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GEO-ENVIRONMENTAL & GEOTECHNICAL ASSESSMENT (GROUND INVESTIGATION) REPORT

PHASE 10
HEYFORD PARK
CAMP ROAD
OX25 5BS

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EXECUTIVE SUMMARY

Site Details	**Site Address**	Phase 10, Heyford Park, Camp Road, OX25 5BS
	National Grid	E:450666, N:225979
	Site Area	5.1ha (approx.)
	Proposed Development	The proposed development is to comprise the demolition of existing buildings and removal of existing infrastructure for the redevelopment of the site to provide new residential houses with gardens and areas of public open space/park.
Encountered Conditions	**Scope of Works**	The assessment incorporated a review of third-party data and production of a scheme of site investigation (Jomas, April 2022) to determine the site's setting to inform a preliminary risk assessment. This was followed by an intrusive investigation to confirm the ground and groundwater conditions and support the development of a geotechnical and geo-environmental assessment.
	Ground Conditions	The ground conditions encountered broadly comprised 0.1-0.6m of topsoil or 0.2-1.9m of Made Ground; underlain by predominantly cohesive deposits of Weathered White Limestone Formation, to depths of up to 3.8m, underlain by Limestone and Mudstone deposits of the White Limestone Formation, to the base of the deepest boreholes (8.0m).
	Groundwater	During the intrusive investigation, groundwater strikes were encountered within JWS3, JBH3, JBH4, JBH7, JTP7, JSTP1 and JSTP2 at depths of between 2.0-3.6m bgl. Groundwater seepages were also noted in JTP10, JTP14 and JTP16 at depths of between 2.0-3.0m bgl. In addition, JSTP2A was abandoned due to influx of perched waster in the Made Ground at 1.5m bgl. During return monitoring, groundwater was encountered at depths of between 1.12m to 4.86m bgl. JWS1 and JWS5 were reported as 'dry' to their terminal depths of 1.36m and 1.57m bgl respectively.
Geo-environmental Assessment Summary and Recommendations		Concentrations of PAHs and long chain aromatic hydrocarbons have been reported in the shallow soils in excess of generic assessment criteria for the protection of human health within a residential with home-grown produce end-use scenario. In addition, presence of chrysotile and amosite asbestos fibres have locally been reported. Any visual asbestos materials may be removed by hand, with extensive dust control measures required during the soil screening operations for the protection of site workers and nearby residents. It should be noted that asbestos fibres will not be visible to the naked eye. Upgraded potable water supply pipe materials are likely to be required. The water supply pipe requirements for this site should be discussed at an early stage with the relevant Utility provider Locally elevated aromatic hydrocarbon fractions >C_{10}-C_{12} and >C_{12}-C_{16} have been reported in boreholes JBH4, JBH6 and BH10. As per Table 5.1 of CL:AIRE, 2017 these hydrocarbon fractions are reported as having a 'moderate' mobility in groundwater. However, groundwater analysis south-west of the site has revealed there is no significant impact to controlled waters down-gradient of site. Therefore, it is considered that the identified hydrocarbon contamination poses a relatively low risk to off-site controlled water receptors. Removal of existing fuel infrastructure will be required to protect the on-site controlled waters receptor (i.e. the underlying Principal Aquifer), and additional groundwater analysis post-remediation may be required to verify successful remediation. A potential vapour risk to end users associated with groundwater localised around JBH6 has been identified, though a widespread issue is unlikely to exist. It is recommended that further investigation is conducted in the vicinity of JBH6, likely to comprise a series of trial pits in an

		attempt to identify a currently unknown source that may be present and would explain the elevated groundwater hydrocarbon concentrations in the area. If a specific source is identified (such as impacted soils, pipework or a tank) this should be removed and further water sampling post-remediation may be sufficient to demonstrate that an ongoing vapour risk is not present. Should no specific source be identified, further assessment of the potential vapour risk should be undertaken, potentially comprising the collection and analysis of vapour samples and derivation of site-specific vapour assessment criteria to assess the chronic risk posed to human health. Based on the calculated GSVs, and in consideration of the conceptual site model, the site is classified as Characteristic Situation 1 (CS1) and therefore no formal gas protection measures are considered to be necessary.
Geotechnical Considerations	**Foundations**	Based on the ground and groundwater conditions encountered, traditional strip/trench-fill foundations up to 1m wide may be formed within the underlying Weathered White Limestone Formation at a minimum depth of 0.9m for an allowable bearing capacity of 100kPa. If foundations span different strata, e.g. sand and clay, they should either be deepened to terminate in a single soil stratum, or suitable reinforcement included (to be detailed by the Structural Engineer).
	Ground Floor Slabs	Given the presence of shrinkable soils with a medium volume change potential, it is recommended that suspended floor slabs are used with an adequate void designed according to NHBC Standards. As a guide, initial modelling indicates a requirement for a sub-floor void of at least 250mm for suspended precast concrete or timber floors. The required sub-floor void would reduce to ≥100mm for ground beams and suspended in-situ concrete ground floors.
	Sulphates	Buried concrete for foundations should be designed to Class DS-1 (AC-1).
	Excavations	Temporary excavations are unlikely to remain stable and some form of temporary support or battering back to a safe angle and dewatering are likely to be required. Subject to seasonal variations, surface water/groundwater encountered during site works could likely be dealt with by conventional pumping from a sump used to collate waters.
	Soakaways	Based on the results of in-situ testing, it is considered that conventional soakaways may be suitable for discharging storm water run-off to the ground in the south-east of site where JSPT3 and JSPT4 were completed. However, in other locations it is considered that an alternative form of storm water disposal would be required, such as on-site storage and attenuation of peak storm flow with discharge to the drainage ditch network, possibly at greenfield run-off rate, under an extension of riparian rights
Recommended Further Work		The following works are recommended: • Seek approval of the Generic Quantitative Risk Assessment and Soil Gas Assessment from the Local Authority, NHBC and other relevant stakeholders; • Further investigation in the vicinity of JBH6, potentially followed by vapour sampling, analysis and assessment; • Provision of a Remediation Method Statement (RMS); • Additional groundwater analysis post-remediation to confirm risk to controlled waters; • Seek confirmation of the water supply pipe requirements by the appropriate service provider.
This Executive Summary is intended to provide a brief summary of the main findings and conclusions of the investigation. For detailed information, the reader is referred to the full text.		

1 INTRODUCTION

1.1 Terms of Reference

1.1.1 Heyford Park Settlements LP (HPSLP) ("The Client") has commissioned Jomas Associates Ltd ('Jomas') to undertake an investigation of the geotechnical and geo-environmental factors pertaining to the proposed development at a site referred to as Phase 10, Heyford Park, Camp Road, OX25 5BS (herein referred to as 'the site'). The site's location is presented in Figure 1.

1.1.2 The existing third party and Jomas reports relating to the site and its vicinity are detailed in Table 1.1 below. These include two reports undertaken by Vertase FLI and Hydrock provided to Jomas by the Client, followed by a Scheme of Site Investigation produced by Jomas. A report by Jomas for a neighbouring site referred to as "Phase 9" has also been included.

Table 1.1: Previous Reports

Title	Author	Reference	Date
Contract Completion Report. POL System - Clean and Make Safe, Upper Heyford, Oxfordshire	Vertase F.L.I.	1246DOR	February 2012
Desk Study and Ground Investigation Report Heyford Park - Western Development, Phase 9, 10, 16 and 16A	Hydrock	HPW-HYD-MS-ZZ-RP-G-0001	February 2017
Supplementary Geo-environmental Assessment Report for Phase 9, Upper Heyford, OX25 5BS	Jomas	P2087J2052b/SC	September 2021
Phase 10, Heyford Park, Camp Road, OX25 5BS Data Review & Proposed Scheme of Site Investigation	Jomas	P4280J2513/SC/SLrev1	April 2022

1.1.3 An intrusive investigation has been undertaken in accordance with Jomas' proposal dated 26 April 2022.

1.2 Proposed Development

1.2.1 The proposed development is to comprise the demolition of existing buildings and removal of existing infrastructure for the redevelopment of the site to provide new residential houses with gardens and areas of public open space/parkland.

1.2.2 A proposed development plan is shown in Figure 4, Appendix 1.

1.2.3 For the purpose of the geotechnical assessment, it is considered that the project could be classified as a Geotechnical Category (GC) 2 site in accordance with BS EN 1997.

1.3 Objectives

1.3.1 The objectives of Jomas' investigation are as follows:

- To undertake an intrusive investigation, to determine the ground and groundwater conditions as well as to assess the nature and extent of contaminants (if any) potentially present at the site;
- To establish the presence of significant pollutant linkages, in accordance with the procedures set out within Part IIA of the Environmental Protection Act 1990, associated statutory guidance and current best practice including the EA's Land Contamination Risk Management (LCRM); and,
- To determine soil/rock properties to inform the geotechnical assessment for foundations, drainage, excavation stability, pavement design and buried concrete and recommendations for further action (if required).

1.4 Scope of Works

1.4.1 The following tasks were undertaken to achieve the objectives listed above:

- Intrusive ground investigation to determine shallow ground conditions, and potential for contamination at the site.
- Undertaking of laboratory chemical and geotechnical testing upon samples obtained.
- Return ground gas/groundwater monitoring.
- The compilation of this report, which collects and discusses the above data, and presents an assessment of the site conditions, conclusions, and recommendations.

1.5 Limitations

1.5.1 Jomas has prepared this report for the sole use of Heyford Park Settlements LP (HPSLP), in accordance with the generally accepted consulting practices and for the intended purposes as stated in the agreement under which this work was completed. This report may not be relied upon by any other party without the explicit written agreement of Jomas. No other third-party warranty, expressed or implied, is made as to the professional advice included in this report. This report must be used in its entirety.

1.5.2 The records search was limited to information available from public sources; this information is changing continually and frequently incomplete. Unless Jomas has actual knowledge to the contrary, information obtained from public sources or provided to Jomas by site personnel and other information sources, have been assumed to be correct. Jomas does not assume any liability for the misinterpretation of information or for items not visible, accessible, or present on the subject property at the time of this study.

1.5.3 Whilst every effort has been made to ensure the accuracy of the data supplied, and any analysis derived from it, there may be conditions at the site that have not been disclosed by the investigation and could not therefore be taken into account. As with any site, there may be differences in soil conditions between exploratory hole positions. Furthermore, it should be noted that groundwater conditions may vary due to seasonal and other effects and may at times be significantly different from those measured by the investigation. No liability can be accepted for any such variations in these conditions.

1.5.4 Any reports provided to Jomas have been reviewed in good faith. Jomas cannot be held liable for any errors or omissions in these reports, or for any incorrect interpretation contained within them.

1.5.5 This investigation and report has been carried out in accordance with the relevant standards and guidance in place at the time of the works. Future changes to these may require a re-assessment of the recommendations made within this report.

1.5.6 This report is not an engineering design and the figures and calculations contained in the report should be used by the Structural Engineer, taking note that variations may apply, depending on variations in design loading, in techniques used, and in site conditions. Our recommendations should therefore not supersede the Engineer's design.

2 EXISTING INFORMATION

2.1 Site Information

2.1.1 The site location plan is appended to this report in Figure 1, Appendix 1.

Table 2.1: Site Information

Name/Address of Site	Phase 10, Heyford Park, Camp Road, OX25 5BS.
Approx. National Grid Ref.	450651, 225976
Site Area (Approx.)	4.4ha
Site Occupation	Disused land and infrastructure located in the southern part of the former Upper Heyford air base. The infrastructure at the site includes several above ground fuel storage tanks.
Local Authority	Cherwell District Council

2.2 Summary of Preliminary Risk Assessment

2.2.1 As detailed in Table 1.1, copies of two third-party reports previously produced for the site have been provided to Jomas. A detailed review of these reports is provided in the *Data Review & Proposed Scheme of Site Investigation* (Jomas, 2022), though a brief summary is presented below.

2.2.2 Reference should be made to the original reports and documents for further details. Where appropriate, this information will be used in the later sections of this report as supplementary information to assist in the evaluation of the ground conditions and aid the identification of geotechnical and geochemical constraints and hazards that could impact the proposed scheme.

Desk Study and Ground Investigation Report (Hydrock, 2017)

2.2.3 The earliest historical map (1875) shows the site as open fields. The first indication of the Upper Heyford air base is shown on the 1954 1:10,560 historical map. However, research has indicated that the surrounding land has had a military use from as early as 1916. From 1916-1918 the Upper Heyford air base was used by the Royal Flying Corps, which was merged with the Royal Naval Air Service in 1918 to become the Royal Air Force (RAF), at which point the RAF took over control of the air base. The United States Air Force took over the running of the air base from 1950; the site remained in this use until its closure in 1994.

2.2.4 Published geology indicated that the site is directly underlain by the Great Oolite Group, which is classified as a Principal aquifer. The site in not within a groundwater source protection zone, and there are no active potable water abstraction within 2km of the site. A single historical potable abstraction is reported 510m west, dated 1960s.

2.2.5 The ground investigation was undertaken by Hydrock in 2016. It covered Phase 10 as well as large areas immediately to south of it known as Phase 9, Phase 16 and Phase 16A. The investigation undertaken in the Phase 10 area comprised 9No. machine dug trial pits up to 2.9m bgl; and 6No. rotary open hole boreholes up to 8.0m bgl.

2.2.6 In total, 7No. soil samples were tested for a standard suite of contaminants as part of the investigation. Following statistical analysis, several PAH compounds were identified as having US_{95} exceeding the GAC. No asbestos was detected.

2.2.7 In addition, 5No. groundwater samples were tested for a standard suite of contaminants. Elevated concentrations of heavy metals, PAHs (above EQS) and petroleum hydrocarbons (above DWS) were reported. A number of VOCs and SVOCs were also reported above the laboratory detection limits in the groundwater samples obtained from BH10 and BH12, however, no assessment was made as there were no water quality targets available for these compounds.

2.2.8 3No. gas monitoring events were undertaken and a worst case GSV was calculated as <0.07 for both methane and carbon dioxide. However, slightly elevated methane concentrations, up to 1.7% were reported on two visits in monitoring well location BH10 and the site was therefore classified as Characteristic Situation 2.

POL "Clean and Make Safe" Contract Completion Report (Vertase FLI, 2012)

2.2.9 The report provides a factual record and confirmation of the "Clean & Make Safe Decommissioning Works" at the site.

2.2.10 The works focussed on the system of POL (petrol, oil and lubricants) tanks and pipelines at the former airfield. Jomas' study site (Phase 10) is located in the southern part of the former airfield and includes POL2 and POL21a/b/c (all of which comprise "above ground tanks" set within a raised bund). The locations of these tanks are presented in Figure 2 in Appendix 1. The figure also shows additional above ground tanks in the south-western part of the site, though it is understood that these did not form part of the POL system and were not addressed within the Vertase "Clean and Make Safe" report.

2.2.11 The POL tanks were emptied, with waste water disposed of at a waste water treatment plant. All tanks were then entered and cleaned by a specialist tank cleaning contractor.

2.2.12 A total of 99 tanks were de-commissioned, the majority were filled with Pulverised Fuel Ash/Ordinary Portland Cement grout. Above ground storage tanks and Type 1 tanks were not filled. [This means POL21 A, B and C on Phase 10 were not filled, though POL2 was filled].

2.2.13 The pipelines were also emptied of waste water and filled with foam at pre-existing valve pit locations. In some locations however, the pipe was located and a 600mm section cut out to facilitate removal of contaminated water and subsequent filling with foam.

2.2.14 One of these excavation pits (TP 2-2) was located within Phase 10 and north-east of POL2, and during the works, an incident report was filed. It transpires that after the pipe had been emptied, it was fitted with a temporary valve prior to filling with foam. The valve was left open allowing residual contaminated water to seep into the excavation overnight. Water from the base of the pit was vacuumed away for disposal and soil was also scraped from the base of the pit for removal/disposal. 2No. soil samples were then obtained from 0.3m bgl and sent for laboratory testing for TPH. Both samples reported concentrations of <10mg/kg TPH.

2.2.15 Whilst no depth of pipework was specified within previous reports, the soil samples obtained from 0.3mbgl were presumably below the pipeline, and as such the pipe network is anticipated to be relatively shallow.

Critical Evaluation of Third-Party Reports

2.2.16 As part of Jomas' report: *Data Review & Proposed Scheme of Site Investigation* (2022), both third-party reports were critically evaluated in order to produce an updated Conceptual Site Model (CSM). This CSM is reproduced in Table 2.2 below.

2.2.17 It was noted that the ground investigation by Hydrock only covered the southern half of Jomas' study site. Therefore, further investigation was considered necessary to assess the ground conditions including a presence of potential contamination in the northern part of the site.

2.2.18 Hydrock's' exploratory holes TP128-131 and BH10-14 targeted POL21. No other point source was targeted by their investigation, though it was noted in the Hydrock report that above ground storage tanks were present in the south-western part of the site.

2.2.19 The only visual/olfactory evidence of contamination reported by Hydrock was a "slight hydrocarbon odour" and "sheen on the groundwater" reported at 2.7-2.9m bgl in TP109. However, laboratory testing of soil/groundwater was not undertaken from this position.

2.2.20 The most significant hydrocarbon impact in groundwater was detected in groundwater samples from BH05, BH10, BH12, and BH14, and to a lesser extent in BH11. Petroleum hydrocarbons were not detected within a groundwater sample obtained from BH13.

2.2.21 It is understood that Hydrock were not provided with the Vertase report prior to their investigation, and so did not target potential sources that the report identified, principally the fuel pipelines buried throughout the site and the fuel spill noted in excavation 2-2.

2.2.22 Hydrock did not recommend further investigation but it was considered by Jomas that there were several potential sources of contamination that had not yet been investigated.

2.2.23 Despite the fact that GSVs were <0.07, Hydrock concluded that the site be determined CS2 due to elevated methane concentrations reported in BH10. Jomas considered it possible that the source of elevated methane was degrading hydrocarbons identified within groundwater in BH10. It was therefore recommended that additional gas monitoring be undertaken that includes the northern part of the site, to confirm the ground gas regime beneath the site.

Table 2.2: Conceptual Site Model/Preliminary Risk Assessment for the Site (Jomas, April 2022)

Source	Pathway	Receptor	Assessment to date	Further investigation required?	Linkage Number
• Made Ground possibly including metals, metalloids, asbestos, PAH and petroleum hydrocarbons • Hydrocarbon fuels and lubricants associated with the fuel storage tanks and former land use. • VOCs and SVOCs associated with the former land use. • Ethylene glycol – potentially used as a de-icer. • Ground gas from nearby backfilled quarries • Electricity sub-station • Underground POL pipelines • POL2 • POL21 A, B, C • AST in south-west of site • Evidence of hydrocarbon contamination reported in TP109 by Hydrock • Former excavation 2-2 with fuel leak/spill reported by Vertase	• Ingestion • Inhalation or contact with potentially contaminated dust and vapours	• Future site users • Construction workers • Maintenance workers • Neighbouring site users	Hydrock report concluded that the underlying Made Ground would be unsuitable for use within communal soft landscaped areas. A clean cover system was recommended. Acute and sub chronic risks to construction/maintenance workers are outside the scope of this assessment but would be expected to be managed by appropriate health and safety procedures.	**Yes.** **Further investigation is considered necessary in the northern half of site (not investigated by Hydrock) and to investigate the following features not targeted by Hydrock:** • **Electricity sub-station** • **Underground POL pipelines** • **POL2** • **AST in south-west of site** • **Evidence of hydrocarbon contamination reported in TP109 by Hydrock** • **Former excavation 2-2 with fuel leak/spill reported by Vertase**	1
	• Inhalation of vapours	• Future site users • Construction workers • Maintenance workers • Neighbouring site users	Hydrock undertook 9No. machine excavated trial pits and 6No. boreholes across the site in order to assess the nature and composition of the made ground for the presence of VOCs, TPH and asbestos. The pits were spread evenly across the site and also targeted above ground fuel tank POL21. The only evidence of hydrocarbon contamination was reported in TP109 (odours and sheen on groundwater), however, no soil or groundwater was analysed from this location. A total of 3No. soil samples were scheduled for VOCs and SVOCs. From a review of the laboratory certificates, Jomas have identified that none of these soil samples analysed were found to detect volatile organic compounds in excess of laboratory detections limits. 3No. samples is not considered sufficient given the size of site and number of sources identified. Analytical testing of groundwater samples was undertaken by Hydrock from installations within BH5 and BH10 to BH14. Volatile contaminants were detected in BH10 and BH12 above laboratory detection limits, however, an assessment of the risk posed to human health from vapour from a groundwater source was not undertaken. The most elevated hydrocarbon impact in groundwater was detected in groundwater samples from BH05, BH10, BH12, and BH14, and to a lesser extent in BH11. Petroleum hydrocarbons were not detected within a groundwater sample tested from BH13. Acute and sub chronic risks to construction/maintenance workers are outside the scope of this assessment but would be expected to be managed by appropriate health and safety procedures.	**Yes.** **Further investigation is considered necessary in the northern half of site (not investigated by Hydrock) and to investigate features not targeted by Hydrock:** • **Electricity sub-station** • **Underground POL pipelines** • **POL2** • **AST in south-west of site** • **Evidence of hydrocarbon contamination reported in TP109 by Hydrock** • **Former excavation 2-2 with fuel leak/spill reported by Vertase** **Given the site investigation results obtained by Hydrock, it is considered that a potential source of volatile organic contamination is present at the site as detected in groundwater sampled from BH10 and BH12, as well as from the identified potential sources of hydrocarbons listed above. Further assessment is recommended in order to assess the risk to human health receptors within the proposed residential end use scenario.**	2
	• Permeation of water pipes and attack on concrete foundations by aggressive soil conditions	• Building structures/services	1No. sample from the Made Ground and 4No. samples from the Great Oolite Group were assessed to determine the properties for concrete in aggressive ground after BRE Special Digest 1, 2005. A Design Sulphate class of DS-1 and an ACEC class of AC-1 were recommended. It was recommended that the relevant water authority be consulted regarding the selection of material was water supply pipes, but that barrier pipework would likely be required.	**Yes.** **Further investigation is considered necessary in the northern half of site (not investigated by Hydrock). Further testing of the Made Ground should also be undertaken across the site as only 1No. sample was previously scheduled and this is considered insufficient to characterise a site >4 hectares.**	3

Source	Pathway	Receptor	Assessment to date	Further investigation required?	Linkage Number
	• Accumulation and migration of soil gases	• Future site users • Construction workers • Maintenance workers	Ground gas monitoring of BH5 and BH10 to BH14 has been undertaken by Hydrock on 3 occasions in 2016. Response zones for the boreholes spanned the Great Oolite Group. Hydrock "provisionally classified" the site as Characteristic Situation 2 due to elevated concentrations of methane reported in BH10 on 2 visits. However, it should be noted that the maximum reported GSV throughout all monitoring events was 0.0024, and flow rates across all wells and visits remained at ≤0.1l/hr. Methane concentrations of up to 1.7% reported in BH10 may be a result of degrading hydrocarbons identified within groundwater obtained from BH10. Methane concentrations above 0.1% were not detected in any of the other well locations suggesting that there is a source specific to BH10, rather than a wider ground gas issue. Acute and sub chronic risks to construction/maintenance workers are outside the scope of this assessment but would be expected to be managed by appropriate health and safety procedures.	**Yes.** **Further investigation is considered necessary in the northern half of site (not investigated by Hydrock) and to further assess the source of elevated methane detected in BH10.**	4
	• Leaching through permeable soils, migration within the vadose zone (i.e., unsaturated soil above the water table) and/or lateral migration within surface water, as a result of cracked hardstanding or via service pipe/corridors and surface water runoff. • Horizontal and vertical migration of contaminants within groundwater.	• Controlled waters - Principal aquifer within the Great Oolite Group and Gallos Brook ~325m south of site.	Hydrock concluded that the groundwater contained elevated concentrations of metals and PAHs (above EQS) and petroleum hydrocarbons (above DWS). VOCs and SVOCs were also reported above the laboratory detection limits in groundwater samples obtained from BH10 and BH12, however, no assessment was made as there were no water quality targets available for these compounds. The most elevated hydrocarbon impact in groundwater was detected in groundwater samples from BH05, BH10, BH12, and BH14, and to a lesser extent in BH11. Petroleum hydrocarbons were not detected within a groundwater sample obtained from BH13. Hydrock considered that the impacted groundwater at the site did not pose a significant risk to the Gallos Brook, as water from the brook was analysed and the only elevated contaminant reported was copper and no copper contamination was identified in soil. It was considered that dilution and dispersion effects would minimise the risk to potential to the closest groundwater receptor (abstraction) >1km from site. It was also considered that, following removal of the tanks and any associated soils and waters from the excavation, the recorded groundwater contamination does not represent a significant risk of pollution to the groundwater below the site.	**Yes.** **Further investigation is considered necessary in to investigate features not targeted by Hydrock:** • **Underground POL pipelines** • **POL2** • **AST in south-west of site** • **Evidence of hydrocarbon contamination reported in TP109 by Hydrock** • **Former excavation 2-2 with fuel leak/spill reported by Vertase**	5

2.3 Summary of Jomas' Ground Investigation at Phase 9

2.3.1 As detailed in Table 1.1, a report has previously been produced by Jomas for a site referred to as Phase 9. This is located adjacent to the south-west of the Phase 10 site. A summary of Jomas' investigation is presented below.

