A-T-026s	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023
A-T-027s	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023
A-T-028s	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023
A-T-031s	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023
A-T-032s	03/03/2023	03/03/2023	03/03/2023	03/03/2023	03/03/2023	03/03/2023	03/03/2023	03/03/2023	03/03/2023	03/03/2023	03/03/2023	03/03/2023
A-T-039s	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023
A-T-040s	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023
A-T-041s	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023
A-T-042sFCN	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023
A-T-042sTCN	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023
A-T-043-s	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023
A-T-044	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023
A-T-045	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023
A-T-050s	24/02/2023	24/02/2023	27/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023
Calc	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023
Calc-no stones	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023

Lab Sample ID	23/01472/13	23/01472/14	23/01472/15	23/01472/16	23/01472/17	23/01472/18	23/01472/19	23/01472/20	23/01472/21	23/01472/22	23/01472/23	23/01472/24
Client Sample No												
Client Sample ID/Depth	WS01 0.30m	WS01 1.20m	WS02 0.30m	WS02 0.80m	WS03 0.30m	WS03 1.20m	WS04 0.30m	WS04 1.10m	WS05 0.30m	WS05 1.00m	WS06 0.30m	WS06 1.00m
Date Sampled	17/02/23	17/02/23	17/02/23	17/02/23	16/02/23	16/02/23	17/02/23	17/02/23	16/02/23	16/02/23	16/02/23	16/02/23
A-T-007s	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023
A-T-019s	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023
A-T-024s	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023
A-T-026s	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023
A-T-027s	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023
A-T-028s	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023
A-T-031s	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023
A-T-032s	03/03/2023	03/03/2023	03/03/2023	03/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023
A-T-039s	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023
A-T-040s	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023
A-T-041s	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023
A-T-042sFCN	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023
A-T-042sTCN	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023
A-T-043-s	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023
A-T-044	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023
A-T-045	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023
A-T-050s	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023
Calc	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023
Calc-no stones	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023

Lab Sample ID	23/01472/25	23/01472/26	23/01472/27	23/01472/28	23/01472/29	23/01472/30	23/01472/31	23/01472/32
Client Sample No								
Client Sample ID/Depth	WS07 0.30m	WS07 1.00m	WS08 0.20m	WS08 1.00m	WS09 0.40m	WS09 1.00m	WS10 0.40m	WS10 1.20m
Date Sampled	16/02/23	16/02/23	16/02/23	16/02/23	17/02/23	17/02/23	17/02/23	17/02/23
A-T-007s	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023
A-T-019s	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023
A-T-024s	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023
A-T-026s	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023
A-T-027s	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023
A-T-028s	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023
A-T-031s	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023
A-T-032s	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023
A-T-039s	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023
A-T-040s	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023
A-T-041s	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023
A-T-042sFCN	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023
A-T-042sTCN	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023
A-T-043-s	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023
A-T-044	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023
A-T-045	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023
A-T-050s	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023	24/02/2023
Calc	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023	01/03/2023
Calc-no stones	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

Annex E

Environmental Monitoring Data Sheet

Client:	EPL 001	**Job No:**	**GM12014**		
Site:	Stonestreet Solar	**Visit No:**	1	**of**	**1**
Date:	06/04/2023	**Operator:**			

Monitoring Point	GAS CONCENTRATIONS								VOLATILES		FLOW DATA			WELL AND WATER DATA				Comments
	Methane (%v/v)		Carbon dioxide (%v/v)		Carbon monoxide (ppm)	Hydrogen sulphide (ppm)	Oxygen (%v/v)		PID Peak (ppm)	Product thickness (mm)	Flow rate (l/hr)		Differential borehole Pressure (Pa)	Water level (mbgl)	Depth of well (m)	Reduced level (mAOD)	Water level (mAOD)	
	Peak	Steady	Peak	Steady	Peak	Peak	Min	Steady			Peak	Steady						
WS1	-0.10	-0.10	6.20	6.00	0.00	0.00	9.90	20.20	0.90		0.00	0.00		1.80				
WS5	-0.10	-0.10	0.70	0.60	0.00	0.00	20.30	20.30			0.00	0.00		0.72				
WS6	0.00	0.00	0.80	0.80	0.00	0.00	18.30	18.30	1.00		15.60	0.00		0.82				
WS7	0.10	0.10	1.50	1.50	0.00	0.00	13.60	13.60	1.00		0.00	0.00		1.03				
WS9	-0.10	-0.10	1.60	1.50	0.00	0.00	16.50	16.50	0.90		0.00	0.00		0.88				
WS10	0.00	0.00	0.20	0.10	0.00	0.00	20.50	20.50	1.00		0.00	0.00		0.36				
Max	**0.1**	**0.1**	**6.2**	**6**	**0**	**0**	**20.5**	**20.5**	**1**	**0**	**15.6**	**0**	**0**	**1.8**			**0.00**	
Min	**-0.1**	**-0.1**	**0.2**	**0.1**	**0**	**0**	**9.9**	**13.6**	**0.9**	**0**	**0**	**0**	**0**	**0.36**			**0.00**	
GSV (l/hr)	**0.0156**		**0.9672**															

METEOROLOGICAL AND SITE INFORMATION:

State of ground:	X	Dry		Wet		Snow		Frozen
Wind:	X	Calm		Moderate		Strong		
Cloud cover:		None	X	Cloudy		Overcast		
Preciptation:	X	None		Moderate		Heavy		
Barometric pressure (mbar):				Before		After	Station:	
Pressure trend:		Falling		Steady		Rising		

Ground gas meter: Gas Data GFM-436

Date of last calibration: 22/03/2023