Report Title:

Geo-Environmental Site Investigation

Project Name:

Downlands Farm, Uckfield



Report Reference: **BRD200653-OR3-D**

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APPENDIX 10.2
GEO-ENVIRONMENTAL SITE INVESTIGATION

REPORT CONTROL SHEET

REPORT TITLE	**GEO-ENVIRONMENTAL SITE INVESTIGATION**
PROJECT	**DOWNLANDS FARM, UCKFIELD**
CLIENT	**GLEESON LAND**

REPORT REFERENCE	ISSUE DETAIL	DATE	PREPARED BY	CHECKED BY
BRD200653-OR3-D	Fourth issue updated to include Chicory Cottage land.	27/04/2022	M Morgan	J Brockwell

BRD Environmental Limited

Geotechnical and Environmental Services

- Ground Investigation
- Japanese Knotweed Removal
- Soil, Water and Gas Testing
- Contamination Assessment
- Geotechnical Advice
- Remediation Solutions

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REPORT LAYOUT

This report is divided into the following four sections: Summary Report, Technical Report, Supporting Information and Appendices.

SUMMARY REPORT

This expanded executive summary provides the main findings of the work undertaken in brief non-technical language. This section provides an overview of the key outcomes for the benefit of non-specialists and concludes with the main recommendations. This section should only be relied upon in the context of the whole report and the Technical Report should be referred to with respect to any design decisions.

TECHNICAL REPORT

The main report section is intended to provide the technical detail of the investigation and is intended to provide the level of information required by current guidance documents and practice. The Technical Report is written in a language that, in part, assumes knowledge of subject matter so that it can be written in as concise a form as possible. Its intended audience is peers, regulators and other professionals in related disciplines.

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SUPPORTING INFORMATION

This section of the report provides background details of a generic nature together with specific technical approaches adopted by BRD and details of the guidance documents that are commonly referenced in the report. The section also includes explanations of technical terms to assist non-specialist readers in understanding the Technical Report. It should be noted that not all the information within this section is necessarily applicable to this specific report.

APPENDICES

The final section of the report presents the factual data collected and employed as part of the investigation.

APPENDIX 1	**SITE PLANS**	
	Site Location Plan	Ref. BRD200653-OP5-B
	Revised Conceptual Site Model	Ref. BRD200653-OP8-C
	Proposed Development Layout	Richards Urban Design, 'Illustrative Master Plan' ref. 1309.02 dated 27.04.22.
	Exploratory Hole Location Plan	Ref. BRD200653-OD3-B
APPENDIX 2	**EXPLORATORY HOLE & MONITORING RECORDS**	
	Logs of trial pits.	Ref. TP01-TP23, SA01-SA05, HD01-HD14 & STK01
	Photographic records of trial pits.	Ref. BRD200653-OP7-A
	Logs of boreholes.	Ref. WS01-WS23
	BRE365 soakage test records.	7 x A4 pages
	Gas monitoring records.	18 x A4 pages
APPENDIX 3	**LABORATORY TEST RESULTS**	
	DETS reports 20-10569 & 20-10570	38 x A4 pages
	SPT report 37497_1	23 x A4 pages
APPENDIX 4	**ADDITIONAL GAS ASSESSMENT**	
	Ground Gas Solutions DataPack report	Report ref. GGS2586DP01 dated 16/07/2021.

SUMMARY REPORT - GENERAL INFORMATION

SUBJECT	COMMENTS
CURRENT SITE CONDITION	The site currently comprises series of grass covered open spaces interspersed with areas of woodland. A heavily overgrown area of former chicken sheds and hardstanding is present towards south eastern part of the site as well as an existing residential property in the south eastern corner of the site.
PROPOSED DEVELOPMENT	It is understood the proposed end use of the site is for residential development in the south of the site, which will surrounded by retained woodland. The northern area will be retained as a Suitable Alternative Natural Green Space (SANG).
HISTORICAL SUMMARY	Since the earliest map of 1874 the site has been shown to consist of agricultural fields and woodlands in the south and predominantly woodlands with interspersed (off site) residential houses in the north. Some chicken sheds and an unknown building were shown in the south eastern corner of the site from the 1970s. These are no longer present. The northern half of the site has remained relatively unchanged in use over the past 100 years or so. Chicory Cottage in the south eastern corner has been present since at least 1874.
PUBLISHED GEOLOGY	Alluvium is shown to be in the north of the site, following the stream that originates from the spring on site. It is also shown to be in the south west corner of the site. The remainder of the site is shown to be devoid of Superficial Deposits. The bedrock geology is shown to consist of the Lower Tunbridge Wells Sand, Ardingly Sandstone Member, Grinstead Clay Member and the Upper Tunbridge Wells Sand.
ACTUAL GROUND CONDITIONS	The investigation has proved that in the higher elevations of the eastern and south eastern parts of the site, sands of the Upper Tunbridge Wells Sand were encountered. Across the southern part of the site and in the centre of the northern two sections of the site, the Grinstead Clay Member was then encountered. Underlying this, and exposed in the north western parts of the site, sands and sandstones of the Ardingly Sandstone Member were encountered. A few locations penetrated the sandstone and encountered the Lower Tunbridge Wells Sand beneath and in the extreme northern section of the site (proposed SANG).
HYDROGEOLOGY	The Alluvium is designated as a Secondary A Aquifer. The Lower Tunbridge Wells Sand, Upper Tunbridge Wells Sand and Ardingly Sandstone Member are designated as Secondary A Aquifers. The Grinstead Clay Member is designated as Unproductive Strata. The site is not located within a groundwater Source Protection Zone.
HYDROLOGY	There are a large number of streams and ponds throughout the site. Most originate from springs located within the site boundaries. The whole of the site is in a Zone 1 area and is highly unlikely to be affected by flooding.
PREVIOUS GROUND REPORTS	BRD is not aware of any previous ground investigations having been conducted at the site. However, BRD has undertaken geo-environmental desk study research and this has been reported separately.

SUMMARY REPORT - GEOTECHNICAL

SUBJECT	COMMENTS
EXCAVATIONS	It should be possible to forward excavations employing normal equipment. The use of hydraulic breaking equipment will be required for forwarding some excavations at the site such as removing the floor slabs of the former chicken sheds. Specific groundwater control unlikely to be required at this site. Limited groundwater control in the form of pumping from sumps is likely to be required. It is unlikely that requirements of the Party Wall Act will apply to the development.
SLOPE STABILITY	The slopes across the site are relatively shallow and show no obvious signs of instability. Any change in levels required by the development should be cut to a shallow slope or should be supported by appropriately designed and constructed retaining walls.
SUB-SURFACE CONCRETE	Design Sulphate Class of DS-1 and Aggressive Chemical Environment for Concrete class of AC-1 applies.
SOAKAWAYS	Site is not suitable for surface water disposal to soakaways or other forms of infiltration device.
PAVEMENT DESIGN	A preliminary design California Bearing Ratio (CBR) of 3% has been recommended.
FOUNDATIONS	
LIKELY FOUNDATION TYPE	The site is generally suitable for the adoption of shallow strip/trench fill footings to bear on any natural soil recorded across the site. Limited reinforcement required when footings straddle the different soils type, from clay to sand. Subject to the final layout, deep trench fill or possibly piles if plots are located within the influence zones of trees.
VOLUME CHANGE POTENTIAL	Medium i.e. moderate swelling or shrinking with moisture content changes.
ESTIMATED FOUNDATION DEPTHS	The minimum footing depth required is 0.90m, but 1.25m where required to allow for restricted new tree planting.
HEAVE PROTECTION	Will be required for those plots located in close proximity of the existing trees.

SUMMARY REPORT – CONTAMINATION ISSUES

SUBJECT	COMMENTS
SOIL RISKS TO HUMAN HEALTH	The vast majority of the site is uncontaminated. Due to an area of former chicken sheds being heavily overgrown, there remains the potential for localised contamination in this area.
LANDFILL GAS	Detailed gas assessment has confirmed a lack of any gas risk to the proposed development and therefore gas protection measures are not warranted.
RADON GAS	Radon gas protection measures are not required.
RISKS TO THE WATER ENVIRONMENT	No unacceptable contamination risks to water resources have been identified by this investigation.
RISKS TO BUILDING MATERIALS AND SERVICES	Some highly localised areas have identified a minor risk to building materials and services, but the vast majority of the site has not identified any risk.
REMEDIATION	No significant remedial works are considered necessary to facilitate the development based on the information collected to date. This is subject to additional investigation in the currently overgrown area of former chicken sheds.
ASBESTOS	No asbestos has been detected in the soil samples tested and no suspected asbestos containing materials has been observed in the soils inspected. Previous inspections of the chicken shed area from 2006 identified some asbestos cement sheets / fragments but this area has since become densely overgrown. It is unknown whether or not this has been removed, but further inspections will be required once the vegetation has been cleared, in conjunction with additional ground investigation in this area.
WASTE SOIL DISPOSAL	The soils at the site as identified by this ground investigation should be classified as non-hazardous waste and characterised as inert waste for off site disposal.

SUMMARY REPORT – KEY RECOMMENDATIONS

RECOMMENDATIONS
It is considered that further exploratory points are required in the vicinity of the former chicken sheds once the area has been cleared of vegetation in order to establish whether or not there are any localised contamination risks in this area. In addition, the soils beneath the former concrete slabs, which are still present, should be inspected. As discussed below, further ground investigation is recommended to increase the density of exploratory points for geotechnical purposes. Such further investigation can also be used to provide further confidence of the general lack of contamination in the proposed development area. If excavations greater than 2.5m below existing ground level are required, it is recommended that further sulphate testing of the deeper soils is undertaken as one sample at depth was recorded as potentially pyritic. A tree survey is required as this information is required for detailed foundation design. This survey with topographic survey data should be undertaken prior to any site clearance to accurately record the location of any previously felled trees and existing trees both within the development area and close to the boundaries of the development area. The survey should record the trunk location, height and species of the trees. If required when plots locations have been finalised, in order to confirm deeper ground conditions for pile design then further ground investigation comprising deep combined percussive and rotary boreholes targeting areas to be piled is recommended. Monitoring wells should be included in the boreholes and at least one post works monitoring visit should be undertaken to record groundwater levels. Insitu Standard Penetration Tests should be conducted during forwarding of the boreholes and collected soil samples submitted for appropriate geotechnical laboratory testing. Once development proposals are confirmed and the requirement for any cut and fill to form development platforms understood, further ground investigation to increase the density of exploratory points and testing for earthworks is recommended.

1. INTRODUCTION TO TECHNICAL REPORT

1.1. CONTRACT DETAILS

CLIENT	Gleeson Strategic Land Limited trading as Gleeson Land.
SITE	Land situated at Downlands Farm in the town of Uckfield, East Sussex.
CLIENT'S ADVISORS	BRD Environmental Limited (BRD) has been commissioned directly by the Client.
REPORT CONTEXT	It is understood that the Client intends to submit a Hybrid Planning Application comprising: 1. Outline Application (with all matters reserved except for access) for the erection of up to 424No. residential dwellings including affordable housing, the provision of vehicular, pedestrian and cycle access and separate emergency access from the Uckfield Bypass (A22), pedestrian and cycle access from Snatts Road, open spaces including children's play space, sustainable urban drainage systems, associated landscaping, infrastructure and earthworks. 2. Full Application comprising creation of a Strategic Suitable Alternative Natural Green Space (SANG), associated landscaping and car parking, and provision of pedestrian and cycle access from Rocks Road, associated landscaping, infrastructure and earthworks. The proposed residential development will be located in the south of the site and will be surrounded by retained woodland. The northern area will be retained as a SANG.
REPORT TYPE	Geo-environmental site investigation (i.e. combined geotechnical ground investigation and Phase 2 contamination assessment).
REPORT OBJECTIVES	The purpose of this report is to undertake a geo-environmental assessment of the site to accompany the planning application and to supplement the marketing information for the site. This will determine if there are any contamination issues at the site or other ground related hazards / constraints in the context of the proposed development.

1.2. SCOPE OF WORKS

The agreed scope of works was:

- Mobilisation to site and production of health and safety documentation.
- Five days of windowless sampling using a percussive drilling rig to provide approximately 22-24No. boreholes to a nominal depth of 3m-5m, ground conditions permitting. Undertake Standard Penetration Tests (SPT) at 1m intervals.
- Installation of a 4m depth combined gas and groundwater monitoring well (nominal 50mm diameter) into 16No. boreholes. Installations will be finished with a flush fitting metal stopcock cover.
- Three days of trial pitting using a mechanical excavator to provide approximately 26-27No. trial pits to a nominal depth of 3m, ground conditions permitting.

- Undertake approximately 13-14No. hand dug inspection trial pits within the wooded / POS areas to confirm the ground conditions.

- All exploratory points will be logged and sampled in general accordance with BS5930:2015 by supervising Geo-Environmental Consultant.

- In-situ geotechnical testing of any fine soils using a Hand Shear Vane and/or Pocket Penetrometer.

- Determination of the accurate location and level of exploratory points by surveying GPS unit.

- Geo-Environmental Technician to undertake a total of 6No. combined gas, vapour and groundwater monitoring visits. For gas, the determination of oxygen, carbon dioxide, methane, hydrogen sulphide and carbon monoxide concentrations, together with atmospheric pressure and flow rates, using portable equipment. For vapours, determination of the concentration of volatile organic compounds by photo ionisation detector. For groundwater, the determination of groundwater levels.

- Chemical testing of soil samples with the budget based on the following testing schedule:

    - 40No. Metals Suite - As, Cd, Cr, CrVI, Hg, Pb, Se, Cu, Ni and Zn.
    - 40No. Inorganics Suite – water soluble sulphate, pH, organic matter.
    - 40No. Speciated Polycyclic Aromatic Hydrocarbons (PAH).
    - 12No. Banded aliphatic/aromatic Total Petroleum Hydrocarbons (TPH).
    - 12No. Benzene, Toluene, Ethylbenzene, Xylene (BTEX) and Methyl Tertiary Butyl Ether (MTBE) compounds.
    - 10No. Asbestos quantification.
    - 4No. Semi-Volatile Organic Compounds (SVOC) suite.
    - 4No. Volatile Organic Compounds (VOC) suite.
    - 10No. Organochlorine Pesticides.

- Chemical testing of 2No. soil samples for Waste Acceptance Criteria (WAC) to assist in establishing the waste classification of the soil for disposal purposes.

- Geotechnical testing as appropriate to the nature of the ground conditions encountered, but the budget is based on the following testing schedule:

    - 12No. Moisture content.
    - 12No. Plasticity indices.
    - 6No. Particle size distribution by wet sieve, with 3No. by follow on hydrometer.
    - 10No. pH and water soluble sulphate analysis.
    - 10No. Total sulphate and sulphur analysis.

- Provision of a combined factual and interpretative investigation report. Factual findings to include all exploratory point records, monitoring and test results. Interpretative reporting to include a summary of information from desk study research, a Generic Quantitative Contamination Risk Assessment (GQRA), waste classification and a Geotechnical Assessment providing comments on pavement design, concrete classification, soakaway feasibility, foundation design recommendations.

In addition to the above, a separate drainage / soakage investigation was undertaken which included the following aspects:

- Delivery of 20mm granular material to site for backfilling the pits and supply of 75-100mm diameter perforated pipes for the inspection well in each pit.

- Performance of soakage tests based upon BRE Digest 365 at 5No. mechanically excavated trial pit locations. Price includes for mechanical excavator for an additional day.

- All exploratory points will be logged and sampled in general accordance with BS5930:2015 by supervising Geo-Environmental Consultant.

- Supply of water to site via a 4WD water bowser unit on three consecutive days for the repeat filling of each trial pit. A Geo-Environmental Technician will attend site in order to monitor the soakage tests. The first gas/groundwater monitoring visit will be undertaken at the same time as the soakage works.

- Removal of pipework at the end of the third day and reinstatement of trial pit surfacing. The surplus soil from excavating the pits will be neatly stockpiled on site. We have not allowed for any disposal of this soil.

- Incorporate all additional exploratory point records and test results in to existing investigation report together with the interpretation of the soakage tests and the potential infiltration rates attainable for the site.

Following the completion of 6No. gas and groundwater monitoring visits it was determined that two additional visits should be undertaken to further evaluate the gas regime and assess the shallow groundwater levels over the winter months. Subsequent to the winter monitoring, a period of continuous gas monitoring was recommended which included the following additional scope of works:

- Mobilisation to site and production of health and safety documentation.

- Purchase of 15No. sets of Heras fence panels, feet and couplings to erect around each proposed monitoring well (3No. panels per monitoring well).

- Provision of mechanical excavator for one day (on day of deployment) to carry equipment, fence panels and feet around the site to the chosen monitoring wells.

- Geo-Environmental Consultant to attend site during GGS Ltd (also known as Ground Gas Solutions) deployment to locate wells, erect fencing and to undertake an additional combined gas, vapour and groundwater monitoring visit (of all existing wells) to supplement the existing dataset.

- Provision and installation of 5No. raised metal lockable headworks with gas tight collars by GGS to go over the existing wells installed by BRD. Some monitoring wells may be extended vertically during this installation to enable the gas monitoring units to be installed.

- Deployment to site of 5No. continuous gas monitoring units by GGS for 3 weeks and collection on completion.

- Periodic standard monitoring of other monitoring wells during site visits by GGS.

- Provision of factual datapack report by GGS. BRD will use this as part of the gas risk assessment within the investigation report, as scoped below.

- Update existing investigation report to incorporate the additional monitoring and present a revised gas risk assessment and recommendations for any required gas protection measures.

1.3. REPORT LIMITATIONS

Any site boundary lines depicted on plans included within this report are approximate only and do not imply legal ownership of land. Any observations of tree species, asbestos containing materials within structures or invasive weeds, does not constitute a formal survey of such features. The identification of such features is therefore tentative only. In the case of Japanese Knotweed, BRD can undertake separate surveys for this plant undertaken by a Property Care Association qualified surveyor.

The report does not consider whether sensitive ecology or archaeology is present as these require consideration by professionals specialising in these matters. It should be recognised that the collection of desk study information may not be exhaustive and that other information pertinent to the site may be available.

The recommendations, interpretations and conclusions of this report are based solely on the ground conditions found at the exploratory holes. Due to the variability in the nature of ground, conditions between exploratory holes can only be interpreted and not defined. The description of the site and the ground conditions is accurate only for the dates of the field works. In particular, groundwater levels can vary due to seasonal and other effects.

The assessment and interpretation of contamination risks is based on the scope of works agreed with the Client together with the budgetary and programme constraints imposed. Further investigation, analysis and assessment of contamination may be required by regulators or other third parties with an interest in the site. An ecological risk assessment of contaminated soils is beyond the scope of this report. This report is concerned with assessing those contamination risks which apply to the future use of the site through the proposed development as part of the planning regime. The assessment does not consider the risk to current site users or continued future use of the site in its current state. If development of the site should occur that differs from that proposed, then the findings of the contamination assessment would need to be re-evaluated.

At the time of writing, detailed information on the proposed structure, such as detailed layout, loadings and serviceability limits, was not available. Accordingly, where geotechnical design advice is provided it is on the prescriptive basis allowed for by Eurocode 7: employing conventional and conservative design rules. The scope of this investigation excludes a formal slope stability study and any observations made regarding slopes are for information only.

This report relies on information (continuous monitoring data) provided by a third party consultant and BRD cannot be held responsible for any errors or inaccuracies within the third party report.

2. SITE CHARACTERISTICS

2.1. SITE SETTING

SITE ADDRESS AND POST CODE	Downlands Farm, Uckfield, East Sussex, TN22 2AP.
NATIONAL GRID REFERENCE	Centred approximately on 546680E 122380N.

2.2. SITE DESCRIPTION

SUBJECT	COMMENTS
CURRENT SITE DESCRIPTION	The site currently comprises a series of grass covered open spaces interspersed with areas of woodland. A heavily overgrown area of former chicken sheds and hardstanding is present in the south eastern part of the site. A cottage is present in the south eastern corner and in this area there are also some sandstone rock outcrops. The overall site covers an area of some 98 hectares. The southern section of the site slopes downhill to the west and a series of shallow ravines are present within the areas of woodland in the southern part of the site. The northern part of the site becomes relatively flat. A single public footpath crosses the site, roughly diving the northern and southern sections. However, the southern part of the site is heavily traversed by members of the public for dog walking and the like and a series of informal paths cross the site. There is also an area of woodland to the south west of the A22 which forms part of the site ownership, but will not be altered as part of the proposed development.
SURROUNDING LAND USE	The site is set in a mixed agricultural and residential area. North of the site, beyond the road, is a mixture of arable land and residential properties. To the east of the site is Budlett's Common, Paygate Wood and residential houses within the town of Uckfield. Several large residential properties are present immediately to the east of the southern half of the site. South of the site are woodlands and a lake, beyond which are residential properties. To the west of the site is a mixture of arable land and woodlands.
PROPOSED DEVELOPMENT	It is understood the proposed end use of the site is for residential development in the south of the site, which will surrounded by retained woodland. The northern area will be retained as a Suitable Alternative Natural Green Space (SANG) along with some existing dwellings. Access will be provided by a new road off the A22 in the south western part of the site and new pedestrian and cycle links from Snatts Road and Rocks Road, including a new boardwalk crossing through Chicory Cottage in the south eastern corner.

SUBJECT	COMMENTS
HISTORICAL SUMMARY	Since the earliest map of 1874 the site has been shown to consist of agricultural fields and woodlands in the south and predominantly woodlands. Some chicken sheds and an unknown building were shown in the south eastern corner of the site from the 1970s. These are no longer present. Chicory Cottage in the south eastern corner has been present since the earliest available map of 1874. The northern half of the site has remained relatively unchanged in use over the past 100 years or so.
PUBLISHED GEOLOGY	Alluvium is shown to be in the north of the site, following the stream that originates from the spring on site. It is also shown to be in the south west corner of the site. The remainder of the site is shown to be devoid of Superficial Deposits. The bedrock geology is shown to consist of the Lower Tunbridge Wells Sand, Ardingly Sandstone Member, Grinstead Clay Member and the Upper Tunbridge Wells Sand. These all form parts of the Tunbridge Wells Sand Formation.
RADON	The site is not situated within an area where radon gas protection measures are required in new buildings.
HYDROGEOLOGY	The Alluvium is designated as a Secondary A Aquifer. The Lower Tunbridge Wells Sand, Upper Tunbridge Wells Sand and Ardingly Sandstone Member are designated as Secondary A Aquifers. The Grinstead Clay Member is designated as Unproductive Strata. The site is not located within a groundwater Source Protection Zone.
HYDROLOGY	There are a large number of streams and ponds throughout the site. Most originate from springs located within the site boundaries. Approximately 2.6km south west of the site is the River Ouse and approximately 1.7km to the east of the site is the River Uck. The streams from the site eventually discharge into the River Ouse. The whole of the site to the east of the A22 is in a Zone 1 area and is highly unlikely to be affected by flooding. Part of the small wooded area to the west of the A22 is in a Zone 3 area and is likely to be affected by flooding.

2.3. PREVIOUS INVESTIGATIONS

BRD is unaware of any previous ground investigations having been conducted at the site. However, the site has been the subject of geo-environmental desk study research by BRD and this has been reported separately in "Phase 1 Geo-Environmental Desk Study – Downlands Farm, Uckfield", BRD Environmental Ltd, ref. BRD200653-OR2-C, dated January 2022. This current report should be read in conjunction with the previous desk study report.

The current desk study also makes reference to a previous desk study completed by BRD in 2006. The 2006 report is referenced 'Downlands Farm, Uckfield, Phase 1 Desk Study', BRD Environmental Ltd, ref. 200653/OR1 Version A, dated November 2006. The site boundaries were slightly different but new 2020 desk study essentially supersedes this previous report in its entirety.

The desk study identified localised contamination risks associated with some former farm buildings as well as a small area of landfilling in the south, and the past use of farm buildings to the north. Two off-site fuel stations and an above ground fuel tank in the north also pose potential low contamination risks to the site.

3. GROUND INVESTIGATION

3.1. INVESTIGATION DESIGN

METHODOLOGY	A mixture of machine excavated trial pits and windowless sample boreholes were chosen as the most appropriate investigation technique. The trial pits expose more soil and allow a more detailed inspection of the ground conditions, as well as allowing soakage tests in accordance with BRE365 to be undertaken. The windowless sample boreholes allow in-situ strength data to be obtained as well as the installation of groundwater monitoring wells.	
DATES OF SITE WORKS	The main field works were undertaken over 11No. days from 24th August to 9th September 2020. Monitoring visits were undertaken on 17th and 24th September, 2nd October, 2nd November, 7th December 2020 and 11th January, 8th February and 9th March 2021. A period of three weeks of continuous monitoring from 5No. selected wells was subsequently completed from 11th June to 2nd July 2021. Other wells were also monitored on the installation and removal date.	
CONSTRAINTS TO EXPLORATORY HOLE LAYOUT	Generally, there were no significant constraints to the ground investigation locations. However, one constraint relates to the area of former chicken sheds and hardstanding adjacent to the site entrance in the south eastern part of the site. This area was completely overgrown with dense brambles and vegetation resulting in very limited access. It was, however, possible to undertaken some exploratory at the edge of this area from the access track. The area of woodland to the south west of the A22 has not been investigated as no potential sources of contamination were previously identified and the area is not located within close vicinity of the proposed residential houses. No intrusive ground investigation has been completed in the Chicory Cottage area in the south eastern corner as it is an occupied residential property. However, no significant contamination sources were identified in this area and the section of the site is only to be used as a pedestrian / cycle boardwalk route to Rocks Road through the ancient woodland. Therefore it is not considered that this is a constraint to the investigation layout.	
EXPLORATORY HOLE SPACING	Approximately 50-100m grid.	
LAYOUT RATIONALE	**SOURCE / FEATURE**	**EXPLORATORY HOLE**
CONTAMINATION SOURCES TARGETED	Former chicken sheds and hardstanding in the south eastern area.	WS06, TP23, HD08
	Landfill area.	WS11, WS14, TP13, TP14, HD09
	Small stockpile in woods.	STK01

	Adjacent to off-site farm with above ground tanks.	WS21
	Adjacent to off-site former petrol station.	WS22
	Areas of woodland within site ownership.	HD01-HD07, HD11-HD14
GROUND FEATURES TARGETED	Areas of identified desiccation cracks.	TP03, TP05
	General site coverage.	TP01-TP23, SA01-SA05 WS01-WS23, and HD01-HD14
CONTAMINATION SAMPLING PLAN	Based on the proposed end use, the sampling and analysis plan is more positively biased towards near surface samples as these represent the soils most likely to be available to future site users. The analysis is more biased towards the Made Ground samples (where present) as this stratum represents the soils most likely to be contaminated. Some slightly deeper samples of subsoil have also been targeted to assess the risk to proposed buried infrastructure. In addition, some deeper samples were taken in areas where cross contamination / migration of groundwater contamination could have occurred.	
ANALYSIS PLAN	Based on the site's history as woodland and agricultural fields, a general contamination suite of commonly occurring contaminants has been specified including a pesticide suite. In certain higher risk areas, such as the landfill area and former chicken sheds, as well as any other Made Ground this has been increased to include asbestos screening, and petroleum hydrocarbons analysis. The analysis has also been expanded in areas adjacent to potential offsite contamination sources.	

3.2. BRD FIELDWORK

HAND DUG INSPECTION PITS	
REFERENCES	HD01 to HD14.
DEPTH RANGE	From 0.15m to 0.35m.
BACKFILL	The inspection pits were backfilled with arisings upon completion.

TRIAL PITS	
REFERENCES	TP01 to TP23 and SA01 to SA05 for soakage tests.
DEPTH RANGE	From 1.20m to 3.00m.
EXCAVATOR	JCB 3CX style wheeled backactor.

BACKFILL	All the trial pits were backfilled with arisings upon completion and compacted with rams of the excavator bucket. The soakage pits were backfilled with 20mm gravel and a 90mm diameter observation well. The surface topsoil was reinstated and the pipes were removed following completion of the soakage tests.

WINDOWLESS SAMPLING BOREHOLES	
REFERENCES	WS01 to WS23.
DEPTH RANGE	From 1.60m to 5.45m.
RIG TYPE	Premier Drilling Rig.
INSTALLATION / BACKFILL	Boreholes WS04, 07, 10, 13, 16, 19 and 23 were backfilled with arisings only. The remaining 16No. boreholes had monitoring wells installed. These comprised 50mm nominal diameter standpipes fitted with a gas tap and finished with a flush metal cover. The slotted response length of the well is shown on the individual logs. Bentonite seals are also indicated on the logs. The filter medium used was pea gravel. Boreholes WS01, WS05, WS06, WS12 and WS14 subsequently had raised lockable headworks installed to allow continuous monitoring devices to be installed.

MONITORING	
TYPE	Ground gases. Vapour. Groundwater levels monitoring.
DATES	17th and 24th September, 2nd October, 2nd November, 7th December 2020 and 11th January, 8th February and 9th March 2021. Continuous monitoring from 5No. selected wells (WS01, WS05, WS06, WS12 and WS14) by Ground Gas Solutions (GGS) using GasClam® Technologies was subsequently completed from 11th June to 2nd July 2021. Traditional 'spot' monitoring from the remaining wells was also completed on these two dates.

3.3. LABORATORY TESTING

GEOTECHNICAL TESTING	
The soil samples for geotechnical testing were forwarded to the laboratory of Soil Property Testing Ltd with pH and sulphate analysis undertaken at the laboratory of DETS Ltd. The geotechnical testing suite is detailed below. The UKAS accreditation of the individual test methods is shown on the laboratory test report included in the Appendices.	
TEST	**NUMBER OF SAMPLES TESTED**
Moisture content	12
Liquid and plastic limits	12
Particle size distribution by wet sieve	3
Particle size distribution by wet sieve and hydrometer	3
pH and Water soluble Sulphate	10
Total Sulphur and Sulphate	10

SOIL CHEMICAL TESTING	
The soil samples for contamination and/or chemical geotechnical testing were forwarded to the laboratory of DETS Ltd and the testing suite is detailed below. The UKAS or MCERTS accreditation of the individual test methods is shown on the laboratory test report included in the Appendices.	
SOIL TESTS	**NUMBER OF SAMPLES TESTED**
Arsenic, Cadmium, Chromium, Chromium VI, Copper, Lead, Mercury, Nickel, Selenium, Zinc	40
Speciated Polycyclic Aromatic Hydrocarbons (PAH)	40
Total Petroleum Hydrocarbons (TPH) with full carbon banding and aliphatic/aromatic split	12
Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) plus Methyl Tert Butyl Ether (MTBE)	12
Organic Matter	40
Asbestos Quantification	10
Semi-Volatile Organic Compounds (SVOCs)	4
Volatile Organic Compounds (VOCs)	4
Organochlorine Pesticides	10
Waste Acceptance Criteria (WAC) testing	2

4. GROUND CONDITIONS

4.1. OVERVIEW

The ground conditions encountered at the site were generally as anticipated from the published geology. In the higher elevations of the eastern and south eastern parts of the site, sands of the Upper Tunbridge Wells Sand were encountered. Across the southern part of the site and in the centre of the northern two sections of the site, the Grinstead Clay Member was then encountered.

Underlying this, and exposed in the north western parts of the site, sands and sandstones of the Ardingly Sandstone Member were encountered. Although not in an area of investigation, in the south eastern corner of the site these rocks are exposed as small outcrops / cliff faces at Chicory Cottage. A few investigation points in the extreme northern section of the site (the proposed SANG) penetrated the Ardingly Sandstone and encountered the underlying Lower Tunbridge Wells Sand.

Details of the various stratigraphic units are given in the following sections.

4.2. ARTIFICIAL GROUND

Trial pit TP23 in the south eastern part of the site encountered a buried concrete slab associated with the former chicken sheds in the area. Adjacent to the chicken shed, Made Ground was encountered to a depth of 0.20m and this comprised 'dark brown very organic silty SAND with abundant plastic packaging and occasional wood, tile and metal fragments'. This soil was found to overly the natural ground. The nearby WS06 located just to the west of the overgrown chicken shed area also encountered Made Ground to a depth of 0.5m. This comprised a layer of reworked topsoil containing slate and brick, overlying a reworked clay with brick, sandstone, ironstone charcoal and ceramic.

Hand dug pit HD08 located in an area of former hardstanding in the extreme south eastern part of the site encountered a granular Made Ground comprising gravelly clays with flint, chalk and tarmac proven to a depth of 0.25m.

In the area identified as a former landfill in the northern part of the middle field, only limited backfill was encountered. Made Ground was only encountered in an area delineated around TP13 on the edge of the woods, as well as a small stockpile of soil within adjacent woodland. In TP13 the Made Ground extended to a depth of 0.5m and comprised an organic sandy clay upper layer with cobbles of angular brick, metal, tarmac and concrete, overlying a silty clay layer with occasional brick fragments. The small stockpile of soil within the woods nearby (STK01) comprised a light brown gravelly clay containing concrete, flint and occasional tarmac.

4.3. TOPSOIL AND MADE GROUND TOPSOIL

Topsoil, or occasional Made Ground Topsoil, was encountered across the site, with the exception of the localised areas of Made Ground discussed above. In the field areas the topsoil extended to a typical depth of 0.3m and may have been historically ploughed. In the woodland areas (hand dug pits) the topsoil was noted to be slightly thinner (0.2m).

The topsoil was typically described as 'dark brown sandy silty clay with abundant rootlets' but was occasionally noted to be a sand or silt.

4.4. SUPERFICIAL DEPOSITS

Superficial Deposits were not encountered.

4.5. BEDROCK

4.5.1. Upper Tunbridge Wells Sand

Soils considered to comprise the Upper Tunbridge Wells Sand were encountered in the eastern part of the site, in particular the eastern section of the northern field of the main site area.

The soils were proven to depths of up to 2.90m with the Grinstead Clay present beneath. They typically comprise either a 'stiff, brown mottled grey and orange, silty sandy CLAY' or a very dense, light brown mottled orange brown, silty fine SAND'.

4.5.2. Grinstead Clay Member

The Grinstead Clay Member was prevalent across the southern field and large parts of the central and northern field of the main site area. It was proven to depths in excess of 5.45m in parts of the southern area.

In the upper one to two metres this strata typically comprised a 'stiff light brown mottled grey brown silty CLAY'. These often became dark grey, friable and containing mudstone lithorelicts and /or ironstone nodules with increasing depth. Where the soils extended deeper, bands of mudstone or siltstone were encountered, some of which forced the termination of the exploratory holes due to their high strength.

4.5.3. Ardingly Sandstone Member

Beneath the Grinstead Clay Member and exposed immediately beneath the topsoil in the north western part of the site, the Ardingly Sandstone was encountered. In a few locations, mostly in the southern edge of the middle field, this exhibited itself as a band of solid sandstone beneath 1-2m of the Grinstead Clay Formation. Where exposed in this way in TP08, it was described as 'Weak, light grey to orange thinly bedded fine grained SANDSTONE recovered as fine to coarse, very weak, thinly laminated, tabular gravel'.

Elsewhere in the north western part of the site (TP11, TP12 and TP14), sandy silty clays, sandy silts and fine sands were encountered. In a few locations the Lower Tunbridge Wells Sand was encountered beneath, but some north westerly areas also encountered sandstone bedrock within the upper 2m.

4.5.4. Lower Tunbridge Wells Sand

The Lower Tunbridge Wells Sand was identified as fine grained deposits located beneath the sands of the Ardingly Sandstone Formation and were only encountered in a few locations in the lower level north western parts of the site, as well as the separate northern section (WS21 and WS22).

This predominantly comprised silty sandy clay deposits but also occasional bands of sand.

4.6. GEOTECHNICAL COMMENTS

The soils encountered were all noted to be predominantly firm to stiff or medium dense to dense consistency owing to the properties of the Tunbridge Wells Sand Formation.

Rare softer / looser deposits were encountered, namely WS02 and WS22, but this appears to relate to increases in moisture content due to valley / spring features.

Equally the soils in the upper few metres were noted to be quite dry during the site works, and desiccated in parts. Desiccation cracks were noted in a few locations during July 2020 at the time of the walkover, but these had largely disappeared by the time of the site works in September 2020 after a period of heavy rainfall in August.

4.7. CONTAMINATION OBSERVATIONS

The localised Made Ground soils encountered did encounter occasional fragments of tarmac and charcoal and this can give rise to low levels of contamination.

4.8. GROUNDWATER BEHAVIOUR

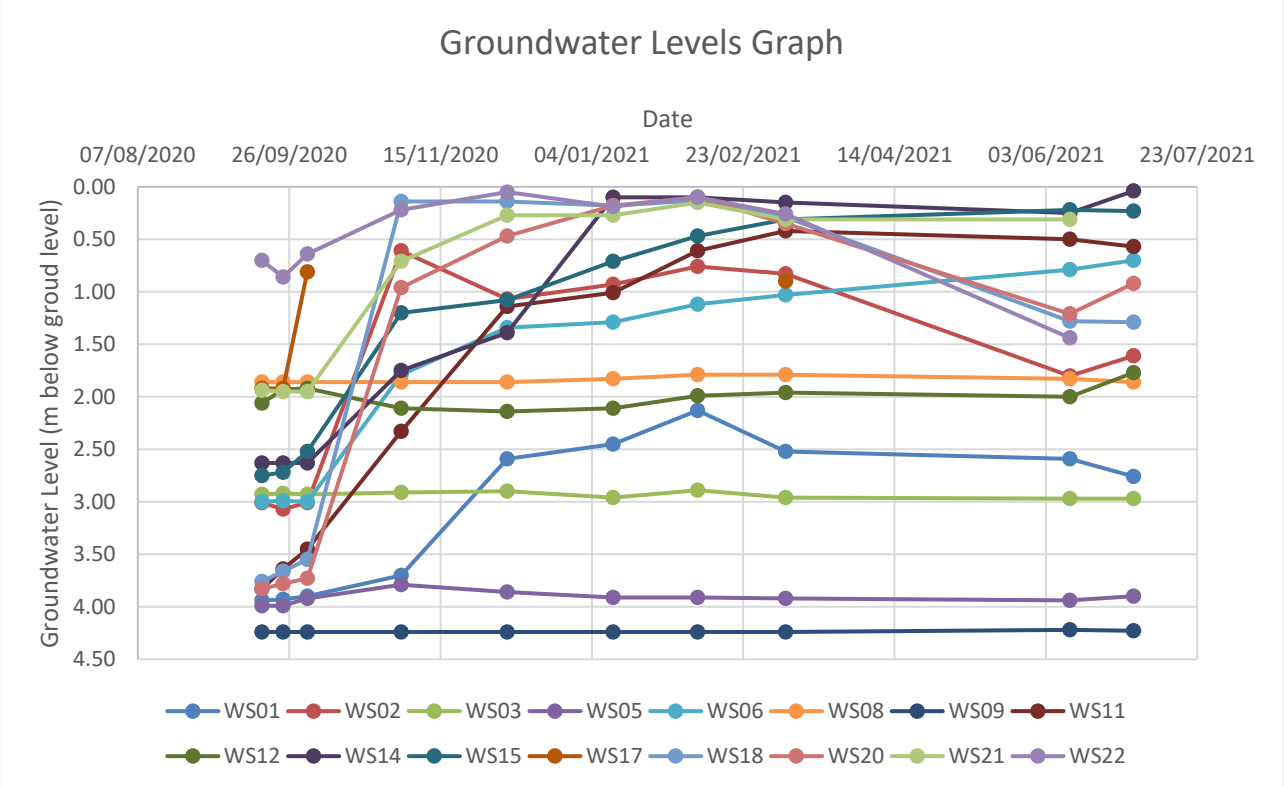
During the progressing of exploratory holes, the following general observations of groundwater behaviour were made.

The vast majority of the exploratory holes did not encounter and groundwater whilst being drilled / excavated. The only exception was WS22 in the northern area where a band of sand encountered at 2.60m was saturated with groundwater.

Conversely, during the subsequent groundwater monitoring, groundwater was encountered in most of the 16No. monitoring wells as discussed in the following section. This would suggest that groundwater inflow is very slow and not perceivable over a short timeframe.

4.9. GROUNDWATER MONITORING

A graph showing the groundwater levels trend (m bgl) is presented below and the results are discussed in the following sections.



DATE	RESTING GROUNDWATER RANGE	COMMENTS
17/09/2020	From 0.70m to >4.24m bgl.	Groundwater was encountered in 12No. of the 16No. monitoring wells. The groundwater was typically at depths of >1.90m with the only exception being WS21 in the northern area where it was recorded at 0.70m.
24/09/2020	From 0.86m to >4.24m bgl.	Similar trend to previous visit although the groundwater levels had all reduced slightly.
02/10/2020	From 0.64m to >4.24m bgl.	Similar trend to the previous visit but typically shallower levels have been recorded in all the boreholes. The shallowest groundwater was recorded in borehole WS22 located in the northern area adjacent to borehole WS21. Also of note is standing groundwater level was recorded in borehole WS05 at 3.92m depth bgl which was recorded as dry in the previous visits.
02/11/2020	From 0.14m to >4.24m bgl.	Groundwater levels had risen significantly in several of the wells with substantial rises (>1m) in WS02, WS06, WS14, WS15, WS18, WS20 and WS21. In WS02, WS18 and WS20 in particular, the rise in groundwater level was 2-3m and now recorded as very shallow (<1m bgl). However, some of the other wells were not affected by rising groundwater levels. This resulted in very shallow groundwater (<1m) in WS02, WS18, and WS20-WS22.
07/12/2020	From 0.05m to >4.24m bgl.	Similar trend to previous visit although a slight rise overall. The water level in WS02 had fallen slightly to 1.07m but was also noted to be rising slightly in several other wells including WS03, WS11, WS14 and WS20.
11/01/2021	From 0.10m to >4.24m bgl.	Very similar water levels trend to previous visit with the exception that WS14 had risen further to a level of 0.1m bgl. Shallow groundwater (<1m) now present in 7No. wells but these are all in the northern section or northern field of the southern section with the exception of WS02 (SW corner) and WS14 (N corner of middle field).
08/02/2021	From 0.10m to >4.24m bgl.	Very similar trend to previous visit. WS11 (towards northern end of middle field) also has groundwater <1m depth.

DATE	RESTING GROUNDWATER RANGE	COMMENTS
09/03/2021	From 0.15m to >4.24m bgl.	Very similar trend to previous visit. Groundwater recorded at depths of less than 1m bgl in WS02, WS11, WS14, WS15, WS17, WS18 and WS20-22.
11/06/2021	From 0.22m to 4.22m bgl.	Three months since the previous visit, the groundwater levels generally remained at similar shallow levels to those recorded in March. This was following a very dry April followed by a very wet May. The exceptions were WS02, WS18, WS20 and WS22 which had dropped by around 1m. In contrast, the groundwater in WS06 had risen slightly to less than 1m.
02/07/2021	From 0.04m to 4.23m bgl.	Groundwater had generally risen slightly in most of the wells after further rainfall recorded throughout June 2021. In particular this was noted in WS02, WS06, WS12, WS14 and WS20. It should be noted that continuous groundwater monitoring was also completed for 5No. of the wells (WS01, WS05, WS06, WS12 and WS14) during the 3 week period since the previous monitoring visit and the intervening data is included within the attached GGS datapack report in Appendix 4.

In summary it can be seen that there is a substantial rise in the groundwater levels across large areas of the site during the winter months with a large proportion recording groundwater levels of less than 1m by the end of the winter. The relatively shallow groundwater levels in some parts of the site continued into the early summer of 2021 after a particularly wet May. It is, however, noted that several of the wells were not significantly impacted by rising groundwater and in relation to the proposed redevelopment areas (southern two fields) only WS02 in the south western corner and WS11 and WS14 in the northern corner are affected. Several wells in the middle of the proposed development area were not affected by shallow groundwater.

5. GEOTECHNICAL PROPERTIES

5.1. COARSE SOIL PARAMETERS

5.1.1. Standard Penetration Tests

Most of the site is covered in silty clay and clayey silt soils but fine sand beds intercalating the clay rich sequences have been mainly recorded in the northern fields in boreholes WS11, WS13, WS14 and WS17 to WS23 and related to the Upper Tunbridge Wells Sand, the Ardingly Sandstone Member and the Lower Tunbridge Wells Sand.

For the Upper Tunbridge Wells Sand N-values of 51 and >50 were recorded at 1.0m depth which are indicative of very dense sands. N-values recorded in the Ardingly Sandstone Member range between 29 and >50 which is indicative of medium dense to very dense sands soils. Typically, N-values in excess of 30, indicative of dense sands and >50 were recorded in these deposits. In the Lower Tunbridge Wells Sand N-values range between 27 and >50 which is indicative of medium dense to very dense sand deposits.

Of particular note is that most of the boreholes refused on sandstone to siltstone rock recorded at variable depth across the site. In the southern part of the site where the Grinstead Clay Member was predominant boreholes refused on sandstone/siltstone rock (N>50) at depths ranging between 2.6m and 4.8m bgl.

In the central and northern part of the site where the rest of the lithologies have been recorded, boreholes refused on sandstone/siltstone rock (N>50) at depths ranging between 1.6m and 3.6m bgl.

5.1.2. Particle Size Distribution

Six samples from soils recorded across the site have been subject to PSD determination.

5.1.2.1. Upper Tunbridge Wells Sand

Two samples from the Upper Tunbridge Wells Sand have been tested and revealed the soils to be from silt to sandy soils.

The sample tested from trial pit TP04 at 0.5m depth was recorded as a sandy, silty CLAY/clay SILT with a 39% of coarse soils content of which 1% was gravel and 38% sands. A fines content of 61% was recorded of which 43% was silt and 18% clay fraction.

The sample tested from trial pit TP23 at 1.1m depth was recorded as clayey, silty, very gravelly SAND with a coarse soils content of 72% of which 51% was sand fraction. A fines content of 28% was recorded of which 10% was clay content.

5.1.2.2. Grinstead Clay Member

One sample from the Grinstead Clay Member has been tested and revealed the soils to be a slightly gravelly, slightly sandy silty CLAY/clay SILT with a 22% content in coarse soils of which 13% is gravel fraction and 9% sand. A fines content of 78% has been recorded of which 53% is silt fraction and 25% clay.

5.1.2.3. Ardingly Sandstone Member.

Three samples from the Ardingly Sandstone Member have been tested and revealed the soils to be from silt to sandy soils.

The samples tested from trial pit TP12 at 1.5m depth, was recorded as a slightly gravelly, slightly sandy, silty CLAY/clay SILT with a of coarse soils content of 19% with a gravel content of 2% and 17% of sands. A fines content of 81% was recorded of which 55% was silt and 26% clay fraction.

The samples tested from trial pit TP14 at 0.8m depth, was recorded as a slightly gravelly, clayey, silty SAND with a of coarse soils content of 68% with a gravel content of 3% and 65% of sands of which 41% is recorded as fine fraction. A fines content of 32% was recorded of which 21% was silt and 11% clay fraction.

The sample tested from trial pit TP18 at 0.8m depth was recorded as a slightly gravelly, sandy, silty CLAY/clay SILT with a coarse soils content of between 51% with a 10% gravel content and 10% and 41% of sand of which 37% is recorded as fine fraction. A fines content of 49% was recorded of which 30% was silt and 10% clay fraction.

5.2. FINE SOIL PARAMETERS

5.2.1. Index Property Testing

SOIL TYPE	Upper Tunbridge Wells Sand.
PLASTICITY INDEX (PI)	14% - 19% (Two samples: Low volume change potential). 23% (One sample: Medium volume change potential).
MODIFIED PI	Not applicable – no oversize particles.
NHBC CLASS	Medium volume change potential.

SOIL TYPE	Grinstead Clay Member.
PLASTICITY INDEX (PI)	47% (One sample: High volume change potential). 27% (One sample: Medium volume change potential). 19% (One sample: Low volume change potential).
MODIFIED PI	18% - 19% (Two samples: Low volume change potential).
NHBC CLASS	Medium volume change potential.

SOIL TYPE	Ardingly Sandstone Member.
PLASTICITY INDEX (PI)	8% (One sample: non-shrinkable).
MODIFIED PI	Not applicable – no oversize particles.
NHBC CLASS	Non shrinkable soil type.

SOIL TYPE	Lower Tunbridge Wells Sand.
PLASTICITY INDEX (PI)	28% (One sample: Medium volume change potential).
MODIFIED PI	12% (One sample: Low volume change potential).
NHBC CLASS	Medium volume change potential.

5.2.2. Undrained Shear Strength

This section discusses all of the laboratory and in-situ tests that produce either direct or indirect measures of undrained shear strength.

5.2.2.1. Hand Shear Vane

SOIL TYPE	Upper Tunbridge Wells Sand.
CORRECTION FACTOR μ	μ=1.0
JUSTIFICATION	After Bjerrum 1972, employing Plasticity Index, PI ~20 so μ=1.0
DISCUSSION OF CORRECTED RESULTS	The recorded undrained shear strength was in the range 72kPa and >140kPa which is indicative of medium to very high strength soil type. However, it is considered that the elevated values (>140kPa) are a direct consequence of the desiccation process recorded across the site in the top meter and should not considered representative of the soil strength at shallow depths.

SOIL TYPE	Grinstead Clay Member.
CORRECTION FACTOR μ	μ=1.0
JUSTIFICATION	After Bjerrum 1972, employing Plasticity Index, PI ~20 so μ=1.0
DISCUSSION OF CORRECTED RESULTS	The recorded undrained shear strength in the upper metre tested was in the range of 60kPa and >140kPa which is indicative of medium to very high strength. Likewise, values greater than 140kPa are considered a direct consequence of the desiccation process recorded across the site in the top meter and should not considered representative of the soil strength at shallow depths. Underneath, the recorded undrained shear strength values range from 90kPa to >140kPa which is indicative of high to very high strength soil type.

SOIL TYPE	Ardingly Sandstone Member
CORRECTION FACTOR μ	μ=1.0
JUSTIFICATION	After Bjerrum 1972, employing Plasticity Index, PI ~20 so μ=1.0
DISCUSSION OF CORRECTED RESULTS	The recorded undrained shear strength was in the range of 40kPa to 80kPa which is indicative of medium to highs strength soil type.

SOIL TYPE	Lower Tunbridge Wells Sand.
CORRECTION FACTOR μ	μ=1.0
JUSTIFICATION	After Bjerrum 1972, employing Plasticity Index, PI ~20 so μ=1.0
DISCUSSION OF CORRECTED RESULTS	The recorded undrained shear strength was in the range of 80kPa and 105kPa which is indicative of high strength soil type.

5.2.2.2. Hand Penetrometer

SOIL TYPE	Grinstead Clay Member.
DISCUSSION OF CORRECTED RESULTS	Typically the recorded undrained shear strength in these soils range from 74kPa to greater than 156kPa which is indicative of medium to very high strength soil type. Anomalous lower values between 31kPa and 50kPa indicative of low to medium strength were recorded in boreholes WS02 and WS06 between 0.8m and 1.8m depth which have been linked to moist soils with reduced strength.

SOIL TYPE	Ardingly Sandstone Member.
DISCUSSION OF CORRECTED RESULTS	A recorded undrained shear strength of 100kPa which is indicative of high strength soil type.

SOIL TYPE	Lower Tunbridge Wells Sand.
DISCUSSION OF CORRECTED RESULTS	The recorded undrained shear strength was in the range of 50kPa to 113kPa which is indicative of medium to high strength soil type.

5.2.2.3. Standard Penetration Test Correlations

A total of 47No. Standard Penetration Tests were undertaken in the clay/silt soils recorded on site.

Most of the test were undertaken in the Grinstead Clay Member which covers most of the site. N-values between 4 and >50 which is indicative of firm to very stiff/ hard soils, have been recorded in these soils. The lowest value, N=4, was recorded in borehole WS02 at 1.0m depth due to the water content of the soils at that point, but it is not considered representative of this soil type strength. N-values recorded in the clay beds of the Ardingly Sandstone Member range between 10 and 47 which is indicative of firm to very stiff soils and N-values recorded in the clay beds of the Lower Tunbridge Wells Sand range between 16 to >50 which is indicative of stiff to very stiff/hard soils.

For fissured, over consolidated fine-grained soils, such as the bedrock soils recorded across the site, SPT N-values can be converted using industry standard correlations, such as Stroud's method, to equivalent undrained shear strengths of a 100mm-diameter triaxial compression test. This conversion uses values for Stroud's conversion factor, f1, selected on the basis of plasticity index recorded in the samples tested in the bedrock soils recorded on site.

An energy ratio of Er=0.81 for the windowless sample rig has been applied based on the annual calibration certificate provided by the sub-contractor.

Elevated equivalent undrained shear strength values have been recorded generally below 1.0m depth across the site and it is likely due to the soils recorded on site are not pure clays and have an elevated fine sands and silt content has been recorded which increase the calculated undrained shear strength values and so the values estimated are tentative only.

5.2.2.4. Grinstead Clay Member

Equivalent undrained shear strengths for the Grinstead Clay Member of between 52kPa and 119kPa have been recorded at 1.0m bgl depth, with values indicative of medium to high strength. A lowest value, 30kPa, recorded in WS02 it is not considered representative of the strength of the Grinstead Clay Member at this depth as has likely been affected by the wet nature of the surface soils and has not been considered.

At a depth of 2.0m, equivalent undrained shear strengths of between 82kPa and 253kPa have been recorded, which are indicative of high to very high strength.

Between 3.0m and 4.0m bgl, equivalent undrained shear strengths of between 104kPa and 379kPa have been recorded, which are indicative of high to extremely high strength.

Below, at 5.0m depth, equivalent undrained shear strengths of between 245kPa and 371kPa have been recorded, which are indicative of very high to extremely high strength soils.

5.2.2.5. Ardingly Sandstone Member

For the Ardingly Sandstone Member, equivalent undrained shear strengths of between 74kPa and 349kPa have been recorded at 1.0m depth, which are indicative of medium to extremely high strength. Below, at 2.0m depth, equivalent undrained shear strengths of between 89kPa and 275kPa have been recorded, which are indicative of high to very high strength soils.

5.2.2.6. Lower Tunbridge Wells Sand

Equivalent undrained shear strengths for the Lower Tunbridge Wells Sand of between 119kPa and 171kPa have been recorded at 1.0m bgl depth, with values indicative of high to very high strength.

At a depth of 2.0m, equivalent undrained shear strengths of between 163kPa and 275kPa have been recorded, which are indicative of very high strength.

Below, at 3.0m depth, equivalent undrained shear strengths of between 141kPa and >370kPa have been recorded, which are indicative of high to extremely high strength soils.

Between 4.0m and 5.0m bgl, equivalent undrained shear strengths of between 186kPa and 341kPa have been recorded, which are indicative of very high to extremely high strength.

5.3. SULPHATE AND pH

	ALL ON-SITE SOILS			
	Sulphate		**pH**	
Characteristic Value	100 mg/l		5.35 units	
Justification	Mean of highest 20% results rounded to nearest 100mg/l.		Mean of lowest 20% results.	
	No. of tests	Results Range	No. of tests	Results Range
Soil	50	<10 – 47 mg/l	50	4.3 – 8.0 units
Groundwater	-	Not tested	-	Not tested
Total Potential Sulphate	10	0.06% – 0.6% One out of six samples at 2.8m depth of Grinstead Clay Member has been recorded as potentially pyritic. It is considered that the result is not representative of the shallower soils.		

6. GEOTECHNICAL ASSESSMENT

6.1. INTRODUCTION

The following advice and recommendations are based on the construction of a large residential estate comprising low rise two to three storey residential properties across the centre and southern parts of the site. A schematic proposed development layout plan is included in Appendix 1. From assessment of the nature of the ground conditions and the type of proposed structures, it is considered that the situation falls within EC7 Geotechnical Category 1.

Should the nature of the development be changed then the results of this investigation would need to be reviewed and reassessed.

6.2. EXCAVATIONS

STABILITY	Any excavation requiring man entry should be battered back to a safe angle, supported by an appropriate proprietary trench support system or adequately shored to provide safe working conditions. Shoring to any excavation requiring man entry must be designed by a suitably qualified and experienced engineer. Any support system will require regular inspection as detailed in published guidelines to ensure the excavation support is adequate and appropriate for the ground conditions present. It is anticipated that narrow trench excavations will remain relatively stable and open for short periods, but minor spalling of side walls could still occur. Trench excavations encountering the groundwater are likely to suffer side wall collapse. It is recommended that deep excavations (>1.5m depth) are undertaken outside of the winter and early spring months when shallow groundwater will be present. Excavations below the water table at this site are likely to result in excavation difficulties due to 'running sands' and appropriate groundwater control will therefore be required.
EQUIPMENT	It should be possible to progress excavations with conventional equipment. Rock is present beneath the site at a depth which is envisaged that it will not cause a construction difficulty. If exceptionally deep excavations are required, e.g. for drains, then the use of hydraulic breaking equipment may be required to forward excavations.
GROUNDWATER CONTROL	Specific groundwater control is unlikely to be required at this site as shallow groundwater has only been encountered in the area outside of where the development is proposed. Limited pumping from sumps or bailing out may be required to deal with slight seepages or surface water ingress during periods of inclement weather.
PARTY WALL ISSUES	As there are no nearby third party structures, the Party Wall Act is unlikely to apply to the development.

6.3. SLOPE STABILITY

Outside the ravine features, the site comprises an undulating topography and generally slopes down from east to west. Moderate slopes have been recorded along the western half of the site where gradients of 5º recorded.

Therefore, it is considered, that the slopes across the areas to be developed, excluding the ravine features, are relatively shallow and show no obvious signs of instability. No significant changes in level as part of the development are anticipated. Any change in levels required should be cut to a slope no greater than one in four (vertical : horizontal) (14°) which should provide reasonable long term stability. Cut slopes should incorporate surface drainage to enhance slope stability. In particular, the interface of the different strata such as the Grinstead Clay Member and the Ardingly Sandstone Member have adequate drainage to deal with the groundwater seepages that will occur.

It should be noted that shallower slopes may be required for other reasons such access in gardens. Alternatively, changes in level should be supported by appropriately designed and constructed retaining walls.

6.4. EARTHWORKS

It is likely that some earthworks will be required on site due to the existing site levels that will require some form of cut and fill to form development platforms. However, details of such earthworks have not been provided at this point.

If substantial earthworks are required, then an earthworks specification should be developed. Further soil classification tests and compaction tests will likely be required to develop such a specification.

It is recommended that a Materials Management Plan is formulated in accordance with the CL:AIRE "Definition of Waste: Development Industry Code of Practice" for the site to allow re-use of the excavated materials.

6.5. SUB-SURFACE CONCRETE

ALL ON-SITE SOILS (UP TO 2.5m DEPTH)	
SITE / SOIL CATEGORY	Natural ground.
DESIGN SULPHATE CLASS	DS-1
GROUNDWATER REGIME	Mobile.
AGGRESSIVE CHEMICAL ENVIRONMENT FOR CONCRETE (ACEC) CLASS	AC-1
COMMENTS	If excavations greater than 2.5m below existing ground level are required, it is recommended that further sulphate testing of the deeper soils is undertaken as one same at depth was recorded as potentially pyritic. It is worth noting that pyritic soils are unlikely in the upper soil layers due to the effect of leaching, as proved by the testing completed.

6.6. SOAKAWAYS

6.6.1. Soil Infiltration Rate

The records of the soakage tests are presented in the Appendices that includes the calculation of the soil infiltration rate. A summary of results are presented in the table below:

TRIAL PIT	SOIL INFILTRATION RATE		STRATUM TESTED
SA01	Test 1	Permeability too low to calculate soil infiltration rate.	0.40m – 1.80m: Stiff, grey, brown mottled orange brown, silty CLAY with occasional fine rootlets.
SA02	Test 1	Permeability too low to calculate soil infiltration rate.	0.30m – 1.80m: Stiff, grey, brown mottled orange brown, silty CLAY with occasional fine rootlets.
SA03	Test 1	Permeability too low to calculate soil infiltration rate.	0.30m – 1.70m: Stiff, desiccated, orange brown mottled grey, silty CLAY. 1.70m - 1.80m: Stiff, light grey mottled brown, silty CLAY.
	Test 2	Permeability too low to calculate soil infiltration rate.	
SA04	Test 1	Permeability too low to calculate soil infiltration rate.	0.35m – 0.80m: Stiff, orange brown mottled grey brown, very silty CLAY with occasional rootlets. 0.80m – 1.80m: Firm to stiff, light yellow brown mottled light grey, clayey, sandy SILT.
	Test 2	1.12×10^{-6} m/s	
SA05	Test 1	Permeability too low to calculate soil infiltration rate.	0.30m – 1.40m: Firm, light brown mottled grey, slightly desiccated, silty CLAY. 1.40m - 1.70m: Firm, light grey mottled red brown, slightly silty CLAY.

6.6.2. Soakaway Design Advice

It is considered that the disposal of collected surface water to soakaways will not be feasible at this site due to the predominately cohesive nature and proved low permeability of the underlying soils.

6.7. PAVEMENT CONSTRUCTION

Ground conditions across the site are variable and likely to be prone to rapid degradation due to trafficking or when subject to inclement weather. On this basis it is considered prudent to adopt a conservative initial design CBR value of 3%. However once the road layouts have been finalised, further *in situ* testing may indicate a higher CBR design value can be adopted.

All unsuitable soils, such as topsoil or desiccated soils, should be removed from beneath proposed paved areas. The exposed sub-grade formation should then be proof rolled to reveal any excessively soft or compressible zones and any such features identified also removed by excavation. Where unsuitable materials are removed, the resultant voids should be filled in layers with appropriately compacted suitable granular fill. To reduce the loss of granular construction

materials into the sub-grade, consideration should be given to utilising a geotextile starter layer across the formation level.

6.8. PRELIMINARY FOUNDATION RECOMMENDATIONS

6.8.1. Introduction

The central and southern parts of the site are proposed to be developed with a large residential estate outside the ravine areas. Several Sustainable Urban Drainage (SUDs) ponds along the lower western part of the development area. The remainder of the site will form the SANG. Only a schematic development layout has been provided but it is considered that the site will comprise low-rise buildings.

The recorded ground conditions are slightly variable across, for the central and southern parts of the site the Grinstead Clay Member is predominant but soils of the Ardingly Sandstone Member could be encountered at foundation depth which have been recorded as clay but also as sand deposits.

The majority of the proposed developed area of the site is out of the influence zones of trees, the influence zones of trees being limited to the areas close to the ravines. It is anticipated that shallow strip footings may be adopted, with deeper trench fill, or possible piled foundations utilised for plots located in close proximity to the mature trees.

6.8.2. Floor Slabs

In consideration of the near surface clay soils, fully suspended floor slabs designed and constructed in accordance with NHBC Standards are recommended at this development.

With reference to Section 2.2, the floor construction will not have to incorporate radon gas protection measures.

6.8.3. Traditional Footings

The site is suitable for the adoption of shallow strip/trench fill footings. Foundations should be taken through made ground/topsoil to bear upon any natural soil recorded across the site.

A presumed bearing value of 110kN/m^2 is considered appropriate for foundations up to 1m wide bearing upon the clay soils of the Grinstead Clay Member or any natural soil recorded across the site. Immediate and long term settlement should be within tolerable limits and take place over several years.

As mentioned above the Ardingly Sandstone Member has been recorded comprising clay to sand soil types. When variable soils, sand and clay, are found at formation level, it is recommended that nominal steel mesh reinforcement is included within the footing to reduce the effects of differential settlement across the varying strata and distribute stresses more evenly.

Typically, the clay soils recorded across the site have been shown to have a medium volume change potential when assessed against NHBC standards and therefore the minimum foundation depth required is 0.90m, but 1.25m where required to allow for restricted new tree planting. Under the NHBC Standards, foundation depths have to be increased if they are within the influence zone of felled trees, existing trees or proposed tree planting. It should be noted that where trees are in groups the resulting competition for resources can lead to deeper root systems than allowed for in the NHBC Standards. In any event, foundations should be taken below any roots encountered in foundation trench excavation. Where the required foundation depth varies around a structure, this can be accommodated by forming steps in the foundation as per NHBC Standards.

Where foundation depths exceed 1.50m in clay soils and are within the zone of influence of existing or felled trees or where foundations cut through tree roots, a compressible void former

will be required against the internal faces of new foundations in order to accommodate potential long term soil heave. Such precautions against heave should be designed and constructed in accordance with NHBC Standards.

The excavator must be set up with care and operated correctly to ensure trench walls are vertical and base horizontal as any slight inclination will result in eccentric loading on deep trench fill footings.

A number of trees and tree stumps are located across the site. It will be necessary to remove all unwanted trees, stumps and root structures prior to commencing with the development. Any resultant void should be backfilled accordingly with respect to the preferred foundation design.

Excavations encountering groundwater seepage or perched water in the soils recorded across the site may rapidly become unstable and this will thus complicate the construction of the footings. The ease of construction will be dependent upon actual groundwater levels present at the time of construction. As a consequence of this, it is strongly recommended that construction of footings is avoided in sustained wet periods and also the winter months when groundwater has been proven to be at its shallowest. If problems are encountered then a 'dig and pour' approach will be a suitable solution.

During construction, any soft spots found at foundation formation level should be excavated and replaced with lean mix concrete. Foundation excavations should be kept dry and left open for the minimum amount of time possible. Where foundations cannot be completed immediately, a blinding layer of concrete should be placed.

6.8.4. Piling

If plots are located in close proximity to existing trees, it may be necessary to consider a piled design where depth of trench fill foundations are too costly or instability of deep present problems for construction of trench fill foundations. Further advice could be provide to identify particular plots which could adopt piled foundations once the plot positions had been finalised and the location and species of the large number nearby trees are identified by tree survey. It is probable that with careful layout design, the need for piling can be removed.

6.9. RECOMMENDATIONS FOR FURTHER GEOTECHNICAL WORK

If excavations greater than 2.5m below existing ground level are required, it is recommended that further sulphate testing of the deeper soils is undertaken as one sample at depth was recorded as potentially pyritic.

A tree survey is required as this information is required for detailed foundation design. This survey with topographic survey data should be undertaken prior to any site clearance to accurately record the location of any previously felled trees and existing trees both within the development area and close to the boundaries of the development area. The survey should record the trunk location, height and species of the trees.

If required when plots locations have been finalised, in order to confirm deeper ground conditions for pile design then further ground investigation comprising deep combined percussive and rotary boreholes targeting areas to be piled is recommended. Monitoring wells should be included in the boreholes and at least one post work monitoring visit should be undertaken to record groundwater levels. Insitu Standard Penetration Tests should be conducted during forwarding of the boreholes and collected soil samples submitted for appropriate geotechnical laboratory testing.

Once development proposals are confirmed and the requirement for any cut and fill to form development platforms understood, further ground investigation to increase the density of exploratory points and testing for earthworks is recommended.

7. RISK ESTIMATION – SOILS

7.1. HUMAN HEALTH

The Generic Assessment Criteria (GAC) employed below are for residential land use as this is appropriate to the proposed form of development.

CONTAMINANT	UNITS	NUMBER OF TESTS	MAXIMUM CONCENTRATION	GAC	NUMBER EXCEEDING GAC
Arsenic	mg/kg	40	22	37	0
Cadmium	mg/kg	40	0.3	22	0
Chromium (hexavalent)	mg/kg	40	<2	21	0
Chromium (total)	mg/kg	40	28	910	0
Copper	mg/kg	40	47	2,400	0
Lead	mg/kg	40	173	200	0
Mercury	mg/kg	40	<1	11	0
Nickel	mg/kg	40	11	180	0
Selenium	mg/kg	40	<3	250	0
Zinc	mg/kg	40	284	3,700	0
pH	Units	40	4.3-8.0	<5-10>	1
Naphthalene	mg/kg	40	<0.1	2.3	0
Acenaphthylene	mg/kg	40	<0.1	170	0
Acenaphthene	mg/kg	40	<0.1	210	0
Fluorene	mg/kg	40	<0.1	170	0
Phenanthrene	mg/kg	40	1.58	95	0
Anthracene	mg/kg	40	0.43	2,400	0
Fluoranthene	mg/kg	40	5.58	280	0
Pyrene	mg/kg	40	5.67	620	0
Benzo(a)anthracene	mg/kg	40	2.97	7.2	0
Chrysene	mg/kg	40	2.65	15	0
Benzo(b)fluoranthene	mg/kg	40	4.93	2.6	3
Benzo(k)fluoranthene	mg/kg	40	1.67	77	0
Benzo(a)pyrene	mg/kg	40	4.4	2.2	3
Indeno(1,2,3-cd)pyrene	mg/kg	40	2.84	27	0
Dibenzo(a,h)anthracene	mg/kg	40	0.64	0.24	3
Benzo(ghi)perylene	mg/kg	40	2.86	320	0
TPH Aliphatic C5-C6	mg/kg	12	<0.01	42	0
TPH Aliphatic C6-C8	mg/kg	12	<0.05	100	0
TPH Aliphatic C8-C10	mg/kg	12	<2	27	0
TPH Aliphatic C10-C12	mg/kg	12	<2	130	0
TPH Aliphatic C12-C16	mg/kg	12	<3	1,100	0
TPH Aliphatic C16-C35	mg/kg	12	31	65,000	0
TPH Aliphatic C35-C44	mg/kg	12	<10	65,000	0

CONTAMINANT	UNITS	NUMBER OF TESTS	MAXIMUM CONCENTRATION	GAC	NUMBER EXCEEDING GAC
TPH Aromatic C5-C7	mg/kg	12	<0.01	70	0
TPH Aromatic C7-C8	mg/kg	12	<0.05	130	0
TPH Aromatic C8-C10	mg/kg	12	<2	34	0
TPH Aromatic C10-C12	mg/kg	12	<2	74	0
TPH Aromatic C12-C16	mg/kg	12	4	140	0
TPH Aromatic C16-C21	mg/kg	12	68	260	0
TPH Aromatic C21-C35	mg/kg	12	342	1,100	0
TPH Aromatic C35-C44	mg/kg	12	231	1,100	0
Benzene	mg/kg	12	<0.002	0.87	0
Toluene	mg/kg	12	<0.005	130	0
Ethylbenzene	mg/kg	12	<0.002	47	0
Xylene (total of all types)	mg/kg	12	<0.002	56	0
Methyl Tert Butyl Ether (MTBE)	mg/kg	12	<0.005	49	0
Volatile Organic Compounds (VOCs)	mg/kg	4	<0.01	LOD*	0
Semi-Volatile Organic Compounds (SVOCs)	mg/kg	4	<0.01	LOD*	0
Organochlorine Pesticides	mg/kg	10	<0.02	LOD*	0
Asbestos Quantification	%	10	<0.001	Fibres Present	0
Notes: *Limit of detection: Given the large amount of compounds in this group, coupled with the lack of GAC for certain compounds, any concentrations above the limit of detection will be highlighted in the first instance.					

<table>
<tr><th colspan="2">RESULTS EXCEEDING HUMAN HEALTH ASSESSMENT CRITERIA</th></tr>
<tr><td>PH</td><td>The pH was noted to be quite acidic in one of the hand dug pit samples. This relates to the topsoil at HD13 which was located in an area of cleared woodland covered with ferns. The vegetation is likely the source of the acidic soils and it is not considered that this would present any contamination risks to site users.</td></tr>
<tr><td>PAH</td><td>Slightly elevated concentrations of PAHs were recorded in three of the samples of Made Ground. This relates to the Made Ground in the area of former hardstanding at HD8 in the south eastern section of the site, as well as the Made Ground in the small section of ‘landfill’ and adjacent stockpile.

These samples were all noted to contain occasional tarmac and the PAH appears to be associated with this compounds. Benzo(a)pyrene (BaP) is often used as a key marker compound for PAHs and this was recorded at concentrations of up to 4.4mg/kg compared to the GAC of 2.2mg/kg for residential land use.

Recent guidance by DEFRA states that where mixtures of PAH compounds are present, the surrogate marker compound approach can be used to estimate the toxicity of a mixture of PAHs. In light of this, DEFRA has published a Category 4 Screening Value (C4SL) for the use of BaP as a surrogate marker compound representing the 8No. genotoxic PAHs. The C4SL for BaP as a surrogate marker compound is 5mg/kg for the residential with plant uptake land use. The use of BaP as a surrogate marker is only deemed appropriate if the following conditions apply:

• The profile of the PAHs relative to BaP should be similar in all samples.
• BaP must be present in all samples.
• The ratio of the genotoxic PAHs relative to BaP for each sample should fit within the upper and lower limits as detailed below:

<table>
<tr><th>PAH</th><th>Lower limit (fraction of BaP)</th><th>Upper Limit (multiple of BaP)</th></tr>
<tr><td>Benzo(a)anthracene</td><td>0.12</td><td>12.43</td></tr>
<tr><td>Chrysene</td><td>0.12</td><td>11.61</td></tr>
<tr><td>Benzo(b)fluoranthene</td><td>0.11</td><td>10.85</td></tr>
<tr><td>Benzo(k)fluoranthene</td><td>0.04</td><td>3.72</td></tr>
<tr><td>Indeno(1,2,3-cd)pyrene</td><td>0.07</td><td>7.27</td></tr>
<tr><td>Dibenzo(a,h)anthracene</td><td>0.01</td><td>1.38</td></tr>
<tr><td>Benzo(ghi)perylene</td><td>0.08</td><td>8.22</td></tr>
</table>
The 3No. samples of Made Ground containing elevated PAHs fit within these upper and lower limits. It is therefore considered appropriate in this case to adopt the use of BaP as a surrogate marker compound representing these samples.

The maximum BaP concentration recorded in the Made Ground was 4.4mg/kg.

In light of this, it can be seen that all of the BaP concentrations fall below the C4SL value, and therefore it is considered that the PAH concentrations recorded in these areas is unlikely to be significant.</td></tr>
</table>

7.2. WATER ENVIRONMENT

It is not appropriate to consider human health assessment criteria for human health in relation to the risk to the water environment, but currently there are no generic soil assessment criteria in respect of the water environment. In the absence of any groundwater sampling data, the soil results are assessed on the basis of professional judgement.

The contaminant concentrations recorded in the soils at the site are not generally considered to be at such levels that they would present any significant risk to the underlying water environment.

The TPH concentration recorded in HD08, in the area of former hardstanding adjacent to the site entrance, is slightly elevated in relation to the threshold above which potential risks to the groundwater would need to be considered. However, the TPH banding correlates with the PAH concentrations recorded in this sample. These heavy PAHs are considered to be associated with the tarmac fragments noted within the soils. These have very low solubility and mobility within groundwater and therefore, it not considered that the corresponding TPH concentrations are of any significant concern to the groundwater environment.

7.3. BUILDING MATERIALS

CONTAMINANT	UNITS	NUMBER OF TESTS	MAXIMUM CONCENTRATION	GAC	NUMBER EXCEEDING GAC
pH	units	40	4.3-8.0	<5.5	2
Sulphate (w/s)	mg/l	40	47	500	0
Sum of any VOC above detection limits	mg/kg	4	<0.01	0.5	0
Sum of SVOC + Aliphatic TPH >C5-C10 + Aromatic TPH >C5-C10 above detection limits	mg/kg	12	<2	2	0
Sum of Aliphatic TPH >C10-C21 + Aromatic TPH >C10-C21 above detection limits	mg/kg	12	68	10	1
Sum of Aliphatic TPH >C21-C34 + Aromatic TPH >C10-C35 above detection limits	mg/kg	12	445	500	0
Sum of BTEX + MTBE above detection limits	mg/kg	12	<0.005	0.1	0
Phenols	mg/kg	4	<0.1	2	0
Cresols and chlorinated phenols	mg/kg	4	<0.1	2	0
Naphthalene	mg/kg	4	<0.1	0.5	0
Benzo(a)pyrene	mg/kg	4.4	4.4	0.5	6

RESULTS EXCEEDING BUILDING MATERIALS ASSESSMENT CRITERIA	
BENZO(A)PYRENE	A few samples of the identified Made Ground, and one sample of topsoil have recorded concentrations of the Polycyclic Aromatic Hydrocarbon (PAH) benzo(a)pyrene above the limits for the use of conventional polyethylene (PE) water supply pipes. However, all of the locations in question are outside of areas proposed for housing and therefore it is unlikely that this will have any impact on the proposed development.
pH	The acidic pH values recorded in one sample is such that it could detrimentally impact sub-surface concrete. The impact on concrete mix design is a geotechnical issue that is considered separately and so no further comment is made on these results within this contamination assessment. However, it is worth noting that the sample in question was of topsoil and so the result is not unexpected for organic rich soil.

8. RISK ESTIMATION – GAS

8.1. RESULTS SUMMARY

PARAMETER	MINIMUM	MAXIMUM	COMMENTS
Methane	0.0%	0.2%	No significant concentrations recorded.
Carbon Dioxide	0.1%	10.1%	During the first two monitoring visits, carbon dioxide was not recorded above 5% in any of the wells. During the 3rd and 4th visits slightly elevated carbon dioxide was recorded in 2-3 wells including WS01, WS02, WS06 and WS22 at concentrations of up to 6.5% During the latter 6No. visits up to 6No. wells on each visit recoded elevated carbon dioxide at concentrations up to 10.1%. This comprised WS01, WS05, WS06, WS08, WS12, WS14, WS15 and WS22. The slightly elevated carbon dioxide concentrations have therefore been recorded in various locations across the site and are not restricted to any one particular area. There is no correlation with the localised areas of shallow Made Ground (registered landfill) and therefore this is not considered to be the source. Based on a lack of any other source of carbon dioxide, the gases appear to be associated with the natural geochemistry and predominantly within the Grinstead Clay Member. This stratum although not particularly organic, did contain occasional relict rootlets and natural black organic staining. The only other identified trend appears to relate to an increase in carbon dioxide concentrations as the groundwater levels rise. It is therefore possible that the carbon dioxide gases recorded could also relate to the geochemistry of the groundwater or the presence of organic material in the groundwater which could be producing small volumes of carbon dioxide, resulting in higher concentrations in the sealed headspace of the well.
Oxygen	0.0%	21.2%	The oxygen levels were typically depleted as carbon dioxide concentrations increased. Very shallow groundwater resulting in only a small amount of gas in the well also appears to have resulted in depleted oxygen being present in some of the wells.
Hydrogen Sulphide	0ppm	4ppm	No significant concentrations recorded.

PARAMETER	MINIMUM	MAXIMUM	COMMENTS
Carbon Monoxide	0ppm	471ppm	Generally, no significant concentrations of carbon monoxide were recorded across the site. The exception was in WS18 and WS20-22 where higher concentrations were recorded on the latter three visits. However, this coincided with very high groundwater levels in on these visits (<0.2m) and therefore the gas analyser was only ran for a few seconds prior to pumping up water. Therefore the elevated results should be viewed as unreliable and should not be used in the assessment.
Atmospheric pressure	982mB	1028mB	Low pressure was recorded on four of the monitoring visits and falling pressure was recorded on 6No. of the visits. It was also noted that the monitoring throughout October 2020 to January 2021 was an exceptionally unsettled period with high levels of rainfall. Therefore it is considered that a worst-case scenario for ground gas generation has been targeted by the monitoring programme.
Groundwater levels	0.04m	3.94m	During the initial three visits in September and early October 2020 the groundwater levels were all relatively low with only WS17 and WS22 recording shallow levels (<1m) by the third visit. Substantial rainfall then occurred in October 2020 resulting in a significant rise in the groundwater levels across most of the site. Following on from this, from November 2020 to February 2021 a further gradual increase in groundwater levels was observed with 9No. of the 16No. wells recording groundwater levels of less than 1m by the final visit in early March 2021. By early summer 2021, the groundwater generally remained at similarly high levels after a very wet month of May, but had fallen by around 1m in some of the wells. By early July 2021, the water levels had risen slightly again in response to rainfall in June.

PARAMETER	MINIMUM	MAXIMUM	COMMENTS
Flow rate	<0.0 l/hr	2.8 l/hr	On the initial two visits flow rates did not typically exceed 0.1 litres per hour. However, on the third visit WS02 recorded a flow rate of 1.9 l/hr and WS21 recorded a flow rate of 2.7 l/hr. Following on from this, groundwater levels rose substantially throughout October and November 2020 and this rise in groundwater levels appears to have impacted the gas flow regime with a significant increase in the gas flow rates recorded. It should be noted that several of the gas flow rates have been omitted from the assessment in instances where the groundwater level was less than 1m below ground level. In this instance the water had risen up into the top part of the well where there are no perforations to the ground and therefore a pressure build-up occurs as the water rises, known as the 'piston' effect. Excluding the piston effect, very high flow rates were still recorded in WS11 and WS14 on the 4th and 5th visits in November and December 2020 between 7.2 and 21.5l/hr. Whilst the groundwater was not in the upper metre, a substantial rise in groundwater occurred in these wells during this period (up to 1.2m rise between visits) and given the relatively low permeability of the soils encountered, it is still considered that some form of piston effect is occurring in these instances, despite the groundwater level being below the 1m depth (1.14m to 1.39m bgl by the 5th visit). It is accepted that rising groundwater trends can result in increased gas emissions from the surface, but in these instances this is considered to be artificially high. Therefore excluding these artificially high readings, a worst case flow reading of 2.8l/hr is recorded. However, it is still possible that well construction in relatively low permeability soils coupled with the rising groundwater levels could still be the cause of the slightly increased flow rates in the majority of cases.

SENSITIVITY OF DEVELOPMENT	High (Residential with gardens)	
	IDEALISED	**ACTUAL**
MONITORING PERIOD	3 months	9 months
TOTAL NUMBER OF VISITS	6	10
NUMBER OF VISITS DURING FALLING PRESSURE TRENDS	At least two visits	6
COMMENT	The level of gas monitoring completed at the site exceeds the requirement of CIRIA C665 for a low risk site.	

8.2. GAS REGIME CHARACTERISATION

8.2.1. Gas Source

GAS SOURCE	GENERATION POTENTIAL	COMMENTS
Inert landfill	Low	A localised area of inert landfill was identified at the site as part of the desk study. In 2006 BRD received correspondence from the Environment Agency (EA) with regards to the landfill and it is understood that this landfill site related to the infilling of part of a farm field in 1991. An area of approximately 100m x 40m and to a depth of 1.0m was infilled and it is reported that the material included inert subsoils and soils. The subsequent ground investigation has only identified a small area of shallow Made Ground consistent with this information. This is unlikely to generate any significant landfill gases as it is too shallow for anaerobic degradation. It should also be noted that this does not appear to relate to the concentrations of carbon dioxide recorded across the site due to the widespread nature of the slightly elevated concentrations recorded.
Natural soils with low organic content	Negligible	Whilst the gas generation potential is low, it is common for natural soils to record low concentrations of Carbon Dioxide due to limited organic or carbonate content. The geochemistry of the soils and groundwater are likely the cause of the low concentrations of carbon dioxide recorded across the site.

8.2.2. Building Type

In accordance with BS8485:2015+A1:2019, the development is likely to comprise predominantly Type A buildings. These buildings are in private ownership with no controls over the use of and alterations to the building. This building type typically comprises private dwellings.

8.2.3. Gas Screening Values

	CHARACTERISTIC GAS CONCENTRATION (fraction)	CHARACTERISTIC GAS FLOW RATE (l/hr)	GAS SCREENING VALUE (l/hr)
Methane	0.001	2.8	0.0028
Carbon Dioxide	0.101	2.8	0.28
Methodology	BS8485:2015+A1:2019.		
Gas Regime	Based on the calculated GSVs and maximum carbon dioxide concentrations, the site would be classified as CS2 – Low risk which would warrant gas protection measures for the entire proposed residential development. The carbon dioxide recorded at the site appears to relate to the natural geochemistry of the underlying soils and groundwater as there is no significant source for the site-wide gas concentrations recorded. It is also noted that the gas concentrations and gas emission rates have increased as the groundwater levels have risen throughout the winter months. Due to the relatively low permeability soils across the site, this may have resulted in artificially high gas flow rates being recorded. With reference to CL:AIRE Research Bulletin RB17 (2012), natural ground gases such as methane and carbon dioxide are found widely in soils and rocks, as they are an integral component of the geochemical cycle of the Earth. Gas wells are an artificial construction in the ground that can in some specific instances cause high flow rates or gas concentrations from or in the well headspace that are not necessarily representative of sustained surface gas emissions. RB17 proposes an alternative method for assessing low risk site by using the total organic carbon (TOC) content of the soil to ass the potential for gas emissions. Soils with a TOC of less than or equal to 1% with no potential source of gas risk (including Made Ground soils averaging up to 3m thick) are recommended to be classified as CS1 (i.e. very low risk, no gas protection measures required). Two samples of the natural soils at the site have been subject to TOC analysis as part of the chemical testing and these recorded values in the range 0.2% to 0.7% and therefore below the RB17 CS1 value. It is therefore considered that the slightly elevated carbon dioxide concentrations would not be of significant concern, if there was not an associated gas flow as has been recorded at the site. As discussed, the rising groundwater levels appear to have had a significant impact on the flow rates recorded. Due to the relatively low permeability of the soils at the site, the borehole construction is		

	most likely resulting in artificially high pressure build-up in the wells as the groundwater levels were rising. In order to overcome this uncertainty it was proposed to undertake a period of continuous monitoring. The carbon dioxide and gas flow rates could then be monitored continually over a three week period. This would clearly demonstrate how the concentrations of carbon dioxide vary with changing pressure and varying groundwater levels and would also provide a far more accurate measurement of the gas emission rates rather, than allowing an artificial pressure build-up between monitoring visits. The results of the continuous monitoring are discussed in the following section.

8.3. CONTINUOUS MONITORING

As discussed in the previous section, a period of continuous monitoring was commissioned for 5No. of the wells which had recorded the highest carbon dioxide concentrations and the highest gas emission rates during the traditional 'spot' monitoring. The aim was to assess whether or not there is any real gas flow / emission from the ground associated with the slightly elevated naturally occurring carbon dioxide recorded in the wells.

8.3.1. Continuous Gas Monitoring Summary

The continuous monitoring was undertaken from 11th June to 2nd July 2021. Readings are taken every 60 minutes, 24 hours per day throughout this period from 5No. monitoring wells resulting in 504No. data points per well. A series of graphs are presented in the GGS report (included in Appendix 4) to demonstrate the variation in gas concentrations, atmospheric pressure and flow rates over time. A summary of the peak readings recorded throughout this period are presented in the table below.

The continuous monitoring was undertaken from the 5No. wells across the proposed development area which had recorded the highest carbon dioxide concentrations and / or gas flow rates (WS01, WS05, WS06, WS12 & WS14).

Borehole	Max. positive Flow Rate (l/hr)	Max. CH4 (% v/v)	Max. CO2 (% v/v)	Min. O2 (% v/v)	Max. H_2S (ppmv)	Max. CO (ppmv)	Range in water level (m bgl)
WS01	0.1	<0.1	5.2	6.9	<1	19	2.59 – 2.82
WS05	0.1	<0.1	8.7	8.9	1	14	3.93 – 3.97
WS06	<0.1	<0.1	2.5	17.0	2	6	0.75 – 0.90
WS12	<0.1	<0.1	2.1	18.3	<1	<1	1.76 – 2.01
WS14	<0.1	<0.1	1.2	17.0	<1	4	0.00 – 0.55

8.3.2. Carbon Dioxide

The carbon dioxide concentrations detected during the continuous monitoring are noted to be substantially lower than during the 'spot' monitoring with concentrations of over 5% only detected in WS01 and WS05.

Concentration duration analysis shows that in WS01, the carbon dioxide exceeded 5% for only 1.8% of the monitoring period and was generally much lower. In WS05 the carbon dioxide concentrations exceed 5% for 40.1% of the time.

In both wells it can be seen that the carbon dioxide concentrations were only elevated in times of falling or stable atmospheric pressure, but when the pressure was rising the concentrations dropped to zero.

8.3.3. Methane

Methane was not detected in any of the wells during the continuous monitoring, as was the case with the 'spot' monitoring.

8.3.4. Oxygen

Oxygen concentrations were noted to be depleted in WS01 and WS05 at times when the carbon dioxide concentrations increased.

8.3.5. Hydrogen Sulphide and Carbon Monoxide

Hydrogen sulphide was only detected at trace concentrations of up to 2ppm and then only sporadically. Hydrogen sulphide is therefore not a concern.

In WS05 carbon monoxide was recorded at initial concentrations of up to 14ppm then declined to zero after the first few days. It is probable that the localised ground disturbance from changing of the headworks to the borehole triggered a small amount of carbon monoxide generation. Elsewhere sporadic concentrations of up to 6ppm were recorded. Accordingly these readings are not of concern.

In WS01, carbon monoxide was continually recorded at a concentration of 10 to around 19ppm. It is possible that, as with the carbon dioxide, the elevated carbon monoxide readings are related to the natural geochemistry of the soils at the site. The results from the continuous monitoring also contrast with the results of the 'spot' monitoring both by BRD (two different instruments) and GGS instrumentation, where in WS01 no carbon monoxide was detected over the entire 9 month period until the final visit by GGS where a concentration of 5ppm was recorded. It is therefore probable that instrumental error is to blame for the consistently elevated concentrations detected in WS01 during the continuous monitoring.

In the UK and globally, there are no specific guidelines or guidance as to what concentrations of carbon monoxide in the ground could give rise to a gas risk within building. The UK occupational limit for carbon monoxide is 20ppm, but this is for a time weighted average for an eight hour shift. The World Health Organisation (WHO) has developed the a 24 hour indoor guideline value of 6ppm. Whilst the concentrations detected in WS01 during the continuous monitoring exceed both these values, the concentrations would be significantly diluted when emitted from the ground surface and entering the atmospheric air. In addition, as noted within CL:AIRE RB17, new dwellings have inherent precautions against ground gases and so this would further prevent a build up of carbon monoxide within indoor air. It is therefore considered that the naturally occurring carbon monoxide identified would not present a significant risk regardless even if the continuous readings made were valid.

8.3.6. Atmospheric pressure

During the continuous monitoring period the atmospheric pressure was recorded in the range 1002 to 1023mB. Sustained falling pressure was detected for 15.2% of the monitoring period and within this there were three more significant falls in pressure as follows:

- 10mB drop over 31 hours (13-14th June)
- 9mB drop over 17 hours (16th June)
- 8mB drop over 15 hours 19-20th June)

The quickest pressure drop rate from within these periods was 0.6 mB/hr.

The GGS report notes that worst case atmospheric conditions, as defined by CL:AIRE Technical Bulletin 18 (TB18) were not met during the continuous monitoring period. However, long term falling pressure periods were encountered to give a reasonable assessment of the effect of the atmospheric pressure on the gas flow regime. It should also be borne in mind that the main aim of the continuous monitoring is to establish if the shallow / rising groundwater trends have an impact on the gas flow regime. This aspect is discussed in the following section.

8.3.7. Groundwater levels and flow rates

Groundwater levels were varied across the 5No. continuous monitoring wells with 2No. recording groundwater in the upper metre, 1No. at depths in the range 1-2m and 2No at depths greater than 2m. The level trend for each well is presented in the following table:

Borehole	Groundwater trends during continuous monitoring	Maximum gas flow (l/hr)
WS01	Initial water level of 2.59m bgl. Gradually dropped to a minimum of 2.82m bgl then subsequently rose to 2.74m bgl.	0.1
WS05	Minimal change in water level between 3.93m and 3.97 m bgl.	0.1
WS06	Water level initially dropped from 0.79m to 0.90 then subsequently rose to 0.75m bgl.	<0.1
WS12	Initially recorded at 2.00m bgl. Subsequently rose to 1.79m bgl, dropped back to 1.85m bgl then rose back to 1.77m bgl.	<0.1
WS14	Initially recorded at 0.35m bgl. Subsequently dropped to 0.55m bgl then rose up to ground level before dropping slightly to 0.04m bgl.	<0.1

The gas flow rates recorded during the continuous monitoring only detected up to a maximum of 0.1 l/hr compared to a maximum flow rate of 2.8 litres per hour during the spot monitoring.

During the three week monitoring period, periods of rising groundwater were recorded in all five of the wells to varying degrees, with a maximum rise of 0.55m recorded in WS14 over a 13 day period within the continuous monitoring. This rate corresponds with the rates observed in October to December 2020 where levels in some wells rose by around 1m in a four week period between monitoring visits.

It is therefore evident that the when using continuous monitoring methods during periods of rising groundwater, there is no associated increase in gas flows.

8.3.8. Discussion

Slightly elevated concentrations of carbon dioxide have been recorded at the site and this is attributed to the natural geochemistry of the soils. Based on guidance in RB17, the Fraction of Organic Carbon of the soils would indicate that the risk from ground gases at the site would be very low. However, due to shallow / rising groundwater at the site increased flow rates were recorded from the conventional 'spot' monitoring at the site and therefore at that stage the naturally elevated carbon dioxide recorded could still have presented a theoretical risk.

Continuous monitoring was subsequently completed whereby readings of gas, flow rate, atmospheric pressure and groundwater level are recorded every hour for a period of three weeks. This far more detailed monitoring dataset has demonstrated that in times of rising groundwater, the flow rates are not affected. Therefore the elevated flow rates previously recorded can safely be dismissed as being artificial due to the pressure building up over time in the monitoring wells.

Based on the continuous monitoring completed, a worst case GSV for carbon dioxide, based on a maximum concentration of 10.1% and maximum flow rate of 0.1l/hr, is 0.01l/hr would correspond with Characteristic Situation 1.

8.4. GAS PROTECTION MEASURES

8.4.1. Radon Gas

The site is not situated within an area where radon gas protection measures are required in new buildings.

8.4.2. Volatile Organic Compounds

The site is not affected by Volatile Organic Compounds (VOC) contamination.

8.4.3. Methane and Carbon Dioxide

The monitoring and assessment has demonstrated that gas protection measures for methane and carbon dioxide are not required at the site.

9. RISK EVALUATION

9.1. REVISED CONCEPTUAL MODEL

The revised conceptual site model plan is presented in the Appendices.

ADDITIONAL POLLUTANT LINKAGES	No additional sources of contamination were identified during the ground investigation.
INVALID POLLUTANT LINKAGES	Following the intrusive ground investigation, the potentially infilled land in the western part of the site has been found to be largely non-existent and relates to a small area of surface Made Ground at the edge of the woodland, together with a stockpile of waste soil within the woodland. Testing of the soil has not identified any significant soil contamination and gas monitoring has confirmed a lack of gases being emitted at a rate that would present a gas risk. Therefore this is unlikely to have any effect on the proposed development. Coupled with this, no contamination has been identified with the former agricultural use of the site, in particular the chicken sheds and former hardstanding in the south east corner. However, only limited investigation has been undertaken in this area due to it being heavily overgrown. No contamination has been identified at the site from any of the off site sources.
LIMITATIONS AND UNCERTAINTIES	At this stage, a preliminary spread of exploratory holes have been completed at the site, but due to the low risk nature of the vast majority of the site, this will be sufficient for most areas. In the south eastern part of the site where the chicken sheds and some hardstanding once stood, the area is heavily overgrown and only limited ground investigation has been completed. Additional continuous gas monitoring has removed uncertainty in relation to ground gas assessment and this confirmed a lack of risk from ground gases at the site.

9.2. UPDATED CONTAMINATION RISK ASSESSMENT

The pollutant linkages identified in the revised conceptual site model will now be evaluated as to their severity:

SOURCES AND CONTAMINANTS	PATHWAYS (REFERENCE FROM MODEL)	RECEPTORS	POTENTIAL RISK
Infilled land on site (very localised and shallow).	Ingestion Inhalation Consumption of home grown produce	Future residents	Negligible
	Horizontal & vertical migration	Surface water and Groundwater	Negligible
	Direct contact (1)	Building materials and services	Low
Potential localised contamination associated with the chicken sheds and adjacent buildings including asbestos cement sheets. - Petroleum hydrocarbons. - Asbestos Containing Materials (ACM). - Herbicides. - Pesticides.	Ingestion Inhalation Consumption of home grown produce (2)	Future residents	Low*
	Horizontal & vertical migration	Surface water and Groundwater	Negligible
	Direct contact (3)	Building materials and services	Low
Off site farm buildings, tanks and petrol stations in the north of the site. - Petroleum hydrocarbons. - ACM. - Herbicides. - Pesticides. - Biological pathogens.	Horizontal migration leading to: Ingestion Inhalation Consumption of home grown produce	Future users of SANG area	Negligible
Ground gases from presumed natural bedrock across the site	Inhalation	Future residents	Negligible

Notes: * subject to recommended further ground investigation.

The contamination risks that are presented to the various receptor groups are discussed further in the following sections:

RISK TO HUMAN HEALTH
Across the vast majority of the site, no risks to human health have been identified. In the area of former chicken sheds, only a preliminary spread of exploratory holes have been completed as the area is heavily overgrown. This has confirmed a lack of widespread contamination but there remains the potential for localised contamination in this area and some asbestos cement sheeting had been historically identified in this area so a low risk still remains. A detailed gas assessment including continuous monitoring has confirmed that the slightly elevated carbon dioxide recorded from the natural geochemistry of the soils does not present a risk to human health as there is no associated gas flow.

RISK TO WATER ENVIRONMENT
No risks to the groundwater or surface water environment have been identified by this ground investigation.

RISK TO BUILDING MATERIALS AND SERVICES
Two localised areas have been identified where the concentrations of hydrocarbon in the soil, although not exceeding human health thresholds, do exceed the highly stringent water supply pipe thresholds. This relates to the surface Made Ground in the south eastern corner of the site adjacent to the current entrance, as well as a small section at the edge of the woodland in the position of the shallow infilled area. If either of these two areas are to be developed with housing then potential risks to water supply pies will exist. However, it should also be noted that only the surface soils are impacted in both areas so the risks to buried water supply pipes is further reduced. This associated risk can be easily managed through the use of hydrocarbon resistant pipes, for example plastic 'barrier' pipes incorporating an aluminium foil layer or metal pipes. The vast majority of the site is Greenfield in nature and has been shown not to be contaminated. Accordingly normal plastic water pipes could be employed in the vast majority of the site. However, it should be noted that the water pipe specification should always be confirmed with the local water supply company as they may insist on such protective pipes regardless of the level of contamination or remediation.

9.3. RISK MANAGEMENT

9.3.1. Introduction

No contamination risks have been identified across the vast majority of the site. Further investigation is required in order to confirm whether there is any localised contamination in the area of heavily overgrown former chicken sheds.

It is recommended that this report is submitted to the planning department of the Local Authority, the organisation undertaking the Building Control function and warranty providers to confirm that the investigation completed to date is satisfactory.

9.3.2. Further Contamination Assessment

In order to provide further confidence in the risk assessment and to address the limitations and uncertainties identified within the existing conceptual model it is recommended that the following additional investigation elements are completed for contamination assessment purposes:

- It is considered that further exploratory points are required in the vicinity of the former chicken sheds once the area has been cleared of vegetation in order to establish whether or not there are any localised contamination risks in this area. In addition, the soils beneath the former concrete slabs, which are still present, should be inspected.

- Further ground investigation is recommended to increase the density of exploratory points for geotechnical purposes. Such further investigation can also be used to provide further confidence of the general lack of contamination in the proposed development area.

9.3.3. Outline Remediation Strategy

Due to the absence of contamination risks across the majority of the site, no remediation is considered necessary in these areas.

Depending on whether any localised contamination is identified in the area of former chicken sheds, then either off site removal or some form of capping layer are likely to be the most appropriate solution, dependent on the proposed and use for this area.

Any remediation works should be supervised and verified by an experienced Geo-Environmental Consultant. The remediation works should be documented in a Verification Report.

9.4. WASTE SOIL DISPOSAL

Topsoil should be viewed as a resource rather than a waste. As the topsoil is suitable for residential garden use in terms contamination, the topsoil at the site should be stripped and the surplus reused on other developments. It should be noted that topsoil, even if uncontaminated, is unlikely to constitute 'inert waste' due to its high organic matter content.

Subject to further investigation in some localised areas, it is considered that any natural sub-soils or localised Made Ground disposed of from the site would be classified as 'non-hazardous waste' and would be characterised for disposal to landfill as 'inert waste'. However, the chemical results should be forwarded to the proposed landfill site and the waste classification confirmed prior to disposing of any surplus soils. Waste Acceptance Criteria (WAC) testing of the soils will also be required where the soil is to be disposed of at a landfill permitted to accept inert waste. Such WAC testing has been completed and the results are in the Appendices which confirm the soil tested complies with the inert waste limits. The only exception is that one of the samples recorded marginally elevated concentrations of antimony. However, the soils were naturally occurring and this is thought to relate to the natural mineralogy or an analytical anomaly rather than any contamination source. The waste code from the European Waste Catalogue (EWC) 2002 for the soils would be 17 05 04 'Soil and Stones, not containing dangerous substances'.

10. HEALTH AND SAFETY FILE INFORMATION

10.1. INTRODUCTION

The aim of the following sections is to present pertinent Health and Safety information that has arisen from the current investigation/survey works discussed in this report. The aim is to identify health and safety controls that may be necessary during any subsequent maintenance, refurbishment, demolition or construction works. The information is not exhaustive and stems only from the aspects identified within the scope of the works undertaken by BRD.

Where BRD has been appointed as a Principal Contractor, then this information shall form the Health and Safety Files as required by the Construction Design and Management (CDM) Regulations 2015.

Reports are always forwarded to the Client and they shall be responsible for ensuring this safety information is disseminated to those who need it.

The works undertaken by BRD are detailed in the previous sections of this report.

10.2. HAZARDS

During the course of the BRD works the following noteworthy safety hazards have been identified:

10.2.1. Contamination

Although no soil contamination has been identified, as with any construction site, if any anomalous material is encountered during the redevelopment then expert environmental advice should be sought.

10.2.2. Asbestos

Based on historic site inspections, there is likely to be asbestos cement debris in the area of former chicken sheds but this section of the site is now heavily overgrown. Further investigation is required in this area, but during the vegetation clearance in this area, the potential presence of asbestos should be considered within health and safety plans.

In accordance with Health and Safety Executive (HSE) guidance, a 'Refurbishment Demolition Survey' (RDS) should be undertaken to identify whether or not asbestos containing materials are present in the existing structure(s) prior to demolition or refurbishment. The results of the survey should then be used to plan for the safe management, removal and disposal of asbestos containing materials from the existing buildings and infrastructure should such materials be present.

10.2.3. Other Issues

There are steep ravines within the areas of woodland in the main southern part of the site, as well as open water hazards associated with water present at the base.

10.3. EXISTING STRUCTURES

BRD recommend that advice on existing structures is gained from a qualified and experienced Building Surveyor or Structural Engineer.

10.4. HAZARDOUS MATERIALS

BRD did not construct anything with hazardous materials.

Any soils to be imported to the site, in particular topsoil, should be tested to confirm their suitability in the development.

10.5. UTILITY SERVICES

No previously unidentified utility services were encountered during the BRD works.

The utility services plans held by the Client should be referred to.

REPORT SPECIFIC REFERENCES

- British Geological Survey sheet 303 "Tunbridge Wells" Solid and Drift edition (1:50,000) published 1971.
- 'Phase 1 Geo-Environmental Desk Study – Downlands Farm, Uckfield', BRD Environmental Ltd, ref. BRD200653-OR2-C, dated January 2022.
- 'Downlands Farm, Uckfield, Phase 1 Desk Study', BRD Environmental Ltd, ref. 200653/OR1 Version A, dated November 2006.
- 'WHO guidelines for indoor air quality: selected pollutants', World Health Organization, 2010.
- 'EH40/2005 - Workplace exposure limits', HSE, Fourth Edition 2020.

SUPPORTING INFORMATION

GROUND INVESTIGATION

Exploratory holes are logged by an experienced Geo-Environmental Consultant in general accordance with 'Code of practice for site investigations' BS5930:2015, British Standards Institution, 2015. Soil samples for chemical and geotechnical analysis are taken from the exploratory holes at intervals dictated by the nature of the soils and the objectives of the investigation.

Where stated on the logs of inspection pits, trial pits or boreholes (where insitu testing has not been undertaken), the relative density of coarse (sand and gravel) soils is tentative only. Such assessments of density are on the basis of visual inspection only taking into consideration such factors as drilling rates, stability of pit side walls, appearance and behaviour under excavation.

Where Chalk strata is encountered it is logged and graded in general accordance with CIRIA guidance 'C574 – Engineering in Chalk'. It should be recognised that where percussive drilling methods are employed, the structure of the Chalk is destroyed and therefore the grading stated on such logs is either tentative or absent where it is not possible to assess the grade.

Hand Dug Inspection Pits

Hand tools are used to forward shallow inspection pits as a cost effective method of describing and sampling near surface soils. The technique is also used where exposure of existing footings is required. The depth reached by such techniques is a function of the nature of the ground and generally does not exceed 1.5m

Trial Pits

Mechanically excavated trial pits allow detailed inspection of near surface ground due to the large volume of soil exposed. A wheeled backhoe loader is the usual machine for digging trial pits that are typically 3 to 4.5m deep, 0.5m wide and 3m long.

Windowless Sampling Boreholes

This type of borehole is formed by a small tracked dynamic percussion drilling rig with samples retrieved in thin plastic liners within the narrow diameter steel sampling tubes. Borehole depths of up to 5m are typical, but in exceptional circumstances up to 15m depth can be achieved. This is the smallest type of rig that is capable of undertaking Standard Penetration Tests (SPTs).

Hand Held Window Sampling

Hand held window sampling is a useful method of drilling narrow diameter boreholes particularly where access is difficult. Hand held mechanical percussive hammers are used to drive the sampling tube into the ground. The soil samples are collected within the hollow metal sampling tubes and inspected via the open window along one side. Window sampling boreholes can be forwarded to depths of 3m to 6m depending upon ground conditions.

Cable Percussive Boreholes

This form of drilling involves repetitive dropping of a tube into the soil under its own weight from a tripod support. The sample is obtained from the clay cutter head in fine soils or a bailer for wet granular soils. As the borehole progresses SPTs can be undertaken and relatively undisturbed samples can be obtained. Typically these boreholes are 15 to 25m deep, but depths of double that can be achieved in soils, but only thin weak rock layers can be penetrated.

Rotary Boreholes

Where competent rock is required to be drilled then rotary drilling techniques are required. The drilling rigs can vary in size from small tracked units to larger units mounted on four wheel drive trucks. Rotary open hole drilling techniques break the rock into small fragments and so recovery of any samples is limited. In contrast, rotary coring retrieves excellent samples. Some rigs also allow windowless sampling to be undertaken through soil layers. There are no practical limits to the depths that this drilling method can achieve.

Dynamic Probing

Dynamic probing comprises a sectional rod with a sacrificial cone at the base of slightly larger diameter than the rod. The rod is driven into the ground by a constant mass falling through a set distance. The number of blows required to forward the rod per 100mm is then recorded and presented in a graph of N_{10} values. The standard applicable to dynamic probing is "BS EN ISO 22476-2:2005 Incorporating corrigendum no. 1, Geotechnical investigation and testing — Field testing — Part 2: Dynamic probing" BSi, February 2007.