2.3.2 Reference should be made to the original report for further details. Where appropriate, this information will be used in the later sections of this report as supplementary information to assist in the evaluation of the ground conditions and aid the identification of geotechnical and geochemical constraints and hazards that could impact the proposed scheme.

Background

2.3.3 Jomas were provided with several reports and documents relating to the Phase 9 site for review. A detailed summary was provided within Jomas' ground investigation report, however, in summary:

- The Environment Agency (EA) did not recommend discharge of a contamination land planning condition due to uncertainties relating to groundwater quality and contradictory statements within previous reports.
- The EA therefore required further groundwater investigation following demolition and tank removal and stated that groundwater remedial works should not be excluded from the remedial strategy.
- The remediation contractor (Smith Grant) attended site throughout January-May 2021 in order to undertake various remedial works at the site. This included demolition of the boiler house and removal of underground storage tanks and associated infrastructure; and removal of contaminated soil 'hotspots' including one referred to as the baseball pitch hotpot.
- Jomas were instructed by the client to install groundwater monitoring wells and undertake groundwater sampling to assess risks to controlled waters following demolition and removal of tanks and hotpsots.

Ground Investigation and Ground Conditions

2.3.4 Jomas were provided with a mark-up of proposed borehole locations positioned by Smith Grant Environmental to target the following:

- JBH1 - baseball pitch hotspot
- JBH2 - downgradient of baseball pitch hotspot
- JBH3 - boiler house.
- JBH4 - replacement of Hydrock BH02 which has been destroyed
- JBH5 – down-gradient of recent hotspot around proposed southern pond

2.3.5 Jomas' ground investigation was undertaken on the 2nd & 3rd August 2021.

2.3.6 All 5No. boreholes were completed up to 10m bgl by rotary open-hole drilling techniques, with groundwater monitoring wells also installed to 10m bgl. Ground conditions comprised a veneer of Made Ground over White Limestone Formation, encountered as limestone and clay.

2.3.7 No groundwater was encountered during drilling due to the methods used. Return groundwater sampling events were undertaken on the 12th & 24th August 2021 and groundwater levels of between 2.36m and 5.61m bgl were reported in JBH1-5.

Controlled Waters Risk Assessment

2.3.8 Wells were dipped using an oil/water interface meter. No free phase product was detected.

2.3.9 2No. groundwater sampling events were undertaken by means of low flow methodology on 12th & 24th August 2021.

2.3.10 In total, 10No. samples were obtained and scheduled for a suite of contaminants including BTEX, MTBE, and TPHCWG.

2.3.11 None of the determinands were detected above laboratory detection limits and therefore the groundwater sampled was not considered to be impacted with petroleum hydrocarbons.

3 GROUND INVESTIGATION

3.1 Scope of Works

3.1.1 A ground investigation was undertaken between 17 and 26 May 2022.

3.1.2 A summary of the fieldwork carried out at the site, with justifications for exploratory hole positions, is presented in Table 3.1 below.

Table 3.1: Scope of Intrusive Investigation

Investigation Type	Number of Exploratory Holes Achieved	Exploratory Hole Designation	Depth Achieved	Justification
Windowless Sampler Boreholes	5	JWS1 to JWS5	Up to 3.8m bgl	Obtain samples for laboratory chemical and geotechnical testing.
Combined Dynamic Sampling & Rotary Boreholes	9	JBH1 to JBH09	Up to 8m bgl	To allow in-situ geotechnical testing. Features targeted by boreholes are summarised in Table 3.2.
Monitoring Wells	13	JWS1 to JWS3, JWS5, JBH1 to JBH9	Up to 8m bgl	Ground gas and groundwater monitoring wells.
Machine Excavated Trial Pits	20	JTP1 to JTP8, JTP10 to JTP16, JSTP1 to JSTP4 & JSTP2A	Up to 3.0m bgl	Obtain samples for laboratory chemical and geotechnical testing. Facilitate soil infiltration testing (JSTP1 to JSTP4 only)

3.1.3 The ground investigation was undertaken in accordance with British Standard BS5930:2015+A1:2020 "Code of practice for ground investigations", British Standard BS10175:2011+A2:2017 "Investigation of potentially contaminated sites - code of practice", NHBC Standards, Chapter 4.1 and AGS Guidelines for Good Practice in Site Investigations.

3.1.4 Exploratory hole positions are shown on the exploratory hole location plan presented in Figure 3, Appendix 1. The exploratory hole records are included in Appendix 2.

3.1.5 Where monitoring well installations were not installed, the exploratory holes were backfilled with the arisings (in the reverse order in which they were drilled) and the ground surface was left slightly mounded to allow for some settlement.

Table 3.2: Justification of Exploratory Hole Locations

Exploratory Location ID	Location Justification
JBH1	Targeting former decommissioning excavation (2-2) to the north-east of POL2
JBH2	West of POL2
JBH3	General coverage in western site area, to assess possible groundwater migration effects

Exploratory Location ID	Location Justification
JBH4	Targeting Valve Pit 1 and ASTs on southern boundary.
JBH5	General coverage in north-eastern site area, to assess possible groundwater migration effects and obtain geotechnical data
JBH6	General coverage in south-eastern areas, to assess possible groundwater migration effects, and to target south of Valve Pit 3, and obtain geotechnical data
JBH7	General coverage in south-western site area, to assess possible groundwater migration effects
JBH8	South of POL2 and southwest of POL21 A, B & C.
JBH9	General coverage in north-eastern site area, to assess possible groundwater migration effects, and obtain geotechnical data
JWS1	Target large single storey unit in north, and general coverage for geotechnical data
JWS4	Target south of POL2. General coverage for geotechnical data
JTP1	Target the area of above ground compressor tanks.
JTP2	Target the area of large single storey unit.
JTP3	Target pipeline and former offices.
JTP5	Investigate the soils covering POL2
JTP6	Target possible pipeline
JTP7	Target the area of visual/olfactory evidence of contamination reported in former trial pit TP109 (Hydrock, 2017).
JTP8	Target possible pipeline
JTP10	Target Valve Pit 1.
JTP11	Target electricity substation and Valve Pit 3.
JTP12	Targeting Valve Pit 3 and north-east of POL21.
JTP13	Investigate soils covering POL21
JWS2, JWS3, JWS5, JTP4, JTP14, JTP15 & JTP16	General coverage

3.2 In-situ Geotechnical Testing

3.2.1 In-situ geotechnical testing included Standard Penetration Tests. The determined 'N' values have been used to determine the relative density of granular materials and have been used with standard correlations to infer various other derived geotechnical parameters including the undrained shear strength of the cohesive strata. The results of the individual tests are on the appropriate exploratory hole logs in Appendix 2.

3.2.2 The determination of infiltration rates for the underlying ground was undertaken by carrying out tests in general accordance with BRE 365. Copies of the results and calculations are provided in Appendix 7.

3.3 Laboratory Analysis

3.3.1 A programme of laboratory testing, scheduled by Jomas Associates Limited, was carried out on selected samples obtained from the Made Ground and natural strata.

Chemical Testing

3.3.2 Chemical testing of soils was undertaken by laboratories of i2 Analytical Limited, which holds UKAS and MCERTS accreditations for a wide range of determinands.

3.3.3 The samples were analysed for a range of contaminants as shown in Table 3.3 below:

Table 3.3: Chemical Tests Scheduled

	No. of tests	
Test Suite	**Made Ground / Topsoil**	**Natural**
Jomas Suite 3	15	2
Jomas Suite 5	8	0
Hydrocarbon Suite	12	1
Asbestos Screen & ID	18	0
Total Organic Carbon	10	0
PCBs	1	1

3.3.4 The determinands contained in the Jomas Suite 3 are as detailed in Table 3.4 below. Jomas Suite 5 contains the same determinands but without the hydrocarbon compounds to avoid overlapping with the extended hydrocarbon testing. The Hydrocarbon Suite includes TPH-CWG, PAHs, phenols, VOCs, BTEX & MTBE.

Table 3.4: Basic Suite of Determinands

DETERMINAND	LIMIT OF DETECTION (mg/kg)	UKAS ACCREDITATION	TECHNIQUE
Arsenic	1	Y (MCERTS)	ICPMS
Cadmium	0.2	Y (MCERTS)	ICPMS
Chromium	1	Y (MCERTS)	ICPMS
Chromium (Hexavalent)	4	Y (MCERTS)	Colorimetry
Lead	1	Y (MCERTS)	ICPMS
Mercury	0.3	Y (MCERTS)	ICPMS
Nickel	1	Y (MCERTS)	ICPMS
Selenium	1	Y (MCERTS)	ICPMS
Copper	1	Y (MCERTS)	ICPMS
Zinc	1	Y (MCERTS)	ICPMS
Boron (Water Soluble)	0.2	Y (MCERTS)	ICPMS

DETERMINAND	LIMIT OF DETECTION (mg/kg)	UKAS ACCREDITATION	TECHNIQUE
pH Value	0.1 units	Y (MCERTS)	Electrometric
Sulphate (Water Soluble)	0.0125g/l	Y (MCERTS)	Ion Chromatography
Total Cyanide	1	Y (MCERTS)	Colorimetry
Speciated/Total PAH	0.05/0.80	Y (MCERTS)	GCFID
Phenols	1	Y (MCERTS)	HPLC
Total Petroleum Hydrocarbons (banded)	-	N Y (MCERTS)	Gas Chromatography

3.3.5 To support the selection of appropriate Tier 1 screening values, 10No. samples were analysed for total organic carbon.

3.3.6 The laboratory test results are included in Appendix 3.

Geotechnical Laboratory Testing

3.3.7 In addition to the contamination assessment, soil samples were submitted to the UKAS Accredited laboratory of i2 Analytical Ltd. for a series of analyses.

3.3.8 This testing was designed to classify the samples; and to obtain parameters (either directly or sufficient to allow relevant correlations to be used) relevant to the technical objectives of the investigation.

3.3.9 The following laboratory geotechnical testing was carried out:

Table 3.5 Laboratory Geotechnical Analysis

Methodology	Test Description	Number of tests
BS EN 17892	Moisture Content Determination	20
BS1377:1990	Liquid and Plastic Limit Determination (Atterberg Limits)	20
BS1377:1990	Particle Size Distribution - Sieving	14

3.3.10 In addition, 17No. soil samples were analysed for a modified BRE Special Digest 1 suite (acid and water soluble sulphate, total sulphur and pH) to assist with the ACEC classification for buried concrete.

3.3.11 The laboratory test results are included in Appendix 4.

4 GROUND CONDITIONS ENCOUNTERED

4.1 General

4.1.1 A summary of the conditions encountered during the physical investigation of the site is presented in the following section.

4.2 Ground Conditions

4.2.1 The ground conditions encountered were broadly consistent with those anticipated, i.e. a thickness of topsoil/ Made Ground overlying deposits of White Limestone Formation, which were highly weathered near surface. The ground conditions are summarised in Table 4.1.

Table 4.1: Ground Conditions Encountered

Stratum and Description	Encountered from (mbgl)	Base of strata (mbgl)	Thickness range (m)
Grass over brown clayey gravelly sand with rootlets. Sand is fine to coarse. Gravel consists of fine to coarse angular to sub-rounded limestone and occasional flint. (TOPSOIL/SUBSOIL) *Encountered in JBH2, JBH5, JBH6, JBH8, JBH9, JTP2, JTP3, JTP6, JTP10, JTP11-JTP13, JTP15, JSTP3 & JSTP4.*	0.0	0.1 – 0.6	0.1 – 0.6
Grass over dark brown slightly gravelly clay/clayey gravelly sand. Gravel consists of fine to coarse angular limestone, asphalt and brick with occasional concrete and flint, and rare glass timber, ceramic. (MADE GROUND) *Encountered in JWS1-JWS5, JBH1, JBH3, JBH4, JBH7, JTP1, JTP5, JTP7, JTP8, JTP14, JTP16, STP1, JSTP2 & JSTP2A.*	0.0	0.2 - 1.9	0.2 - 1.9
Firm to very stiff** grey or brown locally silty, sandy gravelly CLAY. Sand is fine to coarse. Gravel consists of fine to coarse angular limestone and occasional flint. (WEATHERED WHITE LIMESTONE FORMATION - Cohesive) *Encountered in JBH1 – JBH4, JBH7 – JBH9, JWS1- JWS5, JTP1, JTP7, JTP10, JTP14 - JTP16, JSTP1 & JSTP2*	0.2 – 2.6	1.0 – >3.8	0.4 – >3.6
Medium dense to very dense greyish brown clayey very sandy GRAVEL/clayey gravelly SAND. Gravel consists of fine to coarse angular limestone. Occasional cobbles, consisting of angular limestone. (WEATHERED WHITE LIMESTONE FORMATION - Granular) *Encountered in JBH1, JBH5, JBH6, JBH9, JWS1, JWS4, JWS5, JTP1 – JTP4, JTP6, JTP10-JTP13, JTP15, JSTP3.*	0.0 – 2.2	0.8 – >2.9	>0.4 – >1.7
Light brown and grey LIMESTONE becoming bluish grey MUDSTONE. (WHITE LIMESTONE FORMATION) *Encountered in JBH1 – JBH9.*	1.1 - 3.0	3.9 - >8.0 [base not proven]	1.9 - >6.9 [thickness not proven]
Bluish grey MUDSTONE	3.9 – 6.7	>8.0	>4.1

Table 4.1: Ground Conditions Encountered

Stratum and Description	Encountered from (mbgl)	Base of strata (mbgl)	Thickness range (m)
(WHITE LIMESTONE FORMATION) *Encountered in JBH1, JBH2 & JBH5.*		[base not proven]	[thickness not proven]

***Consistency estimated using semi-empirical correlations with SPT N-values, Plasticity Indices and published literature*

4.2.2 It should be noted that shallow ground conditions encountered were variable and, in some locations, only cohesive or only granular deposits were encountered, and others, granular deposits were encountered at shallower depth than cohesive soils. Table 4.1 is a general summary of the ground conditions, and the logs provided in Appendix 2 should be reviewed for full details.

4.2.3 Made Ground was generally only encountered in the western half of site (west of POL2). The exception being JWS1, JWS5 and JBH1, which reported 0.2-0.6m thickness of Made Ground. The greatest depth of Made Ground (1.9m) was reported in the south-west of site, in JSTP2.

4.2.4 Black staining with a slight hydrocarbon odour was reported at 1.2-2.0m bgl in cohesive deposits of Weathered White Limestone Formation in JBH4.

4.2.5 Black staining with a hydrocarbon odour was reported at 1.5-1.7m bgl in the in granular deposits of Weathered White Limestone Formation inf JTP10. Groundwater seepage reported at 2.0m bgl within this trial pit did not display visual/olfactory evidence of contamination.

4.2.6 Black staining with a slight hydrocarbon odour was reported at 1.4-1.5m bgl in the Made Ground in JSTP1.

4.2.7 Black staining was reported in the Made Ground in JSTP2 at 0.9-1.1m bgl, however, no associated odour was noted in this location.

4.2.8 No other visual or olfactory evidence of potential contamination was identified within the investigation positions.

4.3 Groundwater

4.3.1 Groundwater strikes are summarised in Tables 4.2 overleaf.

Table 4.2: Groundwater Strikes During Investigation

Exploratory Hole ID	Depth Encountered (mbgl)	Depth After 20mins (mbgl)	Stratum
JWS3	2.7	-	Weathered White Limestone Formation - Cohesive
JBH3	3.4	3.0	White Limestone Formation
JBH4	2.0	2.0	Top of White Limestone Formation
JBH7	3.6	3.0	White Limestone Formation
JTP7	2.7	-	Weathered White Limestone Formation - Cohesive
JTP10	2.0 (seepage)	-	Weathered White Limestone Formation - Granular
JTP14	3.0 (seepage)	-	Weathered White Limestone Formation - Cohesive
JTP16	3.0 (seepage)	-	Weathered White Limestone Formation - Cohesive
JSTP1	2.5	-	Weathered White Limestone Formation - Cohesive
JSTP2A	1.5	-	Made Ground
JSTP2	2.4	-	Weathered White Limestone Formation - Cohesive

4.3.2 The return groundwater monitoring results are presented in Appendix 5 and are summarised in Table 4.3 overleaf.

Table 4.3: Groundwater Monitoring Summary

Exploratory Hole ID	Install details	Depth Encountered (m bgl)	Depth Encountered (m OD)	Depth to Base of Well (m bgl)	Stratum
JWS1	Jomas, 2022	Dry	Dry	1.36	Installed in Weathered White Limestone Formation - Granular
JWS2		1.12 – 1.49	122.57 – 122.20	1.81	Weathered White Limestone Formation -
JWS3		1.36 – 1.74	121.26 – 120.88	3.30	Weathered White Limestone Formation -
JWS5		Dry	Dry	1.57	Installed in Weathered White Limestone Formation - Granular
JBH1		3.61 – 3.72	122.44 – 122.33	7.27	White Limestone Formation
JBH2		1.63 – 1.96	121.66 – 121.33	7.97	White Limestone Formation
JBH3		1.83 – 2.18	121.53 – 121.18	7.27	White Limestone Formation
JBH4		1.52 – 1.83	120.84 – 120.53	7.63	White Limestone Formation
JBH5		3.34 – 4.03	122.16 – 121.47	8.06	White Limestone Formation
JBH6		3.70 – 5.02	121.97 – 120.65	8.10	White Limestone Formation
JBH7		2.71 – 3.07	120.52 – 120.16	8.04	White Limestone Formation
JBH8		2.92 – 3.50	121.44 – 120.86	7.44	White Limestone Formation
JBH9		4.45 – 5.77	122.13 – 120.81	7.43	White Limestone Formation
BH05	Hydrock, 2016	2.03 – 2.47	-	7.26	Sandy gravelly clay, limestone and clay *
BH10		2.78 – 3.26	-	7.81	Sand/sandstone and Limestone*
BH11		2.79 – 3.94	-	7.90	Sand/sandstone and Limestone*
BH12		4.12 – 4.87	-	7.92	Sand/sandstone and Limestone*
BH13		3.58 – 5.02	-	7.93	Sand/sandstone and Limestone*
BH14		3.18 – 3.80	-	7.84	Sand/sandstone and Limestone*

**Description taken from Hydrock borehole records*

4.3.3 It should be noted that changes in groundwater levels can occur for a number of reasons including seasonal effects and variations in drainage. Such fluctuations may only be recorded by the measurement of the groundwater level within a standpipe or piezometer installed within appropriate response zones. Changes in groundwater level can have a direct effect on excavation stability and dewatering requirements, and cohesive soils can soften under rising or high groundwater levels.

4.3.4 Based on the monitoring data obtained to date the groundwater flow direction beneath the site appears to be generally to the south-west.

4.4 Limitations

4.4.1 During the intrusive ground investigation, a small water supply pipe was struck at 0.9m bgl in JTP4. The client arranged for necessary repair works to be conducted and the trial pit was not progressed any further.

4.4.2 JTP5 was terminated at 1.1m bgl, due to suspected presence of buried services.

4.4.3 JTP8 was terminated at 0.8m bgl due to presence of a concrete obstruction.

4.4.4 JSTP2A was initially excavated to 1.7m bgl to allow soil infiltration testing, but groundwater was struck at 1.5m bgl, therefore the pit was abandoned, and a new position chosen (JSTP2).

4.4.5 JWS1 to JWS5 were terminated at depths of between 1.4m and 3.8m bgl due to refusal of the sample barrel in hard natural ground. Similarly, JTP2, JTP3, JTP6, JTP11, JTP12, JTP13, JTP15, JSTP3 & JSTP4 were terminated at depths of between 1.3-1.4m bgl due to hard natural ground causing very slow/difficult progression with the excavator.

4.4.6 The possible presence of unidentified natural and/or man-made obstructions elsewhere on site cannot be discounted.

4.5 Geotechnical Testing Results

4.5.1 Standard Penetration Tests (SPT) were undertaken in the borehole locations until the drilling equipment refused on hard natural ground at depths of between 1.1m and 3.8m bgl.

4.5.2 SPT 'N' values generally ranged between N=8 and N=28 within the cohesive soils of the Weathered White Limestone Formation. This corresponds with a medium to high strength clay (based on correlations postulated by Stroud & Butler, 1975 and Stroud, 1989). A single N value of N=5 was reported at 1m bgl in WS4, equating to a low strength clay.

4.5.3 Only 3No. SPT's were completed in granular soils of the Weathered White Limestone Formation, these gave 'N' values of N=21, N=49 and N=60. This corresponds with a relative density of medium dense to very dense.

4.5.4 Each borehole location experienced refusal of SPTs on hard natural ground of the White Limestone Formation – i.e. N values of N=>50+.

4.5.5 The results of geotechnical laboratory testing undertaken from the recovered samples of the cohesive and granular deposits of Weathered White Limestone Formation are summarised in Table 4.4.

Table 4.4: Summary of Geotechnical Test Results

Parameter		Made Ground	Weathered White Limestone Formation (Cohesive)	Weathered White Limestone Formation (Granular)
Moisture Content (%)		-	2.6 – 29	-
Liquid Limit (%)		-	26 – 51	-
Plastic Limit (%)		-	15 – 23	-
Plasticity Index (%)		-	10 – 29	-
Modified Plasticity Index (%)		-	6.4 – 29	-
Volume Change Potential [NHBC and BRE]		-	Non-shrinkable to Medium	Non-shrinkable
Particle Size Distribution	Gravel (%)		11 – 23	7 – 78
	Sand (%)		20 – 33	10 – 56
	Clay/Silt (%)		44 – 69	8 – 37
pH		7.8 – 9.2	7.9 – 8.6	8.0 – 8.6
Water soluble sulphate (g/l)		0.0059 – 0.086	0.003 – 0.110	0.0039 – 0.024

Parameter	Made Ground	Weathered White Limestone Formation (Cohesive)	Weathered White Limestone Formation (Granular)
Acid soluble sulphate (%)	0.054 – 0.078	0.034 – 0.074	0.054 – 0.08
Total Sulphur (%)	0.025 – 0.045	0.016 – 0.018	0.021 – 0.035
SPT (N)	12	5 - 28	21 - 60

4.5.6 It should be noted that the engineering characteristics of Made Ground are variable and unpredictable. Therefore, Made Ground has not been assessed further as part of the geotechnical assessment, except where specified otherwise.

4.6 Summary of General Derived Properties

4.6.1 Based on the analysis of the ground investigation data and past experience with similar deposits, the general parameters given in Table 4.5, have been derived for the Weathered White Limestone Formation materials.

Table 4.5: Derived Parameters for Weathered White Limestone Formation materials

Property*	Weathered White Limestone Formation (Cohesive)	Weathered White Limestone Formation (Granular)
Unit Weight[1)]	19	20
Drained Friction, φ' (◦)[2)/3)]	23 – 29[2)]	35[3)]
Drained Cohesion, c' (kPa)	0	-
SPT 'N' Value	5 – 28	21 – 53
Undrained Young's Modulus, E_u (MPa)[4)]	6.0 – 33.6	-
Drained Young's Modulus E' (MPa) [5)/6)]	4.5 – 25.2[5)]	21.0 – 53.0[6)]
Undrained Shear Strength, c_u (kPa)[7)]	25 – 140	-
Plasticity Index (%)	10 – 29	-
Modified Plasticity Index (%)	6.4 – 29	-
Volume Change Potential [NHBC]	Non-shrinkable to Medium	Non-shrinkable
Modulus of Volume Compressibility, m_v (m^2/MN)[8)]	0.071 – 0.4	-

[1)] Derived from Figures 1 and 2 of BS8004:2015
[2)] Calculated from: φ' = (42°- 12.5log10I_p) for 5% ≤ I_p ≤ 100% Where, I_p is the soil's plasticity index (BS8004:2015).
[3)] Calculated from correlation between N value and Φ (Relation of N-values and Friction Angle by Peck et al)
[4)] Calculated from: E_u = 1.2 N MPa, based on the guidance given in CIRIA Report 143.
[5)] Calculated from E' = 0.9 N MPa, based on the guidance given in CIRIA Report 143.
[6)] Calculated from: E' = 1.0 N MPa, based on the guidance given in CIRIA Report 143.
[7)] The undrained shear strength (c_u) of the cohesive soils was correlated to the SPT "N" values using Stroud (1974), where c_u=f_1N and f_1 is factor related to the Plasticity Index (PI) of the clay (a value of f_1 equal to 5.0 for PI ≤ 25% and a value of f_1 value equal to 4.5 for PI>25).
[8)] Calculated from: m_v = 1/f_2 N m^2/MN, f_2 is a coefficient proposed by Stroud and Butler (1975) and varies with Plasticity Index (PI) as presented in Figure 27 of CIRIA Report 27 or 10/c_u.
*These reported values are not considered as '*Characteristic Values*'.

5 RISK ASSESSMENT – ANALYTICAL FRAMEWORK

5.1 Context and Objectives

5.1.1 This section seeks to evaluate the level of chronic risk pertaining to human health and the environment which may result from both the existing use and proposed future use of the site. It makes use of the ground investigation findings, as described in the previous sections, to evaluate further the potential pollutant linkages identified in the desk study. A combination of qualitative and quantitative techniques is used, as described below.

5.1.2 The purpose of generic quantitative risk assessment is to compare concentrations of contaminants found on site against generic assessment criteria (GAC) to establish whether there are actual or potential unacceptable risks. It also determines whether further detailed assessment is required. The approaches detailed all broadly fit within a tiered assessment structure in line with the framework set out in the Department of Environment, Food and Rural Affairs (DEFRA), EA and Institute for Environment and Health Publication, Guidelines for Environmental Risk Assessment and Management.

5.2 Analytical Framework – Soils

5.2.1 There is no single methodology that covers all the various aspects of the assessment of potentially contaminated land and groundwater. Therefore, the analytical framework adopted for this investigation is made up of a number of procedures, which are outlined below. All of these are based on a Risk Assessment methodology centred on the identification and analysis of Source – Pathway – Receptor linkages.

5.2.2 The CLEA model provides a methodology for quantitative assessment of the long term risks posed to human health by exposure to contaminated soils. Toxicological data have been used to calculate Soil Guideline Values (SGV) for individual contaminants, based on the proposed site use; these represent minimal risk concentrations and may be used as screening values.

5.2.3 In the absence of any published SGVs for certain substances, or where the assumptions made in generating the SGVs do not apply to the site, Jomas Associates Limited have compared the soil analytical results to other available GAC, including the LQM/CIEH S4ULs and DEFRA C4SL. Site-specific assessments are undertaken wherever possible and/or applicable. All assessments are carried out in accordance with the CLEA protocol.

5.2.4 The assessment criteria used for the screening of determinands within soils are identified within Table 5.1.

Table 5.1: Selected Assessment Criteria – Contaminants in Soils

Substance Group	Determinand(s)	Assessment Criteria Selected
Organic Substances		
Non-halogenated Hydrocarbons	Total Petroleum Hydrocarbons (TPHCWG banded)	S4UL
	Total Phenols	S4UL
Polycyclic Aromatic Hydrocarbons (PAH-16)	Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene	S4UL
Volatile Organic Compounds (VOCs/sVOCs).	Toluene, Ethylbenzene, Benzene, Xylenes	S4UL
Inorganic Substances		
Heavy Metals and Metalloids	Arsenic, Cadmium, Chromium, Lead, Mercury, Nickel, Selenium, Copper, Zinc	S4UL
	Copper, Zinc, Nickel	BS: 3882 (2015).
Cyanides	Free Cyanide	CLEA v1.06
Sulphates	Water Soluble Sulphate	BRE Special Digest 1:2005

5.2.5 It is understood that the site is to be redeveloped to provide residential houses with private gardens and areas of public open space/park. As a result, the site has been assessed with regards to a "Residential with home-grown produce " end use scenario.

5.2.6 GAC have been selected with consideration to the Soil Organic Matter (SOM) content of the soil. From the soils analytical results, the values for Total Organic Carbon for the Made Ground ranged between 1.1% and 4.3%, which gives an equivalent SOM range of 1.9% to 7.4%. Therefore, published GAC have been selected as those derived assuming a SOM of 1.0% to provide a conservative assessment.

5.3 BRE

5.3.1 The BRE Special Digest 1:2005, 'Concrete in Aggressive Ground' is used with soluble sulphate and pH results to assess the aggressive chemical environment of future underground concrete structures at the site.

5.4 Analytical Framework – Groundwater

5.4.1 The requirement to protect groundwater from pollution is outlined in Groundwater protection: Principles and practice (GP3, EA, August 2013, v1.1).

5.4.2 Where undertaken, the groundwater quality analysis comprises a Level 1 assessment in accordance with the EA Remedial Targets Methodology Document (EA, 2006).

5.4.3 The criteria used by Jomas' in the Level 1 assessment of groundwater quality are shown in Table 5.2.

Table 5.2: Selected Assessment Criteria – Contaminants in Water

Substance Group	Determinand(s)	Assessment Criteria Selected
Metals	Arsenic, Boron, Cadmium, Chromium, Copper, Cyanide, Lead, Mercury, Nickel	EQS/DWS
	Zinc	EQ
	Selenium	DWS
PAHs	Sum of Four – benzo(b)fluoranthene, benzo(ghi)perylene, benzo(k)fluoranthene, indeno(1,2,3-c,d)pyrene	DWS
PAHs	Naphthalene Anthracene Benzo(a)pyrene Fluoranthene	EQS EQS EQS/DWS EQS
Total Petroleum Hydrocarbons	Aliphatic C5-C6, Aliphatic >C6-C8, Aliphatic >C8-C10. Aliphatic >C10-C12, Aliphatic >C12-C16, Aliphatic >C16-C21, Aromatic C5-C7, Aromatic >C7-C8, Aromatic >C8-C10, Aromatic >C10-C12, Aromatic >C12-C16, Aromatic >C16-C21, Aromatic> C21-C35	DWS/WHO
Benzene	Benzene	EQS/DWS
Toluene	Toluene	EQS/WHO
Ethylbenzene	Ethylbenzene	WHO
Xylene	Xylene	EQS/WHO

Environmental Quality Standards EQS

Environmental Quality Standards (EQS) have been released by the EA for dangerous substances, as identified by the EC Dangerous Substances Directive. EQS can vary for each substance, for the hardness of the water and can be different for fresh, estuarine or coastal waters.

WHO Health

These screening criteria have been taken from the World Health Organisation Guidelines for Drinking Water Quality (1984). The health value is a guideline value representing the concentration of a contaminant that does not result in any significant risk to the receptor over a lifetime of exposure.

Further criteria have been obtained from 'Petroleum Products in Drinking-water' - Background document for development of WHO Guidelines for Drinking-water Quality (2005).

UK Drinking Water Standards (DWS)

These comprise screening criteria provided by the Drinking Water Inspectorate (DWI) in the Water Supply (Water Quality) Regulations 2006,

6 GENERIC QUANTITATIVE RISK ASSESSMENT – SOIL DATA

6.1 Screening of Soil Chemical Analysis Results – Human Health Risk Assessment

6.1.1 Laboratory analyses for soils are summarised in Tables 6.1 to 6.4. Raw laboratory data is included in Appendix 3.

Table 6.1: Soil Laboratory Analysis Results – Metals, Metalloids, Phenol, Cyanide

Determinand	Unit	No. samples tested	Screening Criteria		Min	Max	Exceedances
Arsenic	mg/kg	25	S4UL	37	5.3	28	0
Cadmium	mg/kg	25	S4UL	11	<0.2	<0.2	0
Chromium	mg/kg	25	S4UL	910	11	61	0
Lead	mg/kg	25	C4SL	200	7.5	100	0
Mercury	mg/kg	25	S4UL	40	<0.3	<0.3	0
Nickel	mg/kg	25	S4UL	180	7.7	49	0
Copper	mg/kg	25	S4UL	2400	10	120	0
Zinc	mg/kg	25	S4UL	3700	20	110	0
Total Cyanide [A]	mg/kg	25	CLEA v 1.06	33	<1.0	1.6	0
Selenium	mg/kg	25	S4UL	250	<1.0	<1.0	0
Boron Water Soluble	mg/kg	25	S4UL	290	<0.2	2.1	0
Phenols	mg/kg	30	S4UL	120	<1.0	<1.0	0

Notes: [A] Generic assessment criteria derived for free inorganic cyanide.

Table 6.2: Soil Laboratory Analysis Results – Polycyclic Aromatic Hydrocarbons (PAHs)

Determinand	Unit	No. Samples Tested	Screening Criteria		Min	Max	Exceedances
Naphthalene	mg/kg	30	S4UL	2.3	<0.05	0.55	0
Acenaphthylene	mg/kg	30	S4UL	170	<0.05	18	0
Acenaphthene	mg/kg	30	S4UL	210	<0.05	15	0
Fluorene	mg/kg	30	S4UL	170	<0.05	14	0
Phenanthrene	mg/kg	30	S4UL	95	<0.05	180	1No.: JBH3 at 0.25mbgl
Anthracene	mg/kg	30	S4UL	2400	<0.05	59	0
Fluoranthene	mg/kg	30	S4UL	280	<0.05	370	1No.: JBH3 at 0.25mbgl
Pyrene	mg/kg	30	S4UL	620	<0.05	340	0
Benzo(a)anthracene	mg/kg	30	S4UL	7.2	<0.05	150	2No.:

Determinand	Unit	No. Samples Tested	Screening Criteria		Min	Max	Exceedances
							JBH3 at 0.25mbgl JTP8 at 0.50mbgl
Chrysene	mg/kg	30	S4UL	15	<0.05	120	2No.: JBH3 at 0.25mbgl JTP8 at 0.50mbgl
Benzo(b)fluoranthene	mg/kg	30	S4UL	2.6	<0.05	120	4No.: JWS1 at 0.10mbgl JBH2 at 0.25mbgl JBH3 at 0.25mbgl JTP8 at 0.50mbgl
Benzo(k)fluoranthene	mg/kg	30	S4UL	77	<0.05	57	0
Benzo(a)pyrene	mg/kg	30	S4UL	2.2	<0.05	100	4No.: JWS1 at 0.10mbgl JBH2 at 0.25mbgl JBH3 at 0.25mbgl JTP8 at 0.50mbgl
Indeno(123-cd)pyrene	mg/kg	30	S4UL	27	<0.05	50	1No.: JBH3 at 0.25mbgl
Dibenzo(ah)anthracene	mg/kg	30	S4UL	0.24	<0.05	14	3No.: JWS1 at 0.10mbgl JBH3 at 0.25mbgl JTP8 at 0.50mbgl
Benzo(ghi)perylene	mg/kg	30	S4UL	320	<0.05	50	0
Total PAH	mg/kg	30	-	-	<0.80	1670	-

Table 6.3: Soil Laboratory Analysis Results – Total Petroleum Hydrocarbons (TPH)

TPH Band	Unit	No. Samples Tested	Screening Criteria		Min	Max	Exceedances
C_8-C_{10}	mg/kg	16	S4UL	27	<0.1	<0.1	0
>C_{10}-C_{12}	mg/kg	16	S4UL	74	<2.0	<2.0	0
>C_{12}-C_{16}	mg/kg	16	S4UL	140	<4.0	7.3	0
>C_{16}-C_{21}	mg/kg	16	S4UL	260	<1.0	99	0
>C_{21}-C_{35}	mg/kg	16	S4UL	1100	<10	140	0
Total TPH	mg/kg	16	-	-	<17.1	313	-

Note: *The lower value of guidelines for Aromatic/Aliphatics has been selected

Table 6.4: Soil Laboratory Analysis Results – Total Petroleum Hydrocarbons (TPHCWG)

TPH Band	Unit	No. Samples Tested	Screening Criteria		Min	Max	Exceedances
$>C_5$-C_6 Aliphatic	mg/kg	14	S4UL	42	<0.001	<0.001	0
$>C_6$-C_8 Aliphatic	mg/kg	14	S4UL	100	<0.001	<0.001	0
$>C_8$-C_{10} Aliphatic	mg/kg	14	S4UL	27	<0.001	<0.001	0
$>C_{10}$-C_{12} Aliphatic	mg/kg	14	S4UL	130	<1.0	8.1	0
$>C_{12}$-C_{16} Aliphatic	mg/kg	14	S4UL	1100	<2.0	150	0
$>C_{16}$-C_{35} Aliphatic	mg/kg	14	S4UL	65000	<16.0	200	0
$>C_5$-C_7 Aromatic	mg/kg	14	S4UL	70	<0.001	<0.001	0
$>C_7$-C_8 Aromatic	mg/kg	14	S4UL	130	<0.001	<0.001	0
$>C_8$-C_{10} Aromatic	mg/kg	14	S4UL	34	<0.001	<0.001	0
$>C_{10}$-C_{12} Aromatic	mg/kg	14	S4UL	74	<1.0	14	0
$>C_{12}$-C_{16} Aromatic	mg/kg	14	S4UL	140	<2.0	130	0
$>C_{16}$-C_{21} Aromatic	mg/kg	14	S4UL	260	<10	880	2No.: JBH3 at 0.25mbgl JBH4 at 1.50mbgl
$>C_{21}$-C_{35} Aromatic	mg/kg	14	S4UL	1100	<10	1300	1No.: JBH4 at 1.50mbgl
Total TPH (Ali/Aro)	mg/kg	14	-	-	<20	2440	-

6.2 Asbestos in Soil

6.2.1 18No. samples were screened in the laboratory for the presence of asbestos. The results of the analysis are summarised below in Table 6.5 below.

Table 6.5: Asbestos Analysis – Summary

Sample	Screening Result	Quantification result (%)	Comments
JTP8 – 0.50m bgl	Detected	<0.001	Loose Fibres - Chrysotile, Amosite
JWS1 – 0.10m bgl	Not Detected	N/A	N/A
JWS2 – 0.10m bgl	Not Detected	N/A	N/A
JWS3 – 0.10m bgl	Not Detected	N/A	N/A
JWS4 – 0.10m bgl	Not Detected	N/A	N/A
JWS5 – 0.10m bgl	Not Detected	N/A	N/A
JBH1 – 0.25m bgl	Not Detected	N/A	N/A
JBH2 – 0.25m bgl	Not Detected	N/A	N/A
JBH3 – 0.25m bgl	Not Detected	N/A	N/A
JBH4 – 0.10m bgl	Not Detected	N/A	N/A

Sample	Screening Result	Quantification result (%)	Comments
JTP1 – 0.25m bgl	Not Detected	N/A	N/A
JTP5 – 0.75m bgl	Not Detected	N/A	N/A
JTP7 – 0.10m bgl	Not Detected	N/A	N/A
JTP7 – 0.75m bgl	Not Detected	N/A	N/A
JTP14 – 0.75m bgl	Not Detected	N/A	N/A
JTP16 – 0.75m bgl	Not Detected	N/A	N/A
JSTP1 – 0.75m bgl	Not Detected	N/A	N/A
JSTP2 – 1.00m bgl	Not Detected	N/A	N/A

6.2.2 Asbestos was detected in one sample only, which was taken from exploratory location JTP08 at a depth of 0.5m bgl. The Made Ground at this location was described as containing limestone, brick, asphalt, glass and flint.

6.2.3 The result from the asbestos quantification analysis indicated the asbestos concentration of the sample to be <0.001%. This is less 0.1%, at which arisings are considered to be hazardous for the purpose of disposal.

6.3 Volatile Organic Compounds

6.3.1 In addition to the suites outlined previously, 13No. samples were tested for the presence of volatile organic compounds including BTEX compounds (benzene, toluene, ethylbenzene, xylene).

6.3.2 VOCs were not reported above the laboratory detection limit in any of the samples tested.

6.4 Polychlorinated Biphenyl (PCB) Concentrations

6.4.1 In addition to the suites outlined previously, 2No. soil samples obtained from the vicinity of the electrical substation were analysed for the presence of PCBs.

6.4.2 No PCBs were reported above the laboratory method detection limit.

6.5 Vapour Risk Assessment from a Soil Source

6.5.1 As outlined in Tables 6.2 and 6.4, a number of polyaromatic hydrocarbons and petroleum hydrocarbon fractions have been found in excess of their generic screening criteria for the protection of human health within a 'residential with home-grown produce' end-use scenario. The generic screening criteria considers all possible pathways between the source and the receptor. In order to assess potential risks from inhalation of vapour, each organic compound that has been found in excess of its GAC will be assessed in terms of the contribution to total exposure from vapour inhalation inside a structure as reported within the LQM/CIEH S4UL document. Where a significant proportion of the total exposure is reported from vapour inhalation, there could be a potential risk from vapour inhalation.

Table 6.6: Soil Laboratory Analysis Results – Contribution to Total Exposure from Vapour Inhalation (Indoor)

Compound	Contribution of Vapour Inhalation to Total Exposure (%)	Screening Criteria (mg/kg)	Maximum Recorded Value (mg/kg)	Potential Vapour Risk?
Phenanthrene	1.0	95	180	X
Fluoranthene	0.4	280	370	X
Benzo(a)anthracene	0.1	7.2	150	X
Chrysene	<0.1	15	120	X
Benzo(b)fluoranthene	<0.1	2.6	120	X
Benzo(a)pyrene	0.0	2.2	100	X
Indeno(123-cd)pyrene	<0.1	27	50	X
Dibenzo(ah)anthracene	<0.1	0.24	14	X
$>C_{16}$-C_{21} Aromatic	0.2	260	880	X
$>C_{21}$-C_{35} Aromatic	0.0	1100	1300	X

6.5.2 As shown in the table above, all of the potentially volatile organic compounds detected in the soils in excess of generic assessment criteria have a negligible contribution to total exposure via inhalation pathway (less or equal to 1%).

6.5.3 Furthermore, of the 13No. soil samples tested for VOCs, none reported concentrations above the laboratory detections limits.

6.5.4 Therefore, it is considered that the risk to the future site users from the potential inhalation of vapours from the soils is negligible.

6.5.5 The elevated concentrations of medium to heavy end aromatic hydrocarbons reported in exploratory location JBH4 at 1.50m bgl are likely to be associated with the black staining and hydrocarbon odour reported in this position at 1.2-2.0m bgl. However, as demonstrated above, the risk associated via vapour inhalation from this source is considered to be negligible.

6.6 Summary of Human Health Generic Quantitative Risk Assessment

6.6.1 In summary, locally elevated concentrations of some PAH compounds and TPH fractions have been recorded in the topsoil and Made Ground.

6.6.2 The greatest exceedances of PAH were detected in Made Ground samples obtained from exploratory holes JBH3 (0.25m) and JTP8 (0.5m), both located in the south-western part of the site. Fragments of asphalt were reported in the Made Ground in both locations and are the likely sources of elevated PAH reported.

6.6.3 The findings are consistent with the Hydrock report (2017) which also reported exceedances of PAH in the Made Ground.

6.6.4 The elevated aromatic TPH concentrations recorded in the Made Ground sample obtained from exploratory hole JBH4 (1.5m) is likely to be associated with the contamination (black staining and hydrocarbon odour) reported at 1.2-2.0m bgl in this location. The source of this

impact is likely the adjacent above ground storage tanks and/or associated underground pipework.

6.6.5 Elevated aromatic hydrocarbons were also reported in the Made Ground sample obtained from JBH3 (0.25m). Visual/olfactory evidence of organic contamination was not observed in JBH3, nor did the borehole target a specific point source. However, the presence of asphalt fragments (see above) may be the source of the elevated hydrocarbons reported.

6.6.6 In addition, asbestos was detected in 1No. Made Ground sample (out of 18No. screened). No asbestos was detected in Hydrock's investigation (out of 7No. samples tested).

6.7 Screening of Soil Chemical Analysis Results – Potential Risks to Plant Growth

6.7.1 Zinc, copper and nickel are phytotoxins and could therefore inhibit plant growth in soft landscaped areas. Concentrations measured in soil for these determinands have been compared with the pH dependent values given in BS:3882 (2015). This does not constitute a full BS:3882 topsoil test.

6.7.2 Table 6.7 shows the soil analytical results compared with the relevant screening values, adopting a pH value of greater than 7, as indicated by the results of the laboratory analysis.

Table 6.7: Soil Laboratory Analysis Results – Phytotoxic Determinands

Determinand	Threshold level (mg/kg)	Min (mg/kg)	Max (mg/kg)	No. Exceeding
Nickel	110	7.7	49	0
Copper	200	10	120	0
Zinc	300	20	110	0

6.7.3 None of the samples exceeded the threshold levels and a significant risk to plant growth has not been identified.

6.8 Screening for Water Pipes Materials

6.8.1 The results of the analysis have been assessed for potential impact upon water supply pipes. Table 6.8 below summarises the findings of the assessment:

Table 6.8: Screening Guide for Water Pipes

Determinand	No. of tests	Threshold adopted for PE (mg/kg)	Value for site data (mg/kg)		No of Exceedances
			Min	Max	
Total VOCs	13	0.5	<0.056*	<0.056*	0
BTEX	13	0.1	<0.005*	<0.005*	0
MTBE	13	0.1	<0.001*	<0.001*	0
EC5-EC10	30	1	<0.006*	<0.1*	0
EC10-EC16	30	10	<6.0*	292.1	3No.: JBH3 at 0.25mbgl JBH4 at 1.50mbgl

Determinand	No. of tests	Threshold adopted for PE (mg/kg)	Value for site data (mg/kg)		No of Exceedances
			Min	Max	
					JBH5 at 0.25mbgl JTP8 at 0.50mbgl
EC16-EC40	30	500	<11.0*	2380	3No.: JBH3 at 0.25mbgl JBH4 at 1.50mbgl JTP8 at 0.50mbgl
Naphthalene	30	5	<0.05*	0.55	0
Phenols	30	2	<1.0*	<1.0*	0

*Laboratory detection limit

6.8.3 The above suggests that upgraded pipe work may be required.

6.8.4 Alternatively, it may be possible to utilise other protection methods including (but not limited to):

- diversion of the pipe,
- localised remediation
- embedding the pipe in a sufficient thickness of clean granular material

6.8.5 The water supply pipe requirements for this site should be discussed at an early stage with the relevant Utility provider.

6.9 Waste Characterisation

6.9.1 The classification of materials for waste disposal purposes was outside the scope of this report. Should quantities of material require off-site disposal, waste classification will be required to determine whether soils may be treated as hazardous or non-hazardous.

6.9.2 Note that Waste Acceptance Criteria (WAC) analysis may then be required by the landfill operator to determine whether materials can be disposed of at either an inert, stable non-reactive hazardous or hazardous landfill.

7 GENERIC QUANTITATIVE RISK ASSESSMENT – GROUNDWATER DATA

7.1 Groundwater sampling

7.1.1 2No groundwater sampling visits were conducted at the site; the first from the 15 to 17 June 2022 (round 1), and the second from 27 to 29 July 2022 (round 2).

7.1.2 Groundwater samples obtained from the borehole installations within exploratory locations JBH1-JBH9, JWS2-JWS3; and also from wells installed in BH05 and BH10-BH14 by Hydrock in 2016 were submitted for laboratory chemical analysis. JWS1 and JWS5 were not sampled during either visit as both wells were reported as dry to their terminal depths of 1.36m and 1.57m bgl respectively. JWS2 and JWS3 were not sampled during the return visit in July.

7.1.3 The samples were obtained by means of low flow methodology. Groundwater sampling records are presented in Appendix 6.

7.2 Assessment of Groundwater Analytical Data with Respect to Controlled Waters

7.2.1 The results of the laboratory testing from round 1 are summarised in Table 7.1 to 7.3, and from round 2 in Tables 7.4 and 7.5, below, and compared to GAC for controlled waters receptors. The analytical laboratory certificates are presented in Appendix 3.