Static Cone Penetration Tests

Cone Penetration Tests (CPT) consist of pushing a conical 60° cone into the ground at a constant rate and recording the force required to do this. Sensors in the cone record other information and this data can be correlated to a number of different geotechnical parameters.

Dynamic Penetrometer

The Transport Research Laboratory Dynamic Cone Penetrometer (TRL DCP) uses an 8 kg hammer dropping through a height of 575mm to drive a 60° cone of 20mm maximum diameter into the ground. The depth driven either per blow or per several blows is recorded. The strength of each of the soil layer encountered is then calculated by converting the penetration rate (mm per blow) into an approximate California Bearing Ratio (CBR) value employing the correlation proposed by TRL.

Gas Monitoring

Gas monitoring is undertaken with a portable gas monitor for oxygen, Methane, Carbon Dioxide, Hydrogen Sulphide and Carbon Monoxide together with recording of atmospheric pressure and any flow rate.

Vapour Monitoring

Headspace tests and monitoring for Volatile Organic Compounds (VOC) or Semi Volatile Organic Compounds (SVOC) is undertaken using a Photo Ionisation Detector (PID). The MiniRAE models used have a 10.6 eV lamp calibrated for isobutylene. The PID is useful tool to indicate the presence of a wide range of volatile compounds, but only provides semi-quantitative data as different compounds provide a different response and thus the reading is not a true reflection of the actual concentration present.

Low PID readings can be recorded in natural uncontaminated organic soils or even as a result of atmospheric pollution. It is generally accepted by consultants and regulators that recorded values in excess 50 parts per million (ppm) represents the presence of organic compound pollutants and in excess of 100 ppm such contamination may be significant.

The headspace test procedure involves the collection of a sample of suspected contaminated soils and placing within a sample bag. A tight seal to the bag is formed with a similar volume of air trapped to that of the soil and the sample is left for fifteen minutes to allow volatilisation of any contaminants. The bag is then pierced by, and sealed around, the sample probe of the PID and a reading taken.

Borehole well monitoring is undertaken by connecting the PID directly to the gas tap on the monitoring well installation.

Groundwater Level Monitoring

Groundwater levels are recorded with an electronic dip meter that has a detector end that is lowered into the borehole well. An audible signal is made when water is reached and the depth recorded from the graduated tape used to lower the detector. Where there is potential for a separate Light Non Aqueous Phase Liquid (LNAPL) to be present floating on the groundwater an oil/water interface meter is used in preference to a conventional dip meter so that any such floating product can be detected.

Geotechnical Sampling

BRD schedule a range of geotechnical testing as appropriate to the identified ground conditions, available budget and the proposed development. Different types of soil samples are obtained as appropriate to the ground conditions and planned testing.

SAMPLE TYPE	*SYMBOL USED ON LOGS*	*DESCRIPTION*
Disturbed	*D*	*Small disturbed soil samples of about 1 to 2 kg are collected in plastic bags.*
Bulk	*B*	*Large disturbed bulk samples up to about 20 to 30 kg are collected in plastic bags*
Undisturbed	*U*	*'Undisturbed' samples generally collected in plastic or metal tubes within cable percussive boreholes of 100mm diameter for samples of fine soils of firm to stiff consistency. Can also be representative of samples taken by cutting plastic sample liners from windowless sampling drilling methods. It is recognised that such samples do not generally meet Eurocode sample quality requirements for the tests commonly employed. However, given the wealth of experience with these sampling methods this continues to be common in United Kingdom practice particularly for less sensitive developments where more expensive sampling techniques are not economically justifiable.*
Undisturbed	*UT*	*A thin walled steel sampler developed by Archway Engineering called a UT100 in an attempt to gain better quality samples of soft to firm fine soils when using cable percussive drilling methods.*

Contamination Sampling

BRD schedule contamination testing as appropriate to the ground conditions, available budget, potential contaminants and the proposed development. Samples are collected in single use laboratory supplied containers.

Soil samples are retrieved in plastic containers and/or amber glass jars with a lined plastic cap. Contamination samples are indicated by a 'J' on exploratory hole logs.

Water samples are collected in plastic bottles and/or amber glass jars with a lined plastic cap then placed in cool boxes together with freezer packs. Water samples are indicated by a 'W' on exploratory hole records, but generally such samples are not tested as testing from dedicated monitoring wells is preferred for sample quality reasons.

Samples retrieved from the exploratory holes are dispatched to the laboratory by overnight courier. Where samples cannot be transported directly from site they are temporarily stored in the BRD dedicated sample storage facility which includes refrigeration where necessary. The individual accreditation of the test methods is detailed in the laboratory test report.

GEOTECHNICAL ASSESSMENT

Under Eurocode 7 (EC7) the following risk ranking is applied to geotechnical projects:

GEOTECHNICAL CATEGORY	*DESCRIPTION*
1	*Small and relatively simple structures for which it is possible to ensure that the fundamental requirements will be satisfied on the basis of experience and qualitative geotechnical investigations with negligible risk. For example, straightforward ground conditions, local experience, no excavation below the water table unless this will be straight forward.*
2	*Conventional types of structures and foundations. No difficult soil or loading conditions. Quantitative geotechnical data and laboratory testing. Routine procedures for field and laboratory testing. Conventional structures and no exceptional geotechnical risk. For example, spread, raft and piled foundations, retaining walls, bridge piers and abutments, embankments, ground anchors, tunnels and excavations.*
3	*Those structures not in Categories 1 and 2 such as very large or unusual structures, structures involving abnormal risks, or unusual or exceptionally difficult ground or loading conditions. Structures in highly seismic areas. Structures in areas of probable site instability or persistent ground movements that require separate investigation or special measures.*

GEOTECHNICAL PARAMETERS

Soakage Tests

Soakage tests comprise the filling of a test pit with water and recording the time taken for the water to drain away. The tests are undertaken in general accordance with 'Digest DG 365: Soakaway design' BRE, Revised 2016. The test pits are usually gravel filled for safety with a slotted vertical pipe through which water observations are made. Water is generally supplied by a tanker to allow fast filling of the pits with water. Compliant tests are filled and allowed to drain near empty three times.

Standard Penetration Tests

The standard penetration test (SPT) determines the resistance of soils at the base of a borehole to the dynamic penetration of a split barrel sampler and the recovering of disturbed samples for identification purposes. In gravelly soils and some soft rocks a solid cone is used in preference to the sampler.

The basis of the test consists in driving a sampler by dropping a hammer of 63.5 kg mass on from a height of 760 mm. The number of blows (N value) necessary to achieve a penetration of the sampler of 300 mm is recorded. The test is described in 'Geotechnical investigation and testing — Field testing — Part 3: Standard penetration test - BS EN ISO 22476-3:2005 Incorporating corrigendum no. 1', BSi, 2007.

The uncorrected N values of the SPT tests are recorded upon the borehole logs together with a record of blows for each 75mm test portion including the seating blows. Where the full test depth cannot be achieved due to refusal on hard stratum, the number of blows and the distance achieved is recorded and the N value given as >50. The abbreviation SPT(c) is used upon the logs indicates that the test was performed with a solid cone rather than a split spoon sampler.

It is necessary to apply a correction to the N values to account for the effects of energy delivery using the equation: $N_{60} = \frac{E_r}{60} N$ *where* E_r *is the energy ratio of the specific test equipment.*

In the case of tests in sand, for the effects of overburden and rod length the equation is modified to $N_{60} = \frac{E_r}{60} \; x \; \lambda \; x \; C_N \; x \; N$ *where* λ *is the correction factor for energy losses due to the rod length and* C_N *is the correction factor for vertical stress due to overburden of the soil.*

Sulphate

In order to compare the laboratory soil test results with 'Concrete in aggressive ground. BRE Special Digest 1: 2005' (BRE, 2005) laboratory results are converted to SO_4 *mg/l. Laboratory results expressed as* SO_3 *g/l and are multiplied by a factor of 1200 to express the results as* SO_4 *mg/l.*

Index Property Tests

In accordance with National House Building Council (NHBC) Standards Chapter 4.2 – Building near trees, the laboratory plasticity indexes are assessed against their volume change potential. The Modified Plasticity Index is defined as the Plasticity Index of the soil multiplied by the percentage of particles with a nominal diameter of less than 425µm. Whilst the NHBC Standards were developed for residential buildings, the advice is equally applicable to a large number of other types of low rise structures.

Hand Shear Vane

The undrained shear strength of the fine (i.e. clay) soils at the site can be established using hand shear vane apparatus. Usually three readings are taken at every depth tested and the uncorrected results recorded on the exploratory point log. Shear vane readings from depths below 1.2m depth in trial pits are from tests performed on excavated soil. In accordance with Eurocode 7 — Geotechnical design — Part 2: Ground investigation and testing EN 1997-2:2007 the results should be corrected. BRD employ only simple correction methods as the more complex correction methodologies imply undue accuracy to a test that has distinct disadvantages and limitations.

Pocket Penetrometers

The Pocket Penetrometer is a lightweight instrument for use by field personnel to check visual classification of soils. It is a simple test and there is inherent uncertainty related to the small volume of soil being tested and so the results should be used with appropriate caution. Pocket penetrometers are calibrated in terms of unconfined compressive strength and once converted to undrained shear strength (divide by two) the results are further reduced by a factor of 1.5 - 2.0 as the device tends to overestimate strengths.

Instrument Reading (uncompressive strength in kg/cm^2)	*Indicative Undrained Shear Strength (kN/m^2)*	*Indicative Consistency*	*Indicative strength*
1.0	*25 - 33*	*Soft*	*Low*
1.5	*38 - 50*	*Soft to firm*	*Low to medium*
2.0	*50 - 67*	*Firm*	*Medium*
2.5	*63 - 83*	*Firm to stiff*	*Medium to high*
3.5	*88 - 116*	*Stiff*	*High*
4.5	*113 - 150*	*Stiff to very stiff*	*High to very high*

CONTAMINATION ASSESSMENT METHODOLOGY

UK Policy

The UK Government's policy in relation to land affected by historic contamination is based on a 'suitable for use' approach. The approach recognises that the risks presented by any given level of contamination will vary greatly according to the use of the land and a wide range of other factors, such as the underlying geology of the site. Contamination risks therefore need to be assessed on a site-by-site basis. The 'suitable for use' approach limits requirements for remediation to the work necessary to prevent unacceptable risks to human health or the environment in relation to either the current use or future use of the land.

The three main drivers for contamination assessment and remediation are:

- *Voluntary action.*
- *Development as part of the planning regime.*
- *Regulatory action to mitigate unacceptable risks e.g. Part 2A of the Environmental Protection Act 1990.*

Pollutant Linkages

For a contamination risk to exist there must be a 'pollutant linkage' from the contaminant (source) via a pathway (the route from contaminant to receptor) to a receptor (the entity that could be harmed). The absence of a contaminant, pathway or receptor breaks the pollutant linkage and therefore no contamination risk exists.

Contamination is typically present at a site (in the ground and/or in the underlying groundwater) as a result of a historic or current industrial use, usually as a result of leaks, spills or disposal of residues, wastes and excess raw materials from the industrial processes. Contamination may also be present due to:

- *The deliberate application of chemicals e.g. the spraying of herbicide/pesticide.*
- *Migration of pollutants from adjacent land.*
- *Naturally occurring processes e.g. elevated concentrations of particular heavy metals associated with specific geological strata.*

Conceptual Site Model

The conceptual site model can be defined as a textual or graphical representation of the identified pollutant linkages for a given site. The model forms the basis for designing the investigation as the aim will be to target all of the potential pollutant linkages to determine, through the subsequent phases of risk assessment, whether or not they pose an actual risk.

It is important that the conceptual site model is updated with new information as the various investigation, risk assessment and remediation works are completed.

Technical Guidance

The technical and legal framework for contamination assessment is complex. The process adopted through this report for assessing contamination risks is in general accordance with the following guidance, as listed below:

- *'Investigation of Potentially Contaminated Sites - Code of Practice - BS 10175:2011+A2:2017', The British Standards Institution 2017.*
- *'Model Procedures for the management of Land Contamination - CLR Document No. 11', Environment Agency, 2004.*
- *'Guidance for the safe development of housing on land affected by contamination - R&D66: 2008', NHBC/Environment Agency, 2008.*

Risk Assessment Methodology

In line with the technical guidance, the contamination risk assessment follows a series of phased stages for each particular site:

PHASE	*DESCRIPTION*	*RISK ASSESSMENT STAGE*
PHASE1	*Generally limited to desk based research and a site walkover survey to develop an initial conceptual site model and identify what risks, if any, are likely to be presented by the site.*	*Hazard Identification and Assessment* *A preliminary stage of risk assessment concerned with identifying and characterising the hazards that may be associated with a particular site and identifying potential pollutant linkages.*
PHASE 2	*This phase is concerned with establishing whether contamination is present, usually through intrusive ground investigation, and then evaluating the degree and magnitude of the associated risks.*	*Risk Estimation* *A stage concerned with estimating the likelihood that receptors will suffer adverse effects if they come into contact with, or are otherwise affected by, a hazardous substance or agent under defined conditions.* *Risk Evaluation* *A stage of risk assessment concerned with evaluating the acceptability of estimated risks, taking into account the nature and scale of the risk estimates, any uncertainties associated with the assessment and the broad costs and benefits of taking action to mitigate risks.*
PHASE 3	*The appraisal and selection of remediation techniques, their implementation and verification.*	*Risk Management* *The process whereby decisions are made to accept a known or assessed risk and/or the implementation of action to reduce the consequences or probabilities of occurrence.*

Risk Classification

The objective of risk assessment is to identify the nature and magnitude of the potential risks and should be based on a consideration of both:

- *The likelihood/probability of an event [taking into account both the presence of the hazard and receptor and the integrity of the pathway].*
- *The severity of the potential consequence [taking into account both the potential severity of the hazard and the sensitivity of the receptor].*

There is a need for a logical, transparent and repeatable system in defining the categories of severity of consequence and likelihood as well as for the risk itself and therefore the following risk rating matrix is employed:

		SEVERITY OF CONSEQUENCE			
		SEVERE	MEDIUM	MILD	MINOR
PROBABILITY	HIGH LIKELIHOOD	Very High Risk	High Risk	Moderate Risk	Moderate/Low Risk
	LIKELY	High Risk	Moderate Risk	Moderate/Low Risk	Low Risk
	LOW LIKELIHOOD	Moderate Risk	Moderate/Low Risk	Low Risk	Negligible Risk
	UNLIKELY	Moderate/Low Risk	Low Risk	Negligible Risk	Negligible Risk

These risk classifications are defined as follows:

- *Very High Risk - There is a high probability that severe harm could arise to a designated receptor from an identified hazard at the site without appropriate remediation action.*
- *High Risk - Harm is likely to arise to a designated receptor from an identified hazard at the site without appropriate remediation action.*
- *Moderate Risk - It is possible that without appropriate remediation action harm could arise to a designated receptor. It is relatively unlikely that any such harm would be severe, and if any harm were to occur it is more likely that such harm would be relatively mild.*
- *Low Risk - It is possible that harm could arise to a designated receptor from an identified hazard. It is likely that, at worst if any harm was realised any effects would be mild.*
- *Negligible Risk - The presence of an identified hazard does not give rise to the potential to cause harm to a designated receptor.*

This risk assessment matrix and classification system is based on guidance produced by Department for Environment, Food and Rural Affairs (Defra) and the Environment Agency in connection with contaminated land assessment.

RISK ESTIMATION - SOILS

Introduction to Soil Human Health Generic Assessment Criteria (GAC)

The Environment Agency (EA) and Department of Environment Food and Rural Affairs (DEFRA) had previously issued revised guidance following the consultation about the DEFRA publication "Assessing risks from land contamination – a proportionate approach. Soil Guideline Values: the Way Forward". This resulted in a revised version of the Contaminated Land Exposure Model (CLEA) model (version 1.06) and a few of the previously published Soil Guideline Values (SGVs) were revised.

The main legislative driver for dealing with historical land affected by contamination is Part 2A of the Environmental Protection Act 1990. Revised Statutory Guidance to support Part 2A was published in April 2012. This Guidance introduced a new four-category system for classifying land under Part 2A for cases of a Significant Possibility of Significant Harm to human health,1 where Category 1 includes land where the level of risk is clearly unacceptable and Category 4 includes land where the level of risk posed is acceptably low. The impact assessment for the new Statutory Guidance stated "The new statutory guidance will bring about a situation where the current SGVs/GACs are replaced with more pragmatic (but still strongly precautionary) Category 4 screening levels (C4SLs) which will provide a higher simple test for deciding that land is suitable for use and definitely not contaminated land". The C4SLs are still derived using the CLEA model, but adopt a slightly different approach to toxicological assessment and exposure modelling.

In March 2014, the outcome of "SP1010 – Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination - Final Project Report" (CL:AIRE) was published. Due to slightly ambiguous wording within this report, Lord de Mauley, Parliamentary Under Secretary, DEFRA wrote to all local authorities on 3 September 2014 to confirm that the published C4SLs were final and that they can be used in risk assessment undertaken under the planning regime.

Whilst there are proposals for the industry to develop C4SLs for other contaminants, these have yet to produce any new values. BRD do not believe that C4SLs could be developed by a single organisation with sufficient confidence. BRD has therefore employed other, more conservative guidance based on the CLEA model (detailed below) within this assessment for compounds where C4SLs are not available. However, it should be noted that the results of this investigation may need to be reinterpreted as new C4SLs become available.

Due to the limited number of published C4SL values at this time, the Chartered Institute of Environmental health (CIEH) and Land Quality Management Ltd (LQM) have produced Generic Assessment Criteria (GAC) known as Suitable for Use Levels (S4ULs), for use in contaminated land human health risk assessment. These S4ULs (2014) have been derived for a large number of substances using the current CLEA model and are therefore consistent with current guidance. They also incorporate the revised exposure parameters as adopted by the C4SL programme, but have not adopted the revised toxicological approach adopted by the C4SLs and so remain a more conservative assessment criteria. The substances for which SGVs were previously published have also been revised as new S4ULs in light of the new exposure parameters proposed by the C4SL programme, and therefore effectively replace the existing SGVs.

In addition, in December 2009, other GAC for less common substances were produced by the Environmental Industries Commission (EIC), The Association of Geotechnical and Geoenvironmental Specialists (AGS) and Contaminated Land: Applications in Real Environments (CL:AIRE) using the CLEA model. These are referred to as the EIC/AGS/CLAIRE GAC.

In summary, C4SLs have been used where these are available. For those substances where C4SLs have yet to be issued, then the S4ULs have been adopted or in some cases, the EIC/AGS/CLAIRE GAC. All of the previously produced SGVs have now either been withdrawn, or superseded by the respective C4SLs or S4ULs.

The only exception to this approach is the PAH compound benzo(a)pyrene (BaP) where a C4SL guideline value has been produced, whereas BRD has adopted the S4UL value. The C4SL for BaP relates to its use as a surrogate marker compound representing all of the genotoxic PAH compounds as a mixture, rather than this individual compound. BRD has therefore adopted the compound specific S4UL value as the initial screening value, for consistency with the other PAH compounds before then employing the C4SL is necessary.

It should be noted that unless otherwise stated, all the assessment criteria adopted within this report have been derived based on a sandy loam soil at pH 7 and the values quoted are for a conservative soil organic matter content of 1% where applicable (i.e. organic contaminants).

Human Health - Soil Generic Assessment Criteria

The results of the soils analysis have been compared to generic assessment criteria for the default exposure scenarios comprising either residential land with plant uptake, residential land without plant uptake, or commercial/industrial land use. The criteria values selected are listed in the table below and full details on the source are referred to above. Where applicable, the results have also been assessed with reference to the required statistical tests presented within CLAIRE document "Guidance on comparing soil contamination data with a critical concentration".

ANALYSIS	GENERIC ASSESSMENT CRITERIA (mg/kg unless stated)			SOURCE
	RESIDENTIAL WITH PLANT UPTAKE	RESIDENTIAL WITHOUT PLANT UPTAKE	COMMERCIAL / INDUSTRIAL	
Arsenic	37	40	640	C4SL
Cadmium	22	150	410	
Chromium (total)[$]	910	910	8,600	S4UL
Chromium VI	21	21	49	C4SL
Lead	200	310	2,330	
Mercury*	11	15	320	S4UL
Selenium	250	430	12,000	
Nickel	180	180	980	
Copper	2400	7,100	68,000	
Zinc	3,700	40,000	730,000	
pH	<5 - 10> units			Professional judgement
Naphthalene	2.3	2.3	190	S4UL
Acenaphthylene	170	2,900	83,000	
Acenaphthene	210	3,000	84,000	
Fluorene	170	2,800	63,000	
Phenanthrene	95	1,300	22,000	
Anthracene	2,400	31,000	520,000	
Fluoranthene	280	1,500	23,000	
Pyrene	620	3,700	54,000	
Benzo(a)anthracene	7.2	11	170	
Chrysene	15	30	350	
Benzo(b)fluoranthene	2.6	3.9	44	
Benzo(k)fluoranthene	77	110	1,200	
Benzo(a)pyrene	2.2	3.2	35	
Indeno(1,2,3-cd)pyrene	27	45	500	
Dibenzo(a,h)anthracene	0.24	0.31	3.5	S4UL
Benzo(ghi)perylene	320	360	3,900	
TPH Aliphatic C5-C6	42	42	3,200	
TPH Aliphatic C6-C8	100	100	7,800	
TPH Aliphatic C8-C10	27	27	2,000	
TPH Aliphatic C10-C12	130	130	9,700	
TPH Aliphatic C12-C16	1,100	1,100	59,000	
TPH Aliphatic C16-C35	65,000	65,000	1,600,000	
TPH Aliphatic C35-C44	65,000	65,000	1,600,000	

ANALYSIS	GENERIC ASSESSMENT CRITERIA (mg/kg unless stated)			SOURCE
	RESIDENTIAL WITH PLANT UPTAKE	RESIDENTIAL WITHOUT PLANT UPTAKE	COMMERCIAL / INDUSTRIAL	
TPH Aromatic C5-C7	70	370	26,000	
TPH Aromatic C7-C8	130	860	56,000	
TPH Aromatic C8-C10	34	47	3,500	
TPH Aromatic C10-C12	74	250	16,000	
TPH Aromatic C12-C16	140	1,800	36,000	
TPH Aromatic C16-C21	260	1,900	28,000	
TPH Aromatic C21-C35	1,100	1,900	28,000	
TPH Aromatic C35-C44	1,100	1,900	28,000	
Benzene	0.87	3.3	98	C4SL
Toluene	130	880	56,000	S4UL
Ethylbenzene	47	83	5,700	
Xylene^	56	79	5,900	
MTBE	49	73	7,900	EIC/AGS/CL:AIRE GAC

Notes:
** The S4UL for methyl mercury has been adopted as the worst case mercury compound as generally there is no desk study evidence to suggest the potential for elemental mercury on the majority of sites.*
^ The lowest S4UL of either p-xylene, o-xylene or m-xylene has been adopted for each land use as a conservative measure.
$ S4UL for Chromium III adopted, as in the absence of Chromium VI it is likely that all of the chromium will be in this form as these are the two most common and stable forms of chromium in the soil environment.

Where no GAC is available, any concentrations exceeding the laboratory limit of detection are identified and discussed in more detail.

Water Environment - Soil Generic Assessment Criteria

There are no UK published Generic Assessment Criteria for soil test results in respect of the risk to the water environment and therefore risk estimation is on the basis of the professional judgement and experience of BRD to employ values that are a reasonable concentration above which concern for water resources is valid.

The Total PAH GAC employed is the sum of the 16No. priority PAH compounds regularly tested for in contaminated land analysis (i.e. US EPA 16PAHs). BRD employ a soil screening based upon the total PAH limit for 'inert waste' of 100mg/kg. The rationale is based on PAHs are recognised to be generally of low solubility and the risk to the water environment is correspondingly low.

In respect of Total Petroleum Hydrocarbons, BRD employ a value of 500 mg/kg as a screening value in comparison to the sum of the component aliphatic and aromatic TPH carbon bands. The employed soil screening value is based upon:

- *In common with some other consultants, the professional judgement and experience of BRD suggests that this value is a reasonable concentration above which concern for water resources is valid. The rationale is based on the fact that lower concentrations of fuel based contaminants are more likely to naturally degrade than migrate any great distance.*

- *BRD is aware of regional Environment Agency groundwater and contaminated land teams historically employing 500 mg/kg as a screening value for considering whether or not TPH could represent a risk to water resources.*

- *The value mirrors the mineral oil Waste Acceptance Criteria limits for what is considered 'inert waste'.*

Should elevated contaminants that pose a potential risk to the water environment be identified then site specific assessment criteria should be developed.

Building Materials and Services – Soil Generic Assessment Criteria

Some hydrocarbon compounds are known to both attack and permeate through certain plastic pipe materials, with the primary concern being the degradation and tainting of water supplies. The UK Water Industry Research (UKWIR) has therefore produced a document 'Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites' (ref. 10/WM/03/21) that specifies threshold criteria for the adoption of 'standard' polythene (PE) or PVC pipes, protective barrier pipe and ductile iron/steel/copper pipes.

The UKWIR threshold assessment criteria from Table 3.1 of this document for standard PE pipes have been employed. It should be noted that the approach taken by UKWIR is very conservative, and both the document and research are flawed. However, it is these values that are being using to specify water pipe materials and therefore it is appropriate to consider them.

The UKWIR guidance is particularly flawed in respect of the chemical analysis it expects as it seeks a limit of detection that is generally below limits that are reasonable or commonly employed in contaminated land assessment. The UKWIR seeks that where a substance is below the limit of detection it should be taken as being present at half this concentration. For the larger suite of chemicals where the limit is against a sum of compounds, this approach would mean that a sample of virgin sub-soil from a greenfield site with absolutely no contamination would actually fail the criteria for using standard PE pipes. To avoid this situation, BRD have adopted the approach of summing only those compounds detected above their respective limits of detection.

In terms of building materials, the primary concern is in respect of concrete as certain commonly occurring natural ground conditions can adversely impact on buried concrete as discussed in 'Special digest 1:2005 Concrete in aggressive ground', BRE, 2005.

ANALYSIS	*GENERIC ASSESSMENT CRITERIA*	*SOURCE*
pH	*<5.5*	*BRE Special Digest 1:2005*
Sulphate (w/s)	*500 mg/l*	*BRE Special Digest 1:2005*
Sum of any VOC above detection limits	*0.5 mg/kg*	*Relevant compounds adapted from UKWIR Table 3.1*
Sum of SVOC + Aliphatic TPH >C5-C10 + Aromatic TPH >C5-C10 above detection limits	*2 mg/kg*	
Sum of Aliphatic TPH >C10-C21 + Aromatic TPH >C10-C21 above detection limits	*10 mg/kg*	
Sum of Aliphatic TPH >C21-C34 + Aromatic TPH >C10-C35 above detection limits	*500 mg/kg*	
Sum of BTEX + MTBE above detection limits	*0.1 mg/kg*	
Phenols	*2 mg/kg*	
Cresols and chlorinated phenols	*2 mg/kg*	
Naphthalene	*0.5 mg/kg*	
Benzo(a)pyrene	*0.5 mg/kg*	

RISK ESTIMATION – GROUNDWATER

The initial assessment of the contamination risk to groundwater is by comparing dissolved groundwater concentrations with screening values (GAC) that are protective of groundwater resources.

The reference source for the target concentrations is generally the EA's Environmental Quality Standards (EQS) (accessed July 2018: http://evidence.environment-agency.gov.uk/ChemicalStandards/report.aspx?cid=17), the Water Supply (Water Quality) Regulations 2016 and the DW1/DW2 criteria from the Surface Water (Abstraction for drinking water)(classification) Regulations 1996. The target concentrations are outlined in the table below. The 'Petroleum Hydrocarbons in Groundwater: Guidance on assessing petroleum hydrocarbons using existing hydrogeological risk assessment methodologies'. CL:AIRE, 2017 has also been used as reference source for the values.

ANALYSIS	*GENERIC ASSESSMENT CRITERIA (GAC)*	*SOURCE*
Arsenic	*50 µg/l*	*DW1 & EQS*
Cadmium	*5 µg/l*	*EQS*
Chromium (total)	*50 µg/l*	*DW2 & EQS*
Copper	*50 µg/l*	*DW1*
Nickel	*20 µg/l*	*EQS*
Lead	*50 µg/l*	*DW1*
Mercury	*1 µg/l*	*WSR*
Selenium	*10 µg/l*	*WSR*
Zinc	*5 mg/l*	*DW2*
Cyanide	*50 µg/l*	*WSR*
pH	*6 to 9 units*	*EQS*
Benzene	*10 µg/l*	*EQS*
Toluene	*74 µg/l*	*EQS*
Ethylbenzene	*300 µg/l*	*WHO guideline*
Xylene	*30 µg/l*	*EQS*
Methyl tert-butyl ether (MTBE)	*15 µg/l*	*Taste and odour threshold.*
Naphthalene	*2 µg/l*	*EQS*
Benzo(a)pyrene	*0.0017 µg/l*	*EQS – Less than Limit of Detection (LOD)*
Total PAH	*0.2 µg/l*	*DW1*
TPH Aliphatic C5-C6	*15,000 µg/l*	*World Health Organization (WHO) guide values for TPHCWG fractions in drinking water*
TPH Aliphatic C6-C8	*15,000 µg/l*	
TPH Aliphatic C8-C10	*300 µg/l*	
TPH Aliphatic C10-C12	*300 µg/l*	
TPH Aliphatic C12-C16	*300 µg/l*	
TPH Aromatic C5-C7	*10 µg/l*	
TPH Aromatic C7-C8	*700 µg/l*	
TPH Aromatic C8-C10	*300 µg/l*	
TPH Aromatic C10-C12	*90 µg/l*	
TPH Aromatic C12-C16	*90 µg/l*	
TPH Aromatic C16-C21	*90 µg/l*	
TPH Aromatic C21-C35	*90 µg/l*	

There are no available generic assessment criteria for some of the analytical parameters which have been scheduled, for example hexavalent chromium, and some VOC compounds. These parameters will be assessed based on professional judgement should they exceed the limit of detection.

RISK ESTIMATION - GROUND GAS

Introduction

A variety of potentially hazardous gases occur in naturally in the ground environment. Microbial decay of organic matter under anaerobic conditions and geological processes can lead to the generation of Methane and Carbon Dioxide, but can also include traces gases such as Hydrogen sulphide and Carbon monoxide.

Methane is a colourless and odourless gas that has the hazardous properties of being flammable and, at certain air/Methane mixtures, explosive. Methane has a low toxicity, but can be a simple asphyxiant due to the displacement of oxygen.

Carbon Dioxide is a colourless, odourless and non-combustible gas that has the hazardous property of being a highly toxic chemical. At concentrations of 3% by volume, shortness of breath and headaches will occur becoming acute by 6%. At levels of above 10% by volume headache, visual distortion, tremors and rapid loss of consciousness occur. Concentrations of Carbon Dioxide above 22% by volume are likely to be fatal. The effects of Carbon Dioxide poisoning are made more severe if there is accompanying reduction in oxygen concentrations.

Hydrogen sulphide is a colourless and flammable gas that has an odour of rotten eggs. It is important to that the sense of smell is over powered at higher concentrations. The gas is toxic and can be an asphyxiant.

Carbon monoxide is a colourless, odourless and explosive gas in air mixtures that has the hazardous property of being a highly toxic chemical.

Radon is a naturally occurring colourless and odourless gas that is radioactive. It is formed by the radioactive decay of radium which in turn is derived from the radioactive decay of uranium, both of which are minerals that can be found in many soil types. Whilst it is recognised that the air inside every building contains radon, some buildings built in certain defined areas of the country might have unacceptably high concentrations and require special precautions to be taken. The maps contained within BRE211:2015 'Radon: guidance on protective measures for new buildings' identify areas where no radon protection measures are necessary or where higher concentrations are present that either basic or full radon protection measures are required to be fitted to all new buildings, extensions or refurbishments.

Basis of Gas Assessment

In order to classify the level of risk and need, if any, for gas protection measures at a site with the potential for a gas problem, consideration of each of the following is necessary:

- *The source of the gas.*
- *The generation potential of the gas.*
- *The location of the source and the geological setting.*
- *Boreholes flow rate and estimated surface emission rate.*
- *The nature of the proposed development.*
- *Confidence in the knowledge of the gas regime.*

The gas assessment is made with reference to 'C665 - Assessing risks posed by hazardous ground gases to buildings', Construction Industry Research and Information Association (CIRIA), 2007 and 'BS8485:2015 – Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings' BSi 2015.

Gas Screening Value

The methods within CIRIA C665 and BS8485 both use the gas concentrations together with the borehole flow rates to define a characteristic situation for a site based on the limiting borehole gas volume flow for Methane and Carbon Dioxide. This limiting borehole gas volume flow is called the Gas Screening Value (GSV) and is expressed below:

Gas Screening Value (l /hr) = borehole flow rate (l/hr) x gas concentration (fraction)

The calculation of GSV is completed for both Methane and Carbon Dioxide and then the 'worse case' maximum values are used in the assessment. The assessment is to determine the gas regime at the site is dependent upon the nature of the development.

Characteristic Gas Situation

The characteristic situation for many sites is determined from evaluation of the Gas Screening Value derived against the criteria in the following table.

Characteristic situation	*Hazard potential*	*Gas Screening Value (CH4 or CO2 l/hr)*	*Additional factors*
CS1	*Very low risk*	*<0.07*	*Typically Methane ≤1% and/or Carbon Dioxide ≤5%. Otherwise consider an increase to characteristic situation 2.*
CS2	*Low risk*	*0.07 to <0.7*	*Borehole air flow rate not to exceed 70 l/hr. Otherwise consider an increase to characteristic situation 3.*
CS3	*Moderate risk*	*0.7 to <3.5*	*-*
CS4	*Moderate to high risk*	*3.5 to <15*	*-*
CS5	*High risk*	*15 to <70*	*-*
CS6	*Very high risk*	*>70*	*-*

Low rise housing with gardens – NHBC 'Traffic Lights'

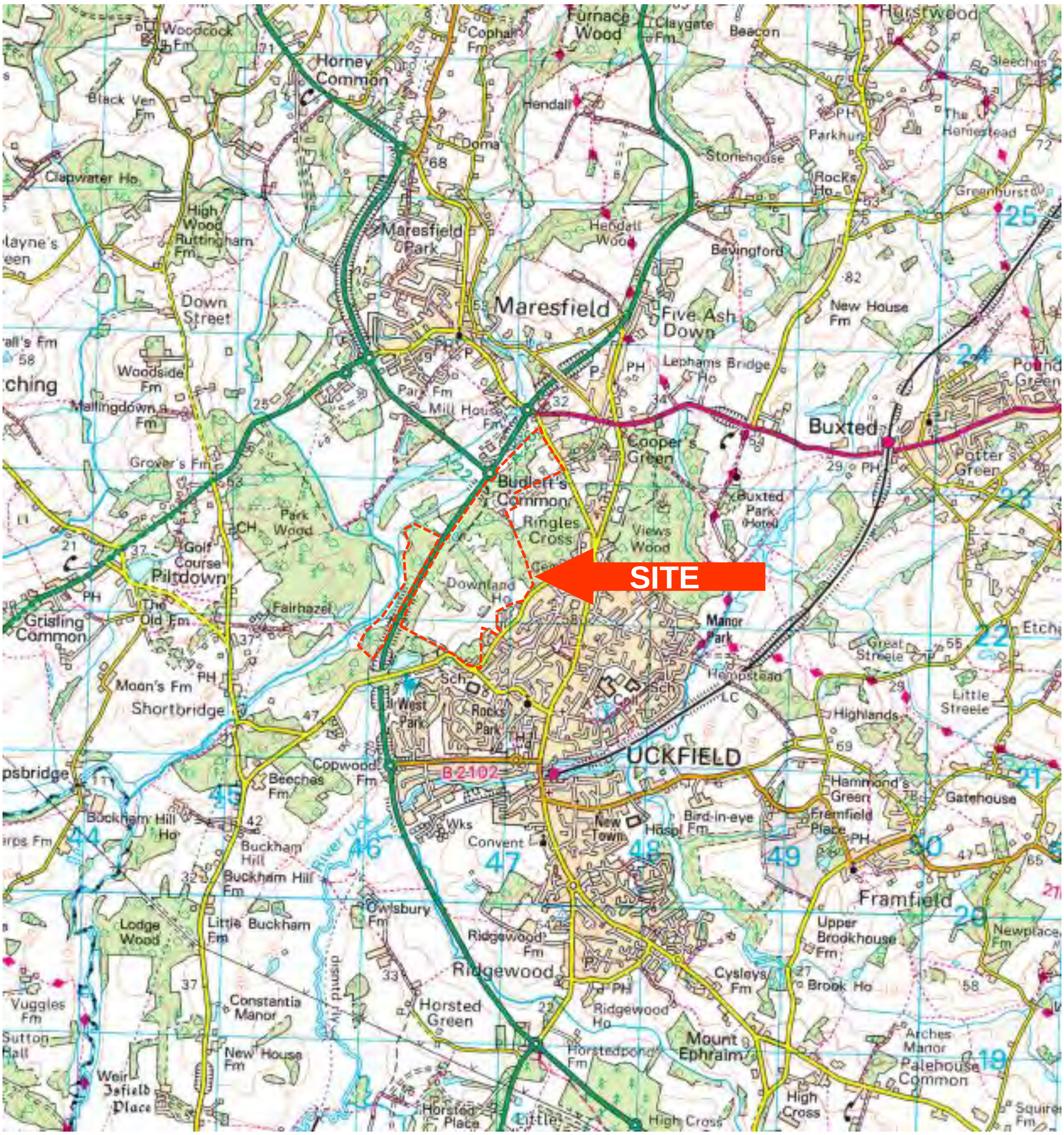
The NHBC model for low rise housing development considered a typical residential house with a ground floor area of 64m^2, suspended floor and ventilated sub-floor void of height 150mm. Where the proposed development of a site is consistent with this model, the NHBC traffic light situation of the site is determined from evaluation of the Gas Screening Value against the criteria in the following table.

Traffic Lights	*Methane*		*Carbon Dioxide*	
	Typical maximum concentrations (%)	*Gas Screening Value (l/hr)*	*Typical maximum concentrations (%)*	*Gas Screening Value (l/hr)*
Green	*≤1*	*≤0.16*	*≤5*	*≤0.78*
Amber 1	*1> to ≤5*	*>0.16 to ≤0.63*	*>5 to ≤10*	*>0.78 to ≤1.56*
Amber 2	*5> to ≤20*	*>0.63 to ≤1.56*	*>10 to ≤30*	*>1.56 to ≤3.13*
Red	*>20*	*>1.56*	*>30*	*>3.13*

APPENDIX 1

Site Location Plan

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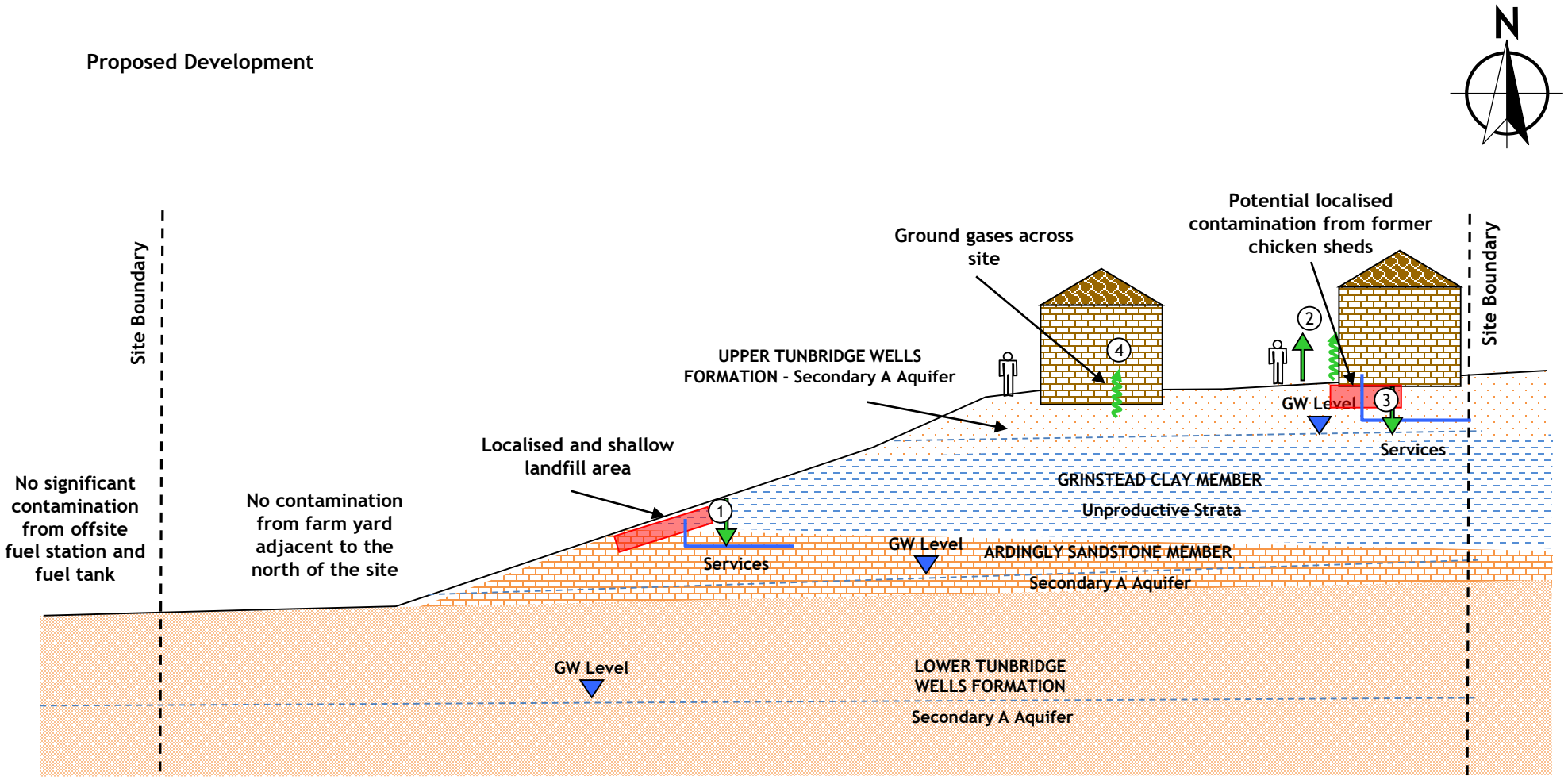
Not to scale.

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Project Title: Downlands Farm, Uckfield
Client: Gleeson Land
BRD Reference: BRD200653-OP5-B
Date Issued: April 2022

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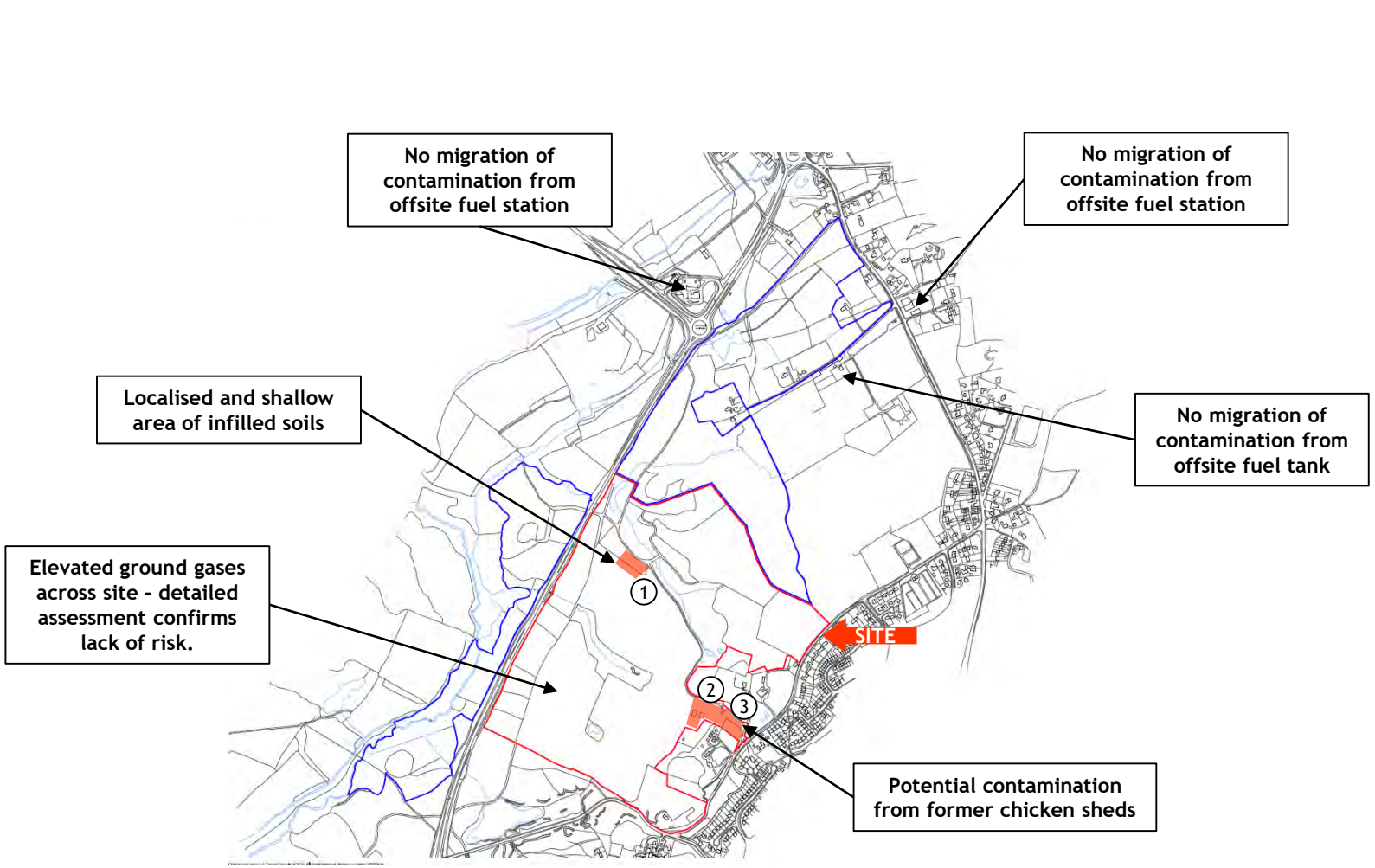
Revised Conceptual Model



Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Land
BRD Reference:	BRD200653-OP8-C
Date Issued:	January 2022

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Revised Conceptual Model



Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Land
BRD Reference:	BRD200653-OP8-C
Date Issued:	January 2022

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BUDLETTS WOOD

Existing woodland retained

Emergency access only

Woodland park

Drainage

A22

Existing woodland retained

Housing area

SNATTS ROAD

Parking for woodland park

Parking for woodland park

Proposed vehicular access

Housing area

Public open space with potential for pitches and childrens play area

New cycle / pedestrian link to Town Centre

Drainage

Pedestrian and cycle link to Snatts Road

Housing area

THE DRIVE

LAKE WOOD

Pedestrian and cycle link to Rocks Road

ROCKS ROAD

Site
DOWNLANDS FARM, UCKFIELD

Drawing
Illustrative masterplan

Scale
1:2000@A1

Date
27.04.22

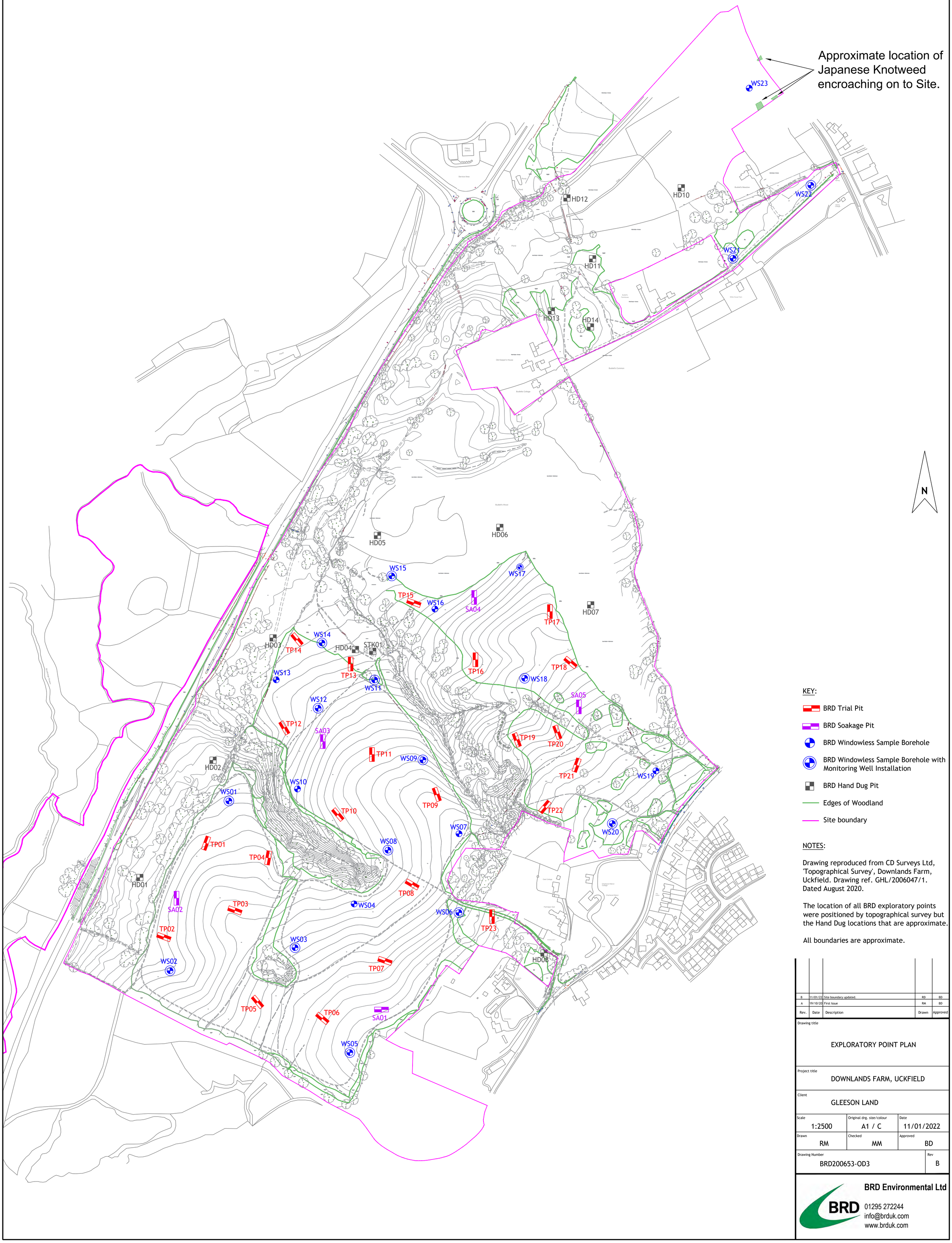
Drawing ref 1309.**02**

KEY

Site boundary

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NOTES:

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The location of all BRD exploratory points were positioned by topographical survey but the Hand Dug locations that are approximate.

All boundaries are approximate.

Rev.	Date	Description	Drawn	Approved
B	11/01/22	Site boundary updated.	RD	BD
A	19/10/20	First Issue	RM	BD

Drawing title

EXPLORATORY POINT PLAN

Project title

DOWNLANDS FARM, UCKFIELD

Client

GLEESON LAND

Scale	Original drg. size/colour	Date
1:2500	A1 / C	11/01/2022
Drawn	Checked	Approved
RM	MM	BD

Drawing Number	Rev
BRD200653-OD3	B

BRD Environmental Ltd
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APPENDIX 2

TRIAL PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 01/09/2020
Method Used: 180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP01

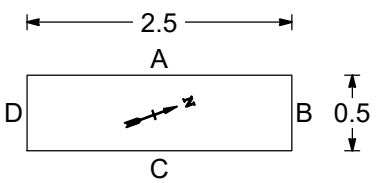
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.20	J1		TOPSOIL: Dark brown, silty, sandy clay with abundant rootlets.	0.30 (34.43)	TS	
			Stiff, grey brown mottled orange, silty CLAY.		GRINSTEAD CLAY MEMBER	
0.80	D1					
0.90	SV	95/>140/110 kPa	0.80 m: Old land drain crossing pit.	1		
1.90	D2		Stiff, greenish grey brown, slightly gravelly CLAY with abundant mudstone lithorelicts. Gravel of fine to coarse, angular ironstone.	1.80 (32.93) 2		
			2.60 m: Becoming, extremely weak, thinly laminated mudstone.	2.60 (32.13)		
2.80	J2			3 3.00 (31.73)		
				4		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
34.731 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 3.00m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 01/09/2020
Method Used: 180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP02

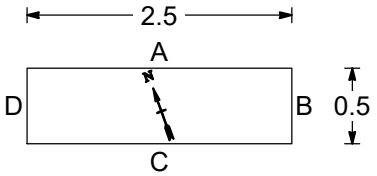
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.10	J1		TOPSOIL: Dark brown, desiccated, silty clay with abundant rootlets.		TS	
				0.40 (34.33)		
			Stiff, grey brown mottled orange, silty CLAY with occasional rootlets to 1.00m.		GRINSTEAD CLAY MEMBER	
0.70	J2					
0.80	SV	105/100/110				
1.00	D1			1		
				1.70 (33.03)		
			Stiff, fissile, light grey, silty CLAY with some mudstone lithorelicts.			
2.00	D2			2		
				2.10 (32.63)		
			Extremely weak, thinly laminated, brown mudstone with occasional ironstone gravel. Recovered as fine to medium, flat tabular gravel.			
2.70	D3					
				2.80 (31.93)		
				3		
				4		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
34.729 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 2.80m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client:	Gleeson Strategic Land
Project Title:	Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	01/09/2020
Method Used:	180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP03

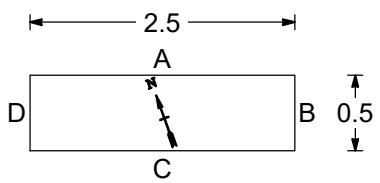
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.20	J1		TOPSOIL: Dark brown, silty, slightly sandy CLAY with abundant rootlets.	0.30 (40.47)	TS	
0.70	D1		Stiff, orange mottled grey brown, silty CLAY.		GRINSTEAD CLAY MEMBER	
0.80	SV	>140x3 kPa		1		
				2		
2.10	D2		Very stiff, green brown, very silty CLAY.	2.00 (38.77)		
			2.70 m: Mottled purple with occasional ironstone lithorelicts.			
2.90	D3			2.90 (37.87)		
				3		
				4		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
40.768 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 2.90m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

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Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 01/09/2020
Method Used: 180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP04

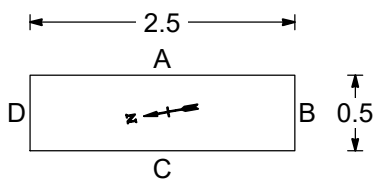
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.10	J1		TOPSOIL: Dark brown, very clayey, silty sand with abundant rootlets.	0.30 (36.18)	TS	
0.50	B1		Firm, orange to red brown, silty, slightly desiccated, very clayey SAND.		UTW	
0.60	J2			0.70 (35.78)		
0.90	D2		Firm, orange brown mottled grey, silty, very sandy CLAY.		GRINSTEAD CLAY MEMBER	
1.00	SV	85/80/60 kPa	1.00 - 1.40 m: Occasional dark brown, fine to medium, angular ironstone pockets.	1		
1.50	D2		Stiff, brown mottled orange and grey, silty CLAY.	1.40 (35.08)		
1.60	SV	90/125/125 kPa		2		
			Stiff, thinly laminated, light grey, silty CLAY.	2.00 (34.48)		
2.50	D3		Firm, thinly laminated, brown, silty CLAY with abundant mudstone lithorelicts and occasional pockets of ironstone.	2.30 (34.18)		
				2.80 (33.68)		
				3		
				4		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
36.477 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 2.80m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

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Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 01/09/2020
Method Used: 180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP05

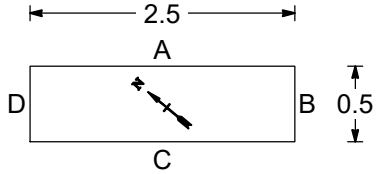
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
			TOPSOIL: Dark brown, desiccated, clayey sand with abundant rootlets.		TS	
0.20	J1			0.30 (45.48)		
			Stiff, slightly desiccated, yellow brown, silty CLAY with rare chert subrounded to angular Gravel.		GRINSTEAD CLAY MEMBER	
0.60	D1					
0.70	SV	>140x3 kPa		1		
				1.50 (44.28)		
			Firm, friable, dark red brown mottled grey brown, silty CLAY with abundant mudstone lithorelicts and occasional fine, angular ironstone.			
1.80	D2			2		
				2.00 (43.78)		
			Firm, light grey mottled brown, silty CLAY with occasional mudstone lithorelicts.			
			2.50 m: Increasing mudstone/stiltstone and occasional ironstone gravel.			
2.70	D3			3		
				3.00 (42.78)		
				4		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
45.782 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 3.00m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

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Email: info@brduk.com

TRIAL PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 01/09/2020
Method Used: 180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP06

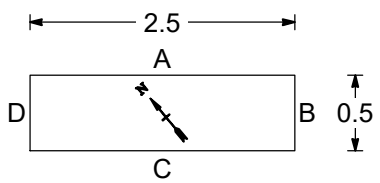
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.20	J1		TOPSOIL: Dark brown, sandy, silty gravel with abundant rootlets.		TS	
				0.35 (51.24)	GRINSTEAD CLAY MEMBER	
			Stiff, light brown mottled grey brown, slightly desiccated, silty CLAY.			
0.70	J2					
0.90	D1			1		
1.00	SV	110/105/90 kPa	1.00 m: Occasional gravelly pockets of fine to medium, angular ironstone.			
			1.20 m: Grey brown colour.			
1.80	D2					
1.90	SV	95/90/90 kPa		2		
				2.00 (49.59)		
			Stiff, friable, dark green grey CLAY.			
2.50	D3					
				2.80 (48.79)		
				3		
				4		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
51.588 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 2.80m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

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TRIAL PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 01/09/2020
Method Used: 180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP07

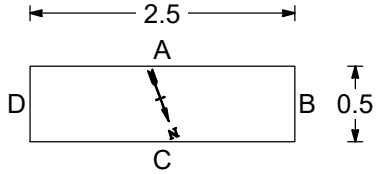
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
			TOPSOIL: Dark brown, desiccated, slightly sandy CLAY with abundant rootlets.	0.30 (48.78)	TS	
0.50	J1		Stiff, orange brown mottled light grey, silty CLAY. 0.50 - 1.40 m: FACE D: Pocket of gravelly clay with ironstone.		GRINSTEAD CLAY MEMBER	
0.80	D1			1		
1.10	SV	110/120/110 kPa				
1.50	SV	100/90/90 kPa	Stiff, light grey, silty CLAY.	1.40 (47.68)		
1.80	D2		1.70 m: Some gravelly pockets of dark purple to brown ironstone. 2.00 m: Brown, friable with some mudstone gravel lithorelicts.	2		
				2.50 (46.58)		
2.80	J2		Firm, fissile, dark grey, silty CLAY.	3		
				3.00 (46.08)		
				4		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
49.083 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 3.00m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

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Email: info@brduk.com

TRIAL PIT RECORD

Client:	Gleeson Strategic Land
Project Title:	Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	03/09/2020
Method Used:	180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP08

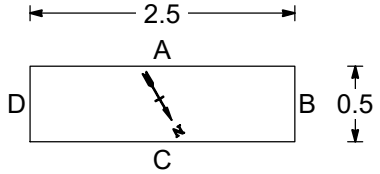
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.20	J1		TOPSOIL: Dark brown, slightly desiccated, silty, slightly sandy clay with abundant rootlets.	0.30 (43.34)	TS	
0.80	D1		Stiff, light orange mottled light grey, sandy, silty CLAY.		GRINSTEAD CLAY MEMBER	
0.90	SV	N/A	0.90 m: Not possible to penetrate soil with shear vane.	1		
1.70	D2		Firm, light grey silty CLAY.	1.60 (42.04)		
			Weak, light grey and orange, thinly bedded fine grained gravel SANDSTONE. Recovered as fine to coarse, very weak, thinly laminated, tabular gravel.	1.70 (41.94)	A	
			1.80 m: No further progress.	1.80 (41.84) 2		
				3		
				4		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
43.641 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 1.80m bgl due to sandstone rock prevented further excavation. Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

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Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 03/09/2020
Method Used: 180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP09

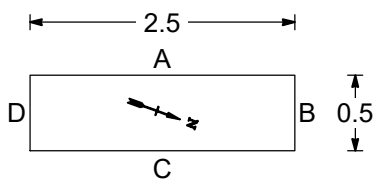
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.10	J1		TOPSOIL: Dark brown, slightly desiccated, silty, slightly sandy clay with abundant rootlets.	0.30 (44.67)	TS	
			Stiff, light grey mottled orange brown, silty CLAY with occasional rootlets.		GRINSTEAD CLAY MEMBER	
0.60	J2					
0.80	D1					
0.90	SV	>140x3 kPa	0.80 m: Old land drain crossing pit.	1		
			1.50 m: Some mudstone gravel. Becoming very stiff/hard.			
1.80	D2			2		
			Very stiff, friable, green grey brown CLAY with abundant mudstone gravel.	2.10 (42.87)		
2.70	D3					
				2.80 (42.17)		
				3		
				4		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
44.971 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 2.80m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 03/09/2020
Method Used: 180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP10

Sheet 1 of 1

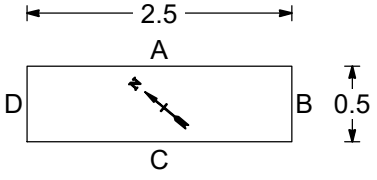
Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.20	J1		TOPSOIL: Dark brown, slightly desiccated, silty, slightly sandy clay with abundant rootlets.	0.40 (38.21)	TS	
0.80	D1		Stiff, brown mottled grey and orange, silty CLAY with occasional rootlets.		GRINSTEAD CLAY MEMBER	
0.90	SV	>140x3 kPa	1.30 m: Becomes grey in colour.	1.80 (36.81)		
2.30	D2		Stiff, friable, grey brown mottled dark purple, silty CLAY with abundant mudstone and ironstone gravel.			
2.70	J3		2.50 m: Becomes very sandy.	2.80 (35.81)		

1 2 3 4

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level: 38.606 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 2.80m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 03/09/2020
Method Used: 180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP11

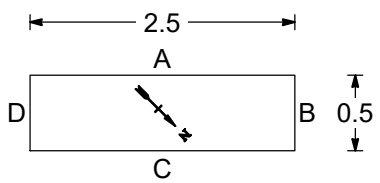
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
			TOPSOIL: Dark brown, sandy, silty clay with abundant rootlets.	0.30 (39.59)	TS	
0.60	J1		Medium dense, yellow brown, silty, gravelly, cobbly SAND. Gravel and cobbles of flint and sandstone.	0.70 (39.19)	UTW	
1.00	SV	>140/>140/80 kPa	Firm, grey brown mottled orange brown, sandy, silty, slightly gravelly CLAY. Gravel of fine to coarse, angular sandstone.	1.10 (38.79)	GRINSTEAD CLAY MEMBER	
1.00	D1					
1.60	D2		Stiff, brown mottled orange grey and dark brown, sandy CLAY with abundant mudstone gravel.	1.80 (38.09)		
2.30	D3		Very stiff, light grey brown mottled orange with dark brown partings, silty CLAY.	2.40 (37.49)		
			2.40 m: Very limited progress.			

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
39.89 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 2.40m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client:	Gleeson Strategic Land
Project Title:	Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	03/09/2020
Method Used:	180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP12

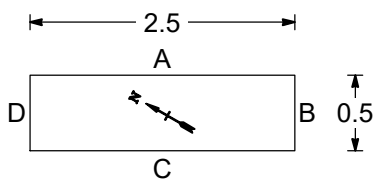
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.10	J1		TOPSOIL: Dark brown, sandy, silty CLAY with abundant rootlets.	0.20 (28.58)	TS	
			Firm, light brown, sandy, silty CLAY with occasional rootlets.	0.50 (28.28)	ARDINGLY SANDSTONE	
0.70	J2		Firm, light brown mottled light grey and orange, sandy, clayey SILT.			
0.90	D1			1		
1.00	SV	40/70/80 kPa		1.00 (27.78)		
			Firm to stiff, slightly gravelly, slightly sandy, silty CLAY/clay SILT. Gravel of fine to medium, angular sandstone.			
1.50	B1					
				1.60 (27.18)	LOWER TUNBRIDGE WELLS SAND	
			Firm, orange brown mottled grey and dark brown, slightly sandy CLAY with occasional sandstone and siltstone gravel.			
2.00	D2			2		
2.30	SV	80/90/105 kPa				
				3		
				3.00 (25.78)		
				4		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
28.778 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 3.00m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 03/09/2020
Method Used: 180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP13

Sheet 1 of 1

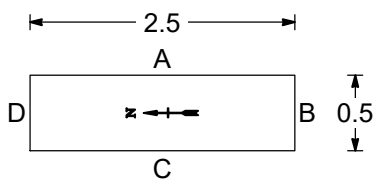
Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.10	J1		MADE GROUND: Dark brown, gravelly, sandy, slightly organic clay. Gravel of fine to coarse with cobbles of angular brick, metal, tarmac and concrete.	0.20 (29.67)	MG	
0.40	J2		MADE GROUND: Light grey, sandy, slightly gravelly, silty clay. Gravel of fine to coarse, subrounded to angular flint and occasional brick.	0.50 (29.37)		
0.80	D1		Stiff, slightly desiccated, brown, sandy, silty CLAY.		GRINSTEAD CLAY MEMBER	
1.50	D2		1.00 Orange mottled light grey colour not desiccated and occasional mudstone gravel.	1.80 (28.07)		

1
2
3
4

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
29.867 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 1.80m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client:	Gleeson Strategic Land
Project Title:	Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	02/09/2020
Method Used:	180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP14

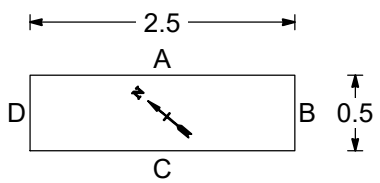
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.20	J1		TOPSOIL: Dark brown, desiccated, sandy clay with abundant rootlets.	0.30 (26.31)	TS	
0.70	J2		Medium dense, orange brown mottled light yellow brown, very clayey SAND. Occasional very weak sandstone gravel.	1	ARDINGLY SANDSTONE	
0.80	B1			1.50 (25.11)		
2.50	D1		Stiff, light orange brown mottled light grey, silty, sandy CLAY with some mudstone and siltstone gravel with some extremely weak sandstone and ironstone gravel.	2	LOWER TUNBRIDGE WELLS SAND	
				2.90 (23.71)		
				3		
				4		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
26.613 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 2.90m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client:	Gleeson Strategic Land
Project Title:	Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	02/09/2020
Method Used:	180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP15

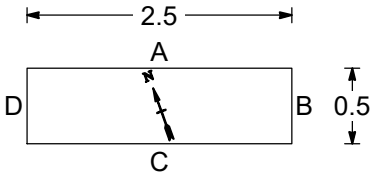
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.10	J1		TOPSOIL: Brown, sandy clay with occasional rootlets.	0.25 (28.68)	TS	
			Stiff, brown, desiccated, silty, slightly sandy CLAY.		GRINSTEAD CLAY MEMBER	
0.60	J2			0.70 (28.23)		
			Stiff, light grey mottled light brown and red brown, silty, slightly sandy CLAY.			
0.90	D1					
1.00	SV	110/120/110 kPa		1		
				2		
2.10	B1		2.00 m: Increasingly sandy and silty with occasional mudstone gravel.			
				2.40 (26.53)	AS	
2.50	D2		Very weak, thinly bedded, yellow brown and grey brown with natural black partings, silty SANDSTONE. Recovered as flat fine to coarse gravel.	2.50 (26.43)		
				3		
				4		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
28.927 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 2.50m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client:	Gleeson Strategic Land
Project Title:	Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	02/09/2020
Method Used:	180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP16

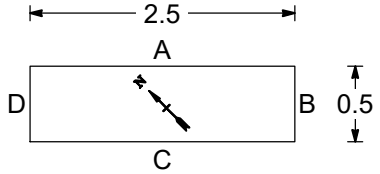
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
			TOPSOIL: Dark brown, sandy clay with abundant rootlets.		TOPSOIL	
0.30	J1			0.40 (35.79)		
			Firm, grey brown mottled orange, silty CLAY with occasional rootlets.		GRINSTEAD CLAY MEMBER	
0.70	J2					
1.00	D1			1		
1.10	SV	105/65/60 kPa				
			Stiff, orange to red brown mottled light grey, silty CLAY with some mudstone and siltstone gravel.	1.20 (34.99)		
1.80	D2			2		
			Stiff, light grey mottled orange and dark brown, silty, sandy CLAY with some extremely weak, siltstone and sandstone gravel.	2.30 (33.89)		
2.60	D3			2.70 (33.49)		
				3		
				4		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
36.191 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 2.70m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client:	Gleeson Strategic Land
Project Title:	Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	02/09/2020
Method Used:	180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP17

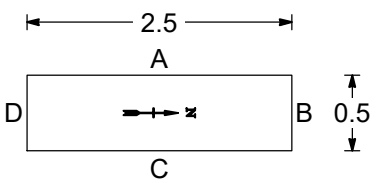
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.20	J1		TOPSOIL: Dark brown, desiccated, sandy clay with abundant rootlets.	0.30 (40.50)	TS	
0.70	D1		Stiff, yellow mottled light grey, desiccated, slightly sandy, silty CLAY with rare rootlets.		GRINSTEAD CLAY MEMBER	
0.80	J2	N/A	0.80 m: Not possible to penetrate soil with shear vane.	1		
	SV					
			2.00 - 2.60 m: Occasional ironstone gravel and mudstone gravel.	2		
2.60	D2			2.60 (38.20)		
				3		
				4		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
40.799 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 2.60m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client:	Gleeson Strategic Land
Project Title:	Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	02/09/2020
Method Used:	180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP18

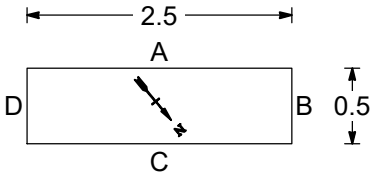
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.20	J1		TOPSOIL: Dark brown, sandy, slightly gravelly silty clay with some rootlets.	0.30 (43.86)	TS	
0.80	SV	N/A	Stiff, lightly desiccated, light orange brown, very sandy, slightly gravelly, very silty CLAY. Gravel of fine to coarse, angular ironstone. Very clayey sand in part.		UPPER TUNBRIDGE WELLS SAND	
0.80	B1		0.80 m: Not possible to penetrate soil with shear vane.	1		
			Dense, light grey mottled orange, slightly gravelly, very clayey, silty fine SAND. Gravel of fine to coarse, subangular sandstone.	1.10 (43.06)		
1.60	D1		1.70 m: Becomes silty, sandy CLAY.	2		
			Very weak, thinly bedded, yellow brown and grey brown with natural black partings, silty SANDSTONE. Recovered as thinly laminated, tabular, fine to coarse gravel.	2.10 (42.06)		
2.40	D2			2.50 (41.66)		
				3		
				4		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
44.162 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 2.50m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client:	Gleeson Strategic Land
Project Title:	Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	02/09/2020
Method Used:	180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP19

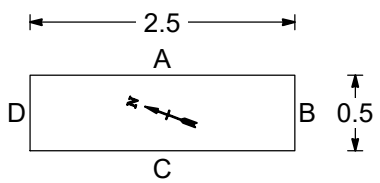
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
			TOPSOIL: Dark brown, sandy, clayey silt with abundant rootlets.		TS	
				0.35 (46.32)		
0.50	J1		Stiff, lightly desiccated, fissile, red brown mottled orange and grey, silty, slightly CLAY.		UTW	
0.90	D1					
1.00	SV	>140x3 kPa		1		
				1.10 (45.57)		
			Very stiff, light grey to light grey brown, silty CLAY.		GRINSTEAD CLAY MEMBER	
2.00	D2		2.00 m: Fissile, brown with occasional mudstone gravel with fine to medium, angular ironstone gravel.	2		
2.40	J2					
				2.50 (44.17)		
				3		
				4		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
46.672 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 2.50m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 02/09/2020
Method Used: 180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP20

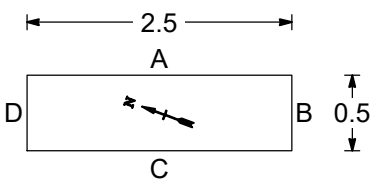
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
			TOPSOIL: Dark brown, sandy, clayey silt with abundant rootlets.		TS	
0.20	J1			0.30 (47.87)		
			Firm to stiff, brown to orange brown, slightly sandy, gravelly CLAY. Gravel of fine to coarse, angular tabular sandstone and ironstone.		UTW	
0.70	J2					
0.90	D1			1		
1.00	SV	N/A	1.00 m: Not possible to penetrate soil with shear vane.	1.10 (47.07)		
			Stiff, light grey mottled orange, very silty CLAY.		GRINSTEAD CLAY MEMBER	
1.40	D2					
				2		
2.20	SV	>140x3 kPa				
2.60	D3					
			2.70 m: Very stiff to hard.	2.70 (45.47)		
				3		
				4		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
48.174 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 2.70m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client:	Gleeson Strategic Land
Project Title:	Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	02/09/2020
Method Used:	180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP21

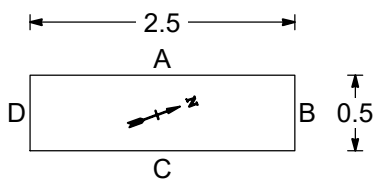
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.20	J1		TOPSOIL: Dark brown, silty sand with occasional roots and abundant rootlets.	0.30 (52.46)	TS	
0.80	D1		Stiff, desiccated, light grey mottled orange to yellow brown, sandy, very silty CLAY.	1	UPPER TUNBRIDGE WELLS SAND	
0.90	SV	N/A				
1.60	D2		Stiff, brown to green brown, slightly sandy, slightly silty CLAY.	1.30 (51.46) 2		
			2.50 m: Very stiff to hard and difficult to excavate.	2.50 (50.26) 3 4		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
52.755 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 2.50m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client:	Gleeson Strategic Land
Project Title:	Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	02/09/2020
Method Used:	180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP22

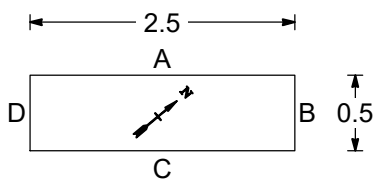
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.10	J1		TOPSOIL: Dark brown, silty sand with abundant rootlets.		TS	
			Firm, light grey mottled yellow, very silty, slightly sandy CLAY.	0.30 (53.41)	UPPER TUNEBIRDGE WELLS SAND	
0.70	J2					
0.80	SV	72/110/100 kPa				
0.80	D1			1		
1.70	D2		1.70 m: Some dark orange colouration.	2		
2.50	D3		2.50 m: Very stiff to hard and laminated. Difficult to excavate.	2.50 (51.21)		
				3		
				4		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
53.709 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 2.50m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client:	Gleeson Strategic Land
Project Title:	Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	03/09/2020
Method Used:	180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

TP23

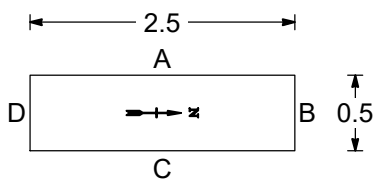
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.10	J1		MADE GROUND: Dark brown, very organic, sandy silt with abundant plastic and occasional wood, tile and metal fragments.	0.20 (55.27)	MG	
0.40	J2		BURIED TOPSOIL: Dark brown, silty sand with abundant roots and rootlets.	0.50 (54.97)	B-TS	
1.10	B1		Medium dense, yellow mottled light grey silty fine SAND with rare sandstone gravel.	1.20 (54.27)	UTWS	

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
55.47 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 1.20m bgl.
Relative density based on visual assessment only.

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client:	Gleeson Strategic Lands
Project Title:	Land at Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	24/08/2020
Method Used:	180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

SA01

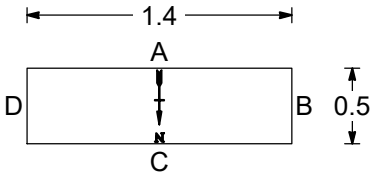
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
			TOPSOIL: Grass over: Dark brown, desiccated, very sandy, slightly gravelly clay with occasional rootlets. Gravel of fine, subrounded ironstone.	0.40 (53.29)	TS	
			Stiff, grey, brown mottled orange brown, silty CLAY with occasional fine rootlets.		GRINSTEAD CLAY MEMBER	
			1.00 m: No further rootlets.	1.80 (51.89)		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
53.692 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 1.80m bgl for soakage test.

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client:	Gleeson Strategic Lands
Project Title:	Land at Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	24/08/2020
Method Used:	180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

SA02

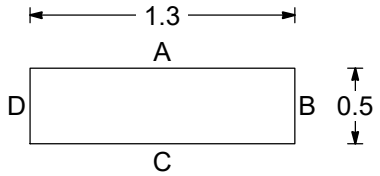
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
			TOPSOIL: Grass over: Dark brown, desiccated, slightly sandy, slightly gravelly clay with occasional rootlets. Gravel of fine, subrounded ironstone and rare subrounded flint.	0.30 (35.13)	TS	
			Stiff, grey, brown mottled orange brown, silty CLAY with occasional fine rootlets. 1.20 m: Some mudstone lithorelicts.	1.80 (33.63)	GRINSTEAD CLAY MEMBER	

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
35.425 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 1.80m bgl for soakage test.

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client:	Gleeson Strategic Lands
Project Title:	Land at Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	24/08/2020
Method Used:	180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

SA03

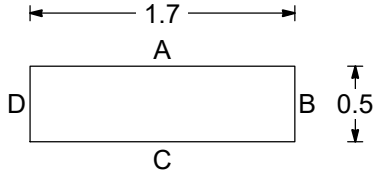
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
			TOPSOIL: Dark brown, dessicated, sandy, clayey silt with abundant rootlets.	0.30 (34.57)	TS	
			Stiff, desiccated, orange brown mottled grey, silty CLAY.	1.40 (33.47)	GRINSTEAD CLAY MEMBER	
			Stiff, light grey mottled brown, silty CLAY.	1.70 (33.17)		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
34.874 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 1.70m bgl for soakage test.

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client: Gleeson Strategic Lands
Project Title: Land at Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 24/08/2020
Method Used: 180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

SA04

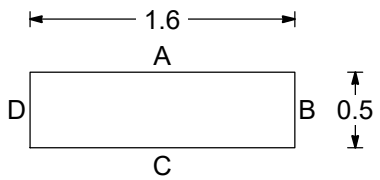
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
			MADE GROUND/TOPSOIL: Brown, slightly desiccated, clayey silt with rare brick.	0.35 (32.36)	MG/TS	
			Stiff, orange brown mottled grey brown, very silty CLAY with occasional rootlets.	0.80 (31.91)	GCM	
			Firm to stiff, light yellow brown mottled light grey, clayey, sandy SILT.	1.80 (30.91)	ARDINGLY SANDSTONE	

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level: 32.712 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 1.80m bgl for soakage test.

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

TRIAL PIT RECORD

Client:	Gleeson Strategic Lands
Project Title:	Land at Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	24/08/2020
Method Used:	180° Backhoe excavator (JCB 3CX type)

Trial Pit No.

SA05

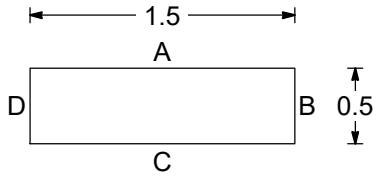
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
			TOPSOIL: Light brown, dessicated, clayey silt.	0.30 (48.31)	TS	
			Firm, slightly desiccated, light brown mottled grey, silty CLAY.	1.40 (47.21)	GRINSTEAD CLAY MEMBER	
			Firm, light grey mottled red brown, slightly silty CLAY.	1.70 (46.91)		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:
48.606 mAOD

Plan of Trial Pit:



General Remarks:
Trial pit terminated at 1.70m bgl for soakage test.

All dimensions in metres
Log Scale 1:25

Telephone: 01295 272244
Email: info@brduk.com

INSPECTION PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 08/09/2020
Method Used: Hand Dug

Pit No.

HD01

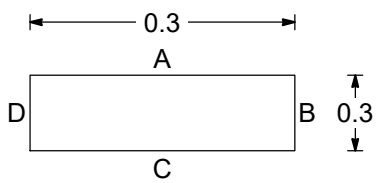
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.15	J1		TOPSOIL: Leaf litter over: Stiff, brown, silty, sandy clay with abundant roots and rootlets.	0.15 ()	TS	

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:

Plan of Inspection Pit:



General Remarks:
Hand dug pit terminated at 0.15m bgl.

All dimensions in metres
Log Scale 1:10

Telephone: 01295 272244
Email: info@brduk.com

INSPECTION PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 08/09/2020
Method Used: Hand Dug

Pit No.

HD02

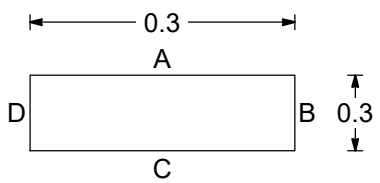
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.10	J1		TOPSOIL: Leaf litter over: Stiff, brown, silty, sandy clay with some rootlets.	0.10 ()	TS	

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:

Plan of Inspection Pit:



General Remarks:
Hand dug pit terminated at 0.10m bgl.

All dimensions in metres
Log Scale 1:10

BRD
Telephone: 01295 272244
Email: info@brduk.com

INSPECTION PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 04/09/2020
Method Used: Hand Dug

Pit No.

HD03

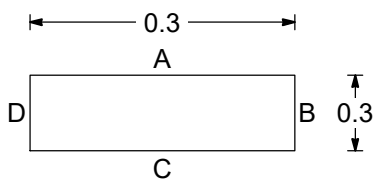
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.10	J1		TOPSOIL: Dark brown, silty, slightly gravelly sand with some roots and rootlets.		TOPSOIL	
			Very dense, light brown, gravelly, silty fine SAND.	0.20 () 0.25 ()	A	

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:

Plan of Inspection Pit:



General Remarks:
Hand dug pit terminated at 0.25m bgl.

All dimensions in metres
Log Scale 1:10

Telephone: 01295 272244
Email: info@brduk.com

INSPECTION PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 04/09/2020
Method Used: Hand Dug

Pit No.

HD04

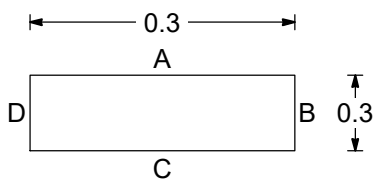
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.10	J1		TOPSOIL: Brown, sandy, silty clay with occasional rootlets.		TOPSOIL	
			Stiff, light yellow mottled light grey, silty, sandy CLAY.	0.20 () 0.25 ()	A	
				1		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:

Plan of Inspection Pit:



General Remarks:
Hand dug pit terminated at 0.25m bgl.

All dimensions in metres
Log Scale 1:10

BRD
Telephone: 01295 272244
Email: info@brduk.com

INSPECTION PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 07/09/2020
Method Used: Hand Dug

Pit No.

HD05

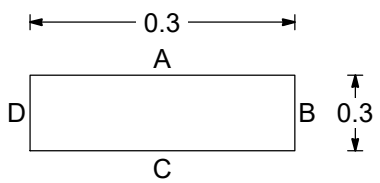
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.10	J1		TOPSOIL: Dark grey brown, silty fine SAND with occasional roots and rootlets.	0.20 ()	TOPSOIL	
			Dense, grey fine SAND.	0.30 ()	AS	

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:

Plan of Inspection Pit:



General Remarks:
Hand dug pit terminated at 0.30m bgl.

All dimensions in metres
Log Scale 1:10

Telephone: 01295 272244
Email: info@brduk.com

INSPECTION PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 07/09/2020
Method Used: Hand Dug

Pit No.

HD06

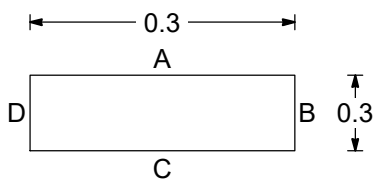
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.15	J1		Dark brown, very organic, silty CLAY with active roots, rootlets and rotting vegetation.	0.07 ()	ASM	
			Dark brown to light brown, silty, sandy CLAY. (desiccated)	0.20 ()		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:

Plan of Inspection Pit:



General Remarks:
Hand dug pit terminated at 0.20m bgl.

All dimensions in metres
Log Scale 1:10

BRD
Telephone: 01295 272244
Email: info@brduk.com

INSPECTION PIT RECORD

Client:	Gleeson Strategic Land
Project Title:	Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	07/09/2020
Method Used:	Hand Dug

Pit No.

HD07

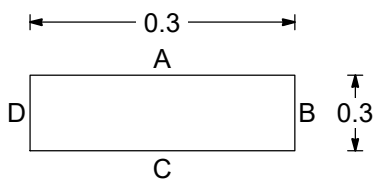
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.10	J1		TOPSOIL: Dark brown, silty, sandy, slightly gravelly clay with occasional rootlets. Gravel of fine, angular sandstone.	0.30 ()	TOPSOIL	

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:

Plan of Inspection Pit:



General Remarks:
Hand dug pit terminated at 0.30m bgl.

All dimensions in metres
Log Scale 1:10

BRD
Telephone: 01295 272244
Email: info@brduk.com

INSPECTION PIT RECORD

Client:	Gleeson Strategic Land
Project Title:	Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	07/09/2020
Method Used:	Hand Dug

Pit No.

HD08

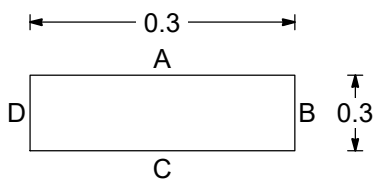
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
			MADE GROUND: Dark brown, very organic, gravelly, sandy clay with abundant roots and rootlets. Gravel of fine to coarse, subrounded to angular flint.	0.10 ()	MADE GROUND	
0.20	J1		MADE GROUND: Brown mottled white, sandy, gravelly clay. Gravel of fine to coarse, flint and clinker with tarmac.	0.25 ()		
			Stiff, brown mottled orange brown, sandy CLAY.	0.40 ()	UTW	
				1		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:

Plan of Inspection Pit:



General Remarks:
Hand dug pit terminated at 0.25m bgl.

All dimensions in metres
Log Scale 1:10

BRD
Telephone: 01295 272244
Email: info@brduk.com

INSPECTION PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 07/09/2020
Method Used: Hand Dug

Pit No.

HD09

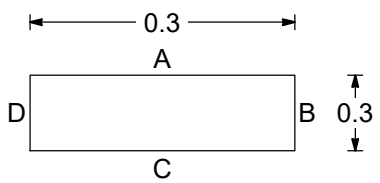
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
			TOPSOIL: Dark brown, silty sandy clay.		TOPSOIL	
				0.30 ()		
			Stiff to hard, orange brown, sandy, silty, CLAY.		L	
				0.35 ()		
				1		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:

Plan of Inspection Pit:



General Remarks:
Hand dug pit terminated at 0.35m bgl.

All dimensions in metres
Log Scale 1:10

BRD
Telephone: 01295 272244
Email: info@brduk.com

INSPECTION PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 08/09/2020
Method Used: Hand Dug

Pit No.

HD10

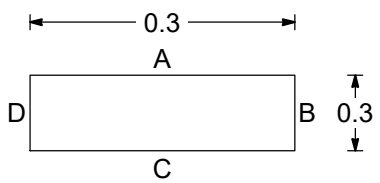
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.20	J1		MADE GROUND TOPSOIL: Dark brown, silty, fine sand with occasional rootlets and rare glass and tile.	0.25 ()	MGTS	

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:

Plan of Inspection Pit:



General Remarks:
Hand dug pit terminated at 0.25m bgl.

All dimensions in metres
Log Scale 1:10

BRD
Telephone: 01295 272244
Email: info@brduk.com

INSPECTION PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 08/09/2020
Method Used: Hand Dug

Pit No.

HD11

Sheet 1 of 1

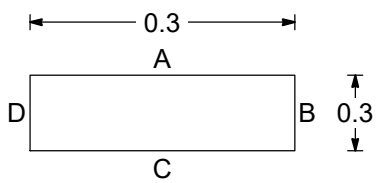
Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.15	J1		TOPSOIL: Dark brown, silty SAND with abundant rootlets.	0.25 ()	TOPSOIL	

1

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:

Plan of Inspection Pit:



General Remarks:
Hand dug pit terminated at 0.25m bgl.

All dimensions in metres
Log Scale 1:10

BRD
Telephone: 01295 272244
Email: info@brduk.com

INSPECTION PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 08/09/2020
Method Used: Hand Dug

Pit No.

HD12

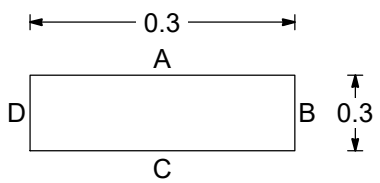
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.20	J1		TOPSOIL: Brown, desiccated, silty, clayey sand with some rootlets.	0.20 ()	TS	

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:

Plan of Inspection Pit:



General Remarks:
Hand dug pit terminated at 0.20m bgl.

All dimensions in metres
Log Scale 1:10

Telephone: 01295 272244
Email: info@brduk.com

INSPECTION PIT RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Completed: 08/09/2020
Method Used: Hand Dug

Pit No.

HD13

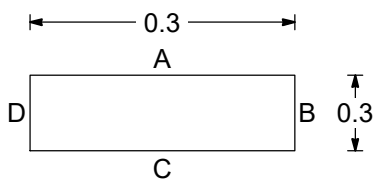
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
			Fern debris.	0.05 ()	M	
0.10	J1		TOPSOIL: Dark brown organis fine sand with abundant roots and rootlets.		TS	
				0.20 ()		
				1		

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:

Plan of Inspection Pit:



General Remarks:
Hand dug pit terminated at 0.20m bgl.

All dimensions in metres
Log Scale 1:10

BRD
Telephone: 01295 272244
Email: info@brduk.com

INSPECTION PIT RECORD

Client:	Gleeson Strategic Land
Project Title:	Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	08/09/2020
Method Used:	Hand Dug

Pit No.

HD14

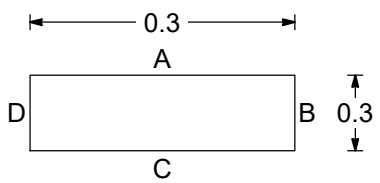
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.20	J1		TOPSOIL: Dark brown organis fine sand with abundant roots and rootlets.	0.25 ()	TOPSOIL	
			Medium dense, light grey, silty fine SAND.	0.30 ()	A	

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:

Plan of Inspection Pit:



General Remarks:
Hand dug pit terminated at 0.30m bgl.

All dimensions in metres
Log Scale 1:10

BRD
Telephone: 01295 272244
Email: info@brduk.com

INSPECTION PIT RECORD

Client:	Gleeson Strategic Land
Project Title:	Downlands Farm, Uckfield
Project No:	BRD200653
Logged By:	M Morgan
Date Completed:	07/09/2020
Method Used:	Hand Dug

Pit No.

STK01

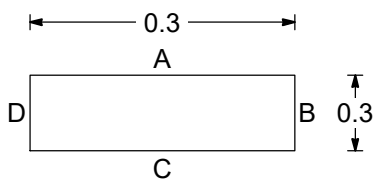
Sheet 1 of 1

Samples & Tests			Description of Strata	Depth / (Level)	Geology	Legend
Depth	Type & No	Value				
0.20	J1		MADE GROUND: Stiff, light brown, gravelly, slightly sandy clay. Gravel of fine to coarse, concrete and flint with occasional tarmac.	0.20 ()	MG	

Pit Stability: Generally stable throughout
Groundwater: Not encountered

Surface Elevation Level:

Plan of Inspection Pit:



General Remarks:
Hand dug pit terminated at 0.20m bgl.