Table 7.1: Groundwater Laboratory Analysis Results – Metals, Metalloids, Phenol, Cyanide (Round 1)

Determinand	Unit	No. samples tested	Screening Criteria		Min	Max	Exceedances
Arsenic	µg/l	17	10	DWS	<0.15	2.78	0
			50	EQS	<0.15	2.78	0
Cadmium	µg/l	17	5	DWS	<0.02	<0.02	0
			0.25	EQS	<0.02	<0.02	0
Chromium	µg/l	17	50	DWS	<0.2	0.5	0
			4.7	EQS	<0.2	0.5	0
Lead	µg/l	17	10	DWS	<0.2	1.8	0
			1.2*	EQS	<0.2	1.8	JBH1
Nickel	µg/l	17	20	DWS	<0.5	5.1	0
			4*	EQS	<0.5	5.1	JWS3
Copper	µg/l	17	2000	DWS	0.6	8.1	0
			1.0*	EQS	0.6	8.1	JBH1, JBH2, JBH3, JBH5, JBH6, JBH7, JBH8, JBH9, JWS2, JWS3, BH05, BH10, BH11, BH12, BH13, BH14
Zinc	µg/l	17	5000	DWS	2.1	9.5	0
			10.9**	EQS	2.1	9.5	0
Mercury	µg/l	17	1	DWS	<0.05	<0.05	0

Table 7.1: Groundwater Laboratory Analysis Results – Metals, Metalloids, Phenol, Cyanide (Round 1)

Determinand	Unit	No. samples tested	Screening Criteria		Min	Max	Exceedances
			0.07	EQS	<0.05	<0.05	0
Selenium	µg/l	17	10	DWS	<0.6	0.8	0
Boron	µg/l	17	1000	DWS	29	250	0
			2000	EQS	29	250	0
Cyanide (Total)	µg/l	17	50	DWS	<1.0	26	0
			1	EQS	<1.0	26	JBH7, JBH8, JBH9, BH11
Phenols (Total)	µg/l	17	7.7	EQS	<10	<10	0

** bioavailable concentration*
***bioavailable concentration + ambient background concentration dissolved for Thames Groundwater (2 µg/L)*

Table 7.2: Groundwater Analysis Results – Polycyclic Aromatic Hydrocarbons (PAHs) (Round 1)

Determinand	Unit	No. samples tested	Screening Criteria		Min.	Max.	Exceedances
Naphthalene	µg/l	17	2.0	EQS	<0.01	<0.01	0
Acenaphthylene	µg/l	17	-	-	<0.01	0.18	-
Acenaphthene	µg/l	17	-	-	<0.01	0.49	-
Fluorene	µg/l	17	-	-	<0.01	0.70	-
Phenanthrene	µg/l	17	-	-	<0.01	<0.01	-
Anthracene	µg/l	17	0.1	EQS	<0.01	<0.01	0
Fluoranthene	µg/l	17	0.0063	EQS	<0.01	0.83	JWS3
Pyrene	µg/l	17	-	-	<0.01	0.34	-
Benzo(a)anthracene	µg/l	17	-	-	<0.01	<0.01	-
Chrysene	µg/l	17	-	-	<0.01	<0.01	-
Sum of four Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(ghi)perylene Indeno(123-cd)pyrene	µg/l	17	0.1	DWS	<0.04	<0.04	0
Benzo(a)pyrene	µg/l	17	0.01	DWS	<0.01	<0.01	0
	µg/l		0.00017	EQS	<0.01	<0.01	0
Dibenzo(ah)anthracene	µg/l	17	-	-	<0.01	<0.01	-

Table 7.3: Groundwater Analysis Results– TPHCWG & BTEX – Controlled Waters (Round 1)

Determinand	Unit	No. Samples tested	Screening Criteria		Min.	Max.	Exceedances
Benzene	µg/l	17	1.0	DWS	<1.0	<1.0	0
		17	10	EQS	<1.0	<1.0	0

Determinand	Unit	No. Samples tested	Screening Criteria		Min.	Max.	Exceedances
Toluene	µg/l	17	74	EQS	<1.0	<1.0	0
		17	700	WHO	<1.0	<1.0	0
Ethyl benzene	µg/l	17	300	WHO	<1.0	<1.0	0
Xylenes (total)	µg/l	17	30	EQS	<2.0	<2.0	0
		17	500	WHO	<2.0	<2.0	0
MTBE	µg/l	17	-	-	<1.0	<1.0	0
>C_5-C_6 Aliphatic	µg/l	17	15000	WHO	<1.0	<1.0	0
>C_6-C_8 Aliphatic	µg/l	17	15000	WHO	<1.0	<1.0	0
>C_8-C_{10} Aliphatic	µg/l	17	300	WHO	<1.0	<1.0	0
>C_{10}-C_{12} Aliphatic	µg/l	17	300	WHO	<10	730	JBH6
>C_{12}-C_{16} Aliphatic	µg/l	17	300	WHO	<10	580	JBH6
>C_{16}-C_{21} Aliphatic	µg/l	17	-	-	<10	110	-
>C_{21}-C_{35} Aliphatic	µg/l	17	-	-	<10	530	-
>C_5-C_7 Aromatic	µg/l	17	10	WHO	<1.0	<1.0	0
>C_7-C_8 Aromatic	µg/l	17	700	WHO	<1.0	<1.0	0
>C_8-C_{10} Aromatic	µg/l	17	300	WHO	<1.0	<1.0	0
>C_{10}-C_{12} Aromatic	µg/l	17	90	WHO	<10	390	JBH4, JBH6, BH10
>C_{12}-C_{16} Aromatic	µg/l	17	90	WHO	<10	350	JBH4, JBH6, BH10
>C_{16}-C_{21} Aromatic	µg/l	17	90	WHO	<10	72	0
>C_{21}-C_{35} Aromatic	µg/l	17	90	WHO	<10	<10	0

7.2.2 In addition to the suite outlined above, the 17No. water samples were also analysed for a suite of volatile organic compounds (VOCS). None of the compounds analysed for were reported above the laboratory method detection limit.

7.2.3 Similarly, for the BTEX (Benzene, Toluene, Ethylbenzene and Xylene) compounds, as shown in Table 7.3 above, none of the results were reported above the laboratory limit of detection.

Table 7.4: Groundwater Analysis Results – Polycyclic Aromatic Hydrocarbons (PAHs) (Round 2)

Determinand	Unit	No. samples tested	Screening Criteria		Min.	Max.	Exceedances
Naphthalene	µg/l	15	2.0	EQS	<0.01	<0.01	0
Acenaphthylene	µg/l	15	-	-	<0.01	0.28	-
Acenaphthene	µg/l	15	-	-	<0.01	0.5	-
Fluorene	µg/l	15	-	-	<0.01	0.71	-
Phenanthrene	µg/l	15	-	-	<0.01	<0.01	-
Anthracene	µg/l	15	0.1	EQS	<0.01	<0.01	0

Determinand	Unit	No. samples tested	Screening Criteria		Min.	Max.	Exceedances
Fluoranthene	µg/l	15	0.0063	EQS	<0.01	<0.01	0
Pyrene	µg/l	15	-	-	<0.01	<0.01	-
Benzo(a)anthracene	µg/l	15	-	-	<0.01	<0.01	-
Chrysene	µg/l	15	-	-	<0.01	<0.01	-
Sum of four Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(ghi)perylene Indeno(123-cd)pyrene	µg/l	15	0.1	DWS	<0.04	<0.04	0
Benzo(a)pyrene	µg/l	15	0.01	DWS	<0.01	<0.01	0
	µg/l		0.00017	EQS	<0.01	<0.01	0
Dibenzo(ah)anthracene	µg/l	15	-	-	<0.01	<0.01	-

Table 7.5: Groundwater Analysis Results– TPHCWG & BTEX – Controlled Waters (Round 2)

Determinand	Unit	No. Samples tested	Screening Criteria		Min.	Max.	Exceedances
Benzene	µg/l	15	1.0	DWS	<1.0	<1.0	0
		15	10	EQS	<1.0	<1.0	0
Toluene	µg/l	15	74	EQS	<1.0	<1.0	0
		15	700	WHO	<1.0	<1.0	0
Ethyl benzene	µg/l	15	300	WHO	<1.0	<1.0	0
Xylenes (total)	µg/l	15	30	EQS	<2.0	<2.0	0
		15	500	WHO	<2.0	<2.0	0
MTBE	µg/l	15	-	-	<1.0	<1.0	0
>C_5-C_6 Aliphatic	µg/l	15	15000	WHO	<1.0	<1.0	0
>C_6-C_8 Aliphatic	µg/l	15	15000	WHO	<1.0	<1.0	0
>C_8-C_{10} Aliphatic	µg/l	15	300	WHO	<1.0	<1.0	0
>C_{10}-C_{12} Aliphatic	µg/l	15	300	WHO	<10	<10	0
>C_{12}-C_{16} Aliphatic	µg/l	15	300	WHO	<10	<10	0
>C_{16}-C_{21} Aliphatic	µg/l	15	-	-	<10	<10	0
>C_{21}-C_{35} Aliphatic	µg/l	15	-	-	<10	<10	0
>C_5-C_7 Aromatic	µg/l	15	10	WHO	<1.0	<1.0	0
>C_7-C_8 Aromatic	µg/l	15	700	WHO	<1.0	<1.0	0
>C_8-C_{10} Aromatic	µg/l	15	300	WHO	<1.0	<1.0	0
>C_{10}-C_{12} Aromatic	µg/l	15	90	WHO	<10	390	JBH4, JBH6, BH10
>C_{12}-C_{16} Aromatic	µg/l	15	90	WHO	<10	280	JBH4, JBH6,

Determinand	Unit	No. Samples tested	Screening Criteria		Min.	Max.	Exceedances
							BH10
>C_{16}-C_{21} Aromatic	µg/l	15	90	WHO	<10	14	0
>C_{21}-C_{35} Aromatic	µg/l	15	90	WHO	<10	<10	0

7.2.4 In addition to the suite outlined above, the 15No water samples were also analysed for a suite of volatile organic compounds (VOCS). None of the compounds analysed for were reported above the laboratory method detection limit.

7.2.5 Similarly, for the BTEX (Benzene, Toluene, Ethylbenzene and Xylene) compounds, as shown in Table 7.5 above, none of the results were reported above the laboratory limit of detection.

7.2.6 During the first round of sampling, locally slightly elevated concentrations of lead and nickel, and more widespread exceedances of copper were reported in excess of Environmental Quality Standards (EQS). However, the EQS values are based on the bioavailable concentrations of these metals, rather than the total dissolved concentrations reported by the laboratory. The bioavailable concentrations of the metals would be expected to be lower than the total concentration reported. Given this and that only relatively minor exceedances of lead and nickel have been reported, the nickel and lead are not considered to pose significant risk to controlled water receptors. Although elevated in groundwater, copper concentrations in soil have not been identified at significantly elevated concentrations and therefore the copper concentration in groundwater is likely to the result of a wider area issue, also reflected in the number of exceedances reported (16/17 samples) rather than being directly related to the study site.

7.2.7 Also, during the first round of sampling, total cyanide concentrations in excess of the EQS have been reported in 4No. groundwater samples obtained from JBH7, JBH8, JBH9 and BH11. No soil source of cyanide has been identified (the concentrations of total cyanide reported in all soil samples were ≤1.0mg/kg). In addition, 13No. remaining groundwater samples did not contain detectable concentrations of cyanide, and 2No. of the 3No. exceedances were marginal (1.1-2.8 µg/l). The exceedances are not widespread across the site and no specific on-site source area of cyanide has been identified and therefore remedial action is unlikely to be effective and is not considered necessary.

7.2.8 As a result of the above conclusions, it was deemed that no pollutant linkages are present with regards to the site impacting on concentrations of metals, metalloids, phenols and cyanide in groundwater and, therefore, the samples collected during the second sampling round were not subject to analysis for these determinands.

7.2.9 A locally elevated concentration of fluoranthene, above the EQS, was reported in a groundwater sample obtained from JWS3, during the first round of sampling. The concentrations of fluoranthene reported in all the other 16No. groundwater samples obtained during this visit, as well as all 15No. samples obtained during the second visit, were below the laboratory limit of detection. The only PAHs with stated “moderate” or “high” mobility rankings in groundwater (as per CL:AIRE, 2017) are naphthalene, acenaphthylene, and acenaphthene. Of these compounds, only naphthalene has a statutory water quality standard. As naphthalene was not found to exceed the laboratory detection limit, the levels of PAHs in groundwater are not considered to pose a risk to sensitive receptors.

7.2.10 Locally elevated concentrations of aliphatic hydrocarbon fractions >C_{10}-C_{12} and >C_{12}-C_{16} were reported in a groundwater sample obtained from borehole JBH6 during the first round of sampling. As per Table 5.1 of CL:AIRE, 2017 these hydrocarbon fractions are reported as having a 'low' to 'very low' mobility in groundwater. Therefore, the risk posed to the controlled waters from these contaminants is considered to be low. In addition, during the second round of sampling (which included JBH6) no aliphatic hydrocarbon fractions were reported above detection limits.

7.2.11 Locally elevated concentrations of aromatic hydrocarbons >C_{10}-C_{12} and >C_{12}-C_{16} were reported in the groundwater samples obtained from boreholes JBH4, JBH6 and BH10, during both of the sampling rounds. As per Table 5.1 of CL:AIRE, 2017 these hydrocarbon fractions are considered to have a 'moderate' mobility in groundwater.

7.2.12 JBH4 targeted above ground storage tanks, south of Valve Pit 1. Results from the soil analysis revealed elevated concentrations of long chain aromatic hydrocarbons in the same location. Black staining and a hydrocarbon odour were also noted during drilling of this borehole at depths of 1.2m to 2.0m bgl. It is likely that the source of hydrocarbon contamination in this area is the nearby tanks and/or associated underground pipework and hydrocarbon impacted soils.

7.2.13 JBH6 targeted an area east of POL2 and south of Valve Pit 3, however, elevated hydrocarbon contaminants were not detected in soils and there was no visual or olfactory evidence of contamination reported during drilling, although a slight hydrocarbon odour was observed during groundwater sampling. The potential source of this contamination is currently unclear and further investigation in this area is recommended to investigate the potential presence of a currently unknown source.

7.2.14 According to Hydrock, BH10 targeted POL21. Hydrock reported elevated concentrations of aliphatic hydrocarbons >C_6-C_{16} within groundwater from BH10, but all aromatic hydrocarbons were reported below the laboratory detection limit of 10 µg/l.

7.2.15 Elevation data and groundwater levels across the site have been studied to determine the likely groundwater flow direction. The data review indicates groundwater flow is generally to the south-west. This is supported by the fact that the River Cherwell, located approximately 1.75km west of the site, flows to the south, and additional minor tributaries (including Gallos Brook) flow south to join it.

7.2.16 Groundwater analysis was undertaken at a site referred to as Phase 9 in September 2021 (see Section 2.3). The Phase 9 site is located south-west and therefore down-gradient of the study site (Phase 10). More specifically, the nearest borehole on the Phase 9 site was located approximately 60m south-west of JBH4 on Phase 10. Over two sampling visits in, 10No. groundwater samples were obtained from the Phase 9 site and scheduled for a suite of contaminants including BTEX, MTBE, and TPHCWG. None of the determinands were detected above laboratory detection limits.

7.2.17 Therefore, it is considered that the hydrocarbon contamination identified in groundwater on Phase 10 is not significantly impacting groundwater off-site and the risk to controlled waters remain relatively low. The contamination reported is likely a localised issue and significant betterment of the groundwater environment can be achieved through tank removal, pipework removal and impacted soil removal, which will sever any residual potential pollutant linkages to controlled waters. Further groundwater sampling post-remediation may be required to demonstrate that an ongoing risk to controlled waters is not present.

7.3 Assessment of Groundwater Analytical Data with Respect to Vapour Intrusion Pathways

7.3.1 In order to further assess potential risks to human health receptors via vapour intrusion pathways, the groundwater results have been compared to generic assessment criteria, published by the Society of Brownfield Risk Assessment (SoBRA) in 2017, relevant to a pollutant linkage via vapour intrusion from a dissolved phase source in groundwater. The site is to be developed to provide residential housing, and therefore, the GAC have been selected for a residential end use.

7.3.2 This assessment supplements the assessment of risks via vapour intrusion from soil data provided in Section 6.5, that concluded a negligible risk.

7.3.3 The assessment results are presented in Table 7.6. Only contaminants recorded above detection limits, from either one or both of the sampling visits, have been assessed.

Table 7.6 Groundwater Vapour Risk Analysis Results (µg/l)

Determinand	Unit	Screening Criteria	Min.	Max.	No. of Exceedances
Acenaphthylene	µg/l	220,000	<0.01	0.18	0
Acenaphthene	µg/l	170,000	<0.01	0.49	0
Fluorene	µg/l	210,000	<0.01	0.7	0
Fluoranthene	µg/l	Insufficiently volatile	<0.01	0.83	-
Pyrene	µg/l	Insufficiently volatile	<0.01	0.34	-
Aliphatic >C_{10}-C_{12}	µg/l	37	<10	730	JBH6
Aliphatic >C_{12}-C_{16}	µg/l	Insufficiently volatile	<10	580	-
Aliphatic >C_{16}-C_{21}	µg/l	Insufficiently volatile	<10	110	-
Aliphatic >C_{21}-C_{35}	µg/l	Insufficiently volatile	<10	530	-
Aromatic >C_{10}-C_{12}	µg/l	6800	<10	390	0
Aromatic >C_{12}-C_{16}	µg/l	39000	<10	350	0
Aromatic >C_{16}-C_{21}	µg/l	Insufficiently volatile	<10	72	-

7.3.4 Out of 32No. total groundwater samples analysed, only the sample from the first round of sampling from JBH6 was reported to have detectable concentrations of aliphatic hydrocarbons >C_{10}-C_{12}, with all other samples reporting <10 µg/l.

7.3.5 A widespread vapour risk is therefore considered unlikely to be present across the site but a localised risk around JBH6 cannot be ruled out at this stage.

7.3.6 Visual or olfactory evidence of contamination was not observed in the soils during the drilling of JBH6. In addition, the results from the soils analysis indicated only low concentrations of total petroleum hydrocarbon to be present in this location.

7.3.7 It is noted that a "slight hydrocarbon smell" was reported from JBH6 during the first round of groundwater sampling (where the elevated concentration of aliphatic C10-C12 was reported) and a "strong hydrocarbon smell" was reported during the second sampling round, from which no elevated concentrations of hydrocarbons was reported.

7.3.8 Based on the above, it is recommended that further investigation is conducted in the vicinity of JBH6, likely to comprise a series of trial pits in an attempt to identify a currently unknown source that may be present, and would explain the elevated groundwater hydrocarbon concentrations in the area. It is recommended that such work is undertaken at the same time as the removal of the known fuel infrastructure across the rest of the site.

7.3.9 If a specific source is identified (such as impacted soils, pipework or a tank) this should be removed and further water sampling post-remediation may be sufficient to demonstrate that an ongoing vapour risk is not present.

7.3.10 Should no specific source be identified, further assessment of the potential vapour risk should be undertaken, potentially comprising the collection and analysis of vapour samples and derivation of site specific vapour assessment criteria to assess the chronic risk that the above exceedance poses to human health.

8 SOIL GAS RISK ASSESSMENT

8.1 Soil Gas Results

8.1.1 3No. return monitoring visits have been undertaken on 8 and 14 June, and 26 July 2022, to monitor wells installed within boreholes at the site for soil gas concentrations and groundwater levels.

8.1.2 During these visits atmospheric pressure ranged between 989mb and 1007mb. The pressure trends observed were falling and rising.

8.1.3 The results from the monitoring undertaken to date are summarised in Table 8.1. The full monitoring records are presented in Appendix 5.

Table 8.1: Summary of Gas Monitoring Data

Hole No.	Install Details	CH_4 (%)	CO_2 (%)	O_2 (%)	VOCs (ppm)	Steady Flow Rate (l/hr)	Peak Flow Rate (l/hr)	Depth to water (m bgl)	Well Response Zone as installed (top / bottom) (m bgl)
JWS1	Jomas, 2022	0.0 – 0.2	0.8 - 1.3	19.7 - 20.5	2 – 11	0.1 to 0.3	0.3	Dry	1.0 / 1.4
JWS2		0.0 – 0.2	0.3 – 2.0	18.7 - 21.6	4 – 25	0.0 to 0.2	0.2	1.12 – 1.49	1.0 / 2.0
JWS3		0.0 – 0.2	2.5 - 3.2	18.1 - 20.8	<1 – 2	0.1 to 0.3	0.3	1.36 – 1.74	1.0 / 3.8
JWS5		0.0 – 0.2	0.9 - 1.2	19.2 - 20.7	1 – 75	0.1 to 0.2	0.2	Dry	1.0 / 1.5
JBH1		0.0 – 0.2	0.5 – 1.1	20.3 - 21.6	6 – 10	0.0 to 0.2	0.2	3.61 – 3.72	1.0 / 8.0
JBH2		0.0 – 0.2	0.0	15.7 - 17.4	13 – 65	0.0 to 0.2	0.2	1.63 – 1.96	1.0 / 8.0
JBH3		0.0 – 0.3	4.1 - 5.7	14.0 - 15.9	3 – 166	0.1 to 0.3	0.3	1.83 – 2.18	1.0 / 8.0
JBH4		1.2 – 1.5	1.6 – 9.3	7.8 - 15.5	326 – 565	-0.2 to 0.3	0.3	1.52 – 1.83	1.0 / 8.0
JBH5		0.0 – 0.2	0.1 – 0.3	20.0 - 20.4	2 – 20	0.1 to 0.3	0.3	3.34 – 4.03	1.0 / 8.0
JBH6		0.1 – 0.8	1.0 - 1.2	19.2 - 20.1	84 – 264	0.1 to 0.2	0.2	3.70 – 5.02	1.0 / 8.0
JBH7		0.0 – 0.3	6.8 - 7.9	15.1 - 15.5	<1 – 4	0.0 to 0.3	0.3	2.71 – 3.07	1.0 / 8.0
JBH8		0.0 – 0.3	1.2 - 1.4	19.0 - 20.5	8 – 24	0.2 to 0.3	0.3	2.92 – 3.50	1.0 / 8.0
JBH9		0.0 – 0.2	1.6 - 1.9	17.9 - 20.3	3 – 32	0.1 to 0.3	0.3	4.45 – 5.77	1.0 / 8.0
BH05	Hydrock, 2016	0.0 – 0.2	3.1 – 7.3	14.7 - 19.3	2 – 4	0.0 to 0.3	0.3	2.03 – 2.47	2.0 / 8.0
BH10		0.0 – 0.3	1.9 – 3.8	14.7 - 21.4	12 – 73	0.1 to 0.2	0.2	2.78 – 3.26	2.0 / 8.0
BH11		0.0 – 0.2	0.6 - 0.8	19.5 - 21.4	6 – 28	0.1 to 0.3	0.3	2.79 – 3.94	2.0 / 8.0
BH12		0.0 – 0.2	0.2 - 2.2	18.6 - 21.4	4 – 33	0.2 to 0.3	0.3	4.12 – 4.87	2.0 / 8.0
BH13		0.0 – 0.2	0.5 - 0.9	20.3 - 20.7	4 – 112	0.2 to 0.3	0.3	3.58 – 5.02	2.0 / 8.0
BH14		0.0 – 0.2	0.8 – 1.4	18.7 - 18.9	1 – 28	0.2	0.2	3.18 – 3.80	2.0 / 8.0

8.2 Screening of Results

8.2.1 As shown in Table 8.1, the maximum methane (CH_4) and carbon dioxide (CO_2) concentrations reported were 1.5% and 9.3% v/v respectively. Screening of the monitoring well headspaces with a photo-ionisation detector (PID) has detected maximum Volatile Organic Compound (VOC) concentration of 565ppm. A maximum gas flow rate recorded during monitoring was 0.3l/hr.

8.2.2 The soil gas assessment method is based on that proposed by Wilson & Card (1999), which was a development of a method proposed in CIRIA publication R149 (CIRIA, 1995). The method uses both gas concentrations and borehole flow rates to define a characteristic situation based on the limiting borehole gas volume flow for methane and carbon dioxide. In both these methods, the limiting borehole gas volume flow is renamed as the Gas Screening Value (GSV).

8.2.3 The Gas Screening Value (litres of gas per hour) is calculated by using the following equation

GSV = (Concentration/100) X Flow rate

Where concentration is measured in percent (%)
and flow rate is measured in litres per hour (l/hr)

8.2.4 To accord with C665, worst case conditions are used in the calculation of GSVs for the site. These have been summarised below in Table 8.2. The Characteristic Situation (CS) is then determined from Table 8.5 of CIRIA C665.