All dimensions in metres
Log Scale 1:10

Telephone: 01295 272244
Email: info@brduk.com

Trial Pit Photographs

TP01





Project Title: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
BRD Reference: BRD200653-OP7-A
Date Issued: October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

TP02





Project Title: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
BRD Reference: BRD200653-OP7-A
Date Issued: October 2020

BRD
01295 272244
info@brduk.com

Trial Pit Photographs

TP03





Project Title: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
BRD Reference: BRD200653-OP7-A
Date Issued: October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

TP04





Project Title: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
BRD Reference: BRD200653-OP7-A
Date Issued: October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

TP05





Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Strategic Land
BRD Reference:	BRD200653-OP7-A
Date Issued:	October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

TP06





Project Title: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
BRD Reference: BRD200653-OP7-A
Date Issued: October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

TP07





Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Strategic Land
BRD Reference:	BRD200653-OP7-A
Date Issued:	October 2020

BRD
01295 272244
info@brduk.com

Trial Pit Photographs

TP08





Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Strategic Land
BRD Reference:	BRD200653-OP7-A
Date Issued:	October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

TP09





Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Strategic Land
BRD Reference:	BRD200653-OP7-A
Date Issued:	October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

TP10





Project Title: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
BRD Reference: BRD200653-OP7-A
Date Issued: October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

TP11





Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Strategic Land
BRD Reference:	BRD200653-OP7-A
Date Issued:	October 2020

BRD
01295 272244
info@brduk.com

Trial Pit Photographs

TP12





Project Title: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
BRD Reference: BRD200653-OP7-A
Date Issued: October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

TP13





Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Strategic Land
BRD Reference:	BRD200653-OP7-A
Date Issued:	October 2020

BRD
01295 272244
info@brduk.com

Trial Pit Photographs

TP14





Project Title: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
BRD Reference: BRD200653-OP7-A
Date Issued: October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

TP15





Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Strategic Land
BRD Reference:	BRD200653-OP7-A
Date Issued:	October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

TP16





Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Strategic Land
BRD Reference:	BRD200653-OP7-A
Date Issued:	October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

TP17





Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Strategic Land
BRD Reference:	BRD200653-OP7-A
Date Issued:	October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

TP18





Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Strategic Land
BRD Reference:	BRD200653-OP7-A
Date Issued:	October 2020

BRD
01295 272244
info@brduk.com

Trial Pit Photographs

TP19





Project Title: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
BRD Reference: BRD200653-OP7-A
Date Issued: October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

TP20





Project Title: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
BRD Reference: BRD200653-OP7-A
Date Issued: October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

TP21





Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Strategic Land
BRD Reference:	BRD200653-OP7-A
Date Issued:	October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

TP22





Project Title: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
BRD Reference: BRD200653-OP7-A
Date Issued: October 2020

BRD
01295 272244
info@brduk.com

Trial Pit Photographs

TP23





Project Title: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
BRD Reference: BRD200653-OP7-A
Date Issued: October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

SA01





Project Title: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
BRD Reference: BRD200653-OP7-A
Date Issued: October 2020

BRD
01295 272244
info@brduk.com

Trial Pit Photographs

SA02





Project Title: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
BRD Reference: BRD200653-OP7-A
Date Issued: October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

SA03





Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Strategic Land
BRD Reference:	BRD200653-OP7-A
Date Issued:	October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

SA04





Project Title: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
BRD Reference: BRD200653-OP7-A
Date Issued: October 2020

01295 272244
info@brduk.com

Trial Pit Photographs

SA05





Project Title: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
BRD Reference: BRD200653-OP7-A
Date Issued: October 2020

BRD
01295 272244
info@brduk.com

Trial Pit Photographs

HD01



HD02



Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Strategic Land
BRD Reference:	BRD200653-OP7-A
Date Issued:	October 2020

BRD
01295 272244
info@brduk.com

Trial Pit Photographs

HD03



HD04



Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Strategic Land
BRD Reference:	BRD200653-OP7-A
Date Issued:	October 2020

BRD
01295 272244
info@brduk.com

Trial Pit Photographs

HD05



HD06



Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Strategic Land
BRD Reference:	BRD200653-OP7-A
Date Issued:	October 2020

BRD
01295 272244
info@brduk.com

Trial Pit Photographs

HD07



HD08



Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Strategic Land
BRD Reference:	BRD200653-OP7-A
Date Issued:	October 2020

BRD
01295 272244
info@brduk.com

Trial Pit Photographs

HD09



HD10



Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Strategic Land
BRD Reference:	BRD200653-OP7-A
Date Issued:	October 2020

BRD
01295 272244
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Trial Pit Photographs

HD11



HD12



Project Title: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
BRD Reference: BRD200653-OP7-A
Date Issued: October 2020

BRD
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Trial Pit Photographs

HD13



HD14



Project Title:	Downlands Farm, Uckfield
Client:	Gleeson Strategic Land
BRD Reference:	BRD200653-OP7-A
Date Issued:	October 2020

BRD
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Trial Pit Photographs

STK01



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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: N Kimber
Date Commenced: 03/09/2020
Date Completed: 03/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS01

Sheet 1 of 2

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
0.10	J1			TOPSOIL: Grass over brown, slightly gravelly, sandy clay. Gravel of fine to medium, subangular ironstone. Frequent rootlets.	0.20 (32.48)		TS	
				Dry, desiccated, orange brown, sandy CLAY.	0.40 (32.28)			
0.60	J2			Dry, desiccated, orange brown mottled grey, sandy CLAY.				
0.80	PEN	4.75/4.5x2 kg/cm²						
1.00	SPT	8 N			1.0 1.00 (31.68)			
				Stiff, orange brown mottled grey, silty CLAY. 1.00 m: SPT: 2,2/1,2,2,3				
					1.40 (31.28)			
1.50	D1			Stiff, reddish brown, silty CLAY with ironstone nodules and mudstone gravel lithorelicts.				
1.70	PEN	3.25/2.5/3.0 kg/cm²						
2.00	SPT	14 N		2.00 m: SPT: 2,1/2,3,5,4	2.0		GRINSTEAD CLAY MEMBER	
					2.50 (30.18)			
2.60	D2			Stiff, fissured, light brownish grey, silty CLAY with mudstone gravel lithorelicts and orange brown staining.				
2.80	PEN	4.5/4.0/4.25 kg/cm²						
3.00	SPT	26 N			3.0 3.00 (29.68)			
				Very stiff, dark grey with orange staining, silty CLAY. Mudstone gravel lithorelicts in places. 3.00 m: SPT: 2,4/4,6,7,9				
4.00	SPT	19 N		4.00 m: SPT: 2,3/4,4,5,6	4.0			
				Stiff, dark grey and white, silty CLAY.	4.10 (28.58)			
					4.50			

General Remarks:
Borehole terminated at 4.84m bgl due to refusal on rock. Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
32.677 mAOD

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: N Kimber
Date Commenced: 03/09/2020
Date Completed: 03/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS01

Sheet 2 of 2

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
4.50	D3			Continued from 4.10m: Stiff, dark grey and white, silty CLAY.			GCM	
4.60	PEN	3.5/4.5/4.0 kg/cm²			4.75 (27.93)			
4.80	SPT	>50 N		Very stiff, alternating orange and dark grey, sandy CLAY. 4.80 m: SPT: 25 for 15mm / 50 for 25mm	4.84 (27.84)			
					5.0			
					6.0			
					7.0			
					8.0			
					9.0			

General Remarks:
Borehole terminated at 4.84m bgl due to refusal on rock. Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
32.677 mAOD

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: N Kimber
Date Commenced: 03/09/2020
Date Completed: 03/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS02

Sheet 1 of 1

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
				TOPSOIL: Grass over dark brown, slightly gravelly, sandy CLAY. Gravel of fine to coarse, subangular ironstone and occasional flint. Some decaying wood fragments.	0.30 (34.92)		TS	
				Dry, orange brown mottled light grey, slightly sandy, silty CLAY.	0.60 (34.62)		GRINSTEAD CLAY MEMBER	
0.80	PEN	1.75/2.25/1.5 kg/cm²		Firm, orange brown mottled light grey, slightly sandy, silty CLAY.				
0.80	J1				1.0 1.00 (34.22)			
1.00	SPT	4 N		Firm, moist, orange brown mottled light grey, sandy, silty CLAY.				
1.10	D1			1.00 m: SPT: 0,0/1,1,1,1				
1.80	PEN	1.25x2 kg/cm²						
2.00	SPT	11 N			2.0 2.00 (33.22)			
				Firm, moist, brown, very sandy CLAY.	2.10 (33.12)			
				2.00 m: SPT: 1,1/2,2,3,4				
				Stiff, brown, silty CLAY with occasional ironstone nodules.	2.30 (32.92)			
				Stiff, fissured, light grey silty CLAY.	2.50 (32.72)			
				Stiff, purple, very sandy CLAY.	2.60 (32.62)		ASM	
2.70	D2			Stiff, black, very clayey SAND.				
					2.90 (32.32)			
3.00	SPT	>50 N		Medium dense, beige, slightly clayey SAND.	3.0			
				3.00 m: SPT: 25 for 68mm / 50 for 25mm	3.09 (32.13)			
					4.0			

General Remarks:
Borehole terminated at 3.09m bgl due to refusal on orange brown sandstone.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
35.217 mAOD

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: N Kimber
Date Commenced: 03/09/2020
Date Completed: 03/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS03

Sheet 1 of 1

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
0.10	J1			TOPSOIL: Dark brown, slightly gravelly, sandy clay. Gravel of fine to medium, subangular ironstone. Frequent rootlets.			TS	
					0.30 (44.13)			
0.40	J2			Stiff, orange brown mottled grey, silty CLAY.			GRINSTEAD CLAY MEMBER	
0.80	PEN	4.5/4.0x2 kg/cm²						
1.00	SPT	16 N			1.0 1.00 (43.43)			
				Stiff, fissured, light grey mottled orange brown, silty CLAY with ironstone nodules. 1.00 m: SPT: 1,2/3,4,4,5				
					1.50 (42.93)			
				Stiff, fissured, light grey with orange staining, silty CLAY with mudstone lithorelicts.				
1.70	D1							
1.80	PEN	4.75x3 kg/cm²						
2.00	SPT	34 N			2.0 2.00 (42.43)			
				Very stiff, fissured, friable, brown with orange staining, silty CLAY. Mudstone lithorelicts. 2.00 m: SPT: 5,8/7,7,9,11				
2.50	D2							
3.00	SPT	>50 N		3.00 m: SPT: 6,10/23,27 for 30mm	3.0			
					3.25 (41.18)			
					4.0			

General Remarks:
Borehole terminated at 3.25m bgl due to refusal on grey siltstone.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
44.433 mAOD

All dimensions in metres
Log Scale 1:25

BRD
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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: N Kimber
Date Commenced: 03/09/2020
Date Completed: 03/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS04

Sheet 1 of 1

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
0.20	J1			MADE GROUND TOPSOIL: Grass over dark brown, slightly gravelly, sandy clay. Gravel of fine to medium, subangular ironstone, rare chalk and occasional fine brick fragments. Frequent rootlets.	0.30 (42.04)		MGTS	
0.40	J2			Dry, light brown mottled light grey, very sandy CLAY / very clayey SAND.	0.60 (41.74)		GRINSTEAD CLAY MEMBER	
0.70	PEN	3.75/3.25x2 kg/cm²		Stiff, orange brown mottled light grey, sandy CLAY.	1.0			
0.90	D1							
1.00	SPT	11 N		1.00 m: SPT: 2,1/2,3,3,3	1.50 (40.84)			
1.70	PEN	3.0x2 kg/cm²		Stiff, orange brown mottled light grey, sandy CLAY with ironstone nodules.	1.70 (40.64)			
1.90	D2			Stiff, light brown mottled light grey, silty CLAY with ironstone nodules.	2.0			
2.00	SPT	19 N		Very stiff, fissured, brown, silty CLAY with mudstone gravel lithorelicts.	2.00 (40.34)			
				2.00 m: SPT: 2,1/2,4,5,67	2.20 (40.14)			
2.50	D3			Very stiff, light grey with yellow and orange staining SILT.				
2.60	SPT	>50 N		2.60 m: SPT: 25 for 20mm / 50 for 20mm	2.64 (39.70)			
					3.0			
					4.0			

General Remarks:
Borehole terminated at 2.64m bgl due to refusal on grey siltstone.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
42.336 mAOD

All dimensions in metres
Log Scale 1:25

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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: N Kimber
Date Commenced: 03/09/2020
Date Completed: 03/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS05

Sheet 1 of 1

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
				TOPSOIL: Grass over dark brown, very sandy clay with rare subrounded sandstone gravel. Frequent rootlets.			TS	
				Dry, light brown, clayey SAND.	0.30 (54.06)			
				Stiff, orange brown mottled light grey, silty CLAY. Some orange and natural black staining.	0.50 (53.86)			
0.90	PEN	4.5x3 kg/cm²						
0.90	J1				1.0			
1.00	SPT	7 N		1.00 m: SPT: 1,1/1,2,2,2				
				Stiff, brown mottled purple, silty CLAY with occasional ironstone nodules and natural black staining.	1.50 (52.86)		GRINSTEAD CLAY MEMBER	
1.80	PEN	4.0/4.25x2 kg/cm²						
					2.0			
2.00	SPT	18 N		2.00 m: SPT: 2,2/4,3,5,6				
2.20	D1							
				Stiff, brownish grey, silty CLAY with ironstone nodules and mudstone gravel lithorelicts.	2.50 (51.86)			
2.80	PEN	3.5/3.0/3.25 kg/cm²						
					3.0			
3.00	SPT	43 N		3.00 m: SPT: 2,4/8,11,11,13				
				Very stiff, brown mottled purple, clayey SILT.	3.10 (51.26)			
				Very stiff, fissured, orange brown mottled grey, silty CLAY with some natural black staining.	3.50 (50.86)			
3.60	D2							
					4.0			
4.00	SPT	>50 N		4.00 m: SPT: 6,7/14,16,15,5 for 15mm				
					4.39 (49.97)			

General Remarks:
Borehole terminated at 4.39m bgl due to refusal on grey siltstone.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
54.356 mAOD

All dimensions in metres
Log Scale 1:25

BRD
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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: N Kimber
Date Commenced: 03/09/2020
Date Completed: 03/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS06

Sheet 1 of 1

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
0.10	J1			MADE GROUND TOPSOIL: Grass over dark brown, slightly gravelly, sandy clay. Gravel of fine to medium, subangular to subrounded sandstone, slate, brick fragments and quartzite.	0.20 (51.04)		MGTS	
0.40	J2			MADE GROUND: Dry, brown, slightly gravelly, sandy clay. Gravel of fine to medium, subangular to subrounded sandstone and ironstone with fine brick fragments, charcoal and ceramic.	0.50 (50.74)		MG	
0.80	PEN	1.75x2 kg/cm²		Firm, orange brown mottled brown, sandy CLAY with relict rootlets.	1.0			
1.00	SPT	7 N		Firm, orange brown mottled grey with occasional purple, silty CLAY with relict rootlets. 1.00 m: SPT: 1,1/2,1,2,2	1.00 (50.24)		GRINSTEAD CLAY MEMBER	
1.30	D1				1.50 (49.74)			
1.80	PEN	3.5/3.25/3.75 kg/cm²		Stiff, light grey mottled brown, silty CLAY with ironstone nodules.	1.90 (49.34)			
2.00	SPT	12 N		Stiff, reddish brown mottled brown with some light grey, silty CLAY. Mudstone gravel lithorelicts. 2.00 m: SPT: 2,2/2,2,3,5	2.0			
2.30	D2			Stiff, grey mottled brown becoming grey mottled orange brown, silty CLAY with ironstone nodules and some orange staining in places.	2.10 (49.14)			
2.80	PEN	3.75/2.5x2 kg/cm²			3.0			
3.00	SPT	14 N		Stiff, reddish brown mottled grey, silty CLAY with occasional ironstone nodules. 3.00 m: SPT: 2,2/4,3,4,3	3.00 (48.24)			
3.80	PEN	3.0x3 kg/cm²		Very stiff, fissured, brown mottled grey, silty CLAY with mudstone gravel lithorelicts.	3.50 (47.74)			
4.00	SPT	>50 N		4.00 m: SPT: 5/20 for 70mm / 50 for 25mm	4.0			
					4.17 (47.07)			

General Remarks:
Borehole terminated at 4.17m bgl due to refusal on sandstone.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
51.244 mAOD

All dimensions in metres
Log Scale 1:25

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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 08/09/2020
Date Completed: 08/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS07

Sheet 1 of 2

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
				MADE GROUND / TOPSOIL: Brown, desiccated, slightly gravelly, silty CLAY with abundant rootlets. Gravel of fine to coarse, angular brick and charcoal.	0.30 (47.18)		MG/TS	
				Stiff, brown mottled grey and orange, silty CLAY. Occasional rootlets and relict roots to 1.00m.			GRINSTEAD CLAY MEMBER	
0.70	J1							
0.80	PEN	4.5x3 kg/cm²						
0.90	D1							
1.00	SPT	14 N		1.00 m: SPT: 2,3/3,3,4,4	1.0			
				1.50 m: Hard with some mudstone gravel lithorelicts and occasional small pockets of ironstone.				
1.80	PEN	>5.0x3 kg/cm²						
1.80	D2							
2.00	SPT	17 N		2.00 m: SPT: 2,2/3,3,6,5	2.0			
2.80	PEN	>5.0x3 kg/cm²						
2.80	D3							
3.00	SPT	47 N		3.00 m: SPT: 6,6/9,10,15,13	3.0			
				3.50 m: Light grey brown colour, very silty.				
4.00	SPT	>50 N		4.00 m: SPT: 5,6/12,14,18,6 for 10mm	4.0			
					4.50			

General Remarks:
Borehole terminated at 5.45m bgl.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
47.483 mAOD

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 08/09/2020
Date Completed: 08/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS07

Sheet 2 of 2

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
5.00	SPT	33 N		Continued from 0.30m: Stiff, brown mottled grey and orange, silty CLAY. Occasional rootlets and relict roots to 1.00m. 5.00 m: SPT: 3,4/5,6,8,14	5.0 5.45 (42.03) 6.0 7.0 8.0 9.0		GCM	

General Remarks:
Borehole terminated at 5.45m bgl.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
47.483 mAOD

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 08/09/2020
Date Completed: 08/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS08

Sheet 1 of 1

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
				MADE GROUND / TOPSOIL: Dark brown sandy slightly gravelly clay with abundant rootlets. Gravel of fine angular brick and subrounded chalk.			MG/TS	
0.30	J1				0.40 (40.32)			
				Stiff orange brown mottled grey silty CLAY. Occasional rootlets to 1.00m			GRINSTEAD CLAY MEMBER	
0.60	PEN	>5.0x3 kg/cm²						
0.80	J2							
0.90	D1							
1.00	SPT	11 N		1.00 m: SPT: 2,1/2,3,3,3	1.0			
1.60	D2							
					1.80 (38.92)		A	
1.85	SPT	>50 N		Weak to medium strong, thinly laminated light grey fine grained SANDSTONE.	1.85 (38.87)			
				1.80 m: Becoming orangey brown.	2.0			
				1.85 m: SPT: 25 for 25mm / 50 for 30mm. No Further Progress.				
					3.0			
					4.0			

General Remarks:
Borehole terminated at 1.80m bgl due to refusal on sandstone.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
40.723 mAOD

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 08/09/2020
Date Completed: 08/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS09

Sheet 1 of 2

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
				TOPSOIL: Dark brown, slightly gravelly, slightly sandy clay. Gravel of fine to medium, angular sandstone.			TS	
0.20	J1				0.25 (41.26)			
				Stiff, brown mottled grey brown, silty CLAY with occasional relict rootlets.			GRINSTEAD CLAY MEMBER	
0.80	PEN	>4.5x3 kg/cm²						
0.90	D1							
1.00	SPT	16 N		1.00 m: SPT: 2,2/4,4,4,4	1.0			
				1.10 m: Occasional fine to coarse, angular ironstone gravel.				
1.70	J2							
1.80	D2							
2.00	SPT	17 N		2.00 m: SPT: 2,3/4,4,4,5	2.0			
				2.10 m: Some mudstone gravel lithorelicts.				
2.90	D3							
3.00	SPT	18 N		3.00 m: SPT: 2,3/4,4,5,5	3.0			
4.00	SPT	>50 N		4.00 m: SPT: 5,8/11,12,13,15	4.0			
				4.10 m: Light grey colour and becomes hard.	4.50			

General Remarks:
Borehole terminated at 5.00m bgl.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
41.51 mAOD

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 08/09/2020
Date Completed: 08/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS09

Sheet 2 of 2

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
				Continued from 0.25m: Stiff, brown mottled grey brown, silty CLAY with occasional relict rootlets.			GCM	
4.80	D4							
5.00	SPT	50 N		5.00 m: SPT: 6,12/12,12,14,12	5.0 5.00 (36.51)			
					6.0			
					7.0			
					8.0			
					9.0			

General Remarks:
Borehole terminated at 5.00m bgl.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
41.51 mAOD

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 08/09/2020
Date Completed: 08/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS10

Sheet 1 of 1

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
0.10	J1			TOPSOIL: Dark brown, silty, sandy, slightly gravelly clay with occasional rootlets. Gravel of fine to angular sandstone.			TS	
					0.30 (33.67)			
				Firm, brown mottled orange brown and grey brown, sandy, silty CLAY.			ARDINGLY SANDSTONE	
0.70	PEN	4.0/4.0/3.75 kg/cm²						
0.80	D1 J2							
					0.90 (33.07)			
1.00	SPT	10 N		Medium dense, brown mottled grey, very clayey SAND / very sandy CLAY. 1.00 m: SPT: 2,2/3,2,2,3	1.0			
1.40	D2							
					1.80 (32.17)			
1.90	PEN	3.0/3.75/3.0 kg/cm²		Stiff, light grey, silty CLAY.			LOWER TUNBRIDGE WELLS SAND	
2.00	SPT	12 N		1.90 - 2.10 m: Abundant, very weak ironstone. 2.00 m: SPT: 3,1/2,3,4,3	2.0			
				2.20 m: Light brown in colour, slightly sandy and some musdtone gravel lithorelicts.				
2.80	D3							
3.00	SPT	>50 N		3.00 m: SPT: 1,2/3,5,42 for 55mm	3.0			
					3.40 (30.57)			
					4.0			

General Remarks:
Borehole terminated at 3.40m bgl due to refusal on sandstone.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
33.97 mAOD

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 04/09/2020
Date Completed: 04/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS11

Sheet 1 of 2

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
				TOPSOIL: Dark brown, sandy, silty clay with some rootlets.			TS	
0.20	J1				0.40 (31.72)			
0.50	D1			Dense, desiccated, orange brown, very silty, clayey SAND.			ARDINGLY SANDSTONE	
				Stiff to hard, desiccated, light grey mottled orange, sandy, clayey SILT.	0.60 (31.52)			
0.90	D2							
1.00	SPT	>50 N			1.0			
				Very dense, orange brown mottled grey, fine SAND.	1.00 (31.12)			
				1.00 m: SPT: 10,15/17,26,7 for 10mm				
				Very stiff to hard, brown mottled dark brown and yellow, sandy, silty CLAY with some mudstone gravel lithorelicts and occasional ironstone fragments.	1.40 (30.72)		LOWER TUNBRIDGE WELLS SAND	
1.90	J2							
2.00	SPT D3	37 N			2.0			
				2.00 m: SPT: 4,5/8,11,9,9				
				2.10 m: Becoming brown mottled green grey brown.				
3.00	SPT	19 N			3.0			
				3.00 m: SPT: 2,4/4,4,5,6				
3.50	D4							
				3.70 m: Increasing mudstone gravel content.				
3.80	SPT	38 N		3.80 m: SPT: 4,6/7,9,11,11	4.0			
				4.30 m: Grey in colour.				
					4.50			

General Remarks:
Borehole terminated at 4.80m bgl.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
32.119 mAOD

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 04/09/2020
Date Completed: 04/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS11

Sheet 2 of 2

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
4.70	D5			Continued from 1.40m: Very stiff to hard, brown mottled dark brown and yellow, sandy, silty CLAY with some mudstone lithorelicts and occasional ironstone fragments.			LTW	
4.80	SPT	25 N		4.80 m: SPT: 3,3/4,6,7,8	4.80 (27.32)			
					5.0			
					6.0			
					7.0			
					8.0			
					9.0			

General Remarks:
Borehole terminated at 4.80m bgl.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
32.119 mAOD

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 04/09/2020
Date Completed: 04/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS12

Sheet 1 of 2

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
0.10	J1			TOPSOIL: Dark brown, silty CLAY with some rootlets.			TS	
				Stiff to hard, orange mottled grey CLAY with occasional mudstone gravel lithorelicts.	0.20 (31.83)			
0.70	PEN	4.0/>4.5/>4.5 kg/cm²						
0.90	D1				1.0			
1.00	SPT J2	10 N		1.00 m: SPT: 1,2/2,2,2,4				
1.60	PEN	>4.5x3 kg/cm²						
1.70	D2							
2.00	SPT	21 N		2.00 m: SPT: 2,2/4,5,5,7	2.0			
				Stiff to hard, light green grey mottled yellow brown, slightly gravelly CLAY. Gravel of fine to coarse, angular sandstone with rare small pockets of ironstone.	2.10 (29.93)		GRINSTEAD CLAY MEMBER	
2.80	D3							
3.00	SPT	23 N		3.00 m: SPT: 2,3/4,5,6,8	3.0			
3.50	PEN	>4.5x3 kg/cm²						
4.00	SPT	28 N		4.00 m: SPT: 2,3/6,6,8,8	4.0			
				4.20 m: Becoming dark grey with some mudstone gravel lithorelicts.	4.50			

General Remarks:
Borehole terminated at 4.80m bgl.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
32.03 mAOD

All dimensions in metres
Log Scale 1:25

BRD
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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 04/09/2020
Date Completed: 04/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS12

Sheet 2 of 2

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
4.50	D4			Continued from 2.10m: Stiff to hard, light green grey mottled yellow brown, slightly gravelly CLAY. Gravel of fine to coarse, angular sandstone with rare small pockets of ironstone.			GCM	
4.80	SPT	47 N		4.80 m: SPT: 5,7/8,10,12,17	4.80 (27.23)			
					5.0			
					6.0			
					7.0			
					8.0			
					9.0			

General Remarks:
Borehole terminated at 4.80m bgl.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
32.03 mAOD

All dimensions in metres
Log Scale 1:25

BRD
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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 04/09/2020
Date Completed: 04/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS13

Sheet 1 of 1

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
0.20	J1			TOPSOIL: Brown, sandy, silty clay with some rootlets.	0.30 (27.90)		TS	
0.70	D1			Stiff, yellow brown mottled grey brown, sandy, slightly gravelly SILT. Gravel of fine to medium subangular sandstone.			ARDINGLY SANDSTONE	
1.00	SPT	>50 N		0.80 - 1.00 Some sandstone and ironstone gravel. (Very weak to weak)	1.0 1.00 (27.20)			
				Very dense, orange mottled yellow brown, silty, slightly gravelly fine SAND. Gravel of fine to medium, angular sandstone. 1.00 m: SPT: 4,11/17,18,12,3 for 5mm	1.50 (26.70)			
1.60	SPT	>50 N		Stiff, orange brown mottled light brown, silty, sandy CLAY. 1.60 m: SPT: 18, 7 for 15mm/ 50 for 70mm	1.60 (26.60)			
					2.0			
					3.0			
					4.0			

General Remarks:
Borehole terminated at 1.60m bgl due to refusal on sandstone.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
28.198 mAOD

All dimensions in metres
Log Scale 1:25

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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 04/09/2020
Date Completed: 04/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS14

Sheet 1 of 1

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
0.20	J1			MADE GROUND / TOPSOIL: Dark brown, sandy, silty, slightly gravelly clay with occasional rootlets. Gravel of fine to medium, angular brick.	0.30 (27.08)		MG/TS	
0.50	D1			Firm to stiff, slightly desiccated, light yellow mottled light grey, sandy, clayey SILT.			GRINSTEAD CLAY	
0.90	J2			0.80 - 1.00 m: Some dark brown, very weak ironstone gravel.	1.0			
1.00	SPT	47 N		1.00 m: SPT: 6,7/8,11,15,13	1.10 (26.28)			
1.50	B1			Dense, grey brown with light grey and orange grey partings, silty, clayey, slightly gravelly fine SAND / sandy SILT with occasional clay bands. Gravel of fine to medium, angular, extremely weak sandstone.			ARDINGLY SANDSTONE MEMBER	
2.00	SPT	32 N		2.00 m: SPT: 3,3/4,7,8,13 2.10 m: Becoming grey brown mottled dark brown with increasing sandstone and siltstone gravel.	2.0			
2.50	D2							
2.60	SPT	>50 N		2.60 m: SPT: 11,14/21,29 for 55mm	2.60 (24.78)			
					3.0			
					4.0			

General Remarks:
Borehole terminated at 2.60m bgl due to refusal on rock. Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
27.377 mAOD

All dimensions in metres
Log Scale 1:25

BRD
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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 07/09/2020
Date Completed: 07/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS15

Sheet 1 of 1

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
0.10	J1			TOPSOIL: Dark brown, sandy, silty CLAY with occasional rootlets.			TS	
0.20	J2			Very stiff to hard, desiccated, light grey, silty CLAY with occasional rootlets.	0.20 (26.58)		LOWER TUNBRIDGE WELLS SAND	
0.60	D1							
1.00	SPT	23 N		Stiff, orange brown, mottled red brown and light grey, silty CLAY. 1.00 m: SPT: 2,4/4,5,7,7	0.80 (25.98) 1.0			
1.50	D2							
2.00	SPT	22 N		2.00 m: SPT: 3,3/4,4,6,8	2.0			
2.80	D3			Very stiff, orange brown mottled dark brown, very sandy, gravelly CLAY. Gravel of fine to medium weak, angular sandstone and ironstone.	2.30 (24.48)			
3.00	SPT	>50 N		3.00 m: SPT: 7,12/20,30 for 60mm	3.0 3.00 (23.78)			
					4.0			

General Remarks:
Borehole terminated at 3.00m bgl due to refusal on rock. Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
26.779 mAOD

All dimensions in metres
Log Scale 1:25

BRD
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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 07/09/2020
Date Completed: 07/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS16

Sheet 1 of 1

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
				TOPSOIL: Dark brown, slightly sandy, slightly gravelly, silty CLAY with some rootlets.	0.25 (30.47)		TS	
				Firm to stiff, light yellow brown mottled light grey, sandy, clayey SILT.				
0.50	J1							
0.60	PEN D1	>4.5x3 kg/cm²			0.70 (30.02)			
				Stiff, orange brown mottled light grey, sandy, silty CLAY.				
1.00	SPT	16 N		1.00 m: SPT: 2,3/3,4,4,5	1.0		LOWER TUNBRIDGE WELLS SAND	
1.50	PEN D2	>4.5x3 kg/cm²						
				Stiff, light grey mottled light orange, clayey SILT.	1.70 (29.02)			
2.00	SPT	35 N		2.00 m: SPT: 4,8/14,8,7,6	2.0			
2.50	PEN D3	>4.5x3 kg/cm²						
2.85	SPT	45 N			2.85 (27.87)			
				Very stiff to hard, brown, clayey, sandy, gravelly SILT. Gravel of fine to medium, very weak, angular ironstone. 2.85 m: SPT: 12,9/9,10,12,14	3.0			
3.40	D4							
3.60	SPT	>50 N		3.60 m: SPT: 10,12/16,14,14,6 for 20mm	3.60 (27.12)			
					4.0			

General Remarks:
Borehole terminated at 3.60m bgl due to refusal on rock. Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
30.718 mAOD

All dimensions in metres
Log Scale 1:25

BRD
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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 07/09/2020
Date Completed: 07/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS17

Sheet 1 of 1

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
				TOPSOIL: Dark brown, slightly sandy, slightly gravelly, silty CLAY with some rootlets.	0.30 (33.99)		TS	
				Dense to very dense, orange brown mottled yellow and grey, silty fine SAND.			ARDINGLY SANDSTONE MEMBER	
0.70	J1			0.70 m: Occasional, very weak sandstone gravel.				
0.80	J2							
0.90	D1							
1.00	SPT	37 N		1.00 m: SPT: 4,6/7,7,10,13	1.0			
1.50	B1							
2.00	SPT	>50 N		2.00 m: SPT: 3,3/4,5,39,2 for 5mm	2.0 2.00 (32.29)			
					3.0			
					4.0			

General Remarks:
Borehole terminated at 2.00m bgl due to refusal on rock. Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
34.288 mAOD

All dimensions in metres
Log Scale 1:25

BRD
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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 07/09/2020
Date Completed: 07/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS18

Sheet 1 of 2

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
0.20	J1			TOPSOIL: Dark brown, silty, clayey fine sand with abundant rootlets.	0.30 (42.13)		TS	
				Stiff, brown mottled grey brown, desiccated, silty, sandy CLAY.	0.50 (41.93)		ARDINGLY SANDSTONE MEMBER	
1.00	SPT	>50 N		Very dense, light brown mottled yellow and orange, gravelly fine SAND. Gravel of fine to coarse, angular, weak sandstone. 1.00 m: SPT: 13,12/20,21,9 for 15mm	1.0			
1.80	D1			Stiff, light brown, gravelly, clayey SILT. Gravel of fine to coarse, very weak siltstone.	1.60 (40.83)		LOWER TUNBRIDGE WELLS SAND	
2.00	SPT	31 N		2.00 m: SPT: 3,5/7,7,8,9	2.0			
				2.40 m: Some fine ironstone seams in fractures.				
2.70	J2							
2.90	D2							
3.00	SPT	>50 N		3.00 m: SPT: 6,8/11,12,14,13 for 70mm	3.0			
				3.40 m: Green grey mottled orange brown.				
4.00	SPT	46 N		4.00 m: SPT: 5,6/12,11,11,12	4.0			
				4.10 m: Dark blue grey in colour.	4.50			

General Remarks:
Borehole terminated at 5.00m bgl.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
42.426 mAOD

All dimensions in metres
Log Scale 1:25

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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 07/09/2020
Date Completed: 07/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS18

Sheet 2 of 2

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
				Continued from 1.60m: Stiff, light brown, gravelly, clayey SILT. Gravel of fine to coarse, very weak siltstone.	5.0		LTW	
4.90 5.00	D3 SPT	46 N		5.00 m: SPT: 5,7/9,9,13,15	5.00 (37.43)			
					6.0			
					7.0			
					8.0			
					9.0			

General Remarks:
Borehole terminated at 5.00m bgl.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
42.426 mAOD

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 07/09/2020
Date Completed: 07/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS19

Sheet 1 of 1

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
0.10	J1			TOPSOIL: Dark brown, slightly gravelly, sandy, silty clay with some rootlets. Gravel of fine to coarse, angular sandstone.	0.30 (57.43)		TS	
0.50	J2			Stiff, brown mottled orange and light grey, silty, sandy CLAY. 0.70 m: Cobble of very weak, fine grained sandstone.	1.0		UPPER TUNBRIDGE WELLS SAND	
0.90	D1							
1.00	SPT	>50 N		Very dense, light brown mottled orange brown and dark brown, silty, fine SAND. 1.00 m: SPT: 11,14/21,19,10 for 40mm	1.00 (56.73)			
1.30	B1				1.70 (56.03)			
2.00	SPT D2	>50 N		Stiff to hard, grey brown mottled dark brown, gravelly, sandy, silty CLAY. Gravel of fine to medium, angular, very weak ironstone. 2.00 m: SPT: 15 fr 25mm,10/35,15 for 45mm	2.0		GRINSTEAD CLAY	
					2.45 (55.28)			
					3.0			
					4.0			

General Remarks:
Borehole terminated at 2.45m bgl.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
57.728 mAOD

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 07/09/2020
Date Completed: 07/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS20

Sheet 1 of 2

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
0.20	J1			TOPSOIL: Dark brown, silty, fine sand with occasional rootlets.	0.30 (58.58)		TS	
				Medium dense, light brown, gravelly, clayey fine SAND. Gravel of fine to coarse angular ironstone.	0.50 (58.38)		UPPER TUNBRIDGE WELLS SAND	
0.60	J2			Very dense, light brown mottled orange brown and dark brown, slightly gravelly, silty, fine SAND. Gravel of fine to coarse, angular sandstone and ironstone.				
				0.80 - 1.20 m: Very clayey.	1.0			
1.00	SPT	>50		1.00 m: SPT: 7,7/7,8,14,22				
1.10	D1	N		1.30 m: Some gravel of fine to coarse, angular sandstone.	1.90 (56.98)			
2.00	SPT	19 N		Stiff, light brown mottled orange brown and dark brown, silty, slightly sandy CLAY. 2.00 m: SPT: 2,7/5,5,5,4	2.0			
2.50	D2			2.70 - 2.90 m: Orange colour, very sandy and some very weak ironstone.	2.90 (55.98)			
3.00	SPT J3	19 N		Stiff to hard, blue grey, silty, sandy CLAY. 3.00 m: SPT: 2,3/3,5,6,5	3.0		GRINSTEAD CLAY MEMBER	
3.90	D3							
4.00	SPT	25 N		4.00 m: SPT: 2,4/4,5,8,8	4.0			
					4.50			

General Remarks:
Borehole terminated at 5.45m bgl.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
58.876 mAOD

All dimensions in metres
Log Scale 1:25

BRD
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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 07/09/2020
Date Completed: 07/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS20

Sheet 2 of 2

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
5.00	SPT	33 N		Continued from 2.90m: Stiff to hard, blue grey, silty, sandy CLAY. 5.00 m: SPT: 4,7/7,9,8,9	5.0 5.45 (53.43) 6.0 7.0 8.0 9.0		GRINSTEAD CLAY MEMBER	

General Remarks:
Borehole terminated at 5.45m bgl.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
58.876 mAOD

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
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PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 08/09/2020
Date Completed: 08/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS21

Sheet 1 of 1

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
0.20	J1			TOPSOIL: Dark brown, silty sand with some rootlets.	0.40 (30.44)		TS	
0.80	J2			Medium dense, yellow brown, slightly gravelly fine SAND. Gravel of very weak, angular sandstone.	1.0		ARDINGLY SANDSTONE MEMBER	
1.00	SPT	29 N		1.00 m: SPT: 5,7/6,7,8,8				
				1.20 m: Grey mottled orange brown, very clayey.				
1.50	D1							
				1.80 m: Very dense with increasing sandstone.	2.0			
2.00	SPT	>50 N		2.00 m: SPT: 25,/33,17for 35mm	2.00 (28.84)			
					3.0			
					4.0			

General Remarks:
Borehole terminated at 2.00m bgl due to refusal on sandstone.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
30.838 mAOD

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 09/09/2020
Date Completed: 08/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS22

Sheet 1 of 1

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
0.10	J1			MADE GROUND / TOPSOIL: Dark brown, sandy clay with occasional rootlets.	0.20 (31.37)		MGTS	
0.40	J2			MADE GROUND: Grey brown mottled brown, slightly organic, silty CLAY.	0.50 (31.07)		MG	
1.00	SPT	5 N		Firm, grey mottled orange, silty CLAY. 1.00 m: SPT: 1,1/1,1,2,1 1.10 m: Becomes sandy.	1.0			
1.60 1.60	PEN D1	1.5/2.0/2.0 kg/cm²		Soft to firm, grey mottled orange brown, silty CLAY with rare relict roots and rootlets.	1.30 (30.27)		LOWER TUNBRIDGE WELLS SAND	
2.00	SPT	8 N		2.00 m: SPT: 1,1/1,1,2,4 2.20 m: moist, soft.	2.0			
			1	Medium dense, orange brown, moist, fine SAND.	2.60 (28.97)			
3.00	SPT	27 N		3.00 m: SPT: 1,2/7,8,6,6 3.30 m: Becomes very clayey.	3.0			
3.50	J3				3.85 (27.72)			
					4.0			

General Remarks:
Borehole terminated at 3.85m bgl.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
31.568 mAOD

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

PROBEHOLE RECORD

Client: Gleeson Strategic Land
Project Title: Downlands Farm, Uckfield
Project No: BRD200653
Logged By: M Morgan
Date Commenced: 08/09/2020
Date Completed: 08/09/2020
Method Used: Windowless Percussive Sampling Rig

Borehole No.

WS23

Sheet 1 of 1

Samples & Tests			Water	Description of Strata	Depth / (Level)	Legend	Geology	Installation /Backfill
Depth	Type & No	Value						
0.30	J1			TOPSOIL: Dark brown, organic, silty, slightly gravelly sand. Gravel of medium, subrounded quartzite.	0.40 (33.09)		TS	
0.60	J2			Medium dense, brown to light brown, very clayey, fine SAND.	0.80 (32.69)		ARDINGLY SANDSTONE MEMBER	
1.10	SPT	>50 N		Firm, orange brown mottled light grey, silty, sandy CLAY. 1.10 m: SPT: 6,10/11,12,24 for 5mm.	1.0			
1.70	SPT	>50 N		Very dense, light brown becoming orange brown, slightly gravelly, fine SAND. Gravel of fine to medium, angular sandstone. 1.65 m: Very light brown to beige colour. 1.70 m: SPT: 25 for 70mm/ 50 for 65mm	1.20 (32.29) 1.80 (31.69) 2.0 3.0 4.0			

General Remarks:
Borehole terminated at 1.80m bgl due to refusal on very dense sand.
Installed with 50mm standpipe, gas tap and flush metal cover.

Surface Elevation Level:
33.491 mAOD

All dimensions in metres
Log Scale 1:25

BRD
Telephone: 01295 272244
Email: info@brduk.com

SOIL INFILTRATION RATE

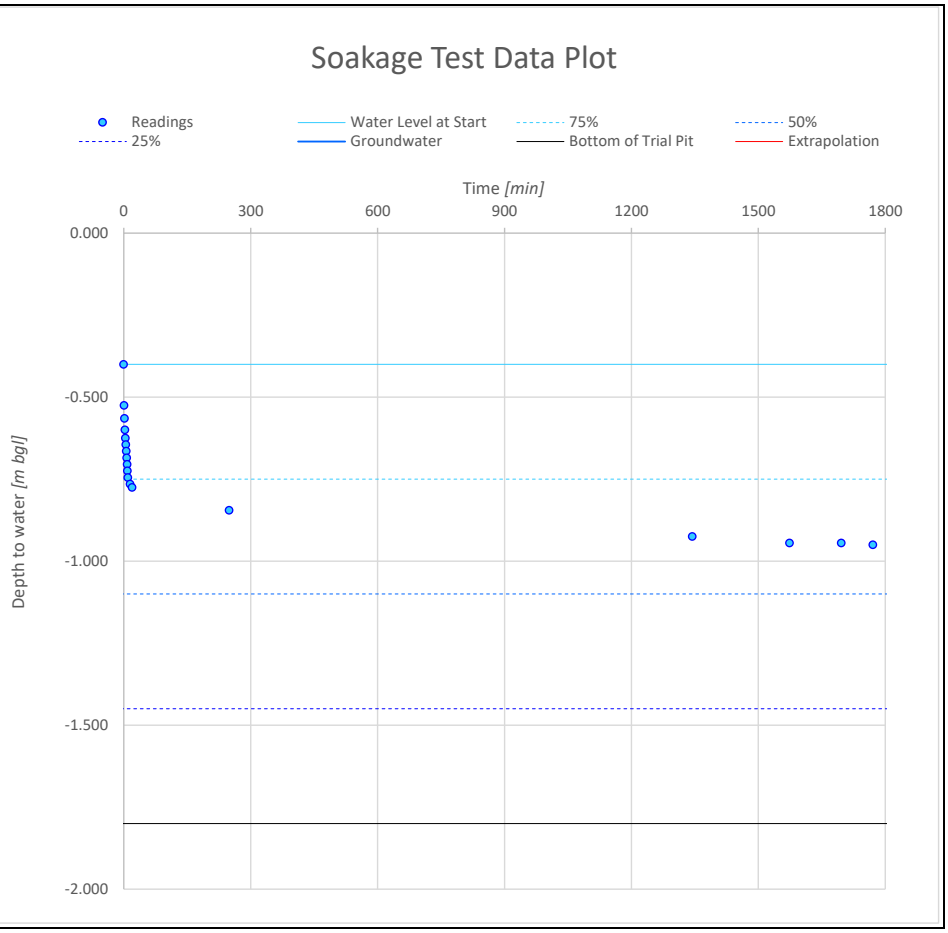
In accordance with BRE Digest 365:2016 - Soakaway Design

Client:	Gleeson Stategic Lands
Project Title:	Land at Downlands Farm, Uckfield
Project No:	BRD200653

Trial Pit No:	SA01	**Length *[m]* :**	1.40
Test No:	1	**Depth *[m]* :**	1.80
Date:	25/08/2020	**Width *[m]* :**	0.45
Logged by:	DB	**Groundwater *[m bgl]* :**	Dry

Ground Conditions	**from - to *[m bgl]***		**Description**
	0.00	0.40	TOPSOIL: Grass over: Dark brown, dessicated, very sandy, slightly gravelly clay with occasional rootlet. Gravel of fine, subrounded flint grave.
	0.40	1.80	Stiff, grey, brown mottled orange brown, silty CLAY with occaisonal fine rootlets.

Time	**Water Depth**
[min]	***[m bgl]***
0	0.400
1	0.525
2	0.565
3	0.600
4	0.625
5	0.645
6	0.665
7	0.685
8	0.705
9	0.725
10	0.745
15	0.765
20	0.775
249	0.845
1344	0.925
1574	0.945
1696	0.945
1771	0.950



Soil Infiltration Rate [m/s]: $f = \frac{V_{p75_25}}{a_{s50} \times tp_{75-25}}$

with:

V_{p75_25}	as Effective Storage Volume of water between 75% and 25% effective storage depth ***[m³]***	**0.44**
a_{s50}	as Internal Surface Area of the soakage trial pit up to 50% storage depth including the base area ***[m²]***	**3.22**
t_{p75_25}	as Time for the water level to fall from 75% to 25% effective storage depth ***[s]***	**n/a**

Soil Infiltration Rate *[m/s]* : n/a

Remarks: Result could not be calculated. Soakage test failed.

SOIL INFILTRATION RATE

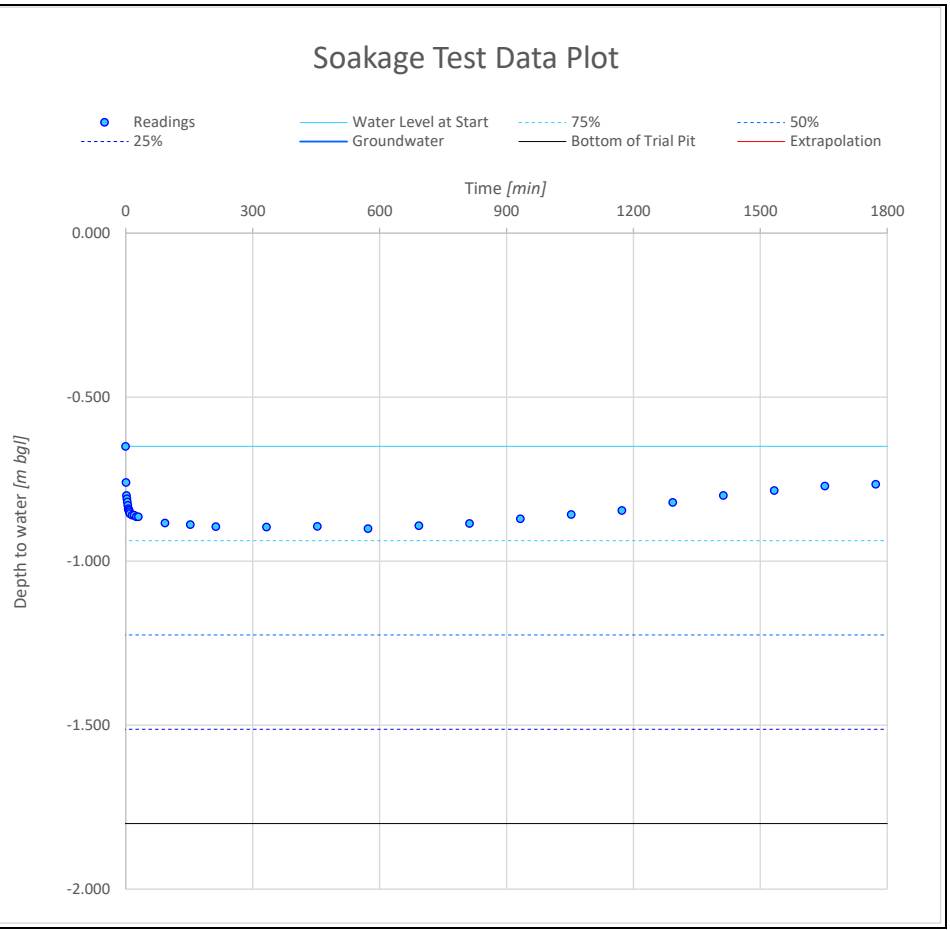
In accordance with BRE Digest 365:2016 - Soakaway Design

Client:	Gleeson Stategic Lands
Project Title:	Land at Downlands Farm, Uckfield
Project No:	BRD200653

Trial Pit No:	SA02	**Length *[m]* :**	1.30
Test No:	1	**Depth *[m]* :**	1.80
Date:	25/08/2020	**Width *[m]* :**	0.45
Logged by:	DB	**Groundwater *[m bgl]* :**	Dry

		from - to *[m bgl]*		Description
Ground	**Conditions**	0.00	0.30	TOPSOIL: Grass over: Dark brown, dessicated, slightly sandy, slightly gravelly clay with occasional rootlets. Gravel of fine, subrounded ??? And rare subrounded flint.
		0.30	1.80	Stiff, grey, brown mottled orange brown, silty CLAY with occasional fine rootlets.

Time	Water Depth
[min]	*[m bgl]*
0	0.650
1	0.760
2	0.800
3	0.810
4	0.820
5	0.830
6	0.840
7	0.845
8	0.845
9	0.850
10	0.855
15	0.860
20	0.860
25	0.865
30	0.865
93	0.884
153	0.889
213	0.895
333	0.896
453	0.894
573	0.901
693	0.892
813	0.885
933	0.871
1053	0.858
1173	0.846
1293	0.821
1413	0.800
1533	0.785
1653	0.771
1773	0.766



Soil Infiltration Rate [m/s]: $f = \frac{V_{p75_25}}{a_{s50} \times tp_{75-25}}$

with:

V_{p75_25}	as Effective Storage Volume of water between 75% and 25% effective storage depth ***[m³]***	**0.34**
a_{s50}	as Internal Surface Area of the soakage trial pit up to 50% storage depth including the base area ***[m²]***	**2.60**
t_{p75_25}	as Time for the water level to fall from 75% to 25% effective storage depth ***[s]***	**n/a**

Soil Infiltration Rate *[m/s]* : n/a

Remarks: Result could not be calculated. Soakage test failed.

SOIL INFILTRATION RATE

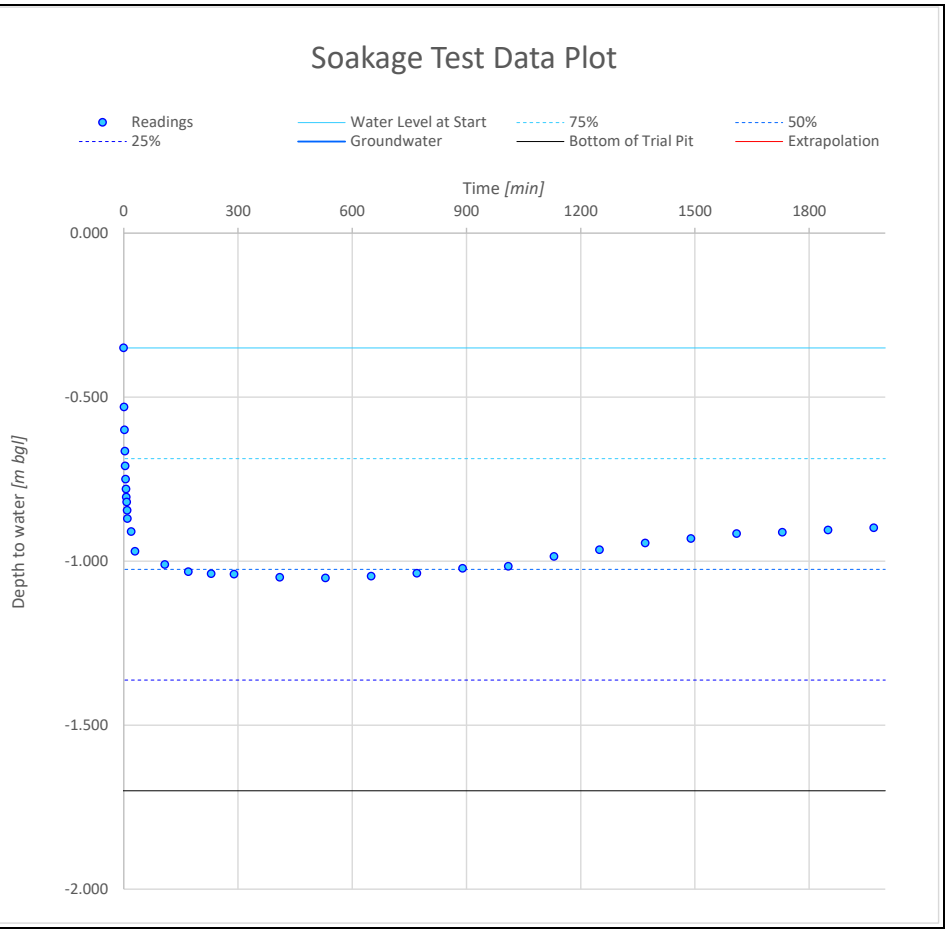
In accordance with BRE Digest 365:2016 - Soakaway Design

Client:	Gleeson Stategic Lands
Project Title:	Land at Downlands Farm, Uckfield
Project No:	BRD200653

Trial Pit No:	SA03	**Length *[m]* :**	1.70
Test No:	1	**Depth *[m]* :**	1.70
Date:	25/08/2020	**Width *[m]* :**	0.45
Logged by:	DB	**Groundwater *[m bgl]* :**	Dry

		from - to *[m bgl]*		Description
Ground	**Conditions**	0.00	0.30	TOPSOIL: Dark brown, dessicated, sandy, clayey silt with abundant rootlets.
		0.30	1.40	Stiff, dessicated, orange brown mottled grey, silty CLAY.
		1.40	1.70	Stiff, light grey mottled bornw, silty CLAY.

Time	Water Depth
[min]	*[m bgl]*
0	0.350
1	0.530
2	0.600
3	0.665
4	0.710
5	0.750
6	0.780
7	0.805
8	0.820
9	0.845
10	0.870
20	0.910
30	0.970
108	1.010
170	1.032
230	1.038
290	1.040
410	1.049
530	1.051
650	1.046
770	1.037
890	1.022
1010	1.016
1130	0.986
1250	0.965
1370	0.945
1490	0.931
1610	0.916
1730	0.912
1850	0.905
1970	0.898



Soil Infiltration Rate [m/s]: $$f = \frac{V_{p75_25}}{a_{s50} \times tp_{75-25}}$$

with:

V_{p75_25}	as Effective Storage Volume of water between 75% and 25% effective storage depth ***[m³]***	**0.52**
a_{s50}	as Internal Surface Area of the soakage trial pit up to 50% storage depth including the base area ***[m²]***	**3.67**
t_{p75_25}	as Time for the water level to fall from 75% to 25% effective storage depth ***[s]***	**n/a**

Soil Infiltration Rate *[m/s]* : **n/a**

Remarks: Result could not be calculated. Soakage test failed.

SOIL INFILTRATION RATE

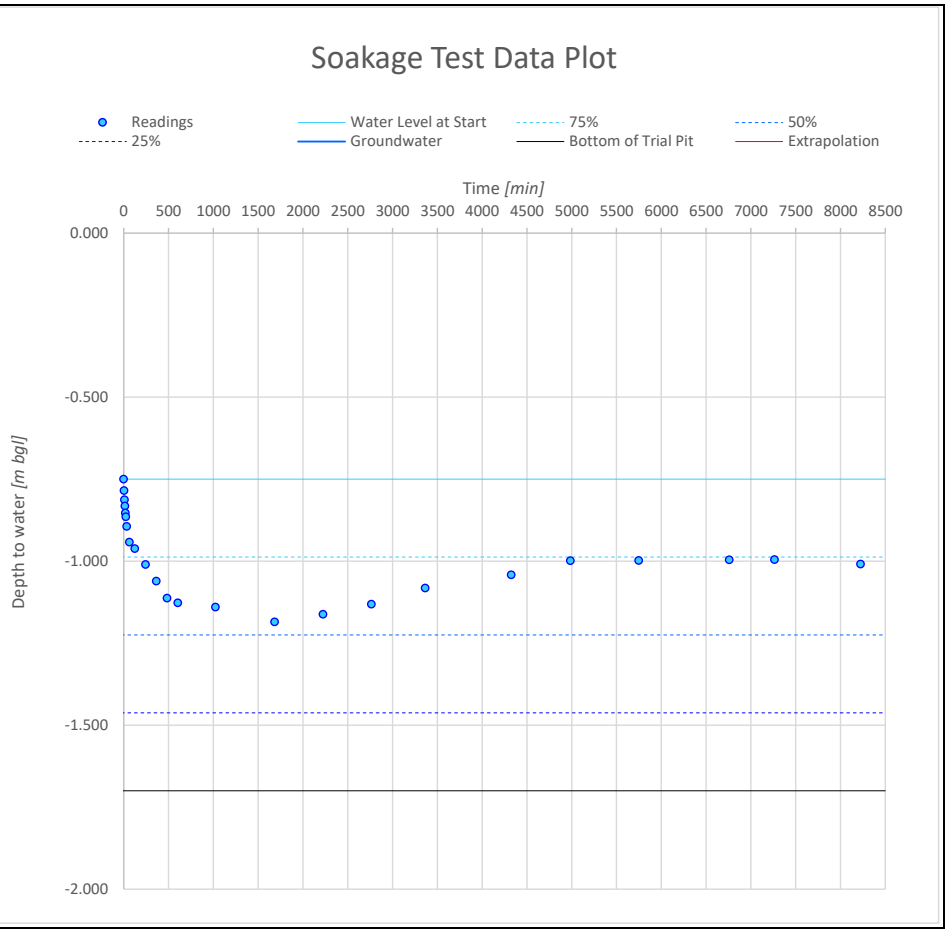
In accordance with BRE Digest 365:2016 - Soakaway Design

Client:	Gleeson Stategic Lands
Project Title:	Land at Downlands Farm, Uckfield
Project No:	BRD200653

Trial Pit No:	SA03	**Length *[m]* :**	1.70
Test No:	2	**Depth *[m]* :**	1.70
Date:	27/08/2020	**Width *[m]* :**	0.45
Logged by:	DB	**Groundwater *[m bgl]* :**	Dry

		from - to *[m bgl]*		**Description**
Ground	**Conditions**	0.00	0.30	TOPSOIL: Dark brown, dessicated, sandy, clayey silt with abundant rootlets.
		0.30	1.40	Stiff, dessicated, orange brown mottled grey, silty CLAY.
		1.40	1.70	Stiff, light grey mottled bornw, silty CLAY.

Time	**Water Depth**
[min]	***[m bgl]***
0	0.750
5	0.785
10	0.813
15	0.832
20	0.853
25	0.865
35	0.894
65	0.942
125	0.962
245	1.010
365	1.061
485	1.113
605	1.127
1025	1.140
1685	1.185
2225	1.162
2765	1.131
3365	1.082
4325	1.042
4985	0.999
5750	0.998
6760	0.996
7265	0.995
8225	1.009



Soil Infiltration Rate [m/s]: $f = \frac{V_{p75_25}}{a_{s50} \times tp_{75-25}}$

with:

V_{p75_25}	as Effective Storage Volume of water between 75% and 25% effective storage depth ***[m³]***	**0.36**
a_{s50}	as Internal Surface Area of the soakage trial pit up to 50% storage depth including the base area ***[m²]***	**2.81**
t_{p75_25}	as Time for the water level to fall from 75% to 25% effective storage depth ***[s]***	**n/a**

Soil Infiltration Rate *[m/s]* : n/a

Remarks: Result could not be calculated. Soakage test failed.

SOIL INFILTRATION RATE

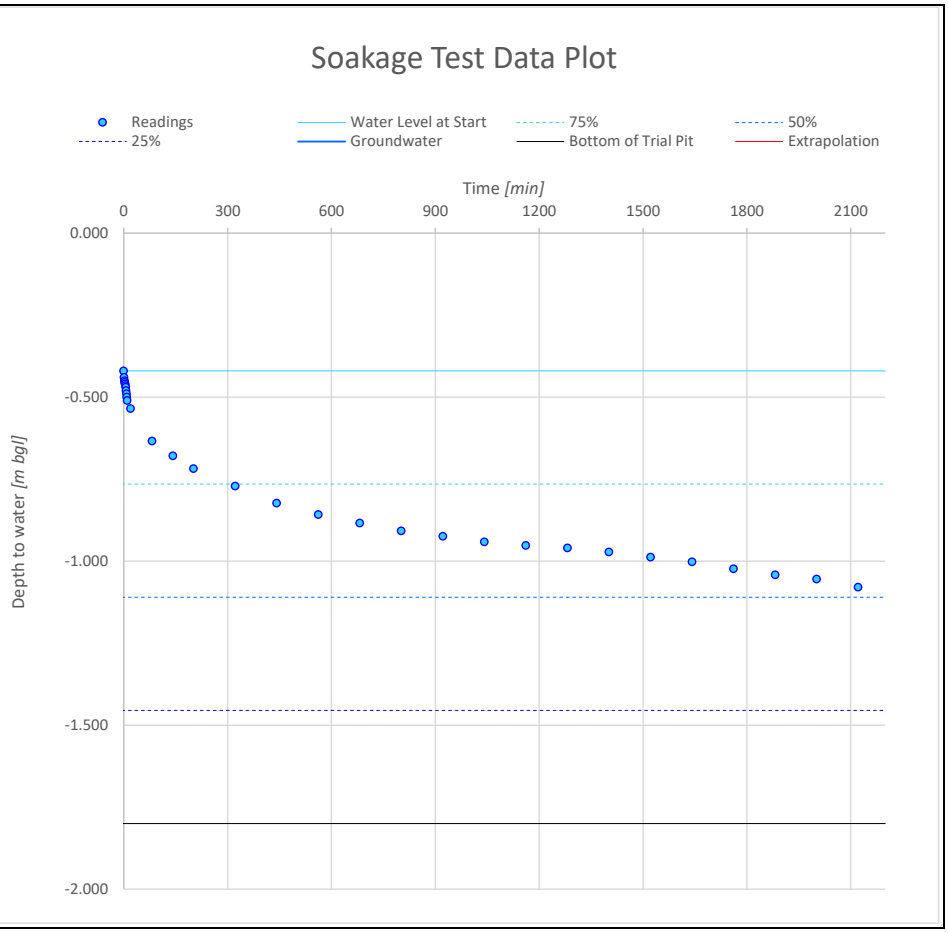
In accordance with BRE Digest 365:2016 - Soakaway Design

Client:	Gleeson Stategic Lands
Project Title:	Land at Downlands Farm, Uckfield
Project No:	BRD200653

Trial Pit No:	SA04	**Length *[m]* :**	1.60
Test No:	1	**Depth *[m]* :**	1.80
Date:	25/08/2020	**Width *[m]* :**	0.45
Logged by:	DB	**Groundwater *[m bgl]* :**	Dry

		from - to *[m bgl]*		Description
Ground	**Conditions**	0.00	0.35	MADE GROUND/TOPSOIL: Brown, slightly dessicated, clayey silt with rare brick.
		0.35	0.80	Stiff, orange brown mottled grey brown, very silty CLAY with occasional rootlets.
		0.80	1.80	Firm to stiff, light yellow brown mottled light grey, clayey, sandy SILT.

Time	Water Depth
[min]	*[m bgl]*
0	0.420
1	0.440
2	0.450
3	0.455
4	0.460
5	0.465
6	0.470
7	0.480
8	0.490
9	0.500
10	0.510
20	0.535
82	0.634
142	0.679
202	0.718
322	0.771
442	0.823
562	0.858
682	0.884
802	0.908
922	0.924
1042	0.941
1162	0.952
1282	0.960
1402	0.972
1522	0.988
1642	1.002
1762	1.023
1882	1.042
2002	1.055
2122	1.079



Soil Infiltration Rate [m/s]: $f = \frac{V_{p75_25}}{a_{s50} \times tp_{75-25}}$

with:

V_{p75_25}	as Effective Storage Volume of water between 75% and 25% effective storage depth ***[m³]***	**0.50**
a_{s50}	as Internal Surface Area of the soakage trial pit up to 50% storage depth including the base area ***[m²]***	**3.55**
t_{p75_25}	as Time for the water level to fall from 75% to 25% effective storage depth ***[s]***	**n/a**

Soil Infiltration Rate *[m/s]* : **n/a**

Remarks: Result could not be calculated. Soakage test failed.

SOIL INFILTRATION RATE

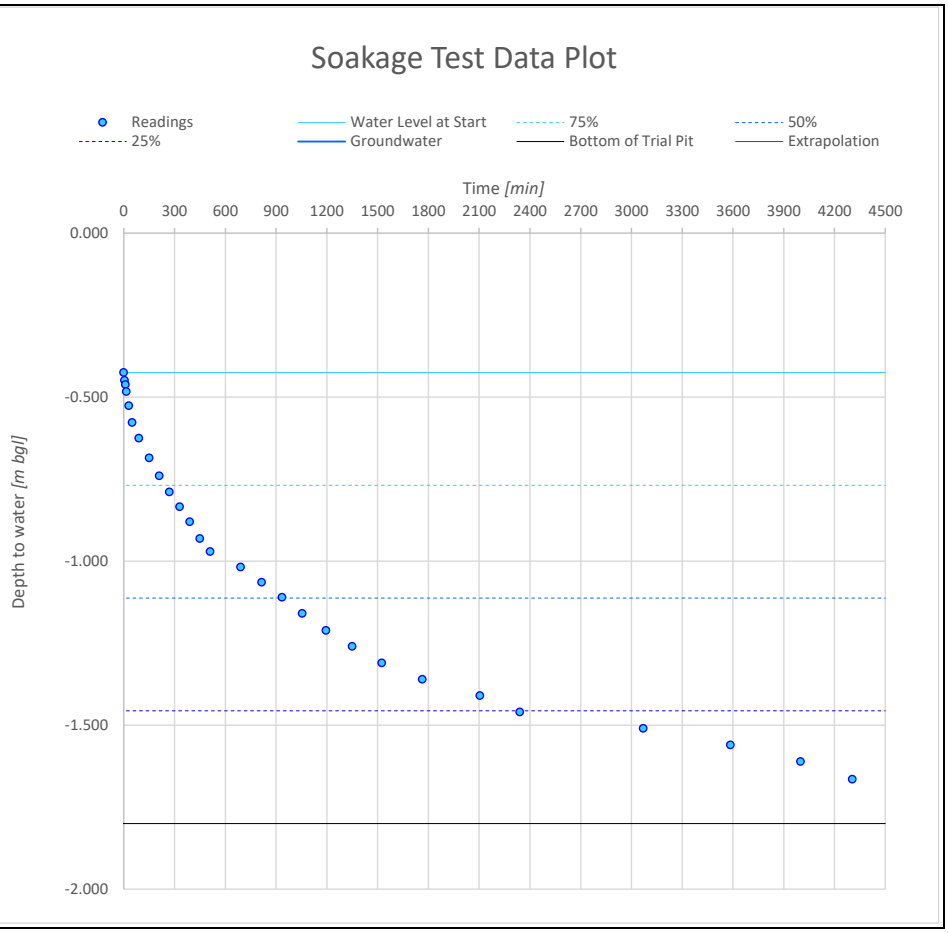
In accordance with BRE Digest 365:2016 - Soakaway Design

Client:	Gleeson Stategic Lands
Project Title:	Land at Downlands Farm, Uckfield
Project No:	BRD200653

Trial Pit No:	SA04	**Length *[m]* :**	1.60
Test No:	2	**Depth *[m]* :**	1.80
Date:	27/08/2020	**Width *[m]* :**	0.45
Logged by:	DB	**Groundwater *[m bgl]* :**	Dry

		from - to *[m bgl]*		**Description**
Ground	**Conditions**	0.00	0.35	MADE GROUND/TOPSOIL: Brown, slightly dessicated, clayey silt with rare brick.
		0.35	0.80	Stiff, orange brown mottled grey brown, very silty CLAY with occasional rootlets.
		0.80	1.80	Firm to stiff, light yellow brown mottled light grey, clayey, sandy SILT.

Time	**Water Depth**
[min]	***[m bgl]***
0	0.425
5	0.449
10	0.462
15	0.483
30	0.526
50	0.577
90	0.625
150	0.685
210	0.740
270	0.789
330	0.834
390	0.880
450	0.931
510	0.971
690	1.018
815	1.064
935	1.110
1055	1.159
1195	1.211
1350	1.260
1525	1.310
1765	1.360
2105	1.410
2340	1.460
3070	1.510
3585	1.560
4000	1.611
4305	1.665



Soil Infiltration Rate [m/s]: $f = \frac{V_{p75_25}}{a_{s50} \times tp_{75-25}}$

with:

V_{p75_25}	as Effective Storage Volume of water between 75% and 25% effective storage depth ***[m³]***	**0.49**
a_{s50}	as Internal Surface Area of the soakage trial pit up to 50% storage depth including the base area ***[m²]***	**3.54**
t_{p75_25}	as Time for the water level to fall from 75% to 25% effective storage depth ***[s]***	**1.2.E+05**

Soil Infiltration Rate *[m/s]* : 1.12E-06

Remarks:

SOIL INFILTRATION RATE

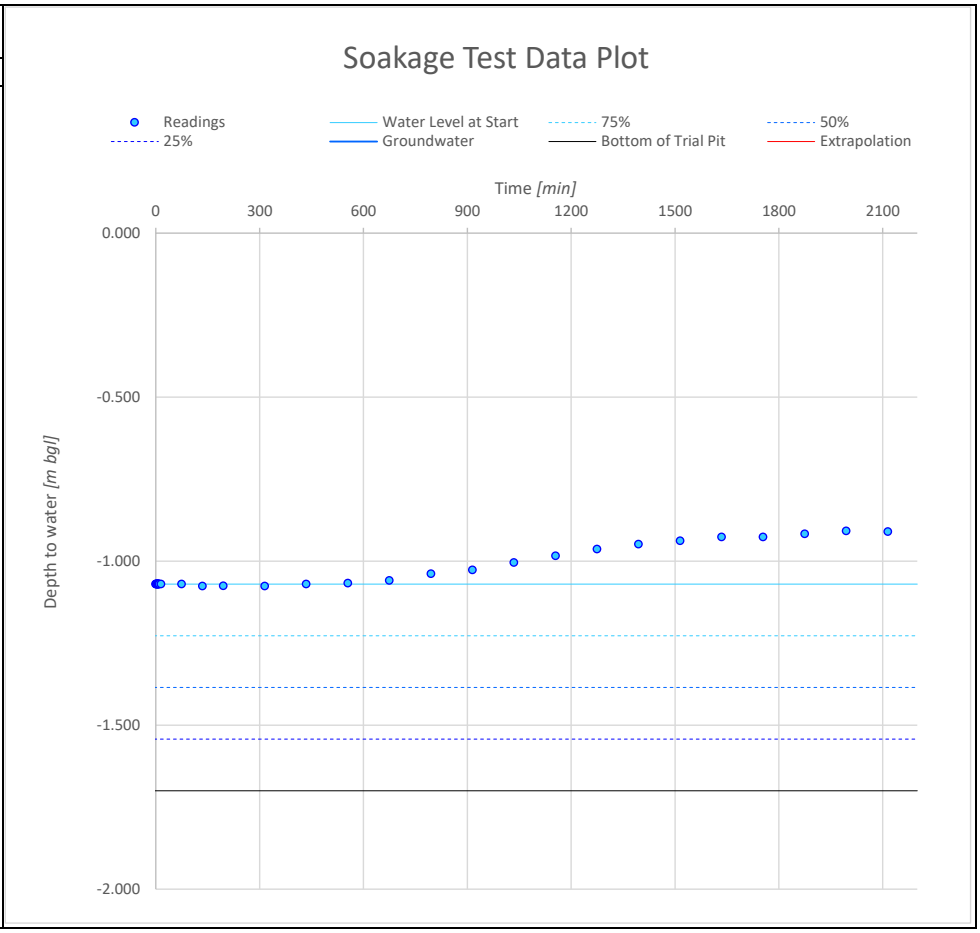
In accordance with BRE Digest 365:2016 - Soakaway Design

Client:	Gleeson Stategic Lands
Project Title:	Land at Downlands Farm, Uckfield
Project No:	BRD200653

Trial Pit No:	SA05	**Length *[m]* :**	1.50
Test No:	1	**Depth *[m]* :**	1.70
Date:	25/08/2020	**Width *[m]* :**	0.45
Logged by:	DB	**Groundwater *[m bgl]* :**	Dry

		from - to *[m bgl]*		**Description**
Ground	**Conditions**	0.00	0.30	TOPSOIL: Light brown, dessicated, clayey silt.
		0.30	1.40	Firm, light brown mottled grey, slightly dessicated, silty CLAY.
		1.40	1.70	Dfirm, light grey mottled red brown, slightly silty CLAY.

Time	**Water Depth**
[min]	***[m bgl]***
0	1.070
1	1.070
2	1.070
3	1.070
4	1.070
5	1.070
6	1.070
7	1.070
8	1.070
9	1.070
10	1.070
15	1.070
75	1.070
135	1.076
195	1.075
315	1.076
435	1.070
555	1.067
675	1.059
795	1.038
915	1.027
1035	1.004
1155	0.984
1275	0.963
1395	0.948
1515	0.938
1635	0.926
1755	0.926
1875	0.917
1995	0.908
2115	0.910



Soil Infiltration Rate [m/s]: $f = \frac{V_{p75_25}}{a_{s50} \times tp_{75-25}}$

with:

V_{p75_25}	as Effective Storage Volume of water between 75% and 25% effective storage depth ***[m³]***	**0.21**
a_{s50}	as Internal Surface Area of the soakage trial pit up to 50% storage depth including the base area ***[m²]***	**1.90**
t_{p75_25}	as Time for the water level to fall from 75% to 25% effective storage depth ***[s]***	**n/a**

Soil Infiltration Rate *[m/s]* : **n/a**

Remarks: Result could not be calculated. Soakage test failed.

Gas Monitoring Record

Project Name: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
Project No: BRD200653

Date:	17/09/2020	Ground conditions:	Dry	Recorded by:	IH
Time at start:	11:30 AM	Weather conditions:	Clear	Pressure trend:	Falling
Time at finish:	3:18 PM	Air Temperature (°C):	20	Monitor serial no:	G501688

The gas monitoring equipment is a Geotech GA5000 portable analyser. As per manufacturers recommendations this is factory calibrated every six months and in addition BRD undertake calibration checks against bottled standard gases on at least a monthly basis. Gas monitor pump is run for three minutes unless otherwise stated and the steady readings are an average reading taken over this pump run time. Vapour monitoring equipment is miniRAE lite PGM-7350 Photo Ionisation Detector (PID) with 10.6 eV lamp calibrated for isobutylene. PID calibration check is performed on site against ambient air and also against a 100ppm isobutylene standard gas. Barometric pressure trend and ambient air temperature is recorded from weather websites at the nearest reported weather station.

CH_4 = Methane CO_2 = Carbon Dioxide O_2 = Oxygen H_2S = Hydrogen Sulphide CO = Carbon Monoxide NR = Not Recorded PID = Photo Ionisation Detector

GWL = Groundwater level measured from ground surface and top of standpipe. Base = Base of standpipe measured from ground surface.

Monitoring point				Gas Concentration								Pressure	Flow rate	Vapour	Comments
				Steady			Peak		Minimum	Peak					
Borehole	GWL Ground (m)	GWL Pipe (m)	Base Ground (m)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CO (ppm)	H_2S (ppm)	Baro - metric (mb)	Steady (l/hr)	PID (ppm)	
WS01	3.94	3.82	4.25	0.0	1.8	19.2	0.0	1.8	19.2	1	0	1027	-0.4	NR	
WS02	3.01	2.90	3.04	0.0	0.1	20.3	0.0	0.1	20.3	0	1	1027	-0.3	NR	
WS03	2.93	2.75	3.03	0.0	1.5	18.8	0.0	0.1	20.3	1	0	1026	-0.5	NR	
WS05	Dry	Dry	3.99	0.0	1.9	18.7	0.0	1.9	18.6	0	1	1024	-0.3	NR	
WS06	3.00	2.83	4.08	0.0	3.9	17.4	0.0	4.0	17.3	0	1	1024	0.0	NR	
WS08	Dry	Dry	1.86	0.0	0.5	20.4	0.0	0.6	20.3	0	0	1026	-0.6	NR	
WS09	Dry	Dry	4.24	0.0	1.9	18.9	0.0	1.9	18.9	1	0	1026	-0.8	NR	
WS11	3.83	3.63	4.16	0.0	2.6	19.2	0.0	2.6	19.2	0	0	1027	-0.7	NR	
WS12	2.06	1.91	4.20	0.0	2.5	19.5	0.0	2.5	19.4	0	0	1027	-0.6	NR	
WS14	Dry	Dry	2.63	0.0	1.9	19.5	0.0	2.3	19.5	1	0	1028	-0.6	NR	

Gas Monitoring Record

Project Name: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
Project No: BRD200653

Date:	17/09/2020	Ground conditions:	Dry	Recorded by:	IH
Time at start:	11:30 AM	Weather conditions:	Clear	Pressure trend:	Falling
Time at finish:	3:18 PM	Air Temperature (°C):	20	Monitor serial no:	G501688

The gas monitoring equipment is a Geotech GA5000 portable analyser. As per manufacturers recommendations this is factory calibrated every six months and in addition BRD undertake calibration checks against bottled standard gases on at least a monthly basis. Gas monitor pump is run for three minutes unless otherwise stated and the steady readings are an average reading taken over this pump run time. Vapour monitoring equipment is miniRAE lite PGM-7350 Photo Ionisation Detector (PID) with 10.6 eV lamp calibrated for isobutylene. PID calibration check is performed on site against ambient air and also against a 100ppm isobutylene standard gas. Barometric pressure trend and ambient air temperature is recorded from weather websites at the nearest reported weather station.

CH_4 = Methane CO_2 = Carbon Dioxide O_2 = Oxygen H_2S = Hydrogen Sulphide CO = Carbon Monoxide NR = Not Recorded PID = Photo Ionisation Detector

GWL = Groundwater level measured from ground surface and top of standpipe. Base = Base of standpipe measured from ground surface.

Monitoring point				Gas Concentration								Pressure	Flow rate	Vapour	Comments
				Steady			Peak		Minimum	Peak					
Borehole	GWL Ground (m)	GWL Pipe (m)	Base Ground (m)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CO (ppm)	H_2S (ppm)	Baro - metric (mb)	Steady (l/hr)	PID (ppm)	
WS15	2.75	2.64	3.02	0.0	1.3	19.8	0.0	1.3	19.8	1	0	1027	-0.7	NR	
WS17	1.92	1.84	1.97	0.0	1.9	19.9	0.0	1.9	19.7	1	0	1026	-0.8	NR	
WS18	3.76	3.62	4.11	0.0	1.3	20.2	0.0	1.3	20.1	2	0	1025	-0.8	NR	
WS20	3.83	3.67	4.18	0.0	3.1	19.1	0.0	3.1	19.1	1	0	1023	-0.8	NR	
WS21	1.94	1.77	2.03	0.0	1.9	20.4	0.0	1.9	20.4	0	0	1025	-0.4	NR	
WS22	0.70	0.55	3.13	0.0	2.6	20.2	0.1	2.6	20.1	0	0	1025	-0.4	NR	

Gas Monitoring Record

Project Name: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
Project No: BRD200653

Date:	24/09/2020	Ground conditions:	Damp	Recorded by:	CB
Time at start:	09:51	Weather conditions:	Sunny spells	Pressure trend:	Falling
Time at finish:	12:36	Air Temperature (°C):	13	Monitor serial no:	G501688

The gas monitoring equipment is a Geotech GA5000 portable analyser. As per manufacturers recommendations this is factory calibrated every six months and in addition BRD undertake calibration checks against bottled standard gases on at least a monthly basis. Gas monitor pump is run for three minutes unless otherwise stated and the steady readings are an average reading taken over this pump run time. Vapour monitoring equipment is miniRAE lite PGM-7350 Photo Ionisation Detector (PID) with 10.6 eV lamp calibrated for isobutylene. PID calibration check is performed on site against ambient air and also against a 100ppm isobutylene standard gas. Barometric pressure trend and ambient air temperature is recorded from weather websites at the nearest reported weather station.

CH_4 = Methane CO_2 = Carbon Dioxide O_2 = Oxygen H_2S = Hydrogen Sulphide CO = Carbon Monoxide NR = Not Recorded PID = Photo Ionisation Detector

GWL = Groundwater level measured from ground surface and top of standpipe. Base = Base of standpipe measured from ground surface.

Monitoring point				Gas Concentration								Pressure	Flow rate	Vapour	Comments
				Steady			Peak		Minimum	Peak					
Borehole	GWL Ground (m)	GWL Pipe (m)	Base Ground (m)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CO (ppm)	H_2S (ppm)	Baro - metric (mb)	Steady (l/hr)	PID (ppm)	
WS01	3.93	3.81	4.23	0.0	4.9	13.5	0.1	4.9	13.4	1	0	996	0.0	NR	
WS02	3.07	2.90	3.04	0.0	6.0	15.5	0.0	7.1	15.5	0	0	994	0.0	NR	
WS03	2.92	2.75	3.03	0.0	1.7	19.4	0.0	1.7	19.0	0	0	996	0.0	NR	
WS05	Dry	Dry	4.00	0.0	2.8	15.1	0.0	2.8	15.0	0	0	994	0.0	NR	
WS06	2.99	2.83	4.07	0.0	3.3	18.8	0.0	3.3	18.9	0	0	993	0.1	NR	
WS08	Dry	Dry	1.86	0.0	2.2	19.2	0.0	2.2	19.2	0	0	996	-0.1	NR	
WS09	Dry	Dry	4.21	0.0	2.6	16.8	0.0	2.7	16.6	0	0	995	0.1	NR	
WS11	3.64	3.45	4.15	0.0	2.7	19.6	0.0	2.7	19.6	0	0	995	0.0	NR	
WS12	1.93	1.79	4.18	0.0	2.1	20.0	0.1	2.1	19.6	0	0	997	0.1	NR	
WS14	Dry	Dry	2.64	0.0	2.0	20.0	0.0	2.0	19.9	0	0	997	0.0	NR	

Gas Monitoring Record

Project Name: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
Project No: BRD200653

Date:	24/09/2020	Ground conditions:	Damp	Recorded by:	CB
Time at start:	09:51	Weather conditions:	Sunny spells	Pressure trend:	Falling
Time at finish:	12:36	Air Temperature (°C):	13	Monitor serial no:	G501688

The gas monitoring equipment is a Geotech GA5000 portable analyser. As per manufacturers recommendations this is factory calibrated every six months and in addition BRD undertake calibration checks against bottled standard gases on at least a monthly basis. Gas monitor pump is run for three minutes unless otherwise stated and the steady readings are an average reading taken over this pump run time. Vapour monitoring equipment is miniRAE lite PGM-7350 Photo Ionisation Detector (PID) with 10.6 eV lamp calibrated for isobutylene. PID calibration check is performed on site against ambient air and also against a 100ppm isobutylene standard gas. Barometric pressure trend and ambient air temperature is recorded from weather websites at the nearest reported weather station.

CH_4 = Methane CO_2 = Carbon Dioxide O_2 = Oxygen H_2S = Hydrogen Sulphide CO = Carbon Monoxide NR = Not Recorded PID = Photo Ionisation Detector

GWL = Groundwater level measured from ground surface and top of standpipe. Base = Base of standpipe measured from ground surface.

Monitoring point				Gas Concentration								Pressure	Flow rate	Vapour	Comments
				Steady			Peak		Minimum	Peak					
Borehole	GWL Ground (m)	GWL Pipe (m)	Base Ground (m)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CO (ppm)	H_2S (ppm)	Baro - metric (mb)	Steady (l/hr)	PID (ppm)	
WS15	2.72	2.61	3.03	0.0	1.7	20.2	0.0	1.7	20.1	0	0	997	0.0	NR	
WS17	1.92	1.84	1.97	0.0	2.1	19.8	0.0	2.1	19.6	0	0	997	-0.2	NR	
WS18	3.66	3.52	4.09	0.0	1.4	20.2	0.0	1.4	20.1	0	0	996	0.1	NR	
WS20	3.78	3.62	4.19	0.0	3.4	19.3	0.0	3.6	19.0	0	0	995	0.0	NR	
WS21	1.95	1.78	2.04	0.0	2.0	20.0	0.0	2.0	19.8	0	0	996	0.1	NR	
WS22	0.86	0.71	3.14	0.0	2.9	19.5	0.0	3.0	19.0	3	0	996	-0.1	NR	

Gas Monitoring Record

Project Name: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
Project No: BRD200653

Date:	02/10/2020	Ground conditions:	Wet	Recorded by:	CB
Time at start:	10:21 AM	Weather conditions:	Raining	Pressure trend:	Falling
Time at finish:	1:16 PM	Air Temperature (°C):	12	Monitor serial no:	G501688

The gas monitoring equipment is a Geotech GA5000 portable analyser. As per manufacturers recommendations this is factory calibrated every six months and in addition BRD undertake calibration checks against bottled standard gases on at least a monthly basis. Gas monitor pump is run for three minutes unless otherwise stated and the steady readings are an average reading taken over this pump run time. Vapour monitoring equipment is miniRAE lite PGM-7350 Photo Ionisation Detector (PID) with 10.6 eV lamp calibrated for isobutylene. PID calibration check is performed on site against ambient air and also against a 100ppm isobutylene standard gas. Barometric pressure trend and ambient air temperature is recorded from weather websites at the nearest reported weather station.

CH_4 = Methane CO_2 = Carbon Dioxide O_2 = Oxygen H_2S = Hydrogen Sulphide CO = Carbon Monoxide NR = Not Recorded PID = Photo Ionisation Detector

GWL = Groundwater level measured from ground surface and top of standpipe. Base = Base of standpipe measured from ground surface.

Monitoring point				Gas Concentration								Pressure	Flow rate	Vapour	Comments
				Steady			Peak		Minimum	Peak					
Borehole	GWL Ground (m)	GWL Pipe (m)	Base Ground (m)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CO (ppm)	H_2S (ppm)	Baro - metric (mb)	Steady (l/hr)	PID (ppm)	
WS01	3.90	3.77	4.23	0.0	5.3	11.5	0.1	5.4	11.1	0	0	984	0.1	0.0	
WS02	3.01	2.91	3.04	0.0	5.2	15.8	0.0	5.2	15.5	0	0	984	1.9	0.2	
WS03	2.93	2.76	3.04	0.0	1.8	19.1	0.0	1.8	18.6	0	0	983	0.1	0.1	
WS05	3.92	3.80	4.01	0.0	2.2	17.2	0.1	2.3	17.3	0	0	982	0.0	0.0	
WS06	3.00	2.84	4.08	0.0	3.3	18.1	0.0	3.3	18.1	0	0	982	0.0	0.0	
WS08	Dry	Dry	1.87	0.0	2.4	19.2	0.2	2.3	19.2	0	0	983	0.1	0.0	
WS09	Dry	Dry	4.20	0.0	2.9	15.7	0.0	2.9	15.7	0	0	983	0.1	0.2	
WS11	3.45	3.24	4.16	0.0	2.8	19.3	0.0	2.8	19.2	0	0	984	0.0	0.1	
WS12	1.92	1.78	4.19	0.0	2.1	19.5	0.0	2.1	19.4	0	0	985	0.1	0.0	
WS14	Dry	Dry	2.64	0.0	2.2	19.3	0.0	2.2	19.2	0	0	985	0.0	0.3	

Gas Monitoring Record

Project Name: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
Project No: BRD200653

Date:	02/10/2020	Ground conditions:	Wet	Recorded by:	CB
Time at start:	10:21 AM	Weather conditions:	Raining	Pressure trend:	Falling
Time at finish:	1:16 PM	Air Temperature (°C):	12	Monitor serial no:	G501688

The gas monitoring equipment is a Geotech GA5000 portable analyser. As per manufacturers recommendations this is factory calibrated every six months and in addition BRD undertake calibration checks against bottled standard gases on at least a monthly basis. Gas monitor pump is run for three minutes unless otherwise stated and the steady readings are an average reading taken over this pump run time. Vapour monitoring equipment is miniRAE lite PGM-7350 Photo Ionisation Detector (PID) with 10.6 eV lamp calibrated for isobutylene. PID calibration check is performed on site against ambient air and also against a 100ppm isobutylene standard gas. Barometric pressure trend and ambient air temperature is recorded from weather websites at the nearest reported weather station.

CH_4 = Methane CO_2 = Carbon Dioxide O_2 = Oxygen H_2S = Hydrogen Sulphide CO = Carbon Monoxide NR = Not Recorded PID = Photo Ionisation Detector

GWL = Groundwater level measured from ground surface and top of standpipe. Base = Base of standpipe measured from ground surface.

Monitoring point				Gas Concentration								Pressure	Flow rate	Vapour	Comments
				Steady			Peak		Minimum	Peak					
Borehole	GWL Ground (m)	GWL Pipe (m)	Base Ground (m)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CO (ppm)	H_2S (ppm)	Baro - metric (mb)	Steady (l/hr)	PID (ppm)	
WS15	2.52	2.39	3.03	0.0	1.7	19.4	0.0	1.7	19.3	0	0	985	0.1	0.3	
WS17	0.81	0.71	1.97	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	Well has been vandalised, cover and bung removed. Surface water ingress very likely.
WS18	3.55	3.41	4.10	0.0	1.4	20.1	0.0	1.4	19.5	0	0	984	0.1	0.3	
WS20	3.73	3.57	4.18	0.0	3.5	19.1	0.0	3.5	19.0	0	0	982	0.1	0.4	
WS21	1.95	1.78	2.04	0.0	4.2	18.0	0.0	4.2	18.0	2	0	985	2.7	0.9	
WS22	0.64	0.48	3.14	0.0	2.1	19.7	0.0	2.1	19.2	0	0	985	0.1	0.0	

Gas Monitoring Record

Project Name: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
Project No: BRD200653

Date:	02/11/2020	Ground conditions:	Damp	Recorded by:	CB
Time at start:	10:04 AM	Weather conditions:	Cloudy	Pressure trend:	Rising
Time at finish:	12:41 PM	Air Temperature (°C):	14	Monitor serial no:	G501688

The gas monitoring equipment is a Geotech GA5000 portable analyser. As per manufacturers recommendations this is factory calibrated every six months and in addition BRD undertake calibration checks against bottled standard gases on at least a monthly basis. Gas monitor pump is run for three minutes unless otherwise stated and the steady readings are an average reading taken over this pump run time. Vapour monitoring equipment is miniRAE lite PGM-7350 Photo Ionisation Detector (PID) with 10.6 eV lamp calibrated for isobutylene. PID calibration check is performed on site against ambient air and also against a 100ppm isobutylene standard gas. Barometric pressure trend and ambient air temperature is recorded from weather websites at the nearest reported weather station.

CH_4 = Methane CO_2 = Carbon Dioxide O_2 = Oxygen H_2S = Hydrogen Sulphide CO = Carbon Monoxide NR = Not Recorded PID = Photo Ionisation Detector

GWL = Groundwater level measured from ground surface and top of standpipe. Base = Base of standpipe measured from ground surface.

Monitoring point				Gas Concentration								Pressure	Flow rate	Vapour	Comments
				Steady			Peak		Minimum	Peak					
Borehole	GWL Ground (m)	GWL Pipe (m)	Base Ground (m)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CO (ppm)	H_2S (ppm)	Baro - metric (mb)	Steady (l/hr)	PID (ppm)	
WS01	3.70	3.57	4.24	0.0	5.7	9.7	0.0	6.5	9.6	0	0	1003	0.0	0.0	
WS02	0.61	0.50	3.05	0.0	2.5	14.0	0.0	2.6	13.9	0	0	1000	6.1	0.0	Initial flow rate of 16.9 l/hr, dropped to 6.1 l/hr after 60 seconds. Piston effect.
WS03	2.91	2.71	3.06	0.0	2.5	13.7	0.0	2.5	13.7	0	0	1003	0.1	0.0	
WS05	3.79	3.65	4.02	0.0	4.1	11.8	0.0	4.1	11.8	0	0	1000	0.2	0.4	
WS06	1.79	1.61	4.07	0.0	6.1	1.9	0.0	6.4	1.2	2	4	1000	0.1	2.2	
WS08	Dry	Dry	1.90	0.0	2.4	19.2	0.0	2.4	19.1	0	0	1002	0.1	0.0	
WS09	Dry	Dry	4.20	0.0	4.1	10.0	0.0	4.1	10.0	0	0	1003	0.0	0.0	
WS11	2.33	2.12	4.16	0.0	3.0	15.0	0.0	3.0	14.9	0	0	1004	19.1	0.0	Initial flow rate of 24.8 l/hr, dropped to 19.1 l/hr after 60 seconds. Possible piston effect.
WS12	2.11	1.95	4.20	0.0	4.4	12.3	0.0	4.4	12.4	0	0	1005	3.9	0.0	
WS14	1.75	1.59	2.66	0.0	2.7	15.0	0.2	2.7	14.9	0	0	1005	7.2	0.0	Initial flow rate of 14.9 l/hr, dropped to 7.2 l/hr after 60 seconds. Possible piston effect.

Gas Monitoring Record

Project Name: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
Project No: BRD200653

Date:	02/11/2020	Ground conditions:	Damp	Recorded by:	CB
Time at start:	10:04 AM	Weather conditions:	Cloudy	Pressure trend:	Rising
Time at finish:	12:41 PM	Air Temperature (°C):	14	Monitor serial no:	G501688

The gas monitoring equipment is a Geotech GA5000 portable analyser. As per manufacturers recommendations this is factory calibrated every six months and in addition BRD undertake calibration checks against bottled standard gases on at least a monthly basis. Gas monitor pump is run for three minutes unless otherwise stated and the steady readings are an average reading taken over this pump run time. Vapour monitoring equipment is miniRAE lite PGM-7350 Photo Ionisation Detector (PID) with 10.6 eV lamp calibrated for isobutylene. PID calibration check is performed on site against ambient air and also against a 100ppm isobutylene standard gas. Barometric pressure trend and ambient air temperature is recorded from weather websites at the nearest reported weather station.

CH_4 = Methane CO_2 = Carbon Dioxide O_2 = Oxygen H_2S = Hydrogen Sulphide CO = Carbon Monoxide NR = Not Recorded PID = Photo Ionisation Detector

GWL = Groundwater level measured from ground surface and top of standpipe. Base = Base of standpipe measured from ground surface.

Monitoring point				Gas Concentration								Pressure	Flow rate	Vapour	Comments
				Steady			Peak		Minimum	Peak					
Borehole	GWL Ground (m)	GWL Pipe (m)	Base Ground (m)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CO (ppm)	H_2S (ppm)	Baro - metric (mb)	Steady (l/hr)	PID (ppm)	
WS15	1.20	1.06	3.06	0.0	4.9	12.7	0.0	4.9	12.7	0	0	1006	7.6	0.0	Initial flow rate of 25.3 l/hr, dropped to 7.6 l/hr after 60 seconds. Piston effect.
WS17	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	Well still vandalised and overflowed with surface water. Inserted new bung.
WS18	0.14	0.00	4.10	0.0	2.0	14.0	0.0	2.1	13.7	1	0	1004	2.6	0.0	Initial flow rate of 5.9 l/hr, dropped to 2.6 l/hr after 30 seconds. Piston effect.
WS20	0.96	0.80	4.18	0.0	4.4	16.6	0.0	4.4	16.7	1	0	1003	11.4	0.0	Initial flow rate of 14.7 l/hr, dropped to 11.4 l/hr after 60 seconds. Piston effect.
WS21	0.71	0.54	2.03	0.0	2.3	16.9	0.0	2.3	16.9	0	0	1007	3.5	0.0	
WS22	0.22	0.05	3.15	0.0	6.5	15.7	0.0	6.5	15.6	4	0	1006	11.1	0.0	

Gas Monitoring Record

Project Name: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
Project No: BRD200653

Date:	07/12/2020	Ground conditions:	Moist	Recorded by:	CB
Time at start:	9:52 AM	Weather conditions:	Cloudy	Pressure trend:	Falling
Time at finish:	12:19 PM	Air Temperature (°C):	1	Monitor serial no:	G501688

The gas monitoring equipment is a Geotech GA5000 portable analyser. As per manufacturers recommendations this is factory calibrated every six months and in addition BRD undertake calibration checks against bottled standard gases on at least a monthly basis. Gas monitor pump is run for three minutes unless otherwise stated and the steady readings are an average reading taken over this pump run time. Vapour monitoring equipment is miniRAE lite PGM-7350 Photo Ionisation Detector (PID) with 10.6 eV lamp calibrated for isobutylene. PID calibration check is performed on site against ambient air and also against a 100ppm isobutylene standard gas. Barometric pressure trend and ambient air temperature is recorded from weather websites at the nearest reported weather station.

CH_4 = Methane CO_2 = Carbon Dioxide O_2 = Oxygen H_2S = Hydrogen Sulphide CO = Carbon Monoxide NR = Not Recorded PID = Photo Ionisation Detector

GWL = Groundwater level measured from ground surface and top of standpipe. Base = Base of standpipe measured from ground surface.

Monitoring point				Gas Concentration								Pressure	Flow rate	Vapour	Comments
				Steady			Peak		Minimum	Peak					
Borehole	GWL Ground (m)	GWL Pipe (m)	Base Ground (m)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CO (ppm)	H_2S (ppm)	Baro - metric (mb)	Steady (l/hr)	PID (ppm)	
WS01	2.59	2.46	4.24	0.0	7.2	8.1	0.0	7.3	8.1	0	0	996	0.0	0.0	
WS02	1.07	0.96	3.05	0.0	3.1	11.5	0.0	3.1	11.4	0	0	997	9.0	0.0	Initial flow rate of 14.4 l/hr, dropped to 9.0 l/hr after 30 seconds. Piston effect.
WS03	2.90	2.69	3.08	0.0	3.4	11.0	0.0	3.4	11.0	0	0	995	0.0	0.0	
WS05	3.86	3.71	4.03	0.0	5.9	9.8	0.0	5.9	9.8	0	0	995	-5.4	0.0	
WS06	1.34	1.17	4.08	0.0	6.9	9.5	0.0	8.0	9.5	0	0	995	0.0	0.0	Initial flow rate of -6.6 l/hr, dropped to -5.4 l/hr after 30 seconds. Piston effect.
WS08	Dry	Dry	1.87	0.0	0.3	21.2	0.0	0.5	19.4	0	0	994	-0.1	0.0	
WS09	Dry	Dry	4.24	0.0	5.2	8.9	0.0	5.2	8.9	0	0	996	0.1	0.0	
WS11	1.14	0.93	4.18	0.0	1.4	14.7	0.0	1.4	14.6	1	0	995	11.9	0.0	Initial flow rate of 20.8 l/hr, dropped to 11.9 l/hr after 30 seconds. Piston effect.
WS12	2.14	2.98	4.21	0.0	7.7	9.4	0.0	10.0	9.5	0	0	996	0.2	0.0	
WS14	1.39	1.24	2.66	0.0	3.7	12.9	0.0	3.7	12.9	0	0	996	21.5	0.0	Initial flow rate of 25.7 l/hr, dropped to 21.5 l/hr after 30 seconds. Possible piston effect.

Gas Monitoring Record

Project Name: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
Project No: BRD200653

Date:	07/12/2020	Ground conditions:	Moist	Recorded by:	CB
Time at start:	9:52 AM	Weather conditions:	Cloudy	Pressure trend:	Falling
Time at finish:	12:19 PM	Air Temperature (°C):	1	Monitor serial no:	G501688

The gas monitoring equipment is a Geotech GA5000 portable analyser. As per manufacturers recommendations this is factory calibrated every six months and in addition BRD undertake calibration checks against bottled standard gases on at least a monthly basis. Gas monitor pump is run for three minutes unless otherwise stated and the steady readings are an average reading taken over this pump run time. Vapour monitoring equipment is miniRAE lite PGM-7350 Photo Ionisation Detector (PID) with 10.6 eV lamp calibrated for isobutylene. PID calibration check is performed on site against ambient air and also against a 100ppm isobutylene standard gas. Barometric pressure trend and ambient air temperature is recorded from weather websites at the nearest reported weather station.

CH_4 = Methane CO_2 = Carbon Dioxide O_2 = Oxygen H_2S = Hydrogen Sulphide CO = Carbon Monoxide NR = Not Recorded PID = Photo Ionisation Detector

GWL = Groundwater level measured from ground surface and top of standpipe. Base = Base of standpipe measured from ground surface.

Monitoring point				Gas Concentration								Pressure	Flow rate	Vapour	Comments
				Steady			Peak		Minimum	Peak					
Borehole	GWL Ground (m)	GWL Pipe (m)	Base Ground (m)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CO (ppm)	H_2S (ppm)	Baro - metric (mb)	Steady (l/hr)	PID (ppm)	
WS15	1.08	0.93	2.89	0.0	6.0	12.6	6.0	12.6	0.0	1	0	997	11.1	0.0	Initial flow rate of 21.5 l/hr, dropped to 11.1 l/hr after 30 seconds. Piston effect.
WS17	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	Well vandalised again with removal of gas tap and bung.
WS18	0.14	0.00	4.10	0.1	2.6	11.4	0.2	20.9	2.0	22	0	995	0.1	NR	Gas monitoring of well lasted for only ten seconds due to water ingress. Unable to record PID reading.
WS20	0.47	0.29	4.20	0.0	2.4	16.1	2.4	16.3	0.0	3	0	993	1.3	0.0	Initial flow rate of 0.4 l/hr, increased to 1.3 l/hr after 30 seconds. Piston effect.
WS21	0.27	0.10	2.04	0.0	1.4	17.0	1.4	17.1	0.0	3	0	996	6.6	0.0	Gas monitoring of well lasted for only ten seconds due to water ingress. Unable to record PID reading.
WS22	0.05	0.21	3.13	0.0	7.7	5.3	7.6	17.2	0.0	4	0	996	0.0	NR	Initial flow rate of 12.1 l/hr, dropped to 6.6 l/hr after 30 seconds. Piston effect.

Gas Monitoring Record

Project Name: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
Project No: BRD200653

Date:	11/01/2021	Ground conditions:	Wet	Recorded by:	CB
Time at start:	9:37 AM	Weather conditions:	Cloudy	Pressure trend:	Falling
Time at finish:	11:51 AM	Air Temperature (°C):	7	Monitor serial no:	G501315

The gas monitoring equipment is a Geotech GA5000 portable analyser. As per manufacturers recommendations this is factory calibrated every six months and in addition BRD undertake calibration checks against bottled standard gases on at least a monthly basis. Gas monitor pump is run for three minutes unless otherwise stated and the steady readings are an average reading taken over this pump run time. Vapour monitoring equipment is miniRAE lite PGM-7350 Photo Ionisation Detector (PID) with 10.6 eV lamp calibrated for isobutylene. PID calibration check is performed on site against ambient air and also against a 100ppm isobutylene standard gas. Barometric pressure trend and ambient air temperature is recorded from weather websites at the nearest reported weather station.

CH_4 = Methane CO_2 = Carbon Dioxide O_2 = Oxygen H_2S = Hydrogen Sulphide CO = Carbon Monoxide NR = Not Recorded PID = Photo Ionisation Detector

GWL = Groundwater level measured from ground surface and top of standpipe. Base = Base of standpipe measured from ground surface.

Monitoring point				Gas Concentration								Pressure	Flow rate	Vapour	Comments
				Steady			Peak		Minimum	Peak					
Borehole	GWL Ground (m)	GWL Pipe (m)	Base Ground (m)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CO (ppm)	H_2S (ppm)	Baro - metric (mb)	Steady (l/hr)	PID (ppm)	
WS01	2.45	2.31	4.23	0.0	6.2	6.9	0.0	6.3	6.9	0	0	1017	0.1	0.0	
WS02	0.93	0.81	3.04	0.0	2.5	12.1	0.0	2.5	12.1	0	0	1017	1.5	0.0	Initial flow rate of 3.3 l/hr, dropped to 1.5 l/hr after 30 seconds. Piston effect.
WS03	2.96	2.74	3.08	0.0	3.0	9.4	0.0	3.1	9.4	0	0	1016	0.2	0.0	
WS05	3.91	3.77	4.01	0.0	5.5	8.7	0.0	5.5	8.6	0	0	1015	1.6	0.0	Initial flow rate of 2.0 l/hr, dropped to 1.6 l/hr after 30 seconds.
WS06	1.29	1.11	4.07	0.0	8.7	0.3	0.0	8.7	0.3	9	3	1015	-3.1	0.0	
WS08	1.83	1.74	1.90	0.0	1.2	20.0	0.0	1.2	18.3	0	0	1016	1.7	0.0	
WS09	Dry	Dry	4.23	0.0	4.6	9.7	0.0	5.4	9.7	0	0	1016	0.1	0.0	
WS11	1.01	0.79	4.17	0.0	1.0	14.9	0.0	1.0	14.9	1	0	1017	7.2	0.0	Initial flow rate of 16.5 l/hr, dropped to 7.2 l/hr after 30 seconds. Piston effect.
WS12	2.11	1.95	4.20	0.0	8.0	8.2	0.0	8.0	8.2	0	0	1017	-5.1	0.0	
WS14	0.10	N/A	2.64	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	Unable to take gas readings due to well being flooded.

Gas Monitoring Record

Project Name: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
Project No: BRD200653

Date:	11/01/2021	Ground conditions:	Wet	Recorded by:	CB
Time at start:	9:37 AM	Weather conditions:	Cloudy	Pressure trend:	Falling
Time at finish:	11:51 AM	Air Temperature (°C):	7	Monitor serial no:	G501315

The gas monitoring equipment is a Geotech GA5000 portable analyser. As per manufacturers recommendations this is factory calibrated every six months and in addition BRD undertake calibration checks against bottled standard gases on at least a monthly basis. Gas monitor pump is run for three minutes unless otherwise stated and the steady readings are an average reading taken over this pump run time. Vapour monitoring equipment is miniRAE lite PGM-7350 Photo Ionisation Detector (PID) with 10.6 eV lamp calibrated for isobutylene. PID calibration check is performed on site against ambient air and also against a 100ppm isobutylene standard gas. Barometric pressure trend and ambient air temperature is recorded from weather websites at the nearest reported weather station.

CH_4 = Methane CO_2 = Carbon Dioxide O_2 = Oxygen H_2S = Hydrogen Sulphide CO = Carbon Monoxide NR = Not Recorded PID = Photo Ionisation Detector

GWL = Groundwater level measured from ground surface and top of standpipe. Base = Base of standpipe measured from ground surface.

Monitoring point				Gas Concentration								Pressure	Flow rate	Vapour	Comments
				Steady			Peak		Minimum	Peak					
Borehole	GWL Ground (m)	GWL Pipe (m)	Base Ground (m)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CO (ppm)	H_2S (ppm)	Baro - metric (mb)	Steady (l/hr)	PID (ppm)	
WS15	0.71	0.60	2.85	0.0	6.0	13.2	0.0	6.0	13.2	1	0	1018.0	6.3	0.0	Initial flow rate of 18.9 l/hr, dropped to 6.3 l/hr after 30 seconds. Piston effect.
WS17	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	Well still vandalised and overflowed with surface water.
WS18	0.18	0.04	4.09	0.0	4.4	15.4	0.1	4.3	19.7	109	0	1016	-2.5	NR	Only analysed gas for ~20 seconds due to water ingress. No PID reading
WS20	0.18	0.00	4.18	0.0	1.8	9.2	0.0	1.8	14.6	207	0	1014	-0.6	NR	Only analysed gas for ~25 seconds due to water ingress. No PID reading
WS21	0.27	0.10	2.04	0.0	1.3	12.3	0.0	1.3	12.5	5	0	1017	0.0	0.0	
WS22	0.19	0.03	3.11	0.0	6.8	11.2	0.0	0.1	19.8	20	0	1017	-0.1	NR	Gas monitoring of well lasted for ~30 seconds due to water ingress. Unable to record PID reading.

Gas Monitoring Record

Project Name: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
Project No: BRD200653

Date:	08/02/2021	Ground conditions:	Wet and frosty	Recorded by:	CB
Time at start:	9:46 AM	Weather conditions:	Light snow	Pressure trend:	Steady
Time at finish:	11:55 AM	Air Temperature (°C):	1	Monitor serial no:	G501315

The gas monitoring equipment is a Geotech GA5000 portable analyser. As per manufacturers recommendations this is factory calibrated every six months and in addition BRD undertake calibration checks against bottled standard gases on at least a monthly basis. Gas monitor pump is run for three minutes unless otherwise stated and the steady readings are an average reading taken over this pump run time. Vapour monitoring equipment is miniRAE lite PGM-7350 Photo Ionisation Detector (PID) with 10.6 eV lamp calibrated for isobutylene. PID calibration check is performed on site against ambient air and also against a 100ppm isobutylene standard gas. Barometric pressure trend and ambient air temperature is recorded from weather websites at the nearest reported weather station.

CH_4 = Methane CO_2 = Carbon Dioxide O_2 = Oxygen H_2S = Hydrogen Sulphide CO = Carbon Monoxide NR = Not Recorded PID = Photo Ionisation Detector

GWL = Groundwater level measured from ground surface and top of standpipe. Base = Base of standpipe measured from ground surface.

Monitoring point				Gas Concentration								Pressure	Flow rate	Vapour	Comments
				Steady			Peak		Minimum	Peak					
Borehole	GWL Ground (m)	GWL Pipe (m)	Base Ground (m)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CO (ppm)	H_2S (ppm)	Baro - metric (mb)	Steady (l/hr)	PID (ppm)	
WS01	2.13	2.00	4.23	0.1	6.3	6.9	0.1	6.3	6.9	0	0	998	0.1	0.0	
WS02	0.76	0.65	3.04	0.1	1.6	13.4	0.1	1.6	13.4	0	0	997	10.4	0.0	Initial flow rate of 17.0 l/hr, dropped to 10.4 l/hr after 30 seconds. Piston effect.
WS03	2.89	2.67	3.07	0.1	3.1	9.3	0.1	3.1	9.3	0	0	997	0.1	0.0	
WS05	3.91	3.73	4.01	0.1	5.5	8.9	0.1	5.5	8.9	0	0	995	0.0	0.0	
WS06	1.12	0.95	4.07	0.1	8.9	0.2	0.1	8.9	0.2	5	2	996	2.6	0.0	Initial flow rate of 4.4 l/hr, dropped to 2.6 l/hr after 30 seconds. Piston effect.
WS08	1.79	1.67	1.90	0.1	3.2	19.1	0.1	3.2	19.1	0	0	997	0.1	0.0	
WS09	Dry	Dry	4.24	0.1	4.7	10.9	0.1	4.7	10.9	0	0	997	1.3	0.0	Initial flow rate of 0.6 l/hr, rose to 1.3 l/hr after 30 seconds.
WS11	0.61	0.49	4.17	0.0	1.3	14.3	0.0	1.3	14.3	0	0	998	10.1	0.0	Initial flow rate of 20.4 l/hr, dropped to 10.1 l/hr after 30 seconds. Piston effect.
WS12	1.99	1.84	4.20	0.0	8.0	8.6	0.0	8.0	8.6	0	0	998	0.7	0.0	
WS14	0.10	N/A	2.66	0.0	6.3	19.3	0.0	0.2	20.6	0	0	999	0.6	NR	Initial flow rate of 5.7 l/hr, dropped to 0.6 l/hr after 30 seconds. Piston effect. Water ingress after 5 seconds during analysing gas.

Gas Monitoring Record

Project Name: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
Project No: BRD200653

Date:	08/02/2021	Ground conditions:	Wet and frosty	Recorded by:	CB
Time at start:	9:46 AM	Weather conditions:	Light snow	Pressure trend:	Steady
Time at finish:	11:55 AM	Air Temperature (°C):	1	Monitor serial no:	G501315

The gas monitoring equipment is a Geotech GA5000 portable analyser. As per manufacturers recommendations this is factory calibrated every six months and in addition BRD undertake calibration checks against bottled standard gases on at least a monthly basis. Gas monitor pump is run for three minutes unless otherwise stated and the steady readings are an average reading taken over this pump run time. Vapour monitoring equipment is miniRAE lite PGM-7350 Photo Ionisation Detector (PID) with 10.6 eV lamp calibrated for isobutylene. PID calibration check is performed on site against ambient air and also against a 100ppm isobutylene standard gas. Barometric pressure trend and ambient air temperature is recorded from weather websites at the nearest reported weather station.

CH_4 = Methane CO_2 = Carbon Dioxide O_2 = Oxygen H_2S = Hydrogen Sulphide CO = Carbon Monoxide NR = Not Recorded PID = Photo Ionisation Detector

GWL = Groundwater level measured from ground surface and top of standpipe. Base = Base of standpipe measured from ground surface.

Monitoring point				Gas Concentration								Pressure	Flow rate	Vapour	Comments
				Steady			Peak		Minimum	Peak					
Borehole	GWL Ground (m)	GWL Pipe (m)	Base Ground (m)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CO (ppm)	H_2S (ppm)	Baro - metric (mb)	Steady (l/hr)	PID (ppm)	
WS15	0.47	0.36	2.84	0.0	6.3	12.7	0.0	6.3	12.7	0	0	999.0	3.2	0.0	Initial flow rate of 15.4 l/hr, dropped to 3.2 l/hr after 30 seconds. Piston effect.
WS17	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	Well still vandalised.
WS18	0.13	NR	4.09	0.2	2.5	10.4	0.2	2.4	11.1	0	0	997	2.0	NR	Initial flow rate of 4.2 l/hr, dropped to 3.2 l/hr after 30 seconds. Piston effect. Monitoring of gas lasted ~30 seconds due to water ingress. Unable to take PID reading.
WS20	0.10	NR	4.18	0.1	2.2	18.1	0.0	0.3	20.4	471	0	995	1.6	NR	Ingress of water occurred within 2 seconds of analysing gas in borehole. Unable to take PID reading.
WS21	0.15	NR	1.94	0.0	1.5	12.7	0.0	1.5	14.9	8	0	998	2.6	NR	Initial flow rate of 5.7 l/hr, dropped to 2.6 l/hr after 30 seconds. Piston effect. Ingress of water occurred within 2 seconds. Unable to take PID reading.
WS22	0.10	NR	3.08	0.0	2.2	20.2	0.0	0.2	20.3	10	0	998	6.0	NR	Initial flow rate of 7.3 l/hr, dropped to 6.0 l/hr after 30 seconds. Piston effect. Ingress of water occurred at ~ 20 seconds. Unable to take PID reading.

Gas Monitoring Record

Project Name: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
Project No: BRD200653

Date:	09/03/2021	Ground conditions:	Damp and soft	Recorded by:	CB
Time at start:	9:58 AM	Weather conditions:	Sunny spells	Pressure trend:	Falling
Time at finish:	12:28 PM	Air Temperature (°C):	8	Monitor serial no:	G501315

The gas monitoring equipment is a Geotech GA5000 portable analyser. As per manufacturers recommendations this is factory calibrated every six months and in addition BRD undertake calibration checks against bottled standard gases on at least a monthly basis. Gas monitor pump is run for three minutes unless otherwise stated and the steady readings are an average reading taken over this pump run time. Vapour monitoring equipment is miniRAE lite PGM-7350 Photo Ionisation Detector (PID) with 10.6 eV lamp calibrated for isobutylene. PID calibration check is performed on site against ambient air and also against a 100ppm isobutylene standard gas. Barometric pressure trend and ambient air temperature is recorded from weather websites at the nearest reported weather station.

CH_4 = Methane CO_2 = Carbon Dioxide O_2 = Oxygen H_2S = Hydrogen Sulphide CO = Carbon Monoxide NR = Not Recorded PID = Photo Ionisation Detector

GWL = Groundwater level measured from ground surface and top of standpipe. Base = Base of standpipe measured from ground surface.

Monitoring point				Gas Concentration								Pressure	Flow rate	Vapour	Comments
				Steady			Peak		Minimum	Peak					
Borehole	GWL Ground (m)	GWL Pipe (m)	Base Ground (m)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CO (ppm)	H_2S (ppm)	Baro - metric (mb)	Steady (l/hr)	PID (ppm)	
WS01	2.52	2.39	4.23	0.0	5.5	5.8	0.0	5.5	5.8	0	0	1019	2.1	0.0	
WS02	0.83	0.72	3.03	0.0	2.4	12.2	0.0	2.4	12.4	0	0	1018	-5.1	0.0	Initial flow rate of -12.2 l/hr, dropped to -5.1 l/hr after 30 seconds. Piston effect.
WS03	2.96	2.75	3.06	0.0	2.7	7.7	0.0	2.7	7.7	0	0	1017	0.0	0.0	
WS05	3.92	3.78	4.02	0.0	5.1	7.9	0.0	5.1	8.0	0	0	1016	1.2	0.0	Initial flow rate of 0.1 l/hr, rised to 1.2 l/hr after 30 seconds.
WS06	1.03	0.87	4.07	0.0	8.3	3.1	0.0	8.3	3.1	2	0	1017	-10.0	0.0	
WS08	1.79	1.67	1.89	0.0	2.7	17.7	0.0	2.8	17.7	0	0	1017	2.8	0.0	
WS09	Dry	Dry	4.24	0.0	4.0	11.4	0.0	4.0	11.4	1	0	1017	1.6	0.0	
WS11	0.42	0.21	4.17	0.0	2.0	7.0	0.0	2.0	7.0	2	0	1018	0.2	0.0	
WS12	1.96	1.81	4.20	0.0	7.0	9.4	0.0	7.0	9.5	3	0	1017	-5.7	0.0	Initial flow rate of -8.8 l/hr, dropped to -5.7 l/hr after 30 seconds. Possible piston effect.
WS14	0.15	0.00	2.65	0.0	0.1	21.1	0.0	0.1	21.2	2	0	1018	0.4	NR	Instant water ingress during gas measurement resulting in unrelaiable data.

Gas Monitoring Record

Project Name: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
Project No: BRD200653

Date:	09/03/2021	Ground conditions:	Damp and soft	Recorded by:	CB
Time at start:	9:58 AM	Weather conditions:	Sunny spells	Pressure trend:	Falling
Time at finish:	12:28 PM	Air Temperature (°C):	8	Monitor serial no:	G501315

The gas monitoring equipment is a Geotech GA5000 portable analyser. As per manufacturers recommendations this is factory calibrated every six months and in addition BRD undertake calibration checks against bottled standard gases on at least a monthly basis. Gas monitor pump is run for three minutes unless otherwise stated and the steady readings are an average reading taken over this pump run time. Vapour monitoring equipment is miniRAE lite PGM-7350 Photo Ionisation Detector (PID) with 10.6 eV lamp calibrated for isobutylene. PID calibration check is performed on site against ambient air and also against a 100ppm isobutylene standard gas. Barometric pressure trend and ambient air temperature is recorded from weather websites at the nearest reported weather station.

CH_4 = Methane CO_2 = Carbon Dioxide O_2 = Oxygen H_2S = Hydrogen Sulphide CO = Carbon Monoxide NR = Not Recorded PID = Photo Ionisation Detector

GWL = Groundwater level measured from ground surface and top of standpipe. Base = Base of standpipe measured from ground surface.

Monitoring point				Gas Concentration								Pressure	Flow rate	Vapour	Comments
				Steady			Peak		Minimum	Peak					
Borehole	GWL Ground (m)	GWL Pipe (m)	Base Ground (m)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CO (ppm)	H_2S (ppm)	Baro - metric (mb)	Steady (l/hr)	PID (ppm)	
WS15	0.31	0.21	2.80	0.0	0.8	19.9	0.0	1.0	18.0	7	0	1019.0	0.8	NR	Initial flow rate of 6.6 l/hr, dropped to 0.8 l/hr after 30 seconds. Piston effect. Water ingress occured after 10 seconds of monitoring, resulting in incorrect data and no PID reading.
WS17	0.90	0.98	1.24	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	Well still vandalised. Water measurements are likely to not represent natural conditions.
WS18	0.29	0.15	4.09	0.0	0.5	19.7	0.0	0.5	19.8	22	0	1017	-10.6	NR	Initial flow rate of -19.9 l/hr, dropped to -10.6 l/hr after 30 seconds. Piston effect. Water ingress occurred after 30 seconds of monitoring, resulting in inaccurate data and no PID reading.
WS20	0.35	0.19	4.18	0.0	1.9	8.5	0.0	1.9	8.5	2	0	1015	0.1	0.0	
WS21	0.31	0.14	1.89	0.0	0.4	19.0	0.0	0.4	20.6	33	0	1018	-5.9	NR	Initial flow rate of -12.7 l/hr, dropped to -5.9 l/hr after 30 seconds. Piston effect. Instant water ingress, resulting in incorrect data and no PID reading.
WS22	0.26	0.11	3.05	0.0	0.1	21.2	0.0	0.1	21.2	1	0	1016	-3.9	NR	Initial flow rate of -4.2 l/hr, dropped to -3.9 l/hr after 30 seconds. Piston effect. Water ingress occurred after 15 seconds of monitoring resulting in inaccurate data and no PID reading.

Gas Monitoring Record

Project Name: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
Project No: BRD200653

Date:	11/06/2021	Ground conditions:	Firm and dry	Recorded by:	CB & MM
Time at start:	12:15 PM	Weather conditions:	Sunny spells	Pressure trend:	Steady
Time at finish:	2:50 PM	Air Temperature (°C):	21	Monitor serial no:	G501315

The gas monitoring equipment is a Geotech GA5000 portable analyser. As per manufacturers recommendations this is factory calibrated every six months and in addition BRD undertake calibration checks against bottled standard gases on at least a monthly basis. Gas monitor pump is run for three minutes unless otherwise stated and the steady readings are an average reading taken over this pump run time. Vapour monitoring equipment is miniRAE lite PGM-7350 Photo Ionisation Detector (PID) with 10.6 eV lamp calibrated for isobutylene. PID calibration check is performed on site against ambient air and also against a 100ppm isobutylene standard gas. Barometric pressure trend and ambient air temperature is recorded from weather websites at the nearest reported weather station.

CH_4 = Methane CO_2 = Carbon Dioxide O_2 = Oxygen H_2S = Hydrogen Sulphide CO = Carbon Monoxide NR = Not Recorded PID = Photo Ionisation Detector

GWL = Groundwater level measured from ground surface and top of standpipe. Base = Base of standpipe measured from ground surface.

Monitoring point				Gas Concentration								Pressure	Flow rate	Vapour	Comments
				Steady			Peak		Minimum	Peak					
Borehole	GWL Ground (m)	GWL Pipe (m)	Base Ground (m)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CO (ppm)	H_2S (ppm)	Baro - metric (mb)	Steady (l/hr)	PID (ppm)	**See separate report for results of other monitoring wells compiled by GGS**
WS02	1.80	1.69	3.05	0.0	3.3	12.7	0.0	3.3	12.7	2	0	1020	0.1	NR	
WS03	2.97	2.74	3.08	0.0	3.3	6.2	0.0	3.3	6.2	2	0	1018	0.0	NR	
WS08	1.83	1.71	1.90	0.0	3.4	16.8	0.0	3.4	15.6	0	0	1019	0.0	NR	
WS09	4.22	4.69	4.23	0.0	3.6	14.7	0.0	3.6	14.7	0	0	1019	0.1	NR	
WS11	0.50	0.29	4.17	0.0	2.0	14.3	0.0	1.9	14.5	2	0	1020	-3.2	NR	Initial flow rate of -15.8 l/hr, fell to -3.2 l/hr after 60 seconds. Piston effect.
WS15	0.22	0.12	2.86	0.0	2.3	17.7	0.0	2.3	17.7	7	0	1020	0.0	NR	
WS18	1.28	1.42	4.08	0.0	3.0	14.0	0.0	3.0	14.0	2	0	1018	-0.1	NR	
WS20	1.21	1.05	4.18	0.0	3.5	12.2	0.0	3.5	12.2	7	0	1016	2.5	NR	Initial flow rate of 4.4 l/hr, fell to 2.5 l/hr after 60 seconds.
WS21	0.31	0.21	3.03	0.0	0.8	19.5	0.0	0.7	19.3	14	0	1019	-6.0	NR	Initial flow rate of -8.5 l/hr, fell to -6.0 after 60 seconds. Piston effect.
WS22	1.44	1.28	1.98	0.0	3.6	9.5	0.0	3.6	9.5	4	0	1019	0.0	NR	

Gas Monitoring Record

Project Name: Downlands Farm, Uckfield
Client: Gleeson Strategic Land
Project No: BRD200653

Date:	02/07/2021	Ground conditions:	Firm and dry, damp in parts	Recorded by:	CB & DB
Time at start:	8:51 AM	Weather conditions:	Sunny spells	Pressure trend:	Steady
Time at finish:	10:14 AM	Air Temperature (°C):	21	Monitor serial no:	G501315

The gas monitoring equipment is a Geotech GA5000 portable analyser. As per manufacturers recommendations this is factory calibrated every six months and in addition BRD undertake calibration checks against bottled standard gases on at least a monthly basis. Gas monitor pump is run for three minutes unless otherwise stated and the steady readings are an average reading taken over this pump run time. Vapour monitoring equipment is miniRAE lite PGM-7350 Photo Ionisation Detector (PID) with 10.6 eV lamp calibrated for isobutylene. PID calibration check is performed on site against ambient air and also against a 100ppm isobutylene standard gas. Barometric pressure trend and ambient air temperature is recorded from weather websites at the nearest reported weather station.

CH_4 = Methane CO_2 = Carbon Dioxide O_2 = Oxygen H_2S = Hydrogen Sulphide CO = Carbon Monoxide NR = Not Recorded PID = Photo Ionisation Detector

GWL = Groundwater level measured from ground surface and top of standpipe. Base = Base of standpipe measured from ground surface.

Monitoring point				Gas Concentration								Pressure	Flow rate	Vapour	Comments
				Steady			Peak		Minimum	Peak					
Borehole	GWL Ground (m)	GWL Pipe (m)	Base Ground (m)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CO (ppm)	H_2S (ppm)	Baro - metric (mb)	Steady (l/hr)	PID (ppm)	**See separate report for results of other monitoring wells compiled by GGS**
WS02	1.61	1.49	3.03	0.0	3.6	9.1	0.0	3.6	9.1	0	0	1015	0.1	0.0	
WS03	2.97		3.07	0.0	3.3	5.9	0.0	3.3	5.9	2	0	1014	0.1	0.0	
WS08	1.86	1.75	1.89	0.0	1.4	19.4	0.0	1.4	19.4	1	0	1015	0.1	0.0	
WS09	Dry	Dry	4.23	0.0	4.0	14.0	0.0	4.0	14.0	2	0	1014	0.2	0.0	
WS11	0.57	0.36	4.16	0.0	1.5	17.6	0.0	1.5	17.6	2	0	1016	-3.5	0.0	Initial flow rate of -12.2 l/hr, fell to -3.5 l/hr after 60 seconds. Piston effect.
WS15	0.23		2.84	0.0	2.9	18.8	0.0	2.9	18.8	6	0	1016	0.2	NR	
WS18	1.29		4.06	0.0	3.3	14.7	0.0	3.3	14.7	2	0	1014	0.1	0.0	
WS20	0.92	0.75	4.17	0.0	3.2	13.7	0.0	3.2	13.7	6	0	1013	4.9	1.3	Initial flow rate of 10.2 l/hr, fell to 4.9 l/hr after 60 seconds. Piston effect.
WS21	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
WS22	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	

APPENDIX 3

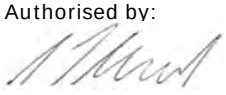
Matthew Morgan
BRD Environmental Ltd
Hawthorne Villa
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Banbury
Oxfordshire
OX16 5HT

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t: 01622 850410

DETS Report No: 20-10569

Site Reference:	Downlands Farm, Uckfield
Project / Job Ref:	BRD200653
Order No:	None Supplied
Sample Receipt Date:	14/09/2020
Sample Scheduled Date:	14/09/2020
Report Issue Number:	1
Reporting Date:	22/09/2020

Authorised by:



Dave Ashworth
Technical Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

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Soil Analysis Certificate						
DETS Report No: 20-10569	Date Sampled	08/09/20	04/09/20	07/09/20	07/09/20	04/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	HD02	HD04	HD06	HD07	HD08
Project / Job Ref: BRD200653	Additional Refs	J1	J1	J1	J1	J1
Order No: None Supplied	Depth (m)	0.10	0.10	0.15	0.10	0.20
Reporting Date: 22/09/2020	DETS Sample No	498411	498412	498413	498414	498415

Determinand	Unit	RL	Accreditation					
Asbestos Quantification (S)	%	< 0.001	ISO17025					< 0.001
pH	pH Units	N/a	MCERTS	8.0	7.1	5.7	5.5	7.5
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	30	25	15	19	14
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	0.03	0.02	0.02	0.02	0.01
Organic Matter	%	< 0.1	MCERTS	3.5	3	5.7	1.8	4.8
Arsenic (As)	mg/kg	< 2	MCERTS	5	5	2	7	6
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	23	14	7	16	9
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	11	6	< 4	< 4	14
Lead (Pb)	mg/kg	< 3	MCERTS	25	18	47	21	32
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	6	5	< 3	< 3	5
Selenium (Se)	mg/kg	< 2	MCERTS	< 3	< 3	< 3	< 3	< 3
Zinc (Zn)	mg/kg	< 3	MCERTS	37	29	13	31	44

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 20-10569	Date Sampled	09/09/20	09/09/20	09/09/20	09/09/20	04/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	HD10	HD11	HD12	HD13	STK01
Project / Job Ref: BRD200653	Additional Refs	J1	J1	J1	J2	J1
Order No: None Supplied	Depth (m)	0.20	0.15	0.20	0.10	0.20
Reporting Date: 22/09/2020	DETS Sample No	498416	498417	498418	498419	498420

Determinand	Unit	RL	Accreditation					
Asbestos Quantification (S)	%	< 0.001	ISO17025	< 0.001				< 0.001
pH	pH Units	N/a	MCERTS	7.3	5.9	5.6	4.3	7.4
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	12	13	16	< 10	47
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	0.01	0.01	0.02	< 0.01	0.05
Organic Matter	%	< 0.1	MCERTS	4.4	5.6	5	8.4	2.4
Arsenic (As)	mg/kg	< 2	MCERTS	2	2	3	< 2	7
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	< 0.2	0.3	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	6	7	8	< 2	17
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	4	< 4	< 4	< 4	47
Lead (Pb)	mg/kg	< 3	MCERTS	28	22	20	18	56
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	< 3	< 3	7	< 3	11
Selenium (Se)	mg/kg	< 2	MCERTS	< 3	< 3	< 3	< 3	< 3
Zinc (Zn)	mg/kg	< 3	MCERTS	20	12	17	< 3	60

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Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 20-10569	Date Sampled	01/09/20	01/09/20	01/09/20	01/09/20	01/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	TP01	TP02	TP02	TP04	TP05
Project / Job Ref: BRD200653	Additional Refs	J1	J2	J2	J1	J1
Order No: None Supplied	Depth (m)	0.20	0.10	0.70	0.10	0.20
Reporting Date: 22/09/2020	DETS Sample No	498421	498422	498423	498424	498425

Determinand	Unit	RL	Accreditation					
Asbestos Quantification (S)	%	< 0.001	ISO17025					
pH	pH Units	N/a	MCERTS	7.0	7.2	7.2	6.7	6.9
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	16	< 10	10	11	< 10
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	0.02	< 0.01	0.01	0.01	< 0.01
Organic Matter	%	< 0.1	MCERTS	3.9	3.1	0.3	2.1	2.1
Arsenic (As)	mg/kg	< 2	MCERTS	4	5	6	5	3
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	19	24	25	16	13
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	16	15	20	10	9
Lead (Pb)	mg/kg	< 3	MCERTS	29	24	10	16	16
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	6	7	6	5	4
Selenium (Se)	mg/kg	< 2	MCERTS	< 3	< 3	< 3	< 3	< 3
Zinc (Zn)	mg/kg	< 3	MCERTS	41	41	32	40	28

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 20-10569	Date Sampled	01/09/20	03/09/20	03/09/20	03/09/20	03/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	TP07	TP08	TP09	TP09	TP10
Project / Job Ref: BRD200653	Additional Refs	J1	J1	J1	J2	J1
Order No: None Supplied	Depth (m)	0.50	0.20	0.10	0.60	0.20
Reporting Date: 22/09/2020	DETS Sample No	498428	498429	498430	498431	498432

Determinand	Unit	RL	Accreditation					
Asbestos Quantification (S)	%	< 0.001	ISO17025					
pH	pH Units	N/a	MCERTS	6.0	6.6	6.7	7.0	7.1
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	25	26	16	23	12
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	0.03	0.03	0.02	0.02	0.01
Organic Matter	%	< 0.1	MCERTS	0.3	2.8	3.2	1.1	2
Arsenic (As)	mg/kg	< 2	MCERTS	3	4	6	< 2	6
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	28	12	14	17	20
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	27	7	26	28	13
Lead (Pb)	mg/kg	< 3	MCERTS	11	19	32	13	21
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	11	4	3	4	6
Selenium (Se)	mg/kg	< 2	MCERTS	< 3	< 3	< 3	< 3	< 3
Zinc (Zn)	mg/kg	< 3	MCERTS	46	33	47	32	39

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 20-10569	Date Sampled	03/09/20	03/09/20	03/09/20	03/09/20	02/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	TP12	TP12	TP13	TP13	TP14
Project / Job Ref: BRD200653	Additional Refs	J1	J2	J1	J2	J1
Order No: None Supplied	Depth (m)	0.10	0.70	0.10	0.40	0.20
Reporting Date: 22/09/2020	DETS Sample No	498434	498435	498436	498437	498438

Determinand	Unit	RL	Accreditation					
Asbestos Quantification (S)	%	< 0.001	ISO17025			< 0.001	< 0.001	
pH	pH Units	N/a	MCERTS	6.6	7.1	7.8	8.0	5.7
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	< 10	11	19	14	20
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	< 0.01	0.01	0.02	0.01	0.02
Organic Matter	%	< 0.1	MCERTS	2.3	0.8	2	0.9	0.9
Arsenic (As)	mg/kg	< 2	MCERTS	5	5	7	5	4
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	12	13	15	12	12
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	5	< 4	33	12	4
Lead (Pb)	mg/kg	< 3	MCERTS	13	5	173	59	10
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	4	4	8	4	4
Selenium (Se)	mg/kg	< 2	MCERTS	< 3	< 3	< 3	< 3	< 3
Zinc (Zn)	mg/kg	< 3	MCERTS	34	29	98	38	22

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 20-10569	Date Sampled	02/09/20	02/09/20	02/09/20	03/09/20	03/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	TP15	TP16	TP22	TP23	WS06
Project / Job Ref: BRD200653	Additional Refs	J1	J2	J2	J1	J1
Order No: None Supplied	Depth (m)	0.10	0.70	0.70	0.10	0.10
Reporting Date: 22/09/2020	DETS Sample No	498440	498441	498444	498445	498446

Determinand	Unit	RL	Accreditation					
Asbestos Quantification (S)	%	< 0.001	ISO17025				< 0.001	< 0.001
pH	pH Units	N/a	MCERTS	5.9	5.9	6.9	7.0	7.3
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	12	12	16	19	21
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	0.01	0.01	0.02	0.02	0.02
Organic Matter	%	< 0.1	MCERTS	2.3	2.2	0.4	11	8
Arsenic (As)	mg/kg	< 2	MCERTS	5	5	22	5	5
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	< 0.2	< 0.2	0.3	0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	13	15	10	7	12
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	< 4	6	6	23	31
Lead (Pb)	mg/kg	< 3	MCERTS	18	23	7	62	91
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	< 3	4	< 3	< 3	5
Selenium (Se)	mg/kg	< 2	MCERTS	< 3	< 3	< 3	< 3	< 3
Zinc (Zn)	mg/kg	< 3	MCERTS	23	26	10	284	153

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 20-10569	Date Sampled	03/09/20	08/09/20	04/09/20	04/09/20	07/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	WS06	WS09	WS11	WS14	WS17
Project / Job Ref: BRD200653	Additional Refs	J2	J1	J1	J1	J1
Order No: None Supplied	Depth (m)	0.40	0.20	0.20	0.20	0.20
Reporting Date: 22/09/2020	DETS Sample No	498447	498448	498449	498450	498452

Determinand	Unit	RL	Accreditation					
Asbestos Quantification (S)	%	< 0.001	ISO17025	< 0.001			< 0.001	
pH	pH Units	N/a	MCERTS	6.8	6.9	6.0		5.6
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	10	15	< 10		< 10
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	0.01	0.02	< 0.01		< 0.01
Organic Matter	%	< 0.1	MCERTS	3.1	3.1	2.5		2.3
Arsenic (As)	mg/kg	< 2	MCERTS	10	14	6		3
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	< 0.2	< 0.2		< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	11	16	13		12
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2		< 2
Copper (Cu)	mg/kg	< 4	MCERTS	18	18	7		< 4
Lead (Pb)	mg/kg	< 3	MCERTS	59	31	16		16
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1		< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	4	6	4		< 3
Selenium (Se)	mg/kg	< 2	MCERTS	< 3	< 3	< 3		< 3
Zinc (Zn)	mg/kg	< 3	MCERTS	58	59	38		21

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)

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Maidstone
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Soil Analysis Certificate						
DETS Report No: 20-10569	Date Sampled	07/09/20	07/09/20	07/09/20	09/09/20	09/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	WS18	WS19	WS20	WS22	WS22
Project / Job Ref: BRD200653	Additional Refs	J1	J1	J1	J2	J3
Order No: None Supplied	Depth (m)	0.20	0.10	0.20	0.40	3.50
Reporting Date: 22/09/2020	DETS Sample No	498453	498454	498455	498458	498459

Determinand	Unit	RL	Accreditation					
Asbestos Quantification (S)	%	< 0.001	ISO17025				< 0.001	
pH	pH Units	N/a	MCERTS	5.8	5.6	5.4	5.5	5.9
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	< 10	10	13	21	16
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	< 0.01	0.01	0.01	0.02	0.02
Organic Matter	%	< 0.1	MCERTS	2.3	2.7	2.7	6.1	< 0.1
Arsenic (As)	mg/kg	< 2	MCERTS	5	8	4	4	< 2
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	< 0.2	< 0.2	0.3	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	13	15	9	19	3
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	7	7	5	7	< 4
Lead (Pb)	mg/kg	< 3	MCERTS	20	22	17	11	< 3
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	< 3	< 3	< 3	9	< 3
Selenium (Se)	mg/kg	< 2	MCERTS	< 3	< 3	< 3	< 3	< 3
Zinc (Zn)	mg/kg	< 3	MCERTS	31	26	18	17	4

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 20-10569	Date Sampled	09/09/20				
BRD Environmental Ltd	Time Sampled	None Supplied				
Site Reference: Downlands Farm, Uckfield	TP / BH No	WS23				
Project / Job Ref: BRD200653	Additional Refs	J1				
Order No: None Supplied	Depth (m)	0.30				
Reporting Date: 22/09/2020	DETS Sample No	498460				

Determinand	Unit	RL	Accreditation					
Asbestos Quantification (S)	%	< 0.001	ISO17025					
pH	pH Units	N/a	MCERTS	5.9				
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	< 10				
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	< 0.01				
Organic Matter	%	< 0.1	MCERTS	3.1				
Arsenic (As)	mg/kg	< 2	MCERTS	4				
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2				
Chromium (Cr)	mg/kg	< 2	MCERTS	10				
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2				
Copper (Cu)	mg/kg	< 4	MCERTS	6				
Lead (Pb)	mg/kg	< 3	MCERTS	53				
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1				
Nickel (Ni)	mg/kg	< 3	MCERTS	3				
Selenium (Se)	mg/kg	< 2	MCERTS	< 3				
Zinc (Zn)	mg/kg	< 3	MCERTS	28				

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)

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Soil Analysis Certificate - Speciated PAHs							
DETS Report No: 20-10569	Date Sampled	08/09/20	04/09/20	07/09/20	07/09/20	04/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	HD02	HD04	HD06	HD07	HD08
Project / Job Ref: BRD200653	Additional Refs	J1	J1	J1	J1	J1
Order No: None Supplied	Depth (m)	0.10	0.10	0.15	0.10	0.20
Reporting Date: 22/09/2020	DETS Sample No	498411	498412	498413	498414	498415

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	1.17
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.35
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	5.58
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	5.67
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	2.78
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	2.29
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	3.72
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	1.13
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	3.07
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	1.80
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.26
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	1.81
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	29.6

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Soil Analysis Certificate - Speciated PAHs							
DETS Report No: 20-10569	Date Sampled	09/09/20	09/09/20	09/09/20	09/09/20	04/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	HD10	HD11	HD12	HD13	STK01
Project / Job Ref: BRD200653	Additional Refs	J1	J1	J1	J2	J1
Order No: None Supplied	Depth (m)	0.20	0.15	0.20	0.10	0.20
Reporting Date: 22/09/2020	DETS Sample No	498416	498417	498418	498419	498420

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	0.45	< 0.1	< 0.1	< 0.1	1.08
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.43
Fluoranthene	mg/kg	< 0.1	MCERTS	1.20	< 0.1	< 0.1	< 0.1	5.40
Pyrene	mg/kg	< 0.1	MCERTS	1.07	< 0.1	< 0.1	< 0.1	5.35
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	0.60	< 0.1	< 0.1	< 0.1	2.97
Chrysene	mg/kg	< 0.1	MCERTS	0.62	< 0.1	< 0.1	< 0.1	2.65
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	0.85	< 0.1	< 0.1	< 0.1	4.93
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	0.32	< 0.1	< 0.1	< 0.1	1.67
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	0.66	< 0.1	< 0.1	< 0.1	4.40
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	0.43	< 0.1	< 0.1	< 0.1	2.84
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.64
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	0.36	< 0.1	< 0.1	< 0.1	2.86
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	6.6	< 1.6	< 1.6	< 1.6	35.2

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Soil Analysis Certificate - Speciated PAHs							
DETS Report No: 20-10569	Date Sampled	01/09/20	01/09/20	01/09/20	01/09/20	01/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	TP01	TP02	TP02	TP04	TP05
Project / Job Ref: BRD200653	Additional Refs	J1	J2	J2	J1	J1
Order No: None Supplied	Depth (m)	0.20	0.10	0.70	0.10	0.20
Reporting Date: 22/09/2020	DETS Sample No	498421	498422	498423	498424	498425

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6

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Soil Analysis Certificate - Speciated PAHs							
DETS Report No: 20-10569	Date Sampled	01/09/20	03/09/20	03/09/20	03/09/20	03/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	TP07	TP08	TP09	TP09	TP10
Project / Job Ref: BRD200653	Additional Refs	J1	J1	J1	J2	J1
Order No: None Supplied	Depth (m)	0.50	0.20	0.10	0.60	0.20
Reporting Date: 22/09/2020	DETS Sample No	498428	498429	498430	498431	498432

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.31	< 0.1	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.26	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.15	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.11	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.22	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.16	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6

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Soil Analysis Certificate - Speciated PAHs							
DETS Report No: 20-10569	Date Sampled	03/09/20	03/09/20	03/09/20	03/09/20	02/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	TP12	TP12	TP13	TP13	TP14
Project / Job Ref: BRD200653	Additional Refs	J1	J2	J1	J2	J1
Order No: None Supplied	Depth (m)	0.10	0.70	0.10	0.40	0.20
Reporting Date: 22/09/2020	DETS Sample No	498434	498435	498436	498437	498438

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	1.02	1.58	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.31	0.39	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	3.20	2.92	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	2.93	2.55	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	1.67	1.37	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	1.61	1.24	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	3	1.75	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	1	0.60	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	2.45	1.54	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	2.27	0.92	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.53	0.23	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	2.45	0.89	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	22.5	16	< 1.6

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Soil Analysis Certificate - Speciated PAHs							
DETS Report No: 20-10569	Date Sampled	02/09/20	02/09/20	02/09/20	03/09/20	03/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	TP15	TP16	TP22	TP23	WS06
Project / Job Ref: BRD200653	Additional Refs	J1	J2	J2	J1	J1
Order No: None Supplied	Depth (m)	0.10	0.70	0.70	0.10	0.10
Reporting Date: 22/09/2020	DETS Sample No	498440	498441	498444	498445	498446

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.47	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.48	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.33	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.32	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.73	0.13
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.20	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.54	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.41	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.45	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	3.9	< 1.6

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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 20-10569	Date Sampled	03/09/20	08/09/20	04/09/20	07/09/20	07/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	WS06	WS09	WS11	WS17	WS18
Project / Job Ref: BRD200653	Additional Refs	J2	J1	J1	J1	J1
Order No: None Supplied	Depth (m)	0.40	0.20	0.20	0.20	0.20
Reporting Date: 22/09/2020	DETS Sample No	498447	498448	498449	498452	498453

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	0.31	0.12	< 0.1	< 0.1	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	0.28	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	0.17	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	0.16	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	0.30	0.12	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	0.23	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	0.14	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	0.13	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	1.7	< 1.6	< 1.6	< 1.6	< 1.6

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Soil Analysis Certificate - Speciated PAHs							
DETS Report No: 20-10569	Date Sampled	07/09/20	07/09/20	09/09/20	09/09/20	09/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	WS19	WS20	WS22	WS22	WS23
Project / Job Ref: BRD200653	Additional Refs	J1	J1	J2	J3	J1
Order No: None Supplied	Depth (m)	0.10	0.20	0.40	3.50	0.30
Reporting Date: 22/09/2020	DETS Sample No	498454	498455	498458	498459	498460

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.49
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.42
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.27
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.27
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.44
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.15
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.29
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.22
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.21
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	2.8

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Soil Analysis Certificate - TPH LQM Banded							
DETS Report No: 20-10569	Date Sampled	04/09/20	01/09/20	01/09/20	03/09/20	03/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	HD08	TP02	TP07	TP09	TP13
Project / Job Ref: BRD200653	Additional Refs	J1	J2	J1	J2	J1
Order No: None Supplied	Depth (m)	0.20	0.70	0.50	0.60	0.10
Reporting Date: 22/09/2020	DETS Sample No	498415	498423	498428	498431	498436

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C35	mg/kg	< 10	MCERTS	31	< 10	< 10	< 10	< 10
Aliphatic >C35 - C44	mg/kg	< 10	NONE	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C44)	mg/kg	< 30	NONE	31	< 30	< 30	< 30	< 30
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	4	< 2	< 2	< 2	< 2
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	68	< 3	< 3	< 3	7
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	342	< 10	< 10	< 10	42
Aromatic >C35 - C44	mg/kg	< 10	NONE	231	< 10	< 10	< 10	< 10
Aromatic (>C5 - C44)	mg/kg	< 30	NONE	646	< 30	< 30	< 30	49
Total >C5 - C44	mg/kg	< 60	NONE	677	< 60	< 60	< 60	< 60

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Soil Analysis Certificate - TPH LQM Banded						
DETS Report No: 20-10569	Date Sampled	03/09/20	02/09/20	02/09/20	03/09/20	04/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	TP13	TP14	TP22	TP23	WS14
Project / Job Ref: BRD200653	Additional Refs	J2	J2	J2	J1	J2
Order No: None Supplied	Depth (m)	0.40	0.70	0.70	0.10	0.90
Reporting Date: 22/09/2020	DETS Sample No	498437	498439	498444	498445	498451

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C35	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aliphatic >C35 - C44	mg/kg	< 10	NONE	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C44)	mg/kg	< 30	NONE	< 30	< 30	< 30	< 30	< 30
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aromatic >C35 - C44	mg/kg	< 10	NONE	< 10	< 10	< 10	< 10	< 10
Aromatic (>C5 - C44)	mg/kg	< 30	NONE	< 30	< 30	< 30	< 30	< 30
Total >C5 - C44	mg/kg	< 60	NONE	< 60	< 60	< 60	< 60	< 60

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Soil Analysis Certificate - TPH LQM Banded						
DETS Report No: 20-10569	Date Sampled	09/09/20	09/09/20			
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied			
Site Reference: Downlands Farm, Uckfield	TP / BH No	WS21	WS22			
Project / Job Ref: BRD200653	Additional Refs	J2	J3			
Order No: None Supplied	Depth (m)	0.80	3.50			
Reporting Date: 22/09/2020	DETS Sample No	498457	498459			

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01			
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05			
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2			
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2			
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3	< 3			
Aliphatic >C16 - C35	mg/kg	< 10	MCERTS	< 10	< 10			
Aliphatic >C35 - C44	mg/kg	< 10	NONE	< 10	< 10			
Aliphatic (C5 - C44)	mg/kg	< 30	NONE	< 30	< 30			
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01			
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05			
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2			
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2			
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	< 2	< 2			
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3			
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	< 10	< 10			
Aromatic >C35 - C44	mg/kg	< 10	NONE	< 10	< 10			
Aromatic (>C5 - C44)	mg/kg	< 30	NONE	< 30	< 30			
Total >C5 - C44	mg/kg	< 60	NONE	< 60	< 60			

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Soil Analysis Certificate - BTEX / MTBE							
DETS Report No: 20-10569	Date Sampled	04/09/20	01/09/20	01/09/20	03/09/20	03/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	HD08	TP02	TP07	TP09	TP13
Project / Job Ref: BRD200653	Additional Refs	J1	J2	J1	J2	J1
Order No: None Supplied	Depth (m)	0.20	0.70	0.50	0.60	0.10
Reporting Date: 22/09/2020	DETS Sample No	498415	498423	498428	498431	498436

Determinand	Unit	RL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
p & m-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
o-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
MTBE	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

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Soil Analysis Certificate - BTEX / MTBE							
DETS Report No: 20-10569	Date Sampled	03/09/20	02/09/20	02/09/20	03/09/20	04/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	TP13	TP14	TP22	TP23	WS14
Project / Job Ref: BRD200653	Additional Refs	J2	J2	J2	J1	J2
Order No: None Supplied	Depth (m)	0.40	0.70	0.70	0.10	0.90
Reporting Date: 22/09/2020	DETS Sample No	498437	498439	498444	498445	498451

Determinand	Unit	RL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
p & m-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
o-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
MTBE	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 20-10569	Date Sampled	09/09/20	09/09/20			
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied			
Site Reference: Downlands Farm, Uckfield	TP / BH No	WS21	WS22			
Project / Job Ref: BRD200653	Additional Refs	J2	J3			
Order No: None Supplied	Depth (m)	0.80	3.50			
Reporting Date: 22/09/2020	DETS Sample No	498457	498459			

Determinand	Unit	RL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2	< 2			
Toluene	ug/kg	< 5	MCERTS	< 5	< 5			
Ethylbenzene	ug/kg	< 2	MCERTS	< 2	< 2			
p & m-xylene	ug/kg	< 2	MCERTS	< 2	< 2			
o-xylene	ug/kg	< 2	MCERTS	< 2	< 2			
MTBE	ug/kg	< 5	MCERTS	< 5	< 5			

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Soil Analysis Certificate - Volatile Organic Compounds (VOC)						
DETS Report No: 20-10569	Date Sampled	01/09/20	01/09/20	03/09/20	02/09/20	
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	
Site Reference: Downlands Farm, Uckfield	TP / BH No	TP02	TP07	TP09	TP22	
Project / Job Ref: BRD200653	Additional Refs	J2	J1	J2	J2	
Order No: None Supplied	Depth (m)	0.70	0.50	0.60	0.70	
Reporting Date: 22/09/2020	DETS Sample No	498423	498428	498431	498444	

Determinand	Unit	RL	Accreditation					
Dichlorodifluoromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
Vinyl Chloride	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
Chloromethane	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	
Chloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
Bromomethane	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	
Trichlorofluoromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
1,1-Dichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
MTBE	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
trans-1,2-Dichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
1,1-Dichloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
cis-1,2-Dichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
2,2-Dichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
Chloroform	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
Bromochloromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
1,1,1-Trichloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
1,1-Dichloropropene	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	
Carbon Tetrachloride	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
1,2-Dichloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
Benzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	
1,2-Dichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
Trichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
Bromodichloromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
Dibromomethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
TAME	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
cis-1,3-Dichloropropene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
Toluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
trans-1,3-Dichloropropene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
1,1,2-Trichloroethane	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	
1,3-Dichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
Tetrachloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
Dibromochloromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
1,2-Dibromoethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
Chlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
1,1,1,2-Tetrachloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
Ethyl Benzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	
m,p-Xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	
o-Xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	
Styrene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
Bromoform	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	
Isopropylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
1,1,2,2-Tetrachloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
1,2,3-Trichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
n-Propylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
Bromobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
2-Chlorotoluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
1,3,5-Trimethylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
4-Chlorotoluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
tert-Butylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
1,2,4-Trimethylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
sec-Butylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
p-Isopropyltoluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
1,3-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
1,4-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
n-Butylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
1,2-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
,2-Dibromo-3-chloropropane	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	
Hexachlorobutadiene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	

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Soil Analysis Certificate - Semi Volatile Organic Compounds (SVOC)						
DETS Report No: 20-10569	Date Sampled	01/09/20	01/09/20	03/09/20	02/09/20	
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	
Site Reference: Downlands Farm, Uckfield	TP / BH No	TP02	TP07	TP09	TP22	
Project / Job Ref: BRD200653	Additional Refs	J2	J1	J2	J2	
Order No: None Supplied	Depth (m)	0.70	0.50	0.60	0.70	
Reporting Date: 22/09/2020	DETS Sample No	498423	498428	498431	498444	

Determinand	Unit	RL	Accreditation					
Phenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
1,2,4-Trichlorobenzene	mg/kg	< 0.1	ISO17025	< 0.1	< 0.1	< 0.1	< 0.1	
2-Nitrophenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Nitrobenzene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
0-Cresol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
bis(2-chloroethoxy)methane	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
bis(2-chloroethyl)ether	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
2,4-Dichlorophenol	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
2-Chlorophenol	mg/kg	< 0.1	ISO17025	< 0.1	< 0.1	< 0.1	< 0.1	
1,3-Dichlorobenzene	mg/kg	< 0.1	ISO17025	< 0.1	< 0.1	< 0.1	< 0.1	
1,4-Dichlorobenzene	mg/kg	< 0.1	ISO17025	< 0.1	< 0.1	< 0.1	< 0.1	
1,2-Dichlorobenzene	mg/kg	< 0.1	ISO17025	< 0.1	< 0.1	< 0.1	< 0.1	
2,4-Dimethylphenol	mg/kg	< 0.15	ISO17025	< 0.15	< 0.15	< 0.15	< 0.15	
Isophorone	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Hexachloroethane	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
p-Cresol	mg/kg	< 0.15	MCERTS	< 0.15	< 0.15	< 0.15	< 0.15	
2,4,6-Trichlorophenol	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
2,4,5-Trichlorophenol	mg/kg	< 0.15	MCERTS	< 0.15	< 0.15	< 0.15	< 0.15	
2-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
4-Chloro-3-methylphenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
2-Methylnaphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Hexachlorocyclopentadiene	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Hexachlorobutadiene	mg/kg	< 0.1	ISO17025	< 0.1	< 0.1	< 0.1	< 0.1	
2,6-Dinitrotoluene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Dimethyl phthalate	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
2-Chloronaphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
4-Chloroanaline	mg/kg	< 0.15	NONE	< 0.15	< 0.15	< 0.15	< 0.15	
4-Nitrophenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
4-Chlorophenyl phenyl ether	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
3-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
4-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
4-Bromophenyl phenyl ether	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Hexachlorobenzene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
2,4-Dinitrotoluene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Diethyl phthalate	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Dibenzofuran	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Azobenzene	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Dibutyl phthalate	mg/kg	< 0.1	ISO17025	< 0.1	< 0.1	< 0.1	< 0.1	
Carbazole	mg/kg	< 0.1	ISO17025	< 0.1	< 0.1	< 0.1	< 0.1	
bis(2-ethylhexyl)phthalate	mg/kg	< 0.15	MCERTS	< 0.15	< 0.15	< 0.15	< 0.15	
Benzyl butyl phthalate	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Di-n-octyl phthalate	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	

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Soil Analysis Certificate - Organochlorine Pesticides							
DETS Report No: 20-10569	Date Sampled	04/09/20	09/09/20	01/09/20	01/09/20	03/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	HD08	HD10	TP01	TP06	TP10
Project / Job Ref: BRD200653	Additional Refs	J1	J1	J1	J1	J1
Order No: None Supplied	Depth (m)	0.20	0.20	0.20	0.20	0.20
Reporting Date: 22/09/2020	DETS Sample No	498415	498416	498421	498426	498432

Determinand	Unit	RL	Accreditation					
Aldrin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
alpha-HCH	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
beta-HCH	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
cis-chlordane	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
delta-HCH	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Dieldrin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Endosulfan A	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Endosulfan B	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Endrin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
gamma-HCH (Lindane)	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Heptachlor	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Heptachlor epoxide	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Hexachlorobenzene (HCB)	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Isodrin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Methoxychlor	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
o,p' - DDD	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
o,p' - DDE	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
o,p' - DDT	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
p,p' - DDD	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
p,p' - DDE	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
p,p' - DDT	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
trans-chlordane	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Trifluralin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02

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Soil Analysis Certificate - Organochlorine Pesticides							
DETS Report No: 20-10569	Date Sampled	03/09/20	02/09/20	02/09/20	03/09/20	09/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	TP12	TP17	TP22	WS06	WS21
Project / Job Ref: BRD200653	Additional Refs	J1	J1	J1	J1	J1
Order No: None Supplied	Depth (m)	0.10	0.20	0.10	0.10	0.20
Reporting Date: 22/09/2020	DETS Sample No	498434	498442	498443	498446	498456

Determinand	Unit	RL	Accreditation					
Aldrin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
alpha-HCH	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
beta-HCH	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
cis-chlordane	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
delta-HCH	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Dieldrin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Endosulfan A	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Endosulfan B	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Endrin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
gamma-HCH (Lindane)	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Heptachlor	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Heptachlor epoxide	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Hexachlorobenzene (HCB)	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Isodrin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Methoxychlor	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
o,p' - DDD	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
o,p' - DDE	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
o,p' - DDT	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
p,p' - DDD	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
p,p' - DDE	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
p,p' - DDT	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
trans-chlordane	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Trifluralin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02

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Waste Acceptance Criteria Analytical Certificate - BS EN 12457/3

DETS Report No: 20-10569	Date Sampled	01/09/20	
BRD Environmental Ltd	Time Sampled	None Supplied	
Site Reference: Downlands Farm, Uckfield	TP / BH No	TP06	
Project / Job Ref: BRD200653	Additional Refs	J2	
Order No: None Supplied	Depth (m)	0.70	
Reporting Date: 22/09/2020	DETS Sample No	498427	

Determinand	Unit	MDL		Landfill Waste Acceptance Criteria Limits: Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
TOC[MU]	%	< 0.1	0.7	3%	5%	6%
Loss on Ignition	%	< 0.01	2.70	--	--	10%
BTEX[MU]	mg/kg	< 0.05	< 0.05	6	--	--
Sum of PCBs	mg/kg	< 0.1	< 0.1	1	--	--
Mineral Oil[MU]	mg/kg	< 10	< 10	500	--	--
Total PAH[MU]	mg/kg	< 1.7	< 1.7	100	--	--
pH[MU]	pH Units	N/a	6.7	--	>6	--
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	< 1	--	To be evaluated	To be evaluated

Eluate Analysis	2:1 mg/l	8:1 mg/l		Cumulative 10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic[U]	< 0.01	< 0.01		< 0.2	0.5	2	25
Barium[U]	< 0.02	< 0.02		< 0.1	20	100	300
Cadmium[U]	< 0.0005	< 0.0005		< 0.02	0.04	1	5
Chromium[U]	< 0.005	< 0.005		< 0.20	0.5	10	70
Copper[U]	0.01	0.01		< 0.5	2	50	100
Mercury[U]	< 0.0005	< 0.0005		< 0.005	0.01	0.2	2
Molybdenum[U]	< 0.001	< 0.001		< 0.1	0.5	10	30
Nickel[U]	< 0.007	< 0.007		< 0.2	0.4	10	40
Lead[U]	< 0.005	0.014		< 0.2	0.5	10	50
Antimony[U]	0.010	0.012		0.12	0.06	0.7	5
Selenium[U]	< 0.005	< 0.005		< 0.05	0.1	0.5	7
Zinc[U]	0.008	0.008		< 0.2	4	50	200
Chloride[U]	7	3		33	800	15000	25000
Fluoride[U]	< 0.5	< 0.5		< 1	10	150	500
Sulphate[U]	7	2		28	1000	20000	50000
TDS	62	50		509	4000	60000	100000
Phenol Index	0.02	0.01		< 0.5	1	-	-
DOC	3.5	5.7		55.4	500	800	1000
Leach Test Information							
Sample Mass (kg)	0.19						
Dry Matter (%)	92.6						
Moisture (%)	8						
Stage 1							
Volume Eluate L2 (litres)	0.34						
Filtered Eluate VE1 (litres)	0.13						

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepencies with current legislation
M Denotes MCERTS accredited test
U Denotes ISO17025 accredited test

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Waste Acceptance Criteria Analytical Certificate - BS EN 12457/3

DETS Report No: 20-10569		Date Sampled	03/09/20				Landfill Waste Acceptance Criteria Limits		
BRD Environmental Ltd		Time Sampled	None Supplied				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Site Reference: Downlands Farm, Uckfield		TP / BH No	TP11						
Project / Job Ref: BRD200653		Additional Refs	J1						
Order No: None Supplied		Depth (m)	0.60						
Reporting Date: 22/09/2020		DETS Sample No	498433						
Determinand	Unit	MDL							
TOC[MU]	%	< 0.1	0.2				3%	5%	6%
Loss on Ignition	%	< 0.01	1.30				--	--	10%
BTEX[MU]	mg/kg	< 0.05	< 0.05				6	--	--
Sum of PCBs	mg/kg	< 0.1	< 0.1				1	--	--
Mineral Oil[MU]	mg/kg	< 10	< 10				500	--	--
Total PAH[MU]	mg/kg	< 1.7	< 1.7				100	--	--
pH[MU]	pH Units	N/a	6.8				--	>6	--
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	< 1				--	To be evaluated	To be evaluated
Eluate Analysis			2:1 mg/l	8:1 mg/l		Cumulative 10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic[U]			< 0.01	< 0.01		< 0.2	0.5	2	25
Barium[U]			< 0.02	< 0.02		< 0.1	20	100	300
Cadmium[U]			< 0.0005	< 0.0005		< 0.02	0.04	1	5
Chromium[U]			< 0.005	< 0.005		< 0.20	0.5	10	70
Copper[U]			< 0.01	< 0.01		< 0.5	2	50	100
Mercury[U]			< 0.0005	< 0.0005		< 0.005	0.01	0.2	2
Molybdenum[U]			< 0.001	< 0.001		< 0.1	0.5	10	30
Nickel[U]			< 0.007	< 0.007		< 0.2	0.4	10	40
Lead[U]			< 0.005	< 0.005		< 0.2	0.5	10	50
Antimony[U]			< 0.005	< 0.005		< 0.05	0.06	0.7	5
Selenium[U]			< 0.005	< 0.005		< 0.05	0.1	0.5	7
Zinc[U]			0.007	0.006		< 0.2	4	50	200
Chloride[U]			4	4		40	800	15000	25000
Fluoride[U]			< 0.5	< 0.5		< 1	10	150	500
Sulphate[U]			3	3		28	1000	20000	50000
TDS			33	40		394	4000	60000	100000
Phenol Index			< 0.01	< 0.01		< 0.5	1	-	-
DOC			1.7	4.6		43.8	500	800	1000
Leach Test Information									
Sample Mass (kg)			0.18						
Dry Matter (%)			95.1						
Moisture (%)			5.2						
Stage 1									
Volume Eluate L2 (litres)			0.34						
Filtered Eluate VE1 (litres)			0.15						

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepencies with current legislation
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Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 20-10569	
BRD Environmental Ltd	
Site Reference: Downlands Farm, Uckfield	
Project / Job Ref: BRD200653	
Order No: None Supplied	
Reporting Date: 22/09/2020	

DETS Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
498411	HD02	J1	0.10	13	Brown sandy clay
498412	HD04	J1	0.10	11.4	Brown sandy clay with vegetation
498413	HD06	J1	0.15	11	Brown sandy clay with stones and vegetation
498414	HD07	J1	0.10	8.5	Brown sandy clay
498415	HD08	J1	0.20	7.4	Brown sandy gravel with stones and vegetation
498416	HD10	J1	0.20	8.5	Brown sandy clay with vegetation
498417	HD11	J1	0.15	9	Brown loamy sand with vegetation
498418	HD12	J1	0.20	7.3	Brown loamy sand with vegetation
498419	HD13	J2	0.10	7.2	Black loamy sand with vegetation
498420	STK01	J1	0.20	5.4	Brown sandy clay with stones and vegetation
$ 498421	TP01	J1	0.20	12	Brown loamy sand with vegetation
$ 498422	TP02	J2	0.10	10.1	Brown sandy clay with vegetation
$ 498423	TP02	J2	0.70	11.1	Light brown sandy clay
$ 498424	TP04	J1	0.10	11.1	Brown sandy clay with vegetation
$ 498425	TP05	J1	0.20	7.4	Brown sandy clay with stones and vegetation
$ 498426	TP06	J1	0.20	11.6	Brown sandy clay
$ 498427	TP06	J2	0.70	7.3	Light brown tar
$ 498428	TP07	J1	0.50	12.8	Light brown sandy clay
$ 498429	TP08	J1	0.20	8.4	Brown sandy clay with vegetation
$ 498430	TP09	J1	0.10	8.5	Brown sandy clay with vegetation
$ 498431	TP09	J2	0.60	8.9	Light brown sandy clay
$ 498432	TP10	J1	0.20	8.1	Brown sandy clay
$ 498433	TP11	J1	0.60	5	Orange sandy clay
$ 498434	TP12	J1	0.10	11.2	Brown sandy clay with vegetation
$ 498435	TP12	J2	0.70	10	Light brown sandy clay
$ 498436	TP13	J1	0.10	8.3	Brown sandy clay with stones and vegetation
$ 498437	TP13	J2	0.40	8.3	Light brown sandy clay with stones and vegetation
$ 498438	TP14	J1	0.20	8.4	Brown sandy clay with vegetation
$ 498439	TP14	J2	0.70	7.9	Light brown sandy clay
$ 498440	TP15	J1	0.10	11.3	Brown sandy clay with vegetation
$ 498441	TP16	J2	0.70	13.7	Brown sandy clay with vegetation
$ 498442	TP17	J1	0.20	8.6	Brown sandy clay with vegetation
$ 498443	TP22	J1	0.10	10.8	Brown sandy clay with vegetation
$ 498444	TP22	J2	0.70	9	Orange sandy clay
$ 498445	TP23	J1	0.10	13.2	Black loamy sand with stones and vegetation
$ 498446	WS06	J1	0.10	12.4	Brown loamy sand with vegetation
$ 498447	WS06	J2	0.40	7.7	Brown sandy clay
498448	WS09	J1	0.20	10.1	Brown loamy sand with vegetation
498449	WS11	J1	0.20	8.2	Brown sandy clay with vegetation
498451	WS14	J2	0.90	6.4	Light brown sandy clay with stones
498452	WS17	J1	0.20	9.2	Brown sandy clay with vegetation
498453	WS18	J1	0.20	9.5	Brown loamy sand with vegetation
498454	WS19	J1	0.10	9.4	Brown sandy clay with vegetation
498455	WS20	J1	0.20	8.9	Brown sandy clay with vegetation
498456	WS21	J1	0.20	7.5	Brown loamy sand with vegetation
498457	WS21	J2	0.80	4.8	Orange sandy clay with vegetation
498458	WS22	J2	0.40	17.9	Brown loamy sand
498459	WS22	J3	3.50	16.1	Orange sandy clay
498460	WS23	J1	0.30	9.5	Brown Sandy Clay with Vegetation

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample I/S

Unsuitable Sample U/S

$ samples exceeded recommended holding times

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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 20-10569
BRD Environmental Ltd
Site Reference: Downlands Farm, Uckfield
Project / Job Ref: BRD200653
Order No: None Supplied
Reporting Date: 22/09/2020

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received

Parameter	Matrix Type	Suite Reference	Expanded Uncertainity Measurement	Unit
TOC	Soil	BS EN 12457	13.49	%
Loss on Ignition	Soil	BS EN 12457	17	%
BTEX	Soil	BS EN 12457	14	%
Sum of PCBs	Soil	BS EN 12457	23	%
Mineral Oil	Soil	BS EN 12457	9	%
Total PAH	Soil	BS EN 12457	20	%
pH	Soil	BS EN 12457	0.399	Units
Acid Neutralisation Capacity	Soil	BS EN 12457	18	%
Arsenic	Leachate	BS EN 12457	16.63	%
Barium	Leachate	BS EN 12457	14.29	%
Cadmium	Leachate	BS EN 12457	14.44	%
Chromium	Leachate	BS EN 12457	18.06	%
Copper	Leachate	BS EN 12457	21.27	%
Mercury	Leachate	BS EN 12457	24.13	%
Molybdenum	Leachate	BS EN 12457	12.55	%
Nickel	Leachate	BS EN 12457	20.08	%
Lead	Leachate	BS EN 12457	13.43	%
Antimony	Leachate	BS EN 12457	18.85	%
Selenium	Leachate	BS EN 12457	18.91	%
Zinc	Leachate	BS EN 12457	13.71	%
Chloride	Leachate	BS EN 12457	16	%
Fluoride	Leachate	BS EN 12457	19.4	%
Sulphate	Leachate	BS EN 12457	19.63	%
TDS	Leachate	BS EN 12457	12	%
Phenol Index	Leachate	BS EN 12457	14	%
DOC	Leachate	BS EN 12457	10	%
Clay Content	Soil	BS 3882: 2015	15	%
Silt Content	Soil	BS 3882: 2015	14	%
Sand Content	Soil	BS 3882: 2015	13	%
Loss on Ignition	Soil	BS 3882: 2015	17	%
pH	Soil	BS 3882: 2015	0.399	Units
Carbonate	Soil	BS 3882: 2015	16	%
Total Nitrogen	Soil	BS 3882: 2015	12	%
Phosphorus (Extractable)	Soil	BS 3882: 2015	24	%
Potassium (Extractable)	Soil	BS 3882: 2015	20	%
Magnesium (Extractable)	Soil	BS 3882: 2015	26	%
Zinc	Soil	BS 3882: 2015	14.9	%
Copper	Soil	BS 3882: 2015	16	%
Nickel	Soil	BS 3882: 2015	17.7	%
Available Sodium	Soil	BS 3882: 2015	23	%
Available Calcium	Soil	BS 3882: 2015	23	%
Electrical Conductivity	Soil	BS 3882: 2015	10	%

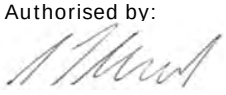
Matthew Morgan
BRD Environmental Ltd
Hawthorne Villa
1 Old Parr Road
Banbury
Oxfordshire
OX16 5HT

DETS Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 20-10570

Site Reference:	Downlands Farm, Uckfield
Project / Job Ref:	BRD200653
Order No:	None Supplied
Sample Receipt Date:	14/09/2020
Sample Scheduled Date:	14/09/2020
Report Issue Number:	1
Reporting Date:	22/09/2020

Authorised by:



Dave Ashworth
Technical Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

DETS Ltd
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4480

Soil Analysis Certificate						
DETS Report No: 20-10570	Date Sampled	01/09/20	01/09/20	03/09/20	02/09/20	08/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	TP01	TP07	TP10	TP19	WS09
Project / Job Ref: BRD200653	Additional Refs	J2	J2	J3	J2	J2
Order No: None Supplied	Depth (m)	2.80	2.80	2.70	2.40	2.40
Reporting Date: 22/09/2020	DETS Sample No	498461	498462	498463	498464	498465

Determinand	Unit	RL	Accreditation					
pH	pH Units	N/a	MCERTS	7.5	7.9	7.4	5.9	5.4
Total Sulphate as SO_4	mg/kg	< 200	NONE	439	518	229	476	782
Total Sulphate as SO_4	%	< 0.02	NONE	0.04	0.05	0.02	0.05	0.08
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	18	25	18	17	32
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	0.02	0.02	0.02	0.02	0.03
Total Sulphur	%	< 0.02	NONE	< 0.02	0.20	< 0.02	< 0.02	0.03

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)

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4480

Soil Analysis Certificate						
DETS Report No: 20-10570	Date Sampled	08/09/20	07/09/20	07/09/20	07/09/20	07/09/20
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Downlands Farm, Uckfield	TP / BH No	WS10	WS17	WS18	WS20	WS20
Project / Job Ref: BRD200653	Additional Refs	J2	J2	J2	J2	J3
Order No: None Supplied	Depth (m)	1.70	0.80	0.80	2.70	3.00
Reporting Date: 22/09/2020	DETS Sample No	498466	498467	498468	498469	498470

Determinand	Unit	RL	Accreditation					
pH	pH Units	N/a	MCERTS	6.7	5.0	6.0	5.6	6.7
Total Sulphate as SO_4	mg/kg	< 200	NONE	401	407	363	218	223
Total Sulphate as SO_4	%	< 0.02	NONE	0.04	0.04	0.04	0.02	0.02
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	11	< 10	12	15	17
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	0.01	< 0.01	0.01	0.01	0.02
Total Sulphur	%	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	0.05

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)

DETS Ltd
Unit 1, Rose Lane Industrial Estate
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mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME
UKAS TESTING 4480

Soil Analysis Certificate - Sample Descriptions
DETS Report No: 20-10570
BRD Environmental Ltd
Site Reference: Downlands Farm, Uckfield
Project / Job Ref: BRD200653
Order No: None Supplied
Reporting Date: 22/09/2020

DETS Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
$ 498461	TP01	J2	2.80	8.6	Light brown sandy clay with stones
$ 498462	TP07	J2	2.80	16	Brown clay
$ 498463	TP10	J3	2.70	6.6	Brown sandy clay with stones
$ 498464	TP19	J2	2.40	8.3	Brown sandy clay with stones
498465	WS09	J2	2.40	8.5	Brown sandy clay
498466	WS10	J2	1.70	10.3	Light brown sandy clay
498467	WS17	J2	0.80	8	Orange sandy clay
498468	WS18	J2	0.80	7.5	Light brown sandy clay
498469	WS20	J2	2.70	7.9	Light brown sandy clay with stones
498470	WS20	J3	3.00	8.3	Blue sandy clay

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample I/S

Unsuitable Sample U/S

$ samples exceeded recommended holding times

DETS Ltd
Unit 1, Rose Lane Industrial Estate
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Lenham Heath
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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 20-10570
BRD Environmental Ltd
Site Reference: Downlands Farm, Uckfield
Project / Job Ref: BRD200653
Order No: None Supplied
Reporting Date: 22/09/2020

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received

TEST REPORT

ISSUED BY SOIL PROPERTY TESTING LTD

DATE ISSUED: 29/09/2020

0998

Contract	**Downlands Farm, Uckfield**
Serial No.	**37497_1**

Client:

BRD Environmental Ltd

BRD Environmental Ltd
Hawthorne Villa
1 Old Parr Road
Banbury
Oxfordshire
OX16 5HT

Soil Property Testing Ltd

15, 16, 18 Halcyon Court, St Margaret's Way,
Stukeley Meadows, Huntingdon,
Cambridgeshire, PE29 6DG

Tel: 01480 455579
Email: enquiries@soilpropertytesting.com
Website: www.soilpropertytesting.com

Samples Submitted By:

BRD Environmental Ltd

Samples Labelled:

Downlands Farm, Uckfield

Approved Signatories:

- ☑ **J.C. Garner B.Eng (Hons) FGS** — Technical Director & Quality Manager
- ☐ **S.P. Townend** — Chairman
- ☐ **W. Johnstone** — Materials Lab Manager
- ☐ **D. Sabnis** — Operations Manager

Date Received: 14/09/2020

Samples Tested Between: 14/09/2020 **and** 29/09/2020

Remarks:

For the attention of Matt Morgan
Your Reference No: BRD200653

Notes:

1. All remaining samples or remnants from this contract will be disposed of after 21 days from today, unless we are notified to the contrary.
2. (a) UKAS - United Kingdom Accreditation Service.
   (b) Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.
3. Tests marked "NOT UKAS ACCREDITED" in this test report are not included in the UKAS Accreditation Schedule for this testing laboratory.
4. This test report may not be reproduced other than in full except with the prior written approval of the issuing laboratory.

TEST REPORT

ISSUED BY SOIL PROPERTY TESTING LTD

DATE ISSUED: 29/09/2020

0998

Contract	**Downlands Farm, Uckfield**		
Serial No.	**37497_1**	**Target Date**	29/09/2020
Scheduled By	BRD Environmental Ltd		

SCHEDULE OF LABORATORY TESTS

Schedule Remarks

Bore Hole No.	Type	Sample Ref.	Top Depth	Water Content (BSEN)	Liquid/Plastic Limits	Wet Sieve Preparation	Particle Size Distribution (BS1377)														Sample Remarks
TP02	D	1	1.00	1	1																
TP02	D	2	2.00	1	1	1															
TP04	B	1	0.50				1														
TP05	D	3	2.70	1	1	1															
TP11	D	1	1.00	1	1																
TP12	B	1	1.50				1														
TP14	B	1	0.80				1														
TP15	B	1	2.10				1														
TP18	B	1	0.80				1														
TP19	D	1	0.90	1	1																
TP19	D	2	2.00	1	1																
TP21	D	1	0.80	1	1																
TP22	D	2	1.70	1	1																
TP23	B	1	1.10				1														
WS11	D	1	0.50	1	1																
WS16	D	2	1.50	1	1	1															
WS18	D	1	1.80	1	1																
WS20	D	3	3.90	1	1																
Totals				**12**	**12**	**3**	**6**														**End of Schedule**

TEST REPORT

ISSUED BY SOIL PROPERTY TESTING LTD

DATE ISSUED: 29/09/2020

0998

Contract	**Downlands Farm, Uckfield**
Serial No.	**37497_1**

SUMMARY OF WATER CONTENT, LIQUID LIMIT, PLASTIC LIMIT, PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole /Pit No.	Depth (m)	Type	Ref.	Water Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasti-city Index (%)	Liquid-ity Index	Sample Preparation				Description	Class
									Method	Ret'd 0.425mm (%)	Corr'd W/C <0.425mm	Curing Time (hrs)		
TP02	1.00	D	1	**26.1**	72	25	47	0.02	From Natural	<1% (A)		25	Stiff fissured mottled light bluish grey, yellowish brown and olive yellow CLAY with rare ironstone fragments and recently active roots. Some polishing to fissure surfaces	CV
TP02	2.00	D	2	**13.7**	44	19	25	-0.21	Wet Sieved	30 (M)	19.5*	71	Stiff thinly laminated mottled light bluish grey and olive yellow slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse shale/claystone	CI
TP05	2.70	D	3	**17.2**	52	22	30	-0.16	Wet Sieved	36 (M)	26.9*	71	Olive brown slightly sandy slightly gravelly CLAY with rare recently active roots. Gravel is fine and medium claystone lithorelicts	CH
TP11	1.00	D	1	**21.1**	46	19	27	0.08	From Natural	0 (A)		25	Stiff mottled light grey, orange and olive yellow silty CLAY with rare recently active roots	CI
TP19	0.90	D	1	**15.1**	42	19	23	-0.17	From Natural	0 (A)		25	Hard friable orangish brown silty CLAY with occasional recently active roots, rare light grey pockets and weak fine lithorelicts	CI
TP19	2.00	D	2	**16.8**	44	19	25	-0.09	From Natural	0 (A)		25	Very stiff pale olive silty CLAY with rare orange mottling and black speckling	CI
TP21	0.80	D	1	**10.6**	31	17	14	-0.46	From Natural	0 (A)		25	Hard friable yellow silty CLAY with occasional orange and light grey mottling and rare fine weak lithorelicts	CL
TP22	1.70	D	2	**24.6**	47	18	29	0.23	From Natural	0 (A)		26	Firm mottled light bluish grey and orange silty CLAY	CI

Method Of Preparation: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2:1990:4.2
Method of Test: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2:1990:3.2, 4.4, 5.3, 5.4
Type of Sample Key: U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter
Comments: *Corrected water content assume material greater than 0.425mm is non-porous. See BS1377: Part 2: 1990 Clause 3 Note 1.

Table Notation: Ret'd 0.425mm: (A) = Assumed, (M) = Measured

TEST REPORT

ISSUED BY SOIL PROPERTY TESTING LTD

DATE ISSUED: 29/09/2020

0998

Contract	**Downlands Farm, Uckfield**
Serial No.	**37497_1**

SUMMARY OF WATER CONTENT, LIQUID LIMIT, PLASTIC LIMIT, PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole /Pit No.	Depth (m)	Type	Ref.	Water Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasti-city Index (%)	Liquid-ity Index	Sample Preparation				Description	Class
									Method	Ret'd 0.425mm (%)	Corr'd W/C <0.425mm	Curing Time (hrs)		
WS11	0.50	D	1	**8.8**	23	15	8	-0.78	From Natural	0 (A)		25	Hard friable brownish yellow sandy silty CLAY with occasional recently active roots	CL
WS16	1.50	D	2	**16.5**	34	19	15	-0.17	Wet Sieved	21 (M)	20.9*	73	Very stiff friable mottled light bluish grey, orange and brownish yellow slightly gravelly slightly sandy silty CLAY. Gravel is fine and medium mudstone lithorelicts	CL
WS18	1.80	D	1	**10.9**	46	18	28	-0.25	From Natural	0 (A)		26	Hard friable olive yellow silty CLAY with occasional orange and light grey mottling and rare weak fine lithorelicts	CI
WS20	3.90	D	3	**15.2**	38	19	19	-0.20	From Natural	0 (A)		68	Hard friable mottled bluish grey and olive silty CLAY with rare lithorelicts	CI

Method Of Preparation: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2:1990:4.2
Method of Test: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2:1990:3.2, 4.4, 5.3, 5.4
Type of Sample Key: U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter
Comments: *Corrected water content assume material greater than 0.425mm is non-porous. See BS1377: Part 2: 1990 Clause 3 Note 1.

Table Notation: Ret'd 0.425mm: (A) = Assumed, (M) = Measured

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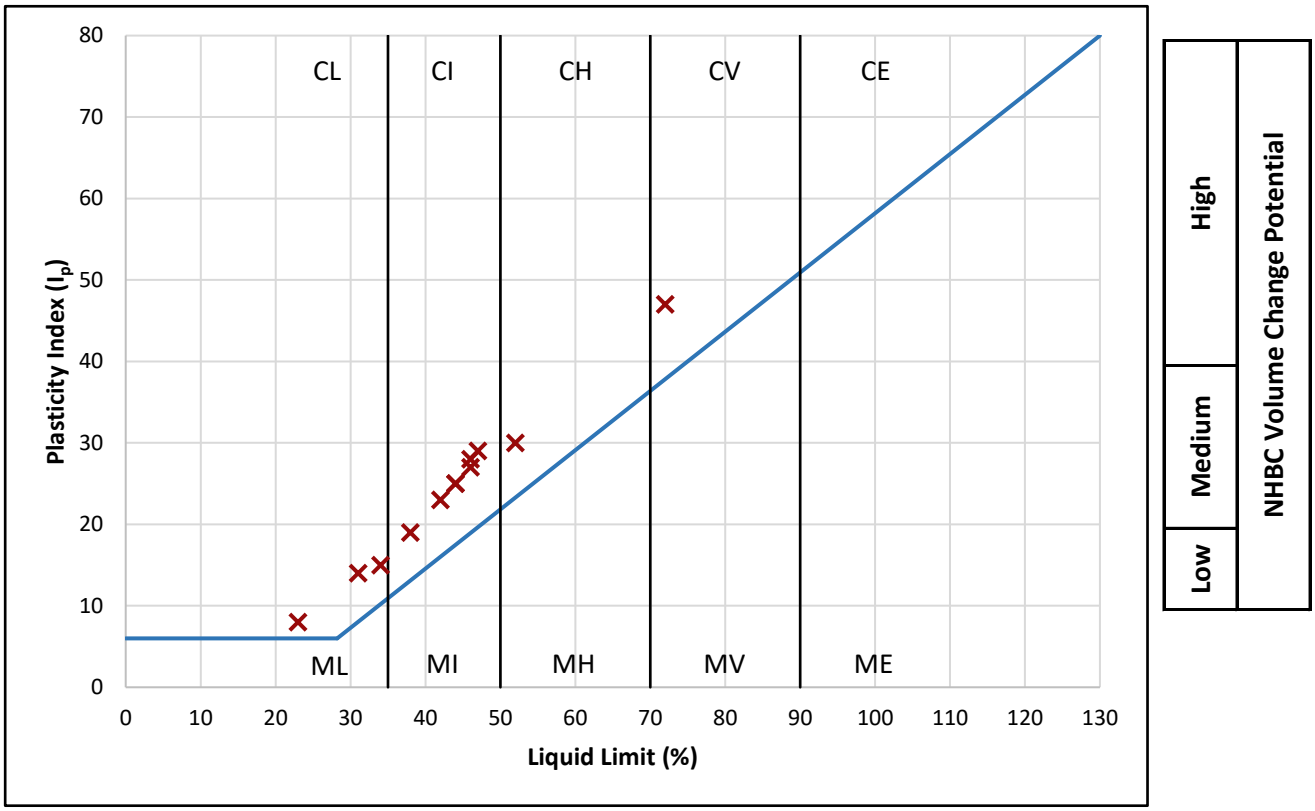
DATE ISSUED: 29/09/2020

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Contract	**Downlands Farm, Uckfield**
Serial No.	**37497_1**

PLOT OF PLASTICITY INDEX AGAINST LIQUID LIMIT USING CASAGRANDE CLASSIFICATION CHART

Plasticity				
Low	Medium	High	Very High	Extremely High



Plasticity Chart BS5930: 2015: Figure 8

Method of Preparation:	BS 1377: Part 2: 1990: 4.2
Method of Test:	BS1377: Part 2: 3.2, 4.4, 5.3, 5.4
Type of Sample Key:	U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter
Comments:	Volume Change Potential: NHBC Standards Chapter 4.2 Unmodified Plasticity Index

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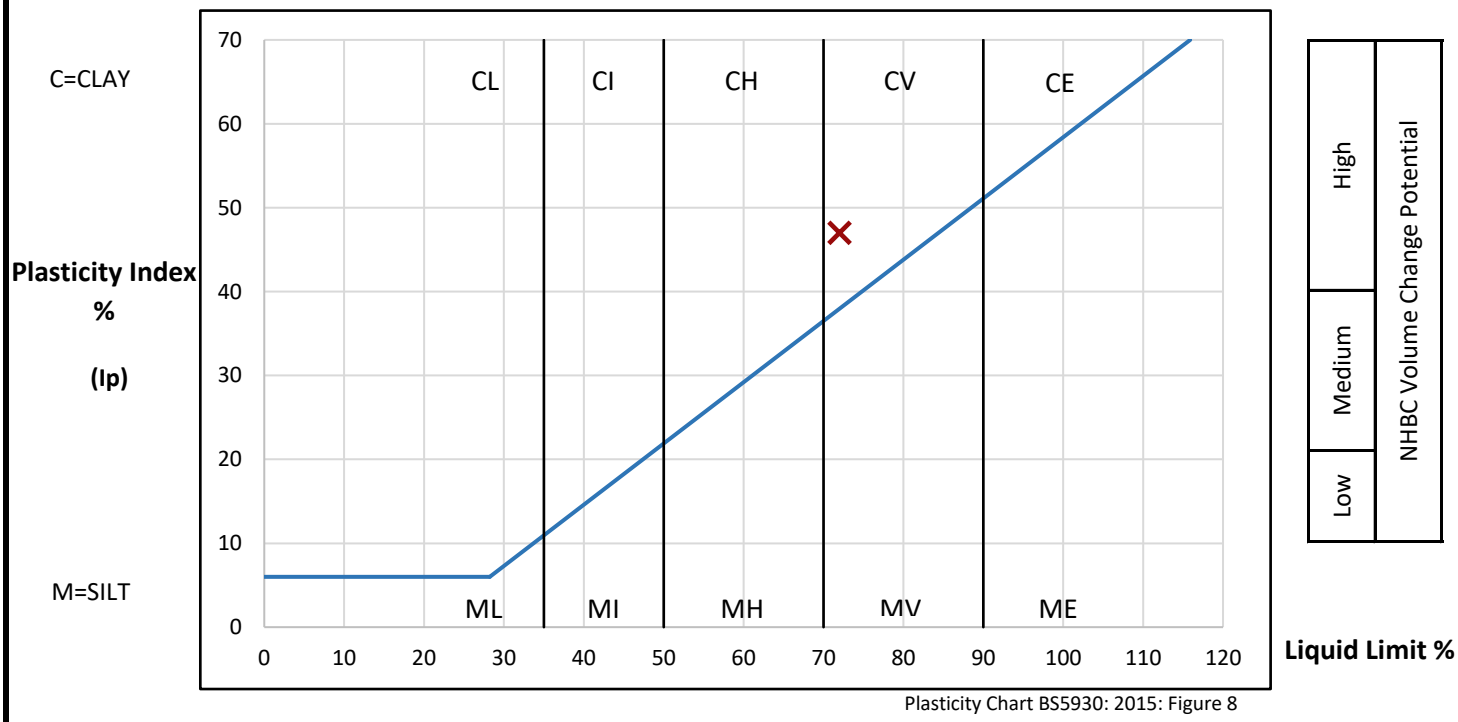
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Contract	**Downlands Farm, Uckfield**
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DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole / Pit No.	Depth m	Sample Type	Sample Reference	Water Content (W) %	Description	Remarks
TP02	1.00	D	1	26.1	Stiff fissured mottled light bluish grey, yellowish brown and olive yellow CLAY with rare ironstone fragments and recently active roots. Some polishing to fissure surfaces	

PREPARATION				Liquid Limit	72 %
Method of preparation	From natural/gravel picked out by hand			Plastic Limit	25 %
Sample retained 0.425mm sieve	(Assumed)	0 %		Plasticity Index	47 %
Corrected water content for material passing 0.425mm				Liquidity Index	0.02
Sample retained 2mm sieve	(Assumed)	<1 %		NHBC Modified (I'p)	n/a
Curing time	25 hrs	Clay Content	Not analysed	Derived Activity	Not analysed



Plasticity Chart BS5930: 2015: Figure 8

Method of Preparation:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
Method of Test:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 3.2, 4.4, 5.3, 5.4
Type of Sample Key:	U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
Comments:	

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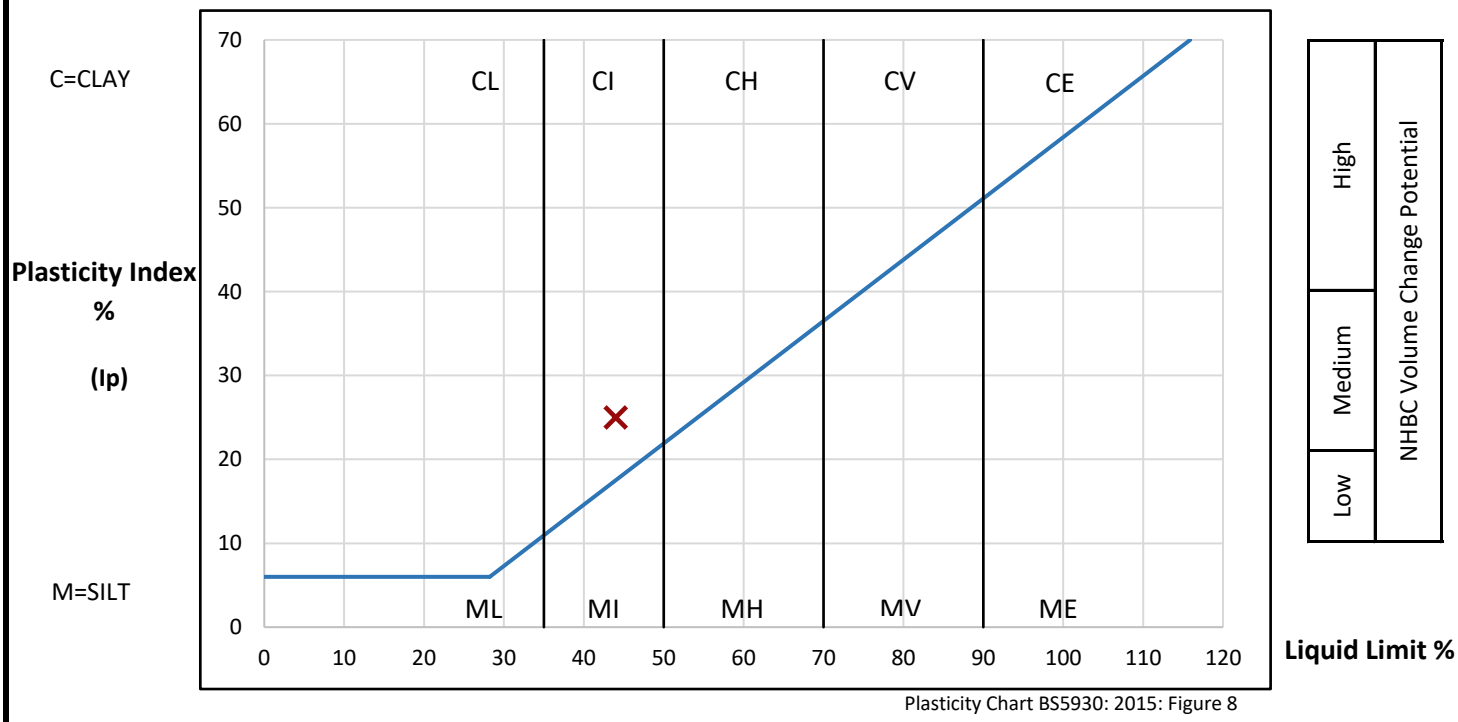
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DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole / Pit No.	Depth m	Sample Type	Sample Reference	Water Content (W) %	Description	Remarks
TP02	2.00	D	2	13.7	Stiff thinly laminated mottled light bluish grey and olive yellow slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse shale/claystone	

PREPARATION				Liquid Limit	44 %
Method of preparation		Wet sieved over 0.425mm sieve		Plastic Limit	19 %
Sample retained 0.425mm sieve	(Measured)	30 %		Plasticity Index	25 %
Corrected water content for material passing 0.425mm		19.5 %		Liquidity Index	-0.21
Sample retained 2mm sieve	(Measured)	24 %		NHBC Modified (I'p)	18 %
Curing time	71 hrs	Clay Content	Not analysed	Derived Activity	Not analysed



Plasticity Chart BS5930: 2015: Figure 8

Method of Preparation:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
Method of Test:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 3.2, 4.4, 5.3, 5.4
Type of Sample Key:	U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
Comments:	Corrected water content assume material greater than 0.425mm non-porous. See BS1377: Part2: 1990 Clause 3 Note 1 Volume Change Potential: NHBC Standards Chapter 4.2 Unmodified Plasticity Index Note: Modified Plasticity Index I'p = Ip x (% less than 425microns/100)

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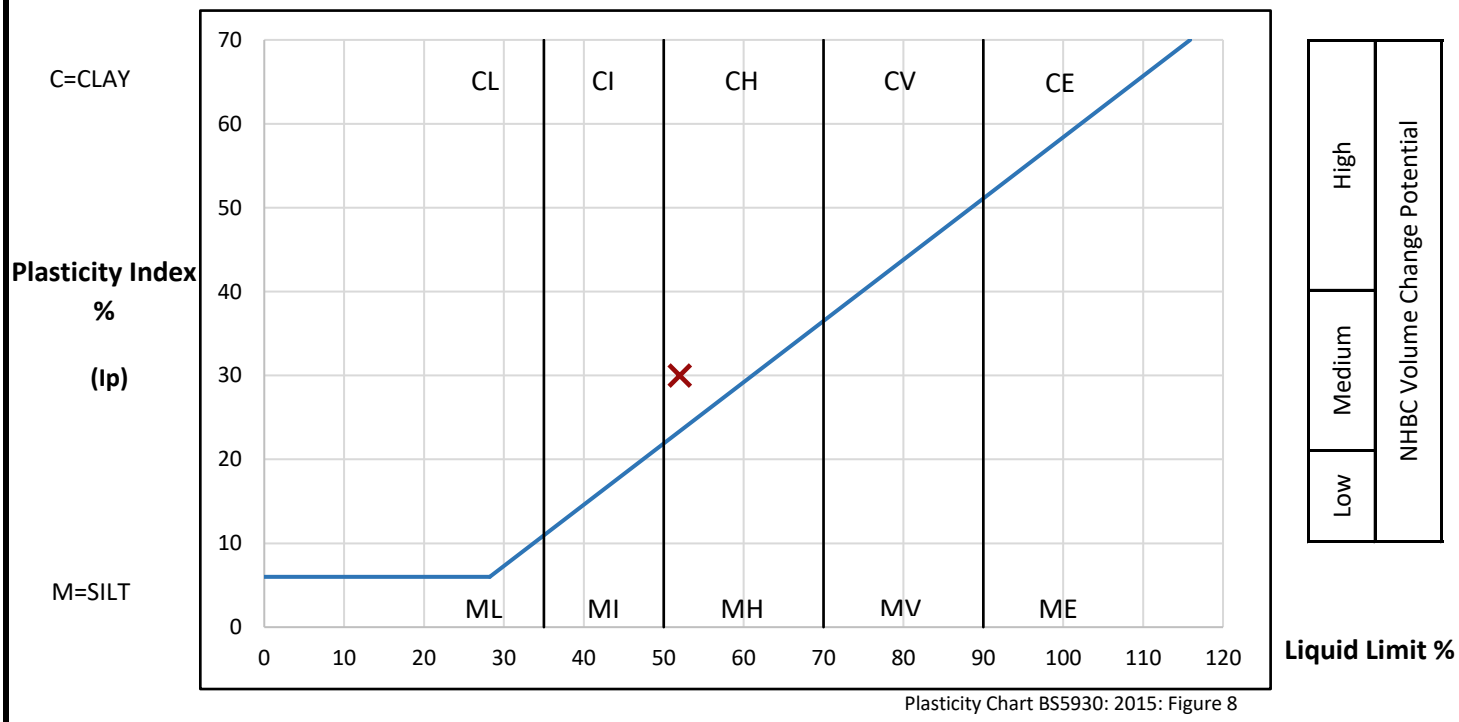
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Contract	**Downlands Farm, Uckfield**
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DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole / Pit No.	Depth m	Sample Type	Sample Reference	Water Content (W) %	Description	Remarks
TP05	2.70	D	3	17.2	Olive brown slightly sandy slightly gravelly CLAY with rare recently active roots. Gravel is fine and medium claystone lithorelicts	

PREPARATION			Liquid Limit	52 %
Method of preparation	Wet sieved over 0.425mm sieve		Plastic Limit	22 %
Sample retained 0.425mm sieve	(Measured)	36 %	Plasticity Index	30 %
Corrected water content for material passing 0.425mm		26.9 %	Liquidity Index	-0.16
Sample retained 2mm sieve	(Measured)	23 %	NHBC Modified (I'p)	19 %
Curing time	71 hrs	Clay Content Not analysed	Derived Activity	Not analysed



Plasticity Chart BS5930: 2015: Figure 8

Method of Preparation:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
Method of Test:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 3.2, 4.4, 5.3, 5.4
Type of Sample Key:	U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
Comments:	Corrected water content assume material greater than 0.425mm non-porous. See BS1377: Part2: 1990 Clause 3 Note 1 Volume Change Potential: NHBC Standards Chapter 4.2 Unmodified Plasticity Index Note: Modified Plasticity Index I'p = Ip x (% less than 425microns/100)

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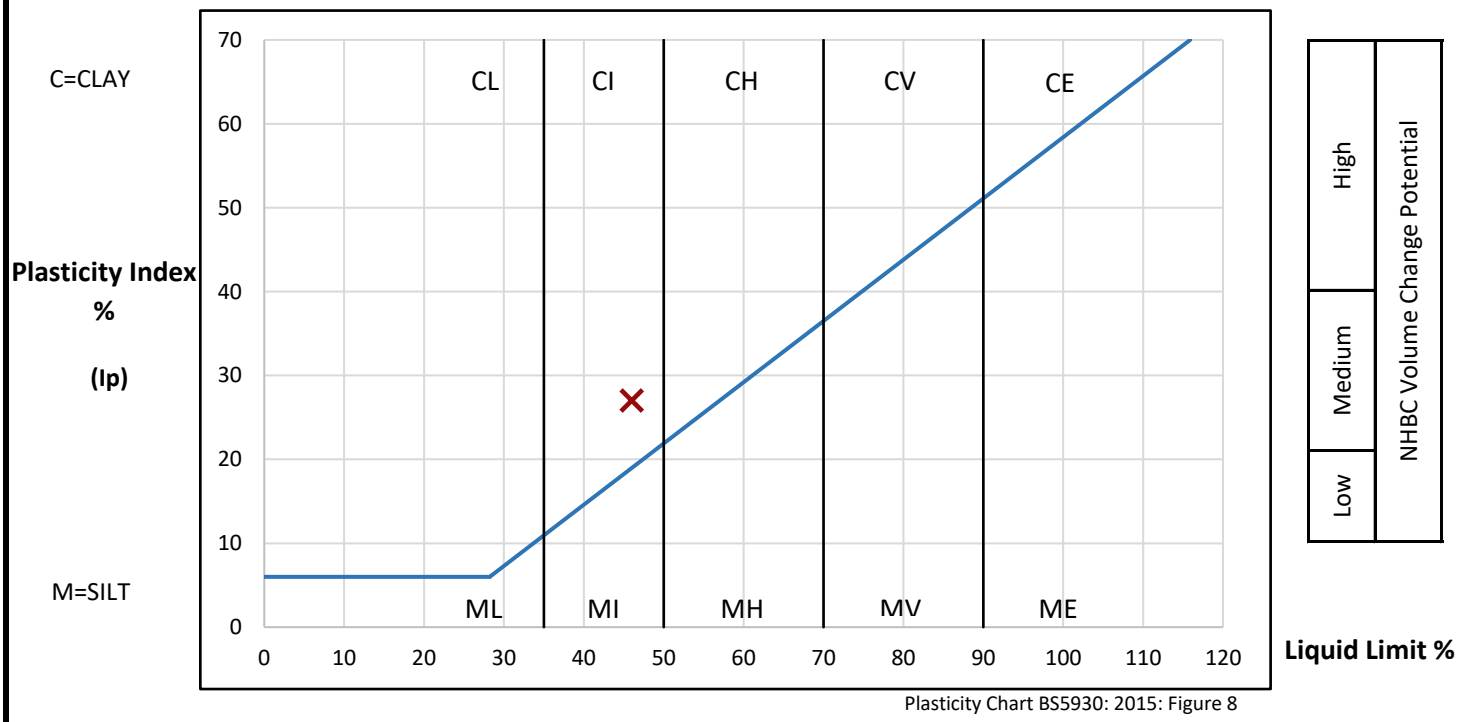
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Contract	**Downlands Farm, Uckfield**
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DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole / Pit No.	Depth m	Sample Type	Sample Reference	Water Content (W) %	Description	Remarks
TP11	1.00	D	1	21.1	Stiff mottled light grey, orange and olive yellow silty CLAY with rare recently active roots	

PREPARATION			Liquid Limit	46 %
Method of preparation		From natural	Plastic Limit	19 %
Sample retained 0.425mm sieve	(Assumed)	0 %	Plasticity Index	27 %
Corrected water content for material passing 0.425mm			Liquidity Index	0.08
Sample retained 2mm sieve	(Assumed)	0 %	NHBC Modified (I'p)	n/a
Curing time	25 hrs	Clay Content Not analysed	Derived Activity	Not analysed



Plasticity Chart BS5930: 2015: Figure 8

Method of Preparation:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
Method of Test:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 3.2, 4.4, 5.3, 5.4
Type of Sample Key:	U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
Comments:	

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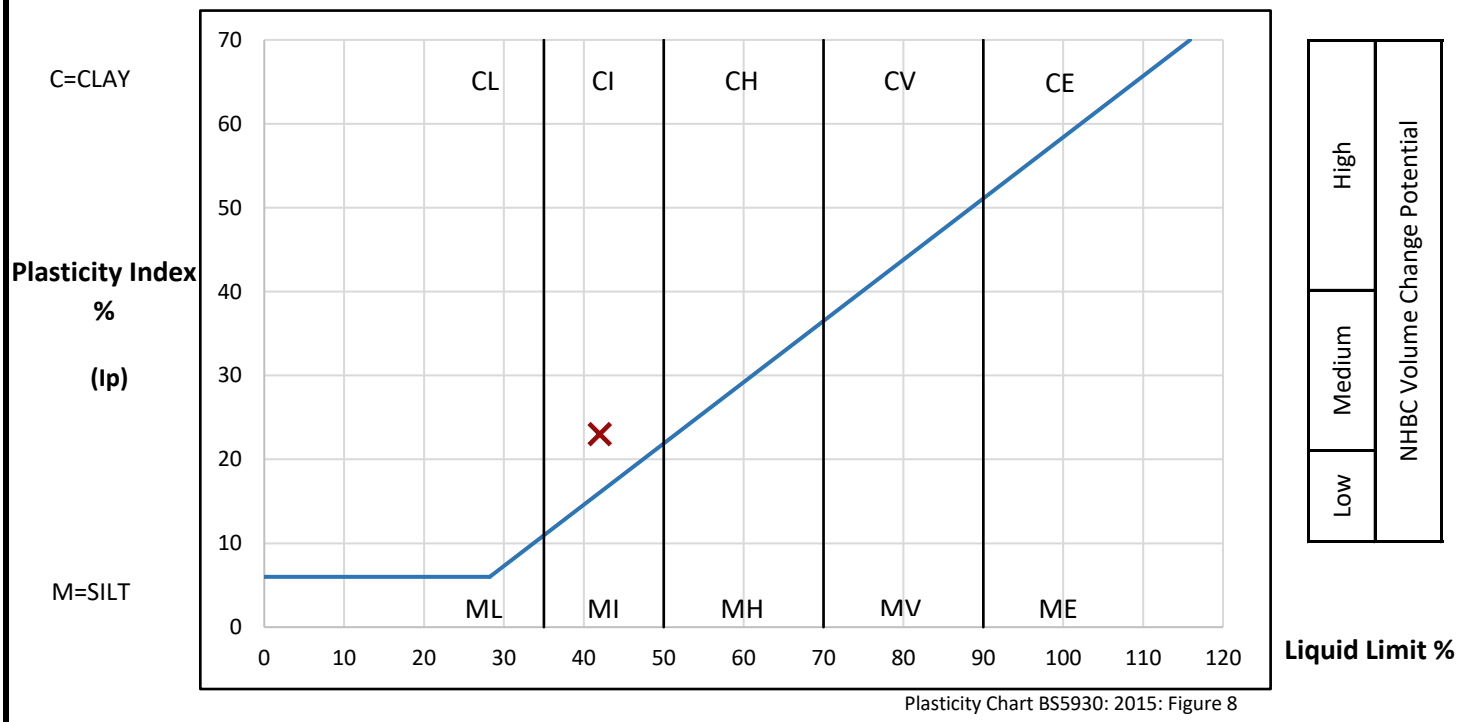
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DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole / Pit No.	Depth m	Sample Type	Sample Reference	Water Content (W) %	Description	Remarks
TP19	0.90	D	1	15.1	Hard friable orangish brown silty CLAY with occasional recently active roots, rare light grey pockets and weak fine lithorelicts	

PREPARATION			Liquid Limit	42 %
Method of preparation		From natural	Plastic Limit	19 %
Sample retained 0.425mm sieve	(Assumed)	0 %	Plasticity Index	23 %
Corrected water content for material passing 0.425mm			Liquidity Index	-0.17
Sample retained 2mm sieve	(Assumed)	0 %	NHBC Modified (I'p)	n/a
Curing time	25 hrs	Clay Content Not analysed	Derived Activity	Not analysed



Plasticity Chart BS5930: 2015: Figure 8

Method of Preparation:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
Method of Test:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 3.2, 4.4, 5.3, 5.4
Type of Sample Key:	U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
Comments:	

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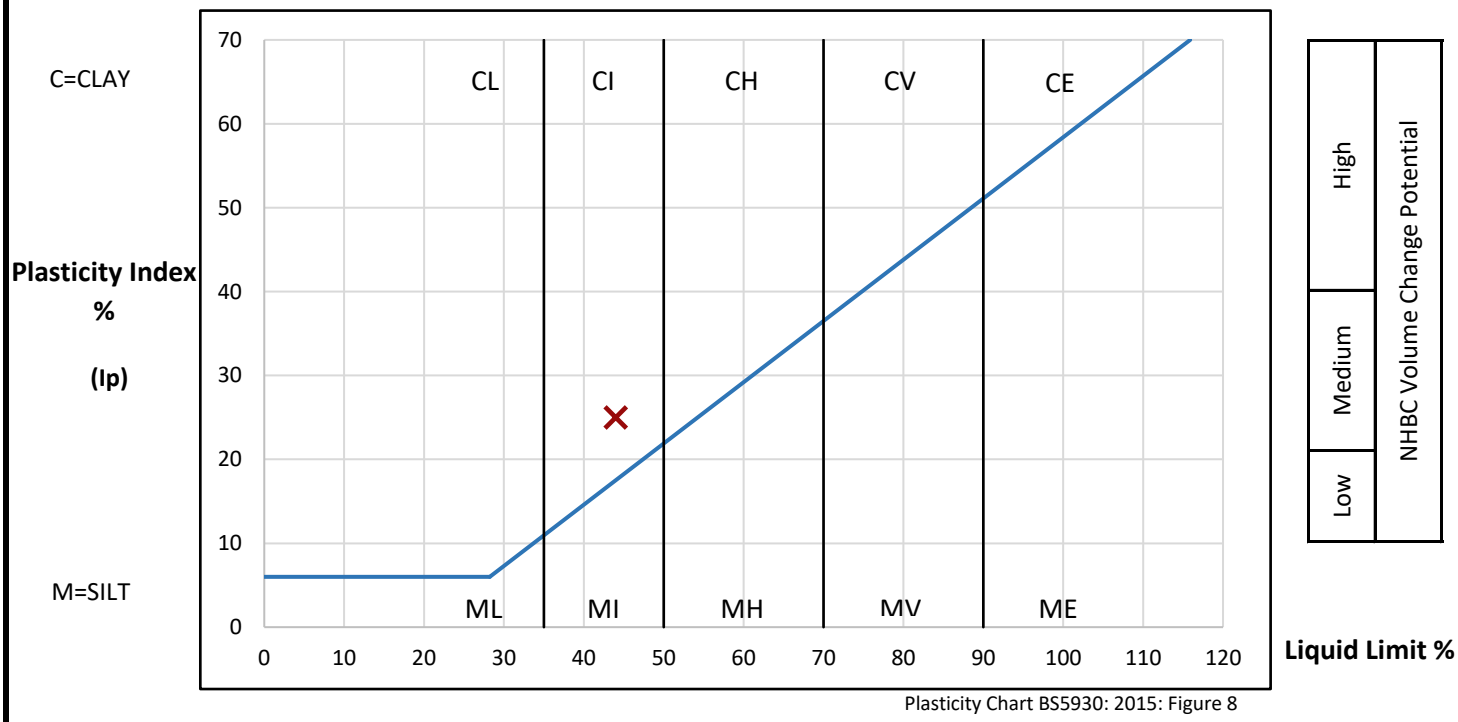
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DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole / Pit No.	Depth m	Sample Type	Sample Reference	Water Content (W) %	Description	Remarks
TP19	2.00	D	2	16.8	Very stiff pale olive silty CLAY with rare orange mottling and black speckling	

PREPARATION			Liquid Limit	44 %
Method of preparation		From natural	Plastic Limit	19 %
Sample retained 0.425mm sieve	(Assumed)	0 %	Plasticity Index	25 %
Corrected water content for material passing 0.425mm			Liquidity Index	-0.09
Sample retained 2mm sieve	(Assumed)	0 %	NHBC Modified (I'p)	n/a
Curing time	25 hrs	Clay Content Not analysed	Derived Activity	Not analysed



Plasticity Chart BS5930: 2015: Figure 8

Method of Preparation:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
Method of Test:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 3.2, 4.4, 5.3, 5.4
Type of Sample Key:	U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
Comments:	

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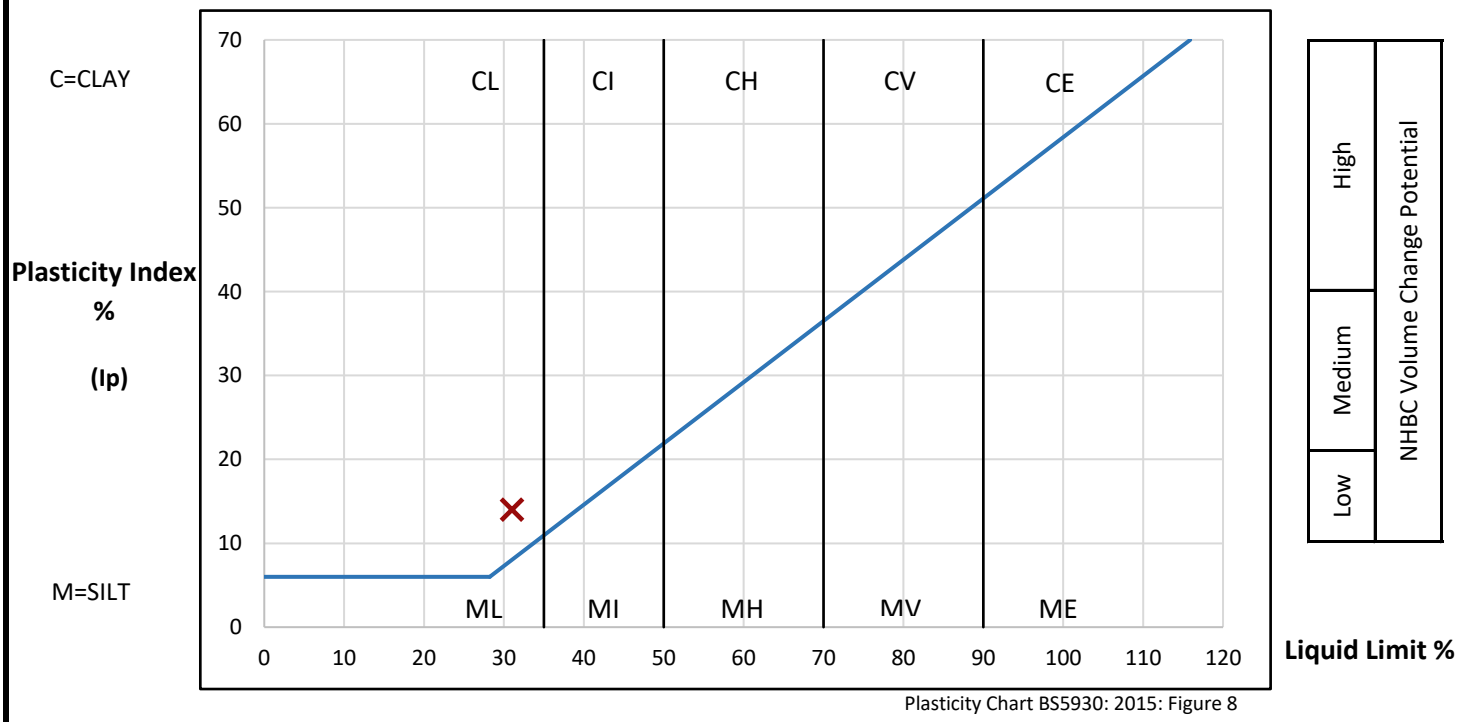
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DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole / Pit No.	Depth m	Sample Type	Sample Reference	Water Content (W) %	Description	Remarks
TP21	0.80	D	1	10.6	Hard friable yellow silty CLAY with occasional orange and light grey mottling and rare fine weak lithorelicts	

PREPARATION			Liquid Limit	31 %
Method of preparation		From natural	Plastic Limit	17 %
Sample retained 0.425mm sieve	(Assumed)	0 %	Plasticity Index	14 %
Corrected water content for material passing 0.425mm			Liquidity Index	-0.46
Sample retained 2mm sieve	(Assumed)	0 %	NHBC Modified (I'p)	n/a
Curing time	25 hrs	Clay Content Not analysed	Derived Activity	Not analysed



Plasticity Chart BS5930: 2015: Figure 8

Method of Preparation:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
Method of Test:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 3.2, 4.4, 5.3, 5.4
Type of Sample Key:	U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
Comments:	

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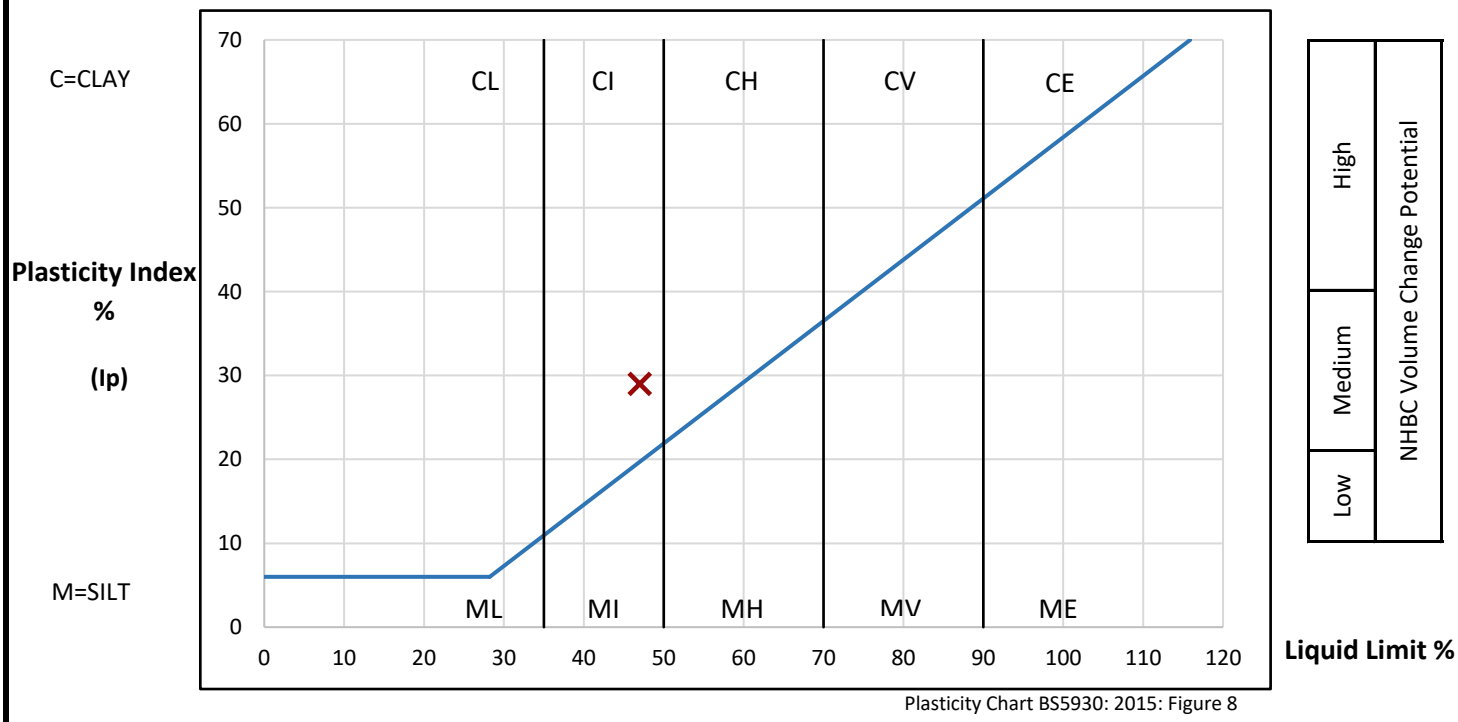
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Contract	**Downlands Farm, Uckfield**
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DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole / Pit No.	Depth m	Sample Type	Sample Reference	Water Content (W) %	Description	Remarks
TP22	1.70	D	2	24.6	Firm mottled light bluish grey and orange silty CLAY	

PREPARATION				Liquid Limit	47 %
Method of preparation		From natural		Plastic Limit	18 %
Sample retained 0.425mm sieve	(Assumed)	0 %		Plasticity Index	29 %
Corrected water content for material passing 0.425mm				Liquidity Index	0.23
Sample retained 2mm sieve	(Assumed)	0 %		NHBC Modified (I'p)	n/a
Curing time	26 hrs	Clay Content	Not analysed	Derived Activity	Not analysed



Plasticity Chart BS5930: 2015: Figure 8

Method of Preparation:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
Method of Test:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 3.2, 4.4, 5.3, 5.4
Type of Sample Key:	U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
Comments:	

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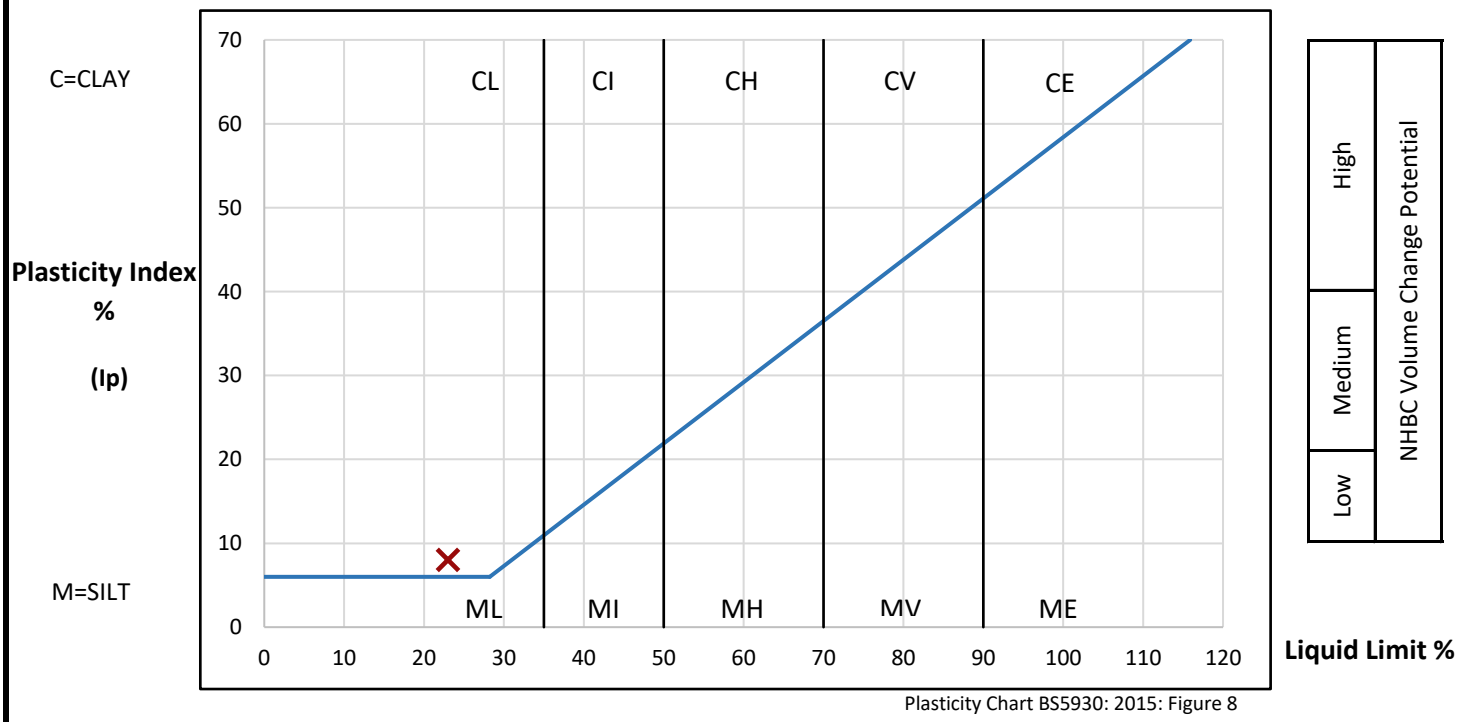
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DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole / Pit No.	Depth m	Sample Type	Sample Reference	Water Content (W) %	Description	Remarks
WS11	0.50	D	1	8.8	Hard friable brownish yellow sandy silty CLAY with occasional recently active roots	

PREPARATION			Liquid Limit	23 %
Method of preparation		From natural	Plastic Limit	15 %
Sample retained 0.425mm sieve	(Assumed)	0 %	Plasticity Index	8 %
Corrected water content for material passing 0.425mm			Liquidity Index	-0.78
Sample retained 2mm sieve	(Assumed)	0 %	NHBC Modified (I'p)	n/a
Curing time	25 hrs	Clay Content Not analysed	Derived Activity	Not analysed



Plasticity Chart BS5930: 2015: Figure 8

Method of Preparation:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
Method of Test:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 3.2, 4.4, 5.3, 5.4
Type of Sample Key:	U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
Comments:	

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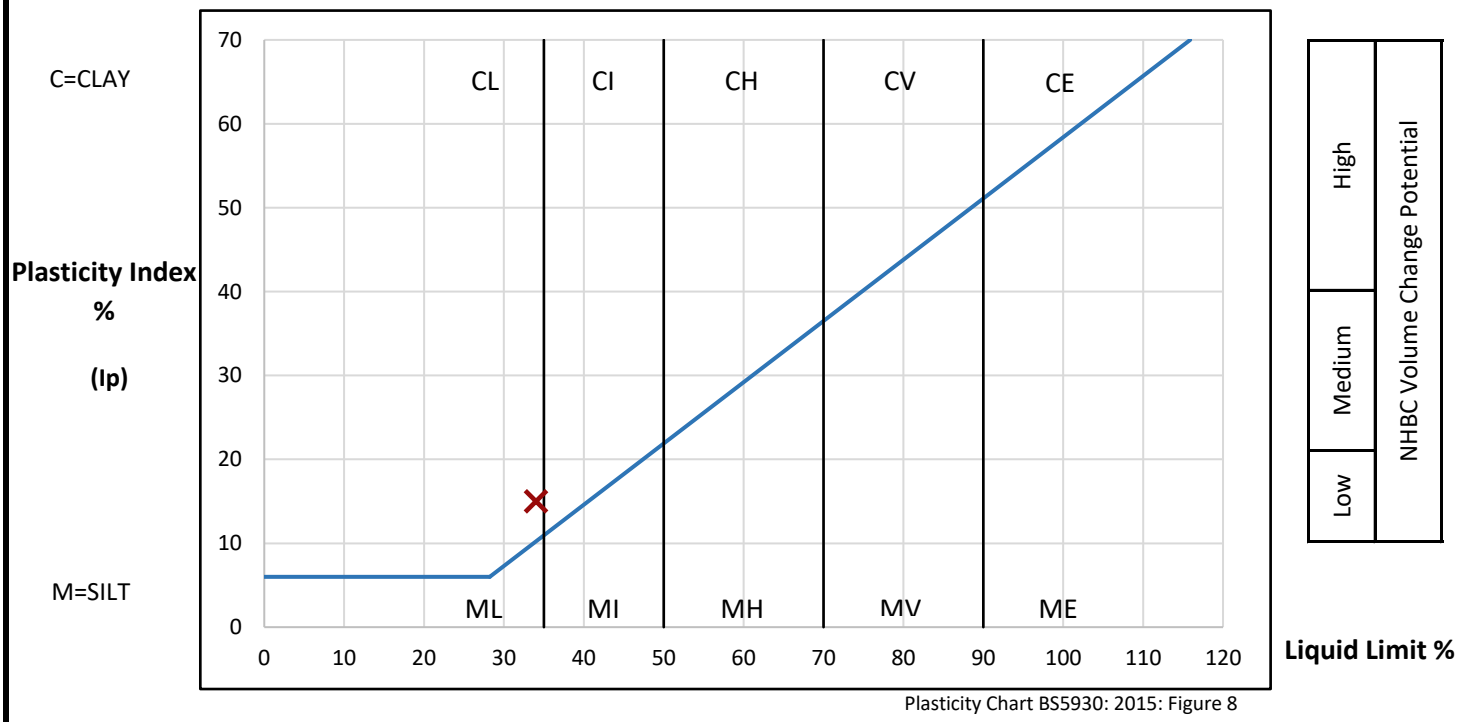
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DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole / Pit No.	Depth m	Sample Type	Sample Reference	Water Content (W) %	Description	Remarks
WS16	1.50	D	2	16.5	Very stiff friable mottled light bluish grey, orange and brownish yellow slightly gravelly slightly sandy silty CLAY. Gravel is fine and medium mudstone lithorelicts	