Table 8.2: Summary of Gas Monitoring Data

Gas	Concentration (v/v %)	Peak Flow Rate (l/hr)	GSV (l/hr)	Characteristic Situation (after CIRIA C665)
CO_2	9.3	0.3	**0.0279**	**1**
CH_4	1.5	0.3	**0.0045**	**1**

Jomas' Findings (2022)

8.2.5 Based on the calculated GSVs (<0.07l/hr), the site is classified as Characteristic Situation 1 (CS1).

8.2.6 BS8485 states that consideration should be given to increasing the classification to CS2 when concentrations of methane are >1.0% or concentrations of carbon dioxide are >5.0%. Elevated methane concentrations of 1.2% to 1.5% were reported in JBH4 only. Occasionally elevated carbon dioxide concentrations, in excess of 5% and up to 7.9%, have been reported within JBH3, JBH4, JBH7 and BH05. However, it should be noted that the concentrations were predominantly low-level exceedances, and they were only detected within 4No out of 17No of the wells monitored. In addition, the flow rates recorded across the entire site were consistently low (≤0.3l/hr). Based on the above, it is considered that the GSVs are appropriate in classifying the site as CS1, and no formal gas protection measures are considered necessary.

8.2.7 Furthermore, it is likely that the elevated methane in JBH3 and JBH4 can be attributed to the hydrocarbon impacted soil/groundwater in that location (see Sections 6 & 7). In accordance with CL:AIRE Research Bulletin RB17 (2012), the presence of degrading hydrocarbons in the well can result in presence of methane and carbon dioxide in the well head space.

Summary of Hydrock Findings (2016)

8.2.8 Ground gas monitoring was undertaken by Hydrock on 3 occasions in 2016. The monitoring included wells installed in boreholes BH05 and BH10 to BH14. The response zones for the boreholes spanned the Great Oolite Group.

8.2.9 Hydrock "provisionally classified" the site as CS2 due to elevated concentrations of methane reported in BH10 on 2 visits. However, it should be noted that the maximum reported GSV throughout all three monitoring events was 0.0024l/hr, and flow rates across all wells and visits remained at ≤0.1l/hr. The methane concentrations of up to 1.7% reported in BH10 may be a result of degrading hydrocarbons identified within groundwater obtained from BH10, as discussed above in paragraphs 8.2.11.

8.2.1 British Standard BS 8576:2013 has been used to derive threshold levels for carbon monoxide and volatile organic compounds.

8.2.2 Carbon monoxide concentrations recorded during monitoring generally ranged from below the limit of detection to 1ppm, although a maximum concentration of 21ppm was reported in JBH2. The Health and Safety Executive (HSE) has recommended a long-term exposure limit of 30ppm. The concentrations recorded on the site are therefore within acceptable limits and it is not considered that additional protection measures need to be incorporated to protect end users from the recorded carbon monoxide concentrations.

8.2.1 PID screening of the monitoring well headspace has revealed maximum concentrations of VOCs of 564ppm in JBH4 and 264ppm in JBH6. A vapour risk from a soil source has not been identified (see Section 6.5). However, a potential vapour risk from groundwater source has been identified in JBH6. Therefore, it is considered that the risks to human health receptors via vapour inhalation pathways require further evaluation. See Section 7.3 for further detail.

Conclusion

8.2.2 Based on the calculated GSVs, and in consideration of the conceptual site model, the site is classified as Characteristic Situation 1 (CS1) and no formal gas protection measures are considered necessary.

8.2.3 Further investigation of possible vapour risks in the vicinity of JBH6 is recommended. Vapour protection measures may be considered necessary in the vicinity of JBH6 depending on the outcome of that further assessment.

9 GEO-ENVIRONMENTAL ASSESSMENT SUMMARY AND RECOMMENDATIONS

9.1 Land Quality Impact Summary

9.1.1 Following the ground investigation, the following is noted:

- It is understood that the proposed development will comprise demolition of existing buildings and removal of existing infrastructure for the redevelopment of the site to provide new residential houses with gardens and areas of public open space/park.

Soil

- Concentrations of PAHs and long chain aromatic hydrocarbons have been reported in the shallow soils in excess of generic assessment criteria for the protection of human health within a residential with home-grown produce end-use scenario. In addition, presence of chrysotile and amosite asbestos fibres have locally been reported.

- The future buildings and hardstanding will act as a barrier to protect the future site users from contamination present within the shallow soils. However, the site users can become exposed to contamination in the soft landscaping areas of the development including private gardens. It is therefore recommended that the Made Ground in these areas is replaced by a cover layer comprising 600mm of clean imported soil, placed on a geotextile membrane. In communal soft landscaping areas and public open space, the thickness of the capping layer could be reduced to 450mm.

- Any visual asbestos containing materials may be removed by hand, with extensive dust control measures required during the soil screening operations for the protection of site workers and nearby residents. It should be noted that asbestos fibres will not be visible to the naked eye.

Underground obstructions

- Based on the records available, several decommissioned above ground storage tanks and associated pipework are present on site. These will need to be removed during the development works along with associated hydrocarbon impacted soils (if present). Such works should be directed, supervised and verified by a suitably qualified environmental consultant.

Underground services

- Upgraded potable water supply pipes are likely to be required. The water supply pipe requirements should be discussed at an early stage with the relevant Utility provider.

Groundwater

- Locally elevated aromatic hydrocarbon fractions >C_{10}-C_{12} and >C_{12}-C_{16} have been reported in boreholes JBH4, JBH6 and BH10. As per Table 5.1 of CL:AIRE, 2017 these hydrocarbon fractions are reported as having a ‘moderate’ mobility in groundwater.

- However, groundwater analysis undertaken in 2021 on the neighbouring Phase 9 site revealed concentrations of TPHCWG, BTEX and MTBE all below laboratory detection limits. The Phase 9 site is located south-west and down-gradient (in terms of groundwater flow) of the Phase 10 site. Therefore, it is considered that the hydrocarbon contamination

identified in groundwater on Phase 10 is not significantly impacting groundwater off-site and the risk to controlled waters remain relatively low. Significant betterment of the groundwater environment can likely be achieved through tank removal, pipework removal and impacted soil removal, which will sever any residual potential pollutant linkages to controlled waters. Further groundwater analysis post-remediation may be required to demonstrate that an ongoing risk to controlled waters is not present.

- A potential vapour risk to end users associated with groundwater localised around JBH6 has been identified, though a widespread issue is unlikely to exist.

- It is recommended that further investigation is conducted in the vicinity of JBH6, likely to comprise a series of trial pits in an attempt to identify a currently unknown source that may be present and would explain the elevated groundwater hydrocarbon concentrations in the area.

- If a specific source is identified (such as impacted soils, pipework or a tank) this should be removed and further water sampling post-remediation may be sufficient to demonstrate that an ongoing vapour risk is not present.

- Should no specific source be identified, further assessment of the potential vapour risk should be undertaken, potentially comprising the collection and analysis of vapour samples and derivation of site-specific vapour assessment criteria to assess the chronic risk posed to human health.

<u>Ground Gas</u>

- Based on the calculated GSVs, and in consideration of the conceptual site model, the site is classified as Characteristic Situation 1 (CS1) and therefore no formal gas protection measures are considered to be necessary. This conclusion does not supersede a potential requirement for localised vapour protection measures pending further assessment of vapour risks.

9.1.2 The above conclusions are made subject to approval by the statutory regulatory bodies.

9.1.3 As with any ground investigation, the presence of further hotspots between sampling points cannot be ruled out. Should any contamination be encountered, a suitably qualified environmental consultant should be informed immediately, so that adequate measures may be recommended.

9.2 Review of Pollutant Linkages Following Ground Investigation

9.2.1 The site CSM has been revised and updated from that suggested in the desk study in view of the ground investigation data, including soil laboratory analysis results. Table 9.1 highlights whether pollutant linkages identified in the original CSM are still relevant following the risk assessment, or whether pollutant linkages, not previously identified, exist.

Table 9.1: Plausible Pollutants Linkages Summary (Pre-Remediation)

Source	Pathway	Receptor	Linkage Number	Relevant Pollutant Linkage?	Comment
• Made Ground possibly including metals, metalloids, asbestos, PAH and petroleum hydrocarbons • Hydrocarbon fuels and lubricants associated with the fuel storage tanks and former land use. • VOCs and SVOCs associated with the former land use. • Ethylene glycol – potentially used as a de-icer. • Ground gas from nearby backfilled quarries • Electricity sub-station • Underground POL pipelines • POL2 • POL21 A, B, C • AST in south-west of site • Evidence of hydrocarbon contamination reported in TP109 by Hydrock • Former excavation 2-2 with fuel leak/spill reported by Vertase	• Ingestion • Inhalation or contact with potentially contaminated dust	• Future site users • Construction workers • Maintenance workers • Neighbouring site users	1	✓	The findings of this report should be included in the construction health and safety file, with adequate measures put in place for the protection of construction and maintenance workers. Removal of the existing above ground tanks and associated pipework and other infrastructure, along with petroleum hydrocarbon impacted soils is required under supervision of a suitably qualified geo-environmental engineer, with appropriate verification work works required. A provision of cover layer is required in the soft landscaping areas including private gardens to protect the future site users from the contamination present in the shallow soils. A Remediation Strategy Report should be produced.
	• Inhalation of vapours	• Future site users • Construction workers • Maintenance workers • Neighbouring site users	2	**?**	The risk to end users associated with vapour risk inhalation from soils is considered negligible. Whilst a widespread vapour risk from groundwater source is considered unlikely, a localised risk around JBH6 cannot be ruled out at this stage. It is recommended that further investigation is conducted in the vicinity of JBH6, comprising further intrusive investigation to look for a currently unknown source and possible vapour sampling and assessment.
	• Permeation of water pipes and attack on concrete foundations by aggressive soil conditions	• Building structures/services	3	✓	Upgraded potable water supply pipe materials are likely to be required. The water supply pipe requirements for this site should be discussed at an early stage with the relevant Utility provider. The concrete classification to protect buried concrete is discussed in Section 10.3
	• Accumulation and migration of soil gases	• Future site users • Construction workers • Maintenance workers	4	**X**	Site has been characterised as CS1 and no gas protection measures are deemed necessary.
	• Leaching through permeable soils, migration within the vadose zone (i.e., unsaturated soil above the water table) and/or lateral migration within surface water, as a result of cracked hardstanding or via service pipe/corridors and surface water runoff. • Horizontal and vertical migration of contaminants within groundwater	• Controlled waters - Principal aquifer within the Great Oolite Group and Gallos Brook ~325m south of site.	5	**X**	Locally elevated aromatic hydrocarbon fractions >C_{10}-C_{12} and >C_{12}-C_{16} have been reported in boreholes JBH4, JBH6 and BH10. As per Table 5.1 of CL:AIRE, 2017 these hydrocarbon fractions are reported as having a 'moderate' mobility in groundwater. However, groundwater analysis south-west of the site has revealed there is no significant impact to controlled waters down-gradient of site. Therefore, it is considered that the identified hydrocarbon contamination poses a relatively low risk to off-site controlled water receptors. Removal of existing fuel infrastructure will be required to protect the on-site controlled waters receptor (i.e. the underlying Principal Aquifer), and additional groundwater analysis post-remediation may be required to verify successful remediation.

10 GEOTECHNICAL ENGINEERING RECOMMENDATIONS

10.1 General

10.1.1 Subsequent to intrusive investigation of the site and receipt of the laboratory test results, the following geotechnical assessments have been made.

10.2 Proposed Foundations

General

10.2.1 All topsoil should be stripped from beneath proposed structures ahead of development.

10.2.2 The Made Ground is not considered to provide a suitable bearing stratum due to its variability and the unacceptable risk of total and differential settlement.

10.2.3 All foundations should be deepened beneath these deposits, soft clay, root or desiccated zones, or disturbed ground, and founded within underlying competent strata.

10.2.4 As soils of medium volume change potential are present, heave precautions will be required against the side of foundations and ground beams in accordance with the requirements set out in NHBC Standards Chapter 4.2.

Conventional Foundations

10.2.5 Based on the ground and groundwater conditions encountered, conventional shallow foundations are likely to be suitable for the proposed development.

10.2.6 It is considered that traditional strip/trench-fill foundations up to 1m wide may be formed within the underlying Weathered White Limestone Formation at a minimum depth of 0.9m for an allowable bearing capacity of 100kPa. Total and differential settlements should be contained within tolerable limits.

10.2.7 This depth, however, does not take into account the depth of Made Ground or the distance to and species of any previous, existing and proposed trees, and foundations may need to be deepened further accordingly, in accordance with NHBC requirements, for soils of medium volume change potential.

10.2.8 Where foundations need to change levels as a result, the foundations should be stepped and reinforced. These steps should be no deeper than half of the width of the foundation and each step should not exceed 0.5m.

10.2.9 If foundations span different strata, e.g. sand and clay, they should either be deepened to terminate in a single soil stratum, or suitable reinforcement included (to be detailed by the Structural Engineer).

10.2.10 Foundations greater than 2.50m deep would require structure-specific design by a structural engineer.

10.2.11 Where any unexpected or soft ground conditions are encountered during the groundworks, works in that area should cease and the advice of a suitably qualified geotechnical engineer sought.

Raft Foundations

10.2.12 Alternatively, a raft foundation may be a suitable option.

10.2.13 Such a foundation should be formed on a suitable thickness of well-engineered granular sub-base, should provide an allowable bearing capacity of 60kN/m^2.

10.2.14 Prior to laying the suitable thickness of well-engineered granular sub-base, the formation level should be inspected by a suitably qualified and experienced specialist. Any loose or soft material should be removed to a suitable depth and replaced with well-graded, properly compacted granular fill or lean mix concrete. The formation should be blinded if left exposed for more than a few hours or if inclement weather is experienced.

10.2.15 In order to keep settlements within tolerable limits, the raft foundation should comprise a continuously well reinforced slab beneath the building.

10.2.16 In addition, reinforced concrete beams / thickening of the raft may be required beneath the structural walls or beneath lines of columns.

10.2.17 Any existing granular sub-base or granular Made Ground could potentially be lifted and re-engineered.

10.3 Sulphates

10.3.1 Sulphate attack on building foundations occurs where sulphate solutions react with the various products of hydration in Ordinary Portland Cement (OPC) or converted High-Alumina Cement (HAC). The reaction is expansive, and therefore disruptive, not only due to the formation of minute cracks, but also due to loss of cohesion in the matrix.

10.3.2 In accordance with BRE Special Digest 1, the characteristic values of sulphate used to determine the concrete classification are determined using the methodology summarised in the table below.

Table 10.1: Concrete in the Ground Characteristic Value Determination

No Samples in the dataset	Method for determining the sulphate characteristic value
1 - 4	Highest value
5-9	Mean of the top 2No highest results
10 or greater	Mean of the top 20% highest results

10.3.3 Table 10.2 summarises the analysis of the aggressive nature of the ground for each of the strata encountered within the ground investigation.

Table 10.2: Concrete in the Ground Classes

Stratum	No Samples	pH range	Characteristic WS Sulphate (mg/l)	Characteristic Total Potential Sulphate (mg/l)[1)]	Design Sulphate Class	ACEC Class
Made Ground/Topsoil	29	7.4 – 11.0	110	N/A	DS-1	AC-1
White Limestone Formation	14	7.9 – 8.6	69	N/A	DS-1	AC-1

1) Applies to soils containing more than 0.3% of oxidisable sulphides, calculated in accordance with BRE SD-1

10.3.4 Analysis of the results indicates that the underlying soils do not contain appreciable concentrations of oxidisable sulphates and therefore the Design Class is dependent on the water soluble sulphate content and pH only.

10.3.5 The concrete structures, including foundations, will need to be designed in accordance with BS EN 1992-1-1:2004+A1:2014. It is recommended that the advice of this publication be taken for the design and specification of all sub-surface concrete.

10.4 Ground Floor Slabs

10.4.1 Given the presence of shrinkable soils with a medium volume change potential, it is recommended that suspended floor slabs are used with an adequate void designed according to NHBC Standards.

10.4.2 As a guide, initial modelling indicates a requirement for a sub-floor void of at least 250mm for suspended precast concrete or timber floors. The required sub-floor void would reduce to ≥100mm for ground beams and suspended in-situ concrete ground floors.

10.5 Excavations

10.5.1 Temporary excavations within the Made Ground and granular soils are unlikely to remain stable and some form of temporary support or battering back to a safe angle and dewatering are likely to be required.

10.5.2 Temporary excavations within the cohesive soils are likely to remain relatively stable in the short term though some spalling may be anticipated.

10.5.3 Ground works should always be designed in such a manner to avoid entry into excavations by construction or maintenance personnel. However, in the event that such works cannot be avoided or designed out, they should only be undertaken in accordance with a safe system of work, following an appropriate risk assessment and in accordance with any legislative requirements, e.g. Confined Spaces Regulations.

10.5.4 Subject to seasonal variations, surface water/groundwater encountered during site works could likely be dealt with by conventional pumping from a sump used to collate waters.

10.6 Drainage

<u>BRE 365 Soakage Tests</u>

10.6.1 Table 10.3 summarises the soakage rates, which were calculated based on the results of the soakage testing:

Table 10.3 – Summary of BRE 365 Soakage Test Results

Position	Geology	Calculated Infiltration Rates (m/s)		
		1st cycle	2nd Cycle	3rd Cycle
JSTP1	Weathered White Limestone Formation - Cohesive	N/D	N/D	-
JSTP2	Weathered White Limestone Formation - Cohesive	N/D	N/D	-
JSTP3	Weathered White Limestone Formation - Granular	1.5×10^{-5}	8.2×10^{-6}	3.3×10^{-6}
JSTP4	Weathered White Limestone Formation - Granular	4.0×10^{-5}	4.6×10^{-5}	1.1×10^{-5}

N/D: Not determined due to insufficient fall in head and presence of perched groundwater

JSTP1 - Test 1 undertaken on 25/05/2022. Pit collapse in Test 1 at 5 minutes. 3cm fall in head recorded after 24 hours.

Pit deepened by 0.5m for Test 2 undertaken on 26/05/2022. 4cm rise in head recorded after 30 minutes.

JSTP2 - Test 1 undertaken on 25/05/2022. 11cm fall in head recorded after 20 hours.

Test 2 undertaken on 26/05/2022. 6cm rise in head recorded after 3 hours.

10.6.2 During the soakage testing water levels rose within JSTP1 and JSTP2 (2nd cycle only) as a result of groundwater ingress. Consequently, no soakage rates could be determined within these trial pits. Although two cycles were achieved within both these trial pits, there were insufficient reductions in water level to calculate or estimate an infiltration rate.

10.6.3 In addition, as previously noted, slow groundwater ingress was also encountered within JSTP1 and JSTP2 at depths of between 2.0m and 3.0m bgl, which may have also influenced on water-level rise or very poor infiltration during the soakage testing.

10.6.4 Furthermore, during the soakage testing, it was noted that very poor infiltration was achieved where more clayey soils were encountered in the west of site. JSTP3 and JSTP4 both achieved 3 full drainage cycles and were completed in the south-east of site, in granular soils of the Weathered White Limestone Formation.

10.6.5 Based on the above results and ground conditions encountered on site, it is considered that conventional soakaways may be suitable for discharging storm water run-off to the ground in the south-east of site where JSPT3 and JSPT4 were completed. However, in other locations it is considered that an alternative form of storm water disposal would be required, such as on-site storage and attenuation of peak storm flow with discharge to the drainage ditch network, possibly at greenfield run-off rate, under an extension of riparian rights.

11 REFERENCES

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APPENDICES

APPENDIX 1 – FIGURES

PROJECT NAME	Phase 10, Heyford Park, Camp Road, OX25 5HD	**CLIENT**	Heyford Park Settlements LP (HPSLP)
TITLE	Location Plan	**PROJECT NO.**	P4280J2513
DATE	March 2022	**FIGURE NO.**	1

PROJECT NAME	Phase 10, Heyford Park, Camp Road, OX25 5HD	**CLIENT**	Heyford Park Settlements LP (HPSLP)
TITLE	Phase 10 site shown with fuel distribution pipelines/tanks overlaid onto satellite image	**PROJECT NO.**	P4280J2513
DATE	March 2022	**FIGURE NO.**	2

Phase 10 Site Boundary

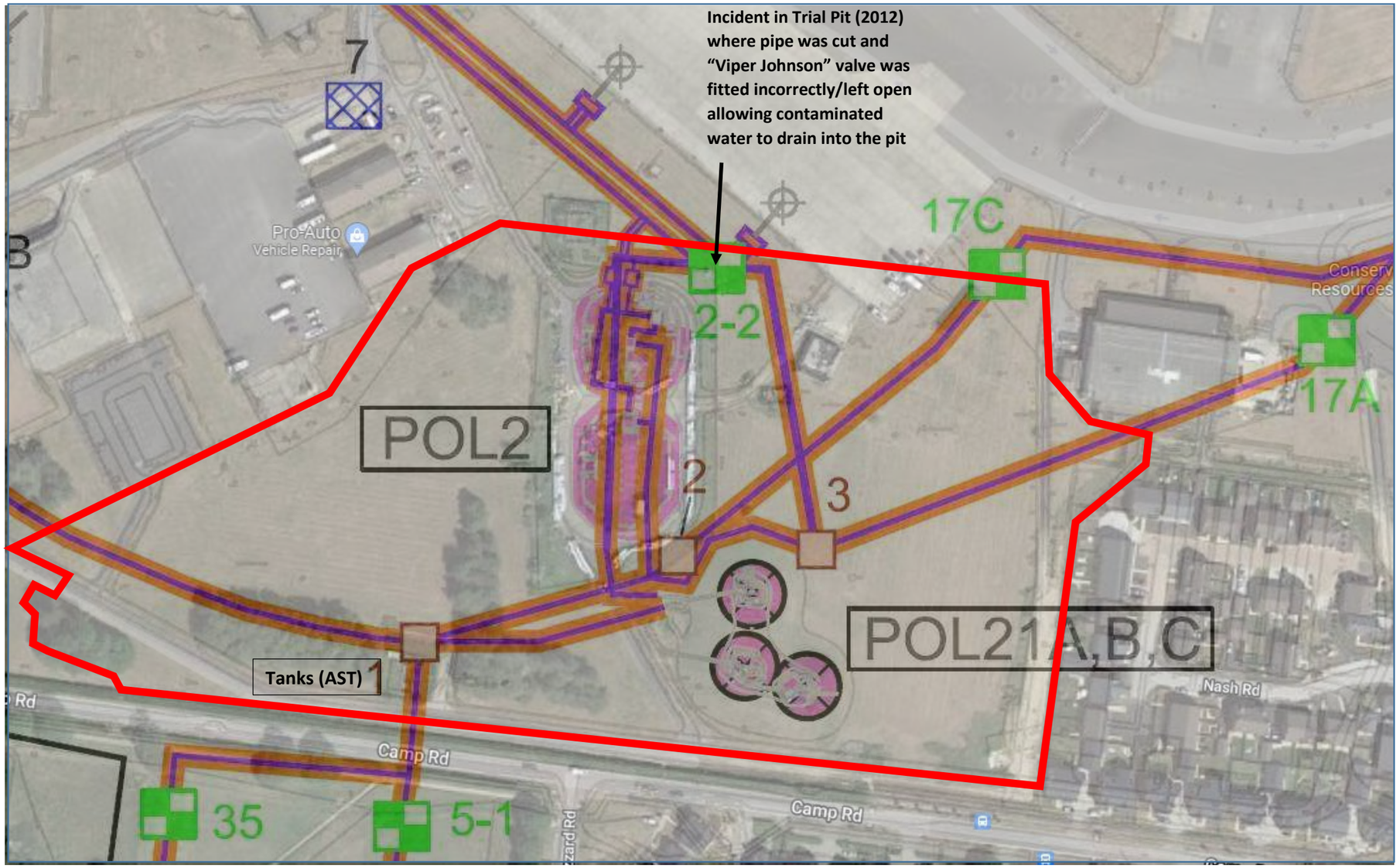
Foam filled pipeline

Trial Pit locations where the pipe was actually cut to facilitate removal of contaminated water contained therein and subsequent filling with foam

Pre-existing valve pit locations, the pipeline was either already severed or was subsequently severed to allow access for decanting and foam filling.

POL21 with Type-1 Tanks (emptied/cleaned but not filled).

POL2 (emptied, cleaned and filled with PFA/OPC grout).



PROJECT NAME	Phase 10, Heyford Park, Camp Road, OX25 5HD	**CLIENT**	Heyford Park Settlements LP (HPSLP)
TITLE	Completed GI Plan	**PROJECT NO.**	P4280J2513
DATE	June 2022	**FIGURE NO.**	3

⊗ **Windowless Sampler Borehole**

Machine Excavated Trial Pit

⊕ **Rotary Borehole**

⊕ **Existing Borehole Installation (Hydrock, 2016)**

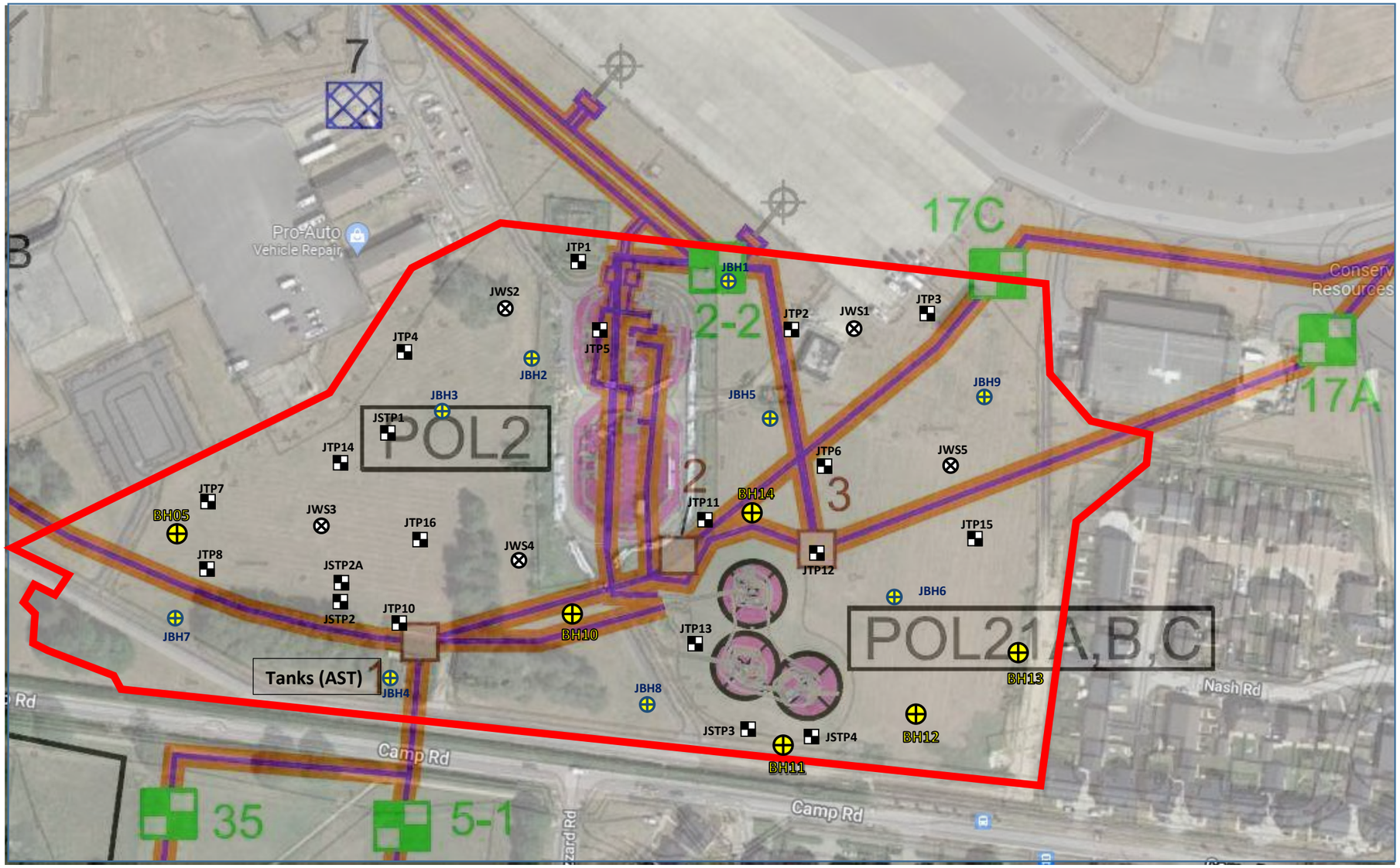
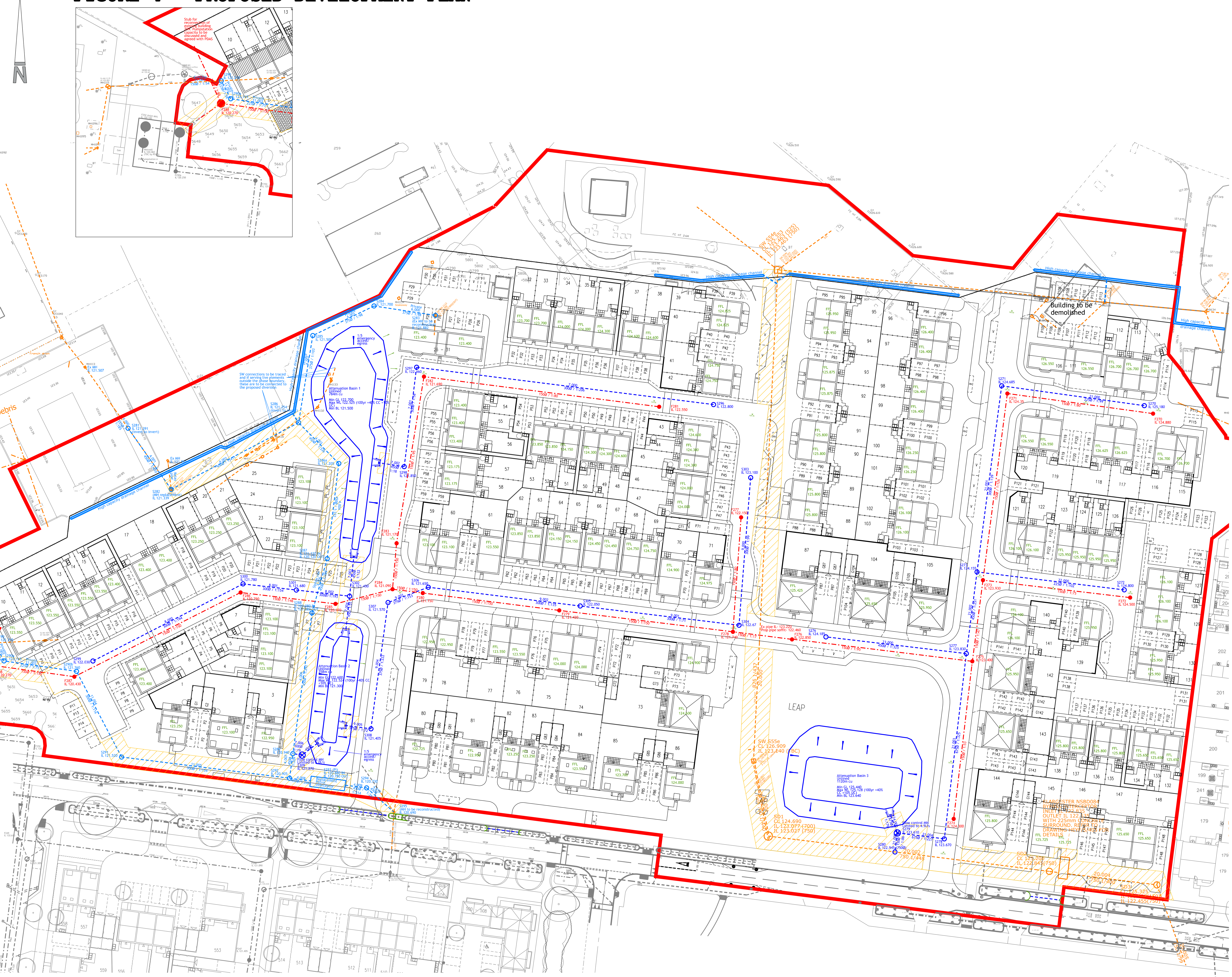


FIGURE 4 – PROPOSED DEVELOPMENT PLAN



NOTES

1. Contractors must check all dimensions on site. Only figured dimensions are to be worked from. Discrepancies must be reported to the Architect or Engineer before proceeding. © This drawing is copyright.

2. All plans and drawings are drawn true to stated scales and can be used for the purpose of planning only. Responsibility is not accepted for errors made by others in scaling from this drawing.

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4. Until technical approval has been obtained from the relevant authorities, all drawings are issued as preliminary and not for construction. Should the Contractor commence site work prior to approval being given it is entirely at his own risk.

5. FFLs are +- 450mm subject to detailed design.

6. External levels and drainage subject to detailed design, Section 38 approval and Section 104 approval.

KEY

- Existing drainage
- Proposed adoptable surface water sewer
- Proposed adoptable foul water sewer
- Notable retaining walls (over 1m high)
- Proposed 1:3 banking

FOR PLANNING PURPOSES ONLY

REV	DESCRIPTION	DRN	CHD	DATE
C	S290b-S291 RELOCATED	AT	JF	27.04.22
B	LATEST ARCHITECTURAL LAYOUT ADDED	AT	JF	26.04.22
A	UPDATED TO SUIT LATEST LAYOUT	AT	JF	25.04.22

☒ PRELIMINARY ☐ INFORMATION ☐ TENDER
☐ CONSTRUCTION ☐ AS BUILT

SCALE 1:500 @ A1 DATE NOV 2021

DRAWN AT CHK JF

DRAWING NO. HEYF-5-1300 REV C

TITLE CAMP ROAD UPPER HEYFORD

DETAILS PHASE 10 LEVELS & DRAINAGE STRATEGY

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APPENDIX 2 – EXPLORATORY HOLE RECORDS

WINDOW/ WINDOWLESS SAMPLING BOREHOLE RECORD

		Exploratory Hole No:	JWS1
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO	Date Commenced:	20/05/2022
Checked By:	SC	Date Completed:	20/05/2022
Type and diameter of equipment:	Windowless Sampler	Sheet No:	1 Of 1

Water levels recorded during boring, m

Date:						
Hole depth:						
Casing depth:						
Level water on strike:						
Water Level after 20mins:						

Remarks

1: *Field observation
2: No groundwater reported
3:
4:

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
ES	0.10								0.00				Grass over dark brown silty slightly gravelly clay with rootlets. Gravel consists of fine to coarse, angular asphalt and concrete. (MADE GROUND)	
											0.20			
ES	0.50								0.50				Stiff* brown mottled light brown very sandy slightly gravelly CLAY. Gravel consists of fine to coarse, angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
S	1.00	7	7	9	12	14	18	53	1.00		1.00			
	For 53mm in R6												Very dense grey mottled brown SAND and GRAVEL. Sand is fine. Gravel consists of fine to coarse, angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
ES	1.20													
S	1.40	10	12	15	15	18	10	58			1.40			
	For 58mm in R6								1.50					
									2.00					
									2.50					
									3.00					
									3.50					
									4.00					
									4.50					
									5.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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WINDOW/ WINDOWLESS SAMPLING BOREHOLE RECORD

		Exploratory Hole No:	JWS2
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO	Date Commenced:	20/05/2022
Checked By:	SC	Date Completed:	20/05/2022
Type and diameter of equipment:	Windowless Sampler	Sheet No:	1 Of 1

Water levels recorded during boring, m

Date:						
Hole depth:						
Casing depth:						
Level water on strike:						
Water Level after 20mins:						

Remarks

1: No groundwater reported

2: **Consistency estimated using semi-empirical correlations with SPT N-values, Plasticity Indices and published literature

3:

4:

Sample or Tests									Strata				
Type	Depth (mbgl)	Result							Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N					
ES	0.10									0.20		Grass over dark brown silty slightly gravelly clay with rootlets. Gravel consists of fine to coarse, angular asphalt and concrete. (MADE GROUND)	
ES	0.50									0.60		Grey mottled brown slightly sandy slightly gravelly CLAY. Sand is fine. Gravel consists of fine to coarse, angular flint and limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
ES	1.00											Stiff to very stiff** light greyish brown sandy gravelly CLAY. Sand is fine to coarse. Gravel consists of fine to coarse, angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
S		2	3	3	4	4	4	15					
S	1.60	25		50				50		2.00			
	50 blows for 30mm												

0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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WINDOW/ WINDOWLESS SAMPLING BOREHOLE RECORD

Exploratory Hole No:	JWS3		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO	Date Commenced:	20/05/2022
Checked By:	SC	Date Completed:	20/05/2022
Type and diameter of equipment:	Windowless Sampler	Sheet No:	1 Of 1

Water levels recorded during boring, m

Date:	20/05/2022					
Hole depth:						
Casing depth:						
Level water on strike:	2.7					
Water Level after 20mins:						

Remarks

1: *Field observation

2: **Consistency estimated using semi-empirical correlations with SPT N-values, Plasticity Indices and published literature

3:

4:

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
ES	0.10								0.00				Grass over dark brown silty slightly gravelly clay with rootlets. Gravel consists of fine to coarse, angular asphalt and concrete. (MADE GROUND)	
											0.20			
ES	0.50								0.50				Stiff* brown mottled light brown sandy gravelly CLAY. Gravel consists of fine to coarse, angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
											0.90			
S	1.00	8	8	9	2	2	2	15	1.00				Firm** dark brown mottled grey sandy gravelly CLAY. Sand is fine. Gravel consists of fine to coarse, angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
ES	1.50								1.50					
											1.80			
S	2.00	2	3	4	4	4	3	15	2.00				Firm becoming very stiff** brown mottled grey slightly sandy CLAY. (WEATHERED WHITE LIMESTONE FORMATION)	
D	2.50								2.50					
S	3.00	2	2	2	2	5	5	14	3.00					
D	3.50								3.50					
S	3.80	25		50				50			3.80			
	50 blows for 45mm													
									4.00					
									4.50					
									5.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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WINDOW/ WINDOWLESS SAMPLING BOREHOLE RECORD

		Exploratory Hole No:	JWS4
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO	Date Commenced:	20/05/2022
Checked By:	SC	Date Completed:	20/05/2022
Type and diameter of equipment:	Windowless Sampler	Sheet No:	1 Of 1

Water levels recorded during boring, m

Date:						
Hole depth:						
Casing depth:						
Level water on strike:						
Water Level after 20mins:						

Remarks

1: *Field observation

2: No groundwater reported

3: **Consistency estimated using semi-empirical correlations with SPT N-values, Plasticity Indices and published literature

4:

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
ES	0.10								0.00				Grass over dark brown silty slightly gravelly clay with rootlets. Gravel consists of fine to coarse, angular asphalt and concrete. (MADE GROUND)	
											0.20			
ES	0.50								0.50				Stiff* brown mottled light brown silty gravelly CLAY. Gravel consists of fine to coarse, angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
											1.00			
S	1.00	1	1	1	1	1	2	5	1.00				Soft** brown sandy gravelly CLAY. Gravel consists of fine to coarse, angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
ES	1.50								1.50					
S	2.00	3	3	5	5	6	5	21	2.00					
											2.20		Medium dense becoming very dense greyish brown SAND. Sand is fine to coarse. (WEATHERED WHITE LIMESTONE FORMATION)	
D	2.50								2.50					
S	2.60	18	20	24	27			51						
	51 blows for 150mm													
									3.00					
									3.50					
									4.00					
									4.50					
									5.00					
											2.90			

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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WINDOW/ WINDOWLESS SAMPLING BOREHOLE RECORD

		Exploratory Hole No:	JWS5
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO	Date Commenced:	20/05/2022
Checked By:	SC	Date Completed:	20/05/2022
Type and diameter of equipment:	Windowless Sampler	Sheet No:	1 Of 1

Water levels recorded during boring, m

Date:						
Hole depth:						
Casing depth:						
Level water on strike:						
Water Level after 20mins:						

Remarks

1: *Field observation
2: No groundwater reported
3:
4:

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
ES	0.10								0.00				Grass over dark brown silty slightly gravelly clay with rootlets. Gravel consists of fine to coarse, angular asphalt and concrete. (MADE GROUND)	
											0.20			
ES	0.50								0.50				Stiff* brown mottled light brown sandy slightly gravelly CLAY. Gravel consists of fine to coarse, angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
S	1.00	4	4	9	12	14	14	49	1.00		1.00			
ES	1.20												Dense to very dense brownish grey gravelly SAND. Sand is fine to coarse. Gravel consists of fine to coarse, angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
S	1.50	12	14	14	15	15	16	60	1.50		1.50			
									2.00					
									2.50					
									3.00					
									3.50					
									4.00					
									4.50					
									5.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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ROTARY BOREHOLE RECORD

		Exploratory Hole No:	JBH1
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO/JN	Date Commenced:	19/05/2022
Checked By:	SC	Date Completed:	19/05/2022
Type and diameter of equipment:	Comacchio 205	Sheet No:	1 Of 2

Water levels recorded during boring, m

Date:						
Hole depth:						
Casing depth:						
Level water on strike:						
Water Level after 20mins:						

Remarks

1: No groundwater reported

2: Dynamic Sampling from GL-2.0m bgl

3: Rotary open-hole drilling with water flush from 2.0-8.0m bgl

4: **Consistency estimated using semi-empirical correlations with SPT N-values, Plasticity Indices and published literature

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
									0.00					
ES	0.25												Grass over dark brown silty silty gravelly clay with rootlets. Gravel consists of fine to coarse angular limestone with rare asphalt and brick. (MADE GROUND)	
									0.50		0.60			
ES	0.75												Stiff** brown mottled light greyish brown silty slightly gravelly CLAY. Gravel consists of fine to coarse angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
SPT	1.00	6	6	4	5	5	5	19	1.00					
									1.50		1.50			
ES	1.60												Grey clayey sandy GRAVEL. Sand is fine to medium. Gravel consists of fine to coarse angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
SPT	2.00	10	15	26	24			50	2.00		2.00			
	50 blows for 145mm												Light brown LIMESTONE. (WHITE LIMESTONE FORMATION)	
									2.50					
									3.00					
									3.50					
									4.00					
									4.50					
									5.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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ROTARY BOREHOLE RECORD

		Exploratory Hole No:	JBH1
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO/JN	Date Commenced:	19/05/2022
Checked By:	SC	Date Completed:	19/05/2022
Type and diameter of equipment:	Comacchio 205	Sheet No:	2 Of 2

Water levels recorded during boring, m

Date:						
Hole depth:						
Casing depth:						
Level water on strike:						
Water Level after 20mins:						

Remarks

1: No groundwater reported

2: Dynamic Sampling from GL-2.0m bgl

3: Rotary open-hole drilling with water flush from 2.0-8.0m bgl

4: **Consistency estimated using semi-empirical correlations with SPT N-values, Plasticity Indices and published literature

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
									5.00				Light brown LIMESTONE. (WHITE LIMESTONE FORMATION)	
									5.50					
									6.00					
									6.50					
											6.70			
													Blueish grey MUDSTONE. (WHITE LIMESTONE FORMATION)	
									7.00					
									7.50					
											8.00			
									8.00					
									8.50					
									9.00					
									9.50					
									10.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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ROTARY BOREHOLE RECORD

Exploratory Hole No:	JBH2		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO/JN	Date Commenced:	20/05/2022
Checked By:	SC	Date Completed:	20/05/2022
Type and diameter of equipment:	Comacchio 205	Sheet No:	1 Of 2

Water levels recorded during boring, m

Date:						
Hole depth:						
Casing depth:						
Level water on strike:						
Water Level after 20mins:						

Remarks

1: No groundwater strike recorded

2: Dynamic sampling from GL-2.0m bgl

3: Rotary open-hole drilling with water flush from 2.0-8.0m bgl

4: *Field description | **Consistency estimated using semi-empirical correlations with SPT N-values, Plasticity Indices and published literature

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
ES	0.25								0.00				Grass over dark brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone. (TOPSOIL/SUBSOIL)	
											0.40			
									0.50				Firm* brown mottled grey silty very gravelly CLAY. Gravel consists of fine to coarse angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
ES	0.75													
SPT-C	1.00	3	14	6	4	3	4	17	1.00		1.00			
													Stiff** grey mottled orangeish brown sandy slightly gravelly CLAY. Sand is fine. (WEATHERED WHITE LIMESTONE FORMATION)	
ES	1.50								1.50					
SPT-C	2.00	25		50				50	2.00		2.00		LIMESTONE. (WHITE LIMESTONE FORMATION)	
	50 blows for 45mm													
									2.50					
									3.00					
									3.50					
											3.90			
									4.00				Blueish grey MUDSTONE. (WHITE LIMESTONE FORMATION)	
									4.50					
									5.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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ROTARY BOREHOLE RECORD

		Exploratory Hole No:	JBH2
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO/JN	Date Commenced:	20/05/2022
Checked By:	SC	Date Completed:	20/05/2022
Type and diameter of equipment:	Comacchio 205	Sheet No:	2 Of 2

Water levels recorded during boring, m

Date:						
Hole depth:						
Casing depth:						
Level water on strike:						
Water Level after 20mins:						

Remarks

1: No groundwater strike recorded

2: Dynamic sampling from GL-2.0m bgl

3: Rotary open-hole drilling with water flush from 2.0-8.0m bgl

4: *Field description | **Consistency estimated using semi-empirical correlations with SPT N-values, Plasticity Indices and published literature

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
									5.00				Blueish grey MUDSTONE. (WHITE LIMESTONE FORMATION)	
									5.50					
									6.00					
									6.50					
									7.00					
									7.50					
									8.00		8.00			
									8.50					
									9.00					
									9.50					
									10.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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ROTARY BOREHOLE RECORD

Exploratory Hole No:	JBH3		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO/JN	Date Commenced:	23/05/2022
Checked By:	SC	Date Completed:	23/05/2022
Type and diameter of equipment:	Comacchio 205	Sheet No:	1 Of 2

Water levels recorded during boring, m

Date:	23/05/2022					
Hole depth:	8.00					
Casing depth:	3.00					
Level water on strike:	3.4					
Water Level after 20mins:	3					

Remarks

1: Dynamic sampling from GL-2.0m bgl

2: Rotary open-hole drilling with water flush from 2.0-8.0m bgl

3: **Consistency estimated using semi-empirical correlations with SPT N-values, Plasticity Indices and published literature

4:

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
ES	0.25								0.00				Grass over dark brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone and asphalt. (MADE GROUND)	
											0.40			
ES	0.75								0.50				Firm** brown mottled light greyish brown silty gravelly CLAY. Gravel consists of fine coarse angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
SPT-C	1.00	2	3	3	4	2	3	12	1.00					
											1.30			
ES	1.50								1.50				Firm** light brown mottled grey sandy slightly gravelly CLAY. Gravel consists of fine to coarse angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
SPT-C	2.00	5	9	21	29			50	2.00					
	50 blows for 125mm										2.00		Grey LIMESTONE. (WHITE LIMESTONE FORMATION)	
									2.50					
									3.00					
									3.50					
									4.00					
									4.50					
									5.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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ROTARY BOREHOLE RECORD

Exploratory Hole No:	JBH3		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO/JN	Date Commenced:	23/05/2022
Checked By:	SC	Date Completed:	23/05/2022
Type and diameter of equipment:	Comacchio 205	Sheet No:	2 Of 2

Water levels recorded during boring, m

Date:	23/05/2022					
Hole depth:	8.00					
Casing depth:	3.00					
Level water on strike:	3.4					
Water Level after 20mins:	3					

Remarks

1: Dynamic sampling from GL-2.0m bgl

2: Rotary open-hole drilling with water flush from 2.0-8.0m bgl

3: **Consistency estimated using semi-empirical correlations with SPT N-values, Plasticity Indices and published literature

4:

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
									5.00				Grey LIMESTONE. (WHITE LIMESTONE FORMATION)	
									5.50					
									6.00					
									6.50					
									7.00					
									7.50					
									8.00		8.00			
									8.50					
									9.00					
									9.50					
									10.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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ROTARY BOREHOLE RECORD

Exploratory Hole No:	JBH4		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO/JN	Date Commenced:	23/05/2022
Checked By:	SC	Date Completed:	23/05/2022
Type and diameter of equipment:	Comacchio 205	Sheet No:	1 Of 2

Water levels recorded during boring, m

Date:	23/05/2022					
Hole depth:	8.00					
Casing depth:	1.00					
Level water on strike:	2					
Water Level after 20mins:	2					

Remarks

1: Dynamic sampling from GL-2.0m bgl

2: Rotary open-hole drilling with water flush from 2.0-8.0m bgl

3: **Consistency estimated using semi-empirical correlations with SPT N-values, Plasticity Indices and published literature