PREPARATION			Liquid Limit	34 %
Method of preparation	Wet sieved over 0.425mm sieve		Plastic Limit	19 %
Sample retained 0.425mm sieve	(Measured)	21 %	Plasticity Index	15 %
Corrected water content for material passing 0.425mm		20.9 %	Liquidity Index	-0.17
Sample retained 2mm sieve	(Measured)	12 %	NHBC Modified (I'p)	12 %
Curing time	73 hrs	Clay Content Not analysed	Derived Activity	Not analysed



Plasticity Chart BS5930: 2015: Figure 8

Method of Preparation:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
Method of Test:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 3.2, 4.4, 5.3, 5.4
Type of Sample Key:	U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
Comments:	Corrected water content assume material greater than 0.425mm non-porous. See BS1377: Part2: 1990 Clause 3 Note 1 Volume Change Potential: NHBC Standards Chapter 4.2 Unmodified Plasticity Index Note: Modified Plasticity Index I'p = Ip x (% less than 425microns/100)

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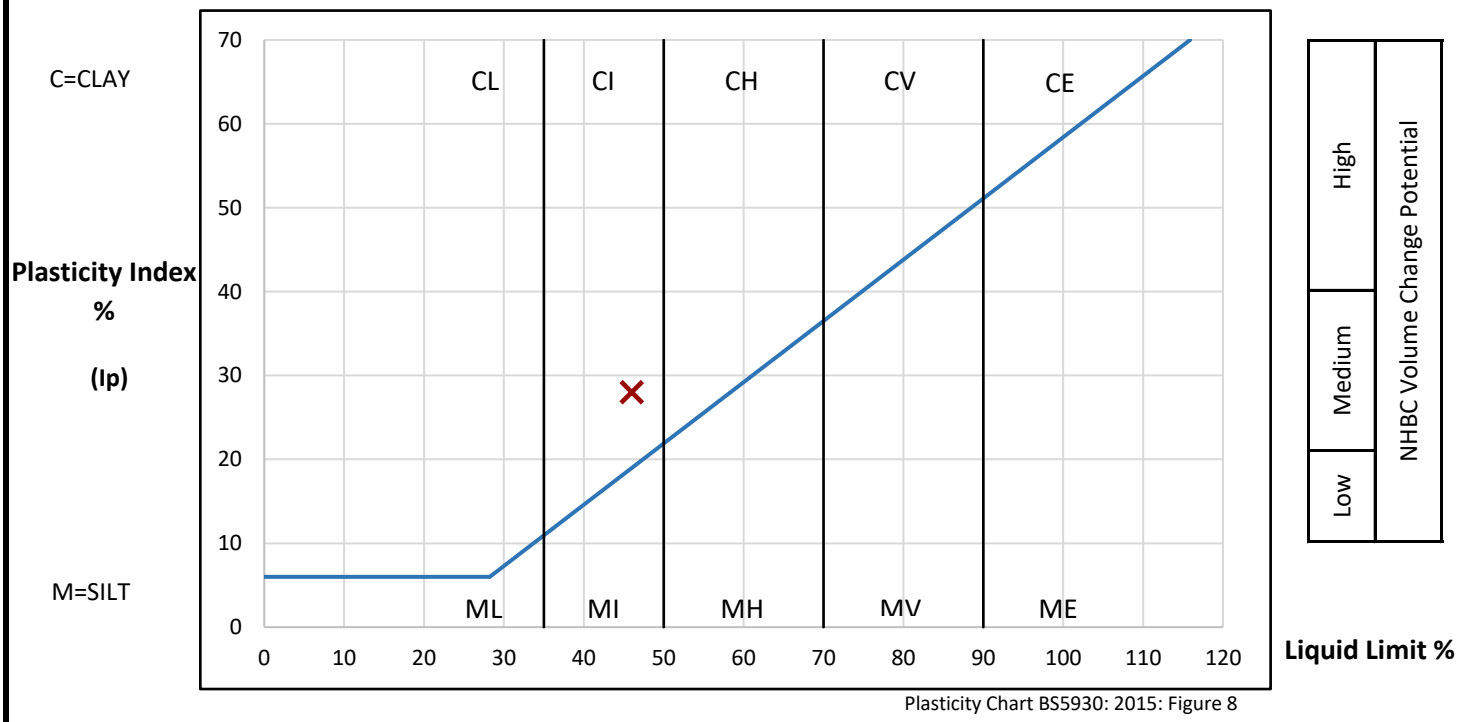
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DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole / Pit No.	Depth m	Sample Type	Sample Reference	Water Content (W) %	Description	Remarks
WS18	1.80	D	1	10.9	Hard friable olive yellow silty CLAY with occasional orange and light grey mottling and rare weak fine lithorelicts	

PREPARATION			Liquid Limit	46 %
Method of preparation		From natural	Plastic Limit	18 %
Sample retained 0.425mm sieve	(Assumed)	0 %	Plasticity Index	28 %
Corrected water content for material passing 0.425mm			Liquidity Index	-0.25
Sample retained 2mm sieve	(Assumed)	0 %	NHBC Modified (I'p)	n/a
Curing time	26 hrs	Clay Content Not analysed	Derived Activity	Not analysed



Plasticity Chart BS5930: 2015: Figure 8

Method of Preparation: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2

Method of Test: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 3.2, 4.4, 5.3, 5.4

Type of Sample Key: U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter

Comments:

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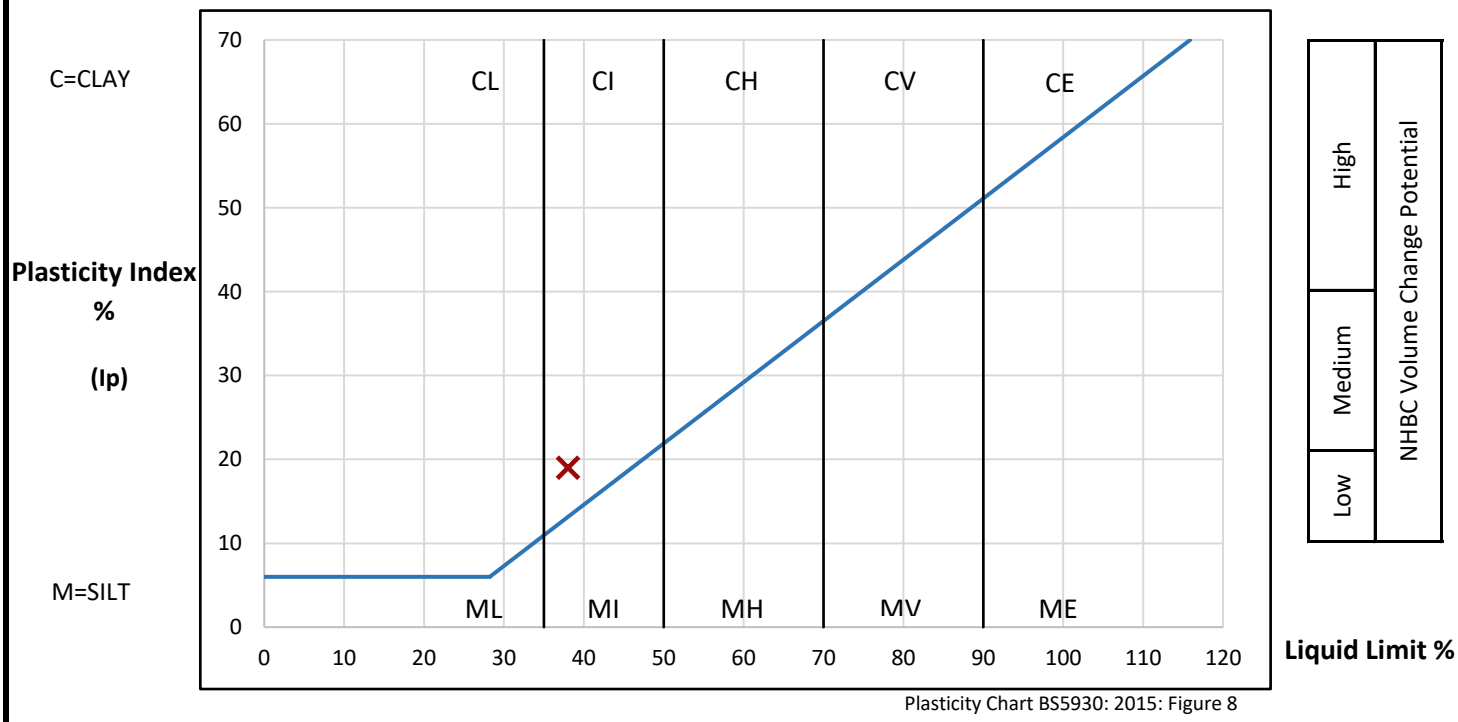
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DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole / Pit No.	Depth m	Sample Type	Sample Reference	Water Content (W) %	Description	Remarks
WS20	3.90	D	3	15.2	Hard friable mottled bluish grey and olive silty CLAY with rare lithorelicts	

PREPARATION			Liquid Limit	38 %
Method of preparation		From natural	Plastic Limit	19 %
Sample retained 0.425mm sieve	(Assumed)	0 %	Plasticity Index	19 %
Corrected water content for material passing 0.425mm			Liquidity Index	-0.20
Sample retained 2mm sieve	(Assumed)	0 %	NHBC Modified (I'p)	n/a
Curing time	68 hrs	Clay Content Not analysed	Derived Activity	Not analysed



Plasticity Chart BS5930: 2015: Figure 8

Method of Preparation:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
Method of Test:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 3.2, 4.4, 5.3, 5.4
Type of Sample Key:	U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
Comments:	

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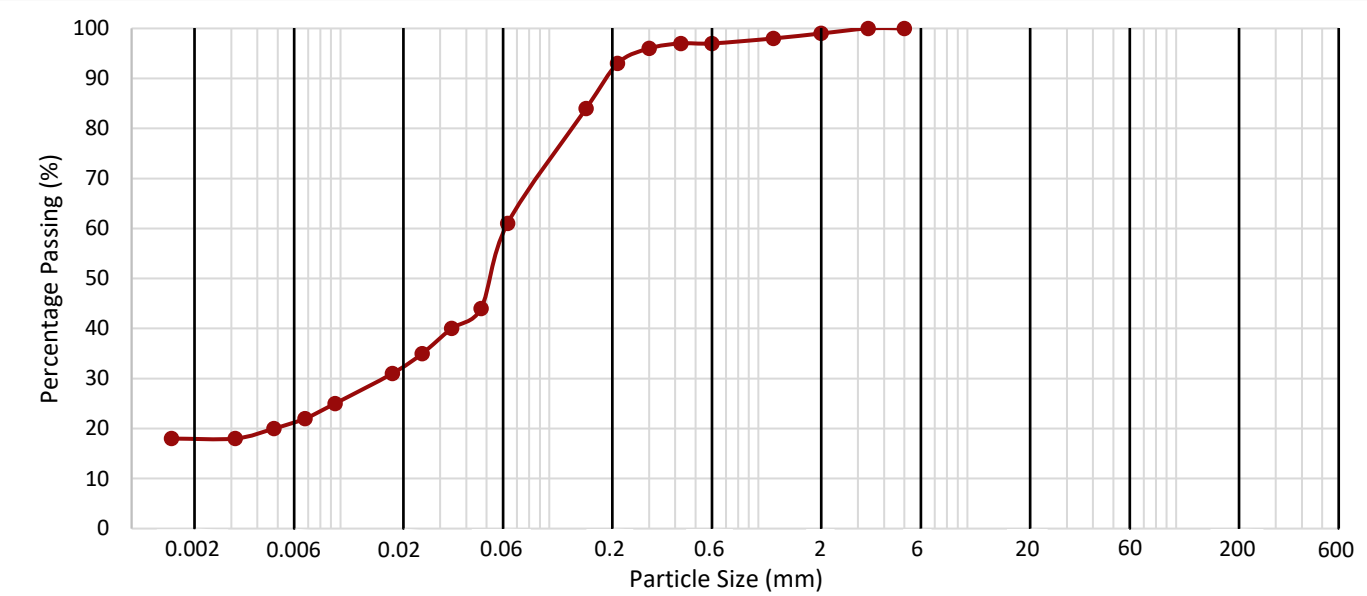
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Contract	**Downlands Farm, Uckfield**
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Pit No.	Depth (m)	Sample Type	Sample Reference	Description	Remarks
TP04	0.50	B	1	Brownish yellow sandy silty CLAY with rare fine sandstone gravel	

Method of Test:	Hydrometer + Pre-sieve	Method of Pretreatment:	Not required



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Hydrometer	Particle Size (mm)	Passing (%)	Silt by Dry Mass (%)
	0.0470	44	43
	0.0340	40	
	0.0246	35	
	0.0177	31	Clay by Dry Mass (%)
	0.0094	25	
	0.0068	22	
	0.0048	20	18
	0.0031	18	
	0.0016	18	

Sieve Size (mm)	Passing (%)	Sand By Dry Mass (%)
2.00	99	38
1.18	98	
0.600	97	
0.425	97	
0.300	96	
0.212	93	
0.150	84	
0.063	61	

Fines By Dry Mass (%)	
<0.063mm	61

Sieve Size (mm)	Passing (%)	2mm+ By Dry Mass (%)
300		1
125		
90		
63		
50		
37.5		
28		
20		
14		
10		
6.3		
5	100	

Method of Preparation: BS1377: Part 1: 2016: 8.3 & 8.4.5
Method of test: BS1377: Part 2: 1990: 9.2,9.5
Type of Sample Key: U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
Comments:

TEST REPORT

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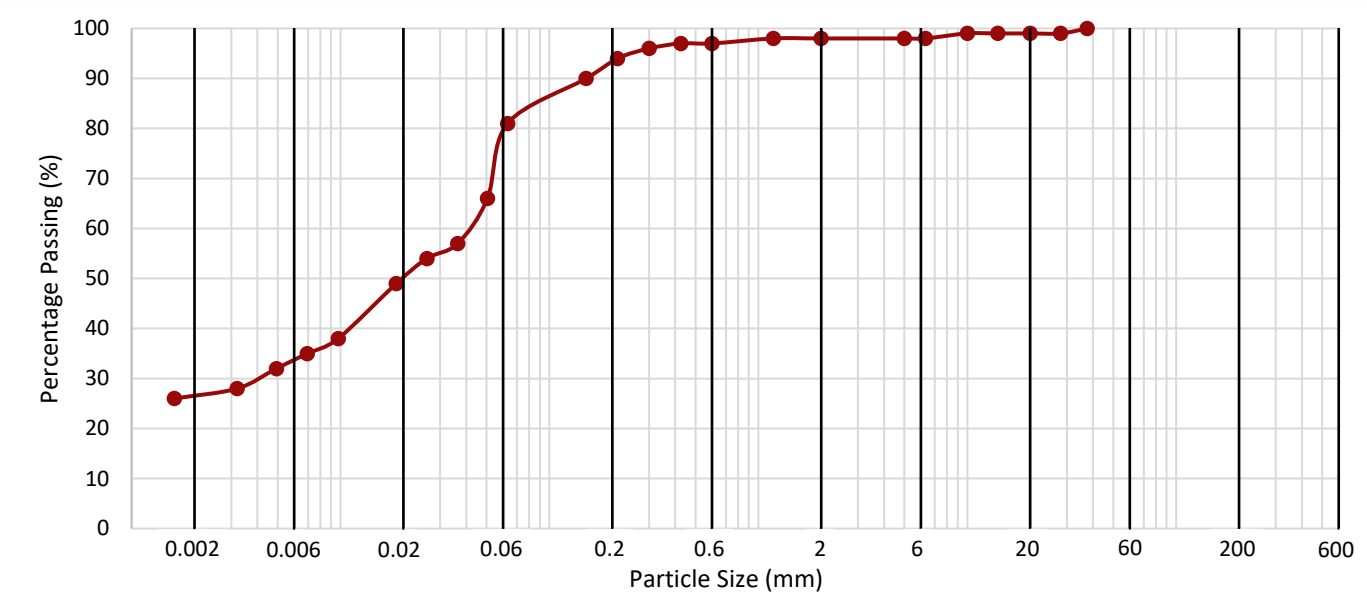
0998

Contract	**Downlands Farm, Uckfield**
Serial No.	**37497_1**

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Pit No.	Depth (m)	Sample Type	Sample Reference	Description	Remarks
TP12	1.50	B	1	Brown slightly gravelly slightly sandy silty CLAY with rare light olive brown silty clay lumps. Gravel is reddish brown and orangish brown ferruginous sandstone	

Method of Test:	Wet Sieve + Hydrometer	Method of Pretreatment:	Not required



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Hydrometer	Particle Size (mm)	Passing (%)	Silt by Dry Mass (%)
	0.0505	66	55
	0.0364	57	
	0.0259	54	
	0.0185	49	Clay by Dry Mass (%)
	0.0098	38	
	0.0069	35	
	0.0049	32	26
	0.0032	28	
	0.0016	26	

Sieve Size (mm)	Passing (%)	Sand By Dry Mass (%)
2.00	98	17
1.18	98	
0.600	97	
0.425	97	
0.300	96	
0.212	94	
0.150	90	
0.063	81	

Fines By Dry Mass (%)	
<0.063mm	81

Sieve Size (mm)	Passing (%)	2mm+ By Dry Mass (%)
300		2
125		
90		
63		
50		
37.5	100	
28	99	
20	99	
14	99	
10	99	
6.3	98	
5	98	

Method of Preparation: BS1377: Part 1: 2016: 8.3 & 8.4.5
Method of test: BS1377: Part 2: 1990: 9.2,9.5
Type of Sample Key: U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
Comments:

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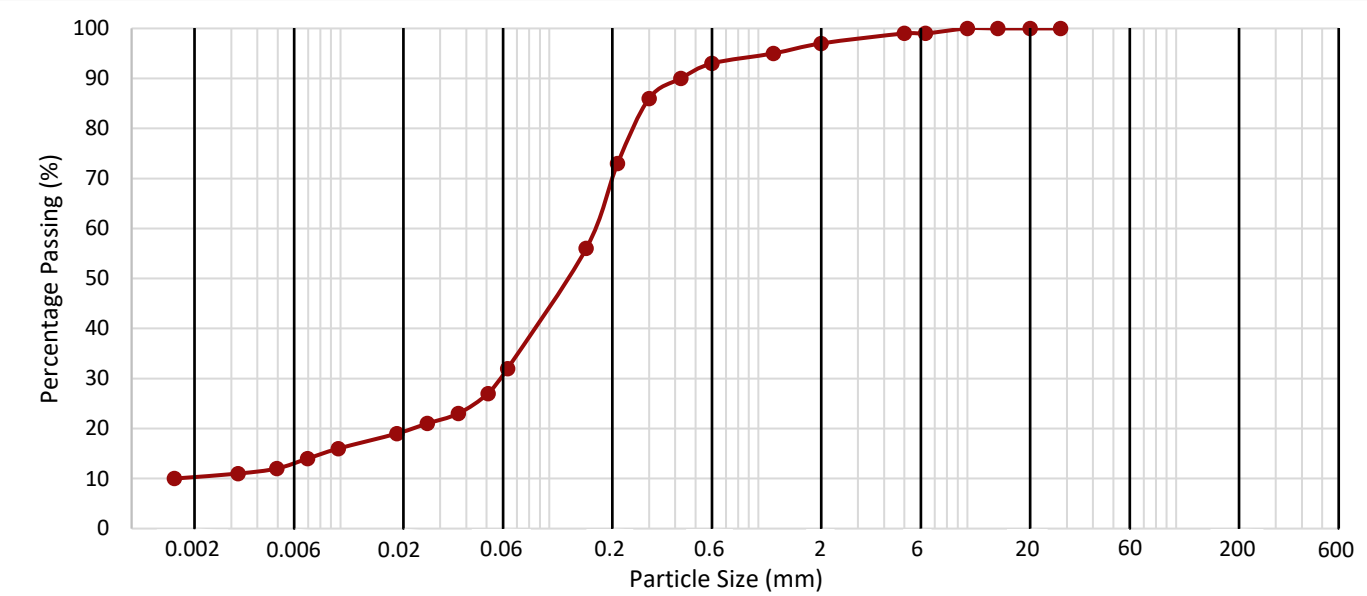
0998

Contract	**Downlands Farm, Uckfield**
Serial No.	**37497_1**

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Pit No.	Depth (m)	Sample Type	Sample Reference	Description	Remarks
TP14	0.80	B	1	Light brown slightly gravelly clayey silty SAND with occasional light olive grey silty clay lumps. Gravel is orangish brown ferruginous sandstone	

Method of Test:	Wet Sieve + Hydrometer	Method of Pretreatment:	Not required



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Hydrometer	Particle Size (mm)	Passing (%)	Silt by Dry Mass (%)
	0.0508	27	21
	0.0366	23	
	0.0260	21	
	0.0186	19	Clay by Dry Mass (%)
	0.0098	16	
	0.0070	14	
	0.0050	12	11
	0.0032	11	
	0.0016	10	

Sieve Size (mm)	Passing (%)	Sand By Dry Mass (%)
2.00	97	65
1.18	95	
0.600	93	
0.425	90	
0.300	86	
0.212	73	
0.150	56	
0.063	32	

Fines By Dry Mass (%)	
<0.063mm	32

Sieve Size (mm)	Passing (%)	2mm+ By Dry Mass (%)
300		3
125		
90		
63		
50		
37.5		
28	100	
20	100	
14	100	
10	100	
6.3	99	
5	99	

Method of Preparation: BS1377: Part 1: 2016: 8.3 & 8.4.5
Method of test: BS1377: Part 2: 1990: 9.2,9.5
Type of Sample Key: U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
Comments:

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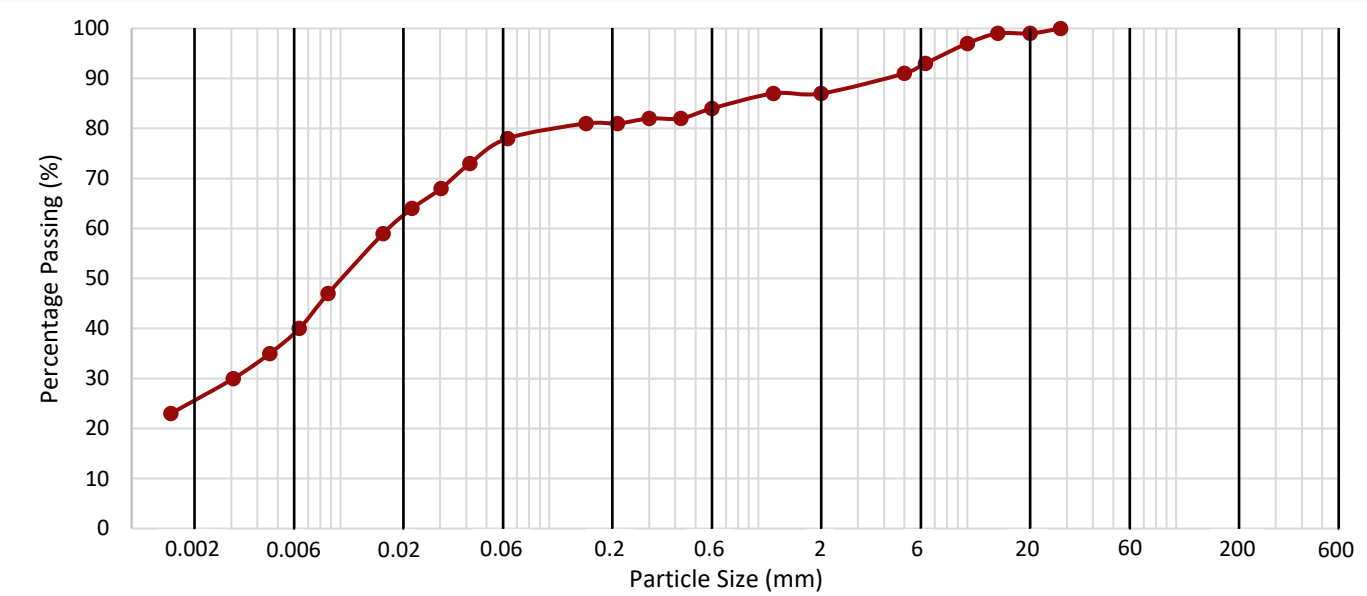
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Contract	**Downlands Farm, Uckfield**
Serial No.	**37497_1**

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Pit No.	Depth (m)	Sample Type	Sample Reference	Description	Remarks
TP15	2.10	B	1	Yellowish brown slightly gravelly slightly sandy silty CLAY with occasional light olive grey silty clay lumps. Gravel is orangish brown ferruginous sandstone	

Method of Test:	Wet Sieve + Hydrometer	Method of Pretreatment:	Not required



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Hydrometer	Particle Size (mm)	Passing (%)	Silt by Dry Mass (%)
	0.0416	73	53
	0.0303	68	
	0.0220	64	
	0.0160	59	Clay by Dry Mass (%)
	0.0087	47	
	0.0064	40	
	0.0046	35	25
	0.0031	30	
	0.0015	23	

Sieve Size (mm)	Passing (%)	Sand By Dry Mass (%)
2.00	87	9
1.18	87	
0.600	84	
0.425	82	
0.300	82	
0.212	81	
0.150	81	
0.063	78	

Fines By Dry Mass (%)	
<0.063mm	78

Sieve Size (mm)	Passing (%)	2mm+ By Dry Mass (%)
300		13
125		
90		
63		
50		
37.5		
28	100	
20	99	
14	99	
10	97	
6.3	93	
5	91	

Method of Preparation: BS1377: Part 1: 2016: 8.3 & 8.4.5
Method of test: BS1377: Part 2: 1990: 9.2,9.5
Type of Sample Key: U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
Comments:

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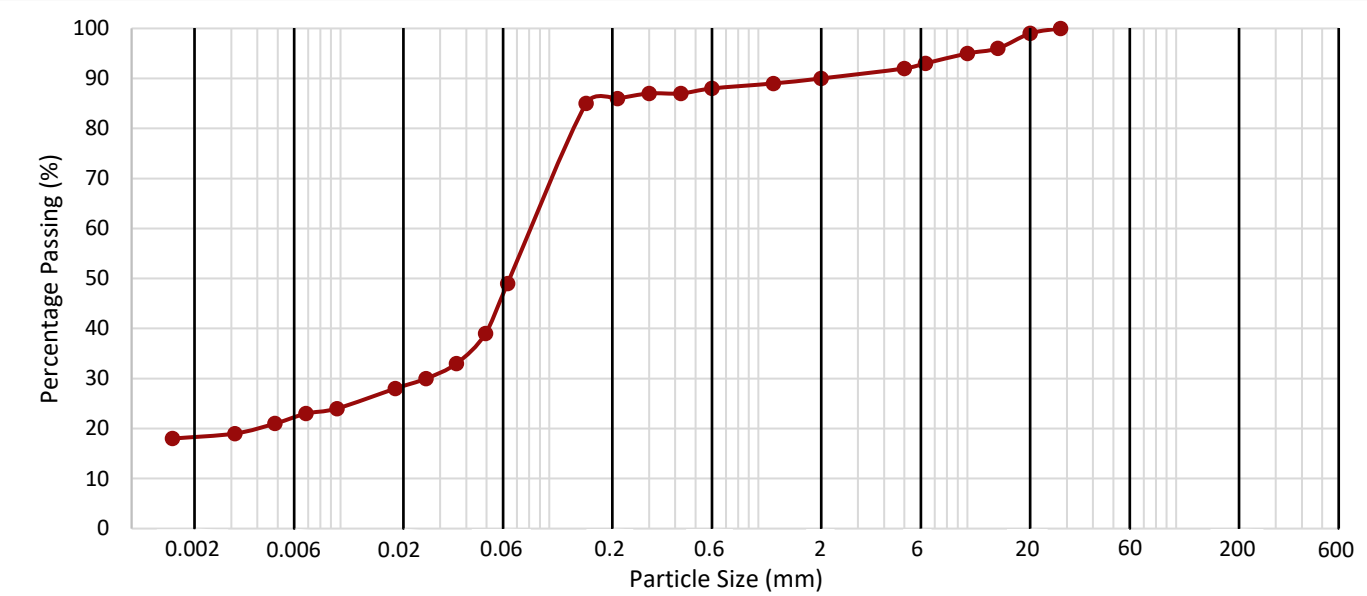
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Contract	**Downlands Farm, Uckfield**
Serial No.	**37497_1**

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Pit No.	Depth (m)	Sample Type	Sample Reference	Description	Remarks
TP18	0.80	B	1	Brownish yellow slightly gravelly sandy silty CLAY. Gravel is black, brown and white chert and orangish brown ferruginous sandstone	

Method of Test:	Wet Sieve + Hydrometer	Method of Pretreatment:	Not required



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Hydrometer	Particle Size (mm)	Passing (%)	Silt by Dry Mass (%)
	0.0495	39	30
	0.0359	33	
	0.0257	30	
	0.0183	28	Clay by Dry Mass (%)
	0.0096	24	
	0.0068	23	
	0.0049	21	19
	0.0031	19	
	0.0016	18	

Sieve Size (mm)	Passing (%)	Sand By Dry Mass (%)
2.00	90	41
1.18	89	
0.600	88	
0.425	87	
0.300	87	
0.212	86	
0.150	85	
0.063	49	

Fines By Dry Mass (%)	
<0.063mm	49

Sieve Size (mm)	Passing (%)	2mm+ By Dry Mass (%)
300		10
125		
90		
63		
50		
37.5		
28	100	
20	99	
14	96	
10	95	
6.3	93	
5	92	

Method of Preparation: BS1377: Part 1: 2016: 8.3 & 8.4.5
Method of test: BS1377: Part 2: 1990: 9.2,9.5
Type of Sample Key: U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
Comments:

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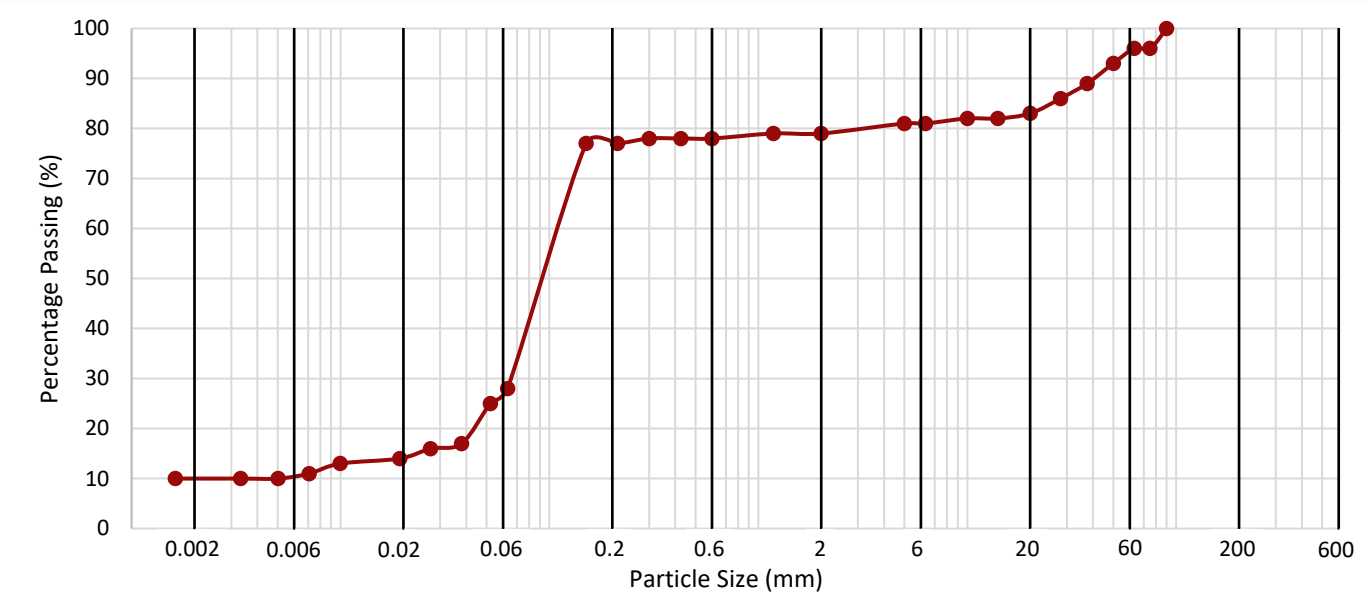
0998

Contract	**Downlands Farm, Uckfield**
Serial No.	**37497_1**

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Pit No.	Depth (m)	Sample Type	Sample Reference	Description	Remarks
TP23	1.10	B	1	Brownish yellow clayey silty very gravelly SAND with rare light olive grey silty clay lumps. Gravel is yellowish brown and orangish brown ferruginous sandstone and siltstone	

Method of Test:	Wet Sieve + Hydrometer	Method of Pretreatment:	Not required



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Hydrometer	Particle Size (mm)	Passing (%)	Silt by Dry Mass (%)	Clay by Dry Mass (%)
	0.0521	25	18	
	0.0380	17		
	0.0270	16		
	0.0192	14		
	0.0100	13		
	0.0071	11		
	0.0050	10		10
	0.0033	10		
	0.0016	10		

Sieve Size (mm)	Passing (%)	Sand By Dry Mass (%)
2.00	79	51
1.18	79	
0.600	78	
0.425	78	
0.300	78	
0.212	77	
0.150	77	
0.063	28	

Fines By Dry Mass (%)	
<0.063mm	28

Sieve Size (mm)	Passing (%)	2mm+ By Dry Mass (%)
300		21
125		
90	100	
63	96	
50	93	
37.5	89	
28	86	
20	83	
14	82	
10	82	
6.3	81	
5	81	

Method of Preparation: BS1377: Part 1: 2016: 8.3 & 8.4.5
Method of test: BS1377: Part 2: 1990: 9.2,9.5
Type of Sample Key: U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
Comments:

APPENDIX 4

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Experts in Continuous Monitoring

GGS DataPack®

GGS2586 Downlands Farm, Uckfield



GGS Site Photograph

Prepared for:

BRD Environmental Limited

For: BRD Environmental Limited
Ref No.: GGS2586DP01
Date: 16/07/2021

Document Control Page

Client	BRD Environmental Limited Hawthorne Villa, 1 Old Parr Road, Banbury, Oxfordshire, OX16 5HT.
Project Title	GGS DataPack® GGS2586 Downlands Farm, Uckfield
Report Ref	GGS2586DP01
Project Revision	-
Revision Detail	First Issue
Issue Status	FINAL

	Name		Position	Signature	Date
Prepared By:	Stacey McKenna	BSc (Hons) FGS	Senior Geo-Environmental Consultant		16/07/2021
Checked and Approved By:	Andrew Brunton	BSc (Hons) FGS	Principal Geo-Environmental Consultant		16/07/2021

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GGS DataPack®
GGS2586 Downlands Farm, Uckfield

FOREWORD

This report has been prepared based on information made available to Ground-Gas Solutions, trading as GGS, at the time of the reporting using all reasonable skill, care and diligence and within the limitations of the scope of works agreed with, and resources provided by, the client.

GGS has relied on information provided by others and has prepared this report on the basis of this information being accurate.

The report and recommendations therein are provided based on information available to GGS at the time of preparing the report and completed to recognised UK guidance and legislation. GSS will not accept any liability for inaccurate or incomplete information provided to GGS or any liability arising from the future change of any such guidance or legislation.

GGS is not obliged and disclaims any obligation to carry out further works or update the report for events occurring after such works have been carried out, and / or report issued in final form. This also applies to transfer of the report to other parties.

This report must be issued as final and be signed by the author and approved by a company director or senior management before the report may be relied upon by the client and subject to full payment for our services being made.

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For: BRD Environmental Limited
Ref No.: GGS2586DP01
Date: 16/07/2021

ggs
Experts in Continuous Monitoring

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Appendices

Appendix A

Site & Monitoring Location Plan

Appendix B

Site Photographs

Appendix C

Periodic Monitoring Records

Appendix D

Continuous Monitoring Data

Appendix E

Concentration Duration Graphs

Appendix F

Instrument Overview & Deployment Info. and Calibration Certificates

1 Introduction

GGS Limited has been commissioned by BRD Environmental Limited, to undertake continuous monitoring services at a site named Downlands Farm, Uckfield and prepare a factual report (GGS DataPack®) containing the following information:

- Periodic monitoring records;
- Continuous monitoring data and graphs;
- Atmospheric pressure trend analysis;
- Concentration duration analysis; and
- Instrument calibration certificates.

1.1 Scope of works

The scope of works is set out below:

- GGS attended site on 10th & 11th June 2021 to conduct periodic monitoring and change the headworks of 5 No. monitoring wells (WS01, WS05, WS06, WS12 & WS14) and deploy continuous monitoring instrumentation, for the detection of standard ground gases (methane, carbon dioxide, oxygen, carbon monoxide and hydrogen sulphide), flow and water level;
- A final site visit was undertaken by GGS on 2nd July 2021, to collect all continuous monitoring instrumentation;
- Provision of a GGS DataPack® report.

1.2 Site context

Table 1.1 below details the site description. A site location plan is included in Appendix A.

Table 1.1 Site description

Description	Details
Address	Downlands Farm, Uckfield, East Sussex
Nearest Postcode	TN22 2AP
National Grid Reference (approximate centre of site)	TQ 46683 21951
Site area (approximate total)	20 hectares
Overview	The site comprises large areas of grass covered open spaces interspersed with areas of woodland, located off Snatts Lane. GGS understands the proposed end use of the site is for residential development. The client completed a geo-environmental site investigation in March 2021 and "identified slightly elevated carbon dioxide concentrations across the site which appear to be naturally occurring. The gas concentrations are not of significant concern to human health, however, the gas emission rates from the ground have been affected by rising groundwater levels over the winter months." As a result, "additional 'continuous' monitoring is recommended in order to fully establish if gas flow is occurring and whether gas protection measures are required for the proposed development."
North of the site	Beyond the road (Uckfield Bypass) is a mixture of arable land and residential properties.
South of the site	Woodlands, beyond which are residential properties.
East of the site	Budlett's Common, Paygate Wood and residential houses within the town of Uckfield.
West of the site	Mixture of arable land and woodlands.




Figure 1 GGS photographs of the site

Figure 1 above shows a selection of site photographs; additional photographs are included within Appendix B.

1.3 Continuous monitoring

1.3.1 Definition

When the frequency of sampling matches, or is greater than, the frequency of a parameter change, the data collected can be termed ‘continuous’. A continuous data set will therefore capture the full range of variation in the parameter being recorded.

1.3.2 Benefits of continuous data

The collection of time series data of permanent gases and other environmental parameters provides a wealth of information significantly assisting the assessor to identify the dominant processes of gas generation and migration. This leads to a more detailed understanding of the ground-gas regime and allows for an accurate and truly site-specific risk assessment to be completed.

2 Methodology

2.1 Periodic monitoring

A geo-environmental technician undertook periodic monitoring of 5 No. monitoring wells on 10th June 2021, prior to deployment of continuous monitoring instruments.

GGS periodic monitoring included measurement of atmospheric pressure (mbar), borehole flow (l/hr) and gas concentrations; methane (%v/v), carbon dioxide (%v/v), oxygen (%v/v), carbon monoxide (ppmv) and hydrogen sulphide (ppmv). A handheld GA5000 gas analyser was used to record these parameters. Water levels and base depths were recorded using a geotechnical groundwater dip meter.

In all cases, gas readings were recorded for up to ten minutes, until steady state was achieved or pump failures within the handheld instrument. All monitoring data and pertinent site observations were recorded on a proforma record sheet. A summary of periodic monitoring results is presented in section 3.1, whilst the full periodic monitoring records are presented in Appendix C.

2.2 Continuous ground gas and flow monitoring

GGS configured high resolution GasSentinel® and GasClam® instrumentation to record at 60-minute intervals for the contracted period of monitoring. The instrumentation recorded atmospheric pressure, temperature, and bulk gas concentrations (methane [CH_4], carbon dioxide [CO_2] and oxygen [O_2]). Continuous borehole flow was also recorded. Table 2.1 below details the schedule of the continuous monitoring at the site.

Table 2.1 Continuous monitoring schedule

Monitoring Location	Instrument Serial No.	Dates Monitored
WS01	000224/01/12	11/06/21 – 30/06/21*
WS05	000034/04/09	11/06/21 – 02/07/21
WS06	03000054	11/06/21 – 02/07/21
WS12	03000036	11/06/21 – 02/07/21
WS14	03000044	11/06/21 – 02/07/21

*instrument failure for unknown reason

Continuous monitoring graphs are presented in Section 3.2 and the raw data is presented in Appendix D.

2.1 Continuous groundwater level monitoring

Continuous water level monitoring was completed alongside the continuous ground-gas and flow monitoring. The Levelogger is a datalogger which measures the groundwater level and temperature. Water levels are displayed as temperature compensated pressure readings and are barometrically compensated with the aid of a Barologger. The Barologger uses algorithms based on atmospheric air pressure only. It measures and logs changes in atmospheric pressure, which are then used to compensate water level readings recorded by a Levelogger. The Levelogger is calibrated for the lifetime of the instrument. The continuous water level results and data are included within the time series graphs which are presented in Section 3.2.

Table 2.2 Continuous groundwater level monitoring schedule

Monitoring Location	Level Logger Serial No.	Dates monitored
WS01	0052047315	11/06/21 – 30/06/21
WS05	0131072026	11/06/21 – 02/07/21
WS06	32036439	11/06/21 – 02/07/21
WS12	0042085065	11/06/21 – 02/07/21
WS14	1053400	11/06/21 – 02/07/21

3 Results

3.1 Periodic monitoring results

A summary of all periodic monitoring data collected by GGS is presented in Table 3.1 below. The full periodic monitoring records are presented in Appendix C.

Monitoring Location	Max. Steady Positive Flow Rate (l/hr)	Max. CH_4 (% v/v)	Max. CO_2 (% v/v)	Min O_2 (% v/v)	Max. H_2S (ppmv)	Max. CO (ppmv)	Standing water level (mbgl)	Base depth (mbgl)
WS01	<0.1	<0.1	7.1	4.8	<1	5	2.59	4.25
WS05	<0.1	<0.1	6.0	5.7	<1	1	3.94	4.00
WS06	<0.1	<0.1	10	0.7	<1	1	0.79	4.07
WS12	<0.1	<0.1	10.1	7.8	<1	3	2.00	4.22
WS14	<0.1	<0.1	0.2	20.8	<1	1	0.25	2.67
Key: 1/hr – litres per hour; %v/v – Percentage volume by volume; ppmv – parts per million by volume; mbgl – metres below ground level; Max – Maximum; Min. – Minimum								

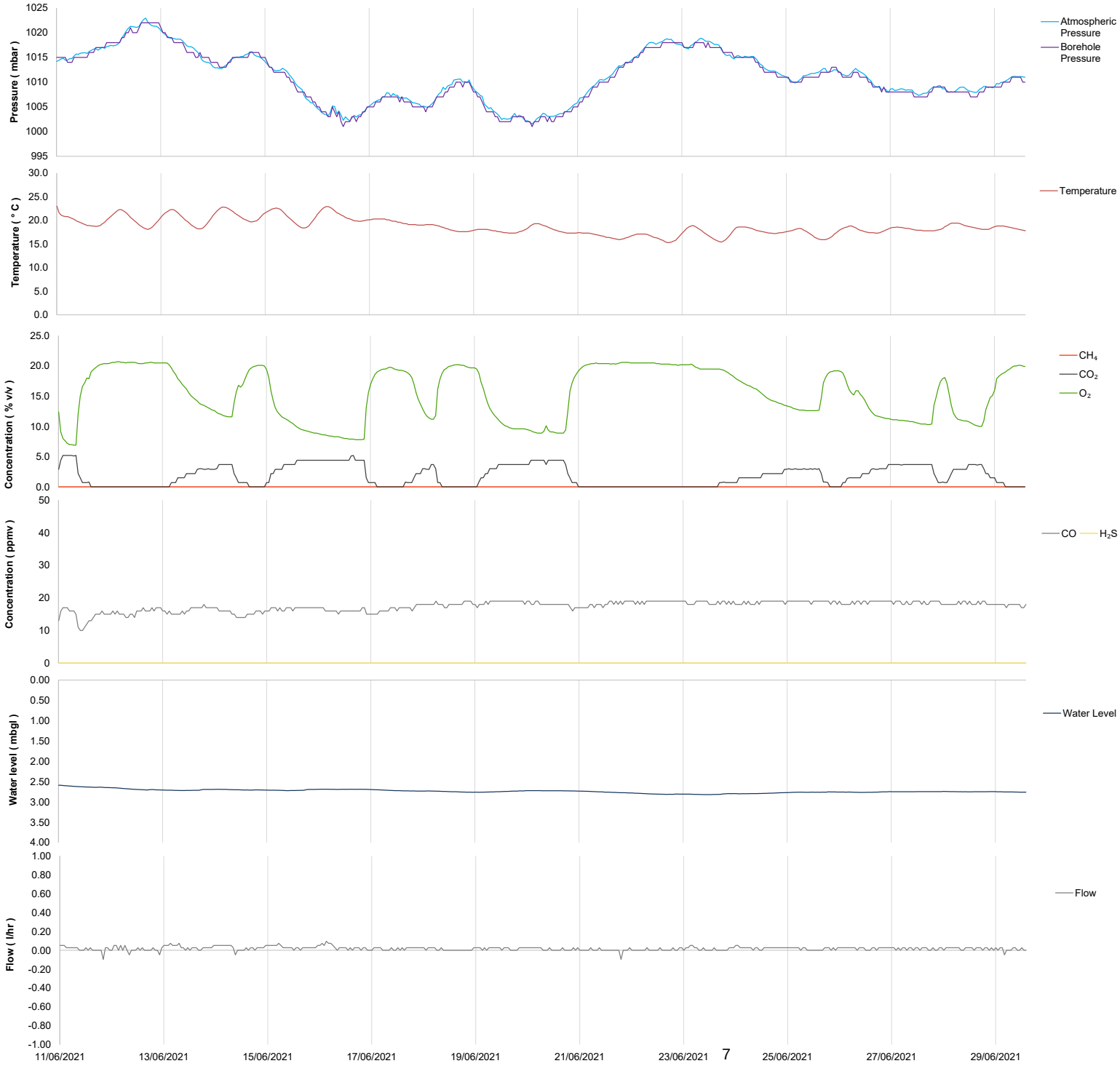
Table 3.1 GGS Periodic gas monitoring results

3.2 Continuous monitoring results

GGS DataPack® analysis involves converting raw data files from instruments into spread sheets. The data is then plotted as time series data graphs, showing ground-gas concentrations, atmospheric pressure, borehole flow, water level and temperature against time. A brief summary of the continuous monitoring results is presented in Table 3.2 below. The graphs are presented below and the raw data is presented in Appendix D.

Table 3.2 Brief summary table of continuous monitoring results

Monitoring Location	Peak Positive Flow Rate (l/hr)	Max. CH_4 (% v/v)	Max. CO_2 (% v/v)	Min O_2 (% v/v)	Max. H_2S (ppmv)	Max. CO (ppmv)	Range in water level (mbgl)
WS01	0.1	<0.1	5.2	6.9	<1	19	2.59 – 2.82
WS05	0.1	<0.1	8.7	8.9	1	14	3.93 – 3.97
WS06	<0.1	<0.1	2.5	17.0	2	6	0.75 – 0.9
WS12	<0.1	<0.1	2.1	18.3	<1	<1	1.76 – 2.01
WS14	<0.1	<0.1	1.2	17.0	<1	4	Flooded – 0.55
Key: 1/hr – litres per hour; %v/v – Percentage volume by volume; ppmv – parts per million by volume; mbgl – metres below ground level; Max – Maximum; Min. – Minimum							



Experts in Continuous Monitoring

Title:

WS01 Time Series Graphs

Project:

GGS2538 Downlands Farm, Uckfield

Client:

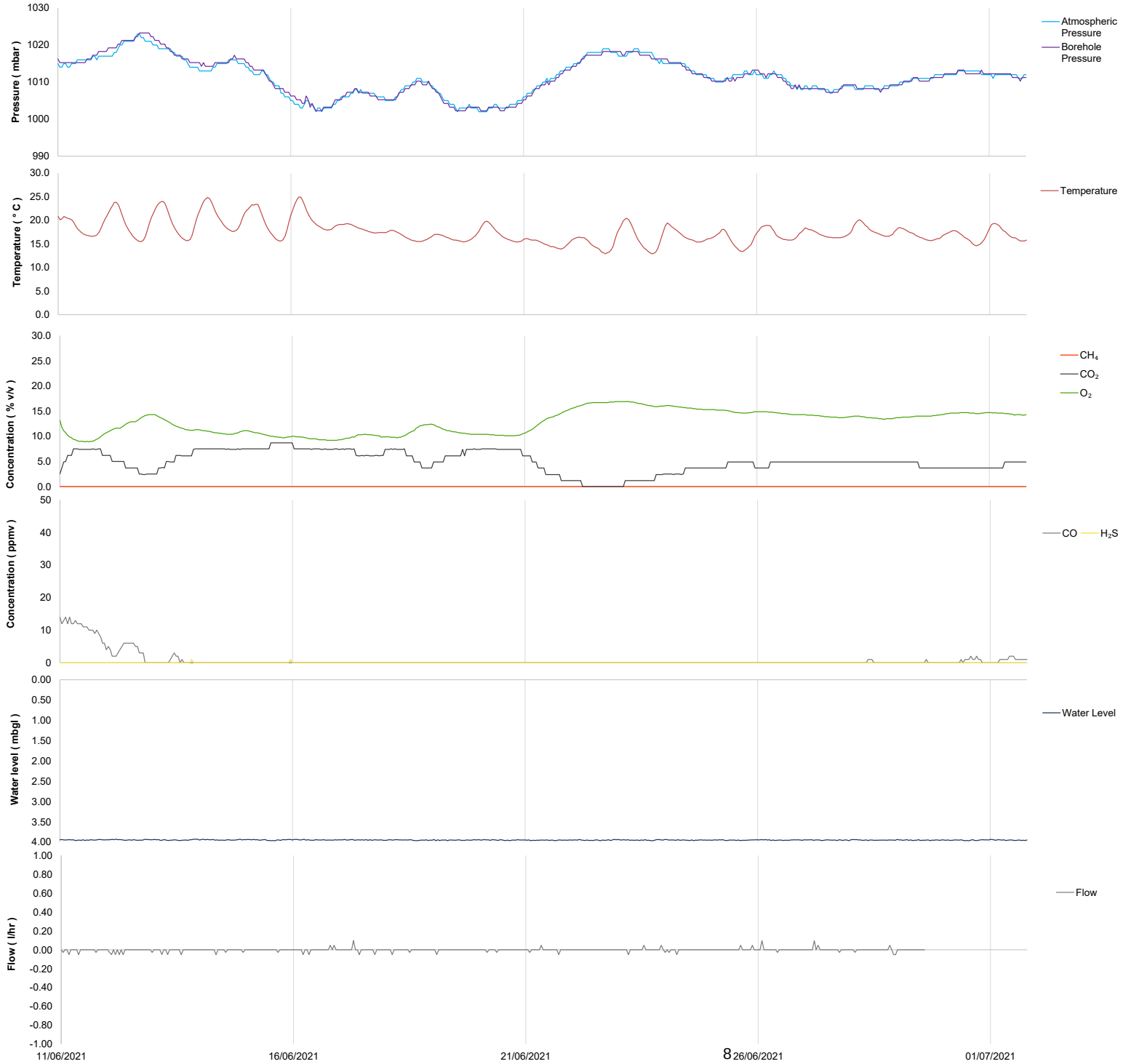
BRD Environmental Ltd.

Minimum / Maximum Table		
Parameter	**Minimum**	**Maximum**
CH_4 (% v/v)	0.0	0.0
CO_2 (% v/v)	0.0	5.2
O_2 (% v/v)	6.9	20.7
Hydrogen Sulphide (ppmv)	0	0
Carbon Monoxide (ppmv)	10	19
Atmospheric Pressure (mbar)	1002	1023
Borehole Pressure (mbar)	1001	1022
Temperature (° C)	15.3	23.0
Flow (l/hr)	-0.10	0.10
Water level (mbgl)	2.59	2.82

These graphs form part of the GGS DataPack® which is a registered trademark.

They should only be relied upon and used in the circumstances they were originally prepared by GGS for the client. Any other use or modification is not the responsibility of GGS.

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Experts in Continuous Monitoring

Title:

WS05 Time Series Graphs

Project:

GGS2538 Downlands Farm, Uckfield

Client:

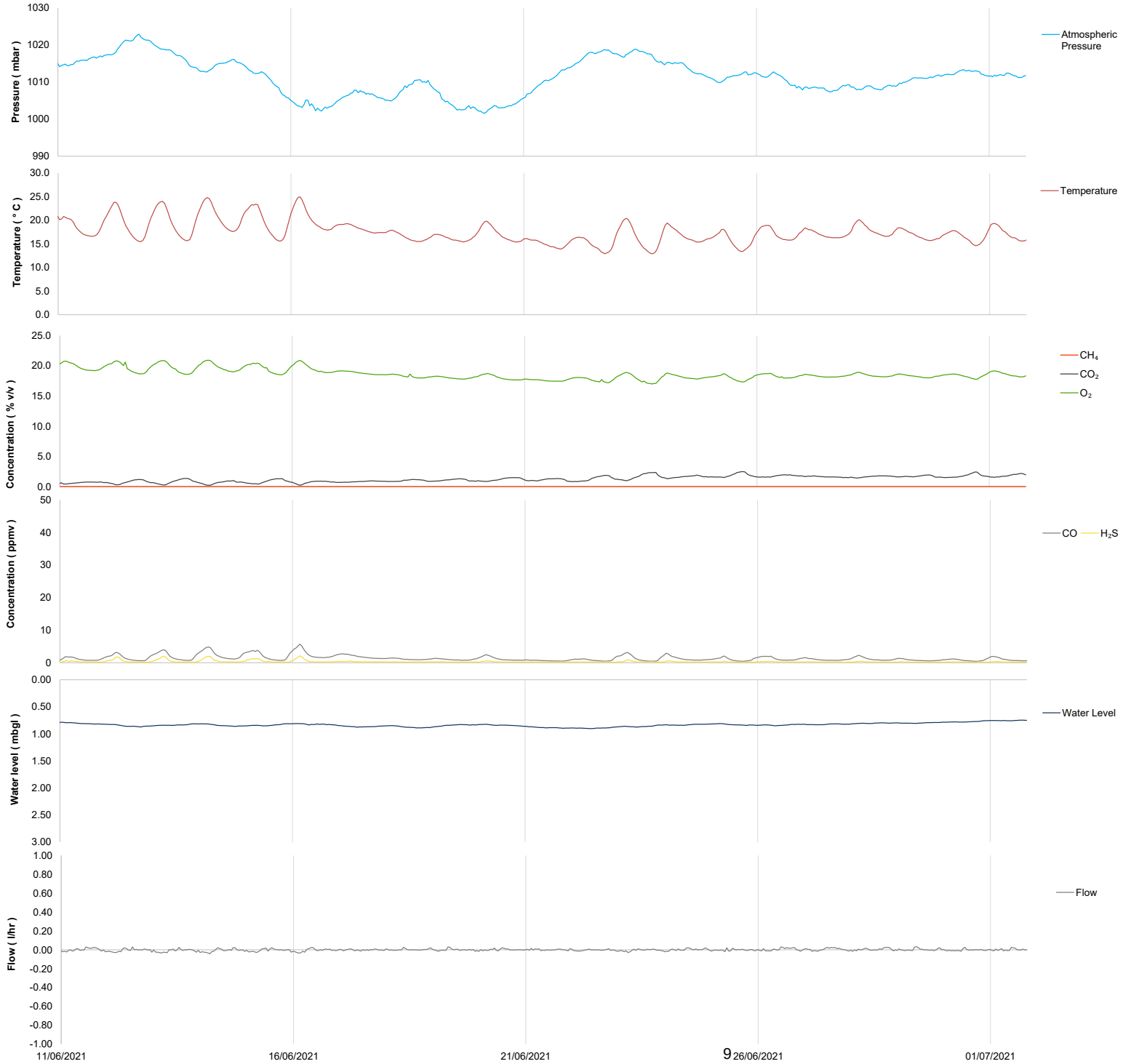
BRD Environmental Ltd.

Minimum / Maximum Table		
Parameter	**Minimum**	**Maximum**
CH_4 (% v/v)	0.0	0.0
CO_2 (% v/v)	0.0	8.7
O_2 (% v/v)	8.9	16.9
Hydrogen Sulphide (ppmv)	0	1
Carbon Monoxide (ppmv)	0	14
Atmospheric Pressure (mbar)	1002	1023
Borehole Pressure (mbar)	1002	1023
Temperature (° C)	12.9	24.9
Flow (l/hr)	-0.05	0.10
Water level (mbgl)	3.93	3.97

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ggs
Experts in Continuous Monitoring

Title:

WS06 Time Series Graphs

Project:

GGS2538 Downlands Farm, Uckfield

Client:

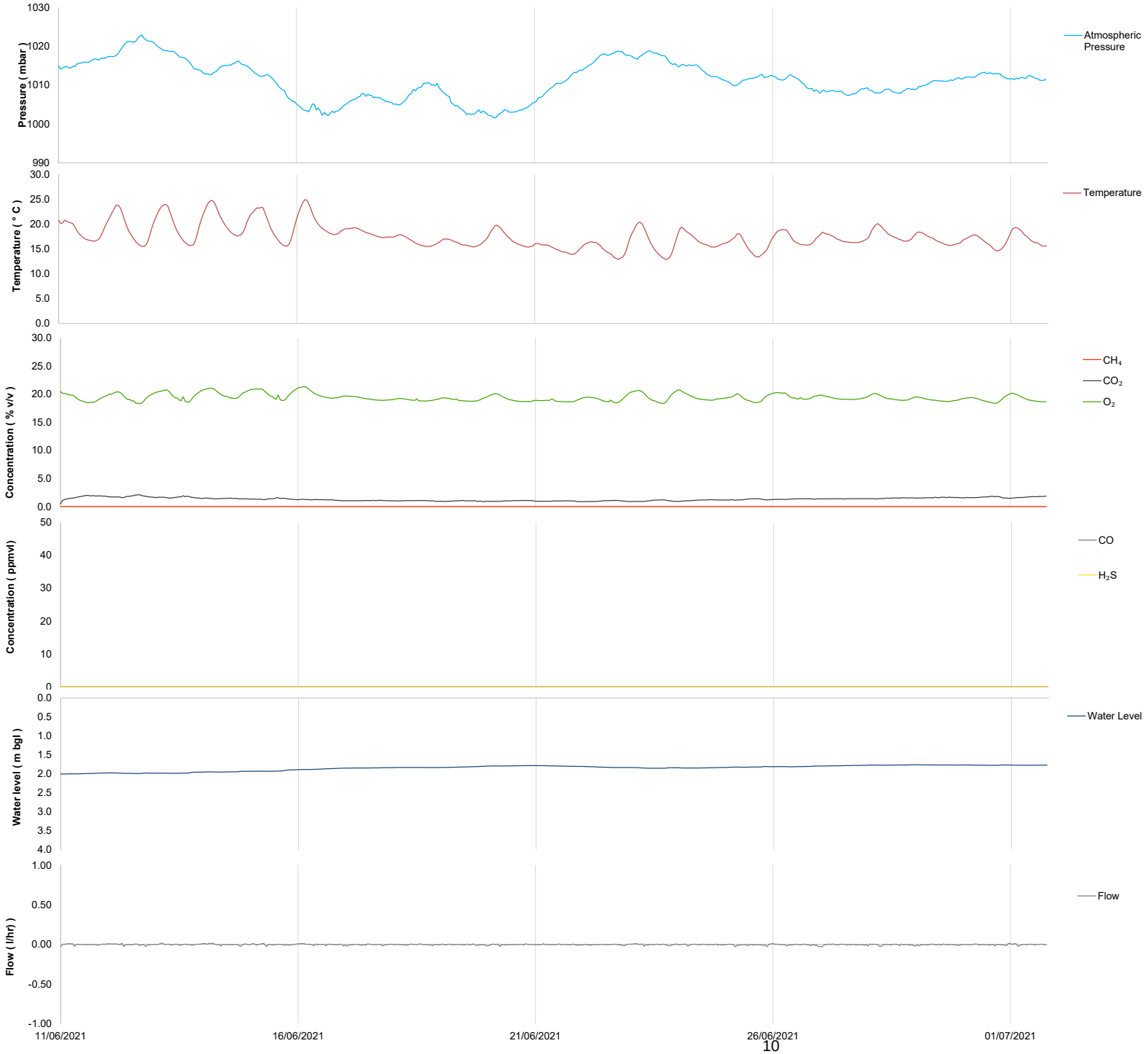
BRD Environmental Ltd.

Minimum / Maximum Table		
Parameter	**Minimum**	**Maximum**
CH_4 (% v/v)	0.0	0.0
CO_2 (% v/v)	0.2	2.5
O_2 (% v/v)	17.0	20.9
Hydrogen Sulphide (ppmv)	0	2
Carbon Monoxide (ppmv)	0	6
Atmospheric Pressure (mbar)	1002	1023
Temperature (° C)	12.9	24.9
Flow (l/hr)	-0.04	0.03
Water level (mbgl)	0.75	0.90

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Experts in Continuous Monitoring

Title:
WS12 Time Series Graphs

Project Reference:
GGS2586

Project Name:
Downlands Farm, Uckfield

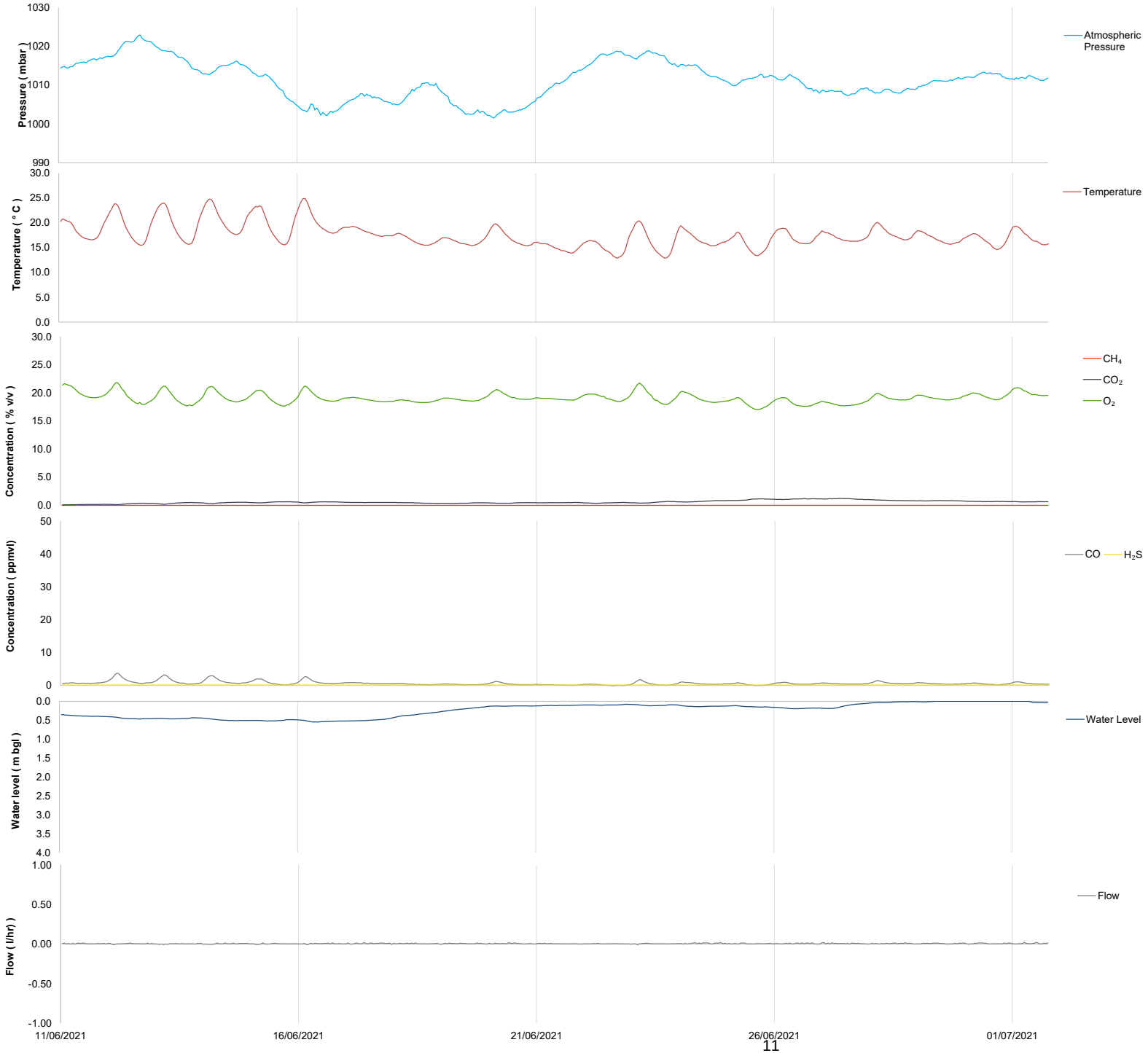
Client:
BRD Environmental Ltd.

Minimum / Maximum Table		
Parameter	**Minimum**	**Maximum**
CH_4 (% v/v)	0.0	0.0
CO_2 (% v/v)	0.5	2.1
O_2 (% v/v)	18.3	21.3
Hydrogen Sulphide (ppmv)	0	0
Carbon Monoxide (ppmv)	0	0
Atmospheric Pressure (mbar)	1002	1023
Borehole Pressure (mbar)	NM	NM
Temperature (° C)	12.9	24.9
Flow (l/hr)	-0.03	0.02
Water level (m bgl)	1.76	2.01

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Experts in Continuous Monitoring

Title:
WS14 Time Series Graphs

Project Reference:
GGS2586

Project Name:
Downlands Farm, Uckfield

Client:
BRD Environmental Ltd.

Minimum / Maximum Table

Parameter	Minimum	Maximum
CH_4 (% v/v)	0.0	0.0
CO_2 (% v/v)	0.1	1.2
O_2 (% v/v)	17.0	21.8
Hydrogen Sulphide (ppmv)	0	0
Carbon Monoxide (ppmv)	0	4
Atmospheric Pressure (mbar)	1002	1023
Borehole Pressure (mbar)	NM	NM
Temperature (° C)	12.9	24.9
Flow (l/hr)	-0.01	0.02
Water level (m bgl)	Flooded	0.55

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3.3 Atmospheric pressure trend analysis

Atmospheric pressure is often a dominant ground-gas driver and as such, monitoring should include sampling during falling pressure events. To capture potential 'worst case' conditions monitoring should include both short and longer duration falling pressure events at a rate of 1.15 millibars per hour and above[1]. Table 3.3 below summarises the most significant atmospheric pressure event during the continuous monitoring period, whilst Figure 2 provides percentage distribution of the atmospheric pressure regime.

Table 3.3 Atmospheric pressure regimes over the continuous monitoring period

Monitoring period	11/06/2021 – 02/07/2021
Range in atmospheric pressure (mbar)	1002 - 1023
Most significant atmospheric pressure fall over 8 millibar	- 10 millibar drop over 31 hours (1023 13/06/21 07:00 – 1013 14/06/21 14:00) -9 millibar drop over 17 hours (1012 16/06/21 01:00 – 1001 16/06/21 18:00) -8 millibar drop over 15 hours (1010 19/06/21 12:00 – 1002 20/06/21 03:00)
Most significant sustained rate of fall (over 8 hours)	0.6 millibar/hr (1009 16/06/21 07:00 – 1004 16/06/21 15:00)
Number of samples taken under 1000mb	0 (0%)
Number of samples taken below 1000mb and falling	0 (0%)

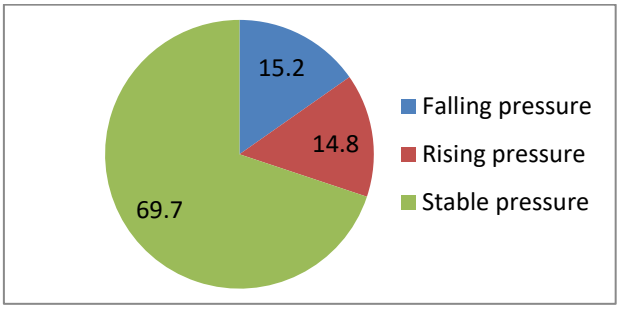


Figure 2 Percentage distribution of the atmospheric pressure regime during the continuous monitoring period

[1] CL:AIRE Technical Bulletin TB18 Continuous Ground Gas Monitoring and the Lines of Evidence Approach to Risk Assessment. January 2019

Figure 3 below demonstrates the most significant pressure fall captured during the continuous monitoring period does not meet 'worst case' conditions, as outlined in TB18.

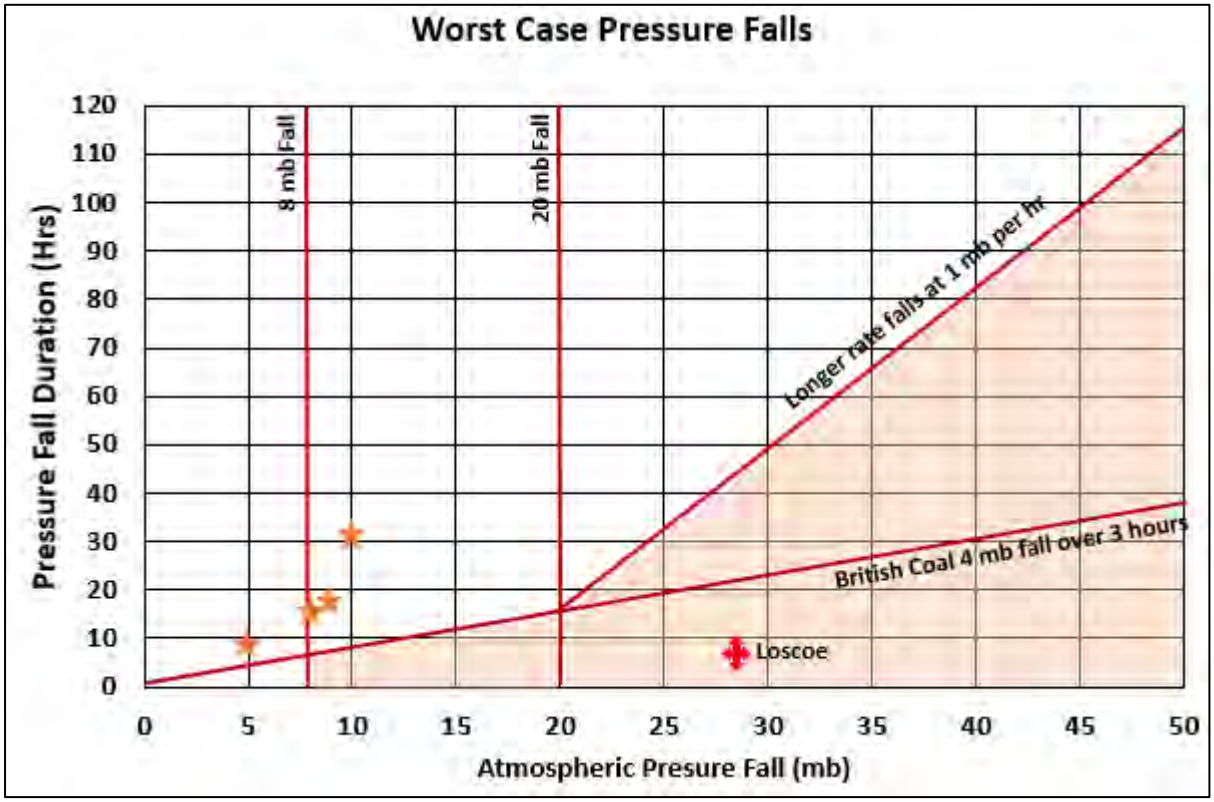


Figure 3 Worst case pressure falls taken from TB18, with the most significant pressure falls captured during the monitoring period.

Figures 4 and 5 below present the atmospheric pressure trend and the 8-hour average pressure change during the continuous monitoring period

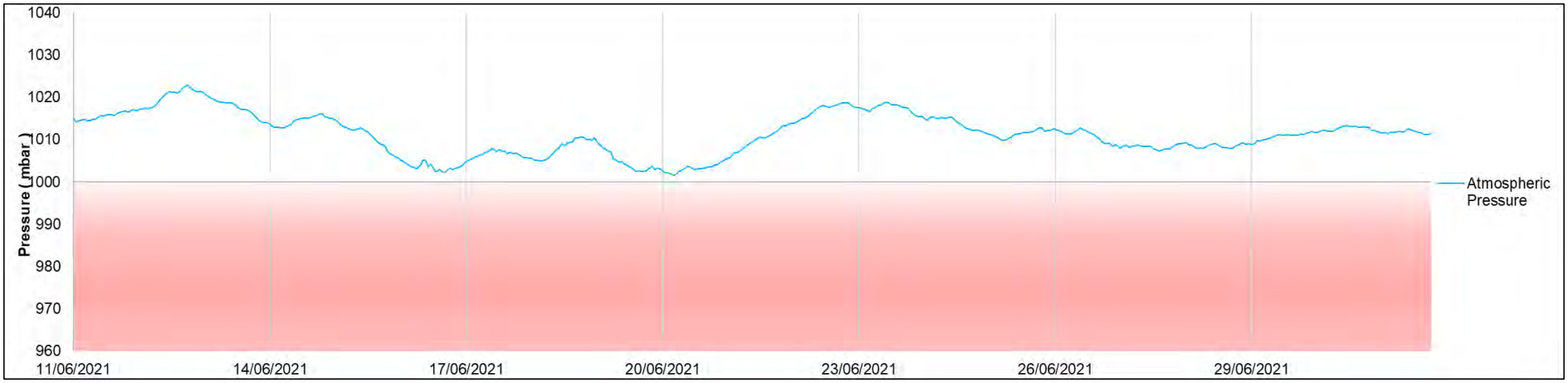


Figure 4 Atmospheric pressure trend during the continuous monitoring period with the shaded area below 1000mb.



Figure 5 8-hour average atmospheric pressure trend during the continuous monitoring period

3.4 Concentration duration analysis

Concentration duration analysis involves calculating the percentage of the monitoring period at which ground-gas concentrations were equalled to, or in exceedance of, a particular value. For example, high methane concentrations may be detected, but may only be present for a small percentage of the monitoring period. This is a valuable tool in risk assessment as it can be used to show the percentage time for which high risk gas concentrations are present throughout the monitoring period.

Concentration duration curves are presented in Appendix E. Table 3.4 below summarises the percentage time in which methane was at 1% v/v or above, 5% v/v or above and at 20% v/v or above. Table 3.5 below summarises the percentage time in which carbon dioxide was at 5% v/v or above, at 10% v/v or above and at 30% v/v or above.

Table 3.4 Percentage time at or above 1%, 5% and 20% v/v methane

	% of monitoring period that CH_4 equalled or exceeded:		
Monitoring Location	1.0% v/v	5.0% v/v	20.0% v/v
WS01	0	0	0
WS05	0	0	0
WS06	0	0	0
WS12	0	0	0
WS14	0	0	0

Table 3.5 Percentage time at or above 5%, 10% and 30% v/v carbon dioxide

	% of monitoring period that CO_2 equalled or exceeded:		
Monitoring Location	5.0% v/v	10.0% v/v	30.0% v/v
WS01	1.8	0	0
WS05	40.1	0	0
WS06	0	0	0
WS12	0	0	0
WS14	0	0	0

4 Instrumentation specification

All GGS instrumentation is maintained in accordance with the manufacturer recommendations and is serviced and calibrated annually. Note that for some instrumentation cross sensitivity to other gases and significant environmental changes, such as temperature, pressure and humidity, should be taken into consideration when considering all site monitoring data.

The current calibration certificates for all equipment used on site are included in Appendix F.

5 Limitations

GGS has prepared this factual report for the use of the Client and those parties whom a warranty agreement has been executed, or with whom an assignment has been agreed. The client's appointed engineers can rely on the data included in this report and acquired at the specific monitoring locations selected for the purposes of this project

GGS accepts no responsibility for the consequences of this document being used for any purpose or project other than for which it was commissioned or for the consequences arising from this document's use by any third party with whom an agreement has not been executed.

GGS accept no responsibility for the interpretation of this factual data. A reviewer of the data provided must take into account other available information and the context in which this data was collected. For example, site setting, conceptual site model, environmental conditions, gases present (that are not monitored as part of this contract, but may interfere with the sensors used), borehole construction and response zone information.

GGS accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this factual report.

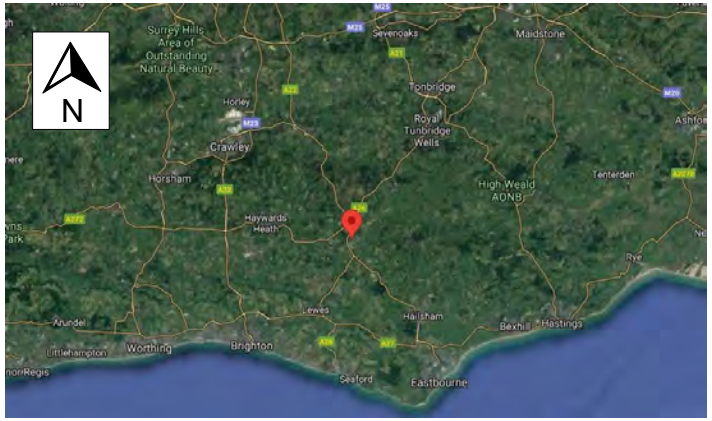
Appendix A

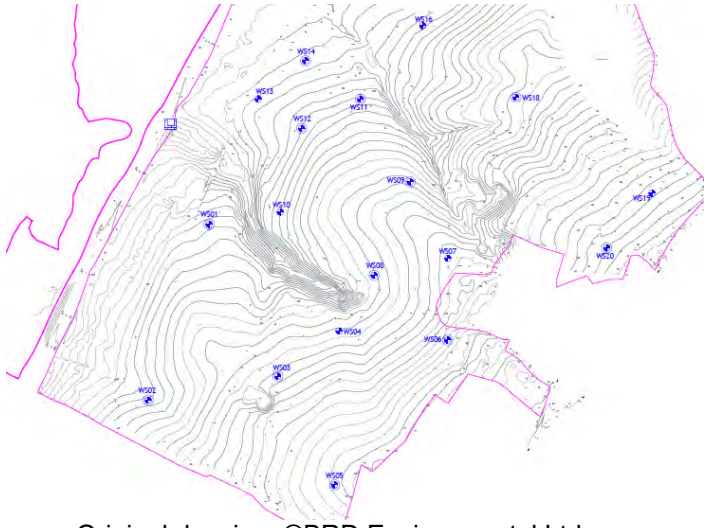
Site & Monitoring Location Plan

For: BRD Environmental Limited
Ref No.: GGS2586DP01
Date: 16/07/2021

Experts in Continuous Monitoring







Original drawing: ©BRD Environmental Ltd.

Title:
Site & Monitoring Location Plan

GGS2586 Downlands Farm,
Uckfield

Drawing No:
GGS2586_SMLP_160721

KEY:

WS01
Approx Monitoring location

Rev.	Date	Dwn.	Description
0	16/07/2021	SM	

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Appendix B

Site Photographs

For: BRD Environmental Limited
Ref No.: GGS2586DP01
Date: 16/07/2021

Experts in Continuous Monitoring

GGS DataPack®
GGS2586 Downlands Farm, Uckfield



WS01 flooded prior to periodic monitoring



WS01 after water was removed



WS01 after headworks were changed & continuous monitoring instruments deployed



WS05 prior to periodic monitoring



WS05 after headworks were changed



WS14 secured on site

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GGS DataPack®
GGS2586 Downlands Farm, Uckfield



WS06 prior to periodic monitoring



WS06 after headworks were changed



Periodic monitoring being carried out at WS12



WS12 prior to headworks being changed



WS12 after headworks being changed



WS12 secured on site after continuous monitoring instruments deployed

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Appendix C

Periodic Monitoring Records

For: BRD Environmental Limited
Ref No.: GGS2586DP01
Date: 16/07/2021

Experts in Continuous Monitoring

Experts in Continuous Monitoring

IMS Ref: GMPM
Version: 2.2

MONITORING WELL COMMENTS
Bung in place and valve closed. Monitoring well cover in place and screwed shut. Ants nest inside the well cover and it was flooded around the stand pipe. Water was drained and monitoring well was left with the bung still in for over an hour before periodic monitoring was carried out.

PROJECT DETAILS			
Project ID	GGS2586	**Date**	10/06/2021
Site	Downlands Farm, Uckfield	**Time**	19:26
Specialist	CF		

EQUIPMENT	
Model	**Serial Number**
Tiger PID	109691
GA5000	G504460

PRESSURE DETAILS	Start:	End:
Atmospheric Pressure (mb)	1017	1017

BOREHOLE DETAILS	
Borehole ID	WS01
Groundwater Level (mbgl)	2.59
Depth to base (mbgl)	4.25

TIME	Gas Flow	Gas Readings					
(seconds)	Litres/hour	CH_4 (% v/v)	CO_2 (% v/v)	O_2 (% v/v)	BAL	CO (ppmv)	H_2S (ppmv)
Fresh Air	<0.1	<0.1	<0.1	21.3	78.7	<1	<1
Initial	-0.1	<0.1	<0.1	5.9	87.7	5	<1
30	-0.1	<0.1	6.9	5.3	87.8	1	<1
60	-0.1	<0.1	6.9	5.2	87.9	<1	<1
120	-0.1	<0.1	7.0	5.0	88.0	1	<1
180	-0.1	<0.1	7.1	4.9	88.1	<1	<1
240		<0.1	7.1	4.8	88.1	<1	<1
300		Pump failed due to vacuum within well					
Fresh Air	<0.1	<0.1	<0.1	21.3	76.6	<1	<1

STEADY STATE FINAL RESULTS							
	Flow (l/hr)	CH_4 (%)	CO_2 (%)	O_2 (% v/v)	BAL	CO (ppm)	H_2S (ppm)
Steady state time (s)	30	30	180	240	240	180	30
Steady state value	-0.1	<0.1	7.1	4.8	88.1	<1	<1
Peak Value (O_2 Low)	<0.1	<0.1	7.1	4.8	88.1	5	<1

KEY: <0.1= Below instrument limit of detection, NM = Not Measured, N/A = Not Applicable, %v/v = Percentage volume by volume, ppmv = parts per million by volume, mb = milibar, ltr/hr = litres per hour, mbgl = metres below ground level, OS = off scale of instrument

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IMS Ref: GMPM
Version: 2.2

Experts in Continuous Monitoring

MONITORING WELL COMMENTS
Bung in place and valve closed. Monitoring well cover in place and screwed shut. There was a hissing noise when handheld device removed after periodic monitoring.

PROJECT DETAILS			
Project ID	GGS2586	**Date**	10/06/2021
Site	Downlands Farm, Uckfield	**Time**	17:30
Specialist	CF		

EQUIPMENT	
Model	**Serial Number**
Tiger PID	109691
GA5000	G504460

PRESSURE DETAILS	Start:	End:
Atmospheric Pressure (mb)	1016	1016

BOREHOLE DETAILS	
Borehole ID	WS05
Groundwater Level (mbgl)	3.94
Depth to base (mbgl)	4.00

TIME	Gas Flow	Gas Readings					
(seconds)	Litres/hour	CH_4 (% v/v)	CO_2 (% v/v)	O_2 (% v/v)	BAL	CO (ppmv)	H_2S (ppmv)
Fresh Air	<0.1	<0.1	0.1	20.5	79.4	<1	<1
Initial	<0.1	<0.1	5.9	10.0	87.8	<1	<1
30	-0.1	<0.1	6.0	5.8	88.3	1	<1
60	-0.1	<0.1	6.0	5.7	88.3	<1	<1
120	-0.1	<0.1	6.0	5.7	88.3	<1	<1
180		<0.1	6.0	5.7	88.3	<1	<1
240		<0.1	6.0	5.7	88.3	<1	<1
Fresh Air	<0.1	<0.1	0.1	20.6	79.4	<1	<1

STEADY STATE FINAL RESULTS							
	Flow (l/hr)	CH_4 (%)	CO_2 (%)	O_2 (% v/v)	BAL	CO (ppm)	H_2S (ppm)
Steady state time (s)	30	30	30	60	30	60	30
Steady state value	-0.1	<0.1	6.0	5.7	88.3	<0.1	<0.1
Peak Value (O_2 Low)	<0.1	<0.1	6.0	5.7	88.3	1	<0.1

KEY: <0.1= Below instrument limit of detection, NM = Not Measured, N/A = Not Applicable, %v/v = Percentage volume by volume, ppmv = parts per million by volume, mb = milibar, ltr/hr = litres per hour, mbgl = metres below ground level, OS = off scale of instrument

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IMS Ref: GMPM
Version: 2.2

Experts in Continuous Monitoring

PROJECT DETAILS			
Project ID	GGS2586	**Date**	10/06/2021
Site	Downlands Farm, Uckfield	**Time**	17:45
Specialist	CF		

EQUIPMENT	
Model	**Serial Number**
Tiger PID	109691
GA5000	G504460

PRESSURE DETAILS	Start:	End:
Atmospheric Pressure (mb)	1016	1016

BOREHOLE DETAILS	
Borehole ID	WS06
Groundwater Level (mbgl)	0.79
Depth to base (mbgl)	4.07

MONITORING WELL COMMENTS

Bung in place and valve closed. Monitoring well cover in place and screwed shut.
Monitoring well located within dence vegetation.

TIME	Gas Flow	Gas Readings					
(seconds)	Litres/hour	CH_4 (% v/v)	CO_2 (% v/v)	O_2 (% v/v)	BAL	CO (ppmv)	H_2S (ppmv)
Fresh Air	<0.1	<0.1	0.1	20.6	79.3	<1	<1
Initial	0.1	<0.1	0.2	18.9	80.9	<1	<1
30	-0.1	<0.1	3.6	11.5	84.9	<1	<1
60	-0.7	<0.1	6.7	6.3	87.0	1	<1
120	-2.0	<0.1	9.7	1.5	88.8	1	<1
180	-1.9	<0.1	9.9	1.1	89.0	1	<1
240	-1.8	<0.1	10.0	0.9	89.1	<1	<1
300	-1.7	<0.1	10.0	0.8	89.2	<1	<1
360	-1.6	<0.1	10.0	0.7	89.3	<1	<1
420	-1.5	<0.1	10.0	0.8	89.2	<1	<1
480	-1.5	<0.1	10.0	0.8	89.2	<1	<1
540	-1.4						
600	-1.3						
Fresh Air	<0.1	<0.1	<0.1	21.3	78.7	<1	<1

STEADY STATE FINAL RESULTS

	Flow (l/hr)	CH_4 (%)	CO_2 (%)	O_2 (% v/v)	BAL	CO (ppm)	H_2S (ppm)
Steady state time (s)	N/A	30	240	420	300	240	30
Steady state value	N/A	<0.1	10.0	0.8	89.2	<0.1	<1
Peak Value (O_2 Low)	0.1	<0.1	10.0	0.7	89.3	1	<1

KEY: <0.1= Below instrument limit of detection, NM = Not Measured, N/A = Not Applicable, %v/v = Percentage volume by volume, ppmv = parts per million by volume, mb = milibar, ltr/hr = litres per hour, mbgl = metres below ground level, OS = off scale of instrument

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IMS Ref: GMPM
Version: 2.2

Experts in Continuous Monitoring

PROJECT DETAILS			
Project ID	GGS2586	**Date**	10/06/2021
Site	Downlands Farm, Uckfield	**Time**	18:38
Specialist	CF		

EQUIPMENT	
Model	**Serial Number**
Tiger PID	109691
GA5000	G504460

PRESSURE DETAILS	Start:	End:
Atmospheric Pressure (mb)	1017	1017

BOREHOLE DETAILS	
Borehole ID	WS12
Groundwater Level (mbgl)	2.00
Depth to base (mbgl)	4.22

MONITORING WELL COMMENTS
Bung in place and valve closed. Monitoring well cover in place and screwed shut. There was a pop noise when bung removed.

TIME	Gas Flow	Gas Readings					
(seconds)	Litres/hour	CH_4 (% v/v)	CO_2 (% v/v)	O_2 (% v/v)	BAL	CO (ppmv)	H_2S (ppmv)
Fresh Air	<0.1	<0.1	<0.1	21.3	78.6	<1	<1
Initial	4.8	<0.1	6.7	13.4	81.5	<1	<1
30	2.9	<0.1	9.5	8.2	82.1	2	<1
60	1.5	<0.1	10.1	7.9	82.0	3	<1
120	0.2	<0.1	10.1	7.8	82.1	2	<1
180	<0.1	Pump failed due to vacuum in well					
240	-0.1						
300	-0.1						
360	-0.1						
Fresh Air	<0.1	<0.1	<0.1	21.2	78.8	<1	<1

STEADY STATE FINAL RESULTS							
	Flow (l/hr)	CH_4 (%)	CO_2 (%)	O_2 (% v/v)	BAL	CO (ppm)	H_2S (ppm)
Steady state time (s)	240	30	60	120	120	120	30
Steady state value	-0.1	<0.1	10.1	7.8	82.1	2.0	<1
Peak Value (O_2 Low)	4.8	<0.1	10.1	7.8	82.1	3	<1

KEY: <0.1= Below instrument limit of detection, NM = Not Measured, N/A = Not Applicable, %v/v = Percentage volume by volume, ppmv = parts per million by volume, mb = milibar, ltr/hr = litres per hour, mbgl = metres below ground level, OS = off scale of instrument

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IMS Ref: GMPM
Version: 2.2

Experts in Continuous Monitoring

MONITORING WELL COMMENTS
Bung in place and valve closed. Monitoring well cover in place and screwed shut.

PROJECT DETAILS			
Project ID	GGS2586	**Date**	10/06/2021
Site	Downlands Farm, Uckfield	**Time**	19:00
Specialist	CF		

EQUIPMENT	
Model	**Serial Number**
Tiger PID	109691
GA5000	G504460

PRESSURE DETAILS	Start:	End:
Atmospheric Pressure (mb)	1017	1017

BOREHOLE DETAILS	
Borehole ID	WS14
Groundwater Level (mbgl)	0.25
Depth to base (mbgl)	2.67

TIME	Gas Flow	Gas Readings					
(seconds)	Litres/hour	CH_4 (% v/v)	CO_2 (% v/v)	O_2 (% v/v)	BAL	CO (ppmv)	H_2S (ppmv)
Fresh Air	<0.1	<0.1	<0.1	21.2	78.8	<1	<1
Initial	-2.2	<0.1	0.2	20.8	80.5	1	<1
30	-0.5	Pump failed due to high water level					
60	-0.2						
120	-0.2						
180	-0.2						
Fresh Air	<0.1	<0.1	<0.1	21.3	78.7	<1	<1

STEADY STATE FINAL RESULTS							
	Flow (l/hr)	CH_4 (%)	CO_2 (%)	O_2 (% v/v)	BAL	CO (ppm)	H_2S (ppm)
Steady state time (s)	60	Initial	Initial	Initial	Initial	Initial	Initial
Steady state value	-0.2	<0.1	0.2	20.8	80.5	1.0	<1
Peak Value (O_2 Low)	<0.1	<0.1	0.2	20.8	80.5	1	<1

KEY: <0.1= Below instrument limit of detection, NM = Not Measured, N/A = Not Applicable, %v/v = Percentage volume by volume, ppmv = parts per million by volume, mb = milibar, ltr/hr = litres per hour, mbgl = metres below ground level, OS = off scale of instrument

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Appendix D

Continuous Monitoring Data

For: BRD Environmental Limited
Ref No.: GGS2586DP01
Date: 16/07/2021

Experts in Continuous Monitoring

Time Series Data

Project Ref:	GGS2586
Project Name:	Downlands Farm, Uckfield
Borehole ref:	WS01
Instrument Name and ID:	000224/01/12
Start Date:	11/06/2021 14:14
End Date:	30/06/2021 04:14
Days of monitoring:	19
Monitoring Frequency (mins):	60
Total samples taken:	447

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Summary Table

	CH_4	CO_2	O_2	CO	H_2S	Borehole Pressure	Atmospheric Pressure	Differential Pressure	Average 9-hour atmospheric pressure change	Flow	Temperature	Water Level
Minimum	0.0	0.0	6.9	10	0	1001	1002	-1	-0.62	-0.10	15.3	2.59
Maximum	0.0	5.2	20.7	19	0	1022	1023	2	0.50	0.10	23.0	2.82
Range	0.0	5.2	13.8	9	0	21	21	N/A	1.12	0.19	7.7	0.23