4:

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
ES	0.10								0.00				Grass over dark brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone. (MADE GROUND)	
											0.20			
									0.50				Brown sandy gravelly clay. Sand is fine. Gravel consists of fine to coarse angular brick, limestone and asphalt. (MADE GROUND)	
ES	0.75													
SPT	1.00	3	4	4	5	5	7	21	1.00					
											1.20			
ES	1.50								1.50				Stiff** brown silty CLAY with black staining. Slight hydrocarbon odour. (WEATHERED WHITE LIMESTONE FORMATION)	
SPT	2.00	8	6	9	12	17	12	50	2.00		2.00			
	50 blows for 250mm												Grey LIMESTONE. (WHITE LIMESTONE FORMATION)	
									2.50					
									3.00					
									3.50					
									4.00					
									4.50					
									5.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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ROTARY BOREHOLE RECORD

Exploratory Hole No:	JBH4		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO/JN	Date Commenced:	23/05/2022
Checked By:	SC	Date Completed:	23/05/2022
Type and diameter of equipment:	Comacchio 205	Sheet No:	2 Of 2

Water levels recorded during boring, m

Date:	23/05/2022					
Hole depth:	8.00					
Casing depth:	1.00					
Level water on strike:	2					
Water Level after 20mins:	2					

Remarks

1: Dynamic sampling from GL-2.0m bgl

2: Rotary open-hole drilling with water flush from 2.0-8.0m bgl

3: **Consistency estimated using semi-empirical correlations with SPT N-values, Plasticity Indices and published literature

4:

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
									5.00				Grey LIMESTONE. (WHITE LIMESTONE FORMATION)	
									5.50					
									6.00					
									6.50					
									7.00					
									7.50					
									8.00		8.00			
									8.50					
									9.00					
									9.50					
									10.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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ROTARY BOREHOLE RECORD

Exploratory Hole No:	JBH5		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO/JN	Date Commenced:	18/05/2022
Checked By:	SC	Date Completed:	18/05/2022
Type and diameter of equipment:	Comacchio 205	Sheet No:	1 Of 2

Water levels recorded during boring, m

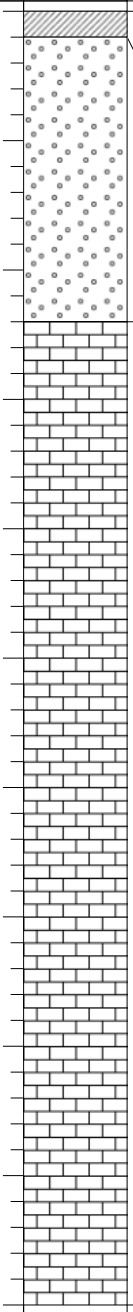
Date:						
Hole depth:						
Casing depth:						
Level water on strike:						
Water Level after 20mins:						

Remarks

1: No groundwater strike recorded
2: Dynamic sampling from GL-1.2m bgl
3: Rotary open-hole drilling with water flush from 1.2-8.0m bgl
4:

Sample or Tests									Strata				
Type	Depth (mbgl)	Result							Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N					
ES	0.25									0.10		Grass over brown silty very gravelly sand with rootlets. Sand is fine to coarse. Gravel consists of fine to coarse angular to sub-angular limestone. (TOPSOIL)	
ES	0.75											Greyish brown clayey sandy GRAVEL. Sand is fine to coarse. Gravel consists of fine to coarse angular to sub-angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
SPT	1.20	7	9	10	13	14	13	50		1.20		LIMESTONE. (WHITE LIMESTONE FORMATION)	
	50 blows for 295mm												

0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00



Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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ROTARY BOREHOLE RECORD

		Exploratory Hole No:	JBH5
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO/JN	Date Commenced:	18/05/2022
Checked By:	SC	Date Completed:	18/05/2022
Type and diameter of equipment:	Comacchio 205	Sheet No:	2 Of 2

Water levels recorded during boring, m

Date:						
Hole depth:						
Casing depth:						
Level water on strike:						
Water Level after 20mins:						

Remarks

1: No groundwater strike recorded

2: Dynamic sampling from GL-1.2m bgl

3: Rotary open-hole drilling with water flush from 1.2-8.0m bgl

4:

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
									5.00				LIMESTONE. (WHITE LIMESTONE FORMATION)	
									5.50					
									6.00		6.10			
													Blueish grey MUDSTONE. (WHITE LIMESTONE FORMATION)	
									6.50					
									7.00					
									7.50					
									8.00		8.00			
									8.50					
									9.00					
									9.50					
									10.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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ROTARY BOREHOLE RECORD

		Exploratory Hole No:	JBH6
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO/JN	Date Commenced:	17/05/2022
Checked By:	SC	Date Completed:	18/05/2022
Type and diameter of equipment:	Comacchio 205	Sheet No:	1 Of 2

Water levels recorded during boring, m

Date:						
Hole depth:						
Casing depth:						
Level water on strike:						
Water Level after 20mins:						

Remarks

1: No groundwater strike recorded

2: *Field description

3: Dynamic sampling from GL-1.1m bgl

4: Rotary open-hole drilling with water flush from 1.1-8.0m bgl

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
ES	0.25								0.00		0.10		Grass over dark brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone. (TOPSOIL)	
									0.50				Greyish brown very clayey very gravelly SAND. Sand is fine. Gravel consists of fine to coarse angular to sub-angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
ES	1.00								1.00		1.10			
SPT	1.10	11	14	26	18	6		50					Limestone. (WHITE LIMESTONE FORMATION)	
	50 blows for 160mm								1.50					
									2.00					
									2.50					
									3.00					
									3.50					
									4.00					
									4.50					
									5.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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ROTARY BOREHOLE RECORD

		Exploratory Hole No:	JBH6
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO/JN	Date Commenced:	17/05/2022
Checked By:	SC	Date Completed:	18/05/2022
Type and diameter of equipment:	Comacchio 205	Sheet No:	2 Of 2

Water levels recorded during boring, m

Date:						
Hole depth:						
Casing depth:						
Level water on strike:						
Water Level after 20mins:						

Remarks

1: No groundwater strike recorded

2: *Field description

3: Dynamic sampling from GL-1.1m bgl

4: Rotary open-hole drilling with water flush from 1.1-8.0m bgl

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
									5.00				Limestone. (WHITE LIMESTONE FORMATION)	
									5.50					
									6.00					
									6.50					
									7.00					
									7.50					
									8.00		8.00			
									8.50					
									9.00					
									9.50					
									10.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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ROTARY BOREHOLE RECORD

Exploratory Hole No:	JBH7		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO/JN	Date Commenced:	24/05/2022
Checked By:	SC	Date Completed:	24/05/2022
Type and diameter of equipment:	Comacchio 205	Sheet No:	1 Of 2

Water levels recorded during boring, m

Date:	24/05/2022					
Hole depth:	8.00					
Casing depth:	3.00					
Level water on strike:	3.6					
Water Level after 20mins:	3					

Remarks

1: Dynamic sampling from GL-3.0m bgl

2: Rotary open-hole drilling with water flush from 3.0-8.0m bgl

3: **Consistency estimated using semi-empirical correlations with SPT N-values, Plasticity Indices and published literature

4:

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
ES	0.10								0.00				Grass over dark brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone (MADE GROUND)	
											0.10			
									0.50				Brown silty gravelly clay. Gravel consists of fine to coarse angular to sub-rounded asphalt, limestone and concrete. (MADE GROUND)	
ES	0.75													
SPT	1.00	1	3	2	2	2	2	8	1.00		1.00		Firm** brown silty CLAY. (WEATHERED WHITE LIMESTONE FORMATION)	
ES	1.50								1.50					
SPT	2.00	3	3	3	5	5	3	16	2.00		2.00		Stiff** brown gravelly CLAY. Gravel consists of fine to coarse angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
D	2.50								2.50					
SPT	3.00	5	9	10	18	22		50	3.00		3.00		Grey LIMESTONE. (WHITE LIMESTONE FORMATION)	
	50 blows for 180mm													
									3.50					
									4.00					
									4.50					
									5.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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ROTARY BOREHOLE RECORD

Exploratory Hole No:	JBH7		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO/JN	Date Commenced:	24/05/2022
Checked By:	SC	Date Completed:	24/05/2022
Type and diameter of equipment:	Comacchio 205	Sheet No:	2 Of 2

Water levels recorded during boring, m

Date:	24/05/2022					
Hole depth:	8.00					
Casing depth:	3.00					
Level water on strike:	3.6					
Water Level after 20mins:	3					

Remarks

1: Dynamic sampling from GL-3.0m bgl

2: Rotary open-hole drilling with water flush from 3.0-8.0m bgl

3: **Consistency estimated using semi-empirical correlations with SPT N-values, Plasticity Indices and published literature

4:

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
									5.00				Grey LIMESTONE. (WHITE LIMESTONE FORMATION)	
									5.50					
									6.00					
									6.50					
									7.00					
									7.50					
									8.00		8.00			
									8.50					
									9.00					
									9.50					
									10.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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ROTARY BOREHOLE RECORD

Exploratory Hole No:	JBH8		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO/JN	Date Commenced:	19/05/2022
Checked By:	SC	Date Completed:	20/05/2022
Type and diameter of equipment:	Comacchio 205	Sheet No:	1 Of 2

Water levels recorded during boring, m

Date:						
Hole depth:						
Casing depth:						
Level water on strike:						
Water Level after 20mins:						

Remarks

1: No groundwater strike recorded

2: Dynamic sampling from GL-1.5m bgl

3: Rotary open-hole drilling with water flush from 1.5-8.0m bgl

4: **Consistency estimated using semi-empirical correlations with SPT N-values, Plasticity Indices and published literature

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
ES	0.10								0.00				Grass over dark brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone. (TOPSOIL)	
											0.20			
									0.50				Stiff** greyish brown very sandy gravelly CLAY. Sand is fine to coarse. Gravel consists of fine to coarse angular to sub-angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
SPT	1.00	3	3	2	1	13	12	28	1.00					
ES	1.50								1.50		1.50			
SPT		7	8	12	18	14	8	52					Grey LIMESTONE. (WHITE LIMESTONE FORMATION)	
	52 blows for 270mm													
									2.00					
									2.50					
									3.00					
									3.50					
									4.00					
									4.50					
									5.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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ROTARY BOREHOLE RECORD

Exploratory Hole No:	JBH8		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO/JN	Date Commenced:	19/05/2022
Checked By:	SC	Date Completed:	20/05/2022
Type and diameter of equipment:	Comacchio 205	Sheet No:	2 Of 2

Water levels recorded during boring, m

Date:						
Hole depth:						
Casing depth:						
Level water on strike:						
Water Level after 20mins:						

Remarks

1: No groundwater strike recorded

2: Dynamic sampling from GL-1.5m bgl

3: Rotary open-hole drilling with water flush from 1.5-8.0m bgl

4: **Consistency estimated using semi-empirical correlations with SPT N-values, Plasticity Indices and published literature

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
									5.00				Grey LIMESTONE. (WHITE LIMESTONE FORMATION)	
									5.50					
									6.00					
									6.50					
									7.00					
									7.50					
									8.00		8.00			
									8.50					
									9.00					
									9.50					
									10.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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ROTARY BOREHOLE RECORD

Exploratory Hole No:	JBH9		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO/JN	Date Commenced:	17/05/2022
Checked By:	SC	Date Completed:	17/05/2022
Type and diameter of equipment:	Comacchio 205	Sheet No:	1 Of 2

Water levels recorded during boring, m

Date:						
Hole depth:						
Casing depth:						
Level water on strike:						
Water Level after 20mins:						

Remarks

1: No groundwater strike recorded

2: Dynamic sampling from GL-1.8m bgl

3: Rotary open-hole drilling with water flush from 1.8-8.0m bgl

4: **Consistency estimated using semi-empirical correlations with SPT N-values, Plasticity Indices and published literature

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
									0.00				Grass over dark brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone. (TOPSOIL)	
											0.10			
ES	0.50								0.50				Greyish brown very gravelly SAND. Sand is fine. Gravel consists of fine to coarse angular to sub-angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
											0.80			
ES	1.00								1.00				Firm** yellowish brown sandy gravelly CLAY. Sand is fine. Gravel consists of fine to coarse angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
SPT	1.20	2	3	3	2	2	2	9						
									1.50		1.50			
ES	1.70												Firm** white sandy gravelly CLAY. Sand is fine. Gravel consists of fine to coarse angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)	
SPT	1.80	19	6	50				50			1.80			
	50 blows for 70mm												Grey LIMESTONE. (WHITE LIMESTONE FORMATION)	
									2.00					
									2.50					
									3.00					
									3.50					
									4.00					
									4.50					
									5.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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ROTARY BOREHOLE RECORD

		Exploratory Hole No:	JBH9
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO/JN	Date Commenced:	17/05/2022
Checked By:	SC	Date Completed:	17/05/2022
Type and diameter of equipment:	Comacchio 205	Sheet No:	2 Of 2

Water levels recorded during boring, m

Date:						
Hole depth:						
Casing depth:						
Level water on strike:						
Water Level after 20mins:						

Remarks

1: No groundwater strike recorded

2: Dynamic sampling from GL-1.8m bgl

3: Rotary open-hole drilling with water flush from 1.8-8.0m bgl

4: **Consistency estimated using semi-empirical correlations with SPT N-values, Plasticity Indices and published literature

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
									5.00				Grey LIMESTONE. (WHITE LIMESTONE FORMATION)	
									5.50					
									6.00					
									6.50					
									7.00					
									7.50					
									8.00		8.00			
									8.50					
									9.00					
									9.50					
									10.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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TRIAL PIT RECORD

Exploratory Hole No:	JTP1						
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD				Project No:	P4280J2513	
Client:	Heyford Park Settlements LP (HPSLP)				Ground Level:		
Logged By:	JRO				Date Commenced:	25/05/2022	
Checked By:	SC				Date Completed:	25/05/2022	
Type and diameter of equipment:	JCB 3CX				Sheet No:	1 Of 1	
Pit Dimension:	Length:	2.20	Width:	0.60	Depth:	3.00	

Remarks

1: No groundwater strike recorded
2:
3:
4:

Sample or Tests			Strata			
Type	Depth (mbgl)	Result	Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
ES	0.25					Brown silty gravelly sand with rootlets. Sand is fine to coarse. Gravel consists of fine to coarse angular limestone and brick. (MADE GROUND)
ES	0.75					
ES	1.50			1.60		
						Light brown silty SAND and GRAVEL with cobbles. Sand is fine to coarse. Gravel consists of fine to coarse angular limestone. Cobbles consist of angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)
D	2.60			2.60		
						Grey mottled light brown silty sandy CLAY. Sand is fine. (WEATHERED WHITE LIMESTONE FORMATION)
				3.00		

0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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TRIAL PIT RECORD

Exploratory Hole No:	JTP2		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO	Date Commenced:	18/05/2022
Checked By:	SC	Date Completed:	18/05/2022
Type and diameter of equipment:	JCB 3CX	Sheet No:	1 Of 1

Pit Dimension:	Length:	2.10	Width:	0.60	Depth:	1.80

Remarks

1: No groundwater strike recorded
2:
3:
4:

Sample or Tests			Strata			
Type	Depth (mbgl)	Result	Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
ES	0.25			0.40		Grass over dark brown silty clayey gravel with rootlets. Gravel consists of fine to coarse, angular to sub-angular flint and limestone. (TOPSOIL/SUBSOIL)
ES	0.75			1.00		Brown SAND and GRAVEL with cobbles. Sand is fine to medium. Gravel consists of fine to coarse, angular limestone. Cobbles consist of angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)
ES	1.50			1.80		Light brown very clayey slightly gravelly SAND. Sand is medium to coarse. Gravel consists of fine to coarse angular to sub-angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)

0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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TRIAL PIT RECORD

Exploratory Hole No:	JTP3		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO	Date Commenced:	18/05/2022
Checked By:	SC	Date Completed:	18/05/2022
Type and diameter of equipment:	JCB 3CX	Sheet No:	1 Of 1

Pit Dimension:	Length:	2.10	Width:	0.60	Depth:	1.90

Remarks

1: No groundwater srike recorded

2:

3:

4:

Sample or Tests				Strata			
Type	Depth (mbgl)	Result		Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
ES	0.25		0.00		0.40		Grass over brown silty very gravelly sand with rootlets. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-angular flint. (TOPSOIL/SUBSOIL)
ES	0.50		0.50		1.90		Light brown mottled brown clayey sandy GRAVEL with cobbles. Sand is fine to medium. Gravel consists of fine to coarse, angular limestones. Cobbles consist of angular limstone. (WEATHERED WHITE LIMESTONE FORMATION)
ES	1.50		1.00				
			1.50				
			2.00				
			2.50				
			3.00				
			3.50				
			4.00				
			4.50				
			5.00				

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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TRIAL PIT RECORD

				Exploratory Hole No:	JTP4		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD			Project No:	P4280J2513		
Client:	Heyford Park Settlements LP (HPSLP)			Ground Level:			
Logged By:	JRO			Date Commenced:	19/05/2022		
Checked By:	SC			Date Completed:	19/05/2022		
Type and diameter of equipment:	JCB 3CX			Sheet No:	1 Of 1		
Pit Dimension:	Length:	2.10	Width:	0.60	Depth:	0.90	

Remarks

1: Water supply pipe encountered at 0.9m and therefore pit terminated.
2:
3:
4:

Sample or Tests				Strata			
Type	Depth (mbgl)	Result		Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
ES	0.25		0.00				Grass over dark brown very clayey very gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone. (WEATHERED WHITE LIMESTONE FORMATION)
ES	0.50		0.50				
					0.90		
			1.00				
			1.50				
			2.00				
			2.50				
			3.00				
			3.50				
			4.00				
			4.50				
			5.00				

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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TRIAL PIT RECORD

				Exploratory Hole No:	JTP5		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD			Project No:	P4280J2513		
Client:	Heyford Park Settlements LP (HPSLP)			Ground Level:			
Logged By:	JRO			Date Commenced:	25/05/2022		
Checked By:	SC			Date Completed:	25/05/2022		
Type and diameter of equipment:	JCB 3CX			Sheet No:	1 Of 1		
Pit Dimension:	Length:	1.90	Width:	0.60	Depth:	1.10	

Remarks

1: No groundwater strike recorded

2: Stopped digging at 1.1mbgl due to potential presence of electric services

3:

4:

Sample or Tests			Strata			
Type	Depth (mbgl)	Result	Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
ES	0.10			0.10		Grass over dark brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone. (MADE GROUND - topsoil)
ES	0.75			1.10		Grey sandy slightly gravelly clay. Sand is fine to medium. Gravel consists of coarse angular brick. (MADE GROUND)

0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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TRIAL PIT RECORD

Exploratory Hole No:	JTP6		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO	Date Commenced:	18/05/2022
Checked By:	SC	Date Completed:	18/05/2022
Type and diameter of equipment:	JCB 3CX	Sheet No:	1 Of 1

Pit Dimension:	Length:	2.10	Width:	0.60	Depth:	1.80

Remarks

1: No groundwater strike recorded
2:
3:
4:

Sample or Tests			Strata			
Type	Depth (mbgl)	Result	Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
ES	0.25			0.60		Grass over dark brown silty clayey gravel with rootlets. Gravel consists of fine to coarse, angular to sub-angular flint and limestone. (TOPSOIL/SUBSOIL)
ES	0.75			1.80		Light brownish grey clayey very sandy GRAVEL with cobbles. Sand is fine to coarse. Gravel consists of fine to coarse angular limestone. Cobbles consist of angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)
ES	1.50					

0.00 — 0.50 — 1.00 — 1.50 — 2.00 — 2.50 — 3.00 — 3.50 — 4.00 — 4.50 — 5.00

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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TRIAL PIT RECORD

Exploratory Hole No:	JTP7						
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD				Project No:	P4280J2513	
Client:	Heyford Park Settlements LP (HPSLP)				Ground Level:		
Logged By:	JRO				Date Commenced:	23/05/2022	
Checked By:	SC				Date Completed:	23/05/2022	
Type and diameter of equipment:	JCB 3CX				Sheet No:	1 Of 1	
Pit Dimension:	Length:	2.00	Width:	0.60	Depth:	3.00	

Remarks

1: Groundwater reported at 2.7m bgl
2:
3:
4:

Sample or Tests			Strata			
Type	Depth (mbgl)	Result	Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
ES	0.10			0.20		Grass over dark brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone. (MADE GROUND)
ES	0.75			1.60		Brown clayey gravelly sand with cobbles and boulders. Sand is fine to coarse. Gravel consists of fine to coarse angular to sub-angular limestone, brick, asphalt, glass and flint. Cobbles consist of angular brick and limestone. Boulders consists of angular concrete. (MADE GROUND)
ES	1.75			3.00		Greyish brown mottled light brown sandy gravelly CLAY. Gravel consists of fine to coarse angular to sub-rounded limestone. (WEATHERED WHITE LIMESTONE FORMATION)
D	2.50					

0.00 — 0.50 — 1.00 — 1.50 — 2.00 — 2.50 — 3.00 — 3.50 — 4.00 — 4.50 — 5.00

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

TRIAL PIT RECORD

Exploratory Hole No:	JTP8		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO	Date Commenced:	23/05/2022
Checked By:	SC	Date Completed:	23/05/2022
Type and diameter of equipment:	JCB 3CX	Sheet No:	1 Of 1

Pit Dimension:	Length:	2.00	Width:	0.60	Depth:	0.80

Remarks

1: No groundwater strike recorded

2: Trial Pit terminated at 0.8m bgl on concrete obstruction

3:

4:

Sample or Tests			Strata			
Type	Depth (mbgl)	Result	Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
ES	0.10			0.20		Grass over dark brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone. (TOPSOIL)
ES	0.50			0.80		Brown clayey gravelly sand with cobbles. Sand is fine to coarse. Gravel consists of fine to coarse angular to sub-angular limestone, brick, asphalt, glass and flint. Cobbles consist of angular brick and limestone. (MADE GROUND)

0.00 — 0.50 — 1.00 — 1.50 — 2.00 — 2.50 — 3.00 — 3.50 — 4.00 — 4.50 — 5.00

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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TRIAL PIT RECORD

Exploratory Hole No:	JTP10						
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD				Project No:	P4280J2513	
Client:	Heyford Park Settlements LP (HPSLP)				Ground Level:		
Logged By:	JRO				Date Commenced:	23/05/2022	
Checked By:	SC				Date Completed:	23/05/2022	
Type and diameter of equipment:	JCB 3CX				Sheet No:	1 Of 1	
Pit Dimension:	Length:	2.10	Width:	0.60	Depth:	3.00	

Remarks

1: *Field description

2: Black stained layer 1.5-1.7 mbgl with slight h/c odour

3: Groundwater seepage at 2.0m bgl. No evidence on hydrocarbon impact on water.