Date and Time	CH_4	CO_2	O_2	CO	H_2S	Borehole Pressure	Atmospheric Pressure	Differential Pressure	Average 9-hour atmospheric pressure change	Flow	Temperature	Water Level
	% v/v	% v/v	% v/v	ppm/v	ppm/v	mbar	mbar	mbar	mbar	Ltr/hr	°C	mbgl
11/06/2021 14:14	0.0	2.9	12.4	13	0	1015	1014	-1	N/A	0.05	23.0	2.59
11/06/2021 15:14	0.0	4.4	9.1	16	0	1015	1014	-1	N/A	0.05	21.6	2.59
11/06/2021 16:14	0.0	5.2	8.0	17	0	1015	1015	0	N/A	0.05	21.1	2.60
11/06/2021 17:14	0.0	5.2	7.6	17	0	1015	1015	0	N/A	0.03	20.9	2.60
11/06/2021 18:14	0.0	5.2	7.2	17	0	1015	1014	-1	N/A	0.03	20.8	2.60
11/06/2021 19:14	0.0	5.2	7.0	16	0	1014	1014	0	N/A	0.03	20.8	2.61
11/06/2021 20:14	0.0	5.2	7.0	16	0	1014	1015	1	N/A	0.03	20.6	2.61
11/06/2021 21:14	0.0	5.1	6.9	16	0	1014	1015	1	N/A	0.03	20.4	2.62
11/06/2021 22:14	0.0	5.2	6.9	15	0	1015	1015	0	0	0.03	20.2	2.62
11/06/2021 23:14	0.0	2.2	12.1	11	0	1015	1016	1	0	0.00	19.9	2.62
12/06/2021 00:14	0.0	1.5	15.0	10	0	1015	1016	1	0	0.00	19.7	2.62
12/06/2021 01:14	0.0	0.7	16.6	10	0	1015	1016	1	0	0.00	19.5	2.63
12/06/2021 02:14	0.0	0.7	17.2	11	0	1015	1016	1	0	0.03	19.3	2.63
12/06/2021 03:14	0.0	0.7	18.0	12	0	1015	1016	1	0	0.00	19.1	2.63
12/06/2021 04:14	0.0	0.8	17.9	13	0	1015	1016	1	0	0.03	18.9	2.63
12/06/2021 05:14	0.0	0.0	19.0	13	0	1016	1016	0	0	0.00	18.9	2.64
12/06/2021 06:14	0.0	0.0	19.4	14	0	1016	1016	0	0	0.00	18.8	2.64
12/06/2021 07:14	0.0	0.0	19.7	15	0	1016	1017	1	0	0.00	18.8	2.64
12/06/2021 08:14	0.0	0.0	20.0	15	0	1017	1017	0	0	0.00	18.7	2.64
12/06/2021 09:14	0.0	0.0	20.2	15	0	1017	1016	-1	0	0.00	18.8	2.64
12/06/2021 10:14	0.0	0.0	20.3	16	0	1017	1017	0	0	-0.10	18.9	2.64
12/06/2021 11:14	0.0	0.0	20.4	15	0	1017	1017	0	0	0.03	19.3	2.64
12/06/2021 12:14	0.0	0.0	20.4	15	0	1017	1017	0	0	0.03	19.6	2.65
12/06/2021 13:14	0.0	0.0	20.4	15	0	1018	1017	-1	0	0.00	20.1	2.65
12/06/2021 14:14	0.0	0.0	20.5	15	0	1018	1017	-1	0	0.00	20.5	2.65
12/06/2021 15:14	0.0	0.0	20.6	16	0	1018	1017	-1	0	0.05	20.9	2.65
12/06/2021 16:14	0.0	0.0	20.6	15	0	1018	1017	-1	0	0.05	21.3	2.65
12/06/2021 17:14	0.0	0.0	20.7	16	0	1018	1017	-1	0	0.00	21.7	2.66
12/06/2021 18:14	0.0	0.0	20.7	15	0	1018	1018	0	0	0.05	22.1	2.66
12/06/2021 19:14	0.0	0.0	20.6	15	0	1018	1018	0	0	0.00	22.3	2.67
12/06/2021 20:14	0.0	0.0	20.6	15	0	1019	1019	0	0	0.05	22.2	2.67
12/06/2021 21:14	0.0	0.0	20.5	14	0	1019	1020	1	0	0.00	21.9	2.67
12/06/2021 22:14	0.0	0.0	20.6	14	0	1020	1020	0	0	-0.05	21.6	2.68
12/06/2021 23:14	0.0	0.0	20.6	15	0	1020	1021	1	0	0.00	21.1	2.68
13/06/2021 00:14	0.0	0.0	20.6	15	0	1021	1021	0	0	0.00	20.6	2.69
13/06/2021 01:14	0.0	0.0	20.6	14	0	1020	1021	1	0	0.00	20.2	2.69
13/06/2021 02:14	0.0	0.0	20.5	16	0	1020	1021	1	0	0.03	19.8	2.69
13/06/2021 03:14	0.0	0.0	20.4	16	0	1020	1021	1	0	0.00	19.4	2.70
13/06/2021 04:14	0.0	0.0	20.4	16	0	1021	1021	0	0	0.03	19.0	2.70
13/06/2021 05:14	0.0	0.0	20.4	17	0	1022	1022	0	0	0.00	18.7	2.70
13/06/2021 06:14	0.0	0.0	20.5	16	0	1022	1023	1	0	0.00	18.4	2.70
13/06/2021 07:14	0.0	0.0	20.5	16	0	1022	1023	1	0	0.00	18.2	2.71
13/06/2021 08:14	0.0	0.0	20.6	16	0	1022	1022	0	0	0.00	18.1	2.70
13/06/2021 09:14	0.0	0.0	20.6	17	0	1022	1022	0	0	0.03	18.3	2.70
13/06/2021 10:14	0.0	0.0	20.5	16	0	1022	1021	-1	0	0.00	18.6	2.70
13/06/2021 11:14	0.0	0.0	20.5	17	0	1022	1021	-1	0	0.00	19.1	2.70
13/06/2021 12:14	0.0	0.0	20.5	17	0	1022	1021	-1	0	-0.05	19.6	2.70
13/06/2021 13:14	0.0	0.0	20.5	17	0	1022	1021	-1	0	0.03	20.1	2.71
13/06/2021 14:14	0.0	0.0	20.5	16	0	1021	1020	-1	0	0.05	20.7	2.71
13/06/2021 15:14	0.0	0.0	20.5	16	0	1020	1020	0	0	0.05	21.2	2.71
13/06/2021 16:14	0.0	0.0	20.5	15	0	1020	1020	0	0	0.05	21.6	2.71
13/06/2021 17:14	0.0	0.0	20.2	16	0	1019	1019	0	0	0.07	21.9	2.71
13/06/2021 18:14	0.0	0.7	19.7	15	0	1019	1019	0	0	0.05	22.2	2.71
13/06/2021 19:14	0.0	0.7	19.1	15	0	1019	1019	0	0	0.05	22.3	2.71
13/06/2021 20:14	0.0	0.7	18.6	15	0	1018	1019	1	0	0.05	22.2	2.72
13/06/2021 21:14	0.0	1.5	17.9	15	0	1018	1019	1	0	0.07	21.9	2.72
13/06/2021 22:14	0.0	1.5	17.5	15	0	1018	1019	1	0	0.03	21.5	2.72
13/06/2021 23:14	0.0	1.5	17.0	16	0	1018	1019	1	0	0.03	21.0	2.72
14/06/2021 00:14	0.0	1.5	16.6	15	0	1018	1018	0	0	0.00	20.6	2.72
14/06/2021 01:14	0.0	2.2	16.2	16	0	1017	1018	1	0	0.03	20.1	2.72
14/06/2021 02:14	0.0	2.2	15.6	16	0	1016	1017	1	0	0.00	19.8	2.72
14/06/2021 03:14	0.0	2.2	15.1	17	0	1016	1017	1	0	0.03	19.4	2.72
14/06/2021 04:14	0.0	2.2	14.8	17	0	1016	1017	1	0	0.03	19.0	2.72
14/06/2021 05:14	0.0	2.2	14.5	17	0	1016	1017	1	0	0.03	18.7	2.71
14/06/2021 06:14	0.0	2.9	14.2	17	0	1015	1016	1	0	0.00	18.4	2.71
14/06/2021 07:14	0.0	3.0	13.8	17	0	1015	1016	1	0	0.00	18.2	2.71
14/06/2021 08:14	0.0	3.0	13.6	17	0	1016	1015	-1	0	0.03	18.2	2.70
14/06/2021 09:14	0.0	2.9	13.5	18	0	1015	1014	-1	0	0.03	18.3	2.69
14/06/2021 10:14	0.0	2.9	13.3	17	0	1015	1014	-1	0	0.03	18.7	2.69
14/06/2021 11:14	0.0	3.0	13.1	17	0	1015	1014	-1	0	0.03	19.2	2.69
14/06/2021 12:14	0.0	2.9	12.9	17	0	1015	1014	-1	0	0.03	19.8	2.69
14/06/2021 13:14	0.0	2.9	12.7	17	0	1014	1014	0	0	0.05	20.4	2.69
14/06/2021 14:14	0.0	2.9	12.6	17	0	1014	1013	-1	0	0.05	21.1	2.69
14/06/2021 15:14	0.0	3.0	12.3	17	0	1014	1013	-1	0	0.05	21.6	2.69
14/06/2021 16:14	0.0	3.7	12.1	16	0	1014	1013	-1	0	0.05	22.1	2.69
14/06/2021 17:14	0.0	3.7	12.0	16	0	1013	1013	0	0	0.05	22.5	2.69
14/06/2021 18:14	0.0	3.7	11.8	16	0	1013	1013	0	0	0.05	22.8	2.69
14/06/2021 19:14	0.0	3.7	11.7	16	0	1013	1013	0	0	0.05	22.8	2.69
14/06/2021 20:14	0.0	3.7	11.6	16	0	1013	1013	0	0	0.05	22.7	2.70
14/06/2021 21:14	0.0	3.7	11.6	16	0	1014	1014	0	0	0.05	22.5	2.70
14/06/2021 22:14	0.0	3.7	11.6	15	0	1014	1014	0	0	0.03	22.2	2.70
14/06/2021 23:14	0.0	2.2	13.9	15	0	1015	1015	0	0	-0.05	21.9	2.70
15/06/2021 00:14	0.0	1.5	15.7	14	0	1015	1015	0	0	0.00	21.5	2.70
15/06/2021 01:14	0.0	0.7	16.8	14	0	1015	1015	0	0	0.00	21.2	2.70
15/06/2021 02:14	0.0	0.7	16.5	14	0	1015	1015	0	0	0.00	20.9	2.70
15/06/2021 03:14	0.0	0.7	16.9	14	0	1015	1015	0	0	0.00	20.6	2.71
15/06/2021 04:14	0.0	0.7	17.8	14	0	1015	1015	0	0	0.03	20.3	2.71
15/06/2021 05:14	0.0	0.7	18.7	15	0	1015	1016	1	0	0.00	20.1	2.71
15/06/2021 06:14	0.0	0.0	19.4	15	0	1015	1016	1	0	0.03	19.9	2.71
15/06/2021 07:14	0.0	0.0	19.7	15	0	1016	1016	0	0	0.03	19.7	2.71
15/06/2021 08:14	0.0	0.0	19.9	15	0	1016	1016	0	0	0.00	19.7	2.71
15/06/2021 09:14	0.0	0.0	20.0	16	0	1016	1016	0	0	0.03	19.8	2.70
15/06/2021 10:14	0.0	0.0	20.1	16	0	1016	1015	-1	0	0.03	19.9	2.70
15/06/2021 11:14	0.0	0.0	20.1	16	0	1016	1015	-1	0	0.03	20.3	2.71
15/06/2021 12:14	0.0	0.0	20.1	15	0	1015	1015	0	0	0.03	20.8	2.71
15/06/2021 13:14	0.0	0.0	20.0	16	0	1015	1015	0	0	0.05	21.3	2.71
15/06/2021 14:14	0.0	0.7	19.4	16	0	1015	1014	-1	0	0.05	21.6	2.71
15/06/2021 15:14	0.0	0.7	18.1	16	0	1014	1014	0	0	0.05	21.9	2.71
15/06/2021 16:14	0.0	2.2	15.9	17	0	1013	1013	0	0	0.05	22.1	2.71

ggs
Experts in Continuous Monitoring

Date and Time	CH_4	CO_2	O_2	CO	H_2S	Borehole Pressure	Atmospheric Pressure	Differential Pressure	Average 9-hour atmospheric pressure change	Flow	Temperature	Water Level
	% v/v	% v/v	% v/v	ppm/v	ppm/v	mbar	mbar	mbar	mbar	Ltr/hr	°C	mbgl
15/06/2021 17:14	0.0	2.2	14.3	17	0	1013	1013	0	0	0.05	22.4	2.71
15/06/2021 18:14	0.0	2.9	13.1	17	0	1012	1012	0	0	0.05	22.5	2.71
15/06/2021 19:14	0.0	2.9	12.4	16	0	1012	1012	0	0	0.07	22.6	2.71
15/06/2021 20:14	0.0	2.9	12.0	17	0	1012	1012	0	0	0.05	22.5	2.72
15/06/2021 21:14	0.0	2.9	11.6	16	0	1012	1012	0	0	0.03	22.3	2.72
15/06/2021 22:14	0.0	3.7	11.4	16	0	1012	1013	1	0	0.03	21.9	2.72
15/06/2021 23:14	0.0	3.7	11.2	17	0	1012	1013	1	0	0.03	21.4	2.72
16/06/2021 00:14	0.0	3.7	11.0	17	0	1011	1012	1	0	0.03	20.9	2.72
16/06/2021 01:14	0.0	3.7	10.7	17	0	1011	1012	1	0	0.03	20.5	2.72
16/06/2021 02:14	0.0	3.7	10.5	16	0	1010	1011	1	0	0.00	20.1	2.72
16/06/2021 03:14	0.0	3.7	10.2	17	0	1010	1010	0	0	0.03	19.7	2.72
16/06/2021 04:14	0.0	4.4	9.9	17	0	1009	1010	1	0	0.03	19.3	2.72
16/06/2021 05:14	0.0	4.4	9.7	17	0	1008	1009	1	0	0.00	18.9	2.72
16/06/2021 06:14	0.0	4.4	9.5	17	0	1008	1009	1	0	0.03	18.6	2.72
16/06/2021 07:14	0.0	4.4	9.4	17	0	1008	1009	1	0	0.03	18.4	2.71
16/06/2021 08:14	0.0	4.4	9.3	17	0	1008	1007	-1	-1	0.03	18.4	2.70
16/06/2021 09:14	0.0	4.4	9.2	17	0	1007	1007	0	-1	0.03	18.5	2.69
16/06/2021 10:14	0.0	4.4	9.1	17	0	1007	1006	-1	-1	0.03	18.8	2.69
16/06/2021 11:14	0.0	4.4	9.0	17	0	1007	1006	-1	0	0.03	19.4	2.69
16/06/2021 12:14	0.0	4.4	8.9	17	0	1006	1006	0	0	0.03	20.0	2.69
16/06/2021 13:14	0.0	4.4	8.9	17	0	1006	1005	-1	0	0.05	20.6	2.69
16/06/2021 14:14	0.0	4.4	8.8	17	0	1005	1005	0	0	0.05	21.3	2.69
16/06/2021 15:14	0.0	4.4	8.7	17	0	1005	1004	-1	0	0.07	21.8	2.69
16/06/2021 16:14	0.0	4.4	8.6	17	0	1004	1004	0	0	0.05	22.3	2.69
16/06/2021 17:14	0.0	4.4	8.6	16	0	1004	1004	0	0	0.10	22.7	2.69
16/06/2021 18:14	0.0	4.4	8.5	16	0	1004	1003	-1	0	0.07	22.9	2.69
16/06/2021 19:14	0.0	4.4	8.4	16	0	1003	1003	0	0	0.07	22.9	2.69
16/06/2021 20:14	0.0	4.4	8.4	16	0	1003	1004	1	0	0.05	22.7	2.69
16/06/2021 21:14	0.0	4.4	8.3	16	0	1005	1005	0	0	0.03	22.4	2.69
16/06/2021 22:14	0.0	4.4	8.3	16	0	1004	1005	1	0	0.00	22.0	2.69
16/06/2021 23:14	0.0	4.4	8.3	15	0	1003	1004	1	0	0.03	21.6	2.69
17/06/2021 00:14	0.0	4.4	8.2	16	0	1004	1004	0	0	0.03	21.4	2.69
17/06/2021 01:14	0.0	4.4	8.1	16	0	1002	1003	1	0	0.03	21.1	2.69
17/06/2021 02:14	0.0	4.4	8.0	16	0	1001	1002	1	0	0.03	20.9	2.69
17/06/2021 03:14	0.0	4.4	8.0	16	0	1002	1003	1	0	0.00	20.6	2.69
17/06/2021 04:14	0.0	4.4	7.9	16	0	1002	1003	1	0	0.03	20.4	2.69
17/06/2021 05:14	0.0	5.1	7.9	16	0	1002	1002	0	0	0.00	20.3	2.69
17/06/2021 06:14	0.0	5.2	7.9	16	0	1003	1003	0	0	0.03	20.1	2.69
17/06/2021 07:14	0.0	4.4	7.8	16	0	1003	1003	0	0	0.03	19.9	2.69
17/06/2021 08:14	0.0	4.4	7.8	16	0	1002	1003	1	0	0.03	19.9	2.69
17/06/2021 09:14	0.0	4.4	7.8	16	0	1003	1003	0	0	0.00	19.8	2.69
17/06/2021 10:14	0.0	4.4	7.8	17	0	1003	1003	0	0	0.03	19.8	2.69
17/06/2021 11:14	0.0	4.4	7.9	17	0	1004	1004	0	0	0.03	19.9	2.69
17/06/2021 12:14	0.0	1.5	13.1	15	0	1004	1004	0	0	0.00	20.0	2.69
17/06/2021 13:14	0.0	0.7	15.6	15	0	1005	1005	0	0	0.00	20.1	2.69
17/06/2021 14:14	0.0	0.7	17.0	15	0	1005	1005	0	0	0.00	20.1	2.69
17/06/2021 15:14	0.0	0.7	17.9	15	0	1005	1006	1	0	0.03	20.2	2.70
17/06/2021 16:14	0.0	0.7	18.6	15	0	1005	1006	1	0	0.03	20.3	2.70
17/06/2021 17:14	0.0	0.0	19.0	15	0	1006	1006	0	0	0.03	20.3	2.70
17/06/2021 18:14	0.0	0.0	19.2	16	0	1006	1006	0	0	0.03	20.3	2.70
17/06/2021 19:14	0.0	0.0	19.4	16	0	1006	1006	0	0	0.00	20.3	2.71
17/06/2021 20:14	0.0	0.0	19.5	16	0	1007	1007	0	0	0.00	20.3	2.71
17/06/2021 21:14	0.0	0.0	19.5	16	0	1007	1007	0	0	0.00	20.3	2.71
17/06/2021 22:14	0.0	0.0	19.7	16	0	1007	1008	1	0	0.00	20.1	2.71
17/06/2021 23:14	0.0	0.0	19.8	17	0	1007	1008	1	0	0.03	20.1	2.72
18/06/2021 00:14	0.0	0.0	19.7	17	0	1007	1007	0	0	0.00	19.9	2.72
18/06/2021 01:14	0.0	0.0	19.5	17	0	1007	1008	1	0	0.00	19.8	2.72
18/06/2021 02:14	0.0	0.0	19.4	16	0	1007	1007	0	0	0.03	19.8	2.72
18/06/2021 03:14	0.0	0.0	19.3	17	0	1007	1007	0	0	0.00	19.6	2.72
18/06/2021 04:14	0.0	0.0	19.3	17	0	1006	1007	1	0	0.03	19.6	2.73
18/06/2021 05:14	0.0	0.0	19.2	17	0	1007	1007	0	0	0.00	19.4	2.73
18/06/2021 06:14	0.0	0.8	19.1	17	0	1006	1007	1	0	0.03	19.3	2.73
18/06/2021 07:14	0.0	0.7	18.9	17	0	1006	1007	1	0	0.03	19.3	2.73
18/06/2021 08:14	0.0	0.7	18.6	17	0	1006	1007	1	0	0.03	19.1	2.73
18/06/2021 09:14	0.0	0.7	18.1	16	0	1006	1006	0	0	0.03	19.1	2.73
18/06/2021 10:14	0.0	1.5	17.0	17	0	1005	1006	1	0	0.03	19.1	2.73
18/06/2021 11:14	0.0	2.2	15.6	18	0	1005	1006	1	0	0.03	19.1	2.73
18/06/2021 12:14	0.0	2.2	14.5	18	0	1005	1006	1	0	0.03	19.0	2.73
18/06/2021 13:14	0.0	2.2	13.7	18	0	1005	1006	1	0	0.03	19.0	2.73
18/06/2021 14:14	0.0	3.0	12.9	18	0	1005	1005	0	0	0.03	19.0	2.73
18/06/2021 15:14	0.0	3.0	12.2	18	0	1005	1005	0	0	0.00	19.0	2.73
18/06/2021 16:14	0.0	2.9	11.7	18	0	1004	1005	1	0	0.03	19.1	2.73
18/06/2021 17:14	0.0	2.9	11.4	18	0	1005	1005	0	0	0.03	19.1	2.73
18/06/2021 18:14	0.0	3.7	11.2	18	0	1005	1005	0	0	0.03	19.1	2.73
18/06/2021 19:14	0.0	3.7	11.2	18	0	1005	1006	1	0	0.03	19.1	2.73
18/06/2021 20:14	0.0	3.0	11.8	19	0	1006	1006	0	0	0.00	19.0	2.73
18/06/2021 21:14	0.0	0.7	16.2	18	0	1007	1007	0	0	0.00	18.9	2.74
18/06/2021 22:14	0.0	0.7	17.8	18	0	1007	1008	1	0	0.03	18.8	2.74
18/06/2021 23:14	0.0	0.0	18.8	18	0	1007	1008	1	0	0.00	18.6	2.74
19/06/2021 00:14	0.0	0.0	19.4	17	0	1007	1009	2	1	0.00	18.5	2.74
19/06/2021 01:14	0.0	0.0	19.6	17	0	1008	1009	1	0	0.00	18.3	2.74
19/06/2021 02:14	0.0	0.0	19.9	18	0	1008	1009	1	0	0.00	18.2	2.75
19/06/2021 03:14	0.0	0.0	20.0	18	0	1009	1009	0	0	0.00	18.0	2.75
19/06/2021 04:14	0.0	0.0	20.1	18	0	1009	1010	1	0	0.00	17.9	2.75
19/06/2021 05:14	0.0	0.0	20.2	18	0	1009	1010	1	0	0.00	17.8	2.75
19/06/2021 06:14	0.0	0.0	20.2	18	0	1010	1011	1	0	0.00	17.7	2.75
19/06/2021 07:14	0.0	0.0	20.2	18	0	1010	1011	1	0	0.00	17.6	2.76
19/06/2021 08:14	0.0	0.0	20.1	18	0	1010	1011	1	0	0.00	17.6	2.76
19/06/2021 09:14	0.0	0.0	20.1	19	0	1009	1010	1	0	0.00	17.6	2.76
19/06/2021 10:14	0.0	0.0	19.9	19	0	1010	1010	0	0	0.00	17.6	2.76
19/06/2021 11:14	0.0	0.0	19.8	19	0	1010	1010	0	0	0.00	17.6	2.76
19/06/2021 12:14	0.0	0.0	19.7	19	0	1010	1010	0	0	0.00	17.7	2.76
19/06/2021 13:14	0.0	0.0	19.7	18	0	1009	1009	0	0	0.03	17.8	2.76
19/06/2021 14:14	0.0	0.0	19.7	18	0	1008	1009	1	0	0.03	17.9	2.76
19/06/2021 15:14	0.0	0.0	19.5	17	0	1008	1008	0	0	0.03	18.0	2.76
19/06/2021 16:14	0.0	0.8	18.8	18	0	1007	1008	1	0	0.03	18.1	2.76
19/06/2021 17:14	0.0	1.5	17.3	18	0	1007	1007	0	0	0.00	18.1	2.76
19/06/2021 18:14	0.0	1.5	16.3	18	0	1006	1007	1	0	0.03	18.1	2.76
19/06/2021 19:14	0.0	2.2	15.0	19	0	1005	1006	1	-1	0.00	18.1	2.76
19/06/2021 20:14	0.0	2.2	13.9	18	0	1004	1005	1	-1	0.03	18.1	2.76
19/06/2021 21:14	0.0	3.0	13.0	19	0	1004	1005	1	-1	0.03	18.0	2.76
19/06/2021 22:14	0.0	3.0	12.4	19	0	1004	1005	1	0	0.03	17.9	2.75
19/06/2021 23:14	0.0	3.0	11.9	19	0	1004	1004	0	0	0.03	17.8	2.75
20/06/2021 00:14	0.0	3.0	11.5	19	0	1003	1004	1	0	0.03	17.8	2.75
20/06/2021 01:14	0.0	3.7	11.1	19	0	1003	1004	1	0	0.03	17.6	2.75
20/06/2021 02:14	0.0	3.7	10.7	19	0	1002	1003	1	0	0.00	17.6	2.75
20/06/2021 03:14	0.0	3.7	10.4	19	0	1002	1002	0	0	0.03	17.5	2.74
20/06/2021 04:14	0.0	3.7	10.1	19	0	1002	1003	1	0	0.03	17.4	2.74
20/06/2021 05:14	0.0	3.7	10.0	19	0	1002	1003	1	0	0.03	17.4	2.74
20/06/2021 06:14	0.0	3.7	9.8	19	0	1002	1003	1	0	0.00	17.3	2.74
20/06/2021 07:14	0.0	3.7	9.7	19	0	1002	1003	1	0	0.00	17.3	2.74
20/06/2021 08:14	0.0	3.7	9.6	19	0	1003	1003	0	0	0.00	17.3	2.73
20/06/2021 09:14	0.0	3.7	9.6	19	0	1003	1004	1	0	0.00	17.3	2.74
20/06/2021 10:14	0.0	3.7	9.6	19	0	1003	1003	0	0	0.03	17.4	2.73
20/06/2021 11:14	0.0	3.7	9.6	19	0	1003	1003	0	0	0.03	17.6	2.73
20/06/2021 12:14	0.0	3.7	9.6	19	0	1003	1003	0	0	0.03	17.7	2.73
20/06/2021 13:14	0.0	3.7	9.6	18	0	1003	1003	0	0	0.03	17.9	2.73
20/06/2021 14:14	0.0	3.7	9.5	19	0	1002	1002	0	0	0.03	18.1	2.72
20/06/2021 15:14	0.0	3.7	9.4	19	0	1002	1002	0	0	0.03	18.4	2.72
20/06/2021 16:14	0.0	4.4	9.3	18	0	1002	1002	0	0	0.03	18.8	2.72
20/06/2021 17:14	0.0	4.4	9.1	18	0	1001	1002	1	0	0.03	19.1	2.72
20/06/2021 18:14	0.0	4.4	9.0	19	0	1002	1002	0	0	0.03	19.3	2.72

gqs
Experts in Continuous Monitoring

Date and Time	CH_4	CO_2	O_2	CO	H_2S	Borehole Pressure	Atmospheric Pressure	Differential Pressure	Average 9-hour atmospheric pressure change	Flow	Temperature	Water Level
	% v/v	% v/v	% v/v	ppm/v	ppm/v	mbar	mbar	mbar	mbar	Ltr/hr	°C	mbgl
20/06/2021 19:14	0.0	4.4	8.9	19	0	1002	1003	1	0	0.03	19.3	2.72
20/06/2021 20:14	0.0	4.4	8.9	18	0	1002	1003	1	0	0.03	19.3	2.72
20/06/2021 21:14	0.0	4.4	8.9	18	0	1003	1003	0	0	0.00	19.1	2.73
20/06/2021 22:14	0.0	4.4	9.2	18	0	1003	1004	1	0	0.00	18.9	2.73
20/06/2021 23:14	0.0	3.7	10.1	18	0	1003	1004	1	0	0.00	18.8	2.73
21/06/2021 00:14	0.0	4.4	9.4	18	0	1002	1003	1	0	0.03	18.6	2.73
21/06/2021 01:14	0.0	4.4	9.1	18	0	1003	1003	0	0	0.00	18.4	2.73
21/06/2021 02:14	0.0	4.4	9.1	18	0	1002	1003	1	0	0.00	18.2	2.73
21/06/2021 03:14	0.0	4.4	9.0	18	0	1002	1003	1	0	0.00	18.0	2.73
21/06/2021 04:14	0.0	4.4	8.9	18	0	1003	1003	0	0	0.00	17.9	2.73
21/06/2021 05:14	0.0	4.4	8.9	18	0	1003	1003	0	0	0.00	17.7	2.73
21/06/2021 06:14	0.0	4.4	8.9	18	0	1003	1004	1	0	0.03	17.6	2.73
21/06/2021 07:14	0.0	4.4	8.9	18	0	1003	1004	1	0	0.00	17.5	2.73
21/06/2021 08:14	0.0	3.7	9.4	18	0	1004	1004	0	0	0.00	17.4	2.73
21/06/2021 09:14	0.0	2.2	12.5	18	0	1004	1004	0	0	0.00	17.3	2.73
21/06/2021 10:14	0.0	1.5	15.8	17	0	1004	1005	1	0	0.00	17.3	2.73
21/06/2021 11:14	0.0	0.7	17.2	16	0	1004	1005	1	0	0.03	17.3	2.73
21/06/2021 12:14	0.0	0.7	18.1	17	0	1005	1005	0	0	0.00	17.3	2.73
21/06/2021 13:14	0.0	0.7	18.7	17	0	1005	1006	1	0	0.03	17.3	2.73
21/06/2021 14:14	0.0	0.0	19.2	17	0	1005	1006	1	0	0.00	17.4	2.73
21/06/2021 15:14	0.0	0.0	19.6	17	0	1006	1007	1	0	0.00	17.4	2.73
21/06/2021 16:14	0.0	0.0	19.9	17	0	1006	1007	1	0	0.00	17.3	2.74
21/06/2021 17:14	0.0	0.0	20.1	17	0	1007	1007	0	0	0.00	17.3	2.74
21/06/2021 18:14	0.0	0.0	20.2	17	0	1007	1008	1	0	0.00	17.3	2.74
21/06/2021 19:14	0.0	0.0	20.3	18	0	1007	1008	1	0	0.03	17.3	2.74
21/06/2021 20:14	0.0	0.0	20.4	18	0	1008	1009	1	0	0.00	17.2	2.74
21/06/2021 21:14	0.0	0.0	20.4	17	0	1009	1009	0	0	0.00	17.1	2.75
21/06/2021 22:14	0.0	0.0	20.5	18	0	1009	1009	0	0	0.00	17.0	2.75
21/06/2021 23:14	0.0	0.0	20.4	18	0	1009	1010	1	0	0.03	16.9	2.75
22/06/2021 00:14	0.0	0.0	20.4	18	0	1010	1010	0	0	0.00	16.8	2.75
22/06/2021 01:14	0.0	0.0	20.4	17	0	1010	1011	1	0	0.00	16.7	2.76
22/06/2021 02:14	0.0	0.0	20.4	18	0	1010	1010	0	0	0.00	16.6	2.76
22/06/2021 03:14	0.0	0.0	20.4	18	0	1010	1011	1	0	0.00	16.4	2.76
22/06/2021 04:14	0.0	0.0	20.4	19	0	1010	1011	1	0	0.00	16.4	2.76
22/06/2021 05:14	0.0	0.0	20.3	19	0	1011	1011	0	0	0.00	16.3	2.76
22/06/2021 06:14	0.0	0.0	20.4	18	0	1011	1012	1	0	0.00	16.2	2.76
22/06/2021 07:14	0.0	0.0	20.3	19	0	1011	1012	1	0	0.00	16.1	2.77
22/06/2021 08:14	0.0	0.0	20.4	18	0	1012	1013	1	0	0.00	16.0	2.77
22/06/2021 09:14	0.0	0.0	20.5	19	0	1013	1013	0	0	-0.10	15.9	2.77
22/06/2021 10:14	0.0	0.0	20.6	18	0	1013	1013	0	0	0.00	16.0	2.77
22/06/2021 11:14	0.0	0.0	20.6	19	0	1013	1014	1	0	0.00	16.1	2.77
22/06/2021 12:14	0.0	0.0	20.6	19	0	1014	1014	0	0	0.00	16.3	2.78
22/06/2021 13:14	0.0	0.0	20.6	19	0	1014	1014	0	0	0.03	16.4	2.78
22/06/2021 14:14	0.0	0.0	20.5	19	0	1014	1014	0	0	0.00	16.6	2.78
22/06/2021 15:14	0.0	0.0	20.5	19	0	1014	1015	1	0	0.00	16.8	2.78
22/06/2021 16:14	0.0	0.0	20.5	18	0	1015	1015	0	0	0.00	16.9	2.79
22/06/2021 17:14	0.0	0.0	20.5	19	0	1015	1015	0	0	0.00	17.1	2.79
22/06/2021 18:14	0.0	0.0	20.5	18	0	1015	1015	0	0	0.00	17.1	2.79
22/06/2021 19:14	0.0	0.0	20.5	19	0	1016	1016	0	0	0.00	17.1	2.79
22/06/2021 20:14	0.0	0.0	20.5	18	0	1016	1017	1	0	0.00	17.1	2.79
22/06/2021 21:14	0.0	0.0	20.5	19	0	1017	1017	0	0	0.03	17.1	2.80
22/06/2021 22:14	0.0	0.0	20.5	19	0	1017	1018	1	0	0.00	17.0	2.80
22/06/2021 23:14	0.0	0.0	20.5	19	0	1017	1018	1	0	0.00	16.8	2.80
23/06/2021 00:14	0.0	0.0	20.5	19	0	1017	1018	1	0	0.00	16.6	2.81
23/06/2021 01:14	0.0	0.0	20.5	19	0	1017	1018	1	0	0.00	16.4	2.81
23/06/2021 02:14	0.0	0.0	20.4	19	0	1017	1018	1	0	0.00	16.3	2.81
23/06/2021 03:14	0.0	0.0	20.4	19	0	1017	1018	1	0	0.03	16.2	2.81
23/06/2021 04:14	0.0	0.0	20.3	19	0	1017	1018	1	0	0.00	15.9	2.81
23/06/2021 05:14	0.0	0.0	20.3	19	0	1018	1018	0	0	0.00	15.8	2.81
23/06/2021 06:14	0.0	0.0	20.3	19	0	1018	1019	1	0	0.00	15.5	2.81
23/06/2021 07:14	0.0	0.0	20.3	19	0	1018	1019	1	0	0.00	15.3	2.81
23/06/2021 08:14	0.0	0.0	20.3	19	0	1018	1019	1	0	0.00	15.3	2.81
23/06/2021 09:14	0.0	0.0	20.2	19	0	1018	1019	1	0	0.03	15.4	2.81
23/06/2021 10:14	0.0	0.0	20.2	19	0	1018	1018	0	0	0.00	15.6	2.81
23/06/2021 11:14	0.0	0.0	20.2	19	0	1018	1018	0	0	0.00	15.8	2.81
23/06/2021 12:14	0.0	0.0	20.1	19	0	1018	1018	0	0	0.03	16.3	2.81
23/06/2021 13:14	0.0	0.0	20.2	19	0	1018	1018	0	0	0.03	16.8	2.81
23/06/2021 14:14	0.0	0.0	20.2	19	0	1018	1017	-1	0	0.00	17.3	2.81
23/06/2021 15:14	0.0	0.0	20.2	19	0	1017	1017	0	0	0.03	17.8	2.81
23/06/2021 16:14	0.0	0.0	20.2	18	0	1017	1017	0	0	0.03	18.3	2.81
23/06/2021 17:14	0.0	0.0	20.2	18	0	1017	1017	0	0	0.05	18.6	2.81
23/06/2021 18:14	0.0	0.0	20.3	18	0	1017	1017	0	0	0.05	18.8	2.81
23/06/2021 19:14	0.0	0.0	20.1	18	0	1017	1018	1	0	0.03	18.9	2.81
23/06/2021 20:14	0.0	0.0	19.8	19	0	1018	1018	0	0	0.03	18.7	2.82
23/06/2021 21:14	0.0	0.0	19.7	19	0	1018	1018	0	0	0.00	18.4	2.82
23/06/2021 22:14	0.0	0.0	19.5	19	0	1018	1019	1	0	0.00	18.1	2.82
23/06/2021 23:14	0.0	0.0	19.5	19	0	1018	1019	1	0	0.03	17.8	2.82
24/06/2021 00:14	0.0	0.0	19.5	19	0	1018	1019	1	0	0.00	17.4	2.82
24/06/2021 01:14	0.0	0.0	19.5	19	0	1017	1018	1	0	0.00	17.1	2.82
24/06/2021 02:14	0.0	0.0	19.5	18	0	1018	1018	0	0	0.00	16.8	2.82
24/06/2021 03:14	0.0	0.0	19.5	18	0	1017	1018	1	0	0.00	16.5	2.82
24/06/2021 04:14	0.0	0.0	19.5	18	0	1017	1018	1	0	0.03	16.2	2.82
24/06/2021 05:14	0.0	0.0	19.5	18	0	1017	1018	1	0	0.00	15.9	2.82
24/06/2021 06:14	0.0	0.0	19.5	19	0	1017	1018	1	0	0.00	15.7	2.81
24/06/2021 07:14	0.0	0.7	19.5	18	0	1017	1018	1	0	0.00	15.5	2.81
24/06/2021 08:14	0.0	0.7	19.4	19	0	1017	1017	0	0	0.00	15.4	2.81
24/06/2021 09:14	0.0	0.8	19.3	19	0	1016	1016	0	0	0.00	15.6	2.80
24/06/2021 10:14	0.0	0.7	19.1	18	0	1016	1016	0	0	0.00	15.9	2.80
24/06/2021 11:14	0.0	0.7	18.9	19	0	1016	1015	-1	0	0.03	16.4	2.80
24/06/2021 12:14	0.0	0.7	18.6	18	0	1016	1016	0	0	0.03	16.9	2.80
24/06/2021 13:14	0.0	0.7	18.4	19	0	1016	1015	-1	0	0.03	17.5	2.80
24/06/2021 14:14	0.0	0.7	18.1	18	0	1015	1015	0	0	0.05	18.1	2.79
24/06/2021 15:14	0.0	0.7	17.8	18	0	1015	1015	0	0	0.05	18.5	2.80
24/06/2021 16:14	0.0	1.5	17.6	18	0	1015	1015	0	0	0.03	18.6	2.80
24/06/2021 17:14	0.0	1.5	17.4	18	0	1015	1015	0	0	0.03	18.6	2.80
24/06/2021 18:14	0.0	1.5	17.2	19	0	1015	1015	0	0	0.03	18.6	2.80
24/06/2021 19:14	0.0	1.5	17.0	18	0	1015	1015	0	0	0.03	18.6	2.80
24/06/2021 20:14	0.0	1.5	16.8	19	0	1015	1015	0	0	0.03	18.5	2.80
24/06/2021 21:14	0.0	1.5	16.7	18	0	1015	1015	0	0	0.03	18.4	2.80
24/06/2021 22:14	0.0	1.5	16.5	18	0	1015	1015	0	0	0.00	18.3	2.80
24/06/2021 23:14	0.0	1.5	16.3	18	0	1015	1015	0	0	0.03	18.1	2.80
25/06/2021 00:14	0.0	1.5	16.2	19	0	1014	1015	1	0	0.03	17.9	2.79
25/06/2021 01:14	0.0	1.5	15.9	18	0	1014	1014	0	0	0.00	17.8	2.79
25/06/2021 02:14	0.0	1.5	15.6	19	0	1013	1014	1	0	0.00	17.7	2.79
25/06/2021 03:14	0.0	2.2	15.3	19	0	1013	1013	0	0	0.03	17.6	2.79
25/06/2021 04:14	0.0	2.2	15.0	19	0	1012	1013	1	0	0.03	17.5	2.79
25/06/2021 05:14	0.0	2.2	14.7	19	0	1012	1013	1	0	0.03	17.4	2.79
25/06/2021 06:14	0.0	2.2	14.5	19	0	1012	1012	0	0	0.03	17.3	2.79
25/06/2021 07:14	0.0	2.2	14.3	19	0	1012	1012	0	0	0.03	17.3	2.78
25/06/2021 08:14	0.0	2.2	14.2	19	0	1012	1012	0	0	0.03	17.2	2.78
25/06/2021 09:14	0.0	2.2	14.1	19	0	1012	1012	0	0	0.03	17.2	2.78
25/06/2021 10:14	0.0	2.2	13.9	19	0	1011	1012	1	0	0.03	17.3	2.78
25/06/2021 11:14	0.0	2.2	13.8	19	0	1011	1012	1	0	0.03	17.4	2.77
25/06/2021 12:14	0.0	2.2	13.7	19	0	1011	1011	0	0	0.03	17.4	2.77
25/06/2021 13:14	0.0	2.9	13.5	18	0	1011	1011	0	0	0.03	17.5	2.77
25/06/2021 14:14	0.0	2.9	13.4	19	0	1011	1011	0	0	0.03	17.6	2.77
25/06/2021 15:14	0.0	3.0	13.3	19	0	1011	1011	0	0	0.03	17.7	2.77
25/06/2021 16:14	0.0	2.9	13.2	19	0	1010	1010	0	0	0.03	17.8	2.77
25/06/2021 17:14	0.0	2.9	13.0	19	0	1010	1010	0	0	0.03	17.9	2.76
25/06/2021 18:14	0.0	3.0	12.9	19	0	1010	1010	0	0	0.03	18.1	2.76
25/06/2021 19:14	0.0	2.9	12.8	19	0	1010	1010	0	0	0.03	18.2	2.76
25/06/2021 20:14	0.0	2.9	12.7	19	0	1010	1010	0	0	0.00	18.3	2.76

ggs
Experts in Continuous Monitoring

Date and Time	CH_4	CO_2	O_2	CO	H_2S	Borehole Pressure	Atmospheric Pressure	Differential Pressure	Average 9-hour atmospheric pressure change	Flow	Temperature	Water Level
	% v/v	% v/v	% v/v	ppm/v	ppm/v	mbar	mbar	mbar	mbar	Ltr/hr	°C	mbgl
25/06/2021 21:14	0.0	2.9	12.7	19	0	1010	1011	1	0	0.03	18.2	2.76
25/06/2021 22:14	0.0	3.0	12.7	19	0	1011	1011	0	0	0.03	17.9	2.76
25/06/2021 23:14	0.0	2.9	12.6	19	0	1011	1011	0	0	0.00	17.7	2.76
26/06/2021 00:14	0.0	2.9	12.6	19	0	1011	1011	0	0	0.00	17.4	2.76
26/06/2021 01:14	0.0	3.0	12.6	18	0	1011	1012	1	0	0.00	17.1	2.76
26/06/2021 02:14	0.0	2.9	12.6	19	0	1011	1012	1	0	0.00	16.8	2.76
26/06/2021 03:14	0.0	3.0	12.6	19	0	1011	1012	1	0	0.00	16.4	2.76
26/06/2021 04:14	0.0	2.9	12.6	19	0	1011	1012	1	0	0.00	16.2	2.76
26/06/2021 05:14	0.0	3.0	12.7	19	0	1011	1012	1	0	0.00	16.0	2.76
26/06/2021 06:14	0.0	2.2	14.7	19	0	1012	1012	0	0	0.00	15.9	2.76
26/06/2021 07:14	0.0	0.8	17.2	19	0	1012	1013	1	0	0.03	15.9	2.76
26/06/2021 08:14	0.0	0.8	18.1	19	0	1012	1013	1	0	0.03	15.9	2.76
26/06/2021 09:14	0.0	0.7	18.7	19	0	1012	1012	0	0	0.03	16.1	2.75
26/06/2021 10:14	0.0	0.0	19.0	18	0	1012	1012	0	0	0.00	16.3	2.75
26/06/2021 11:14	0.0	0.0	19.1	19	0	1013	1012	-1	0	0.03	16.6	2.75
26/06/2021 12:14	0.0	0.0	19.2	19	0	1013	1013	-1	0	0.00	17.1	2.75
26/06/2021 13:14	0.0	0.0	19.2	18	0	1013	1012	-1	0	0.03	17.4	2.76
26/06/2021 14:14	0.0	0.0	19.2	19	0	1012	1012	0	0	0.03	17.8	2.76
26/06/2021 15:14	0.0	0.0	19.1	18	0	1012	1012	0	0	0.03	18.1	2.76
26/06/2021 16:14	0.0	0.7	18.8	18	0	1011	1012	1	0	0.03	18.3	2.76
26/06/2021 17:14	0.0	0.7	18.0	18	0	1011	1011	0	0	0.03	18.5	2.76
26/06/2021 18:14	0.0	1.4	16.9	18	0	1011	1011	0	0	0.03	18.6	2.76
26/06/2021 19:14	0.0	1.5	16.0	18	0	1011	1011	0	0	0.03	18.8	2.76
26/06/2021 20:14	0.0	1.5	15.5	19	0	1011	1012	1	0	0.03	18.8	2.76
26/06/2021 21:14	0.0	1.5	15.2	18	0	1012	1012	0	0	0.03	18.6	2.76
26/06/2021 22:14	0.0	1.5	15.9	19	0	1012	1013	1	0	0.00	18.4	2.76
26/06/2021 23:14	0.0	1.5	15.9	19	0	1012	1012	0	0	0.03	18.1	2.77
27/06/2021 00:14	0.0	1.5	15.3	18	0	1011	1012	1	0	0.03	17.9	2.76
27/06/2021 01:14	0.0	2.2	14.9	19	0	1011	1012	1	0	0.03	17.8	2.76
27/06/2021 02:14	0.0	2.2	14.4	19	0	1011	1012	1	0	0.00	17.6	2.76
27/06/2021 03:14	0.0	2.2	13.7	18	0	1011	1011	0	0	0.00	17.5	2.76
27/06/2021 04:14	0.0	2.2	13.0	19	0	1010	1011	1	0	0.00	17.4	2.76
27/06/2021 05:14	0.0	2.9	12.5	19	0	1010	1010	0	0	0.03	17.4	2.76
27/06/2021 06:14	0.0	3.0	12.1	19	0	1009	1010	1	0	0.03	17.4	2.76
27/06/2021 07:14	0.0	2.9	11.8	19	0	1009	1009	0	0	0.00	17.3	2.76
27/06/2021 08:14	0.0	2.9	11.7	19	0	1009	1009	0	0	0.03	17.3	2.76
27/06/2021 09:14	0.0	3.0	11.6	19	0	1009	1009	0	0	0.03	17.4	2.76
27/06/2021 10:14	0.0	3.0	11.5	19	0	1008	1008	0	0	0.03	17.6	2.75
27/06/2021 11:14	0.0	3.0	11.4	19	0	1009	1009	0	0	0.03	17.8	2.75
27/06/2021 12:14	0.0	3.0	11.3	19	0	1008	1008	0	0	0.03	18.0	2.75
27/06/2021 13:14	0.0	3.7	11.3	19	0	1008	1008	0	0	0.03	18.2	2.75
27/06/2021 14:14	0.0	3.7	11.2	19	0	1008	1009	1	0	0.03	18.4	2.75
27/06/2021 15:14	0.0	3.7	11.1	18	0	1008	1009	1	0	0.03	18.5	2.75
27/06/2021 16:14	0.0	3.7	11.1	19	0	1008	1008	0	0	0.00	18.5	2.75
27/06/2021 17:14	0.0	3.7	11.1	19	0	1008	1008	0	0	0.03	18.6	2.75
27/06/2021 18:14	0.0	3.7	11.0	19	0	1008	1009	1	0	0.00	18.5	2.75
27/06/2021 19:14	0.0	3.6	11.0	18	0	1008	1009	1	0	0.03	18.5	2.75
27/06/2021 20:14	0.0	3.7	11.0	18	0	1008	1009	1	0	0.03	18.4	2.75
27/06/2021 21:14	0.0	3.7	10.9	19	0	1008	1008	0	0	0.00	18.3	2.75
27/06/2021 22:14	0.0	3.7	10.9	18	0	1008	1008	0	0	0.03	18.3	2.75
27/06/2021 23:14	0.0	3.7	10.8	18	0	1008	1008	0	0	0.03	18.2	2.75
28/06/2021 00:14	0.0	3.7	10.8	19	0	1008	1008	0	0	0.00	18.1	2.75
28/06/2021 01:14	0.0	3.7	10.7	19	0	1007	1008	1	0	0.03	18.0	2.75
28/06/2021 02:14	0.0	3.7	10.6	19	0	1007	1008	1	0	0.03	17.9	2.75
28/06/2021 03:14	0.0	3.7	10.5	19	0	1007	1007	0	0	0.00	17.9	2.75
28/06/2021 04:14	0.0	3.7	10.4	18	0	1007	1007	0	0	0.03	17.9	2.75
28/06/2021 05:14	0.0	3.7	10.4	19	0	1007	1008	1	0	0.03	17.8	2.75
28/06/2021 06:14	0.0	3.7	10.4	18	0	1007	1008	1	0	0.03	17.8	2.75
28/06/2021 07:14	0.0	3.7	10.3	18	0	1007	1008	1	0	0.00	17.8	2.75
28/06/2021 08:14	0.0	3.7	10.3	19	0	1008	1008	0	0	0.00	17.8	2.75
28/06/2021 09:14	0.0	3.7	10.4	19	0	1008	1009	1	0	0.03	17.8	2.75
28/06/2021 10:14	0.0	2.2	13.5	19	0	1009	1009	0	0	0.00	17.8	2.75
28/06/2021 11:14	0.0	1.5	14.8	19	0	1009	1009	0	0	0.00	17.9	2.75
28/06/2021 12:14	0.0	0.7	16.3	19	0	1009	1009	0	0	0.03	18.0	2.75
28/06/2021 13:14	0.0	0.7	17.4	18	0	1009	1009	0	0	0.03	18.1	2.75
28/06/2021 14:14	0.0	0.8	17.9	18	0	1009	1009	0	0	0.00	18.3	2.74
28/06/2021 15:14	0.0	0.7	18.1	18	0	1009	1009	0	0	0.03	18.7	2.74
28/06/2021 16:14	0.0	0.7	17.2	18	0	1008	1008	0	0	0.03	18.9	2.75
28/06/2021 17:14	0.0	1.4	15.4	18	0	1008	1008	0	0	0.03	19.2	2.75
28/06/2021 18:14	0.0	2.2	13.5	18	0	1008	1008	0	0	0.03	19.4	2.75
28/06/2021 19:14	0.0	2.9	12.2	18	0	1008	1008	0	0	0.03	19.4	2.75
28/06/2021 20:14	0.0	2.9	11.6	18	0	1008	1008	0	0	0.03	19.4	2.75
28/06/2021 21:14	0.0	2.9	11.2	19	0	1008	1009	1	0	0.03	19.4	2.75
28/06/2021 22:14	0.0	2.9	11.1	18	0	1008	1009	1	0	0.00	19.3	2.75
28/06/2021 23:14	0.0	2.9	11.0	19	0	1008	1009	1	0	0.00	19.1	2.75
29/06/2021 00:14	0.0	2.9	10.9	19	0	1008	1009	1	0	0.03	18.9	2.75
29/06/2021 01:14	0.0	2.9	10.9	18	0	1008	1009	1	0	0.03	18.8	2.75
29/06/2021 02:14	0.0	3.7	10.8	19	0	1008	1008	0	0	0.03	18.7	2.75
29/06/2021 03:14	0.0	3.7	10.6	18	0	1007	1008	1	0	0.03	18.6	2.75
29/06/2021 04:14	0.0	3.7	10.4	18	0	1007	1008	1	0	0.00	18.5	2.75
29/06/2021 05:14	0.0	3.7	10.2	18	0	1007	1008	1	0	0.03	18.4	2.75
29/06/2021 06:14	0.0	3.6	10.1	19	0	1007	1008	1	0	0.03	18.3	2.75
29/06/2021 07:14	0.0	3.7	10.0	18	0	1008	1009	1	0	0.03	18.2	2.75
29/06/2021 08:14	0.0	3.7	10.0	19	0	1008	1009	1	0	0.00	18.1	2.75
29/06/2021 09:14	0.0	3.0	10.9	19	0	1008	1009	1	0	0.03	18.1	2.75
29/06/2021 10:14	0.0	2.2	12.8	18	0	1009	1009	0	0	0.03	18.1	2.75
29/06/2021 11:14	0.0	2.2	13.8	18	0	1009	1009	0	0	0.00	18.1	2.75
29/06/2021 12:14	0.0	1.5	14.8	18	0	1009	1009	0	0	0.03	18.3	2.75
29/06/2021 13:14	0.0	1.5	15.1	18	0	1009	1009	0	0	0.00	18.5	2.75
29/06/2021 14:14	0.0	1.5	16.0	18	0	1009	1009	0	0	0.03	18.7	2.75
29/06/2021 15:14	0.0	0.7	17.9	18	0	1009	1010	1	0	0.00	18.8	2.75
29/06/2021 16:14	0.0	0.7	18.3	18	0	1009	1010	1	0	0.03	18.8	2.75
29/06/2021 17:14	0.0	0.7	18.6	18	0	1009	1010	1	0	0.03	18.8	2.75
29/06/2021 18:14	0.0	0.7	18.8	18	0	1010	1010	0	0	-0.05	18.8	2.75
29/06/2021 19:14	0.0	0.0	19.0	17	0	1010	1010	0	0	0.00	18.7	2.75
29/06/2021 20:14	0.0	0.0	19.3	18	0	1010	1010	0	0	0.00	18.6	2.75
29/06/2021 21:14	0.0	0.0	19.5	18	0	1010	1011	1	0	0.00	18.5	2.76
29/06/2021 22:14	0.0	0.0	19.8	18	0	1011	1011	0	0	0.03	18.4	2.76
29/06/2021 23:14	0.0	0.0	20.0	18	0	1011	1011	0	0	0.03	18.3	2.76
30/06/2021 00:14	0.0	0.0	20.0	18	0	1011	1011	0	0	0.00	18.2	2.76
30/06/2021 01:14	0.0	0.0	20.1	18	0	1011	1011	0	0	0.00	18.1	2.76
30/06/2021 02:14	0.0	0.0	20.1	17	0	1011	1011	0	0	0.03	18.0	2.76
30/06/2021 03:14	0.0	0.0	20.0	17	0	1010	1011	1	0	0.00	17.9	2.76
30/06/2021 04:14	0.0	0.0	19.9	18	0	1010	1011	1	0	0.00	17.8	2.76

ggs
Experts in Continuous Monitoring

Time Series Data

Project Ref:	GGS2586
Project Name:	Downlands Farm, Uckfield
Borehole ref:	WS05
Instrument Name and ID:	000034/04/09
Start Date:	11/06/2021 13:11
End Date:	02/07/2021 08:11
Days of monitoring:	21
Monitoring Frequency (mins):	60
Total samples taken:	500

ggs
Experts in Continuous Monitoring

Summary Table

	CH_4	CO_2	O_2	CO	H_2S	Borehole Pressure	Atmospheric Pressure	Differential Pressure	Average 9-hour atmospheric pressure change	Flow	Temperature	Water Level
Minimum	0.0	0.0	8.9	0	0	1002	1002	-2	-0.63	-0.05	12.9	3.93
Maximum	0.0	8.7	16.9	14	1	1023	1023	2	0.50	0.10	24.9	3.97
Range	0.0	8.7	8.0	14	1	21	21	N/A	1.13	0.15	12.0	0.04

Date and Time	CH_4 % v/v	CO_2 % v/v	O_2 % v/v	CO ppm/v	H_2S ppm/v	Borehole Pressure mbar	Atmospheric Pressure mbar	Differential Pressure mbar	Average 9-hour atmospheric pressure change mbar	Flow Ltr/hr	Temperature °C	Water Level mbgl
11/06/2021 13:11	0.0	2.5	13.2	14	0	1016	1015	-1	N/A	0.00	20.8	3.94
11/06/2021 14:11	0.0	3.7	11.8	12	0	1015	1014	-1	N/A	-0.03	20.1	3.94
11/06/2021 15:11	0.0	4.9	11.1	13	0	1015	1014	-1	N/A	0.00	20.3	3.95
11/06/2021 16:11	0.0	5.0	10.7	14	0	1015	1015	0	N/A	0.00	20.8	3.95
11/06/2021 17:11	0.0	6.2	10.2	12	0	1015	1015	0	N/A	-0.05	20.6	3.94
11/06/2021 18:11	0.0	6.2	9.9	14	0	1015	1014	-1	N/A	0.00	20.4	3.94
11/06/2021 19:11	0.0	6.2	9.7	12	0	1015	1014	-1	N/A	0.00	20.3	3.95
11/06/2021 20:11	0.0	7.5	9.4	12	0	1015	1015	0	N/A	0.00	20.1	3.94
11/06/2021 21:11	0.0	7.5	9.3	13	0	1015	1015	0	0	0.00	19.6	3.96
11/06/2021 22:11	0.0	7.5	9.1	12	0	1015	1015	0	0	-0.05	18.8	3.95
11/06/2021 23:11	0.0	7.4	9.0	12	0	1015	1016	1	0	0.00	18.2	3.95
12/06/2021 00:11	0.0	7.4	9.0	12	0	1015	1016	1	0	0.00	17.8	3.96
12/06/2021 01:11	0.0	7.4	9.0	11	0	1015	1016	1	0	0.00	17.4	3.94
12/06/2021 02:11	0.0	7.4	8.9	11	0	1015	1016	1	0	0.00	17.1	3.96
12/06/2021 03:11	0.0	7.4	9.0	11	0	1015	1016	1	0	0.00	16.9	3.95
12/06/2021 04:11	0.0	7.4	8.9	10	0	1016	1016	0	0	0.00	16.8	3.95
12/06/2021 05:11	0.0	7.4	9.0	10	0	1016	1016	0	0	0.00	16.7	3.94
12/06/2021 06:11	0.0	7.5	9.0	10	0	1016	1016	0	0	0.00	16.6	3.95
12/06/2021 07:11	0.0	7.4	9.2	9	0	1017	1017	0	0	-0.03	16.6	3.95
12/06/2021 08:11	0.0	7.4	9.4	10	0	1017	1017	0	0	0.00	16.7	3.95
12/06/2021 09:11	0.0	7.5	9.6	9	0	1017	1016	-1	0	0.00	16.9	3.94
12/06/2021 10:11	0.0	7.5	9.9	8	0	1018	1017	-1	0	0.00	17.4	3.94
12/06/2021 11:11	0.0	6.2	10.2	6	0	1018	1017	-1	0	0.00	18.2	3.94
12/06/2021 12:11	0.0	6.2	10.5	6	0	1018	1017	-1	0	0.00	19.2	3.95
12/06/2021 13:11	0.0	6.2	10.7	4	0	1018	1017	-1	0	0.00	20.1	3.94
12/06/2021 14:11	0.0	6.2	10.9	5	0	1018	1017	-1	0	-0.03	20.8	3.95
12/06/2021 15:11	0.0	6.2	11.1	4	0	1019	1017	-2	0	-0.05	21.6	3.94
12/06/2021 16:11	0.0	5.0	11.3	2	0	1019	1017	-2	0	0.00	22.4	3.93
12/06/2021 17:11	0.0	5.0	11.5	2	0	1019	1017	-2	0	-0.05	23.1	3.94
12/06/2021 18:11	0.0	5.0	11.6	2	0	1019	1018	-1	0	0.00	23.8	3.93
12/06/2021 19:11	0.0	5.0	11.6	3	0	1019	1018	-1	0	-0.05	23.8	3.94
12/06/2021 20:11	0.0	5.0	11.6	4	0	1020	1019	-1	0	0.00	23.3	3.94
12/06/2021 21:11	0.0	5.0	11.8	5	0	1020	1020	0	0	-0.05	22.3	3.94
12/06/2021 22:11	0.0	5.0	12.1	6	0	1021	1020	-1	0	0.00	21.1	3.95
12/06/2021 23:11	0.0	3.7	12.4	6	0	1021	1021	0	1	0.00	19.9	3.96
13/06/2021 00:11	0.0	3.7	12.6	6	0	1021	1021	0	1	0.00	18.9	3.95
13/06/2021 01:11	0.0	3.7	12.8	6	0	1021	1021	0	0	0.00	18.2	3.94
13/06/2021 02:11	0.0	3.7	12.9	6	0	1021	1021	0	0	0.00	17.5	3.95
13/06/2021 03:11	0.0	3.7	12.9	6	0	1021	1021	0	0	0.00	16.9	3.94
13/06/2021 04:11	0.0	3.7	12.9	5	0	1021	1021	0	0	0.00	16.4	3.95
13/06/2021 05:11	0.0	3.7	13.1	5	0	1022	1022	0	0	0.00	16.0	3.96
13/06/2021 06:11	0.0	2.5	13.4	3	0	1022	1023	1	0	0.00	15.7	3.95
13/06/2021 07:11	0.0	2.5	13.7	3	0	1023	1023	0	0	0.00	15.5	3.96
13/06/2021 08:11	0.0	2.4	13.9	3	0	1023	1022	-1	0	0.00	15.5	3.95
13/06/2021 09:11	0.0	2.4	14.1	0	0	1023	1022	-1	0	0.00	15.8	3.93
13/06/2021 10:11	0.0	2.5	14.2	0	0	1023	1021	-2	0	0.00	16.6	3.94
13/06/2021 11:11	0.0	2.5	14.3	0	0	1023	1021	-2	0	0.00	17.9	3.94
13/06/2021 12:11	0.0	2.5	14.3	0	0	1023	1021	-2	0	-0.03	19.3	3.94
13/06/2021 13:11	0.0	2.5	14.3	0	0	1022	1021	-1	0	0.00	20.5	3.94
13/06/2021 14:11	0.0	2.5	14.3	0	0	1022	1020	-2	0	0.00	21.4	3.94
13/06/2021 15:11	0.0	2.5	14.1	0	0	1021	1020	-1	0	0.00	22.3	3.94
13/06/2021 16:11	0.0	3.7	13.9	0	0	1021	1020	-1	0	0.00	23.1	3.94
13/06/2021 17:11	0.0	3.7	13.7	0	0	1021	1019	-2	0	-0.05	23.6	3.96
13/06/2021 18:11	0.0	3.8	13.5	0	0	1020	1019	-1	0	0.00	23.9	3.95
13/06/2021 19:11	0.0	3.7	13.3	0	0	1020	1019	-1	0	0.00	24.0	3.94
13/06/2021 20:11	0.0	5.0	13.1	0	0	1020	1019	-1	0	-0.05	23.6	3.96
13/06/2021 21:11	0.0	5.0	12.9	0	0	1019	1019	0	0	0.00	22.6	3.96
13/06/2021 22:11	0.0	4.9	12.7	1	0	1019	1019	0	0	0.00	21.4	3.95
13/06/2021 23:11	0.0	4.9	12.4	2	0	1018	1019	1	0	0.00	20.2	3.95
14/06/2021 00:11	0.0	4.9	12.2	3	0	1018	1018	0	0	0.00	19.2	3.94
14/06/2021 01:11	0.0	6.2	12.0	2	0	1017	1018	1	0	0.00	18.4	3.95
14/06/2021 02:11	0.0	6.2	11.9	2	0	1017	1017	0	0	0.00	17.7	3.96
14/06/2021 03:11	0.0	6.2	11.7	0	0	1017	1017	0	0	-0.05	17.1	3.96
14/06/2021 04:11	0.0	6.1	11.6	1	0	1017	1017	0	0	0.00	16.6	3.96
14/06/2021 05:11	0.0	6.1	11.5	0	0	1016	1017	1	0	0.00	16.2	3.95
14/06/2021 06:11	0.0	6.1	11.3	0	0	1016	1016	0	0	0.00	15.9	3.95
14/06/2021 07:11	0.0	6.1	11.3	0	0	1016	1016	0	0	0.00	15.7	3.96
14/06/2021 08:11	0.0	6.1	11.2	0	0	1016	1015	-1	0	0.00	15.7	3.94
14/06/2021 09:11	0.0	6.1	11.2	0	1	1015	1014	-1	0	0.00	15.9	3.94
14/06/2021 10:11	0.0	7.4	11.2	0	0	1015	1014	-1	0	0.00	16.8	3.93
14/06/2021 11:11	0.0	7.5	11.3	0	0	1015	1014	-1	0	0.00	18.2	3.93
14/06/2021 12:11	0.0	7.5	11.3	0	0	1015	1014	-1	0	0.00	19.8	3.93
14/06/2021 13:11	0.0	7.5	11.3	0	0	1015	1014	-1	0	0.00	21.1	3.95
14/06/2021 14:11	0.0	7.5	11.2	0	0	1015	1013	-2	0	0.00	22.1	3.94
14/06/2021 15:11	0.0	7.5	11.1	0	0	1014	1013	-1	0	0.00	23.1	3.93
14/06/2021 16:11	0.0	7.5	11.1	0	0	1015	1013	-2	0	0.00	24.0	3.94
14/06/2021 17:11	0.0	7.5	11.0	0	0	1014	1013	-1	0	0.00	24.5	3.94
14/06/2021 18:11	0.0	7.5	11.0	0	0	1014	1013	-1	0	0.00	24.8	3.94
14/06/2021 19:11	0.0	7.5	10.9	0	0	1014	1013	-1	0	0.00	24.6	3.94
14/06/2021 20:11	0.0	7.5	10.8	0	0	1014	1013	-1	0	0.00	23.9	3.94
14/06/2021 21:11	0.0	7.5	10.7	0	0	1014	1014	0	0	-0.05	22.9	3.95
14/06/2021 22:11	0.0	7.5	10.7	0	0	1015	1014	-1	0	0.00	21.9	3.95
14/06/2021 23:11	0.0	7.5	10.6	0	0	1015	1015	0	0	0.00	21.1	3.96
15/06/2021 00:11	0.0	7.5	10.6	0	0	1015	1015	0	0	0.00	20.4	3.95
15/06/2021 01:11	0.0	7.5	10.5	0	0	1015	1015	0	0	0.00	19.8	3.95
15/06/2021 02:11	0.0	7.5	10.5	0	0	1015	1015	0	0	-0.03	19.2	3.96
15/06/2021 03:11	0.0	7.4	10.4	0	0	1015	1015	0	0	0.00	18.7	3.95
15/06/2021 04:11	0.0	7.5	10.4	0	0	1015	1015	0	0	0.00	18.3	3.94
15/06/2021 05:11	0.0	7.4	10.4	0	0	1015	1016	1	0	0.00	18.0	3.95
15/06/2021 06:11	0.0	7.4	10.4	0	0	1016	1016	0	0	0.00	17.8	3.95
15/06/2021 07:11	0.0	7.4	10.5	0	0	1016	1016	0	0	0.00	17.6	3.95
15/06/2021 08:11	0.0	7.4	10.6	0	0	1017	1016	-1	0	0.00	17.7	3.95
15/06/2021 09:11	0.0	7.5	10.7	0	0	1016	1016	0	0	0.00	17.9	3.94
15/06/2021 10:11	0.0	7.4	10.9	0	0	1016	1015	-1	0	0.00	18.4	3.93
15/06/2021 11:11	0.0	7.5	11.0	0	0	1016	1015	-1	0	-0.03	19.3	3.95
15/06/2021 12:11	0.0	7.5	11.1	0	0	1016	1015	-1	0	0.00	20.5	3.94
15/06/2021 13:11	0.0	7.5	11.1	0	0	1016	1015	-1	0	0.00	21.4	3.94
15/06/2021 14:11	0.0	7.5	11.1	0	0	1015	1014	-1	0	0.00	22.0	3.94
15/06/2021 15:11	0.0	7.5	11.0	0	0	1015	1014	-1	0	0.00	22.4	3.94

ggs
Experts in Continuous Monitoring

Date and Time	CH_4	CO_2	O_2	CO	H_2S	Borehole Pressure	Atmospheric Pressure	Differential Pressure	Average 9-hour atmospheric pressure change	Flow	Temperature	Water Level
	% v/v	% v/v	% v/v	ppm/v	ppm/v	mbar	mbar	mbar	mbar	Ltr/hr	°C	mbgl
15/06/2021 16:11	0.0	7.5	10.9	0	0	1014	1013	-1	0	0.00	22.9	3.94
15/06/2021 17:11	0.0	7.5	10.8	0	0	1014	1013	-1	0	0.00	23.3	3.94
15/06/2021 18:11	0.0	7.5	10.7	0	0	1013	1012	-1	0	0.00	23.2	3.94
15/06/2021 19:11	0.0	7.5	10.7	0	0	1013	1012	-1	0	0.00	23.4	3.94
15/06/2021 20:11	0.0	7.5	10.6	0	0	1013	1012	-1	0	0.00	23.3	3.95
15/06/2021 21:11	0.0	7.5	10.5	0	0	1013	1012	-1	0	0.00	22.3	3.95
15/06/2021 22:11	0.0	7.5	10.4	0	0	1013	1013	0	0	0.00	21.2	3.94
15/06/2021 23:11	0.0	7.5	10.3	0	0	1013	1013	0	0	0.00	20.1	3.94
16/06/2021 00:11	0.0	7.5	10.2	0	0	1012	1012	0	0	0.00	19.1	3.96
16/06/2021 01:11	0.0	7.5	10.1	0	0	1011	1012	1	0	0.00	18.3	3.96
16/06/2021 02:11	0.0	8.7	10.0	0	0	1010	1011	1	0	0.00	17.6	3.97
16/06/2021 03:11	0.0	8.7	10.0	0	0	1010	1010	0	0	0.00	17.1	3.96
16/06/2021 04:11	0.0	8.7	9.9	0	0	1009	1010	1	0	0.00	16.6	3.97
16/06/2021 05:11	0.0	8.7	9.9	0	0	1008	1009	1	-1	-0.03	16.1	3.95
16/06/2021 06:11	0.0	8.7	9.8	0	0	1008	1009	1	-1	0.00	15.8	3.95
16/06/2021 07:11	0.0	8.7	9.8	0	0	1008	1009	1	0	0.00	15.6	3.96
16/06/2021 08:11	0.0	8.7	9.7	0	0	1008	1007	-1	-1	0.00	15.6	3.94
16/06/2021 09:11	0.0	8.7	9.7	0	0	1008	1007	-1	-1	0.00	15.9	3.94
16/06/2021 10:11	0.0	8.7	9.8	0	0	1007	1006	-1	-1	0.00	16.7	3.94
16/06/2021 11:11	0.0	8.7	9.9	0	0	1007	1006	-1	-1	0.00	18.1	3.94
16/06/2021 12:11	0.0	8.7	9.9	0	1	1007	1006	-1	0	0.00	19.7	3.94
16/06/2021 13:11	0.0	8.7	10.0	0	0	1006	1005	-1	-1	0.00	21.2	3.95
16/06/2021 14:11	0.0	7.5	10.0	0	0	1006	1005	-1	-1	0.00	22.3	3.94
16/06/2021 15:11	0.0	7.5	9.9	0	0	1006	1004	-2	0	0.00	23.4	3.93
16/06/2021 16:11	0.0	7.5	9.9	0	0	1005	1004	-1	0	0.00	24.3	3.94
16/06/2021 17:11	0.0	7.5	9.9	0	0	1005	1004	-1	0	0.00	24.9	3.95
16/06/2021 18:11	0.0	7.5	9.8	0	0	1005	1003	-2	0	-0.05	24.9	3.94
16/06/2021 19:11	0.0	7.5	9.8	0	0	1004	1003	-1	0	0.00	24.2	3.93
16/06/2021 20:11	0.0	7.5	9.7	0	0	1004	1004	0	0	0.00	23.2	3.95
16/06/2021 21:11	0.0	7.5	9.6	0	0	1006	1005	-1	0	-0.05	22.1	3.94
16/06/2021 22:11	0.0	7.5	9.5	0	0	1005	1005	0	0	0.00	21.2	3.95
16/06/2021 23:11	0.0	7.4	9.5	0	0	1003	1004	1	0	0.00	20.5	3.96
17/06/2021 00:11	0.0	7.5	9.5	0	0	1004	1004	0	0	0.00	19.9	3.96
17/06/2021 01:11	0.0	7.5	9.5	0	0	1003	1003	0	0	0.00	19.5	3.94
17/06/2021 02:11	0.0	7.5	9.4	0	0	1002	1002	0	0	0.00	19.1	3.95
17/06/2021 03:11	0.0	7.5	9.3	0	0	1002	1003	1	0	0.00	18.8	3.95
17/06/2021 04:11	0.0	7.4	9.3	0	0	1002	1003	1	0	0.00	18.6	3.95
17/06/2021 05:11	0.0	7.4	9.3	0	0	1002	1002	0	0	0.00	18.3	3.94
17/06/2021 06:11	0.0	7.5	9.3	0	0	1003	1003	0	0	0.00	18.1	3.95
17/06/2021 07:11	0.0	7.4	9.2	0	0	1003	1003	0	0	0.00	18.0	3.95
17/06/2021 08:11	0.0	7.4	9.2	0	0	1003	1003	0	0	0.05	17.9	3.95
17/06/2021 09:11	0.0	7.4	9.2	0	0	1003	1003	0	0	0.00	18.0	3.95
17/06/2021 10:11	0.0	7.4	9.2	0	0	1003	1003	0	0	0.05	18.1	3.95
17/06/2021 11:11	0.0	7.5	9.2	0	0	1004	1004	0	0	0.00	18.5	3.94
17/06/2021 12:11	0.0	7.5	9.2	0	0	1005	1004	-1	0	0.00	18.8	3.95
17/06/2021 13:11	0.0	7.4	9.3	0	0	1005	1005	0	0	0.00	19.0	3.94
17/06/2021 14:11	0.0	7.4	9.3	0	0	1005	1005	0	0	0.00	19.1	3.95
17/06/2021 15:11	0.0	7.5	9.4	0	0	1005	1006	1	0	0.00	19.1	3.94
17/06/2021 16:11	0.0	7.4	9.5	0	0	1006	1006	0	0	0.00	19.1	3.94
17/06/2021 17:11	0.0	7.5	9.6	0	0	1006	1006	0	0	0.00	19.2	3.95
17/06/2021 18:11	0.0	7.5	9.6	0	0	1007	1006	-1	0	0.00	19.3	3.95
17/06/2021 19:11	0.0	7.5	9.7	0	0	1007	1006	-1	0	0.00	19.2	3.94
17/06/2021 20:11	0.0	7.4	9.9	0	0	1007	1007	0	0	0.10	19.1	3.94
17/06/2021 21:11	0.0	7.5	9.8	0	0	1007	1007	0	0	0.00	18.9	3.95
17/06/2021 22:11	0.0	6.2	10.1	0	0	1008	1008	0	0	0.00	18.7	3.95
17/06/2021 23:11	0.0	6.1	10.3	0	0	1008	1008	0	0	-0.05	18.5	3.94
18/06/2021 00:11	0.0	6.1	10.3	0	0	1007	1007	0	0	0.00	18.3	3.95
18/06/2021 01:11	0.0	6.2	10.3	0	0	1007	1008	1	0	0.00	18.2	3.94
18/06/2021 02:11	0.0	6.1	10.4	0	0	1007	1007	0	0	0.00	18.1	3.95
18/06/2021 03:11	0.0	6.2	10.4	0	0	1007	1007	0	0	0.00	17.9	3.94
18/06/2021 04:11	0.0	6.2	10.3	0	0	1007	1007	0	0	0.00	17.8	3.96
18/06/2021 05:11	0.0	6.1	10.3	0	0	1007	1007	0	0	0.00	17.6	3.94
18/06/2021 06:11	0.0	6.1	10.3	0	0	1006	1007	1	0	0.00	17.5	3.96
18/06/2021 07:11	0.0	6.1	10.2	0	0	1006	1007	1	0	-0.05	17.4	3.95
18/06/2021 08:11	0.0	6.2	10.2	0	0	1006	1007	1	0	0.00	17.3	3.94
18/06/2021 09:11	0.0	6.2	10.1	0	0	1006	1006	0	0	0.00	17.3	3.95
18/06/2021 10:11	0.0	6.1	10.1	0	0	1005	1006	1	0	0.00	17.4	3.95
18/06/2021 11:11	0.0	6.2	9.8	0	0	1005	1006	1	0	0.00	17.4	3.95
18/06/2021 12:11	0.0	6.2	9.9	0	0	1005	1006	1	0	0.00	17.4	3.96
18/06/2021 13:11	0.0	7.4	9.9	0	0	1005	1006	1	0	0.00	17.4	3.96
18/06/2021 14:11	0.0	7.4	9.9	0	0	1005	1005	0	0	0.00	17.4	3.95
18/06/2021 15:11	0.0	7.4	9.9	0	0	1005	1005	0	0	0.00	17.6	3.94
18/06/2021 16:11	0.0	7.5	9.8	0	0	1005	1005	0	0	-0.05	17.8	3.95
18/06/2021 17:11	0.0	7.4	9.8	0	0	1005	1005	0	0	0.00	17.9	3.95
18/06/2021 18:11	0.0	7.5	9.8	0	0	1005	1005	0	0	0.00	17.8	3.94
18/06/2021 19:11	0.0	7.4	9.7	0	0	1005	1006	1	0	0.00	17.6	3.94
18/06/2021 20:11	0.0	7.4	9.8	0	0	1006	1006	0	0	0.00	17.4	3.95
18/06/2021 21:11	0.0	7.4	9.8	0	0	1007	1007	0	0	0.00	17.2	3.95
18/06/2021 22:11	0.0	7.4	10.0	0	0	1007	1008	1	0	0.00	16.9	3.95
18/06/2021 23:11	0.0	7.5	10.1	0	0	1007	1008	1	0	0.00	16.7	3.95
19/06/2021 00:11	0.0	6.1	10.3	0	0	1008	1009	1	1	0.00	16.4	3.95
19/06/2021 01:11	0.0	6.1	10.6	0	0	1008	1009	1	1	-0.03	16.2	3.95
19/06/2021 02:11	0.0	6.1	10.8	0	0	1008	1009	1	0	0.00	16.0	3.94
19/06/2021 03:11	0.0	6.1	11.0	0	0	1009	1009	0	0	0.00	15.8	3.95
19/06/2021 04:11	0.0	4.9	11.1	0	0	1009	1010	1	0	0.00	15.7	3.96
19/06/2021 05:11	0.0	4.9	11.6	0	0	1009	1010	1	0	0.00	15.6	3.97
19/06/2021 06:11	0.0	4.9	11.8	0	0	1010	1011	1	0	0.00	15.5	3.96
19/06/2021 07:11	0.0	4.9	12.1	0	0	1010	1011	1	0	0.00	15.5	3.95
19/06/2021 08:11	0.0	3.7	12.1	0	0	1010	1011	1	0	0.00	15.5	3.95
19/06/2021 09:11	0.0	3.7	12.3	0	0	1009	1010	1	0	0.00	15.6	3.95
19/06/2021 10:11	0.0	3.7	12.3	0	0	1009	1010	1	0	0.00	15.8	3.94
19/06/2021 11:11	0.0	3.7	12.3	0	0	1009	1010	1	0	0.00	15.9	3.96
19/06/2021 12:11	0.0	3.7	12.4	0	0	1010	1010	0	0	0.00	16.2	3.95
19/06/2021 13:11	0.0	3.7	12.4	0	0	1009	1009	0	0	0.00	16.4	3.95
19/06/2021 14:11	0.0	4.9	12.3	0	0	1008	1009	1	0	0.00	16.7	3.94
19/06/2021 15:11	0.0	4.9	12.1	0	0	1008	1008	0	0	-0.05	17.0	3.97
19/06/2021 16:11	0.0	4.9	11.9	0	0	1007	1008	1	0	0.00	17.0	3.94
19/06/2021 17:11	0.0	4.9	11.8	0	0	1007	1007	0	0	0.00	17.0	3.96
19/06/2021 18:11	0.0	4.9	11.6	0	0	1006	1007	1	0	0.00	16.9	3.95
19/06/2021 19:11	0.0	4.9	11.4	0	0	1005	1006	1	-1	0.00	16.8	3.95
19/06/2021 20:11	0.0	6.1	11.3	0	0	1004	1005	1	-1	0.00	16.6	3.95
19/06/2021 21:11	0.0	6.1	11.1	0	0	1004	1005	1	-1	0.00	16.4	3.97
19/06/2021 22:11	0.0	6.1	11.1	0	0	1004	1005	1	0	0.00	16.3	3.95
19/06/2021 23:11	0.0	6.1	11.0	0	0	1003	1004	1	-1	0.00	16.1	3.95
20/06/2021 00:11	0.0	6.1	10.9	0	0	1003	1004	1	0	0.00	15.9	3.95
20/06/2021 01:11	0.0	6.1	10.9	0	0	1003	1004	1	0	0.00	15.8	3.95
20/06/2021 02:11	0.0	6.1	10.8	0	0	1002	1003	1	0	0.00	15.8	3.95
20/06/2021 03:11	0.0	6.1	10.7	0	0	1002	1002	0	0	0.00	15.7	3.94
20/06/2021 04:11	0.0	6.1	10.7	0	0	1002	1003	1	0	0.00	15.6	3.96
20/06/2021 05:11	0.0	7.4	10.6	0	0	1002	1003	1	0	0.00	15.5	3.96
20/06/2021 06:11	0.0	6.1	10.6	0	0	1002	1003	1	0	0.00	15.4	3.96
20/06/2021 07:11	0.0	7.4	10.5	0	0	1002	1003	1	0	0.00	15.5	3.95
20/06/2021 08:11	0.0	7.4	10.5	0	0	1003	1003	0	0	0.00	15.6	3.95
20/06/2021 09:11	0.0	7.4	10.4	0	0	1003	1004	1	0	0.00	15.8	3.96
20/06/2021 10:11	0.0	7.4	10.4	0	0	1003	1003	0	0	0.00	16.0	3.95
20/06/2021 11:11	0.0	7.5	10.4	0	0	1003	1003	0	0	0.00	16.4	3.94
20/06/2021 12:11	0.0	7.4	10.4	0	0	1003	1003	0	0	0.00	16.7	3.95
20/06/2021 13:11	0.0	7.4	10.4	0	0	1003	1003	0	0	0.00	17.2	3.94
20/06/2021 14:11	0.0	7.4	10.4	0	0	1003	1002	-1	0	0.00	17.8	3.95
20/06/2021 15:11	0.0	7.5	10.4	0	0	1002	1002	0	0	0.00	18.6	3.95
20/06/2021 16:11	0.0	7.5	10.4	0	0	1002	1002	0	0	0.00	19.2	3.94
20/06/2021 17:11	0.0	7.5	10.4	0	0	1002	1002	0	0	-0.03	19.7	3.95

ggrs
Experts in Continuous Monitoring

Date and Time	CH_4	CO_2	O_2	CO	H_2S	Borehole Pressure	Atmospheric Pressure	Differential Pressure	Average 9-hour atmospheric pressure change	Flow	Temperature	Water Level
	% v/v	% v/v	% v/v	ppm/v	ppm/v	mbar	mbar	mbar	mbar	Ltr/hr	°C	mbgl
20/06/2021 18:11	0.0	7.5	10.4	0	0	1002	1002	0	0	0.00	19.8	3.94
20/06/2021 19:11	0.0	7.5	10.3	0	0	1003	1003	0	0	0.00	19.5	3.96
20/06/2021 20:11	0.0	7.5	10.3	0	0	1003	1003	0	0	0.00	19.1	3.94
20/06/2021 21:11	0.0	7.5	10.3	0	0	1003	1003	0	0	0.00	18.6	3.94
20/06/2021 22:11	0.0	7.5	10.2	0	0	1003	1004	1	0	-0.03	18.1	3.95
20/06/2021 23:11	0.0	7.4	10.2	0	0	1003	1004	1	0	0.00	17.6	3.96
21/06/2021 00:11	0.0	7.4	10.2	0	0	1003	1003	0	0	0.00	17.3	3.94
21/06/2021 01:11	0.0	7.4	10.2	0	0	1002	1003	1	0	0.00	16.9	3.94
21/06/2021 02:11	0.0	7.4	10.2	0	0	1002	1003	1	0	0.00	16.5	3.96
21/06/2021 03:11	0.0	7.4	10.1	0	0	1002	1003	1	0	0.00	16.3	3.96
21/06/2021 04:11	0.0	7.4	10.1	0	0	1003	1003	0	0	0.00	16.1	3.95
21/06/2021 05:11	0.0	7.4	10.1	0	0	1003	1003	0	0	0.00	15.9	3.97
21/06/2021 06:11	0.0	7.4	10.1	0	0	1003	1004	1	0	0.00	15.8	3.96
21/06/2021 07:11	0.0	7.4	10.1	0	0	1003	1004	1	0	0.00	15.6	3.95
21/06/2021 08:11	0.0	7.4	10.1	0	0	1003	1004	1	0	0.00	15.5	3.95
21/06/2021 09:11	0.0	7.4	10.2	0	0	1003	1004	1	0	0.00	15.4	3.94
21/06/2021 10:11	0.0	7.4	10.2	0	0	1004	1005	1	0	0.00	15.4	3.95
21/06/2021 11:11	0.0	7.4	10.3	0	0	1004	1005	1	0	0.00	15.5	3.95
21/06/2021 12:11	0.0	6.1	10.5	0	0	1004	1005	1	0	0.00	15.6	3.95
21/06/2021 13:11	0.0	6.1	10.6	0	0	1005	1006	1	0	0.00	16.0	3.95
21/06/2021 14:11	0.0	6.1	10.8	0	0	1005	1006	1	0	0.00	16.1	3.95
21/06/2021 15:11	0.0	6.1	11.0	0	0	1006	1007	1	0	-0.03	16.1	3.95
21/06/2021 16:11	0.0	6.1	11.2	0	0	1006	1007	1	0	0.00	15.9	3.96
21/06/2021 17:11	0.0	4.9	11.4	0	0	1006	1007	1	0	0.00	15.8	3.95
21/06/2021 18:11	0.0	4.9	11.7	0	0	1007	1008	1	0	0.00	15.8	3.96
21/06/2021 19:11	0.0	4.9	12.0	0	0	1008	1008	0	0	0.00	15.8	3.95
21/06/2021 20:11	0.0	3.7	12.3	0	0	1008	1009	1	0	0.00	15.7	3.95
21/06/2021 21:11	0.0	3.7	12.6	0	0	1008	1009	1	0	0.05	15.5	3.95
21/06/2021 22:11	0.0	3.7	12.9	0	0	1009	1009	0	0	0.00	15.3	3.95
21/06/2021 23:11	0.0	3.7	13.1	0	0	1009	1010	1	0	0.00	15.1	3.95
22/06/2021 00:11	0.0	2.4	13.4	0	0	1009	1010	1	0	0.00	14.9	3.95
22/06/2021 01:11	0.0	2.4	13.6	0	0	1010	1011	1	0	0.00	14.8	3.95
22/06/2021 02:11	0.0	2.4	13.7	0	0	1009	1010	1	0	0.00	14.6	3.96
22/06/2021 03:11	0.0	2.4	13.8	0	0	1010	1011	1	0	0.00	14.4	3.95
22/06/2021 04:11	0.0	2.4	13.9	0	0	1010	1011	1	0	0.00	14.4	3.96
22/06/2021 05:11	0.0	2.4	14.1	0	0	1010	1011	1	0	0.00	14.3	3.96
22/06/2021 06:11	0.0	2.4	14.2	0	0	1011	1012	1	0	-0.05	14.1	3.95
22/06/2021 07:11	0.0	2.4	14.4	0	0	1011	1012	1	0	0.00	14.0	3.95
22/06/2021 08:11	0.0	1.2	14.6	0	0	1012	1013	1	0	0.00	13.9	3.95
22/06/2021 09:11	0.0	1.2	14.8	0	0	1012	1013	1	0	0.00	14.0	3.95
22/06/2021 10:11	0.0	1.2	15.0	0	0	1013	1013	0	0	0.00	14.3	3.95
22/06/2021 11:11	0.0	1.2	15.1	0	0	1013	1014	1	0	0.00	14.7	3.95
22/06/2021 12:11	0.0	1.2	15.3	0	0	1013	1014	1	0	0.00	15.1	3.95
22/06/2021 13:11	0.0	1.2	15.5	0	0	1013	1014	1	0	0.00	15.5	3.95
22/06/2021 14:11	0.0	1.2	15.6	0	0	1014	1014	0	0	0.00	15.9	3.95
22/06/2021 15:11	0.0	1.2	15.7	0	0	1014	1015	1	0	0.00	16.1	3.95
22/06/2021 16:11	0.0	1.2	15.9	0	0	1014	1015	1	0	0.00	16.3	3.95
22/06/2021 17:11	0.0	1.2	16.0	0	0	1015	1015	0	0	0.00	16.4	3.94
22/06/2021 18:11	0.0	1.2	16.1	0	0	1015	1015	0	0	0.00	16.4	3.95
22/06/2021 19:11	0.0	0.0	16.2	0	0	1016	1016	0	0	0.00	16.3	3.96
22/06/2021 20:11	0.0	0.0	16.4	0	0	1016	1017	1	0	0.00	16.3	3.96
22/06/2021 21:11	0.0	0.0	16.5	0	0	1017	1017	0	0	0.00	16.0	3.95
22/06/2021 22:11	0.0	0.0	16.6	0	0	1017	1018	1	0	0.00	15.7	3.96
22/06/2021 23:11	0.0	0.0	16.6	0	0	1017	1018	1	0	0.00	15.2	3.96
23/06/2021 00:11	0.0	0.0	16.7	0	0	1017	1018	1	0	0.00	14.8	3.96
23/06/2021 01:11	0.0	0.0	16.7	0	0	1017	1018	1	0	0.00	14.5	3.95
23/06/2021 02:11	0.0	0.0	16.7	0	0	1017	1018	1	0	0.00	14.3	3.94
23/06/2021 03:11	0.0	0.0	16.7	0	0	1017	1018	1	0	0.00	14.1	3.96
23/06/2021 04:11	0.0	0.0	16.7	0	0	1017	1018	1	0	0.00	13.8	3.97
23/06/2021 05:11	0.0	0.0	16.7	0	0	1017	1018	1	0	0.00	13.3	3.95
23/06/2021 06:11	0.0	0.0	16.7	0	0	1018	1019	1	0	0.00	13.1	3.96
23/06/2021 07:11	0.0	0.0	16.7	0	0	1018	1019	1	0	0.00	12.9	3.95
23/06/2021 08:11	0.0	0.0	16.7	0	0	1018	1019	1	0	0.00	13.1	3.94
23/06/2021 09:11	0.0	0.0	16.8	0	0	1018	1019	1	0	0.00	13.3	3.96
23/06/2021 10:11	0.0	0.0	16.8	0	0	1018	1018	0	0	0.00	13.7	3.95
23/06/2021 11:11	0.0	0.0	16.8	0	0	1018	1018	0	0	0.00	14.5	3.93
23/06/2021 12:11	0.0	0.0	16.9	0	0	1018	1018	0	0	0.00	15.9	3.94
23/06/2021 13:11	0.0	0.0	16.9	0	0	1018	1018	0	0	0.00	17.2	3.94
23/06/2021 14:11	0.0	0.0	16.9	0	0	1018	1017	-1	0	0.00	18.1	3.95
23/06/2021 15:11	0.0	0.0	16.9	0	0	1018	1017	-1	0	0.00	18.8	3.95
23/06/2021 16:11	0.0	0.0	16.9	0	0	1017	1017	0	0	0.00	19.7	3.94
23/06/2021 17:11	0.0	1.2	16.9	0	0	1017	1017	0	0	0.00	20.2	3.95
23/06/2021 18:11	0.0	1.2	16.9	0	0	1018	1017	-1	0	-0.05	20.4	3.94
23/06/2021 19:11	0.0	1.2	16.9	0	0	1018	1018	0	0	0.00	20.1	3.95
23/06/2021 20:11	0.0	1.2	16.8	0	0	1018	1018	0	0	0.00	19.4	3.95
23/06/2021 21:11	0.0	1.2	16.8	0	0	1018	1018	0	0	0.00	18.5	3.96
23/06/2021 22:11	0.0	1.2	16.7	0	0	1018	1019	1	0	0.00	17.5	3.95
23/06/2021 23:11	0.0	1.2	16.6	0	0	1018	1019	1	0	0.00	16.6	3.95
24/06/2021 00:11	0.0	1.2	16.5	0	0	1018	1019	1	0	0.00	15.8	3.96
24/06/2021 01:11	0.0	1.2	16.5	0	0	1017	1018	1	0	0.00	15.2	3.95
24/06/2021 02:11	0.0	1.2	16.4	0	0	1017	1018	1	0	0.05	14.6	3.96
24/06/2021 03:11	0.0	1.2	16.3	0	0	1017	1018	1	0	0.00	14.1	3.94
24/06/2021 04:11	0.0	1.2	16.2	0	0	1017	1018	1	0	0.00	13.8	3.96
24/06/2021 05:11	0.0	1.2	16.1	0	0	1017	1018	1	0	0.00	13.4	3.95
24/06/2021 06:11	0.0	1.2	16.1	0	0	1017	1018	1	0	0.00	13.1	3.97
24/06/2021 07:11	0.0	1.2	16.0	0	0	1016	1018	2	0	0.00	12.9	3.97
24/06/2021 08:11	0.0	1.2	15.9	0	0	1016	1017	1	0	0.00	13.0	3.95
24/06/2021 09:11	0.0	2.4	15.9	0	0	1016	1016	0	0	0.00	13.3	3.94
24/06/2021 10:11	0.0	2.4	15.9	0	0	1016	1016	0	0	0.00	14.0	3.94
24/06/2021 11:11	0.0	2.4	16.0	0	0	1016	1015	-1	0	0.05	15.2	3.94
24/06/2021 12:11	0.0	2.4	16.0	0	0	1016	1016	0	0	0.00	16.5	3.95
24/06/2021 13:11	0.0	2.5	16.0	0	0	1016	1015	-1	0	-0.03	17.8	3.94
24/06/2021 14:11	0.0	2.5	16.1	0	0	1016	1015	-1	0	0.00	18.9	3.94
24/06/2021 15:11	0.0	2.5	16.1	0	0	1016	1015	-1	0	-0.03	19.4	3.95
24/06/2021 16:11	0.0	2.5	16.1	0	0	1015	1015	0	0	0.00	19.1	3.95
24/06/2021 17:11	0.0	2.5	16.0	0	0	1015	1015	0	0	0.00	18.7	3.95
24/06/2021 18:11	0.0	2.4	16.0	0	0	1015	1015	0	0	0.00	18.4	3.95
24/06/2021 19:11	0.0	2.5	15.9	0	0	1015	1015	0	0	-0.05	18.1	3.95
24/06/2021 20:11	0.0	2.5	15.9	0	0	1015	1015	0	0	0.00	17.8	3.94
24/06/2021 21:11	0.0	2.5	15.8	0	0	1015	1015	0	0	0.00	17.4	3.96
24/06/2021 22:11	0.0	2.4	15.8	0	0	1015	1015	0	0	0.00	17.1	3.95
24/06/2021 23:11	0.0	2.5	15.7	0	0	1014	1015	1	0	0.00	16.7	3.95
25/06/2021 00:11	0.0	3.7	15.7	0	0	1014	1015	1	0	0.00	16.4	3.96
25/06/2021 01:11	0.0	3.7	15.6	0	0	1013	1014	1	0	0.00	16.2	3.96
25/06/2021 02:11	0.0	3.7	15.6	0	0	1013	1014	1	0	0.00	16.0	3.96
25/06/2021 03:11	0.0	3.7	15.6	0	0	1013	1013	0	0	0.00	15.9	3.95
25/06/2021 04:11	0.0	3.7	15.5	0	0	1012	1013	1	0	0.00	15.8	3.97
25/06/2021 05:11	0.0	3.7	15.5	0	0	1012	1013	1	0	0.00	15.6	3.95
25/06/2021 06:11	0.0	3.7	15.4	0	0	1012	1012	0	0	0.00	15.4	3.95
25/06/2021 07:11	0.0	3.7	15.4	0	0	1012	1012	0	0	0.00	15.4	3.95
25/06/2021 08:11	0.0	3.7	15.4	0	0	1012	1012	0	0	0.00	15.4	3.95
25/06/2021 09:11	0.0	3.7	15.3	0	0	1012	1012	0	0	0.00	15.5	3.95
25/06/2021 10:11	0.0	3.7	15.3	0	0	1011	1012	1	0	0.00	15.7	3.95
25/06/2021 11:11	0.0	3.7	15.3	0	0	1011	1012	1	0	0.00	15.9	3.95
25/06/2021 12:11	0.0	3.7	15.3	0	0	1011	1011	0	0	0.00	16.1	3.95
25/06/2021 13:11	0.0	3.7	15.3	0	0	1011	1011	0	0	0.00	16.1	3.96
25/06/2021 14:11	0.0	3.7	15.3	0	0	1010	1011	1	0	0.00	16.3	3.95
25/06/2021 15:11	0.0	3.7	15.3	0	0	1010	1011	1	0	0.00	16.5	3.94
25/06/2021 16:11	0.0	3.7	15.2	0	0	1010	1010	0	0	0.00	16.8	3.95
25/06/2021 17:11	0.0	3.7	15.2	0	0	1010	1010	0	0	0.00	17.1	3.94
25/06/2021 18:11	0.0	3.7	15.2	0	0	1010	1010	0	0	0.00	17.4	3.95
25/06/2021 19:11	0.0	3.7	15.2	0	0	1010	1010	0	0	0.00	18.0	3.94

ggrs
Experts in Continuous Monitoring

Date and Time	CH_4	CO_2	O_2	CO	H_2S	Borehole Pressure	Atmospheric Pressure	Differential Pressure	Average 9-hour atmospheric pressure change	Flow	Temperature	Water Level
	% v/v	% v/v	% v/v	ppm/v	ppm/v	mbar	mbar	mbar	mbar	Ltr/hr	°C	mbgl
25/06/2021 20:11	0.0	3.7	15.2	0	0	1010	1010	0	0	0.00	18.1	3.96
25/06/2021 21:11	0.0	3.7	15.1	0	0	1010	1011	1	0	0.00	17.7	3.96
25/06/2021 22:11	0.0	4.9	15.1	0	0	1011	1011	0	0	0.00	16.9	3.96
25/06/2021 23:11	0.0	4.9	15.0	0	0	1010	1011	1	0	0.00	16.2	3.95
26/06/2021 00:11	0.0	4.9	14.9	0	0	1010	1011	1	0	0.00	15.5	3.95
26/06/2021 01:11	0.0	4.9	14.8	0	0	1011	1012	1	0	0.00	14.9	3.95
26/06/2021 02:11	0.0	4.9	14.7	0	0	1010	1012	2	0	0.00	14.4	3.96
26/06/2021 03:11	0.0	4.9	14.7	0	0	1011	1012	1	0	0.00	14.0	3.95
26/06/2021 04:11	0.0	4.9	14.7	0	0	1011	1012	1	0	0.05	13.6	3.96
26/06/2021 05:11	0.0	4.9	14.6	0	0	1011	1012	1	0	0.00	13.4	3.96
26/06/2021 06:11	0.0	4.9	14.6	0	0	1011	1012	1	0	0.00	13.4	3.95
26/06/2021 07:11	0.0	4.9	14.6	0	0	1012	1013	1	0	0.00	13.7	3.96
26/06/2021 08:11	0.0	4.9	14.6	0	0	1012	1013	1	0	0.00	14.0	3.95
26/06/2021 09:11	0.0	4.9	14.7	0	0	1012	1012	0	0	0.00	14.4	3.95
26/06/2021 10:11	0.0	4.9	14.7	0	0	1012	1012	0	0	0.05	14.8	3.95
26/06/2021 11:11	0.0	4.9	14.8	0	0	1013	1012	-1	0	0.00	15.6	3.95
26/06/2021 12:11	0.0	3.7	14.9	0	0	1013	1013	0	0	0.00	16.6	3.94
26/06/2021 13:11	0.0	3.7	14.9	0	0	1013	1012	-1	0	0.00	17.3	3.94
26/06/2021 14:11	0.0	3.7	14.9	0	0	1013	1012	-1	0	0.00	17.8	3.95
26/06/2021 15:11	0.0	3.7	14.9	0	0	1012	1012	0	0	0.10	18.4	3.94
26/06/2021 16:11	0.0	3.7	14.9	0	0	1012	1012	0	0	0.00	18.7	3.95
26/06/2021 17:11	0.0	3.7	14.9	0	0	1012	1011	-1	0	0.00	18.8	3.94
26/06/2021 18:11	0.0	3.7	14.9	0	0	1011	1011	0	0	0.00	18.9	3.95
26/06/2021 19:11	0.0	3.7	14.8	0	0	1012	1011	-1	0	0.00	18.9	3.95
26/06/2021 20:11	0.0	4.9	14.8	0	0	1012	1012	0	0	0.00	18.8	3.96
26/06/2021 21:11	0.0	4.9	14.8	0	0	1012	1012	0	0	0.00	18.2	3.95
26/06/2021 22:11	0.0	4.9	14.7	0	0	1012	1013	1	0	0.00	17.6	3.96
26/06/2021 23:11	0.0	4.9	14.7	0	0	1012	1012	0	0	-0.03	16.9	3.96
27/06/2021 00:11	0.0	4.9	14.6	0	0	1011	1012	1	0	0.00	16.5	3.95
27/06/2021 01:11	0.0	4.9	14.6	0	0	1011	1012	1	0	0.00	16.3	3.95
27/06/2021 02:11	0.0	4.9	14.5	0	0	1011	1012	1	0	0.00	16.1	3.96
27/06/2021 03:11	0.0	4.9	14.5	0	0	1010	1011	1	0	0.00	15.9	3.95
27/06/2021 04:11	0.0	4.9	14.5	0	0	1010	1011	1	0	0.00	15.9	3.96
27/06/2021 05:11	0.0	4.9	14.4	0	0	1009	1010	1	0	0.00	15.8	3.96
27/06/2021 06:11	0.0	4.9	14.4	0	0	1009	1010	1	0	0.00	15.8	3.95
27/06/2021 07:11	0.0	4.9	14.3	0	0	1008	1009	1	0	0.00	15.8	3.95
27/06/2021 08:11	0.0	4.9	14.3	0	0	1008	1009	1	0	0.00	15.9	3.95
27/06/2021 09:11	0.0	4.9	14.3	0	0	1009	1009	0	0	0.00	16.2	3.95
27/06/2021 10:11	0.0	4.9	14.3	0	0	1008	1008	0	0	0.00	16.6	3.94
27/06/2021 11:11	0.0	4.9	14.3	0	0	1009	1009	0	0	0.00	17.2	3.95
27/06/2021 12:11	0.0	4.9	14.3	0	0	1008	1008	0	0	0.00	17.5	3.96
27/06/2021 13:11	0.0	4.9	14.3	0	0	1008	1008	0	0	0.00	17.9	3.95
27/06/2021 14:11	0.0	4.9	14.3	0	0	1008	1009	1	0	0.00	18.4	3.95
27/06/2021 15:11	0.0	4.9	14.2	0	0	1008	1009	1	0	0.00	18.2	3.95
27/06/2021 16:11	0.0	4.9	14.2	0	0	1008	1008	0	0	0.00	18.0	3.94
27/06/2021 17:11	0.0	4.9	14.2	0	0	1008	1008	0	0	0.00	18.0	3.94
27/06/2021 18:11	0.0	4.9	14.2	0	0	1008	1009	1	0	0.10	17.8	3.96
27/06/2021 19:11	0.0	4.9	14.1	0	0	1008	1009	1	0	0.00	17.6	3.95
27/06/2021 20:11	0.0	4.9	14.1	0	0	1008	1009	1	0	0.05	17.4	3.95
27/06/2021 21:11	0.0	4.9	14.1	0	0	1008	1008	0	0	0.00	17.1	3.95
27/06/2021 22:11	0.0	4.9	14.0	0	0	1008	1008	0	0	0.00	16.9	3.96
27/06/2021 23:11	0.0	4.9	14.0	0	0	1008	1008	0	0	0.00	16.8	3.96
28/06/2021 00:11	0.0	4.9	13.9	0	0	1008	1008	0	0	0.00	16.6	3.95
28/06/2021 01:11	0.0	4.9	13.9	0	0	1007	1008	1	0	0.00	16.5	3.94
28/06/2021 02:11	0.0	4.9	13.9	0	0	1007	1008	1	0	0.00	16.4	3.95
28/06/2021 03:11	0.0	4.9	13.8	0	0	1007	1007	0	0	0.00	16.4	3.95
28/06/2021 04:11	0.0	4.9	13.8	0	0	1007	1007	0	0	0.00	16.3	3.95
28/06/2021 05:11	0.0	4.9	13.8	0	0	1007	1008	1	0	0.00	16.3	3.95
28/06/2021 06:11	0.0	4.9	13.8	0	0	1007	1008	1	0	0.00	16.3	3.96
28/06/2021 07:11	0.0	4.9	13.7	0	0	1007	1008	1	0	-0.03	16.3	3.94
28/06/2021 08:11	0.0	4.9	13.7	0	0	1008	1008	0	0	0.00	16.3	3.95
28/06/2021 09:11	0.0	4.9	13.7	0	0	1008	1009	1	0	0.00	16.4	3.96
28/06/2021 10:11	0.0	4.9	13.7	0	0	1009	1009	0	0	0.00	16.5	3.95
28/06/2021 11:11	0.0	4.9	13.8	0	0	1009	1009	0	0	0.00	16.7	3.95
28/06/2021 12:11	0.0	4.9	13.8	0	0	1009	1009	0	0	0.00	16.9	3.97
28/06/2021 13:11	0.0	4.9	13.9	0	0	1009	1009	0	0	0.00	17.2	3.95
28/06/2021 14:11	0.0	4.9	13.9	0	0	1009	1009	0	0	0.00	17.8	3.94
28/06/2021 15:11	0.0	4.9	14.0	0	0	1009	1009	0	0	-0.03	18.8	3.94
28/06/2021 16:11	0.0	4.9	14.0	0	0	1009	1008	-1	0	0.00	19.4	3.94
28/06/2021 17:11	0.0	4.9	14.0	0	0	1008	1008	0	0	0.00	19.9	3.95
28/06/2021 18:11	0.0	4.9	14.0	0	0	1008	1008	0	0	0.00	20.1	3.95
28/06/2021 19:11	0.0	4.9	13.9	0	0	1008	1008	0	0	0.00	19.8	3.96
28/06/2021 20:11	0.0	4.9	13.9	0	0	1008	1008	0	0	0.00	19.4	3.95
28/06/2021 21:11	0.0	4.9	13.8	0	0	1008	1009	1	0	0.00	18.9	3.95
28/06/2021 22:11	0.0	4.9	13.7	1	0	1008	1009	1	0	0.00	18.6	3.96
28/06/2021 23:11	0.0	4.9	13.7	1	0	1008	1009	1	0	0.00	18.1	3.95
29/06/2021 00:11	0.0	4.9	13.7	1	0	1008	1009	1	0	0.00	17.8	3.95
29/06/2021 01:11	0.0	4.9	13.6	0	0	1008	1009	1	0	0.00	17.6	3.96
29/06/2021 02:11	0.0	4.9	13.6	0	0	1008	1008	0	0	0.00	17.4	3.95
29/06/2021 03:11	0.0	4.9	13.6	0	0	1008	1008	0	0	0.00	17.3	3.95
29/06/2021 04:11	0.0	4.9	13.5	0	0	1008	1008	0	0	0.00	17.1	3.95
29/06/2021 05:11	0.0	4.9	13.5	0	0	1007	1008	1	0	0.00	16.9	3.95
29/06/2021 06:11	0.0	4.9	13.4	0	0	1008	1008	0	0	0.00	16.8	3.95
29/06/2021 07:11	0.0	4.9	13.4	0	0	1008	1009	1	0	0.00	16.6	3.95
29/06/2021 08:11	0.0	4.9	13.5	0	0	1008	1009	1	0	0.00	16.6	3.95
29/06/2021 09:11	0.0	4.9	13.5	0	0	1008	1009	1	0	0.05	16.6	3.95
29/06/2021 10:11	0.0	4.9	13.5	0	0	1009	1009	0	0	0.00	16.8	3.95
29/06/2021 11:11	0.0	4.9	13.5	0	0	1009	1009	0	0	-0.05	17.0	3.95
29/06/2021 12:11	0.0	4.9	13.6	0	0	1009	1009	0	0	-0.05	17.6	3.96
29/06/2021 13:11	0.0	4.9	13.7	0	0	1009	1009	0	0	0.00	18.0	3.94
29/06/2021 14:11	0.0	4.9	13.7	0	0	1009	1009	0	0	0.00	18.4	3.95
29/06/2021 15:11	0.0	4.9	13.7	0	0	1009	1010	1	0	0.00	18.4	3.95
29/06/2021 16:11	0.0	4.9	13.8	0	0	1009	1010	1	0	0.00	18.3	3.96
29/06/2021 17:11	0.0	4.9	13.8	0	0	1010	1010	0	0	0.00	18.1	3.95
29/06/2021 18:11	0.0	4.9	13.8	0	0	1010	1010	0	0	0.00	17.9	3.94
29/06/2021 19:11	0.0	4.9	13.8	0	0	1010	1010	0	0	0.00	17.6	3.96
29/06/2021 20:11	0.0	4.9	13.8	0	0	1010	1010	0	0	0.00	17.4	3.95
29/06/2021 21:11	0.0	4.9	13.9	0	0	1010	1011	1	0	0.00	17.3	3.96
29/06/2021 22:11	0.0	4.9	13.9	0	0	1011	1011	0	0	0.00	17.1	3.95
29/06/2021 23:11	0.0	4.9	14.0	0	0	1011	1011	0	0	0.00	16.8	3.95
30/06/2021 00:11	0.0	4.9	14.0	0	0	1011	1011	0	0	0.00	16.6	3.94
30/06/2021 01:11	0.0	3.7	14.0	0	0	1010	1011	1	0	0.00	16.4	3.96
30/06/2021 02:11	0.0	3.7	14.0	0	0	1010	1011	1	0	0.00	16.3	3.95
30/06/2021 03:11	0.0	3.7	14.0	0	0	1010	1011	1	0	0.00	16.1	3.95
30/06/2021 04:11	0.0	3.7	14.0	1	0	1010	1011	1	0	0.00	15.9	3.95
30/06/2021 05:11	0.0	3.7	14.0	0	0	1010	1011	1	0	0.00	15.8	3.95
30/06/2021 06:11	0.0	3.7	14.0	0	0	1010	1011	1	0	0.00	15.7	3.97
30/06/2021 07:11	0.0	3.7	14.0	0	0	1011	1011	0	0	-0.03	15.7	3.95
30/06/2021 08:11	0.0	3.7	14.1	0	0	1011	1011	0	0	0.00	15.8	3.96
30/06/2021 09:11	0.0	3.7	14.1	0	0	1011	1012	1	0	0.00	15.9	3.95
30/06/2021 10:11	0.0	3.7	14.2	0	0	1011	1012	1	0	0.05	16.1	3.95
30/06/2021 11:11	0.0	3.7	14.2	0	0	1011	1012	1	0	0.00	16.1	3.96
30/06/2021 12:11	0.0	3.7	14.3	0	0	1011	1012	1	0	0.05	16.4	3.95
30/06/2021 13:11	0.0	3.7	14.3	0	0	1011	1012	1	0	0.00	16.8	3.95
30/06/2021 14:11	0.0	3.7	14.4	0	0	1012	1012	0	0	0.00	17.0	3.96
30/06/2021 15:11	0.0	3.7	14.5	0	0	1012	1012	0	0	0.00	17.2	3.95
30/06/2021 16:11	0.0	3.7	14.5	0	0	1012	1012	0	0	0.00	17.4	3.96
30/06/2021 17:11	0.0	3.7	14.6	0	0	1012	1012	0	0	0.00	17.6	3.96
30/06/2021 18:11	0.0	3.7	14.6	0	0	1012	1012	0	0	0.00	17.8	3.95
30/06/2021 19:11	0.0	3.7	14.6	0	0	1012	1012	0	0	0.00	17.8	3.95
30/06/2021 20:11	0.0	3.7	14.6	0	0	1012	1012	0	0	0.00	17.7	3.95
30/06/2021 21:11	0.0	3.7	14.6	0	0	1013	1013	0	0	0.00	17.4	3.95

ggrs
Experts in Continuous Monitoring

Date and Time	CH_4 % v/v	CO_2 % v/v	O_2 % v/v	CO ppm/v	H_2S ppm/v	Borehole Pressure mbar	Atmospheric Pressure mbar	Differential Pressure mbar	Average 9-hour atmospheric pressure change mbar	Flow Ltr/hr	Temperature °C	Water Level mbgl
30/06/2021 22:11	0.0	3.7	14.7	1	0	1013	1013	0	0	0.00	17.1	3.94
30/06/2021 23:11	0.0	3.7	14.7	0	0	1013	1013	0	0	0.00	16.8	3.96
01/07/2021 00:11	0.0	3.7	14.7	1	0	1013	1013	0	0	0.00	16.4	3.97
01/07/2021 01:11	0.0	3.7	14.7	1	0	1012	1013	1	0	0.00	16.2	3.96
01/07/2021 02:11	0.0	3.7	14.7	1	0	1012	1013	1	0	0.00	15.9	3.97
01/07/2021 03:11	0.0	3.7	14.6	2	0	1012	1013	1	0	0.05	15.6	3.95
01/07/2021 04:11	0.0	3.7	14.6	1	0	1012	1013	1	0	0.00	15.1	3.94
01/07/2021 05:11	0.0	3.7	14.6	1	0	1012	1013	1	0	0.00	14.8	3.96
01/07/2021 06:11	0.0	3.7	14.5	2	0	1012	1013	1	0	0.00	14.6	3.96
01/07/2021 07:11	0.0	3.7	14.5	1	0	1012	1013	1	0	0.00	14.7	3.95
01/07/2021 08:11	0.0	3.7	14.5	1	0	1012	1013	1	0	0.00	14.9	3.95
01/07/2021 09:11	0.0	3.7	14.6	0	0	1013	1012	-1	0	-0.03	15.3	3.94
01/07/2021 10:11	0.0	3.7	14.6	0	0	1012	1012	0	0	0.00	15.8	3.95
01/07/2021 11:11	0.0	3.7	14.7	0	0	1012	1012	0	0	0.00	16.5	3.94
01/07/2021 12:11	0.0	3.7	14.7	0	0	1012	1012	0	0	0.00	17.4	3.95
01/07/2021 13:11	0.0	3.7	14.7	0	0	1012	1012	0	0	0.00	18.3	3.94
01/07/2021 14:11	0.0	3.7	14.7	0	0	1012	1012	0	0	0.00	19.1	3.94
01/07/2021 15:11	0.0	3.7	14.6	0	0	1012	1011	-1	0	-0.05	19.3	3.95
01/07/2021 16:11	0.0	3.7	14.7	0	0	1012	1012	0	0	0.00	19.3	3.96
01/07/2021 17:11	0.0	3.7	14.6	0	0	1012	1012	0	0	0.00	19.1	3.94
01/07/2021 18:11	0.0	3.7	14.6	1	0	1012	1012	0	0	0.00	18.8	3.94
01/07/2021 19:11	0.0	3.7	14.6	1	0	1012	1012	0	0	0.00	18.3	3.95
01/07/2021 20:11	0.0	3.7	14.6	1	0	1012	1012	0	0	0.00	17.8	3.94
01/07/2021 21:11	0.0	4.9	14.5	1	0	1012	1012	0	0	0.00	17.6	3.96
01/07/2021 22:11	0.0	4.9	14.5	1	0	1012	1012	0	0	0.00	17.2	3.96
01/07/2021 23:11	0.0	4.9	14.5	2	0	1012	1012	0	0	0.00	16.8	3.95
02/07/2021 00:11	0.0	4.9	14.4	2	0	1012	1012	0	0	0.00	16.5	3.95
02/07/2021 01:11	0.0	4.9	14.4	2	0	1011	1012	1	0	0.00	16.3	3.96
02/07/2021 02:11	0.0	4.9	14.2	1	0	1011	1012	1	0	0.00	16.3	3.96
02/07/2021 03:11	0.0	4.9	14.3	1	0	1011	1012	1	0	0.00	16.1	3.95
02/07/2021 04:11	0.0	4.9	14.3	1	0	1011	1011	0	0	0.00	15.8	3.95
02/07/2021 05:11	0.0	4.9	14.3	1	0	1010	1011	1	0	0.05	15.6	3.96
02/07/2021 06:11	0.0	4.9	14.2	1	0	1011	1011	0	0	0.00	15.6	3.96
02/07/2021 07:11	0.0	4.9	14.2	1	0	1011	1012	1	0	0.00	15.6	3.96
02/07/2021 08:11	0.0	4.9	14.3	1	0	1011	1012	1	0	0.00	15.8	3.95

ggs
Experts in Continuous Monitoring

Time Series Data

Project Ref:	GGS2586
Project Name:	Downlands Farm, Uckfield
Borehole ref:	WS06
Instrument Name and ID:	GasSentinel 03000054
Start Date:	11/06/2021 13:00
End Date:	02/07/2021 08:00
Days of monitoring:	21
Monitoring Frequency (mins):	60
Total samples taken:	500

Experts in Continuous Monitoring

Summary Table

	CH_4	CO_2	O_2	CO	H_2S	Atmospheric Pressure	Average 9-hour atmospheric pressure change	Flow	Temperature	Water Level
Minimum	0.0	0.2	17.0	0	0	1002	-0.43	-0.04	12.9	0.75
Maximum	0.0	2.5	20.9	6	2	1023	0.41	0.03	24.9	0.90
Range	0.0	2.3	3.9	5	2	21	0.84	0.08	12.0	0.16

Date and Time	CH_4	CO_2	O_2	CO	H_2S	Atmospheric Pressure	Average 9-hour atmospheric pressure change	Flow	Temperature	Water Level
	% v/v	% v/v	% v/v	ppm/v	ppm/v	mbar	mbar	Ltr/hr	°C	mbgl
11/06/2021 13:00	0.0	0.5	20.3	1	0	1015	N/A	-0.01	20.8	0.79
11/06/2021 14:00	0.0	0.6	20.4	1	0	1014	N/A	-0.02	20.1	0.78
11/06/2021 15:00	0.0	0.4	20.7	1	0	1014	N/A	-0.02	20.3	0.79
11/06/2021 16:00	0.0	0.4	20.8	2	1	1015	N/A	-0.02	20.8	0.79
11/06/2021 17:00	0.0	0.4	20.7	2	1	1015	N/A	-0.01	20.6	0.79
11/06/2021 18:00	0.0	0.5	20.5	2	0	1014	N/A	0.00	20.4	0.79
11/06/2021 19:00	0.0	0.5	20.5	2	1	1014	N/A	-0.01	20.3	0.79
11/06/2021 20:00	0.0	0.6	20.4	2	1	1015	N/A	-0.01	20.1	0.80
11/06/2021 21:00	0.0	0.6	20.2	1	0	1015	0.04	0.01	19.6	0.80
11/06/2021 22:00	0.0	0.6	20.0	1	0	1015	0.07	0.01	18.8	0.80
11/06/2021 23:00	0.0	0.7	19.7	1	0	1016	0.09	-0.01	18.2	0.81
12/06/2021 00:00	0.0	0.7	19.6	1	0	1016	0.13	0.00	17.8	0.81
12/06/2021 01:00	0.0	0.7	19.5	1	0	1016	0.16	0.00	17.4	0.81
12/06/2021 02:00	0.0	0.8	19.4	1	0	1016	0.13	0.03	17.1	0.81
12/06/2021 03:00	0.0	0.8	19.3	1	0	1016	0.13	0.02	16.9	0.81
12/06/2021 04:00	0.0	0.8	19.3	1	0	1016	0.06	0.02	16.8	0.81
12/06/2021 05:00	0.0	0.8	19.2	1	0	1016	0.06	0.02	16.7	0.81
12/06/2021 06:00	0.0	0.8	19.2	1	0	1016	0.09	0.03	16.6	0.82
12/06/2021 07:00	0.0	0.7	19.2	1	0	1017	0.09	0.02	16.6	0.82
12/06/2021 08:00	0.0	0.7	19.2	1	0	1017	0.10	0.01	16.7	0.82
12/06/2021 09:00	0.0	0.7	19.3	1	0	1016	0.06	0.00	16.9	0.82
12/06/2021 10:00	0.0	0.8	19.4	1	0	1017	0.11	-0.01	17.4	0.82
12/06/2021 11:00	0.0	0.7	19.7	1	0	1017	0.09	0.00	18.2	0.82
12/06/2021 12:00	0.0	0.7	19.9	2	0	1017	0.04	-0.02	19.2	0.82
12/06/2021 13:00	0.0	0.7	20.0	2	0	1017	0.05	-0.02	20.1	0.82
12/06/2021 14:00	0.0	0.6	20.2	2	1	1017	0.05	-0.02	20.8	0.82
12/06/2021 15:00	0.0	0.6	20.3	2	1	1017	0.11	-0.02	21.6	0.83
12/06/2021 16:00	0.0	0.5	20.4	2	1	1017	0.07	-0.03	22.4	0.83
12/06/2021 17:00	0.0	0.4	20.6	3	1	1017	0.04	-0.03	23.1	0.83
12/06/2021 18:00	0.0	0.3	20.8	3	2	1018	0.09	-0.03	23.8	0.83
12/06/2021 19:00	0.0	0.3	20.8	3	2	1018	0.10	-0.02	23.8	0.83
12/06/2021 20:00	0.0	0.4	20.7	3	1	1019	0.18	-0.02	23.3	0.84
12/06/2021 21:00	0.0	0.5	20.4	2	1	1020	0.24	0.01	22.3	0.85
12/06/2021 22:00	0.0	0.6	20.0	2	1	1020	0.33	0.02	21.1	0.85
12/06/2021 23:00	0.0	0.7	20.6	1	0	1021	0.39	0.01	19.9	0.86
13/06/2021 00:00	0.0	0.8	19.5	1	0	1021	0.41	0.00	18.9	0.86
13/06/2021 01:00	0.0	0.9	19.3	1	0	1021	0.35	-0.01	18.2	0.86
13/06/2021 02:00	0.0	1.0	19.1	1	0	1021	0.25	0.03	17.5	0.86
13/06/2021 03:00	0.0	1.1	19.0	1	0	1021	0.17	0.00	16.9	0.86
13/06/2021 04:00	0.0	1.1	18.9	1	0	1021	0.11	0.00	16.4	0.86
13/06/2021 05:00	0.0	1.2	18.8	1	0	1022	0.13	0.00	16.0	0.87
13/06/2021 06:00	0.0	1.2	18.7	1	0	1023	0.15	0.00	15.7	0.87
13/06/2021 07:00	0.0	1.2	18.7	1	0	1023	0.19	0.00	15.5	0.87
13/06/2021 08:00	0.0	1.2	18.7	1	0	1022	0.11	0.01	15.5	0.86
13/06/2021 09:00	0.0	1.0	18.8	1	0	1022	0.07	0.01	15.8	0.86
13/06/2021 10:00	0.0	0.8	19.1	1	0	1021	0.01	0.00	16.6	0.86
13/06/2021 11:00	0.0	0.8	19.5	2	0	1021	-0.09	0.00	17.9	0.86
13/06/2021 12:00	0.0	0.7	19.8	2	0	1021	-0.15	-0.03	19.3	0.86
13/06/2021 13:00	0.0	0.7	20.1	2	0	1021	-0.22	0.00	20.5	0.85
13/06/2021 14:00	0.0	0.6	20.3	3	1	1020	-0.19	-0.03	21.4	0.85
13/06/2021 15:00	0.0	0.5	20.4	3	1	1020	-0.19	-0.03	22.3	0.85
13/06/2021 16:00	0.0	0.5	20.7	3	1	1020	-0.20	-0.03	23.1	0.84
13/06/2021 17:00	0.0	0.4	20.8	4	1	1019	-0.22	-0.03	23.6	0.84
13/06/2021 18:00	0.0	0.3	20.8	4	2	1019	-0.26	-0.03	23.9	0.84
13/06/2021 19:00	0.0	0.3	20.9	4	2	1019	-0.23	-0.03	24.0	0.84
13/06/2021 20:00	0.0	0.3	20.7	4	2	1019	-0.18	-0.03	23.6	0.84
13/06/2021 21:00	0.0	0.5	20.4	3	1	1019	-0.15	0.00	22.6	0.84
13/06/2021 22:00	0.0	0.6	20.0	2	1	1019	-0.10	0.00	21.4	0.84
13/06/2021 23:00	0.0	0.8	19.7	2	0	1019	-0.07	0.01	20.2	0.84
14/06/2021 00:00	0.0	0.9	19.6	1	0	1018	-0.07	-0.01	19.2	0.84
14/06/2021 01:00	0.0	1.0	19.5	1	0	1018	-0.12	0.00	18.4	0.84
14/06/2021 02:00	0.0	1.1	19.1	1	0	1017	-0.17	0.03	17.7	0.84
14/06/2021 03:00	0.0	1.2	18.9	1	0	1017	-0.17	0.00	17.1	0.83
14/06/2021 04:00	0.0	1.3	18.8	1	0	1017	-0.17	-0.01	16.6	0.84
14/06/2021 05:00	0.0	1.3	18.7	1	0	1017	-0.20	0.00	16.2	0.83
14/06/2021 06:00	0.0	1.4	18.6	1	0	1016	-0.21	0.00	15.9	0.83
14/06/2021 07:00	0.0	1.3	18.6	1	0	1016	-0.20	0.00	15.7	0.83
14/06/2021 08:00	0.0	1.3	18.6	1	0	1015	-0.22	0.00	15.7	0.82
14/06/2021 09:00	0.0	1.1	18.7	1	0	1014	-0.30	0.00	15.9	0.82
14/06/2021 10:00	0.0	0.9	19.0	1	0	1014	-0.33	-0.01	16.8	0.81
14/06/2021 11:00	0.0	0.8	19.4	2	0	1014	-0.32	-0.03	18.2	0.81
14/06/2021 12:00	0.0	0.7	19.8	3	0	1014	-0.28	-0.01	19.8	0.82
14/06/2021 13:00	0.0	0.6	20.1	3	1	1014	-0.26	-0.03	21.1	0.82
14/06/2021 14:00	0.0	0.6	20.3	4	1	1013	-0.24	-0.02	22.1	0.81
14/06/2021 15:00	0.0	0.5	20.6	4	1	1013	-0.18	-0.03	23.1	0.81
14/06/2021 16:00	0.0	0.3	20.8	4	2	1013	-0.13	-0.03	24.0	0.82
14/06/2021 17:00	0.0	0.3	20.9	5	2	1013	-0.14	-0.03	24.5	0.82
14/06/2021 18:00	0.0	0.2	20.9	5	2	1013	-0.14	-0.04	24.8	0.82
14/06/2021 19:00	0.0	0.2	20.8	5	2	1013	-0.06	-0.02	24.6	0.82
14/06/2021 20:00	0.0	0.4	20.6	4	1	1013	0.03	-0.02	23.9	0.83
14/06/2021 21:00	0.0	0.5	20.3	3	1	1014	0.10	0.00	22.9	0.83
14/06/2021 22:00	0.0	0.6	20.0	2	1	1014	0.17	0.02	21.9	0.84
14/06/2021 23:00	0.0	0.7	19.8	2	0	1015	0.22	0.01	21.1	0.84
15/06/2021 00:00	0.0	0.7	19.7	2	0	1015	0.25	0.01	20.4	0.85
15/06/2021 01:00	0.0	0.8	19.5	2	0	1015	0.22	-0.01	19.8	0.85
15/06/2021 02:00	0.0	0.8	19.4	1	0	1015	0.18	-0.01	19.2	0.85
15/06/2021 03:00	0.0	0.9	19.3	1	0	1015	0.16	0.00	18.7	0.85
15/06/2021 04:00	0.0	1.0	19.1	1	0	1015	0.09	0.00	18.3	0.85
15/06/2021 05:00	0.0	0.9	19.1	1	0	1016	0.09	-0.01	18.0	0.86
15/06/2021 06:00	0.0	1.0	19.0	1	0	1016	0.08	0.02	17.8	0.86
15/06/2021 07:00	0.0	1.0	19.0	1	0	1016	0.11	0.02	17.6	0.86
15/06/2021 08:00	0.0	0.8	19.1	1	0	1016	0.12	0.00	17.7	0.86
15/06/2021 09:00	0.0	0.7	19.2	1	0	1016	0.04	-0.01	17.9	0.86
15/06/2021 10:00	0.0	0.7	19.3	2	0	1015	0.00	0.00	18.4	0.85
15/06/2021 11:00	0.0	0.8	19.6	2	0	1015	-0.04	0.00	19.3	0.86
15/06/2021 12:00	0.0	0.7	19.8	3	0	1015	-0.08	-0.02	20.5	0.85
15/06/2021 13:00	0.0	0.6	20.0	3	1	1015	-0.17	-0.01	21.4	0.85
15/06/2021 14:00	0.0	0.6	20.2	3	1	1014	-0.22	-0.02	22.0	0.85
15/06/2021 15:00	0.0	0.6	20.2	3	1	1014	-0.21	-0.02	22.4	0.85

ggs Experts in Continuous Monitoring

Date and Time	CH_4	CO_2	O_2	CO	H_2S	Atmospheric Pressure	Average 9-hour atmospheric pressure change	Flow	Temperature	Water Level
	% v/v	% v/v	% v/v	ppm/v	ppm/v	mbar	mbar	Ltr/hr	°C	mbgl
15/06/2021 16:00	0.0	0.5	20.3	4	1	1013	-0.24	-0.01	22.9	0.84
15/06/2021 17:00	0.0	0.5	20.4	4	1	1013	-0.25	-0.02	23.3	0.84
15/06/2021 18:00	0.0	0.5	20.4	3	1	1012	-0.28	-0.03	23.2	0.84
15/06/2021 19:00	0.0	0.4	20.4	4	1	1012	-0.26	-0.02	23.4	0.84
15/06/2021 20:00	0.0	0.4	20.4	3	1	1012	-0.20	-0.01	23.3	0.85
15/06/2021 21:00	0.0	0.6	20.1	3	1	1012	-0.13	0.01	22.3	0.85
15/06/2021 22:00	0.0	0.7	19.8	2	0	1013	-0.03	0.01	21.2	0.85
15/06/2021 23:00	0.0	0.8	19.7	2	0	1013	-0.04	0.02	20.1	0.85
16/06/2021 00:00	0.0	0.9	19.7	1	0	1012	-0.03	-0.01	19.1	0.85
16/06/2021 01:00	0.0	1.0	19.1	1	0	1012	-0.08	0.01	18.3	0.85
16/06/2021 02:00	0.0	1.1	19.0	1	0	1011	-0.14	0.02	17.6	0.84
16/06/2021 03:00	0.0	1.2	18.8	1	0	1010	-0.21	0.01	17.1	0.84
16/06/2021 04:00	0.0	1.3	18.7	1	0	1010	-0.34	0.00	16.6	0.84
16/06/2021 05:00	0.0	1.3	18.6	1	0	1009	-0.38	0.00	16.1	0.83
16/06/2021 06:00	0.0	1.3	18.6	1	0	1009	-0.37	0.00	15.8	0.83
16/06/2021 07:00	0.0	1.3	18.5	1	0	1009	-0.34	0.00	15.6	0.83
16/06/2021 08:00	0.0	1.3	18.5	1	0	1007	-0.42	-0.01	15.6	0.82
16/06/2021 09:00	0.0	1.1	18.7	1	0	1007	-0.43	0.00	15.9	0.81
16/06/2021 10:00	0.0	0.9	18.9	1	0	1006	-0.37	0.00	16.7	0.81
16/06/2021 11:00	0.0	0.9	19.3	2	0	1006	-0.37	0.00	18.1	0.81
16/06/2021 12:00	0.0	0.8	19.7	3	0	1006	-0.34	-0.03	19.7	0.81
16/06/2021 13:00	0.0	0.7	20.0	4	1	1005	-0.37	-0.02	21.2	0.81
16/06/2021 14:00	0.0	0.6	20.2	4	1	1005	-0.28	-0.02	22.3	0.81
16/06/2021 15:00	0.0	0.5	20.6	5	1	1004	-0.25	-0.03	23.4	0.81
16/06/2021 16:00	0.0	0.3	20.8	5	2	1004	-0.27	-0.04	24.3	0.81
16/06/2021 17:00	0.0	0.2	20.9	6	2	1004	-0.25	-0.03	24.9	0.81
16/06/2021 18:00	0.0	0.3	20.8	5	2	1003	-0.26	-0.02	24.9	0.81
16/06/2021 19:00	0.0	0.4	20.5	4	1	1003	-0.23	-0.03	24.2	0.81
16/06/2021 20:00	0.0	0.6	20.3	3	1	1004	-0.10	0.00	23.2	0.82
16/06/2021 21:00	0.0	0.6	20.0	3	1	1005	0.09	0.01	22.1	0.83
16/06/2021 22:00	0.0	0.7	19.8	2	0	1005	0.14	0.02	21.2	0.83
16/06/2021 23:00	0.0	0.8	19.5	2	0	1004	0.01	0.03	20.5	0.83
17/06/2021 00:00	0.0	0.9	19.4	2	0	1004	0.08	0.01	19.9	0.83
17/06/2021 01:00	0.0	0.9	19.3	2	0	1003	0.02	-0.01	19.5	0.82
17/06/2021 02:00	0.0	0.9	19.1	2	0	1002	-0.18	-0.01	19.1	0.82
17/06/2021 03:00	0.0	0.9	19.0	2	0	1003	-0.24	0.00	18.8	0.82
17/06/2021 04:00	0.0	0.9	19.1	2	0	1003	-0.29	-0.01	18.6	0.82
17/06/2021 05:00	0.0	0.9	19.0	2	0	1002	-0.16	0.00	18.3	0.82
17/06/2021 06:00	0.0	0.9	18.9	2	0	1003	-0.16	0.01	18.1	0.82
17/06/2021 07:00	0.0	0.9	18.9	2	0	1003	-0.01	0.00	18.0	0.83
17/06/2021 08:00	0.0	0.8	18.9	2	0	1003	0.08	0.01	17.9	0.83
17/06/2021 09:00	0.0	0.8	18.9	2	0	1003	0.04	-0.01	18.0	0.83
17/06/2021 10:00	0.0	0.8	18.9	2	0	1003	0.10	0.00	18.1	0.83
17/06/2021 11:00	0.0	0.8	19.0	2	0	1004	0.17	-0.01	18.5	0.84
17/06/2021 12:00	0.0	0.7	19.1	2	0	1004	0.17	0.00	18.8	0.84
17/06/2021 13:00	0.0	0.7	19.1	3	0	1005	0.17	0.00	19.0	0.85
17/06/2021 14:00	0.0	0.7	19.2	3	0	1005	0.24	0.00	19.1	0.85
17/06/2021 15:00	0.0	0.7	19.2	3	0	1006	0.24	-0.01	19.1	0.85
17/06/2021 16:00	0.0	0.7	19.1	3	0	1006	0.28	0.00	19.1	0.86
17/06/2021 17:00	0.0	0.7	19.1	3	0	1006	0.26	0.00	19.2	0.86
17/06/2021 18:00	0.0	0.7	19.1	3	0	1006	0.23	0.01	19.3	0.86
17/06/2021 19:00	0.0	0.8	19.1	2	1	1006	0.18	0.01	19.2	0.86
17/06/2021 20:00	0.0	0.8	19.1	2	0	1007	0.21	0.00	19.1	0.87
17/06/2021 21:00	0.0	0.8	19.0	2	0	1007	0.17	-0.01	18.9	0.87
17/06/2021 22:00	0.0	0.8	18.9	2	0	1008	0.22	0.00	18.7	0.87
17/06/2021 23:00	0.0	0.8	18.9	2	0	1008	0.19	-0.01	18.5	0.87
18/06/2021 00:00	0.0	0.9	18.8	2	0	1007	0.09	-0.01	18.3	0.87
18/06/2021 01:00	0.0	0.9	18.8	2	0	1008	0.14	0.00	18.2	0.87
18/06/2021 02:00	0.0	0.9	18.8	2	0	1007	0.04	-0.01	18.1	0.87
18/06/2021 03:00	0.0	0.9	18.7	2	0	1007	0.03	0.00	17.9	0.87
18/06/2021 04:00	0.0	0.9	18.7	2	0	1007	-0.12	-0.01	17.8	0.87
18/06/2021 05:00	0.0	0.9	18.6	2	0	1007	-0.09	0.00	17.6	0.87
18/06/2021 06:00	0.0	1.0	18.6	1	0	1007	-0.04	0.00	17.5	0.87
18/06/2021 07:00	0.0	1.0	18.6	1	0	1007	-0.10	0.01	17.4	0.87
18/06/2021 08:00	0.0	0.9	18.5	1	0	1007	-0.09	0.01	17.3	0.86
18/06/2021 09:00	0.0	0.9	18.5	1	0	1006	-0.12	0.00	17.3	0.86
18/06/2021 10:00	0.0	0.9	18.5	1	0	1006	-0.10	0.00	17.4	0.86
18/06/2021 11:00	0.0	0.9	18.5	1	0	1006	-0.13	0.00	17.4	0.86
18/06/2021 12:00	0.0	0.9	18.5	1	0	1006	-0.12	-0.01	17.4	0.85
18/06/2021 13:00	0.0	0.9	18.5	1	0	1006	-0.14	0.01	17.4	0.85
18/06/2021 14:00	0.0	0.9	18.5	1	0	1005	-0.16	0.00	17.4	0.85
18/06/2021 15:00	0.0	0.9	18.6	1	0	1005	-0.12	0.00	17.6	0.85
18/06/2021 16:00	0.0	0.9	18.6	1	0	1005	-0.09	0.00	17.8	0.85
18/06/2021 17:00	0.0	0.9	18.6	1	0	1005	-0.10	-0.01	17.9	0.85
18/06/2021 18:00	0.0	0.9	18.6	1	0	1005	-0.04	0.00	17.8	0.85
18/06/2021 19:00	0.0	0.9	18.6	1	0	1006	0.01	0.00	17.6	0.85
18/06/2021 20:00	0.0	0.9	18.5	1	0	1006	0.12	0.00	17.4	0.86
18/06/2021 21:00	0.0	0.9	18.4	1	0	1007	0.20	0.00	17.2	0.86
18/06/2021 22:00	0.0	1.0	18.3	1	0	1008	0.29	0.03	16.9	0.87
18/06/2021 23:00	0.0	1.1	18.2	1	0	1008	0.34	0.01	16.7	0.87
19/06/2021 00:00	0.0	1.1	18.2	1	0	1009	0.41	0.00	16.4	0.88
19/06/2021 01:00	0.0	1.1	18.1	1	0	1009	0.32	0.00	16.2	0.88
19/06/2021 02:00	0.0	1.1	18.6	1	0	1009	0.34	0.00	16.0	0.88
19/06/2021 03:00	0.0	1.2	18.3	1	0	1009	0.27	0.00	15.8	0.88
19/06/2021 04:00	0.0	1.2	18.1	1	0	1010	0.22	0.00	15.7	0.88
19/06/2021 05:00	0.0	1.2	18.0	1	0	1010	0.27	0.00	15.6	0.89
19/06/2021 06:00	0.0	1.2	18.0	1	0	1011	0.17	0.00	15.5	0.89
19/06/2021 07:00	0.0	1.2	18.0	1	0	1011	0.23	0.00	15.5	0.89
19/06/2021 08:00	0.0	1.1	18.0	1	0	1011	0.16	0.00	15.5	0.89
19/06/2021 09:00	0.0	1.1	18.0	1	0	1010	0.07	0.00	15.6	0.88
19/06/2021 10:00	0.0	1.0	18.0	1	0	1010	0.07	0.00	15.8	0.88
19/06/2021 11:00	0.0	0.9	18.1	1	0	1010	-0.06	0.01	15.9	0.88
19/06/2021 12:00	0.0	0.9	18.2	1	0	1010	-0.01	0.02	16.2	0.88
19/06/2021 13:00	0.0	0.9	18.2	1	0	1009	-0.14	0.00	16.4	0.88
19/06/2021 14:00	0.0	0.9	18.2	1	0	1009	-0.21	0.00	16.7	0.87
19/06/2021 15:00	0.0	0.9	18.3	1	0	1008	-0.21	-0.01	17.0	0.87
19/06/2021 16:00	0.0	0.9	18.3	1	0	1008	-0.25	-0.02	17.0	0.86
19/06/2021 17:00	0.0	1.0	18.3	1	0	1007	-0.28	-0.01	17.0	0.86
19/06/2021 18:00	0.0	1.0	18.2	1	0	1007	-0.37	0.00	16.9	0.86
19/06/2021 19:00	0.0	1.0	18.2	1	0	1006	-0.42	-0.01	16.8	0.85
19/06/2021 20:00	0.0	1.1	18.1	1	0	1005	-0.40	0.00	16.6	0.85
19/06/2021 21:00	0.0	1.1	18.1	1	0	1005	-0.39	0.03	16.4	0.84
19/06/2021 22:00	0.0	1.1	18.0	1	0	1005	-0.33	0.03	16.3	0.84
19/06/2021 23:00	0.0	1.2	18.0	1	0	1004	-0.34	0.01	16.1	0.84
20/06/2021 00:00	0.0	1.2	17.9	1	0	1004	-0.36	0.00	15.9	0.84
20/06/2021 01:00	0.0	1.2	17.9	1	0	1004	-0.22	0.00	15.8	0.83
20/06/2021 02:00	0.0	1.3	17.9	1	0	1003	-0.23	0.01	15.8	0.83
20/06/2021 03:00	0.0	1.3	17.8	1	0	1002	-0.25	-0.01	15.7	0.83
20/06/2021 04:00	0.0	1.3	17.8	1	0	1003	-0.24	0.00	15.6	0.83
20/06/2021 05:00	0.0	1.3	17.8	1	0	1003	-0.19	0.00	15.5	0.83
20/06/2021 06:00	0.0	1.2	17.8	1	0	1003	-0.15	0.00	15.4	0.83
20/06/2021 07:00	0.0	1.2	17.8	1	0	1003	-0.10	0.00	15.5	0.83
20/06/2021 08:00	0.0	1.0	17.9	1	0	1003	0.02	0.00	15.6	0.83
20/06/2021 09:00	0.0	0.9	18.0	1	0	1004	0.14	0.00	15.8	0.84
20/06/2021 10:00	0.0	1.0	18.0	1	0	1003	0.02	0.00	16.0	0.83
20/06/2021 11:00	0.0	0.9	18.1	1	0	1003	0.09	-0.02	16.4	0.83
20/06/2021 12:00	0.0	0.9	18.2	1	0	1003	0.07	-0.01	16.7	0.84
20/06/2021 13:00	0.0	1.0	18.2	1	0	1003	0.00	-0.02	17.2	0.83
20/06/2021 14:00	0.0	0.9	18.4	2	0	1002	-0.11	0.00	17.8	0.83
20/06/2021 15:00	0.0	0.9	18.5	2	0	1002	-0.16	-0.01	18.6	0.83
20/06/2021 16:00	0.0	0.9	18.6	2	0	1002	-0.12	0.00	19.2	0.82
20/06/2021 17:00	0.0	0.9	18.7	2	1	1002	-0.19	-0.01	19.7	0.82

ggrs
Experts in Continuous Monitoring

Date and Time	CH_4	CO_2	O_2	CO	H_2S	Atmospheric Pressure	Average 9-hour atmospheric pressure change	Flow	Temperature	Water Level
	% v/v	% v/v	% v/v	ppm/v	ppm/v	mbar	mbar	Ltr/hr	°C	mbgl
20/06/2021 18:00	0.0	0.9	18.7	2	1	1002	-0.13	-0.01	19.8	0.83
20/06/2021 19:00	0.0	0.9	18.7	2	1	1003	-0.01	0.01	19.5	0.83
20/06/2021 20:00	0.0	1.0	18.5	2	0	1003	0.07	0.00	19.1	0.83
20/06/2021 21:00	0.0	1.0	18.5	2	0	1003	0.11	0.02	18.6	0.84
20/06/2021 22:00	0.0	1.1	18.3	1	0	1004	0.21	-0.01	18.1	0.84
20/06/2021 23:00	0.0	1.1	18.1	1	0	1004	0.22	-0.01	17.6	0.84
21/06/2021 00:00	0.0	1.2	18.1	1	0	1003	0.13	0.01	17.3	0.84
21/06/2021 01:00	0.0	1.2	17.9	1	0	1003	0.05	0.02	16.9	0.84
21/06/2021 02:00	0.0	1.3	17.9	1	0	1003	0.03	0.02	16.5	0.84
21/06/2021 03:00	0.0	1.4	17.8	1	0	1003	-0.01	0.01	16.3	0.84
21/06/2021 04:00	0.0	1.4	17.8	1	0	1003	-0.05	0.01	16.1	0.84
21/06/2021 05:00	0.0	1.5	17.7	1	0	1003	-0.01	0.00	15.9	0.84
21/06/2021 06:00	0.0	1.5	17.7	1	0	1004	0.06	0.00	15.8	0.84
21/06/2021 07:00	0.0	1.5	17.7	1	0	1004	0.07	0.00	15.6	0.84
21/06/2021 08:00	0.0	1.5	17.7	1	0	1004	0.10	0.00	15.5	0.85
21/06/2021 09:00	0.0	1.5	17.7	1	0	1004	0.11	0.00	15.4	0.85
21/06/2021 10:00	0.0	1.5	17.7	1	0	1005	0.14	0.00	15.4	0.85
21/06/2021 11:00	0.0	1.4	17.7	1	0	1005	0.16	0.00	15.5	0.86
21/06/2021 12:00	0.0	1.3	17.7	1	0	1005	0.19	0.00	15.6	0.86
21/06/2021 13:00	0.0	1.1	17.8	1	0	1006	0.22	0.00	16.0	0.86
21/06/2021 14:00	0.0	1.0	17.8	1	0	1006	0.20	0.00	16.1	0.86
21/06/2021 15:00	0.0	1.0	17.8	1	0	1007	0.30	0.00	16.1	0.87
21/06/2021 16:00	0.0	1.0	17.7	1	0	1007	0.26	0.02	15.9	0.87
21/06/2021 17:00	0.0	1.0	17.7	1	0	1007	0.24	0.00	15.8	0.87
21/06/2021 18:00	0.0	1.0	17.7	1	0	1008	0.26	0.01	15.8	0.87
21/06/2021 19:00	0.0	1.0	17.7	1	0	1008	0.29	0.01	15.8	0.88
21/06/2021 20:00	0.0	1.0	17.7	1	0	1009	0.32	0.01	15.7	0.88
21/06/2021 21:00	0.0	1.1	17.7	1	0	1009	0.26	-0.01	15.5	0.88
21/06/2021 22:00	0.0	1.1	17.6	1	0	1009	0.29	0.00	15.3	0.88
21/06/2021 23:00	0.0	1.2	17.6	1	0	1010	0.32	-0.01	15.1	0.89
22/06/2021 00:00	0.0	1.2	17.5	1	0	1010	0.30	0.00	14.9	0.89
22/06/2021 01:00	0.0	1.3	17.5	1	0	1011	0.25	0.00	14.8	0.89
22/06/2021 02:00	0.0	1.3	17.5	1	0	1010	0.18	0.00	14.6	0.89
22/06/2021 03:00	0.0	1.3	17.5	1	0	1011	0.16	0.00	14.4	0.89
22/06/2021 04:00	0.0	1.3	17.5	1	0	1011	0.16	0.00	14.4	0.89
22/06/2021 05:00	0.0	1.3	17.5	1	0	1011	0.15	0.00	14.3	0.89
22/06/2021 06:00	0.0	1.3	17.5	0	0	1012	0.13	0.01	14.1	0.89
22/06/2021 07:00	0.0	1.3	17.5	1	0	1012	0.19	0.01	14.0	0.89
22/06/2021 08:00	0.0	1.3	17.5	1	0	1013	0.27	0.00	13.9	0.89
22/06/2021 09:00	0.0	1.2	17.5	1	0	1013	0.30	0.00	14.0	0.90
22/06/2021 10:00	0.0	1.1	17.6	1	0	1013	0.26	0.00	14.3	0.89
22/06/2021 11:00	0.0	0.9	17.7	1	0	1014	0.25	-0.01	14.7	0.89
22/06/2021 12:00	0.0	0.9	17.8	1	0	1014	0.25	0.01	15.1	0.89
22/06/2021 13:00	0.0	0.9	17.9	1	0	1014	0.18	0.00	15.5	0.89
22/06/2021 14:00	0.0	0.8	18.0	1	0	1014	0.15	-0.01	15.9	0.89
22/06/2021 15:00	0.0	0.9	18.0	1	0	1015	0.13	-0.01	16.1	0.89
22/06/2021 16:00	0.0	0.8	18.1	1	0	1015	0.20	-0.01	16.3	0.89
22/06/2021 17:00	0.0	0.9	18.1	1	0	1015	0.19	-0.01	16.4	0.89
22/06/2021 18:00	0.0	0.9	18.0	1	0	1015	0.17	-0.01	16.4	0.89
22/06/2021 19:00	0.0	0.9	18.0	1	0	1016	0.24	-0.01	16.3	0.90
22/06/2021 20:00	0.0	0.9	18.0	1	0	1017	0.26	0.00	16.3	0.90
22/06/2021 21:00	0.0	1.0	18.0	1	0	1017	0.28	0.00	16.0	0.90
22/06/2021 22:00	0.0	1.0	17.9	1	0	1018	0.29	0.01	15.7	0.90
22/06/2021 23:00	0.0	1.2	17.7	1	0	1018	0.31	0.00	15.2	0.90
23/06/2021 00:00	0.0	1.4	17.6	1	0	1018	0.29	0.00	14.8	0.90
23/06/2021 01:00	0.0	1.5	17.5	1	0	1018	0.22	0.00	14.5	0.90
23/06/2021 02:00	0.0	1.6	17.4	1	0	1018	0.13	0.00	14.3	0.89
23/06/2021 03:00	0.0	1.6	17.4	1	0	1018	0.09	0.00	14.1	0.89
23/06/2021 04:00	0.0	1.7	17.3	1	0	1018	0.06	0.00	13.8	0.89
23/06/2021 05:00	0.0	1.8	17.7	1	0	1018	0.02	0.00	13.3	0.89
23/06/2021 06:00	0.0	1.8	17.4	0	0	1019	0.06	0.00	13.1	0.89
23/06/2021 07:00	0.0	1.9	17.3	1	0	1019	0.09	0.00	12.9	0.89
23/06/2021 08:00	0.0	1.8	17.2	1	0	1019	0.11	0.01	13.1	0.89
23/06/2021 09:00	0.0	1.8	17.2	1	0	1019	0.09	-0.01	13.3	0.89
23/06/2021 10:00	0.0	1.5	17.5	1	0	1018	0.01	0.00	13.7	0.88
23/06/2021 11:00	0.0	1.4	17.7	1	0	1018	-0.04	0.00	14.5	0.87
23/06/2021 12:00	0.0	1.2	18.0	2	0	1018	-0.10	-0.01	15.9	0.87
23/06/2021 13:00	0.0	1.2	18.2	2	0	1018	-0.12	-0.02	17.2	0.87
23/06/2021 14:00	0.0	1.2	18.4	2	0	1017	-0.13	-0.01	18.1	0.87
23/06/2021 15:00	0.0	1.1	18.5	2	0	1017	-0.17	-0.01	18.8	0.86
23/06/2021 16:00	0.0	1.1	18.7	3	0	1017	-0.15	-0.02	19.7	0.86
23/06/2021 17:00	0.0	1.0	18.8	3	1	1017	-0.12	-0.01	20.2	0.86
23/06/2021 18:00	0.0	1.0	18.9	3	1	1017	-0.03	-0.03	20.4	0.86
23/06/2021 19:00	0.0	1.1	18.8	3	1	1018	0.00	-0.02	20.1	0.86
23/06/2021 20:00	0.0	1.2	18.7	2	1	1018	0.06	-0.01	19.4	0.87
23/06/2021 21:00	0.0	1.4	18.4	2	0	1018	0.12	0.01	18.5	0.87
23/06/2021 22:00	0.0	1.5	18.1	1	0	1019	0.21	-0.01	17.5	0.87
23/06/2021 23:00	0.0	1.6	17.9	1	0	1019	0.24	0.01	16.6	0.87
24/06/2021 00:00	0.0	1.7	17.7	1	0	1019	0.14	0.01	15.8	0.87
24/06/2021 01:00	0.0	1.9	17.5	1	0	1018	0.07	0.00	15.2	0.87
24/06/2021 02:00	0.0	2.0	17.3	1	0	1018	0.03	0.00	14.6	0.87
24/06/2021 03:00	0.0	2.2	17.5	1	0	1018	-0.01	0.00	14.1	0.87
24/06/2021 04:00	0.0	2.2	17.2	1	0	1018	-0.09	0.01	13.8	0.86
24/06/2021 05:00	0.0	2.3	17.1	0	0	1018	-0.14	0.00	13.4	0.86
24/06/2021 06:00	0.0	2.3	17.1	0	0	1018	-0.11	0.00	13.1	0.86
24/06/2021 07:00	0.0	2.3	17.0	0	0	1018	-0.08	0.01	12.9	0.86
24/06/2021 08:00	0.0	2.3	17.1	0	0	1017	-0.17	0.00	13.0	0.85
24/06/2021 09:00	0.0	2.4	17.1	1	0	1016	-0.24	-0.01	13.3	0.84
24/06/2021 10:00	0.0	1.9	17.4	1	0	1016	-0.26	0.00	14.0	0.84
24/06/2021 11:00	0.0	1.7	17.8	2	0	1015	-0.25	-0.01	15.2	0.84
24/06/2021 12:00	0.0	1.5	18.1	2	0	1016	-0.23	-0.01	16.5	0.84
24/06/2021 13:00	0.0	1.5	18.3	2	0	1015	-0.28	-0.02	17.8	0.83
24/06/2021 14:00	0.0	1.4	18.7	3	0	1015	-0.23	-0.02	18.9	0.83
24/06/2021 15:00	0.0	1.3	18.8	3	1	1015	-0.08	-0.02	19.4	0.84
24/06/2021 16:00	0.0	1.4	18.7	2	1	1015	-0.02	0.00	19.1	0.84
24/06/2021 17:00	0.0	1.4	18.6	2	0	1015	-0.03	0.01	18.7	0.84
24/06/2021 18:00	0.0	1.5	18.5	2	0	1015	-0.07	0.00	18.4	0.84
24/06/2021 19:00	0.0	1.5	18.5	2	0	1015	0.03	-0.01	18.1	0.84
24/06/2021 20:00	0.0	1.5	18.4	1	0	1015	0.05	0.01	17.8	0.84
24/06/2021 21:00	0.0	1.5	18.3	1	0	1015	-0.02	0.00	17.4	0.84
24/06/2021 22:00	0.0	1.6	18.2	1	0	1015	-0.02	0.00	17.1	0.84
24/06/2021 23:00	0.0	1.7	18.1	1	0	1015	0.01	0.00	16.7	0.84
25/06/2021 00:00	0.0	1.7	18.0	1	0	1015	-0.02	0.02	16.4	0.84
25/06/2021 01:00	0.0	1.7	18.0	1	0	1014	-0.12	0.02	16.2	0.83
25/06/2021 02:00	0.0	1.7	17.9	1	0	1014	-0.16	0.02	16.0	0.83
25/06/2021 03:00	0.0	1.7	17.9	1	0	1013	-0.19	0.00	15.9	0.83
25/06/2021 04:00	0.0	1.8	17.9	1	0	1013	-0.27	0.00	15.8	0.83
25/06/2021 05:00	0.0	1.8	17.9	1	0	1013	-0.29	0.01	15.6	0.82
25/06/2021 06:00	0.0	1.9	17.8	1	0	1012	-0.27	0.00	15.4	0.82
25/06/2021 07:00	0.0	1.9	17.8	1	0	1012	-0.22	0.00	15.4	0.82
25/06/2021 08:00	0.0	1.8	17.9	1	0	1012	-0.16	0.00	15.4	0.82
25/06/2021 09:00	0.0	1.7	18.0	1	0	1012	-0.13	0.01	15.5	0.82
25/06/2021 10:00	0.0	1.6	18.0	1	0	1012	-0.10	0.02	15.7	0.82
25/06/2021 11:00	0.0	1.6	18.1	1	0	1012	-0.10	0.01	15.9	0.82
25/06/2021 12:00	0.0	1.6	18.1	1	0	1011	-0.11	0.00	16.1	0.82
25/06/2021 13:00	0.0	1.6	18.1	1	0	1011	-0.11	-0.01	16.1	0.82
25/06/2021 14:00	0.0	1.6	18.2	1	0	1011	-0.14	-0.01	16.3	0.82
25/06/2021 15:00	0.0	1.6	18.2	1	0	1011	-0.16	0.00	16.5	0.82
25/06/2021 16:00	0.0	1.6	18.3	1	0	1010	-0.17	0.00	16.8	0.81
25/06/2021 17:00	0.0	1.6	18.3	1	0	1010	-0.18	-0.01	17.1	0.81
25/06/2021 18:00	0.0	1.6	18.4	1	0	1010	-0.17	0.00	17.4	0.81
25/06/2021 19:00	0.0	1.6	18.5	2	0	1010	-0.14	-0.01	18.0	0.81

gfg
Experts in Continuous Monitoring

Date and Time	CH_4	CO_2	O_2	CO	H_2S	Atmospheric Pressure	Average 9-hour atmospheric pressure change	Flow	Temperature	Water Level
	% v/v	% v/v	% v/v	ppm/v	ppm/v	mbar	mbar	Ltr/hr	°C	mbgl
25/06/2021 20:00	0.0	1.5	18.7	2	0	1010	-0.07	-0.02	18.1	0.82
25/06/2021 21:00	0.0	1.6	18.6	2	0	1011	-0.01	0.02	17.7	0.82
25/06/2021 22:00	0.0	1.7	18.4	1	0	1011	0.10	-0.01	16.9	0.83
25/06/2021 23:00	0.0	1.8	18.1	1	0	1011	0.15	-0.01	16.2	0.83
26/06/2021 00:00	0.0	1.9	18.0	1	0	1011	0.18	0.02	15.5	0.83
26/06/2021 01:00	0.0	2.0	17.8	1	0	1012	0.19	0.00	14.9	0.83
26/06/2021 02:00	0.0	2.2	17.7	1	0	1012	0.15	0.00	14.4	0.83
26/06/2021 03:00	0.0	2.3	17.5	1	0	1012	0.12	0.00	14.0	0.83
26/06/2021 04:00	0.0	2.4	17.5	1	0	1012	0.07	0.00	13.6	0.83
26/06/2021 05:00	0.0	2.5	17.4	0	0	1012	0.07	0.01	13.4	0.84
26/06/2021 06:00	0.0	2.5	17.3	0	0	1012	0.10	0.00	13.4	0.84
26/06/2021 07:00	0.0	2.4	17.4	1	0	1013	0.11	-0.01	13.7	0.84
26/06/2021 08:00	0.0	2.1	17.6	1	0	1013	0.11	-0.01	14.0	0.84
26/06/2021 09:00	0.0	1.9	17.8	1	0	1012	0.02	0.00	14.4	0.83
26/06/2021 10:00	0.0	1.8	17.9	1	0	1012	0.02	0.00	14.8	0.84
26/06/2021 11:00	0.0	1.8	18.1	1	0	1012	0.01	-0.01	15.6	0.84
26/06/2021 12:00	0.0	1.6	18.3	1	0	1013	0.02	-0.01	16.6	0.84
26/06/2021 13:00	0.0	1.6	18.5	2	0	1012	-0.03	0.00	17.3	0.84
26/06/2021 14:00	0.0	1.6	18.5	2	0	1012	-0.06	-0.01	17.8	0.84
26/06/2021 15:00	0.0	1.6	18.6	2	0	1012	0.00	-0.01	18.4	0.84
26/06/2021 16:00	0.0	1.6	18.7	2	0	1012	-0.06	0.01	18.7	0.83
26/06/2021 17:00	0.0	1.6	18.7	2	0	1011	-0.08	-0.01	18.8	0.84
26/06/2021 18:00	0.0	1.6	18.7	2	0	1011	-0.13	-0.01	18.9	0.83
26/06/2021 19:00	0.0	1.6	18.7	2	0	1011	-0.12	-0.01	18.9	0.84
26/06/2021 20:00	0.0	1.6	18.8	2	0	1012	-0.04	-0.01	18.8	0.84
26/06/2021 21:00	0.0	1.7	18.6	2	0	1012	0.04	0.01	18.2	0.85
26/06/2021 22:00	0.0	1.7	18.5	1	0	1013	0.14	0.00	17.6	0.85
26/06/2021 23:00	0.0	1.8	18.3	1	0	1012	0.11	0.00	16.9	0.85
27/06/2021 00:00	0.0	1.8	18.2	1	0	1012	0.09	0.00	16.5	0.85
27/06/2021 01:00	0.0	1.9	18.1	1	0	1012	0.05	0.03	16.3	0.84
27/06/2021 02:00	0.0	1.9	18.2	1	0	1012	-0.03	0.03	16.1	0.84
27/06/2021 03:00	0.0	1.9	18.0	1	0	1011	-0.13	0.01	15.9	0.84
27/06/2021 04:00	0.0	2.0	18.0	1	0	1011	-0.24	0.02	15.9	0.84
27/06/2021 05:00	0.0	1.9	18.0	1	0	1010	-0.23	0.02	15.8	0.83
27/06/2021 06:00	0.0	2.0	18.0	1	0	1010	-0.28	0.02	15.8	0.83
27/06/2021 07:00	0.0	1.9	18.0	1	0	1009	-0.30	0.02	15.8	0.83
27/06/2021 08:00	0.0	1.9	18.1	1	0	1009	-0.28	0.02	15.9	0.83
27/06/2021 09:00	0.0	1.8	18.1	1	0	1009	-0.22	0.00	16.2	0.83
27/06/2021 10:00	0.0	1.8	18.2	1	0	1008	-0.25	0.00	16.6	0.82
27/06/2021 11:00	0.0	1.8	18.4	1	0	1009	-0.16	-0.02	17.2	0.82
27/06/2021 12:00	0.0	1.8	18.4	1	0	1008	-0.12	0.00	17.5	0.83
27/06/2021 13:00	0.0	1.7	18.5	2	0	1008	-0.14	0.01	17.9	0.82
27/06/2021 14:00	0.0	1.7	18.6	2	0	1009	-0.06	0.01	18.4	0.83
27/06/2021 15:00	0.0	1.7	18.6	1	0	1009	-0.05	0.00	18.2	0.83
27/06/2021 16:00	0.0	1.7	18.5	1	0	1008	-0.01	0.00	18.0	0.83
27/06/2021 17:00	0.0	1.7	18.5	1	0	1008	-0.05	-0.02	18.0	0.83
27/06/2021 18:00	0.0	1.8	18.4	1	0	1009	0.00	-0.01	17.8	0.83
27/06/2021 19:00	0.0	1.8	18.4	1	0	1009	0.09	-0.01	17.6	0.83
27/06/2021 20:00	0.0	1.7	18.3	1	0	1009	0.00	-0.02	17.4	0.83
27/06/2021 21:00	0.0	1.7	18.3	1	0	1008	-0.04	0.00	17.1	0.83
27/06/2021 22:00	0.0	1.6	18.2	1	0	1008	0.01	0.00	16.9	0.83
27/06/2021 23:00	0.0	1.6	18.2	1	0	1008	0.00	0.00	16.8	0.83
28/06/2021 00:00	0.0	1.6	18.2	1	0	1008	-0.01	0.02	16.6	0.83
28/06/2021 01:00	0.0	1.6	18.1	1	0	1008	-0.10	0.03	16.5	0.82
28/06/2021 02:00	0.0	1.6	18.1	1	0	1008	-0.11	0.02	16.4	0.82
28/06/2021 03:00	0.0	1.6	18.1	1	0	1007	-0.11	0.03	16.4	0.82
28/06/2021 04:00	0.0	1.6	18.1	1	0	1007	-0.11	0.02	16.3	0.82
28/06/2021 05:00	0.0	1.6	18.2	1	0	1008	-0.08	0.02	16.3	0.82
28/06/2021 06:00	0.0	1.6	18.2	1	0	1008	-0.07	0.01	16.3	0.81
28/06/2021 07:00	0.0	1.6	18.2	1	0	1008	0.00	0.02	16.3	0.82
28/06/2021 08:00	0.0	1.6	18.2	1	0	1008	0.08	0.01	16.3	0.82
28/06/2021 09:00	0.0	1.5	18.3	1	0	1009	0.16	0.00	16.4	0.82
28/06/2021 10:00	0.0	1.5	18.3	1	0	1009	0.19	0.00	16.5	0.82
28/06/2021 11:00	0.0	1.5	18.3	1	0	1009	0.14	-0.01	16.7	0.82
28/06/2021 12:00	0.0	1.5	18.4	1	0	1009	0.16	-0.01	16.9	0.82
28/06/2021 13:00	0.0	1.5	18.5	1	0	1009	0.17	0.00	17.2	0.82
28/06/2021 14:00	0.0	1.6	18.5	1	0	1009	0.04	-0.02	17.8	0.81
28/06/2021 15:00	0.0	1.5	18.7	2	0	1009	-0.01	0.00	18.8	0.81
28/06/2021 16:00	0.0	1.5	18.8	2	0	1008	-0.09	-0.01	19.4	0.81
28/06/2021 17:00	0.0	1.4	18.9	2	0	1008	-0.12	0.01	19.9	0.81
28/06/2021 18:00	0.0	1.5	18.9	2	0	1008	-0.13	0.00	20.1	0.81
28/06/2021 19:00	0.0	1.5	18.8	2	0	1008	-0.15	0.00	19.8	0.80
28/06/2021 20:00	0.0	1.6	18.7	2	0	1008	-0.06	0.01	19.4	0.80
28/06/2021 21:00	0.0	1.6	18.6	1	0	1009	-0.01	0.02	18.9	0.81
28/06/2021 22:00	0.0	1.6	18.5	1	0	1009	0.07	0.01	18.6	0.81
28/06/2021 23:00	0.0	1.7	18.4	1	0	1009	0.11	0.00	18.1	0.81
29/06/2021 00:00	0.0	1.7	18.4	1	0	1009	0.10	0.00	17.8	0.81
29/06/2021 01:00	0.0	1.7	18.3	1	0	1009	0.07	0.00	17.6	0.80
29/06/2021 02:00	0.0	1.7	18.3	1	0	1008	0.01	0.00	17.4	0.80
29/06/2021 03:00	0.0	1.7	18.3	1	0	1008	-0.05	0.00	17.3	0.80
29/06/2021 04:00	0.0	1.8	18.2	1	0	1008	-0.10	0.01	17.1	0.80
29/06/2021 05:00	0.0	1.8	18.2	1	0	1008	-0.12	0.00	16.9	0.80
29/06/2021 06:00	0.0	1.8	18.2	1	0	1008	-0.11	0.02	16.8	0.80
29/06/2021 07:00	0.0	1.8	18.2	1	0	1009	-0.01	0.03	16.6	0.80
29/06/2021 08:00	0.0	1.8	18.2	1	0	1009	0.06	0.03	16.6	0.80
29/06/2021 09:00	0.0	1.7	18.2	1	0	1009	0.11	0.02	16.6	0.80
29/06/2021 10:00	0.0	1.8	18.3	1	0	1009	0.12	0.01	16.8	0.80
29/06/2021 11:00	0.0	1.7	18.3	1	0	1009	0.11	-0.01	17.0	0.80
29/06/2021 12:00	0.0	1.7	18.4	1	0	1009	0.12	0.00	17.6	0.80
29/06/2021 13:00	0.0	1.6	18.5	1	0	1009	0.04	-0.01	18.0	0.80
29/06/2021 14:00	0.0	1.6	18.6	1	0	1009	0.04	0.01	18.4	0.80
29/06/2021 15:00	0.0	1.6	18.6	1	0	1010	0.07	0.00	18.4	0.80
29/06/2021 16:00	0.0	1.6	18.6	1	0	1010	0.05	0.00	18.3	0.80
29/06/2021 17:00	0.0	1.7	18.6	1	0	1010	0.12	-0.01	18.1	0.80
29/06/2021 18:00	0.0	1.7	18.5	1	0	1010	0.10	0.00	17.9	0.80
29/06/2021 19:00	0.0	1.7	18.4	1	0	1010	0.15	0.00	17.6	0.80
29/06/2021 20:00	0.0	1.7	18.4	1	0	1010	0.15	-0.01	17.4	0.80
29/06/2021 21:00	0.0	1.6	18.3	1	0	1011	0.12	-0.01	17.3	0.80
29/06/2021 22:00	0.0	1.6	18.3	1	0	1011	0.17	0.03	17.1	0.81
29/06/2021 23:00	0.0	1.7	18.3	1	0	1011	0.14	0.03	16.8	0.81
30/06/2021 00:00	0.0	1.7	18.2	1	0	1011	0.13	0.02	16.6	0.80
30/06/2021 01:00	0.0	1.7	18.2	1	0	1011	0.10	0.00	16.4	0.80
30/06/2021 02:00	0.0	1.8	18.1	1	0	1011	0.07	0.01	16.3	0.80
30/06/2021 03:00	0.0	1.9	18.1	1	0	1011	0.03	0.00	16.1	0.80
30/06/2021 04:00	0.0	1.9	18.0	1	0	1011	-0.01	0.00	15.9	0.79
30/06/2021 05:00	0.0	1.9	18.0	1	0	1011	-0.02	0.00	15.8	0.79
30/06/2021 06:00	0.0	1.9	18.0	1	0	1011	0.00	0.00	15.7	0.79
30/06/2021 07:00	0.0	1.9	18.0	1	0	1011	0.03	0.00	15.7	0.79
30/06/2021 08:00	0.0	1.8	18.1	1	0	1011	0.01	-0.01	15.8	0.79
30/06/2021 09:00	0.0	1.6	18.2	1	0	1012	0.05	0.00	15.9	0.79
30/06/2021 10:00	0.0	1.6	18.3	1	0	1012	0.08	0.01	16.1	0.79
30/06/2021 11:00	0.0	1.6	18.3	1	0	1012	0.11	0.02	16.1	0.79
30/06/2021 12:00	0.0	1.6	18.4	1	0	1012	0.06	0.00	16.4	0.79
30/06/2021 13:00	0.0	1.5	18.5	1	0	1012	0.03	0.00	16.8	0.78
30/06/2021 14:00	0.0	1.5	18.5	1	0	1012	0.08	-0.01	17.0	0.78
30/06/2021 15:00	0.0	1.5	18.5	1	0	1012	0.06	-0.01	17.2	0.78
30/06/2021 16:00	0.0	1.5	18.6	1	0	1012	0.04	0.00	17.4	0.78
30/06/2021 17:00	0.0	1.5	18.6	1	0	1012	0.01	-0.01	17.6	0.78
30/06/2021 18:00	0.0	1.6	18.6	1	0	1012	0.04	-0.01	17.8	0.78
30/06/2021 19:00	0.0	1.6	18.6	1	0	1012	0.04	-0.01	17.8	0.78
30/06/2021 20:00	0.0	1.6	18.6	1	0	1012	0.06	-0.01	17.7	0.78
30/06/2021 21:00	0.0	1.6	18.6	1	0	1013	0.07	-0.01	17.4	0.78

gfg
Experts in Continuous Monitoring

Date and Time	CH_4	CO_2	O_2	CO	H_2S	Atmospheric Pressure	Average 9-hour atmospheric pressure change	Flow	Temperature	Water Level
	% v/v	% v/v	% v/v	ppm/v	ppm/v	mbar	mbar	Ltr/hr	°C	mbgl
30/06/2021 22:00	0.0	1.7	18.5	1	0	1013	0.10	-0.02	17.1	0.78
30/06/2021 23:00	0.0	1.7	18.4	1	0	1013	0.13	0.01	16.8	0.78
01/07/2021 00:00	0.0	1.8	18.3	1	0	1013	0.15	0.03	16.4	0.78
01/07/2021 01:00	0.0	1.9	18.2	1	0	1013	0.11	0.00	16.2	0.78
01/07/2021 02:00	0.0	1.9	18.2	1	0	1013	0.07	0.00	15.9	0.78
01/07/2021 03:00	0.0	2.1	18.1	1	0	1013	0.05	0.00	15.6	0.78
01/07/2021 04:00	0.0	2.2	17.9	0	0	1013	-0.02	0.00	15.1	0.77
01/07/2021 05:00	0.0	2.3	17.9	0	0	1013	-0.03	0.00	14.8	0.77
01/07/2021 06:00	0.0	2.4	17.8	0	0	1013	-0.03	0.00	14.6	0.77
01/07/2021 07:00	0.0	2.4	17.8	0	0	1013	-0.01	0.00	14.7	0.77
01/07/2021 08:00	0.0	2.1	18.0	1	0	1013	-0.02	0.00	14.9	0.77
01/07/2021 09:00	0.0	1.9	18.2	1	0	1012	-0.11	0.00	15.3	0.76
01/07/2021 10:00	0.0	1.8	18.3	1	0	1012	-0.09	-0.01	15.8	0.76
01/07/2021 11:00	0.0	1.7	18.5	1	0	1012	-0.13	-0.01	16.5	0.76
01/07/2021 12:00	0.0	1.7	18.7	1	0	1012	-0.15	0.00	17.4	0.75
01/07/2021 13:00	0.0	1.6	18.9	2	0	1012	-0.15	0.00	18.3	0.75
01/07/2021 14:00	0.0	1.6	19.1	2	0	1012	-0.13	-0.01	19.1	0.75
01/07/2021 15:00	0.0	1.6	19.1	2	0	1011	-0.08	-0.01	19.3	0.75
01/07/2021 16:00	0.0	1.5	19.2	2	0	1012	-0.02	0.01	19.3	0.75
01/07/2021 17:00	0.0	1.6	19.1	2	0	1012	-0.02	-0.01	19.1	0.75
01/07/2021 18:00	0.0	1.6	19.0	1	0	1012	0.02	0.00	18.8	0.76
01/07/2021 19:00	0.0	1.6	18.9	1	0	1012	0.05	0.01	18.3	0.76
01/07/2021 20:00	0.0	1.7	18.8	1	0	1012	0.02	-0.01	17.8	0.75
01/07/2021 21:00	0.0	1.7	18.7	1	0	1012	0.04	0.00	17.6	0.75
01/07/2021 22:00	0.0	1.8	18.6	1	0	1012	0.06	-0.01	17.2	0.76
01/07/2021 23:00	0.0	1.8	18.5	1	0	1012	0.09	-0.01	16.8	0.76
02/07/2021 00:00	0.0	1.9	18.4	1	0	1012	0.04	0.03	16.5	0.76
02/07/2021 01:00	0.0	2.0	18.4	1	0	1012	-0.01	0.02	16.3	0.75
02/07/2021 02:00	0.0	2.0	18.3	1	0	1012	-0.02	0.02	16.3	0.75
02/07/2021 03:00	0.0	2.0	18.3	1	0	1012	-0.02	0.00	16.1	0.75
02/07/2021 04:00	0.0	2.1	18.2	1	0	1011	-0.13	0.00	15.8	0.75
02/07/2021 05:00	0.0	2.2	18.2	1	0	1011	-0.13	0.00	15.6	0.75
02/07/2021 06:00	0.0	2.2	18.2	1	0	1011	-0.11	0.01	15.6	0.75
02/07/2021 07:00	0.0	2.1	18.2	1	0	1012	-0.04	0.00	15.6	0.75
02/07/2021 08:00	0.0	2.0	18.3	1	0	1012	0.01	0.00	15.8	0.75

ggs
Experts in Continuous Monitoring

Time Series Data

Project Ref:	GGS2586
Project Name:	Downlands Farm, Uckfield
Borehole ref:	WS12
Instrument Name and ID:	03000036
Start Date:	11/06/2021 13:00
End Date:	02/07/2021 07:00
Days of monitoring:	21
Monitoring Frequency (hh:mm:ss):	01:00:00
Total samples taken:	502

Experts in Continuous Monitoring

Summary Table

	CH_4	CO_2	O_2	CO	H_2S	Borehole Pressure	Atmospheric Pressure	Differential Pressure	Average 8-hour atmospheric pressure change	Flow	Temperature	Water Level
Minimum	0.0	0.5	18.3	0	0	NM	1002	N/A	-0.62	-0.03	12.9	1.76
Maximum	0.0	2.1	21.3	0	0	NM	1023	N/A	0.50	0.02	24.9	2.01
Range	0.0	1.6	3.0	0	0	N/A	21	N/A	1.12	0.05	12.0	0.25

Date and Time	CH_4 % v/v	CO_2 % v/v	O_2 % v/v	CO ppm/v	H_2S ppm/v	Borehole Pressure mbar	Atmospheric Pressure mbar	Differential Pressure mbar	Average 8-hour atmospheric pressure change mbar	Flow Ltr/hr	Temperature °C	Water Level mbgl
11/06/2021 13:00	0.0	0.5	20.4	0	0	NM	1015	N/A	N/A	-0.03	20.8	2.00
11/06/2021 14:00	0.0	1.1	20.2	0	0	NM	1014	N/A	N/A	0.00	20.1	2.01
11/06/2021 15:00	0.0	1.3	20.1	0	0	NM	1014	N/A	N/A	0.00	20.3	2.00
11/06/2021 16:00	0.0	1.3	20.0	0	0	NM	1015	N/A	N/A	0.00	20.8	2.00
11/06/2021 17:00	0.0	1.4	19.9	0	0	NM	1015	N/A	N/A	0.01	20.6	2.00
11/06/2021 18:00	0.0	1.5	19.8	0	0	NM	1014	N/A	N/A	0.00	20.4	2.00
11/06/2021 19:00	0.0	1.5	19.8	0	0	NM	1014	N/A	N/A	0.01	20.3	2.00
11/06/2021 20:00	0.0	1.5	19.6	0	0	NM	1015	N/A	N/A	-0.03	20.1	2.00
11/06/2021 21:00	0.0	1.7	19.3	0	0	NM	1015	N/A	0	0.00	19.6	2.00
11/06/2021 22:00	0.0	1.7	19.1	0	0	NM	1015	N/A	0	0.00	18.8	2.00
11/06/2021 23:00	0.0	1.8	18.9	0	0	NM	1016	N/A	0	0.00	18.2	2.00
12/06/2021 00:00	0.0	1.8	18.8	0	0	NM	1016	N/A	0	0.00	17.8	2.00
12/06/2021 01:00	0.0	1.9	18.6	0	0	NM	1016	N/A	0	0.00	17.4	2.00
12/06/2021 02:00	0.0	2.0	18.5	0	0	NM	1016	N/A	0	-0.01	17.1	1.99
12/06/2021 03:00	0.0	2.0	18.5	0	0	NM	1016	N/A	0	0.00	16.9	1.99
12/06/2021 04:00	0.0	1.9	18.5	0	0	NM	1016	N/A	0	0.00	16.8	1.99
12/06/2021 05:00	0.0	1.9	18.5	0	0	NM	1016	N/A	0	-0.01	16.7	1.99
12/06/2021 06:00	0.0	1.9	18.6	0	0	NM	1016	N/A	0	0.00	16.6	1.99
12/06/2021 07:00	0.0	1.9	18.7	0	0	NM	1017	N/A	0	0.00	16.6	1.98
12/06/2021 08:00	0.0	1.9	19.0	0	0	NM	1017	N/A	0	-0.01	16.7	1.98
12/06/2021 09:00	0.0	1.9	19.2	0	0	NM	1016	N/A	0	0.00	16.9	1.98
12/06/2021 10:00	0.0	1.9	19.4	0	0	NM	1017	N/A	0	0.00	17.4	1.98
12/06/2021 11:00	0.0	1.8	19.5	0	0	NM	1017	N/A	0	0.00	18.2	1.98
12/06/2021 12:00	0.0	1.9	19.7	0	0	NM	1017	N/A	0	0.00	19.2	1.98
12/06/2021 13:00	0.0	1.8	19.8	0	0	NM	1017	N/A	0	0.01	20.1	1.98
12/06/2021 14:00	0.0	1.7	20.0	0	0	NM	1017	N/A	0	0.00	20.8	1.98
12/06/2021 15:00	0.0	1.7	20.0	0	0	NM	1017	N/A	0	0.00	21.6	1.97
12/06/2021 16:00	0.0	1.7	20.2	0	0	NM	1017	N/A	0	0.00	22.4	1.98
12/06/2021 17:00	0.0	1.7	20.4	0	0	NM	1017	N/A	0	0.00	23.1	1.98
12/06/2021 18:00	0.0	1.7	20.4	0	0	NM	1018	N/A	0	0.00	23.8	1.98
12/06/2021 19:00	0.0	1.7	20.3	0	0	NM	1018	N/A	0	0.00	23.8	1.98
12/06/2021 20:00	0.0	1.6	20.1	0	0	NM	1019	N/A	0	0.01	23.3	1.98
12/06/2021 21:00	0.0	1.6	19.7	0	0	NM	1020	N/A	0	-0.03	22.3	1.99
12/06/2021 22:00	0.0	1.8	19.3	0	0	NM	1020	N/A	0	0.00	21.1	1.99
12/06/2021 23:00	0.0	1.8	19.0	0	0	NM	1021	N/A	0	0.00	19.9	1.99
13/06/2021 00:00	0.0	1.8	19.1	0	0	NM	1021	N/A	0	0.00	18.9	1.99
13/06/2021 01:00	0.0	1.9	18.7	0	0	NM	1021	N/A	0	-0.01	18.2	1.99
13/06/2021 02:00	0.0	1.9	18.8	0	0	NM	1021	N/A	0	0.00	17.5	1.99
13/06/2021 03:00	0.0	2.1	18.4	0	0	NM	1021	N/A	0	0.00	16.9	1.99
13/06/2021 04:00	0.0	2.1	18.4	0	0	NM	1021	N/A	0	0.00	16.4	1.99
13/06/2021 05:00	0.0	2.1	18.3	0	0	NM	1022	N/A	0	-0.02	16.0	1.99
13/06/2021 06:00	0.0	2.0	18.4	0	0	NM	1023	N/A	0	0.00	15.7	1.99
13/06/2021 07:00	0.0	1.9	18.7	0	0	NM	1023	N/A	0	-0.01	15.5	1.98
13/06/2021 08:00	0.0	1.9	19.2	0	0	NM	1022	N/A	0	-0.03	15.5	1.98
13/06/2021 09:00	0.0	1.7	19.5	0	0	NM	1022	N/A	0	0.00	15.8	1.98
13/06/2021 10:00	0.0	1.7	19.7	0	0	NM	1021	N/A	0	-0.01	16.6	1.98
13/06/2021 11:00	0.0	1.7	20.0	0	0	NM	1021	N/A	0	0.00	17.9	1.98
13/06/2021 12:00	0.0	1.7	20.1	0	0	NM	1021	N/A	0	0.00	19.3	1.98
13/06/2021 13:00	0.0	1.6	20.3	0	0	NM	1021	N/A	0	0.00	20.5	1.98
13/06/2021 14:00	0.0	1.7	20.4	0	0	NM	1020	N/A	0	0.00	21.4	1.98
13/06/2021 15:00	0.0	1.7	20.5	0	0	NM	1020	N/A	0	0.00	22.3	1.98
13/06/2021 16:00	0.0	1.6	20.6	0	0	NM	1020	N/A	0	0.02	23.1	1.98
13/06/2021 17:00	0.0	1.7	20.6	0	0	NM	1019	N/A	0	0.00	23.6	1.98
13/06/2021 18:00	0.0	1.6	20.7	0	0	NM	1019	N/A	0	0.00	23.9	1.98
13/06/2021 19:00	0.0	1.6	20.7	0	0	NM	1019	N/A	0	0.00	24.0	1.99
13/06/2021 20:00	0.0	1.5	20.4	0	0	NM	1019	N/A	0	0.00	23.6	1.99
13/06/2021 21:00	0.0	1.5	20.0	0	0	NM	1019	N/A	0	-0.01	22.6	1.99
13/06/2021 22:00	0.0	1.6	19.6	0	0	NM	1019	N/A	0	0.00	21.4	1.99
13/06/2021 23:00	0.0	1.6	19.4	0	0	NM	1019	N/A	0	0.00	20.2	1.99
14/06/2021 00:00	0.0	1.7	19.3	0	0	NM	1018	N/A	0	0.00	19.2	1.99
14/06/2021 01:00	0.0	1.7	19.0	0	0	NM	1018	N/A	0	-0.01	18.4	1.98
14/06/2021 02:00	0.0	1.8	18.8	0	0	NM	1017	N/A	0	-0.01	17.7	1.98
14/06/2021 03:00	0.0	1.9	19.5	0	0	NM	1017	N/A	0	0.00	17.1	1.98
14/06/2021 04:00	0.0	1.8	18.7	0	0	NM	1017	N/A	0	0.00	16.6	1.98
14/06/2021 05:00	0.0	1.9	18.6	0	0	NM	1017	N/A	0	-0.01	16.2	1.98
14/06/2021 06:00	0.0	1.8	18.6	0	0	NM	1016	N/A	0	0.00	15.9	1.98
14/06/2021 07:00	0.0	1.7	19.0	0	0	NM	1016	N/A	0	-0.01	15.7	1.96
14/06/2021 08:00	0.0	1.6	19.4	0	0	NM	1015	N/A	0	-0.01	15.7	1.96
14/06/2021 09:00	0.0	1.6	19.8	0	0	NM	1014	N/A	0	0.00	15.9	1.96
14/06/2021 10:00	0.0	1.5	20.1	0	0	NM	1014	N/A	0	0.00	16.8	1.96
14/06/2021 11:00	0.0	1.5	20.3	0	0	NM	1014	N/A	0	0.00	18.2	1.96
14/06/2021 12:00	0.0	1.5	20.6	0	0	NM	1014	N/A	0	0.00	19.8	1.95
14/06/2021 13:00	0.0	1.5	20.8	0	0	NM	1014	N/A	0	0.01	21.1	1.95
14/06/2021 14:00	0.0	1.5	20.8	0	0	NM	1013	N/A	0	0.01	22.1	1.95
14/06/2021 15:00	0.0	1.5	20.9	0	0	NM	1013	N/A	0	0.00	23.1	1.95
14/06/2021 16:00	0.0	1.5	21.0	0	0	NM	1013	N/A	0	0.01	24.0	1.95
14/06/2021 17:00	0.0	1.4	21.0	0	0	NM	1013	N/A	0	0.01	24.5	1.95
14/06/2021 18:00	0.0	1.4	21.0	0	0	NM	1013	N/A	0	0.01	24.8	1.95
14/06/2021 19:00	0.0	1.4	20.8	0	0	NM	1013	N/A	0	0.00	24.6	1.95
14/06/2021 20:00	0.0	1.4	20.5	0	0	NM	1013	N/A	0	0.00	23.9	1.95
14/06/2021 21:00	0.0	1.4	20.2	0	0	NM	1014	N/A	0	0.00	22.9	1.95
14/06/2021 22:00	0.0	1.4	19.9	0	0	NM	1014	N/A	0	-0.02	21.9	1.95
14/06/2021 23:00	0.0	1.5	19.8	0	0	NM	1015	N/A	0	0.00	21.1	1.95
15/06/2021 00:00	0.0	1.5	19.6	0	0	NM	1015	N/A	0	0.00	20.4	1.95
15/06/2021 01:00	0.0	1.4	19.6	0	0	NM	1015	N/A	0	0.00	19.8	1.95
15/06/2021 02:00	0.0	1.5	19.4	0	0	NM	1015	N/A	0	-0.01	19.2	1.95
15/06/2021 03:00	0.0	1.5	19.3	0	0	NM	1015	N/A	0	0.00	18.7	1.95
15/06/2021 04:00	0.0	1.4	19.3	0	0	NM	1015	N/A	0	-0.01	18.3	1.95
15/06/2021 05:00	0.0	1.4	19.2	0	0	NM	1016	N/A	0	0.00	18.0	1.95
15/06/2021 06:00	0.0	1.5	19.3	0	0	NM	1016	N/A	0	0.00	17.8	1.95
15/06/2021 07:00	0.0	1.4	19.5	0	0	NM	1016	N/A	0	-0.01	17.6	1.94
15/06/2021 08:00	0.0	1.4	19.8	0	0	NM	1016	N/A	0	-0.03	17.7	1.94
15/06/2021 09:00	0.0	1.4	20.2	0	0	NM	1016	N/A	0	0.00	17.9	1.93
15/06/2021 10:00	0.0	1.4	20.3	0	0	NM	1015	N/A	0	0.00	18.4	1.94
15/06/2021 11:00	0.0	1.4	20.5	0	0	NM	1015	N/A	0	0.00	19.3	1.93
15/06/2021 12:00	0.0	1.3	20.7	0	0	NM	1015	N/A	0	0.00	20.5	1.93
15/06/2021 13:00	0.0	1.3	20.8	0	0	NM	1015	N/A	0	0.00	21.4	1.93
15/06/2021 14:00	0.0	1.3	20.8	0	0	NM	1014	N/A	0	0.01	22.0	1.93
15/06/2021 15:00	0.0	1.4	20.9	0	0	NM	1014	N/A	0	0.00	22.4	1.93

ggs Experts in Continuous Monitoring

Date and Time	CH_4	CO_2	O_2	CO	H_2S	Borehole Pressure	Atmospheric Pressure	Differential Pressure	Average 8-hour atmospheric pressure change	Flow	Temperature	Water Level
	% v/v	% v/v	% v/v	ppm/v	ppm/v	mbar	mbar	mbar	mbar	Ltr/hr	°C	mbgl
15/06/2021 16:00	0.0	1.3	20.9	0	0	NM	1013	N/A	0	-0.01	22.9	1.93
15/06/2021 17:00	0.0	1.3	20.9	0	0	NM	1013	N/A	0	0.00	23.3	1.93
15/06/2021 18:00	0.0	1.3	20.9	0	0	NM	1012	N/A	0	0.00	23.2	1.93
15/06/2021 19:00	0.0	1.2	20.9	0	0	NM	1012	N/A	0	0.01	23.4	1.93
15/06/2021 20:00	0.0	1.2	20.6	0	0	NM	1012	N/A	0	0.00	23.3	1.93
15/06/2021 21:00	0.0	1.3	20.3	0	0	NM	1012	N/A	0	-0.03	22.3	1.93
15/06/2021 22:00	0.0	1.4	19.9	0	0	NM	1013	N/A	0	0.00	21.2	1.93
15/06/2021 23:00	0.0	1.4	19.6	0	0	NM	1013	N/A	0	0.00	20.1	1.93
16/06/2021 00:00	0.0	1.4	19.6	0	0	NM	1012	N/A	0	-0.01	19.1	1.93
16/06/2021 01:00	0.0	1.4	19.2	0	0	NM	1012	N/A	0	0.00	18.3	1.93
16/06/2021 02:00	0.0	1.6	19.1	0	0	NM	1011	N/A	0	0.00	17.6	1.93
16/06/2021 03:00	0.0	1.6	19.9	0	0	NM	1010	N/A	0	0.00	17.1	1.93
16/06/2021 04:00	0.0	1.4	19.0	0	0	NM	1010	N/A	0	0.00	16.6	1.92
16/06/2021 05:00	0.0	1.5	18.9	0	0	NM	1009	N/A	0	0.00	16.1	1.92
16/06/2021 06:00	0.0	1.5	18.9	0	0	NM	1009	N/A	0	-0.01	15.8	1.92
16/06/2021 07:00	0.0	1.4	19.2	0	0	NM	1009	N/A	0	-0.01	15.6	1.90
16/06/2021 08:00	0.0	1.4	19.6	0	0	NM	1007	N/A	-1	-0.01	15.6	1.90
16/06/2021 09:00	0.0	1.3	20.1	0	0	NM	1007	N/A	-1	-0.01	15.9	1.90
16/06/2021 10:00	0.0	1.3	20.4	0	0	NM	1006	N/A	-1	0.00	16.7	1.90
16/06/2021 11:00	0.0	1.3	20.6	0	0	NM	1006	N/A	0	0.00	18.1	1.89
16/06/2021 12:00	0.0	1.2	20.8	0	0	NM	1006	N/A	0	0.00	19.7	1.89
16/06/2021 13:00	0.0	1.2	21.1	0	0	NM	1005	N/A	0	0.00	21.2	1.89
16/06/2021 14:00	0.0	1.3	21.2	0	0	NM	1005	N/A	0	0.01	22.3	1.89
16/06/2021 15:00	0.0	1.3	21.2	0	0	NM	1004	N/A	0	0.01	23.4	1.88
16/06/2021 16:00	0.0	1.3	21.3	0	0	NM	1004	N/A	0	0.01	24.3	1.88
16/06/2021 17:00	0.0	1.2	21.3	0	0	NM	1004	N/A	0	0.00	24.9	1.88
16/06/2021 18:00	0.0	1.3	21.0	0	0	NM	1003	N/A	0	0.00	24.9	1.88
16/06/2021 19:00	0.0	1.2	20.7	0	0	NM	1003	N/A	0	0.00	24.2	1.88
16/06/2021 20:00	0.0	1.2	20.5	0	0	NM	1004	N/A	0	0.00	23.2	1.88
16/06/2021 21:00	0.0	1.2	20.2	0	0	NM	1005	N/A	0	-0.02	22.1	1.88
16/06/2021 22:00	0.0	1.3	20.0	0	0	NM	1005	N/A	0	0.00	21.2	1.88
16/06/2021 23:00	0.0	1.3	19.9	0	0	NM	1004	N/A	0	-0.01	20.5	1.88
17/06/2021 00:00	0.0	1.2	19.7	0	0	NM	1004	N/A	0	0.00	19.9	1.88
17/06/2021 01:00	0.0	1.2	19.6	0	0	NM	1003	N/A	0	0.00	19.5	1.87
17/06/2021 02:00	0.0	1.2	19.5	0	0	NM	1002	N/A	0	0.00	19.1	1.87
17/06/2021 03:00	0.0	1.2	19.4	0	0	NM	1003	N/A	0	-0.02	18.8	1.87
17/06/2021 04:00	0.0	1.2	19.4	0	0	NM	1003	N/A	0	0.00	18.6	1.87
17/06/2021 05:00	0.0	1.2	19.3	0	0	NM	1002	N/A	0	0.00	18.3	1.86
17/06/2021 06:00	0.0	1.2	19.3	0	0	NM	1003	N/A	0	0.00	18.1	1.86
17/06/2021 07:00	0.0	1.2	19.3	0	0	NM	1003	N/A	0	0.00	18.0	1.86
17/06/2021 08:00	0.0	1.1	19.4	0	0	NM	1003	N/A	0	0.00	17.9	1.86
17/06/2021 09:00	0.0	1.1	19.3	0	0	NM	1003	N/A	0	-0.01	18.0	1.86
17/06/2021 10:00	0.0	1.1	19.5	0	0	NM	1003	N/A	0	0.00	18.1	1.85
17/06/2021 11:00	0.0	1.1	19.6	0	0	NM	1004	N/A	0	0.00	18.5	1.85
17/06/2021 12:00	0.0	1.0	19.7	0	0	NM	1004	N/A	0	-0.02	18.8	1.85
17/06/2021 13:00	0.0	1.0	19.7	0	0	NM	1005	N/A	0	-0.01	19.0	1.85
17/06/2021 14:00	0.0	1.1	19.6	0	0	NM	1005	N/A	0	-0.02	19.1	1.85
17/06/2021 15:00	0.0	1.0	19.6	0	0	NM	1006	N/A	0	0.00	19.1	1.85
17/06/2021 16:00	0.0	1.0	19.6	0	0	NM	1006	N/A	0	0.00	19.1	1.85
17/06/2021 17:00	0.0	1.0	19.6	0	0	NM	1006	N/A	0	-0.01	19.2	1.85
17/06/2021 18:00	0.0	1.0	19.5	0	0	NM	1006	N/A	0	0.00	19.3	1.85
17/06/2021 19:00	0.0	1.0	19.5	0	0	NM	1006	N/A	0	0.00	19.2	1.85
17/06/2021 20:00	0.0	1.1	19.4	0	0	NM	1007	N/A	0	-0.01	19.1	1.85
17/06/2021 21:00	0.0	1.0	19.4	0	0	NM	1007	N/A	0	-0.01	18.9	1.85
17/06/2021 22:00	0.0	1.0	19.3	0	0	NM	1008	N/A	0	0.00	18.7	1.85
17/06/2021 23:00	0.0	1.1	19.2	0	0	NM	1008	N/A	0	-0.01	18.5	1.85
18/06/2021 00:00	0.0	1.1	19.2	0	0	NM	1007	N/A	0	0.00	18.3	1.85
18/06/2021 01:00	0.0	1.1	19.1	0	0	NM	1008	N/A	0	0.00	18.2	1.85
18/06/2021 02:00	0.0	1.1	19.1	0	0	NM	1007	N/A	0	0.00	18.1	1.85
18/06/2021 03:00	0.0	1.1	19.0	0	0	NM	1007	N/A	0	0.00	17.9	1.84
18/06/2021 04:00	0.0	1.1	19.0	0	0	NM	1007	N/A	0	0.00	17.8	1.84
18/06/2021 05:00	0.0	1.1	18.9	0	0	NM	1007	N/A	0	0.00	17.6	1.84
18/06/2021 06:00	0.0	1.1	18.9	0	0	NM	1007	N/A	0	0.00	17.5	1.84
18/06/2021 07:00	0.0	1.1	18.9	0	0	NM	1007	N/A	0	-0.01	17.4	1.84
18/06/2021 08:00	0.0	1.1	18.9	0	0	NM	1007	N/A	0	-0.02	17.3	1.84
18/06/2021 09:00	0.0	1.0	18.9	0	0	NM	1006	N/A	0	0.00	17.3	1.84
18/06/2021 10:00	0.0	1.0	19.0	0	0	NM	1006	N/A	0	0.00	17.4	1.84
18/06/2021 11:00	0.0	1.0	19.0	0	0	NM	1006	N/A	0	0.00	17.4	1.84
18/06/2021 12:00	0.0	1.0	19.0	0	0	NM	1006	N/A	0	0.00	17.4	1.84
18/06/2021 13:00	0.0	1.0	19.0	0	0	NM	1006	N/A	0	0.00	17.4	1.84
18/06/2021 14:00	0.0	1.0	19.1	0	0	NM	1005	N/A	0	-0.01	17.4	1.83
18/06/2021 15:00	0.0	1.0	19.2	0	0	NM	1005	N/A	0	0.00	17.6	1.83
18/06/2021 16:00	0.0	1.0	19.2	0	0	NM	1005	N/A	0	-0.01	17.8	1.83
18/06/2021 17:00	0.0	1.0	19.2	0	0	NM	1005	N/A	0	-0.01	17.9	1.83
18/06/2021 18:00	0.0	1.0	19.2	0	0	NM	1005	N/A	0	-0.01	17.8	1.83
18/06/2021 19:00	0.0	1.0	19.1	0	0	NM	1006	N/A	0	0.00	17.6	1.83
18/06/2021 20:00	0.0	1.1	19.1	0	0	NM	1006	N/A	0	-0.01	17.4	1.83
18/06/2021 21:00	0.0	1.0	19.0	0	0	NM	1007	N/A	0	0.00	17.2	1.83
18/06/2021 22:00	0.0	1.1	19.0	0	0	NM	1008	N/A	0	0.00	16.9	1.83
18/06/2021 23:00	0.0	1.1	18.9	0	0	NM	1008	N/A	0	0.00	16.7	1.83
19/06/2021 00:00	0.0	1.1	18.9	0	0	NM	1009	N/A	1	0.00	16.4	1.83
19/06/2021 01:00	0.0	1.1	19.2	0	0	NM	1009	N/A	0	0.00	16.2	1.83
19/06/2021 02:00	0.0	1.1	18.8	0	0	NM	1009	N/A	0	0.00	16.0	1.83
19/06/2021 03:00	0.0	1.1	18.8	0	0	NM	1009	N/A	0	0.00	15.8	1.83
19/06/2021 04:00	0.0	1.1	18.8	0	0	NM	1010	N/A	0	0.00	15.7	1.83
19/06/2021 05:00	0.0	1.1	18.8	0	0	NM	1010	N/A	0	0.00	15.6	1.83
19/06/2021 06:00	0.0	1.1	18.8	0	0	NM	1011	N/A	0	0.00	15.5	1.84
19/06/2021 07:00	0.0	1.0	18.8	0	0	NM	1011	N/A	0	-0.01	15.5	1.83
19/06/2021 08:00	0.0	1.0	18.9	0	0	NM	1011	N/A	0	-0.01	15.5	1.84
19/06/2021 09:00	0.0	1.0	18.9	0	0	NM	1010	N/A	0	-0.02	15.6	1.83
19/06/2021 10:00	0.0	1.0	19.0	0	0	NM	1010	N/A	0	0.00	15.8	1.83
19/06/2021 11:00	0.0	0.9	19.1	0	0	NM	1010	N/A	0	-0.01	15.9	1.84
19/06/2021 12:00	0.0	0.9	19.1	0	0	NM	1010	N/A	0	-0.01	16.2	1.83
19/06/2021 13:00	0.0	0.9	19.3	0	0	NM	1009	N/A	0	-0.01	16.4	1.83
19/06/2021 14:00	0.0	0.9	19.3	0	0	NM	1009	N/A	0	0.00	16.7	1.83
19/06/2021 15:00	0.0	0.9	19.3	0	0	NM	1008	N/A	0	-0.01	17.0	1.83
19/06/2021 16:00	0.0	0.9	19.3	0	0	NM	1008	N/A	0	-0.01	17.0	1.83
19/06/2021 17:00	0.0	0.9	19.3	0	0	NM	1007	N/A	0	0.00	17.0	1.83
19/06/2021 18:00	0.0	0.9	19.2	0	0	NM	1007	N/A	0	0.00	16.9	1.83
19/06/2021 19:00	0.0	1.0	19.1	0	0	NM	1006	N/A	-1	-0.01	16.8	1.83
19/06/2021 20:00	0.0	1.0	19.0	0	0	NM	1005	N/A	-1	0.00	16.6	1.83
19/06/2021 21:00	0.0	1.0	19.2	0	0	NM	1005	N/A	-1	0.00	16.4	1.82
19/06/2021 22:00	0.0	1.0	18.9	0	0	NM	1005	N/A	0	0.00	16.3	1.82
19/06/2021 23:00	0.0	1.1	18.9	0	0	NM	1004	N/A	0	0.00	16.1	1.82
20/06/2021 00:00	0.0	1.1	18.8	0	0	NM	1004	N/A	0	0.00	15.9	1.82
20/06/2021 01:00	0.0	1.1	18.8	0	0	NM	1004	N/A	0	-0.01	15.8	1.82
20/06/2021 02:00	0.0	1.0	18.8	0	0	NM	1003	N/A	0	0.00	15.8	1.82
20/06/2021 03:00	0.0	1.0	18.7	0	0	NM	1002	N/A	0	0.00	15.7	1.81
20/06/2021 04:00	0.0	1.0	18.7	0	0	NM	1003	N/A	0	-0.01	15.6	1.81
20/06/2021 05:00	0.0	1.0	18.7	0	0	NM	1003	N/A	0	0.00	15.5	1.81
20/06/2021 06:00	0.0	1.0	18.7	0	0	NM	1003	N/A	0	0.00	15.4	1.81
20/06/2021 07:00	0.0	1.0	18.8	0	0	NM	1003	N/A	0	-0.02	15.5	1.81
20/06/2021 08:00	0.0	0.9	18.9	0	0	NM	1003	N/A	0	-0.01	15.6	1.81
20/06/2021 09:00	0.0	1.0	19.0	0	0	NM	1004	N/A	0	-0.01	15.8	1.80
20/06/2021 10:00	0.0	0.9	19.2	0	0	NM	1003	N/A	0	-0.01	16.0	1.80
20/06/2021 11:00	0.0	0.9	19.3	0	0	NM	1003	N/A	0	0.00	16.4	1.80
20/06/2021 12:00	0.0	0.9	19.4	0	0	NM	1003	N/A	0	-0.02	16.7	1.80
20/06/2021 13:00	0.0	0.9	19.6	0	0	NM	1003	N/A	0	-0.02	17.2	1.79
20/06/2021 14:00	0.0	0.9	19.8	0	0	NM	1002	N/A	0	-0.01	17.8	1.79
20/06/2021 15:00	0.0	0.9	19.9	0	0	NM	1002	N/A	0	0.00	18.6	1.79
20/06/2021 16:00	0.0	1.0	20.0	0	0	NM	1002	N/A	0	0.00	19.2	1.79
20/06/2021 17:00	0.0	0.9	20.1	0	0	NM	1002	N/A	0	0.00	19.7	1.79

ggs
Experts in Continuous Monitoring

Date and Time	CH_4	CO_2	O_2	CO	H_2S	Borehole Pressure	Atmospheric Pressure	Differential Pressure	Average 8-hour atmospheric pressure change	Flow	Temperature	Water Level
	% v/v	% v/v	% v/v	ppm/v	ppm/v	mbar	mbar	mbar	mbar	Ltr/hr	°C	mbgl
20/06/2021 18:00	0.0	0.9	20.0	0	0	NM	1002	N/A	0	0.00	19.8	1.79
20/06/2021 19:00	0.0	0.9	19.8	0	0	NM	1003	N/A	0	-0.03	19.5	1.79
20/06/2021 20:00	0.0	0.9	19.6	0	0	NM	1003	N/A	0	-0.01	19.1	1.79
20/06/2021 21:00	0.0	1.0	19.4	0	0	NM	1003	N/A	0	0.00	18.6	1.79
20/06/2021 22:00	0.0	1.0	19.3	0	0	NM	1004	N/A	0	-0.01	18.1	1.79
20/06/2021 23:00	0.0	1.0	19.1	0	0	NM	1004	N/A	0	0.00	17.6	1.79
21/06/2021 00:00	0.0	1.0	19.0	0	0	NM	1003	N/A	0	-0.01	17.3	1.79
21/06/2021 01:00	0.0	1.0	19.0	0	0	NM	1003	N/A	0	0.00	16.9	1.79
21/06/2021 02:00	0.0	1.1	18.9	0	0	NM	1003	N/A	0	-0.01	16.5	1.79
21/06/2021 03:00	0.0	1.1	18.8	0	0	NM	1003	N/A	0	0.00	16.3	1.79
21/06/2021 04:00	0.0	1.1	18.8	0	0	NM	1003	N/A	0	0.00	16.1	1.79
21/06/2021 05:00	0.0	1.1	18.7	0	0	NM	1003	N/A	0	0.00	15.9	1.79
21/06/2021 06:00	0.0	1.1	18.7	0	0	NM	1004	N/A	0	0.00	15.8	1.79
21/06/2021 07:00	0.0	1.1	18.7	0	0	NM	1004	N/A	0	-0.01	15.6	1.79
21/06/2021 08:00	0.0	1.1	18.7	0	0	NM	1004	N/A	0	0.00	15.5	1.78
21/06/2021 09:00	0.0	1.1	18.7	0	0	NM	1004	N/A	0	0.00	15.4	1.78
21/06/2021 10:00	0.0	1.1	18.7	0	0	NM	1005	N/A	0	0.00	15.4	1.78
21/06/2021 11:00	0.0	1.1	18.7	0	0	NM	1005	N/A	0	0.00	15.5	1.78
21/06/2021 12:00	0.0	1.0	18.8	0	0	NM	1005	N/A	0	-0.01	15.6	1.78
21/06/2021 13:00	0.0	1.0	18.9	0	0	NM	1006	N/A	0	-0.01	16.0	1.78
21/06/2021 14:00	0.0	0.9	18.9	0	0	NM	1006	N/A	0	0.00	16.1	1.78
21/06/2021 15:00	0.0	0.9	18.9	0	0	NM	1007	N/A	0	-0.01	16.1	1.78
21/06/2021 16:00	0.0	1.0	18.8	0	0	NM	1007	N/A	0	0.00	15.9	1.79
21/06/2021 17:00	0.0	1.0	18.9	0	0	NM	1007	N/A	0	0.01	15.8	1.79
21/06/2021 18:00	0.0	0.9	18.9	0	0	NM	1008	N/A	0	-0.01	15.8	1.79
21/06/2021 19:00	0.0	0.9	18.9	0	0	NM	1008	N/A	0	0.00	15.8	1.79
21/06/2021 20:00	0.0	0.9	18.9	0	0	NM	1009	N/A	0	-0.01	15.7	1.79
21/06/2021 21:00	0.0	0.9	19.1	0	0	NM	1009	N/A	0	0.00	15.5	1.79
21/06/2021 22:00	0.0	1.0	19.1	0	0	NM	1009	N/A	0	0.00	15.3	1.79
21/06/2021 23:00	0.0	1.0	18.8	0	0	NM	1010	N/A	0	-0.01	15.1	1.79
22/06/2021 00:00	0.0	1.0	18.7	0	0	NM	1010	N/A	0	0.00	14.9	1.79
22/06/2021 01:00	0.0	1.0	18.7	0	0	NM	1011	N/A	0	0.00	14.8	1.80
22/06/2021 02:00	0.0	1.0	18.7	0	0	NM	1010	N/A	0	-0.01	14.6	1.80
22/06/2021 03:00	0.0	1.0	18.7	0	0	NM	1011	N/A	0	0.00	14.4	1.80
22/06/2021 04:00	0.0	1.0	18.7	0	0	NM	1011	N/A	0	0.00	14.4	1.80
22/06/2021 05:00	0.0	1.0	18.6	0	0	NM	1011	N/A	0	-0.01	14.3	1.80
22/06/2021 06:00	0.0	1.0	18.6	0	0	NM	1012	N/A	0	-0.01	14.1	1.80
22/06/2021 07:00	0.0	1.0	18.6	0	0	NM	1012	N/A	0	-0.01	14.0	1.80
22/06/2021 08:00	0.0	1.0	18.7	0	0	NM	1013	N/A	0	0.00	13.9	1.80
22/06/2021 09:00	0.0	1.0	18.8	0	0	NM	1013	N/A	0	-0.01	14.0	1.80
22/06/2021 10:00	0.0	0.9	18.9	0	0	NM	1013	N/A	0	-0.01	14.3	1.80
22/06/2021 11:00	0.0	0.9	19.1	0	0	NM	1014	N/A	0	-0.01	14.7	1.81
22/06/2021 12:00	0.0	0.9	19.2	0	0	NM	1014	N/A	0	-0.01	15.1	1.81
22/06/2021 13:00	0.0	0.9	19.4	0	0	NM	1014	N/A	0	-0.01	15.5	1.81
22/06/2021 14:00	0.0	0.9	19.4	0	0	NM	1014	N/A	0	0.00	15.9	1.81
22/06/2021 15:00	0.0	0.9	19.5	0	0	NM	1015	N/A	0	-0.01	16.1	1.81
22/06/2021 16:00	0.0	0.9	19.5	0	0	NM	1015	N/A	0	-0.01	16.3	1.81
22/06/2021 17:00	0.0	0.9	19.4	0	0	NM	1015	N/A	0	-0.01	16.4	1.81
22/06/2021 18:00	0.0	0.9	19.4	0	0	NM	1015	N/A	0	0.00	16.4	1.82
22/06/2021 19:00	0.0	0.9	19.3	0	0	NM	1016	N/A	0	-0.01	16.3	1.82
22/06/2021 20:00	0.0	0.9	19.3	0	0	NM	1017	N/A	0	0.00	16.3	1.82
22/06/2021 21:00	0.0	0.9	19.1	0	0	NM	1017	N/A	0	0.00	16.0	1.82
22/06/2021 22:00	0.0	1.0	19.0	0	0	NM	1018	N/A	0	0.00	15.7	1.82
22/06/2021 23:00	0.0	1.0	18.8	0	0	NM	1018	N/A	0	0.00	15.2	1.83
23/06/2021 00:00	0.0	1.1	18.7	0	0	NM	1018	N/A	0	0.00	14.8	1.83
23/06/2021 01:00	0.0	1.1	18.7	0	0	NM	1018	N/A	0	-0.01	14.5	1.83
23/06/2021 02:00	0.0	1.0	18.6	0	0	NM	1018	N/A	0	0.00	14.3	1.83
23/06/2021 03:00	0.0	1.1	19.0	0	0	NM	1018	N/A	0	0.00	14.1	1.83
23/06/2021 04:00	0.0	1.1	18.6	0	0	NM	1018	N/A	0	0.00	13.8	1.83
23/06/2021 05:00	0.0	1.1	18.5	0	0	NM	1018	N/A	0	0.00	13.3	1.83
23/06/2021 06:00	0.0	1.1	18.5	0	0	NM	1019	N/A	0	0.00	13.1	1.84
23/06/2021 07:00	0.0	1.1	18.5	0	0	NM	1019	N/A	0	-0.01	12.9	1.83
23/06/2021 08:00	0.0	1.0	18.8	0	0	NM	1019	N/A	0	-0.01	13.1	1.83
23/06/2021 09:00	0.0	1.0	19.1	0	0	NM	1019	N/A	0	-0.02	13.3	1.83
23/06/2021 10:00	0.0	1.0	19.4	0	0	NM	1018	N/A	0	-0.02	13.7	1.83
23/06/2021 11:00	0.0	0.9	19.8	0	0	NM	1018	N/A	0	0.00	14.5	1.83
23/06/2021 12:00	0.0	0.9	20.1	0	0	NM	1018	N/A	0	0.00	15.9	1.83
23/06/2021 13:00	0.0	0.9	20.3	0	0	NM	1018	N/A	0	0.00	17.2	1.83
23/06/2021 14:00	0.0	0.9	20.4	0	0	NM	1017	N/A	0	0.00	18.1	1.83
23/06/2021 15:00	0.0	0.9	20.5	0	0	NM	1017	N/A	0	0.00	18.8	1.84
23/06/2021 16:00	0.0	0.9	20.6	0	0	NM	1017	N/A	0	0.01	19.7	1.84
23/06/2021 17:00	0.0	0.9	20.7	0	0	NM	1017	N/A	0	0.00	20.2	1.84
23/06/2021 18:00	0.0	0.9	20.6	0	0	NM	1017	N/A	0	0.00	20.4	1.84
23/06/2021 19:00	0.0	0.9	20.4	0	0	NM	1018	N/A	0	0.00	20.1	1.85
23/06/2021 20:00	0.0	0.9	20.1	0	0	NM	1018	N/A	0	-0.03	19.4	1.85
23/06/2021 21:00	0.0	1.0	19.7	0	0	NM	1018	N/A	0	0.00	18.5	1.85
23/06/2021 22:00	0.0	1.0	19.4	0	0	NM	1019	N/A	0	-0.01	17.5	1.85
23/06/2021 23:00	0.0	1.0	19.1	0	0	NM	1019	N/A	0	0.00	16.6	1.85
24/06/2021 00:00	0.0	1.1	18.9	0	0	NM	1019	N/A	0	0.00	15.8	1.85
24/06/2021 01:00	0.0	1.1	18.8	0	0	NM	1018	N/A	0	0.00	15.2	1.85
24/06/2021 02:00	0.0	1.2	18.7	0	0	NM	1018	N/A	0	0.00	14.6	1.85
24/06/2021 03:00	0.0	1.2	18.5	0	0	NM	1018	N/A	0	0.00	14.1	1.85
24/06/2021 04:00	0.0	1.2	18.4	0	0	NM	1018	N/A	0	-0.01	13.8	1.85
24/06/2021 05:00	0.0	1.2	18.4	0	0	NM	1018	N/A	0	0.00	13.4	1.85
24/06/2021 06:00	0.0	1.2	18.4	0	0	NM	1018	N/A	0	0.00	13.1	1.85
24/06/2021 07:00	0.0	1.2	18.6	0	0	NM	1018	N/A	0	-0.01	12.9	1.85
24/06/2021 08:00	0.0	1.1	19.1	0	0	NM	1017	N/A	0	-0.02	13.0	1.84
24/06/2021 09:00	0.0	1.0	19.6	0	0	NM	1016	N/A	0	-0.02	13.3	1.84
24/06/2021 10:00	0.0	1.0	20.0	0	0	NM	1016	N/A	0	0.00	14.0	1.84
24/06/2021 11:00	0.0	0.9	20.3	0	0	NM	1015	N/A	0	-0.01	15.2	1.84
24/06/2021 12:00	0.0	0.9	20.5	0	0	NM	1016	N/A	0	0.00	16.5	1.84
24/06/2021 13:00	0.0	0.9	20.7	0	0	NM	1015	N/A	0	0.00	17.8	1.84
24/06/2021 14:00	0.0	0.9	20.7	0	0	NM	1015	N/A	0	-0.01	18.9	1.84
24/06/2021 15:00	0.0	1.0	20.5	0	0	NM	1015	N/A	0	0.00	19.4	1.85
24/06/2021 16:00	0.0	1.0	20.3	0	0	NM	1015	N/A	0	0.00	19.1	1.85
24/06/2021 17:00	0.0	1.0	20.1	0	0	NM	1015	N/A	0	0.00	18.7	1.85
24/06/2021 18:00	0.0	1.0	19.9	0	0	NM	1015	N/A	0	-0.02	18.4	1.85
24/06/2021 19:00	0.0	1.0	19.8	0	0	NM	1015	N/A	0	-0.01	18.1	1.85
24/06/2021 20:00	0.0	1.1	19.6	0	0	NM	1015	N/A	0	0.00	17.8	1.85
24/06/2021 21:00	0.0	1.1	19.5	0	0	NM	1015	N/A	0	0.00	17.4	1.85
24/06/2021 22:00	0.0	1.1	19.3	0	0	NM	1015	N/A	0	0.00	17.1	1.85
24/06/2021 23:00	0.0	1.1	19.2	0	0	NM	1015	N/A	0	0.00	16.7	1.85
25/06/2021 00:00	0.0	1.2	19.1	0	0	NM	1015	N/A	0	-0.01	16.4	1.85
25/06/2021 01:00	0.0	1.2	19.0	0	0	NM	1014	N/A	0	0.00	16.2	1.85
25/06/2021 02:00	0.0	1.2	19.0	0	0	NM	1014	N/A	0	0.00	16.0	1.84
25/06/2021 03:00	0.0	1.2	19.0	0	0	NM	1013	N/A	0	0.00	15.9	1.84
25/06/2021 04:00	0.0	1.2	19.0	0	0	NM	1013	N/A	0	-0.01	15.8	1.84
25/06/2021 05:00	0.0	1.2	18.9	0	0	NM	1013	N/A	0	0.00	15.6	1.84
25/06/2021 06:00	0.0	1.2	18.9	0	0	NM	1012	N/A	0	0.00	15.4	1.84
25/06/2021 07:00	0.0	1.2	18.9	0	0	NM	1012	N/A	0	-0.01	15.4	1.84
25/06/2021 08:00	0.0	1.2	19.0	0	0	NM	1012	N/A	0	0.00	15.4	1.84
25/06/2021 09:00	0.0	1.2	19.2	0	0	NM	1012	N/A	0	-0.01	15.5	1.84
25/06/2021 10:00	0.0	1.2	19.2	0	0	NM	1012	N/A	0	0.00	15.7	1.83
25/06/2021 11:00	0.0	1.2	19.2	0	0	NM	1012	N/A	0	-0.01	15.9	1.83
25/06/2021 12:00	0.0	1.1	19.2	0	0	NM	1011	N/A	0	-0.01	16.1	1.83
25/06/2021 13:00	0.0	1.2	19.3	0	0	NM	1011	N/A	0	0.00	16.1	1.83
25/06/2021 14:00	0.0	1.2	19.3	0	0	NM	1011	N/A	0	0.00	16.3	1.83
25/06/2021 15:00	0.0	1.2	19.4	0	0	NM	1011	N/A	0	0.00	16.5	1.83
25/06/2021 16:00	0.0	1.2	19.5	0	0	NM	1010	N/A	0	0.00	16.8	1.83
25/06/2021 17:00	0.0	1.2	19.6	0	0	NM	1010	N/A	0	0.00	17.1	1.82
25/06/2021 18:00	0.0	1.1	19.9	0	0	NM	1010	N/A	0	-0.03	17.4	1.82
25/06/2021 19:00	0.0	1.2	20.0	0	0	NM	1010	N/A	0	-0.01	18.0	1.82

ggs
Experts in Continuous Monitoring

Date and Time	CH_4	CO_2	O_2	CO	H_2S	Borehole Pressure	Atmospheric Pressure	Differential Pressure	Average 8-hour atmospheric pressure change	Flow	Temperature	Water Level
	% v/v	% v/v	% v/v	ppm/v	ppm/v	mbar	mbar	mbar	mbar	Ltr/hr	°C	mbgl
25/06/2021 20:00	0.0	1.2	19.9	0	0	NM	1010	N/A	0	-0.02	18.1	1.82
25/06/2021 21:00	0.0	1.2	19.6	0	0	NM	1011	N/A	0	0.00	17.7	1.83
25/06/2021 22:00	0.0	1.2	19.3	0	0	NM	1011	N/A	0	0.00	16.9	1.82
25/06/2021 23:00	0.0	1.3	19.1	0	0	NM	1011	N/A	0	0.00	16.2	1.83
26/06/2021 00:00	0.0	1.3	18.9	0	0	NM	1011	N/A	0	-0.02	15.5	1.82
26/06/2021 01:00	0.0	1.4	18.9	0	0	NM	1012	N/A	0	-0.01	14.9	1.82
26/06/2021 02:00	0.0	1.4	18.7	0	0	NM	1012	N/A	0	0.00	14.4	1.82
26/06/2021 03:00	0.0	1.4	18.5	0	0	NM	1012	N/A	0	-0.01	14.0	1.82
26/06/2021 04:00	0.0	1.4	18.5	0	0	NM	1012	N/A	0	0.00	13.6	1.82
26/06/2021 05:00	0.0	1.4	18.5	0	0	NM	1012	N/A	0	-0.01	13.4	1.82
26/06/2021 06:00	0.0	1.4	18.6	0	0	NM	1012	N/A	0	-0.01	13.4	1.82
26/06/2021 07:00	0.0	1.3	18.7	0	0	NM	1013	N/A	0	-0.01	13.7	1.82
26/06/2021 08:00	0.0	1.3	19.1	0	0	NM	1013	N/A	0	-0.02	14.0	1.81
26/06/2021 09:00	0.0	1.2	19.5	0	0	NM	1012	N/A	0	-0.01	14.4	1.81
26/06/2021 10:00	0.0	1.2	19.7	0	0	NM	1012	N/A	0	-0.03	14.8	1.81
26/06/2021 11:00	0.0	1.2	19.9	0	0	NM	1012	N/A	0	0.00	15.6	1.81
26/06/2021 12:00	0.0	1.2	20.1	0	0	NM	1013	N/A	0	0.00	16.6	1.81
26/06/2021 13:00	0.0	1.3	20.1	0	0	NM	1012	N/A	0	0.01	17.3	1.81
26/06/2021 14:00	0.0	1.3	20.2	0	0	NM	1012	N/A	0	0.00	17.8	1.81
26/06/2021 15:00	0.0	1.3	20.3	0	0	NM	1012	N/A	0	0.00	18.4	1.81
26/06/2021 16:00	0.0	1.2	20.2	0	0	NM	1012	N/A	0	0.00	18.7	1.81
26/06/2021 17:00	0.0	1.3	20.2	0	0	NM	1011	N/A	0	0.00	18.8	1.81
26/06/2021 18:00	0.0	1.3	20.2	0	0	NM	1011	N/A	0	0.00	18.9	1.81
26/06/2021 19:00	0.0	1.3	20.2	0	0	NM	1011	N/A	0	0.00	18.9	1.81
26/06/2021 20:00	0.0	1.3	20.0	0	0	NM	1012	N/A	0	-0.02	18.8	1.81
26/06/2021 21:00	0.0	1.3	19.7	0	0	NM	1012	N/A	0	-0.01	18.2	1.82
26/06/2021 22:00	0.0	1.3	19.4	0	0	NM	1013	N/A	0	-0.01	17.6	1.81
26/06/2021 23:00	0.0	1.4	19.3	0	0	NM	1012	N/A	0	-0.01	16.9	1.81
27/06/2021 00:00	0.0	1.4	19.4	0	0	NM	1012	N/A	0	0.00	16.5	1.81
27/06/2021 01:00	0.0	1.4	19.2	0	0	NM	1012	N/A	0	0.00	16.3	1.81
27/06/2021 02:00	0.0	1.4	19.1	0	0	NM	1012	N/A	0	0.00	16.1	1.81
27/06/2021 03:00	0.0	1.4	19.4	0	0	NM	1011	N/A	0	0.00	15.9	1.81
27/06/2021 04:00	0.0	1.4	19.1	0	0	NM	1011	N/A	0	0.00	15.9	1.81
27/06/2021 05:00	0.0	1.4	19.1	0	0	NM	1010	N/A	0	0.00	15.8	1.81
27/06/2021 06:00	0.0	1.4	19.1	0	0	NM	1010	N/A	0	-0.01	15.8	1.81
27/06/2021 07:00	0.0	1.4	19.1	0	0	NM	1009	N/A	0	0.00	15.8	1.80
27/06/2021 08:00	0.0	1.4	19.3	0	0	NM	1009	N/A	0	-0.02	15.9	1.80
27/06/2021 09:00	0.0	1.4	19.5	0	0	NM	1009	N/A	0	-0.01	16.2	1.80
27/06/2021 10:00	0.0	1.3	19.6	0	0	NM	1008	N/A	0	-0.01	16.6	1.80
27/06/2021 11:00	0.0	1.4	19.7	0	0	NM	1009	N/A	0	-0.01	17.2	1.80
27/06/2021 12:00	0.0	1.4	19.8	0	0	NM	1008	N/A	0	-0.03	17.5	1.79
27/06/2021 13:00	0.0	1.4	19.9	0	0	NM	1008	N/A	0	-0.03	17.9	1.79
27/06/2021 14:00	0.0	1.4	19.8	0	0	NM	1009	N/A	0	-0.03	18.4	1.79
27/06/2021 15:00	0.0	1.4	19.7	0	0	NM	1009	N/A	0	0.00	18.2	1.79
27/06/2021 16:00	0.0	1.4	19.6	0	0	NM	1008	N/A	0	-0.01	18.0	1.79
27/06/2021 17:00	0.0	1.4	19.5	0	0	NM	1008	N/A	0	0.00	18.0	1.79
27/06/2021 18:00	0.0	1.4	19.5	0	0	NM	1009	N/A	0	0.00	17.8	1.79
27/06/2021 19:00	0.0	1.4	19.4	0	0	NM	1009	N/A	0	0.00	17.6	1.79
27/06/2021 20:00	0.0	1.4	19.3	0	0	NM	1009	N/A	0	0.00	17.4	1.79
27/06/2021 21:00	0.0	1.4	19.2	0	0	NM	1008	N/A	0	-0.01	17.1	1.79
27/06/2021 22:00	0.0	1.4	19.2	0	0	NM	1008	N/A	0	-0.01	16.9	1.79
27/06/2021 23:00	0.0	1.4	19.1	0	0	NM	1008	N/A	0	0.00	16.8	1.79
28/06/2021 00:00	0.0	1.4	19.1	0	0	NM	1008	N/A	0	0.00	16.6	1.78
28/06/2021 01:00	0.0	1.4	19.1	0	0	NM	1008	N/A	0	0.00	16.5	1.78
28/06/2021 02:00	0.0	1.4	19.1	0	0	NM	1008	N/A	0	-0.01	16.4	1.78
28/06/2021 03:00	0.0	1.4	19.1	0	0	NM	1007	N/A	0	-0.01	16.4	1.78
28/06/2021 04:00	0.0	1.4	19.1	0	0	NM	1007	N/A	0	-0.01	16.3	1.78
28/06/2021 05:00	0.0	1.4	19.1	0	0	NM	1008	N/A	0	0.00	16.3	1.78
28/06/2021 06:00	0.0	1.4	19.1	0	0	NM	1008	N/A	0	0.00	16.3	1.78
28/06/2021 07:00	0.0	1.4	19.1	0	0	NM	1008	N/A	0	-0.01	16.3	1.78
28/06/2021 08:00	0.0	1.4	19.1	0	0	NM	1008	N/A	0	0.00	16.3	1.78
28/06/2021 09:00	0.0	1.4	19.2	0	0	NM	1009	N/A	0	0.00	16.4	1.78
28/06/2021 10:00	0.0	1.4	19.3	0	0	NM	1009	N/A	0	-0.01	16.5	1.78
28/06/2021 11:00	0.0	1.4	19.3	0	0	NM	1009	N/A	0	-0.01	16.7	1.78
28/06/2021 12:00	0.0	1.4	19.4	0	0	NM	1009	N/A	0	-0.01	16.9	1.77
28/06/2021 13:00	0.0	1.4	19.6	0	0	NM	1009	N/A	0	-0.02	17.2	1.77
28/06/2021 14:00	0.0	1.4	19.8	0	0	NM	1009	N/A	0	0.00	17.8	1.77
28/06/2021 15:00	0.0	1.4	20.0	0	0	NM	1009	N/A	0	0.00	18.8	1.77
28/06/2021 16:00	0.0	1.4	20.1	0	0	NM	1008	N/A	0	0.00	19.4	1.77
28/06/2021 17:00	0.0	1.4	20.1	0	0	NM	1008	N/A	0	0.00	19.9	1.77
28/06/2021 18:00	0.0	1.4	20.0	0	0	NM	1008	N/A	0	0.00	20.1	1.77
28/06/2021 19:00	0.0	1.4	19.8	0	0	NM	1008	N/A	0	-0.03	19.8	1.77
28/06/2021 20:00	0.0	1.4	19.6	0	0	NM	1008	N/A	0	-0.02	19.4	1.77
28/06/2021 21:00	0.0	1.4	19.5	0	0	NM	1009	N/A	0	0.00	18.9	1.77
28/06/2021 22:00	0.0	1.5	19.3	0	0	NM	1009	N/A	0	0.00	18.6	1.77
28/06/2021 23:00	0.0	1.5	19.2	0	0	NM	1009	N/A	0	0.00	18.1	1.77
29/06/2021 00:00	0.0	1.5	19.1	0	0	NM	1009	N/A	0	-0.01	17.8	1.77
29/06/2021 01:00	0.0	1.5	19.2	0	0	NM	1009	N/A	0	-0.01	17.6	1.77
29/06/2021 02:00	0.0	1.5	19.1	0	0	NM	1008	N/A	0	0.00	17.4	1.77
29/06/2021 03:00	0.0	1.5	19.0	0	0	NM	1008	N/A	0	0.00	17.3	1.77
29/06/2021 04:00	0.0	1.5	19.0	0	0	NM	1008	N/A	0	0.00	17.1	1.77
29/06/2021 05:00	0.0	1.5	18.9	0	0	NM	1008	N/A	0	-0.02	16.9	1.77
29/06/2021 06:00	0.0	1.5	18.9	0	0	NM	1008	N/A	0	0.00	16.8	1.77
29/06/2021 07:00	0.0	1.6	18.9	0	0	NM	1009	N/A	0	-0.01	16.6	1.77
29/06/2021 08:00	0.0	1.6	18.9	0	0	NM	1009	N/A	0	0.00	16.6	1.77
29/06/2021 09:00	0.0	1.5	19.0	0	0	NM	1009	N/A	0	0.00	16.6	1.77
29/06/2021 10:00	0.0	1.6	19.0	0	0	NM	1009	N/A	0	-0.01	16.8	1.76
29/06/2021 11:00	0.0	1.6	19.2	0	0	NM	1009	N/A	0	0.00	17.0	1.76
29/06/2021 12:00	0.0	1.5	19.4	0	0	NM	1009	N/A	0	-0.02	17.6	1.76
29/06/2021 13:00	0.0	1.5	19.5	0	0	NM	1009	N/A	0	-0.02	18.0	1.76
29/06/2021 14:00	0.0	1.5	19.5	0	0	NM	1009	N/A	0	-0.01	18.4	1.76
29/06/2021 15:00	0.0	1.5	19.4	0	0	NM	1010	N/A	0	-0.02	18.4	1.76
29/06/2021 16:00	0.0	1.5	19.4	0	0	NM	1010	N/A	0	0.00	18.3	1.76
29/06/2021 17:00	0.0	1.5	19.3	0	0	NM	1010	N/A	0	0.00	18.1	1.77
29/06/2021 18:00	0.0	1.6	19.2	0	0	NM	1010	N/A	0	0.00	17.9	1.77
29/06/2021 19:00	0.0	1.6	19.1	0	0	NM	1010	N/A	0	-0.01	17.6	1.77
29/06/2021 20:00	0.0	1.6	19.0	0	0	NM	1010	N/A	0	-0.01	17.4	1.77
29/06/2021 21:00	0.0	1.6	19.0	0	0	NM	1011	N/A	0	0.00	17.3	1.77
29/06/2021 22:00	0.0	1.6	18.9	0	0	NM	1011	N/A	0	0.00	17.1	1.77
29/06/2021 23:00	0.0	1.7	18.9	0	0	NM	1011	N/A	0	0.00	16.8	1.77
30/06/2021 00:00	0.0	1.6	18.9	0	0	NM	1011	N/A	0	-0.01	16.6	1.77
30/06/2021 01:00	0.0	1.6	18.8	0	0	NM	1011	N/A	0	0.00	16.4	1.77
30/06/2021 02:00	0.0	1.7	18.8	0	0	NM	1011	N/A	0	-0.01	16.3	1.77
30/06/2021 03:00	0.0	1.7	18.7	0	0	NM	1011	N/A	0	0.00	16.1	1.77
30/06/2021 04:00	0.0	1.6	18.7	0	0	NM	1011	N/A	0	0.00	15.9	1.77
30/06/2021 05:00	0.0	1.6	18.7	0	0	NM	1011	N/A	0	-0.01	15.8	1.77
30/06/2021 06:00	0.0	1.7	18.7	0	0	NM	1011	N/A	0	-0.01	15.7	1.77
30/06/2021 07:00	0.0	1.6	18.7	0	0	NM	1011	N/A	0	0.00	15.7	1.77
30/06/2021 08:00	0.0	1.6	18.8	0	0	NM	1011	N/A	0	-0.01	15.8	1.77
30/06/2021 09:00	0.0	1.6	18.9	0	0	NM	1012	N/A	0	0.00	15.9	1.77
30/06/2021 10:00	0.0	1.6	18.9	0	0	NM	1012	N/A	0	-0.01	16.1	1.77
30/06/2021 11:00	0.0	1.6	19.0	0	0	NM	1012	N/A	0	-0.02	16.1	1.77
30/06/2021 12:00	0.0	1.6	19.1	0	0	NM	1012	N/A	0	0.00	16.4	1.77
30/06/2021 13:00	0.0	1.6	19.2	0	0	NM	1012	N/A	0	0.00	16.8	1.77
30/06/2021 14:00	0.0	1.6	19.3	0	0	NM	1012	N/A	0	0.00	17.0	1.77
30/06/2021 15:00	0.0	1.6	19.3	0	0	NM	1012	N/A	0	0.00	17.2	1.77
30/06/2021 16:00	0.0	1.6	19.4	0	0	NM	1012	N/A	0	0.00	17.4	1.77
30/06/2021 17:00	0.0	1.6	19.4	0	0	NM	1012	N/A	0	-0.01	17.6	1.77
30/06/2021 18:00	0.0	1.6	19.4	0	0	NM	1012	N/A	0	0.00	17.8	1.77
30/06/2021 19:00	0.0	1.6	19.3	0	0	NM	1012	N/A	0	0.00	17.8	1.77
30/06/2021 20:00	0.0	1.6	19.2	0	0	NM	1012	N/A	0	0.00	17.7	1.77
30/06/2021 21:00	0.0	1.6	19.1	0	0	NM	1013	N/A	0	-0.01	17.4	1.77

gegrs
Experts in Continuous Monitoring

Date and Time	CH_4 % v/v	CO_2 % v/v	O_2 % v/v	CO ppm/v	H_2S ppm/v	Borehole Pressure mbar	Atmospheric Pressure mbar	Differential Pressure mbar	Average 8-hour atmospheric pressure change mbar	Flow Ltr/hr	Temperature °C	Water Level mbgl
30/06/2021 22:00	0.0	1.7	19.0	0	0	NM	1013	N/A	0	-0.01	17.1	1.77
30/06/2021 23:00	0.0	1.7	18.9	0	0	NM	1013	N/A	0	0.00	16.8	1.77
01/07/2021 00:00	0.0	1.7	18.8	0	0	NM	1013	N/A	0	-0.01	16.4	1.77
01/07/2021 01:00	0.0	1.7	18.7	0	0	NM	1013	N/A	0	0.00	16.2	1.78
01/07/2021 02:00	0.0	1.7	18.6	0	0	NM	1013	N/A	0	-0.01	15.9	1.78
01/07/2021 03:00	0.0	1.8	18.5	0	0	NM	1013	N/A	0	-0.01	15.6	1.78
01/07/2021 04:00	0.0	1.8	18.4	0	0	NM	1013	N/A	0	0.00	15.1	1.78
01/07/2021 05:00	0.0	1.8	18.4	0	0	NM	1013	N/A	0	-0.02	14.8	1.78
01/07/2021 06:00	0.0	1.8	18.4	0	0	NM	1013	N/A	0	-0.01	14.6	1.78
01/07/2021 07:00	0.0	1.8	18.5	0	0	NM	1013	N/A	0	0.00	14.7	1.77
01/07/2021 08:00	0.0	1.7	18.9	0	0	NM	1013	N/A	0	-0.01	14.9	1.77
01/07/2021 09:00	0.0	1.6	19.2	0	0	NM	1012	N/A	0	0.00	15.3	1.77
01/07/2021 10:00	0.0	1.5	19.5	0	0	NM	1012	N/A	0	-0.01	15.8	1.77
01/07/2021 11:00	0.0	1.5	19.7	0	0	NM	1012	N/A	0	-0.02	16.5	1.77
01/07/2021 12:00	0.0	1.5	19.9	0	0	NM	1012	N/A	0	0.01	17.4	1.77
01/07/2021 13:00	0.0	1.5	20.1	0	0	NM	1012	N/A	0	0.01	18.3	1.77
01/07/2021 14:00	0.0	1.5	20.2	0	0	NM	1012	N/A	0	0.00	19.1	1.77
01/07/2021 15:00	0.0	1.6	20.1	0	0	NM	1011	N/A	0	0.01	19.3	1.77
01/07/2021 16:00	0.0	1.6	19.9	0	0	NM	1012	N/A	0	0.00	19.3	1.77
01/07/2021 17:00	0.0	1.6	19.8	0	0	NM	1012	N/A	0	-0.03	19.1	1.77
01/07/2021 18:00	0.0	1.6	19.6	0	0	NM	1012	N/A	0	-0.01	18.8	1.77
01/07/2021 19:00	0.0	1.6	19.4	0	0	NM	1012	N/A	0	0.00	18.3	1.77
01/07/2021 20:00	0.0	1.6	19.3	0	0	NM	1012	N/A	0	0.00	17.8	1.77
01/07/2021 21:00	0.0	1.7	19.1	0	0	NM	1012	N/A	0	-0.01	17.6	1.77
01/07/2021 22:00	0.0	1.7	19.0	0	0	NM	1012	N/A	0	0.00	17.2	1.77
01/07/2021 23:00	0.0	1.7	18.9	0	0	NM	1012	N/A	0	0.00	16.8	1.77
02/07/2021 00:00	0.0	1.8	18.9	0	0	NM	1012	N/A	0	0.00	16.5	1.77
02/07/2021 01:00	0.0	1.7	18.8	0	0	NM	1012	N/A	0	-0.01	16.3	1.77
02/07/2021 02:00	0.0	1.8	18.7	0	0	NM	1012	N/A	0	-0.01	16.3	1.77
02/07/2021 03:00	0.0	1.8	18.7	0	0	NM	1012	N/A	0	0.00	16.1	1.77
02/07/2021 04:00	0.0	1.8	18.7	0	0	NM	1011	N/A	0	0.00	15.8	1.77
02/07/2021 05:00	0.0	1.8	18.6	0	0	NM	1011	N/A	0	0.00	15.6	1.77
02/07/2021 06:00	0.0	1.8	18.6	0	0	NM	1011	N/A	0	-0.01	15.6	1.77
02/07/2021 07:00	0.0	1.8	18.7	0	0	NM	1012	N/A	0	-0.01	15.6	1.77

ggs
Experts in Continuous Monitoring

Time Series Data

Project Ref:	GGS2586
Project Name:	Downlands Farm, Uckfield
Borehole ref:	WS14
Instrument Name and ID:	03000044
Start Date:	11/06/2021 15:00
End Date:	02/07/2021 08:00
Days of monitoring:	21
Monitoring Frequency (hh:mm:ss):	01:00:00
Total samples taken:	502



Summary Table

	CH_4	CO_2	O_2	CO	H_2S	Borehole Pressure	Atmospheric Pressure	Differential Pressure	Average 8-hour atmospheric pressure change	Flow	Temperature	Water Level
Minimum	0.0	0.1	17.0	0	0	NM	1002	N/A	-0.62	-0.01	12.9	Flooded
Maximum	0.0	1.2	21.8	4	0	NM	1023	N/A	0.50	0.02	24.9	0.55
Range	0.0	1.1	4.8	4	0	NM	21	N/A	1.12	0.03	12.0	0.55

Date and Time	CH_4	CO_2	O_2	CO	H_2S	Borehole Pressure	Atmospheric Pressure	Differential Pressure	Average 8-hour atmospheric pressure change	Flow	Temperature	Water Level
	% v/v	% v/v	% v/v	ppm/v	ppm/v	mbar	mbar	mbar	mbar	Ltr/hr	°C	mbgl
11/06/2021 15:00	0.0	0.1	21.4	0	0	NM	1014	N/A	N/A	0.01	20.3	0.35
11/06/2021 16:00	0.0	0.1	21.6	1	0	NM	1015	N/A	N/A	0.01	20.8	0.36
11/06/2021 17:00	0.0	0.1	21.5	1	0	NM	1015	N/A	N/A	0.00	20.6	0.36
11/06/2021 18:00	0.0	0.1	21.4	1	0	NM	1014	N/A	N/A	0.01	20.4	0.37
11/06/2021 19:00	0.0	0.1	21.3	1	0	NM	1014	N/A	N/A	0.00	20.3	0.37
11/06/2021 20:00	0.0	0.1	21.1	1	0	NM	1015	N/A	N/A	0.01	20.1	0.37
11/06/2021 21:00	0.0	0.1	20.8	1	0	NM	1015	N/A	N/A	0.00	19.6	0.37
11/06/2021 22:00	0.0	0.1	20.4	1	0	NM	1015	N/A	0	0.01	18.8	0.38
11/06/2021 23:00	0.0	0.1	20.1	1	0	NM	1016	N/A	0	0.01	18.2	0.38
12/06/2021 00:00	0.0	0.1	19.8	1	0	NM	1016	N/A	0	0.01	17.8	0.38
12/06/2021 01:00	0.0	0.1	19.7	1	0	NM	1016	N/A	0	0.01	17.4	0.39
12/06/2021 02:00	0.0	0.1	19.5	1	0	NM	1016	N/A	0	0.01	17.1	0.39
12/06/2021 03:00	0.0	0.1	19.3	1	0	NM	1016	N/A	0	0.00	16.9	0.39
12/06/2021 04:00	0.0	0.2	19.3	1	0	NM	1016	N/A	0	0.00	16.8	0.39
12/06/2021 05:00	0.0	0.2	19.2	1	0	NM	1016	N/A	0	0.00	16.7	0.39
12/06/2021 06:00	0.0	0.2	19.2	1	0	NM	1016	N/A	0	0.00	16.6	0.39
12/06/2021 07:00	0.0	0.2	19.1	1	0	NM	1017	N/A	0	0.00	16.6	0.40
12/06/2021 08:00	0.0	0.2	19.2	1	0	NM	1017	N/A	0	0.00	16.7	0.40
12/06/2021 09:00	0.0	0.2	19.2	1	0	NM	1016	N/A	0	0.01	16.9	0.39
12/06/2021 10:00	0.0	0.2	19.3	1	0	NM	1017	N/A	0	0.00	17.4	0.40
12/06/2021 11:00	0.0	0.2	19.4	1	0	NM	1017	N/A	0	0.01	18.2	0.40
12/06/2021 12:00	0.0	0.2	19.6	1	0	NM	1017	N/A	0	0.01	19.2	0.40
12/06/2021 13:00	0.0	0.2	19.8	1	0	NM	1017	N/A	0	0.00	20.1	0.40
12/06/2021 14:00	0.0	0.2	20.1	1	0	NM	1017	N/A	0	0.01	20.8	0.40
12/06/2021 15:00	0.0	0.2	20.5	2	0	NM	1017	N/A	0	0.01	21.6	0.41
12/06/2021 16:00	0.0	0.2	20.9	2	0	NM	1017	N/A	0	0.00	22.4	0.41
12/06/2021 17:00	0.0	0.1	21.5	3	0	NM	1017	N/A	0	-0.01	23.1	0.41
12/06/2021 18:00	0.0	0.1	21.8	4	0	NM	1018	N/A	0	0.00	23.8	0.42
12/06/2021 19:00	0.0	0.1	21.8	4	0	NM	1018	N/A	0	0.00	23.8	0.42
12/06/2021 20:00	0.0	0.2	21.3	3	0	NM	1019	N/A	0	0.00	23.3	0.43
12/06/2021 21:00	0.0	0.2	20.7	3	0	NM	1020	N/A	0	0.01	22.3	0.44
12/06/2021 22:00	0.0	0.2	20.4	2	0	NM	1020	N/A	0	0.00	21.1	0.44
12/06/2021 23:00	0.0	0.3	19.7	2	0	NM	1021	N/A	0	0.01	19.9	0.45
13/06/2021 00:00	0.0	0.3	19.3	1	0	NM	1021	N/A	0	0.01	18.9	0.46
13/06/2021 01:00	0.0	0.3	19.1	1	0	NM	1021	N/A	0	0.01	18.2	0.46
13/06/2021 02:00	0.0	0.3	18.7	1	0	NM	1021	N/A	0	0.01	17.5	0.46
13/06/2021 03:00	0.0	0.3	18.4	1	0	NM	1021	N/A	0	0.00	16.9	0.46
13/06/2021 04:00	0.0	0.3	18.2	1	0	NM	1021	N/A	0	0.00	16.4	0.46
13/06/2021 05:00	0.0	0.4	18.1	1	0	NM	1022	N/A	0	0.00	16.0	0.46
13/06/2021 06:00	0.0	0.4	18.3	1	0	NM	1023	N/A	0	0.00	15.7	0.47
13/06/2021 07:00	0.0	0.4	18.0	1	0	NM	1023	N/A	0	0.00	15.5	0.47
13/06/2021 08:00	0.0	0.4	17.9	1	0	NM	1022	N/A	0	0.00	15.5	0.46
13/06/2021 09:00	0.0	0.4	18.0	1	0	NM	1022	N/A	0	0.00	15.8	0.46
13/06/2021 10:00	0.0	0.4	18.3	1	0	NM	1021	N/A	0	0.01	16.6	0.46
13/06/2021 11:00	0.0	0.4	18.5	1	0	NM	1021	N/A	0	0.00	17.9	0.46
13/06/2021 12:00	0.0	0.3	18.7	1	0	NM	1021	N/A	0	0.01	19.3	0.46
13/06/2021 13:00	0.0	0.3	18.9	1	0	NM	1021	N/A	0	0.00	20.5	0.46
13/06/2021 14:00	0.0	0.3	19.3	1	0	NM	1020	N/A	0	0.00	21.4	0.45
13/06/2021 15:00	0.0	0.3	19.9	2	0	NM	1020	N/A	0	0.00	22.3	0.45
13/06/2021 16:00	0.0	0.3	20.5	2	0	NM	1020	N/A	0	0.00	23.1	0.45
13/06/2021 17:00	0.0	0.2	20.9	3	0	NM	1019	N/A	0	0.00	23.6	0.45
13/06/2021 18:00	0.0	0.2	21.2	3	0	NM	1019	N/A	0	-0.01	23.9	0.45
13/06/2021 19:00	0.0	0.2	21.1	3	0	NM	1019	N/A	0	0.00	24.0	0.45
13/06/2021 20:00	0.0	0.3	20.8	3	0	NM	1019	N/A	0	0.00	23.6	0.46
13/06/2021 21:00	0.0	0.3	20.2	2	0	NM	1019	N/A	0	0.00	22.6	0.46
13/06/2021 22:00	0.0	0.3	19.8	2	0	NM	1019	N/A	0	0.00	21.4	0.46
13/06/2021 23:00	0.0	0.4	19.4	1	0	NM	1019	N/A	0	0.00	20.2	0.46
14/06/2021 00:00	0.0	0.4	18.9	1	0	NM	1018	N/A	0	0.01	19.2	0.46
14/06/2021 01:00	0.0	0.4	18.6	1	0	NM	1018	N/A	0	0.00	18.4	0.46
14/06/2021 02:00	0.0	0.4	18.4	1	0	NM	1017	N/A	0	0.00	17.7	0.46
14/06/2021 03:00	0.0	0.5	18.1	1	0	NM	1017	N/A	0	0.00	17.1	0.46
14/06/2021 04:00	0.0	0.5	17.9	1	0	NM	1017	N/A	0	0.00	16.6	0.46
14/06/2021 05:00	0.0	0.5	17.8	0	0	NM	1017	N/A	0	0.00	16.2	0.45
14/06/2021 06:00	0.0	0.5	17.7	0	0	NM	1016	N/A	0	0.00	15.9	0.45
14/06/2021 07:00	0.0	0.5	17.9	0	0	NM	1016	N/A	0	0.00	15.7	0.45
14/06/2021 08:00	0.0	0.5	17.7	0	0	NM	1015	N/A	0	0.00	15.7	0.44
14/06/2021 09:00	0.0	0.5	17.8	0	0	NM	1014	N/A	0	0.00	15.9	0.44
14/06/2021 10:00	0.0	0.5	18.1	1	0	NM	1014	N/A	0	0.00	16.8	0.43
14/06/2021 11:00	0.0	0.5	18.4	1	0	NM	1014	N/A	0	0.01	18.2	0.44
14/06/2021 12:00	0.0	0.5	18.6	1	0	NM	1014	N/A	0	0.01	19.8	0.44
14/06/2021 13:00	0.0	0.5	19.0	1	0	NM	1014	N/A	0	0.01	21.1	0.44
14/06/2021 14:00	0.0	0.4	19.4	1	0	NM	1013	N/A	0	0.00	22.1	0.44
14/06/2021 15:00	0.0	0.4	20.2	2	0	NM	1013	N/A	0	0.00	23.1	0.45
14/06/2021 16:00	0.0	0.3	20.8	2	0	NM	1013	N/A	0	0.00	24.0	0.45
14/06/2021 17:00	0.0	0.3	21.0	3	0	NM	1013	N/A	0	0.00	24.5	0.46
14/06/2021 18:00	0.0	0.3	21.2	3	0	NM	1013	N/A	0	0.00	24.8	0.46
14/06/2021 19:00	0.0	0.3	21.1	3	0	NM	1013	N/A	0	0.00	24.6	0.47
14/06/2021 20:00	0.0	0.4	20.7	2	0	NM	1013	N/A	0	0.00	23.9	0.48
14/06/2021 21:00	0.0	0.4	20.3	2	0	NM	1014	N/A	0	0.01	22.9	0.48
14/06/2021 22:00	0.0	0.4	19.9	2	0	NM	1014	N/A	0	0.00	21.9	0.49
14/06/2021 23:00	0.0	0.5	19.6	1	0	NM	1015	N/A	0	0.00	21.1	0.49
15/06/2021 00:00	0.0	0.5	19.3	1	0	NM	1015	N/A	0	0.00	20.4	0.50
15/06/2021 01:00	0.0	0.5	19.1	1	0	NM	1015	N/A	0	0.01	19.8	0.50
15/06/2021 02:00	0.0	0.5	18.9	1	0	NM	1015	N/A	0	0.00	19.2	0.50
15/06/2021 03:00	0.0	0.5	18.7	1	0	NM	1015	N/A	0	0.00	18.7	0.50
15/06/2021 04:00	0.0	0.5	18.6	1	0	NM	1015	N/A	0	0.00	18.3	0.50
15/06/2021 05:00	0.0	0.5	18.5	1	0	NM	1016	N/A	0	0.01	18.0	0.51
15/06/2021 06:00	0.0	0.5	18.4	1	0	NM	1016	N/A	0	0.00	17.8	0.51
15/06/2021 07:00	0.0	0.6	18.4	1	0	NM	1016	N/A	0	0.00	17.6	0.51
15/06/2021 08:00	0.0	0.6	18.5	1	0	NM	1016	N/A	0	0.01	17.7	0.51
15/06/2021 09:00	0.0	0.6	18.6	1	0	NM	1016	N/A	0	0.01	17.9	0.51
15/06/2021 10:00	0.0	0.5	18.7	1	0	NM	1015	N/A	0	0.01	18.4	0.50
15/06/2021 11:00	0.0	0.6	18.8	1	0	NM	1015	N/A	0	0.01	19.3	0.51
15/06/2021 12:00	0.0	0.5	19.0	1	0	NM	1015	N/A	0	0.01	20.5	0.51
15/06/2021 13:00	0.0	0.5	19.3	1	0	NM	1015	N/A	0	0.00	21.4	0.50
15/06/2021 14:00	0.0	0.5	19.5	1	0	NM	1014	N/A	0	0.00	22.0	0.51
15/06/2021 15:00	0.0	0.5	19.9	1	0	NM	1014	N/A	0	0.00	22.4	0.50
15/06/2021 16:00	0.0	0.5	20.2	2	0	NM	1013	N/A	0	0.00	22.9	0.50
15/06/2021 17:00	0.0	0.5	20.4	2	0	NM	1013	N/A	0	-0.01	23.3	0.50

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Experts in Continuous Monitoring

Date and Time	CH_4	CO_2	O_2	CO	H_2S	Borehole Pressure	Atmospheric Pressure	Differential Pressure	Average 8-hour atmospheric pressure change	Flow	Temperature	Water Level
	% v/v	% v/v	% v/v	ppm/v	ppm/v	mbar	mbar	mbar	mbar	Ltr/hr	°C	mbgl
15/06/2021 18:00	0.0	0.5	20.5	2	0	NM	1012	N/A	0	0.00	23.2	0.50
15/06/2021 19:00	0.0	0.4	20.5	2	0	NM	1012	N/A	0	0.00	23.4	0.50
15/06/2021 20:00	0.0	0.5	20.3	2	0	NM	1012	N/A	0	0.01	23.3	0.51
15/06/2021 21:00	0.0	0.5	20.0	1	0	NM	1012	N/A	0	0.00	22.3	0.51
15/06/2021 22:00	0.0	0.5	19.6	1	0	NM	1013	N/A	0	0.00	21.2	0.52
15/06/2021 23:00	0.0	0.5	19.2	1	0	NM	1013	N/A	0	0.00	20.1	0.52
16/06/2021 00:00	0.0	0.6	18.8	1	0	NM	1012	N/A	0	0.00	19.1	0.52
16/06/2021 01:00	0.0	0.6	18.6	1	0	NM	1012	N/A	0	0.01	18.3	0.52
16/06/2021 02:00	0.0	0.6	18.3	0	0	NM	1011	N/A	0	0.01	17.6	0.52
16/06/2021 03:00	0.0	0.6	18.1	0	0	NM	1010	N/A	0	0.01	17.1	0.51
16/06/2021 04:00	0.0	0.6	17.9	0	0	NM	1010	N/A	0	0.00	16.6	0.51
16/06/2021 05:00	0.0	0.6	17.8	0	0	NM	1009	N/A	0	0.00	16.1	0.51
16/06/2021 06:00	0.0	0.6	17.7	0	0	NM	1009	N/A	0	0.00	15.8	0.50
16/06/2021 07:00	0.0	0.6	17.6	0	0	NM	1009	N/A	0	0.00	15.6	0.50
16/06/2021 08:00	0.0	0.6	17.8	0	0	NM	1007	N/A	-1	0.00	15.6	0.49
16/06/2021 09:00	0.0	0.6	17.9	0	0	NM	1007	N/A	-1	0.00	15.9	0.48
16/06/2021 10:00	0.0	0.6	18.1	0	0	NM	1006	N/A	-1	0.00	16.7	0.48
16/06/2021 11:00	0.0	0.6	18.4	0	0	NM	1006	N/A	0	0.00	18.1	0.48
16/06/2021 12:00	0.0	0.6	18.7	1	0	NM	1006	N/A	0	0.00	19.7	0.48
16/06/2021 13:00	0.0	0.6	19.0	1	0	NM	1005	N/A	0	0.00	21.2	0.49
16/06/2021 14:00	0.0	0.6	19.5	1	0	NM	1005	N/A	0	0.00	22.3	0.49
16/06/2021 15:00	0.0	0.5	20.2	2	0	NM	1004	N/A	0	0.00	23.4	0.49
16/06/2021 16:00	0.0	0.5	20.7	2	0	NM	1004	N/A	0	0.00	24.3	0.50
16/06/2021 17:00	0.0	0.4	21.2	3	0	NM	1004	N/A	0	0.01	24.9	0.50
16/06/2021 18:00	0.0	0.5	21.1	3	0	NM	1003	N/A	0	-0.01	24.9	0.51
16/06/2021 19:00	0.0	0.5	20.8	2	0	NM	1003	N/A	0	0.00	24.2	0.52
16/06/2021 20:00	0.0	0.5	20.4	2	0	NM	1004	N/A	0	0.01	23.2	0.53
16/06/2021 21:00	0.0	0.5	20.0	1	0	NM	1005	N/A	0	0.00	22.1	0.54
16/06/2021 22:00	0.0	0.6	19.7	1	0	NM	1005	N/A	0	0.01	21.2	0.55
16/06/2021 23:00	0.0	0.6	19.4	1	0	NM	1004	N/A	0	0.01	20.5	0.54
17/06/2021 00:00	0.0	0.6	19.2	1	0	NM	1004	N/A	0	0.00	19.9	0.54
17/06/2021 01:00	0.0	0.6	19.0	1	0	NM	1003	N/A	0	0.01	19.5	0.54
17/06/2021 02:00	0.0	0.6	18.9	1	0	NM	1002	N/A	0	0.00	19.1	0.54
17/06/2021 03:00	0.0	0.6	18.7	1	0	NM	1003	N/A	0	0.01	18.8	0.54
17/06/2021 04:00	0.0	0.6	18.7	1	0	NM	1003	N/A	0	0.01	18.6	0.53
17/06/2021 05:00	0.0	0.6	18.6	1	0	NM	1002	N/A	0	0.01	18.3	0.53
17/06/2021 06:00	0.0	0.6	18.5	1	0	NM	1003	N/A	0	0.00	18.1	0.53
17/06/2021 07:00	0.0	0.6	18.5	1	0	NM	1003	N/A	0	0.02	18.0	0.53
17/06/2021 08:00	0.0	0.6	18.5	1	0	NM	1003	N/A	0	0.00	17.9	0.53
17/06/2021 09:00	0.0	0.6	18.6	1	0	NM	1003	N/A	0	0.00	18.0	0.52
17/06/2021 10:00	0.0	0.6	18.7	1	0	NM	1003	N/A	0	0.00	18.1	0.52
17/06/2021 11:00	0.0	0.6	18.8	1	0	NM	1004	N/A	0	0.01	18.5	0.52
17/06/2021 12:00	0.0	0.6	19.0	1	0	NM	1004	N/A	0	0.00	18.8	0.52
17/06/2021 13:00	0.0	0.5	19.1	1	0	NM	1005	N/A	0	0.00	19.0	0.52
17/06/2021 14:00	0.0	0.5	19.1	1	0	NM	1005	N/A	0	0.00	19.1	0.52
17/06/2021 15:00	0.0	0.5	19.1	1	0	NM	1006	N/A	0	0.01	19.1	0.52
17/06/2021 16:00	0.0	0.5	19.1	1	0	NM	1006	N/A	0	0.00	19.1	0.52
17/06/2021 17:00	0.0	0.5	19.2	1	0	NM	1006	N/A	0	0.00	19.2	0.52
17/06/2021 18:00	0.0	0.5	19.2	1	0	NM	1006	N/A	0	0.00	19.3	0.52
17/06/2021 19:00	0.0	0.5	19.2	1	0	NM	1006	N/A	0	0.01	19.2	0.51
17/06/2021 20:00	0.0	0.5	19.1	1	0	NM	1007	N/A	0	0.01	19.1	0.51
17/06/2021 21:00	0.0	0.5	19.1	1	0	NM	1007	N/A	0	0.00	18.9	0.51
17/06/2021 22:00	0.0	0.5	19.0	1	0	NM	1008	N/A	0	0.00	18.7	0.51
17/06/2021 23:00	0.0	0.5	18.9	1	0	NM	1008	N/A	0	0.02	18.5	0.51
18/06/2021 00:00	0.0	0.5	18.8	1	0	NM	1007	N/A	0	0.01	18.3	0.51
18/06/2021 01:00	0.0	0.5	18.8	1	0	NM	1008	N/A	0	0.00	18.2	0.50
18/06/2021 02:00	0.0	0.5	18.7	1	0	NM	1007	N/A	0	0.01	18.1	0.50
18/06/2021 03:00	0.0	0.5	18.7	1	0	NM	1007	N/A	0	0.01	17.9	0.50
18/06/2021 04:00	0.0	0.5	18.6	1	0	NM	1007	N/A	0	0.00	17.8	0.49
18/06/2021 05:00	0.0	0.5	18.5	1	0	NM	1007	N/A	0	0.01	17.6	0.49
18/06/2021 06:00	0.0	0.5	18.5	1	0	NM	1007	N/A	0	0.01	17.5	0.49
18/06/2021 07:00	0.0	0.5	18.5	0	0	NM	1007	N/A	0	0.01	17.4	0.49
18/06/2021 08:00	0.0	0.5	18.4	1	0	NM	1007	N/A	0	0.01	17.3	0.48
18/06/2021 09:00	0.0	0.5	18.4	1	0	NM	1006	N/A	0	0.01	17.3	0.48
18/06/2021 10:00	0.0	0.5	18.4	1	0	NM	1006	N/A	0	0.01	17.4	0.47
18/06/2021 11:00	0.0	0.5	18.5	0	0	NM	1006	N/A	0	0.01	17.4	0.46
18/06/2021 12:00	0.0	0.5	18.5	1	0	NM	1006	N/A	0	0.01	17.4	0.45
18/06/2021 13:00	0.0	0.5	18.5	1	0	NM	1006	N/A	0	-0.01	17.4	0.44
18/06/2021 14:00	0.0	0.5	18.5	1	0	NM	1005	N/A	0	0.01	17.4	0.43
18/06/2021 15:00	0.0	0.5	18.6	1	0	NM	1005	N/A	0	0.00	17.6	0.42
18/06/2021 16:00	0.0	0.5	18.7	1	0	NM	1005	N/A	0	0.00	17.8	0.41
18/06/2021 17:00	0.0	0.5	18.8	1	0	NM	1005	N/A	0	0.01	17.9	0.40
18/06/2021 18:00	0.0	0.5	18.8	1	0	NM	1005	N/A	0	0.01	17.8	0.39
18/06/2021 19:00	0.0	0.5	18.7	1	0	NM	1006	N/A	0	0.00	17.6	0.38
18/06/2021 20:00	0.0	0.5	18.7	0	0	NM	1006	N/A	0	0.01	17.4	0.37
18/06/2021 21:00	0.0	0.5	18.6	0	0	NM	1007	N/A	0	0.01	17.2	0.37
18/06/2021 22:00	0.0	0.5	18.7	0	0	NM	1008	N/A	0	0.00	16.9	0.37
18/06/2021 23:00	0.0	0.5	18.5	0	0	NM	1008	N/A	0	0.01	16.7	0.37
19/06/2021 00:00	0.0	0.5	18.4	0	0	NM	1009	N/A	1	0.00	16.4	0.36
19/06/2021 01:00	0.0	0.4	18.4	0	0	NM	1009	N/A	0	0.01	16.2	0.35
19/06/2021 02:00	0.0	0.4	18.3	0	0	NM	1009	N/A	0	0.00	16.0	0.35
19/06/2021 03:00	0.0	0.4	18.3	0	0	NM	1009	N/A	0	0.00	15.8	0.34
19/06/2021 04:00	0.0	0.4	18.3	0	0	NM	1010	N/A	0	0.00	15.7	0.33
19/06/2021 05:00	0.0	0.4	18.3	0	0	NM	1010	N/A	0	0.00	15.6	0.33
19/06/2021 06:00	0.0	0.4	18.3	0	0	NM	1011	N/A	0	0.00	15.5	0.32
19/06/2021 07:00	0.0	0.4	18.3	0	0	NM	1011	N/A	0	0.00	15.5	0.32
19/06/2021 08:00	0.0	0.4	18.3	0	0	NM	1011	N/A	0	0.00	15.5	0.31
19/06/2021 09:00	0.0	0.4	18.4	0	0	NM	1010	N/A	0	0.01	15.6	0.31
19/06/2021 10:00	0.0	0.4	18.5	0	0	NM	1010	N/A	0	0.00	15.8	0.30
19/06/2021 11:00	0.0	0.3	18.6	0	0	NM	1010	N/A	0	0.01	15.9	0.29
19/06/2021 12:00	0.0	0.3	18.7	0	0	NM	1010	N/A	0	0.01	16.2	0.29
19/06/2021 13:00	0.0	0.3	18.8	0	0	NM	1009	N/A	0	0.00	16.4	0.28
19/06/2021 14:00	0.0	0.4	18.9	0	0	NM	1009	N/A	0	0.00	16.7	0.27
19/06/2021 15:00	0.0	0.4	19.1	0	0	NM	1008	N/A	0	0.00	17.0	0.27
19/06/2021 16:00	0.0	0.3	19.1	0	0	NM	1008	N/A	0	0.01	17.0	0.26
19/06/2021 17:00	0.0	0.4	19.1	0	0	NM	1007	N/A	0	0.00	17.0	0.25
19/06/2021 18:00	0.0	0.3	19.1	0	0	NM	1007	N/A	0	0.01	16.9	0.25
19/06/2021 19:00	0.0	0.3	19.0	0	0	NM	1006	N/A	-1	0.01	16.8	0.24
19/06/2021 20:00	0.0	0.3	19.0	0	0	NM	1005	N/A	-1	0.01	16.6	0.23
19/06/2021 21:00	0.0	0.3	18.9	0	0	NM	1005	N/A	-1	0.01	16.4	0.22
19/06/2021 22:00	0.0	0.4	18.8	0	0	NM	1005	N/A	0	0.00	16.3	0.22
19/06/2021 23:00	0.0	0.4	18.8	0	0	NM	1004	N/A	0	0.01	16.1	0.21
20/06/2021 00:00	0.0	0.4	18.7	0	0	NM	1004	N/A	0	0.01	15.9	0.21
20/06/2021 01:00	0.0	0.4	18.7	0	0	NM	1004	N/A	0	0.01	15.8	0.21
20/06/2021 02:00	0.0	0.4	18.6	0	0	NM	1003	N/A	0	0.01	15.8	0.20
20/06/2021 03:00	0.0	0.4	18.6	0	0	NM	1002	N/A	0	0.01	15.7	0.20
20/06/2021 04:00	0.0	0.4	18.6	0	0	NM	1003	N/A	0	0.00	15.6	0.19
20/06/2021 05:00	0.0	0.4	18.6	0	0	NM	1003	N/A	0	0.00	15.5	0.19
20/06/2021 06:00	0.0	0.4	18.5	0	0	NM	1003	N/A	0	0.00	15.4	0.18
20/06/2021 07:00	0.0	0.5	18.6	0	0	NM	1003	N/A	0	0.00	15.5	0.17
20/06/2021 08:00	0.0	0.5	18.6	0	0	NM	1003	N/A	0	0.01	15.6	0.17
20/06/2021 09:00	0.0	0.5	18.7	0	0	NM	1004	N/A	0	0.01	15.8	0.16
20/06/2021 10:00	0.0	0.5	18.8	0	0	NM	1003	N/A	0	0.01	16.0	0.16
20/06/2021 11:00	0.0	0.5	19.1	0	0	NM	1003	N/A	0	0.00	16.4	0.15
20/06/2021 12:00	0.0	0.5	19.2	0	0	NM	1003	N/A	0	0.00	16.7	0.15
20/06/2021 13:00	0.0	0.4	19.3	0	0	NM	1003	N/A	0	0.00	17.2	0.14
20/06/2021 14:00	0.0	0.4	19.6	1	0	NM	1002	N/A	0	0.01	17.8	0.13
20/06/2021 15:00	0.0	0.4	20.0	1	0	NM	1002	N/A	0	0.00	18.6	0.13
20/06/2021 16:00	0.0	0.4	20.2	1	0	NM	1002	N/A	0	0.00	19.2	0.13
20/06/2021 17:00	0.0	0.4	20.4	1	0	NM	1002	N/A	0	0.01	19.7	0.12
20/06/2021 18:00	0.0	0.4	20.6	1	0	NM	1002	N/A	0	0.01	19.8	0.12
20/06/2021 19:00	0.0	0.4	20.5	1	0	NM	1003	N/A	0	0.01	19.5	0.12

ggs
Experts in Continuous Monitoring

Date and Time	CH_4	CO_2	O_2	CO	H_2S	Borehole Pressure	Atmospheric Pressure	Differential Pressure	Average 8-hour atmospheric pressure change	Flow	Temperature	Water Level
	% v/v	% v/v	% v/v	ppm/v	ppm/v	mbar	mbar	mbar	mbar	Ltr/hr	°C	mbgl
20/06/2021 20:00	0.0	0.4	20.3	1	0	NM	1003	N/A	0	0.00	19.1	0.12
20/06/2021 21:00	0.0	0.4	20.0	1	0	NM	1003	N/A	0	0.01	18.6	0.13
20/06/2021 22:00	0.0	0.4	19.8	1	0	NM	1004	N/A	0	0.01	18.1	0.13
20/06/2021 23:00	0.0	0.4	19.6	1	0	NM	1004	N/A	0	0.00	17.6	0.13
21/06/2021 00:00	0.0	0.4	19.4	0	0	NM	1003	N/A	0	0.02	17.3	0.13
21/06/2021 01:00	0.0	0.4	19.3	0	0	NM	1003	N/A	0	0.01	16.9	0.12
21/06/2021 02:00	0.0	0.4	19.1	0	0	NM	1003	N/A	0	0.01	16.5	0.12
21/06/2021 03:00	0.0	0.4	19.2	0	0	NM	1003	N/A	0	0.02	16.3	0.12
21/06/2021 04:00	0.0	0.4	19.0	0	0	NM	1003	N/A	0	0.01	16.1	0.12
21/06/2021 05:00	0.0	0.5	18.9	0	0	NM	1003	N/A	0	0.01	15.9	0.12
21/06/2021 06:00	0.0	0.5	18.9	0	0	NM	1004	N/A	0	0.00	15.8	0.12
21/06/2021 07:00	0.0	0.5	18.9	0	0	NM	1004	N/A	0	0.00	15.6	0.12
21/06/2021 08:00	0.0	0.5	18.9	0	0	NM	1004	N/A	0	0.00	15.5	0.12
21/06/2021 09:00	0.0	0.5	18.8	0	0	NM	1004	N/A	0	0.00	15.4	0.12
21/06/2021 10:00	0.0	0.5	18.9	0	0	NM	1005	N/A	0	0.00	15.4	0.12
21/06/2021 11:00	0.0	0.5	18.9	0	0	NM	1005	N/A	0	0.01	15.5	0.12
21/06/2021 12:00	0.0	0.5	18.9	0	0	NM	1005	N/A	0	0.00	15.6	0.12
21/06/2021 13:00	0.0	0.5	19.1	0	0	NM	1006	N/A	0	0.00	16.0	0.12
21/06/2021 14:00	0.0	0.5	19.1	0	0	NM	1006	N/A	0	0.00	16.1	0.12
21/06/2021 15:00	0.0	0.4	19.1	0	0	NM	1007	N/A	0	0.01	16.1	0.12
21/06/2021 16:00	0.0	0.5	19.1	0	0	NM	1007	N/A	0	0.01	15.9	0.12
21/06/2021 17:00	0.0	0.5	19.0	0	0	NM	1007	N/A	0	0.00	15.8	0.12
21/06/2021 18:00	0.0	0.5	19.0	0	0	NM	1008	N/A	0	0.01	15.8	0.11
21/06/2021 19:00	0.0	0.5	19.0	0	0	NM	1008	N/A	0	0.00	15.8	0.11
21/06/2021 20:00	0.0	0.5	19.0	0	0	NM	1009	N/A	0	0.00	15.7	0.11
21/06/2021 21:00	0.0	0.5	19.0	0	0	NM	1009	N/A	0	0.01	15.5	0.11
21/06/2021 22:00	0.0	0.5	19.0	0	0	NM	1009	N/A	0	0.00	15.3	0.11
21/06/2021 23:00	0.0	0.5	18.9	0	0	NM	1010	N/A	0	0.00	15.1	0.11
22/06/2021 00:00	0.0	0.5	18.9	0	0	NM	1010	N/A	0	0.00	14.9	0.11
22/06/2021 01:00	0.0	0.5	18.9	0	0	NM	1011	N/A	0	0.00	14.8	0.11
22/06/2021 02:00	0.0	0.5	18.8	0	0	NM	1010	N/A	0	0.00	14.6	0.11
22/06/2021 03:00	0.0	0.5	18.8	0	0	NM	1011	N/A	0	0.00	14.4	0.11
22/06/2021 04:00	0.0	0.5	18.8	0	0	NM	1011	N/A	0	0.00	14.4	0.11
22/06/2021 05:00	0.0	0.5	18.8	0	0	NM	1011	N/A	0	0.00	14.3	0.11
22/06/2021 06:00	0.0	0.5	18.7	0	0	NM	1012	N/A	0	0.00	14.1	0.11
22/06/2021 07:00	0.0	0.5	18.7	0	0	NM	1012	N/A	0	0.00	14.0	0.11
22/06/2021 08:00	0.0	0.5	18.7	0	0	NM	1013	N/A	0	0.00	13.9	0.11
22/06/2021 09:00	0.0	0.5	18.7	0	0	NM	1013	N/A	0	0.00	14.0	0.11
22/06/2021 10:00	0.0	0.5	18.9	0	0	NM	1013	N/A	0	0.00	14.3	0.10
22/06/2021 11:00	0.0	0.5	19.0	0	0	NM	1014	N/A	0	0.00	14.7	0.10
22/06/2021 12:00	0.0	0.5	19.2	0	0	NM	1014	N/A	0	0.00	15.1	0.10
22/06/2021 13:00	0.0	0.5	19.4	0	0	NM	1014	N/A	0	0.00	15.5	0.10
22/06/2021 14:00	0.0	0.4	19.6	0	0	NM	1014	N/A	0	0.00	15.9	0.10
22/06/2021 15:00	0.0	0.4	19.7	0	0	NM	1015	N/A	0	0.00	16.1	0.10
22/06/2021 16:00	0.0	0.4	19.8	0	0	NM	1015	N/A	0	0.00	16.3	0.10
22/06/2021 17:00	0.0	0.4	19.8	0	0	NM	1015	N/A	0	0.00	16.4	0.10
22/06/2021 18:00	0.0	0.4	19.8	0	0	NM	1015	N/A	0	0.00	16.4	0.10
22/06/2021 19:00	0.0	0.4	19.8	0	0	NM	1016	N/A	0	0.01	16.3	0.10
22/06/2021 20:00	0.0	0.4	19.7	0	0	NM	1017	N/A	0	0.00	16.3	0.10
22/06/2021 21:00	0.0	0.4	19.6	0	0	NM	1017	N/A	0	0.01	16.0	0.10
22/06/2021 22:00	0.0	0.4	19.5	0	0	NM	1018	N/A	0	0.00	15.7	0.10
22/06/2021 23:00	0.0	0.4	19.3	0	0	NM	1018	N/A	0	0.00	15.2	0.10
23/06/2021 00:00	0.0	0.4	19.4	0	0	NM	1018	N/A	0	0.00	14.8	0.10
23/06/2021 01:00	0.0	0.4	19.1	0	0	NM	1018	N/A	0	0.00	14.5	0.10
23/06/2021 02:00	0.0	0.4	19.0	0	0	NM	1018	N/A	0	0.00	14.3	0.10
23/06/2021 03:00	0.0	0.5	18.9	0	0	NM	1018	N/A	0	0.00	14.1	0.10
23/06/2021 04:00	0.0	0.5	18.8	0	0	NM	1018	N/A	0	0.00	13.8	0.10
23/06/2021 05:00	0.0	0.5	18.7	0	0	NM	1018	N/A	0	0.00	13.3	0.10
23/06/2021 06:00	0.0	0.5	18.6	0	0	NM	1019	N/A	0	0.00	13.1	0.10
23/06/2021 07:00	0.0	0.5	18.5	0	0	NM	1019	N/A	0	0.00	12.9	0.10
23/06/2021 08:00	0.0	0.5	18.5	0	0	NM	1019	N/A	0	0.00	13.1	0.09
23/06/2021 09:00	0.0	0.5	18.6	0	0	NM	1019	N/A	0	0.00	13.3	0.09
23/06/2021 10:00	0.0	0.5	18.7	0	0	NM	1018	N/A	0	0.00	13.7	0.09
23/06/2021 11:00	0.0	0.5	18.9	0	0	NM	1018	N/A	0	0.00	14.5	0.08
23/06/2021 12:00	0.0	0.5	19.1	0	0	NM	1018	N/A	0	0.00	15.9	0.08
23/06/2021 13:00	0.0	0.5	19.4	0	0	NM	1018	N/A	0	0.00	17.2	0.08
23/06/2021 14:00	0.0	0.5	19.6	0	0	NM	1017	N/A	0	0.00	18.1	0.08
23/06/2021 15:00	0.0	0.5	20.4	1	0	NM	1017	N/A	0	0.00	18.8	0.08
23/06/2021 16:00	0.0	0.5	21.0	1	0	NM	1017	N/A	0	0.00	19.7	0.09
23/06/2021 17:00	0.0	0.4	21.5	2	0	NM	1017	N/A	0	-0.01	20.2	0.09
23/06/2021 18:00	0.0	0.4	21.8	2	0	NM	1017	N/A	0	0.00	20.4	0.09
23/06/2021 19:00	0.0	0.4	21.5	2	0	NM	1018	N/A	0	0.00	20.1	0.10
23/06/2021 20:00	0.0	0.4	21.1	1	0	NM	1018	N/A	0	0.01	19.4	0.10
23/06/2021 21:00	0.0	0.4	20.7	1	0	NM	1018	N/A	0	0.01	18.5	0.11
23/06/2021 22:00	0.0	0.4	20.1	1	0	NM	1019	N/A	0	0.01	17.5	0.11
23/06/2021 23:00	0.0	0.4	19.8	0	0	NM	1019	N/A	0	0.01	16.6	0.12
24/06/2021 00:00	0.0	0.5	19.5	0	0	NM	1019	N/A	0	0.00	15.8	0.12
24/06/2021 01:00	0.0	0.5	19.0	0	0	NM	1018	N/A	0	0.00	15.2	0.11
24/06/2021 02:00	0.0	0.5	18.7	0	0	NM	1018	N/A	0	0.00	14.6	0.11
24/06/2021 03:00	0.0	0.6	18.7	0	0	NM	1018	N/A	0	0.00	14.1	0.11
24/06/2021 04:00	0.0	0.6	18.3	0	0	NM	1018	N/A	0	0.00	13.8	0.11
24/06/2021 05:00	0.0	0.6	18.1	0	0	NM	1018	N/A	0	0.00	13.4	0.11
24/06/2021 06:00	0.0	0.6	18.0	0	0	NM	1018	N/A	0	0.00	13.1	0.11
24/06/2021 07:00	0.0	0.7	18.0	0	0	NM	1018	N/A	0	0.00	12.9	0.11
24/06/2021 08:00	0.0	0.7	18.0	0	0	NM	1017	N/A	0	0.00	13.0	0.10
24/06/2021 09:00	0.0	0.7	18.1	0	0	NM	1016	N/A	0	0.00	13.3	0.09
24/06/2021 10:00	0.0	0.7	18.4	0	0	NM	1016	N/A	0	0.00	14.0	0.09
24/06/2021 11:00	0.0	0.7	18.7	0	0	NM	1015	N/A	0	0.00	15.2	0.09
24/06/2021 12:00	0.0	0.6	19.0	0	0	NM	1016	N/A	0	0.00	16.5	0.09
24/06/2021 13:00	0.0	0.6	19.4	1	0	NM	1015	N/A	0	0.01	17.8	0.09
24/06/2021 14:00	0.0	0.6	19.9	1	0	NM	1015	N/A	0	0.00	18.9	0.10
24/06/2021 15:00	0.0	0.6	20.2	1	0	NM	1015	N/A	0	0.01	19.4	0.11
24/06/2021 16:00	0.0	0.6	20.3	1	0	NM	1015	N/A	0	0.00	19.1	0.12
24/06/2021 17:00	0.0	0.6	20.1	1	0	NM	1015	N/A	0	0.01	18.7	0.12
24/06/2021 18:00	0.0	0.6	20.0	1	0	NM	1015	N/A	0	0.00	18.4	0.13
24/06/2021 19:00	0.0	0.6	19.9	1	0	NM	1015	N/A	0	0.00	18.1	0.13
24/06/2021 20:00	0.0	0.6	19.7	1	0	NM	1015	N/A	0	0.01	17.8	0.13
24/06/2021 21:00	0.0	0.6	19.5	1	0	NM	1015	N/A	0	0.01	17.4	0.14
24/06/2021 22:00	0.0	0.7	19.3	1	0	NM	1015	N/A	0	0.02	17.1	0.14
24/06/2021 23:00	0.0	0.7	19.1	1	0	NM	1015	N/A	0	0.00	16.7	0.14
25/06/2021 00:00	0.0	0.7	18.9	0	0	NM	1015	N/A	0	0.01	16.4	0.14
25/06/2021 01:00	0.0	0.7	18.8	0	0	NM	1014	N/A	0	0.00	16.2	0.14
25/06/2021 02:00	0.0	0.7	18.7	0	0	NM	1014	N/A	0	0.02	16.0	0.14
25/06/2021 03:00	0.0	0.7	18.6	0	0	NM	1013	N/A	0	0.01	15.9	0.14
25/06/2021 04:00	0.0	0.8	18.5	0	0	NM	1013	N/A	0	0.02	15.8	0.13
25/06/2021 05:00	0.0	0.8	18.4	0	0	NM	1013	N/A	0	0.01	15.6	0.13
25/06/2021 06:00	0.0	0.8	18.4	0	0	NM	1012	N/A	0	0.00	15.4	0.13
25/06/2021 07:00	0.0	0.8	18.3	0	0	NM	1012	N/A	0	0.00	15.4	0.13
25/06/2021 08:00	0.0	0.8	18.3	0	0	NM	1012	N/A	0	0.01	15.4	0.13
25/06/2021 09:00	0.0	0.9	18.3	0	0	NM	1012	N/A	0	0.01	15.5	0.13
25/06/2021 10:00	0.0	0.8	18.4	0	0	NM	1012	N/A	0	0.01	15.7	0.13
25/06/2021 11:00	0.0	0.8	18.4	0	0	NM	1012	N/A	0	0.02	15.9	0.13
25/06/2021 12:00	0.0	0.8	18.5	0	0	NM	1011	N/A	0	0.00	16.1	0.13
25/06/2021 13:00	0.0	0.8	18.5	0	0	NM	1011	N/A	0	0.01	16.1	0.13
25/06/2021 14:00	0.0	0.8	18.6	0	0	NM	1011	N/A	0	0.00	16.3	0.12
25/06/2021 15:00	0.0	0.9	18.6	0	0	NM	1011	N/A	0	0.01	16.5	0.12
25/06/2021 16:00	0.0	0.8	18.7	1	0	NM	1010	N/A	0	0.00	16.8	0.12
25/06/2021 17:00	0.0	0.8	18.8	1	0	NM	1010	N/A	0	0.00	17.1	0.12
25/06/2021 18:00	0.0	0.8	18.9	1	0	NM	1010	N/A	0	0.01	17.4	0.12
25/06/2021 19:00	0.0	0.8	19.1	1	0	NM	1010	N/A	0	0.00	18.0	0.12
25/06/2021 20:00	0.0	0.9	19.2	1	0	NM	1010	N/A	0	0.00	18.1	0.12
25/06/2021 21:00	0.0	0.9	19.0	1	0	NM	1011	N/A	0	0.01	17.7	0.12

gfs
Experts in Continuous Monitoring

Date and Time	CH_4	CO_2	O_2	CO	H_2S	Borehole Pressure	Atmospheric Pressure	Differential Pressure	Average 8-hour atmospheric pressure change	Flow	Temperature	Water Level
	% v/v	% v/v	% v/v	ppm/v	ppm/v	mbar	mbar	mbar	mbar	Ltr/hr	°C	mbgl
25/06/2021 22:00	0.0	0.9	18.7	1	0	NM	1011	N/A	0	0.01	16.9	0.13
25/06/2021 23:00	0.0	0.9	18.3	0	0	NM	1011	N/A	0	0.01	16.2	0.13
26/06/2021 00:00	0.0	1.0	18.0	0	0	NM	1011	N/A	0	0.00	15.5	0.14
26/06/2021 01:00	0.0	1.0	17.8	0	0	NM	1012	N/A	0	0.00	14.9	0.14
26/06/2021 02:00	0.0	1.1	17.5	0	0	NM	1012	N/A	0	0.00	14.4	0.14
26/06/2021 03:00	0.0	1.1	17.3	0	0	NM	1012	N/A	0	0.00	14.0	0.14
26/06/2021 04:00	0.0	1.1	17.1	0	0	NM	1012	N/A	0	0.00	13.6	0.14
26/06/2021 05:00	0.0	1.1	17.0	0	0	NM	1012	N/A	0	0.00	13.4	0.15
26/06/2021 06:00	0.0	1.1	17.0	0	0	NM	1012	N/A	0	0.01	13.4	0.15
26/06/2021 07:00	0.0	1.2	17.1	0	0	NM	1013	N/A	0	0.00	13.7	0.15
26/06/2021 08:00	0.0	1.2	17.3	0	0	NM	1013	N/A	0	0.00	14.0	0.15
26/06/2021 09:00	0.0	1.1	17.4	0	0	NM	1012	N/A	0	0.00	14.4	0.14
26/06/2021 10:00	0.0	1.1	17.6	0	0	NM	1012	N/A	0	0.00	14.8	0.15
26/06/2021 11:00	0.0	1.1	17.8	0	0	NM	1012	N/A	0	0.01	15.6	0.15
26/06/2021 12:00	0.0	1.1	18.1	0	0	NM	1013	N/A	0	0.01	16.6	0.15
26/06/2021 13:00	0.0	1.1	18.4	1	0	NM	1012	N/A	0	0.00	17.3	0.16
26/06/2021 14:00	0.0	1.1	18.6	1	0	NM	1012	N/A	0	0.00	17.8	0.16
26/06/2021 15:00	0.0	1.0	18.8	1	0	NM	1012	N/A	0	0.01	18.4	0.16
26/06/2021 16:00	0.0	1.0	19.0	1	0	NM	1012	N/A	0	0.00	18.7	0.16
26/06/2021 17:00	0.0	1.1	19.1	1	0	NM	1011	N/A	0	0.00	18.8	0.17
26/06/2021 18:00	0.0	1.0	19.2	1	0	NM	1011	N/A	0	0.00	18.9	0.17
26/06/2021 19:00	0.0	1.0	19.2	1	0	NM	1011	N/A	0	0.00	18.9	0.17
26/06/2021 20:00	0.0	1.1	19.1	1	0	NM	1012	N/A	0	0.01	18.8	0.18
26/06/2021 21:00	0.0	1.0	18.8	1	0	NM	1012	N/A	0	0.00	18.2	0.19
26/06/2021 22:00	0.0	1.1	18.5	1	0	NM	1013	N/A	0	0.01	17.6	0.19
26/06/2021 23:00	0.0	1.1	18.2	0	0	NM	1012	N/A	0	0.00	16.9	0.19
27/06/2021 00:00	0.0	1.1	18.0	0	0	NM	1012	N/A	0	0.00	16.5	0.19
27/06/2021 01:00	0.0	1.1	17.8	0	0	NM	1012	N/A	0	0.01	16.3	0.19
27/06/2021 02:00	0.0	1.1	17.7	0	0	NM	1012	N/A	0	0.01	16.1	0.19
27/06/2021 03:00	0.0	1.1	17.7	0	0	NM	1011	N/A	0	0.00	15.9	0.19
27/06/2021 04:00	0.0	1.1	17.6	0	0	NM	1011	N/A	0	0.02	15.9	0.19
27/06/2021 05:00	0.0	1.2	17.6	0	0	NM	1010	N/A	0	0.00	15.8	0.19
27/06/2021 06:00	0.0	1.2	17.6	0	0	NM	1010	N/A	0	0.01	15.8	0.18
27/06/2021 07:00	0.0	1.1	17.6	0	0	NM	1009	N/A	0	0.01	15.8	0.18
27/06/2021 08:00	0.0	1.2	17.7	0	0	NM	1009	N/A	0	0.00	15.9	0.18
27/06/2021 09:00	0.0	1.2	17.8	0	0	NM	1009	N/A	0	0.02	16.2	0.18
27/06/2021 10:00	0.0	1.2	18.0	0	0	NM	1008	N/A	0	0.00	16.6	0.18
27/06/2021 11:00	0.0	1.2	18.1	1	0	NM	1009	N/A	0	0.00	17.2	0.18
27/06/2021 12:00	0.0	1.1	18.2	1	0	NM	1008	N/A	0	0.00	17.5	0.18
27/06/2021 13:00	0.0	1.1	18.4	1	0	NM	1008	N/A	0	0.00	17.9	0.18
27/06/2021 14:00	0.0	1.1	18.5	1	0	NM	1009	N/A	0	0.02	18.4	0.18
27/06/2021 15:00	0.0	1.1	18.4	1	0	NM	1009	N/A	0	0.02	18.2	0.18
27/06/2021 16:00	0.0	1.1	18.3	1	0	NM	1008	N/A	0	0.00	18.0	0.19
27/06/2021 17:00	0.0	1.1	18.3	1	0	NM	1008	N/A	0	0.01	18.0	0.19
27/06/2021 18:00	0.0	1.2	18.2	1	0	NM	1009	N/A	0	0.00	17.8	0.19
27/06/2021 19:00	0.0	1.2	18.1	1	0	NM	1009	N/A	0	0.02	17.6	0.19
27/06/2021 20:00	0.0	1.2	18.0	1	0	NM	1009	N/A	0	0.01	17.4	0.19
27/06/2021 21:00	0.0	1.2	17.9	0	0	NM	1008	N/A	0	0.01	17.1	0.18
27/06/2021 22:00	0.0	1.2	17.8	0	0	NM	1008	N/A	0	0.00	16.9	0.17
27/06/2021 23:00	0.0	1.2	17.8	0	0	NM	1008	N/A	0	0.01	16.8	0.16
28/06/2021 00:00	0.0	1.2	17.7	0	0	NM	1008	N/A	0	0.01	16.6	0.14
28/06/2021 01:00	0.0	1.2	17.7	0	0	NM	1008	N/A	0	0.01	16.5	0.13
28/06/2021 02:00	0.0	1.2	17.7	0	0	NM	1008	N/A	0	0.00	16.4	0.12
28/06/2021 03:00	0.0	1.2	17.7	0	0	NM	1007	N/A	0	0.01	16.4	0.11
28/06/2021 04:00	0.0	1.2	17.8	0	0	NM	1007	N/A	0	0.00	16.3	0.10
28/06/2021 05:00	0.0	1.2	17.8	0	0	NM	1008	N/A	0	0.01	16.3	0.09
28/06/2021 06:00	0.0	1.1	17.8	0	0	NM	1008	N/A	0	0.01	16.3	0.08
28/06/2021 07:00	0.0	1.1	17.9	0	0	NM	1008	N/A	0	0.01	16.3	0.08
28/06/2021 08:00	0.0	1.1	18.0	0	0	NM	1008	N/A	0	0.01	16.3	0.07
28/06/2021 09:00	0.0	1.1	18.1	0	0	NM	1009	N/A	0	0.01	16.4	0.07
28/06/2021 10:00	0.0	1.1	18.2	0	0	NM	1009	N/A	0	0.00	16.5	0.07
28/06/2021 11:00	0.0	1.0	18.3	0	0	NM	1009	N/A	0	0.00	16.7	0.06
28/06/2021 12:00	0.0	1.0	18.4	1	0	NM	1009	N/A	0	0.00	16.9	0.06
28/06/2021 13:00	0.0	1.0	18.6	1	0	NM	1009	N/A	0	0.00	17.2	0.05
28/06/2021 14:00	0.0	1.0	18.8	1	0	NM	1009	N/A	0	0.00	17.8	0.04
28/06/2021 15:00	0.0	1.0	19.2	1	0	NM	1009	N/A	0	0.01	18.8	0.04
28/06/2021 16:00	0.0	1.0	19.4	1	0	NM	1008	N/A	0	0.00	19.4	0.04
28/06/2021 17:00	0.0	1.0	19.8	1	0	NM	1008	N/A	0	0.01	19.9	0.03
28/06/2021 18:00	0.0	0.9	19.9	1	0	NM	1008	N/A	0	0.00	20.1	0.03
28/06/2021 19:00	0.0	0.9	19.8	1	0	NM	1008	N/A	0	0.00	19.8	0.03
28/06/2021 20:00	0.0	0.9	19.7	1	0	NM	1008	N/A	0	0.01	19.4	0.03
28/06/2021 21:00	0.0	0.9	19.5	1	0	NM	1009	N/A	0	0.00	18.9	0.03
28/06/2021 22:00	0.0	0.9	19.3	1	0	NM	1009	N/A	0	0.01	18.6	0.03
28/06/2021 23:00	0.0	0.9	19.1	1	0	NM	1009	N/A	0	0.01	18.1	0.03
29/06/2021 00:00	0.0	0.9	19.0	1	0	NM	1009	N/A	0	0.00	17.8	0.03
29/06/2021 01:00	0.0	0.9	19.0	1	0	NM	1009	N/A	0	0.01	17.6	0.02
29/06/2021 02:00	0.0	0.8	18.9	1	0	NM	1008	N/A	0	0.01	17.4	0.02
29/06/2021 03:00	0.0	0.9	18.8	1	0	NM	1008	N/A	0	0.01	17.3	0.02
29/06/2021 04:00	0.0	0.8	18.8	1	0	NM	1008	N/A	0	0.00	17.1	0.01
29/06/2021 05:00	0.0	0.8	18.8	1	0	NM	1008	N/A	0	0.01	16.9	0.01
29/06/2021 06:00	0.0	0.8	18.7	0	0	NM	1008	N/A	0	0.01	16.8	0.01
29/06/2021 07:00	0.0	0.8	18.8	0	0	NM	1009	N/A	0	0.01	16.6	0.01
29/06/2021 08:00	0.0	0.8	18.7	1	0	NM	1009	N/A	0	0.02	16.6	0.01
29/06/2021 09:00	0.0	0.8	18.8	0	0	NM	1009	N/A	0	0.01	16.6	0.01
29/06/2021 10:00	0.0	0.8	18.9	1	0	NM	1009	N/A	0	0.01	16.8	0.01
29/06/2021 11:00	0.0	0.8	19.0	1	0	NM	1009	N/A	0	0.01	17.0	0.01
29/06/2021 12:00	0.0	0.8	19.2	1	0	NM	1009	N/A	0	0.00	17.6	0.01
29/06/2021 13:00	0.0	0.8	19.4	1	0	NM	1009	N/A	0	0.00	18.0	0.01
29/06/2021 14:00	0.0	0.8	19.6	1	0	NM	1009	N/A	0	0.00	18.4	0.01
29/06/2021 15:00	0.0	0.8	19.6	1	0	NM	1010	N/A	0	0.00	18.4	0.01
29/06/2021 16:00	0.0	0.8	19.6	1	0	NM	1010	N/A	0	0.00	18.3	0.01
29/06/2021 17:00	0.0	0.8	19.5	1	0	NM	1010	N/A	0	0.01	18.1	0.01
29/06/2021 18:00	0.0	0.8	19.4	1	0	NM	1010	N/A	0	0.01	17.9	0.01
29/06/2021 19:00	0.0	0.8	19.3	1	0	NM	1010	N/A	0	0.01	17.6	0.01
29/06/2021 20:00	0.0	0.8	19.2	1	0	NM	1010	N/A	0	0.01	17.4	0.01
29/06/2021 21:00	0.0	0.8	19.2	1	0	NM	1011	N/A	0	0.01	17.3	0.01
29/06/2021 22:00	0.0	0.8	19.1	0	0	NM	1011	N/A	0	0.01	17.1	0.01
29/06/2021 23:00	0.0	0.8	19.0	1	0	NM	1011	N/A	0	0.01	16.8	Flooded
30/06/2021 00:00	0.0	0.8	19.0	0	0	NM	1011	N/A	0	0.01	16.6	Flooded
30/06/2021 01:00	0.0	0.9	18.9	0	0	NM	1011	N/A	0	0.01	16.4	Flooded
30/06/2021 02:00	0.0	0.8	18.9	0	0	NM	1011	N/A	0	0.01	16.3	Flooded
30/06/2021 03:00	0.0	0.8	18.8	0	0	NM	1011	N/A	0	0.01	16.1	Flooded
30/06/2021 04:00	0.0	0.8	18.8	0	0	NM	1011	N/A	0	0.00	15.9	Flooded
30/06/2021 05:00	0.0	0.8	18.8	0	0	NM	1011	N/A	0	0.00	15.8	Flooded
30/06/2021 06:00	0.0	0.8	18.8	0	0	NM	1011	N/A	0	0.00	15.7	Flooded
30/06/2021 07:00	0.0	0.8	18.8	0	0	NM	1011	N/A	0	0.00	15.7	Flooded
30/06/2021 08:00	0.0	0.8	18.8	0	0	NM	1011	N/A	0	0.00	15.8	Flooded
30/06/2021 09:00	0.0	0.8	18.9	0	0	NM	1012	N/A	0	0.01	15.9	Flooded
30/06/2021 10:00	0.0	0.8	19.0	0	0	NM	1012	N/A	0	0.00	16.1	Flooded
30/06/2021 11:00	0.0	0.8	19.1	0	0	NM	1012	N/A	0	0.01	16.1	Flooded
30/06/2021 12:00	0.0	0.8	19.2	0	0	NM	1012	N/A	0	0.01	16.4	Flooded
30/06/2021 13:00	0.0	0.8	19.4	0	0	NM	1012	N/A	0	0.01	16.8	Flooded
30/06/2021 14:00	0.0	0.8	19.5	1	0	NM	1012	N/A	0	0.01	17.0	Flooded
30/06/2021 15:00	0.0	0.7	19.6	1	0	NM	1012	N/A	0	0.00	17.2	Flooded
30/06/2021 16:00	0.0	0.7	19.7	1	0	NM	1012	N/A	0	0.00	17.4	Flooded
30/06/2021 17:00	0.0	0.7	19.9	1	0	NM	1012	N/A	0	0.00	17.6	Flooded
30/06/2021 18:00	0.0	0.7	20.0	1	0	NM	1012	N/A	0	0.00	17.8	Flooded
30/06/2021 19:00	0.0	0.7	20.0	1	0	NM	1012	N/A	0	0.01	17.8	Flooded
30/06/2021 20:00	0.0	0.7	19.9	1	0	NM	1012	N/A	0	0.01	17.7	Flooded
30/06/2021 21:00	0.0	0.7	19.8	1	0	NM	1013	N/A	0	0.02	17.4	Flooded
30/06/2021 22:00	0.0	0.7	19.7	1	0	NM	1013	N/A	0	0.01	17.1	Flooded
30/06/2021 23:00	0.0	0.7	19.6	0	0	NM	1013	N/A	0	0.02	16.8	Flooded

ggs
Experts in Continuous Monitoring

Date and Time	CH_4 % v/v	CO_2 % v/v	O_2 % v/v	CO ppm/v	H_2S ppm/v	Borehole Pressure mbar	Atmospheric Pressure mbar	Differential Pressure mbar	Average 8-hour atmospheric pressure change mbar	Flow Ltr/hr	Temperature °C	Water Level mbgl
01/07/2021 00:00	0.0	0.7	19.4	0	0	NM	1013	N/A	0	0.01	16.4	Flooded
01/07/2021 01:00	0.0	0.7	19.2	0	0	NM	1013	N/A	0	0.01	16.2	Flooded
01/07/2021 02:00	0.0	0.7	19.1	0	0	NM	1013	N/A	0	0.00	15.9	Flooded
01/07/2021 03:00	0.0	0.7	19.0	0	0	NM	1013	N/A	0	0.00	15.6	Flooded
01/07/2021 04:00	0.0	0.7	18.9	0	0	NM	1013	N/A	0	0.00	15.1	Flooded
01/07/2021 05:00	0.0	0.7	18.8	0	0	NM	1013	N/A	0	0.00	14.8	Flooded
01/07/2021 06:00	0.0	0.7	18.8	0	0	NM	1013	N/A	0	0.00	14.6	Flooded
01/07/2021 07:00	0.0	0.7	18.8	0	0	NM	1013	N/A	0	0.00	14.7	Flooded
01/07/2021 08:00	0.0	0.7	18.9	0	0	NM	1013	N/A	0	0.00	14.9	Flooded
01/07/2021 09:00	0.0	0.7	19.1	0	0	NM	1012	N/A	0	0.00	15.3	Flooded
01/07/2021 10:00	0.0	0.7	19.3	0	0	NM	1012	N/A	0	0.01	15.8	Flooded
01/07/2021 11:00	0.0	0.7	19.6	0	0	NM	1012	N/A	0	0.00	16.5	Flooded
01/07/2021 12:00	0.0	0.6	19.8	1	0	NM	1012	N/A	0	0.01	17.4	Flooded
01/07/2021 13:00	0.0	0.7	20.1	1	0	NM	1012	N/A	0	0.01	18.3	Flooded
01/07/2021 14:00	0.0	0.7	20.6	1	0	NM	1012	N/A	0	0.01	19.1	Flooded
01/07/2021 15:00	0.0	0.7	20.8	1	0	NM	1011	N/A	0	0.00	19.3	Flooded
01/07/2021 16:00	0.0	0.7	20.9	1	0	NM	1012	N/A	0	0.00	19.3	Flooded
01/07/2021 17:00	0.0	0.6	20.9	1	0	NM	1012	N/A	0	0.00	19.1	Flooded
01/07/2021 18:00	0.0	0.6	20.8	1	0	NM	1012	N/A	0	0.01	18.8	Flooded
01/07/2021 19:00	0.0	0.6	20.6	1	0	NM	1012	N/A	0	0.00	18.3	Flooded
01/07/2021 20:00	0.0	0.6	20.4	1	0	NM	1012	N/A	0	0.02	17.8	Flooded
01/07/2021 21:00	0.0	0.6	20.3	1	0	NM	1012	N/A	0	0.01	17.6	Flooded
01/07/2021 22:00	0.0	0.6	20.1	1	0	NM	1012	N/A	0	0.01	17.2	Flooded
01/07/2021 23:00	0.0	0.6	19.9	1	0	NM	1012	N/A	0	0.00	16.8	0.01
02/07/2021 00:00	0.0	0.6	19.7	0	0	NM	1012	N/A	0	0.01	16.5	0.02
02/07/2021 01:00	0.0	0.6	19.7	0	0	NM	1012	N/A	0	0.01	16.3	0.03
02/07/2021 02:00	0.0	0.6	19.7	0	0	NM	1012	N/A	0	0.02	16.3	0.03
02/07/2021 03:00	0.0	0.7	19.6	0	0	NM	1012	N/A	0	0.01	16.1	0.03
02/07/2021 04:00	0.0	0.6	19.6	0	0	NM	1011	N/A	0	0.00	15.8	0.03
02/07/2021 05:00	0.0	0.6	19.5	0	0	NM	1011	N/A	0	0.00	15.6	0.03
02/07/2021 06:00	0.0	0.6	19.5	0	0	NM	1011	N/A	0	0.01	15.6	0.03
02/07/2021 07:00	0.0	0.6	19.5	0	0	NM	1012	N/A	0	0.01	15.6	0.04
02/07/2021 08:00	0.0	0.6	19.5	0	0	NM	1012	N/A	0	0.01	15.8	0.04

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Appendix E

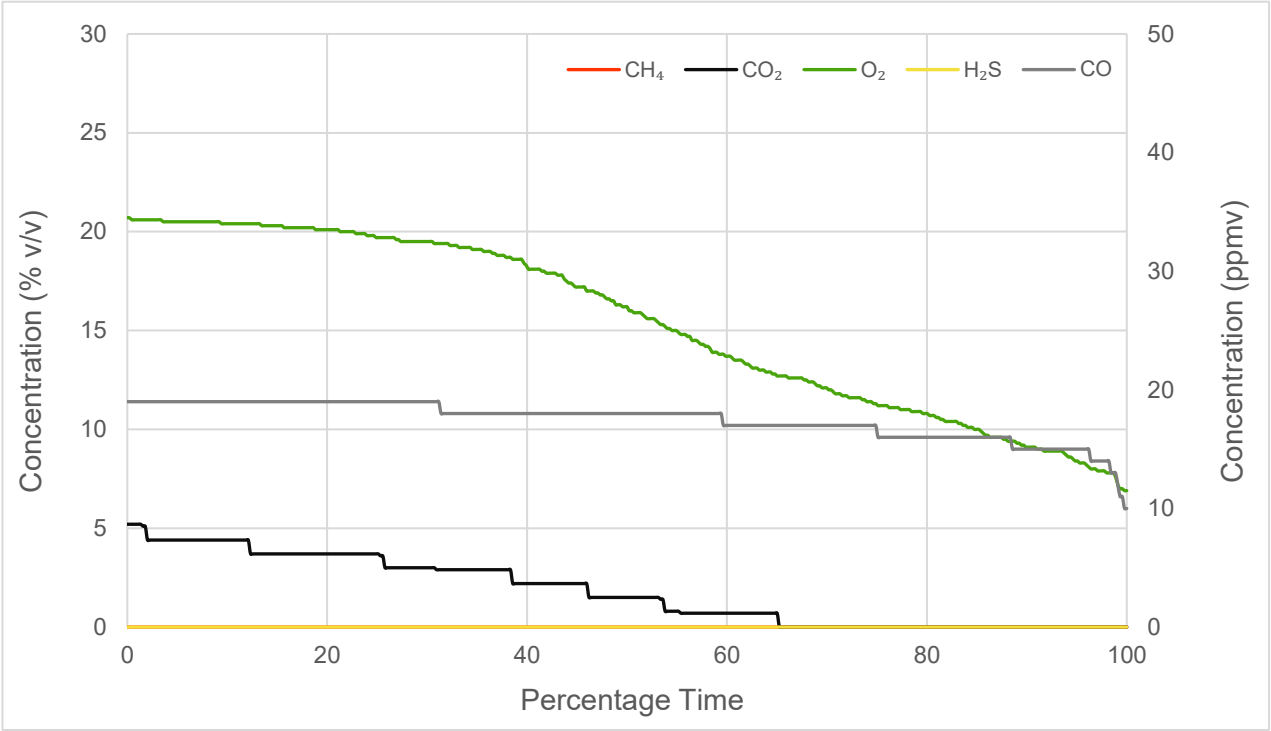
Concentration Duration Graphs

For: BRD Environmental Limited
Ref No.: GGS2586DP01
Date: 16/07/2021

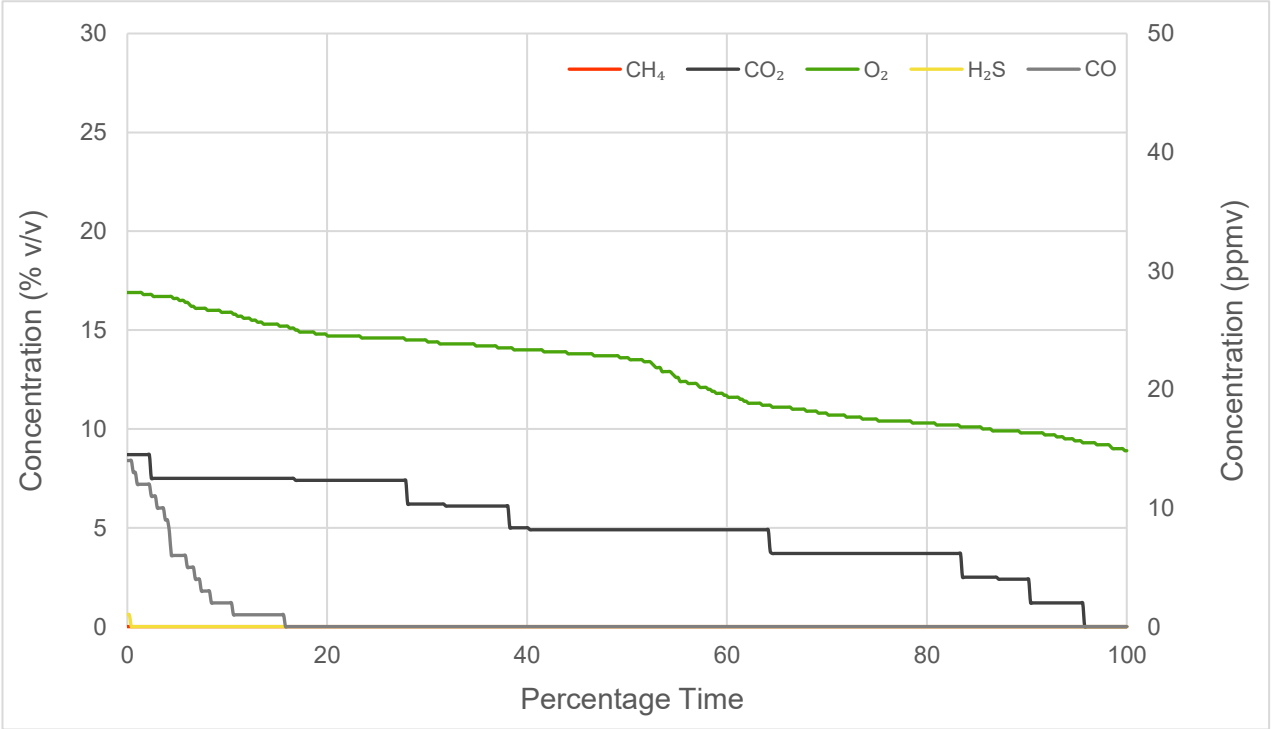
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Concentration Duration Graph, WS01

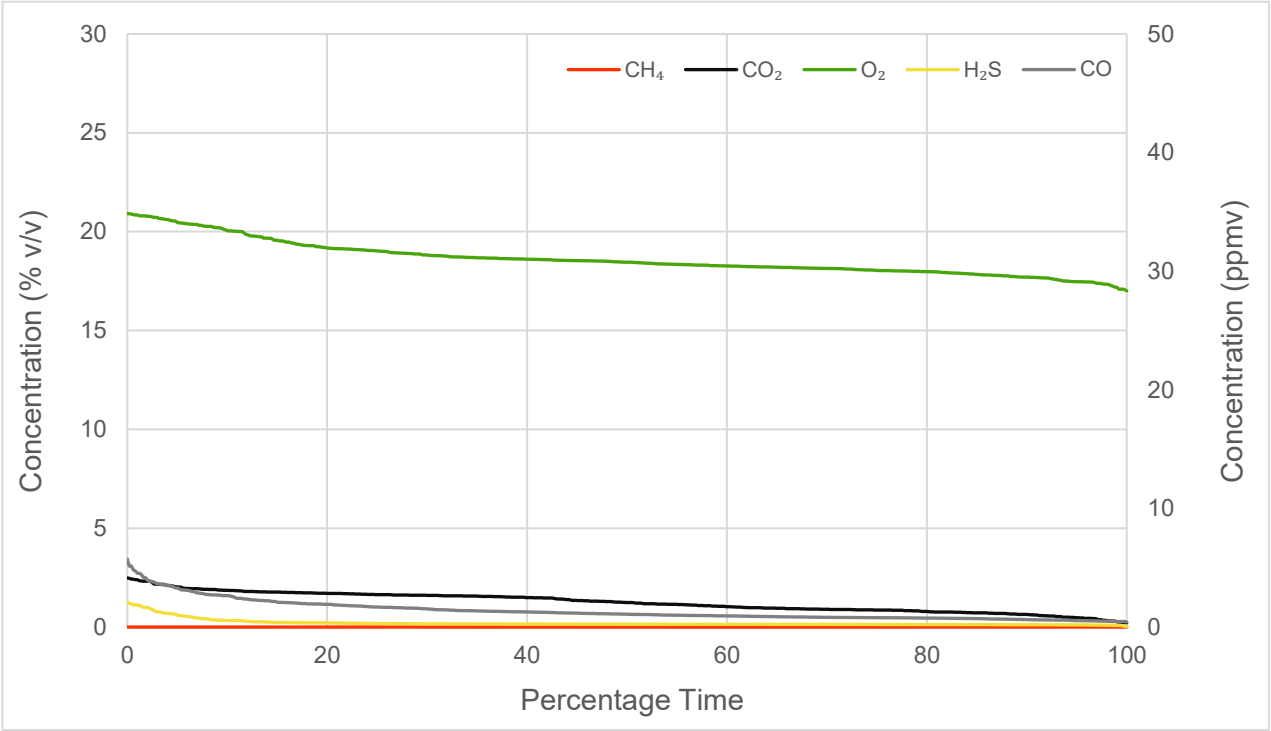


Concentration Duration Graph, WS05

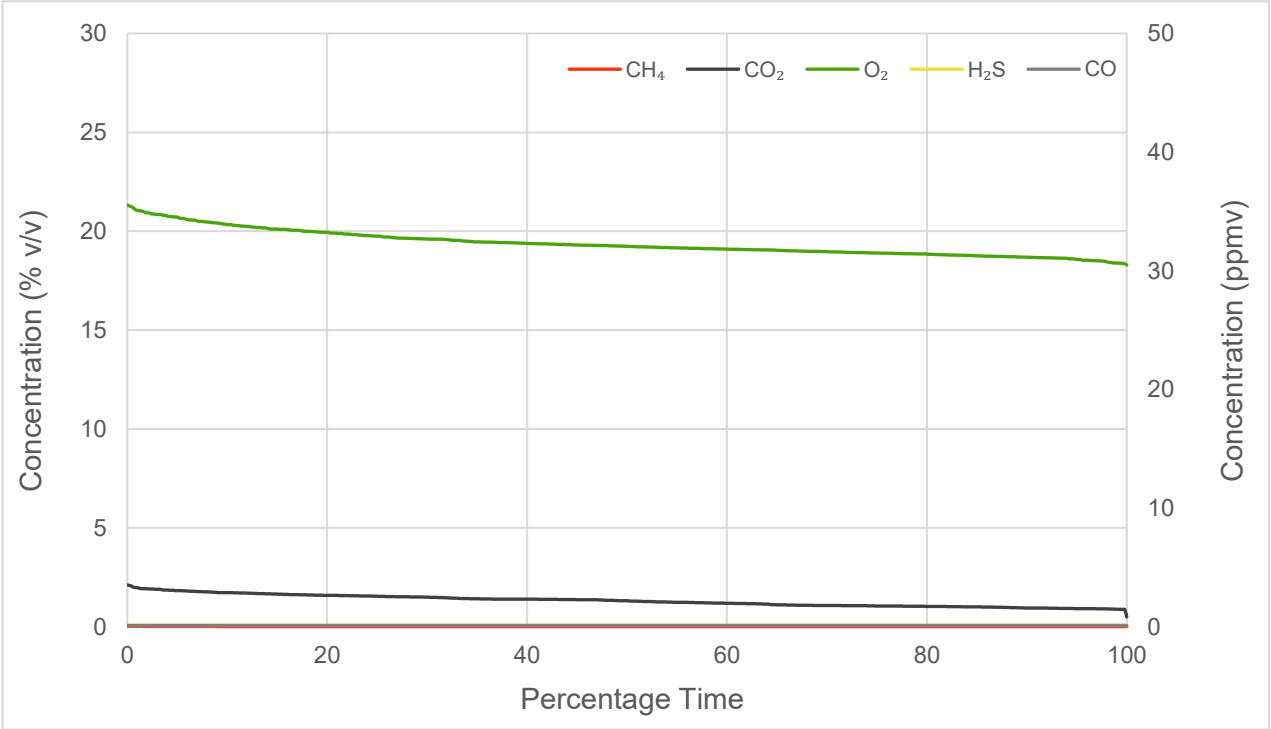


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Concentration Duration Graph, WS06

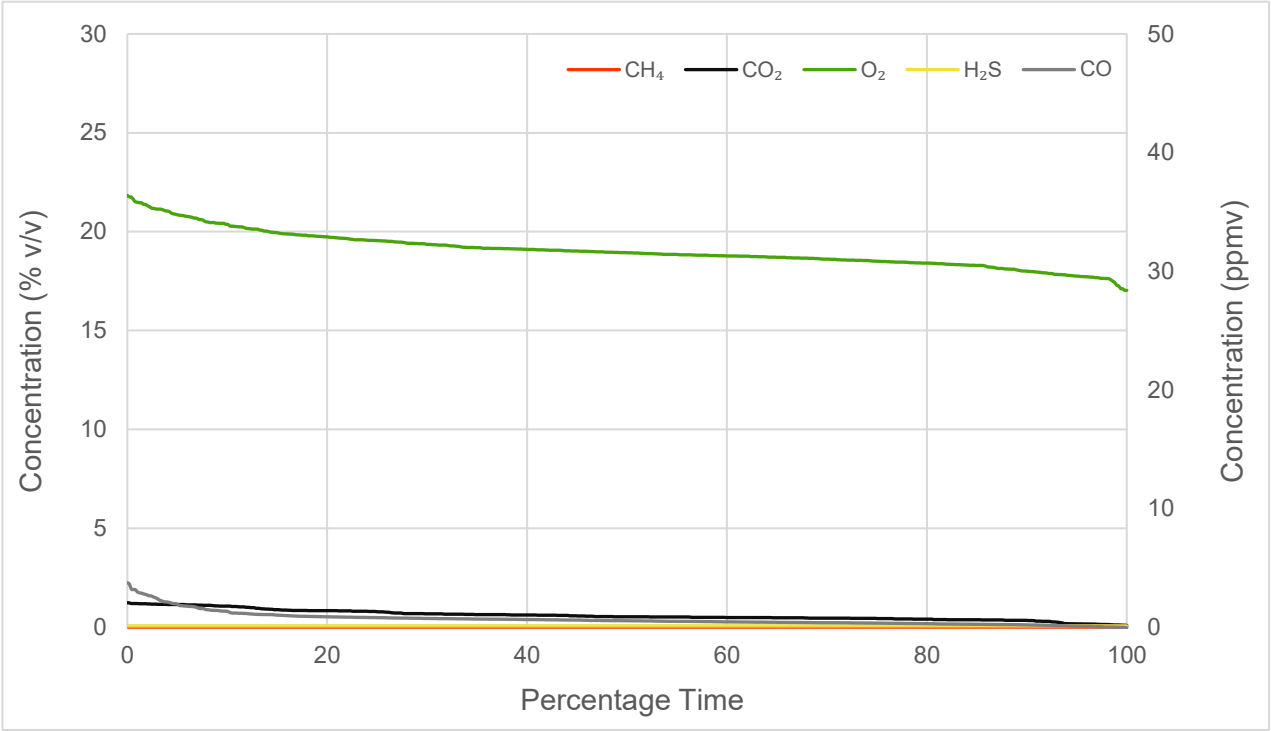


Concentration Duration Graph, WS12



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Concentration Duration Graph, WS14



Appendix F

Instrument Overview & Deployment Info. and Calibration Certificates

For: BRD Environmental Limited
Ref No.: GGS2586DP01
Date: 16/07/2021

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CALIBRATION CERTIFICATE:

Issued By:	CGD Technology Limited
Date:	20/04/2021
Staff:	TF
Instrument:	GasClam
Serial Number:	34.04.09

Calibration Results			
Sensor	**Lot No.**	**Reference Value**	**Indicated Value**
Hydrogen sulphide	C22238	118	120
Carbon monoxide	C24438	40	39
Methane	C322626	59.82	61.7
Carbon dioxide	C322626	40.18	40.8
Oxygen	C322626	0	-0.6
Isobutylene	-	-	-
Atmospheric pressure	VAISALA-PTU301	1009	1007
Borehole pressure	VAISALA-PTU301	1009	1006
Temperature	VAISALA-PTU301	18.7	19.6

Comments:

Prior to calibration the GasClam was allowed to stabilise in ambient air for 1 hour taking measurements at 3 minute intervals.

The Instrument was calibrated by exposing the sensors to known values of gas concentrations.

Pressure was calibrated using a known artifically generated higher pressure.

The reference values are those generated by the ceritifed source and indicated values are those measured by the GasClam.

Uncertainty is based on a standard uncertainty multiplied by a coverage factor of k=2

This provides a level of confidence of uncertainty of approximately 95%

Ambient conditions	
Temperature	18.7
Atmospheric Pressure	1009
Relative Humidity	37.4

CGDT Technology Ltd, Pythia House (unit 10)
Bamford Business Park, Hibbert street
Stockport, SK4 1PL

CALIBRATION CERTIFICATE:

Certificate ref.	GSCAL00134
Issued By:	**Thomas Fairey**
Date:	08.06.21
Staff No.	-
Instrument:	03000054

Calibration Results			
Sensor	**Lot No.**	**Ref. value**	**Indicated value**
Carbon monoxide	C24438	40	38.35
Hydrogen sulphide	C22238	118	118.75
Methane	C322626	59.73	60.08
Carbon dioxide High	C322626	40.18	37.78
Carbon dioxide Low	C322726	1.99	1.90
Carbon dioxide Low ppm	C24338	504	512.84
Isobutylene ppb	C322826	-	-
Oxygen	C24438	0	0.2

Comments:

Prior to calibration the sensors were allowed to stabilise in ambient air for 1 hour.

The Instrument was calibrated by exposing the sensors to known values of gas concentrations.

The reference values are those generated by the ceritifed source and indicated values are those measured by the Gas Sentinel.

Uncertainty is based on a standard uncertainty multiplied by a coverage factor of k=2

This provides a level of confidence of uncertainty of approximately 95%

Ambient conditions	
Temperature	22.2
Relative Humidity	44.7

CALIBRATION CERTIFICATE:

Certificate ref.	GSCAL00125
Issued By:	**Thomas Fairey**
Date:	18.12.20
Staff No.	-
Instrument:	03000036

Calibration Results			
Sensor	**Lot No.**	**Ref. value**	**Indicated value**
Carbon monoxide	C24438	40	40.10
Hydrogen sulphide	C22238	118	117.65
Methane	C322626	59.73	60.49
Carbon dioxide High	C322626	40.27	35.93
Carbon dioxide Low	C322726	1.99	1.97
Carbon dioxide Low ppm	C24338	504	545.00
Isobutylene ppb	C322826	-	-
Oxygen	C24438	0	-0.1

Comments:

Prior to calibration the sensors were allowed to stabilise in ambient air for 1 hour.

The Instrument was calibrated by exposing the sensors to known values of gas concentrations.

The reference values are those generated by the ceritifed source and indicated values are those measured by the Gas Sentinel.

Uncertainty is based on a standard uncertainty multiplied by a coverage factor of k=2

This provides a level of confidence of uncertainty of approximately 95%

Ambient conditions	
Temperature	19.4
Relative Humidity	51.9

CALIBRATION CERTIFICATE:

Certificate ref.	GSCAL00123
Issued By:	**Thomas Fairey**
Date:	03.02.21
Staff No.	-
Instrument:	03000044

Calibration Results			
Sensor	**Lot No.**	**Ref. value**	**Indicated value**
Carbon monoxide	C24438	40	40.00
Hydrogen sulphide	C22238	118	115.89
Methane	C322626	59.73	62.80
Carbon dioxide High	C322626	40.27	41.15
Carbon dioxide Low	C322726	1.99	1.97
Carbon dioxide Low ppm	C24338	504	504.00
Isobutylene ppb	C322826	-	-
Oxygen	C24438	0	0.35

Comments:

Prior to calibration the sensors were allowed to stabilise in ambient air for 1 hour.

The Instrument was calibrated by exposing the sensors to known values of gas concentrations.

The reference values are those generated by the ceritifed source and indicated values are those measured by the Gas Sentinel.

Uncertainty is based on a standard uncertainty multiplied by a coverage factor of k=2

This provides a level of confidence of uncertainty of approximately 95%

Ambient conditions	
Temperature	20.6
Relative Humidity	42.1

CALIBRATION CERTIFICATE:

Certificate ref.	CGDTCAL_
Issued By:	CGD Technology Limited
Date:	09/06/2021
Staff:	Thomas Fairey
Instrument:	GasClam
Serial Number:	224.01.12

0

Calibration Results			
Sensor	**Lot No.**	**Reference Value**	**Indicated Value**
Hydrogen sulphide	C22238	118	121
Carbon monoxide	C24438	40	40
Methane	C322626	59.82	59.8
Carbon dioxide	C322626	40.18	40.9
Oxygen	C322626	0	-0.1
Isobutylene	-	-	-
Atmospheric pressure	VAISALA-PTU301	1009.8	1007
Borehole pressure	VAISALA-PTU301	1009.8	1005
Temperature	VAISALA-PTU301	22.3	23.9

Comments:

Prior to calibration the GasClam was allowed to stabilise in ambient air for 1 hour taking measurements at 3 minute intervals.

The Instrument was calibrated by exposing the sensors to known values of gas concentrations.

Pressure was calibrated using a known artifically generated higher pressure.

The reference values are those generated by the ceritifed source and indicated values are those measured by the GasClam.

Uncertainty is based on a standard uncertainty multiplied by a coverage factor of k=2

This provides a level of confidence of uncertainty of approximately 95%

Ambient conditions	
Temperature	22.3
Atmospheric Pressure	1009.8
Relative Humidity	53.3

CGDT Technology Ltd, Pythia House (unit 10)
Bamford Business Park, Hibbert street
Stockport, SK4 1PL

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GGS GasClam® Instrumentation Overview & Deployment Information



Introduction

GGS GasClam® instruments are high frequency in situ borehole gas monitoring devices, suitable for detection of a wide range of ground gases commonly found in borehole monitoring. The equipment is ATEX approved and IP68 rated and can operate safely in explosive atmospheres and survive flooding environments. They can also be secured to building walls or placed internally to monitor sub-floor spaces or indoor air.

GGS currently have three versions of the instrument, a bulk gas version which monitors methane, carbon dioxide and oxygen; a trace gas version which also includes sensors for hydrogen sulphide, carbon monoxide and total volatile organic compounds; and a specialized instrument that can monitor methane and carbon dioxide between 0 – 5%v/v at a high resolution of 0.05% in addition to the other gases. All versions record atmospheric pressure, borehole pressure and temperature as standard.

Should your site be influenced by water level changes (e.g. tidal or flooding), GGS can also provide water level logging alongside the high frequency ground gas data if required.

GasClam® Sensor Specifications, Service and Maintenance

The GGS GasClam® instruments are serviced and calibrated annually. Routine maintenance including the replacement of filters and operational checks are carried out at regular intervals and prior to deployment at a site. Copies of the calibration certificates for the instruments used on site are included as standard within reporting. Details of the sensor specification are provided below:

Sensor	Method / Type	Range	Resolution
Methane (0-100%)	Infrared	0 - 100%v/v	1% of measuring range above 50%, 0.5% below 50%
#Methane (0-5%)	Infrared	0-5%v/v	0.05%
Carbon Dioxide (0-100%)	Infrared	0 - 100%v/v	1% of measuring range above 50%, 0.5% below 50%
#Carbon Dioxide (0-5%)	Infrared	0-5%v/v	0.05%
Oxygen	Electrochemical	0 - 25%v/v	0.1%
*Hydrogen Sulphide	Electrochemical	0 - 100ppmv	1ppmv
*Carbon Monoxide	Electrochemical	0 - 1000ppmv	1ppmv
*Total Volatile Organic Compounds	PID	0 - 4000ppmv	1ppmv
Atmospheric Pressure	Piezoelectric	800 - 1200mb	1mBar
Borehole Pressure	Piezoelectric	800 - 1200mb	1mBar
Temperature	Internal chip	-5°C to +50°C	1°C

Only installed on the 0-5% High Resolution GasClam® * Only installed in VOC GasClam®

The GGS GasClam® equipment is battery powered and runs off two D cell batteries. The bulk gas versions can take approximately 1350 readings (approximately 8 weeks based on hourly sampling), with the other versions taking approximately 600 readings (approximately 3.5 weeks based on hourly sampling) before the batteries need replacing.

Deployment Requirements (IMPORTANT)

For GGS GasClam® instruments to be deployed, standard 50mm installation standpipes are required (larger diameter boreholes can be accommodated for). Headworks with enough clearance and a suitable secure cover are also required. GGS recommend that a minimum 8 inch diameter flush fit cover (for example MW8 covers available from Stuart Wells http://wellservices.stuartgroup.ltd.uk/) be used. A minimum 100mm clearance is required from the top of the 50mm standpipe to the underside of the cover. A minimum 150mm internal headworks diameter is required (75mm clear radius from centre of stand pipe). We also recommend that minimum standing water level is greater than 0.9m below the standpipe top due to the instrument halting gas sampling automatically to avoid taking water internally.

GGS can also deploy GasClam® instruments within buildings or fix them to external walls within protective and secure housing should you wish to monitor indoor air or subfloor void spaces of existing buildings or for verification purposes. If the above requirements cannot be achieved, please contact GGS to discuss site specific deployment options – there probably is one!

GasClam Insurance

GGS offer insurance to cover the instruments against theft from site and is an optional part of our service.

GGS Gas Sentinel® Instrumentation
Overview & Deployment Information



Introduction

GGS Gas Sentinel® is a transportable, continuous, multi-gas analyser; with 2-way telemetry capability. It is easy to use for both short term and long term monitoring of landfill, contaminated land and existing buildings. Versatile remote data acquisition through an intuitive dashboard provides cost effective regulatory compliance. The equipment is designed to be ATEX* and IP68* rated and can operate safely in explosive atmospheres and survive flooding environments (*awaiting certification).

GGS Gas Sentinel® devices can be configured to carry an extended range of gas sensors but is normally available to monitor methane, carbon dioxide, oxygen, TVOC, hydrogen sulphide and carbon monoxide. Sensors for both full range and high resolution 0-5% methane and 0-2,000ppm carbon dioxide are available. The device also records atmospheric pressure, borehole pressure and temperature and borehole gas flow as standard.

GGS can also provide high frequency water level logging in conjunction with Gas Sentinel deployments

Gas Sentinel® Sensor Specifications, Service and Maintenance

The GGS instruments are serviced and calibrated annually. Routine maintenance including the replacement of filters and operational checks are carried out at regular intervals and prior to deployment at a site. Copies of the calibration certificates for the instruments used on site are included as standard within reporting. Details of the sensor specification are provided below:

Sensor	Method / Type	Range	Resolution & Tolerance
Methane (0-100%)	Infrared	0 - 100%v/v	0.1% v/v 2%FSD or ± 10% of reading whichever is the greatest
Methane (0-5%) High Resolution	Infrared	0-5%v/v	0.01% v/v or 2%FSD or ± 10% of reading whichever is the greatest
Carbon Dioxide (0-100%)	Infrared	0 - 100%v/v	0.1% v/v or 2%FSD or ± 10% of reading whichever is the greatest
Carbon Dioxide (0-2,000ppm) High Resolution	Infrared	0-2,000ppmv	10ppm or 2%FSD or ± 10% of reading whichever is the greatest
Oxygen	Electrochemical	0 - 25%v/v	0.1% v/v or ± 10% of reading whichever is the greatest
Hydrogen Sulphide	Electrochemical	0 - 100ppmv	1ppm ±4ppm or ± 10% of reading whichever is the greatest
Carbon Monoxide	Electrochemical	0 – 1,000ppmv	1ppm ±6ppm or ± 10% of reading whichever is the greatest
Total Volatile Organic Compounds	PID	0 – 4,000ppmv	1ppm ±10ppm or ± 10% of reading whichever is the greatest
Atmospheric Pressure	Piezoelectric	800 – 1,200mb	±1mbar
Borehole Pressure	Piezoelectric	800 – 1,200mb	±1mbar
Temperature	Internal chip	-5°C to +50°C	0.1°C ±0.5°C of reading
Humidity	Capacitive Internal chip	0-100%RH	1%RH ±1.8%RH
Gas Flow	Thermal sensor	0–60 Ltr/hr	0.1ltr/hr ±0.1ltr/hr or 10% of reading whichever is the greatest

The GGS Gas Sentinel® is powered by re-chargeable batteries that can provide 4 weeks to several months depending on how many sensors are switched on and the frequency of monitoring. Please discuss your requirements with GGS for the optimum configuration for your site.

Deployment Requirements (IMPORTANT)

The GGS Gas Sentinel® is designed for deployment with standard 50mm installation standpipes but can be used with both larger and smaller diameter standpipes. Secure headworks with sufficient clearance are required for the Gas Sentinel®. GGS recommends a 10 inch diameter flush fit. A minimum 250 mm clearance is required from the top of the 50mm standpipe to the underside of the cover. GGS recommends a minimum distance of 0.25m between the top of the standpipe and standing water level to allow gas sampling. The device is also easily fitted to either inside or to the outside of buildings. Other bespoke deployment options are available. Please contact GGS to discuss options.

Gas Sentinel® Insurance

GGS can provide insurance to cover instruments against theft from site or acts of vandalism.