4:

Sample or Tests			Strata			
Type	Depth (mbgl)	Result	Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
ES	0.25			0.60		Grass over dark brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone. (TOPSOIL/SUBSOIL)
ES	1.00			1.40		Firm* brown mottled greyish brown sandy slightly gravelly CLAY. Gravel consists of fine to coarse angular to sub-rounded limestone. (WEATHERED WHITE LIMESTONE FORMATION)
ES	1.50			2.00		Light brown clayey sandy GRAVEL. Sand is fine to medium. Gravel consists of angular to sub-rounded limestone and flint. Black staining and hydrocarbon odour at 1.5-1.7m bgl. (WEATHERED WHITE LIMESTONE FORMATION)
ES	1.80					
ES	2.50			3.00		Soft* grey mottled light brown sandy slightly gravelly CLAY. (WEATHERED WHITE LIMESTONE FORMATION)

0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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TRIAL PIT RECORD

Exploratory Hole No:	JTP11		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO	Date Commenced:	18/05/2022
Checked By:	SC	Date Completed:	18/05/2022
Type and diameter of equipment:	JCB 3CX	Sheet No:	1 Of 1

Pit Dimension:	Length:	2.10	Width:	0.60	Depth:	1.30

Remarks

1: No groundwater strike recorded

2:

3:

4:

Sample or Tests			Strata			
Type	Depth (mbgl)	Result	Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
				0.00		
ES	0.25			0.30		Grass over dark brown silty clayey gravel with rootlets. Gravel consists of fine to coarse, angular to sub-angular flint and limestone. (TOPSOIL)
ES	0.50			0.70		Orangeish brown clayey sandy GRAVEL with cobbles. Sand is fine to coarse. Gravel consists of fine to coarse angular limestone. Cobbles consist of angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)
ES	1.20			1.30		Orangeish brown silty SAND. Sand is fine to coarse. (WEATHERED WHITE LIMESTONE FORMATION)

0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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TRIAL PIT RECORD

Exploratory Hole No:	JTP12		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO	Date Commenced:	18/05/2022
Checked By:	SC	Date Completed:	18/05/2022
Type and diameter of equipment:	JCB 3CX	Sheet No:	1 Of 1

Pit Dimension:	Length:	2.00	Width:	0.60	Depth:	1.40

Remarks

1: No groundwater strike recorded
2:
3:
4:

Sample or Tests			Strata			
Type	Depth (mbgl)	Result	Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
ES	0.25			0.50		Grass over dark brown silty clayey gravel with rootlets. Gravel consists of fine to coarse, angular to sub-angular flint and limestone. (TOPSOIL/SUBSOIL)
ES	0.75			1.40		Light brownish grey clayey sandy GRAVEL with cobbles. Sand is fine to coarse. Gravel consists of fine to coarse angular limestone. Cobbles consist of angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)
ES	1.40					

0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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TRIAL PIT RECORD

Exploratory Hole No:	JTP13		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO	Date Commenced:	25/05/2022
Checked By:	SC	Date Completed:	25/05/2022
Type and diameter of equipment:	JCB 3CX	Sheet No:	1 Of 1

Pit Dimension:	Length:	1.90	Width:	0.60	Depth:	1.90

Remarks

1: No groundwater strike recorded
2:
3:
4:

Sample or Tests			Strata			
Type	Depth (mbgl)	Result	Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
ES	0.10			0.20		Grass over dark brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone. (TOPSOIL)
ES	0.75			1.90		Light brown clayey very sandy GRAVEL. Sand is fine to coarse. Gravel consists of fine to coarse angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)

0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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TRIAL PIT RECORD

Exploratory Hole No:	JTP14						
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD				Project No:	P4280J2513	
Client:	Heyford Park Settlements LP (HPSLP)				Ground Level:		
Logged By:	JRO				Date Commenced:	25/05/2022	
Checked By:	SC				Date Completed:	25/05/2022	
Type and diameter of equipment:	JCB 3CX				Sheet No:	1 Of 1	
Pit Dimension:	Length:	2.00	Width:	0.60	Depth:	3.00	

Remarks

1: *Field description

2: Groundwater seepage at base of pit

3:

4:

Sample or Tests			Strata			
Type	Depth (mbgl)	Result	Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
ES	0.10			0.20		Grass over dark brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone. (MADE GROUND)
ES	0.75			1.50		Brown clayey gravelly sand with cobbles and boulders. Sand is fine to coarse. Gravel consists of fine to coarse angular concrete, timber, brick and limestone. Cobbles and boulders consist of timber. (MADE GROUND)
ES	1.75					Firm* dark grey mottled brown sandy slightly gravelly CLAY. Sand is coarse. (WEATHERED WHITE LIMESTONE FORMATION)
D	3.00			3.00		

0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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TRIAL PIT RECORD

Exploratory Hole No:	JTP15		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO	Date Commenced:	26/05/2022
Checked By:	SC	Date Completed:	26/05/2022
Type and diameter of equipment:	JCB 3CX	Sheet No:	1 Of 1

Pit Dimension:	Length:	2.10	Width:	0.60	Depth:	1.80

Remarks

1: No groundwater strike recorded
2:
3:
4:

Sample or Tests			Strata			
Type	Depth (mbgl)	Result	Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
ES	0.25			0.50		Grass over dark brown silty sand and gravel with rootlets. Sand is fine to coarse. Gravel consists of fine to coarse angular flint and limestone. (TOPSOIL/SUBSOIL)
ES	0.75			1.40		Light brown slightly clayey gravelly SAND with cobbles. Sand is fine to medium. Gravel consists of fine to coarse angular limestone. Cobbles consist of angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)
ES	1.60			1.80		Light brownish grey very sandy gravelly CLAY. Sand is fine to medium. Gravel consists of fine to coarse angular to sub-rounded limestone. (WEATHERED WHITE LIMESTONE FORMATION)

0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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TRIAL PIT RECORD

Exploratory Hole No:	JTP16		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO	Date Commenced:	23/05/2022
Checked By:	SC	Date Completed:	23/05/2022
Type and diameter of equipment:	JCB 3CX	Sheet No:	1 Of 1

Pit Dimension:	Length:	2.00	Width:	0.60	Depth:	3.00

Remarks

1: *Field description

2: Groundwater seepage at base of pit.

3:

4:

Sample or Tests			Strata			
Type	Depth (mbgl)	Result	Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
ES	0.25			0.60		Grass over dark brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone. (MADE GROUND)
ES	0.75			1.60		Brown clayey gravelly sand with cobbles. Sand is fine to coarse. Gravel consists of fine to coarse angular to sub-angular limestone, brick, asphalt and flint. Cobbles consist of angular brick and limestone. (MADE GROUND)
ES	1.75			2.40		Light greyish brown sandy gravelly CLAY. Sand is fine to coarse. (WEATHERED WHITE LIMESTONE FORMATION)
D	2.50			3.00		Firm* grey mottled light brown sandy slightly gravelly CLAY. Sand is fine to coarse. (WEATHERED WHITE LIMESTONE FORMATION)

0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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TRIAL PIT RECORD

				Exploratory Hole No:		JSTP1	
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD			Project No:		P4280J2513	
Client:	Heyford Park Settlements LP (HPSLP)			Ground Level:			
Logged By:	JRO			Date Commenced:		24/05/2022	
Checked By:	SC			Date Completed:		24/05/2022	
Type and diameter of equipment:	JCB 3CX			Sheet No:		1 Of 1	
Pit Dimension:	Length:	2.40	Width:	0.60	Depth:	2.70	

Remarks

1: *Field description

2: Black staining and slight hydrocarbon odour at 1.4-1.5m bgl.

3: BRE365 infiltration testing undertaken. Trial pit deepened to 3.2m bgl for second test

4: Groundwater reported at 2.5m bgl

Sample or Tests			Strata			
Type	Depth (mbgl)	Result	Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
ES	0.25			0.30		Grass over dark brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone. (MADE GROUND)
ES	0.75			1.50		Brown silty very gravelly clay with cobbles and boulders. Gravel consists of fine to coarse angular to sub-rounded brick, concrete, asphalt and limestone. Cobbles and boulders consist of angular concrete. Black staining and slight hydrocarbon odour at 1.4-1.5m bgl. (MADE GROUND)
ES	1.40			2.70		Firm* dark grey silty sandy CLAY. Sand is coarse. (WEATHERED WHITE LIMESTONE FORMATION)
ES	1.75					

0.00 — 0.50 — 1.00 — 1.50 — 2.00 — 2.50 — 3.00 — 3.50 — 4.00 — 4.50 — 5.00

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

TRIAL PIT RECORD

Exploratory Hole No:	JSTP2A		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO	Date Commenced:	24/05/2022
Checked By:	SC	Date Completed:	24/05/2022
Type and diameter of equipment:	JCB 3CX	Sheet No:	1 Of 1

Pit Dimension:	Length:	2.20	Width:	0.60	Depth:	1.70	

Remarks

1: Trial pit terminated at 1.7m bgl due to influx of water at 1.5m bgl.

2:

3:

4:

Sample or Tests				Strata			
Type	Depth (mbgl)	Result		Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
			0.00		0.30		Grass over dark brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone. (MADE GROUND)
			0.50		1.70		Brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse angular to sub-rounded limestone, concrete, asphalt, brick and ceramic. (MADE GROUND)
			1.00				
			1.50				
			2.00				
			2.50				
			3.00				
			3.50				
			4.00				
			4.50				
			5.00				

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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TRIAL PIT RECORD

Exploratory Hole No:	JSTP2						
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD				Project No:	P4280J2513	
Client:	Heyford Park Settlements LP (HPSLP)				Ground Level:		
Logged By:	JRO				Date Commenced:	24/05/2022	
Checked By:	SC				Date Completed:	24/05/2022	
Type and diameter of equipment:	JCB 3CX				Sheet No:	1 Of 1	
Pit Dimension:	Length:	2.30	Width:	0.60	Depth:	2.30	

Remarks

1: *Field description

2: Black staining at 0.9-1.1m bgl. No odour

3: BRE365 infiltration testing undertaken. Trial pit deepened to 2.9m bgl for second test

4: Groundwater reported at 2.4m bgl

Sample or Tests			Strata			
Type	Depth (mbgl)	Result	Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
ES	0.10			0.20		Grass over dark brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone. (MADE GROUND)
ES	0.50			1.90		Brown silty clayey gravelly sand. Sand is coarse. Gravel consists of fine to coarse angular limestone. Black staining at 0.9-1.1m. (MADE GROUND)
ES	1.00					
ES	2.00			2.40		Soft* grey mottled light brown silty slightly gravelly CLAY. (WEATHERED WHITE LIMESTONE FORMATION)

0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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TRIAL PIT RECORD

Exploratory Hole No:	JSTP3		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO	Date Commenced:	24/05/2022
Checked By:	SC	Date Completed:	24/05/2022
Type and diameter of equipment:	JCB 3CX	Sheet No:	1 Of 1

Pit Dimension:	Length:	2.00	Width:	0.60	Depth:	1.30

Remarks

1: No groundwater strike recorded

2: Trial pit terminated at 1.3m bgl due to limestone rockhead enountered.

3:

4:

Sample or Tests			Strata			
Type	Depth (mbgl)	Result	Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
ES	0.25			0.30		Grass over dark brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone. (TOPSOIL)
ES	0.75			1.30		Brown clayey sandy GRAVEL with cobbles. Sand is fine. Gravel consists of fine to coarse angular to sub-angular limestone. Cobbles consist of angular to sub-angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)

0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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TRIAL PIT RECORD

Exploratory Hole No:	JSTP4		
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Project No:	P4280J2513
Client:	Heyford Park Settlements LP (HPSLP)	Ground Level:	
Logged By:	JRO	Date Commenced:	24/05/2022
Checked By:	SC	Date Completed:	24/05/2022
Type and diameter of equipment:	JCB 3CX	Sheet No:	1 Of 1

Pit Dimension:	Length:	2.30	Width:	0.80	Depth:	1.30

Remarks

1: No groundwater strike recorded

2: Trial pit terminated at 1.4m bgl due to limestone rockhead encountered.

3:

4:

Sample or Tests				Strata			
Type	Depth (mbgl)	Result		Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description
ES	0.25		0.00		0.30		Grass over dark brown clayey gravelly sand. Sand is fine to coarse. Gravel consists of fine to coarse, angular to sub-rounded limestone. (TOPSOIL)
ES	0.75		0.50 1.00		1.40		Brown clayey sandy GRAVEL with cobbles. Sand is fine. Gravel consists of fine to coarse angular to sub-angular limestone. Cobbles consist of angular to sub-angular limestone. (WEATHERED WHITE LIMESTONE FORMATION)
			1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00				

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

Jomas Associates Ltd - Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD
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APPENDIX 3 – CHEMICAL LABORATORY TEST RESULTS

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Stockley Park
UB11 1BD

e: Jomas Associates -

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

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e: reception@i2analytical.com

Analytical Report Number : 22-62384

Replaces Analytical Report Number: 22-62384, issue no. 1
Additional analysis undertaken.

Project / Site name:	Phase 10 Heyford Park Camp Road OX25 5HD	**Samples received on:**	30/05/2022
Your job number:	JJ2513	**Samples instructed on/ Analysis started on:**	01/06/2022
Your order number:	P4280JJ2513 8	**Analysis completed by:**	01/07/2022
Report Issue Number:	2	**Report issued on:**	12/07/2022
Samples Analysed:	23 soil samples		

[redacted]

Signed:

Joanna Wawrzeczko
Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 22-62384
Project / Site name: Phase 10 Heyford Park Camp Road OX25 5HD
Your Order No: P4280JJ2513 8

Lab Sample Number				2299047	2299048	2299049	2299050	2299051
Sample Reference				JWS1	JWS2	JWS3	JWS4	JWS5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.10	0.10	0.10	0.10	0.10
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	30	< 0.1	36	21
Moisture Content	%	0.01	NONE	17	11	14	8.5	14
Total mass of sample received	kg	0.001	NONE	1	1	1	1	1
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	JMA	JMA	JMA	JMA	JMA
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.9	7.8	8	8.1	7.9
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	930	1200	920	910	1200
Total Sulphate as SO4	%	0.005	MCERTS	-	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.01	0.011	0.008	0.0059	0.015
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	10.4	10.8	8	5.9	14.6
Total Sulphur	mg/kg	50	MCERTS	-	-	-	-	-
Total Sulphur	%	0.005	MCERTS	-	-	-	-	-
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	-	4.3	2.3	-	3.9
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.58	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.81	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	8.4	0.63	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	1.5	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	13	2.5	0.4	0.5	< 0.05
Pyrene	mg/kg	0.05	MCERTS	11	2.5	0.38	0.41	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	5	0.82	0.21	0.22	< 0.05
Chrysene	mg/kg	0.05	MCERTS	5.1	1.9	0.24	0.2	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	6.1	2.1	0.24	0.23	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	2.9	1	0.22	0.18	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	5.6	1.7	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	2.8	1.2	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.68	0.18	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	3.7	1.6	< 0.05	< 0.05	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	67.7	16.1	1.69	1.74	< 0.80

Analytical Report Number: 22-62384
Project / Site name: Phase 10 Heyford Park Camp Road OX25 5HD
Your Order No: P4280JJ2513 8

Lab Sample Number				2299047	2299048	2299049	2299050	2299051
Sample Reference				JWS1	JWS2	JWS3	JWS4	JWS5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.10	0.10	0.10	0.10	0.10
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	21	15	20	14	16
Boron (water soluble)	mg/kg	0.2	MCERTS	1.8	1.3	0.8	< 0.2	2.1
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	32	24	30	18	25
Copper (aqua regia extractable)	mg/kg	1	MCERTS	120	16	16	10	24
Lead (aqua regia extractable)	mg/kg	1	MCERTS	40	27	25	17	20
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	24	16	20	13	16
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	97	67	52	41	52
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	-	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	-
Petroleum Hydrocarbons								
Petroleum Range Organics (C6 - C10) $_{HS\_1D\_TOTAL}$	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH\_CU\_1D\_AL}$	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH\_CU\_1D\_AL}$	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AL}$	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12 $_{EH\_CU\_1D\_AR}$	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16 $_{EH\_CU\_1D\_AR}$	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AR}$	mg/kg	10	MCERTS	-	-	-	-	-
TPH (C10 - C12) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH (C12 - C16) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	4	MCERTS	7.3	< 4.0	< 4.0	< 4.0	< 4.0
TPH (C16 - C21) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	1	MCERTS	20	4.9	< 1.0	< 1.0	< 1.0
TPH (C21 - C40) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	10	MCERTS	120	24	< 10	< 10	< 10
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-	-

Analytical Report Number: 22-62384
Project / Site name: Phase 10 Heyford Park Camp Road OX25 5HD
Your Order No: P4280JJ2513 8

Lab Sample Number				2299047	2299048	2299049	2299050	2299051
Sample Reference				JWS1	JWS2	JWS3	JWS4	JWS5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.10	0.10	0.10	0.10	0.10
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
Benzene	µg/kg	1	MCERTS	-	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-	-
Styrene	µg/kg	1	MCERTS	-	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-62384
Project / Site name: Phase 10 Heyford Park Camp Road OX25 5HD
Your Order No: P4280JJ2513 8

Lab Sample Number				2299052	2299053	2299054	2299055	2299056
Sample Reference				JBH1	JBH2	JBH3	JBH4	JBH4
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.25	0.25	0.25	0.10	1.50
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	39	73	31	37	< 0.1
Moisture Content	%	0.01	NONE	7.4	2.4	2.3	7	13
Total mass of sample received	kg	0.001	NONE	1	1	1	1	1
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	-
Asbestos Analyst ID	N/A	N/A	N/A	JMA	JMA	JMA	JMA	N/A
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.6	11	8.5	9.2	7.9
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	-
Total Sulphate as SO4	mg/kg	50	MCERTS	840	2300	530	970	510
Total Sulphate as SO4	%	0.005	MCERTS	-	-	-	-	0.051
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.021	0.052	0.014	0.086	0.11
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	20.9	51.8	14	85.7	107
Total Sulphur	mg/kg	50	MCERTS	-	-	-	-	1200
Total Sulphur	%	0.005	MCERTS	-	-	-	-	0.118
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	1.1	-	-	-	-
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	18	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	15	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	14	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	3	180	0.47	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.73	59	0.18	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.67	6.3	370	0.97	< 0.05
Pyrene	mg/kg	0.05	MCERTS	0.7	5.7	340	0.86	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.44	2	150	0.31	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.28	3.1	120	0.44	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.37	3	120	0.48	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.26	1.2	57	0.21	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.3	2.6	100	0.44	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.2	1.3	50	0.25	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	14	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.3	1.7	50	0.33	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	3.52	30.6	1670	4.94	< 0.80

Analytical Report Number: 22-62384
Project / Site name: Phase 10 Heyford Park Camp Road OX25 5HD
Your Order No: P4280JJ2513 8

Lab Sample Number				2299052	2299053	2299054	2299055	2299056
Sample Reference				JBH1	JBH2	JBH3	JBH4	JBH4
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.25	0.25	0.25	0.10	1.50
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	23	11	12	13	-
Boron (water soluble)	mg/kg	0.2	MCERTS	1.3	1.3	0.3	0.7	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	-
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	35	11	16	20	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	21	11	22	14	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	22	10	21	22	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	24	8.7	10	13	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	59	29	49	51	-
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Petroleum Hydrocarbons								
Petroleum Range Organics (C6 - C10) $_{HS\_1D\_TOTAL}$	mg/kg	0.1	MCERTS	-	< 0.1	-	< 0.1	-
TPH-CWG - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	-	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	-	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	-	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH\_CU\_1D\_AL}$	mg/kg	1	MCERTS	< 1.0	-	< 1.0	-	4.3
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH\_CU\_1D\_AL}$	mg/kg	2	MCERTS	< 2.0	-	12	-	41
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	-	29	-	80
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	-	30	-	120
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AL}$	mg/kg	10	MCERTS	< 10	-	71	-	240
TPH-CWG - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	-	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	-	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	-	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 $_{EH\_CU\_1D\_AR}$	mg/kg	1	MCERTS	< 1.0	-	14	-	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 $_{EH\_CU\_1D\_AR}$	mg/kg	2	MCERTS	< 2.0	-	87	-	84
TPH-CWG - Aromatic >EC16 - EC21 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10	-	560	-	880
TPH-CWG - Aromatic >EC21 - EC35 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	18	-	780	-	1300
TPH-CWG - Aromatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AR}$	mg/kg	10	MCERTS	24	-	1400	-	2200
TPH (C10 - C12) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	2	MCERTS	-	< 2.0	-	< 2.0	-
TPH (C12 - C16) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	4	MCERTS	-	< 4.0	-	< 4.0	-
TPH (C16 - C21) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	1	MCERTS	-	39	-	8.5	-
TPH (C21 - C40) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	10	MCERTS	-	49	-	21	-
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0

Analytical Report Number: 22-62384
Project / Site name: Phase 10 Heyford Park Camp Road OX25 5HD
Your Order No: P4280JJ2513 8

Lab Sample Number				2299052	2299053	2299054	2299055	2299056
Sample Reference				JBH1	JBH2	JBH3	JBH4	JBH4
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.25	0.25	0.25	0.10	1.50
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-62384
Project / Site name: Phase 10 Heyford Park Camp Road OX25 5HD
Your Order No: P4280JJ2513 8

Lab Sample Number				2299057	2299058	2299059	2299060	2299061
Sample Reference				JBH5	JHB6	JBH8	JWS1	JWS3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.25	0.25	0.10	1.20	1.50
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	72	< 0.1	19	27	< 0.1
Moisture Content	%	0.01	NONE	3.2	7.6	3.8	9.4	14
Total mass of sample received	kg	0.001	NONE	1	1	1	1	1
Asbestos in Soil	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos Analyst ID	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.3	8.2	7.4	8.2	7.9
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Total Sulphate as SO4	mg/kg	50	MCERTS	630	600	900	560	510
Total Sulphate as SO4	%	0.005	MCERTS	-	-	-	0.056	0.051
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0064	0.0063	0.011	0.006	0.069
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	6.4	6.3	10.7	6	69.3
Total Sulphur	mg/kg	50	MCERTS	-	-	-	250	320
Total Sulphur	%	0.005	MCERTS	-	-	-	0.025	0.032
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	-	-	-	-	-
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1.8	-	-
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.41	-	-
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	4.1	-	-
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	3.7	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1.4	-	-
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	2	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	2	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.79	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1.6	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.85	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1.1	-	-
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	19.8	-	-

Analytical Report Number: 22-62384
Project / Site name: Phase 10 Heyford Park Camp Road OX25 5HD
Your Order No: P4280JJ2513 8

Lab Sample Number				2299057	2299058	2299059	2299060	2299061
Sample Reference				JBH5	JHB6	JBH8	JWS1	JWS3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.25	0.25	0.10	1.20	1.50
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.5	28	17	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	0.7	1	< 0.2	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	12	34	20	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	11	13	12	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	7.5	20	19	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	7.7	24	13	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	20	54	65	-	-
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
o-xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Petroleum Hydrocarbons								
Petroleum Range Organics (C6 - C10) $_{HS\_1D\_TOTAL}$	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	-	-
TPH-CWG - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH\_CU\_1D\_AL}$	mg/kg	1	MCERTS	8.1	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH\_CU\_1D\_AL}$	mg/kg	2	MCERTS	150	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AL}$	mg/kg	10	MCERTS	160	-	-	-	-
TPH-CWG - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12 $_{EH\_CU\_1D\_AR}$	mg/kg	1	MCERTS	4	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16 $_{EH\_CU\_1D\_AR}$	mg/kg	2	MCERTS	130	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	11	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AR}$	mg/kg	10	MCERTS	150	-	-	-	-
TPH (C10 - C12) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	2	MCERTS	12	< 2.0	< 2.0	-	-
TPH (C12 - C16) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	4	MCERTS	280	6.8	< 4.0	-	-
TPH (C16 - C21) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	1	MCERTS	11	99	10	-	-
TPH (C21 - C40) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	10	MCERTS	< 10	140	19	-	-
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-	-

Analytical Report Number: 22-62384
Project / Site name: Phase 10 Heyford Park Camp Road OX25 5HD
Your Order No: P4280JJ2513 8

Lab Sample Number				2299057	2299058	2299059	2299060	2299061
Sample Reference				JBH5	JHB6	JBH8	JWS1	JWS3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.25	0.25	0.10	1.20	1.50
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
Benzene	µg/kg	1	MCERTS	-	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-	-
Styrene	µg/kg	1	MCERTS	-	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-62384
Project / Site name: Phase 10 Heyford Park Camp Road OX25 5HD
Your Order No: P4280JJ2513 8

Lab Sample Number				2299062	2299063	2299064	2299065	2299066
Sample Reference				JWS3	JWS4	JWS4	JBH1	JBH2
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.50	0.50	2.50	1.60	0.75
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	39	30
Moisture Content	%	0.01	NONE	19	8.9	9.9	5.5	3.1
Total mass of sample received	kg	0.001	NONE	0.5	1	0.5	1	1
Asbestos in Soil	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos Analyst ID	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.3	8.3	8.6	8.3	8.2
Total Cyanide	mg/kg	1	MCERTS	-	-	-	-	-
Total Sulphate as SO4	mg/kg	50	MCERTS	340	740	540	760	690
Total Sulphate as SO4	%	0.005	MCERTS	0.034	0.074	0.054	0.076	0.069
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.01	0.004	0.0071	0.0051	0.0068
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	10.1	4	7.1	5.1	6.8
Total Sulphur	mg/kg	50	MCERTS	160	290	210	310	290
Total Sulphur	%	0.005	MCERTS	0.016	0.029	0.021	0.031	0.029
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	-	-	-	-	-
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	-	-	-	-	-
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-	-
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	-	-	-	-	-

Analytical Report Number: 22-62384
Project / Site name: Phase 10 Heyford Park Camp Road OX25 5HD
Your Order No: P4280JJ2513 8

Lab Sample Number				2299062	2299063	2299064	2299065	2299066
Sample Reference				JWS3	JWS4	JWS4	JBH1	JBH2
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.50	0.50	2.50	1.60	0.75
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	-	-	-	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-	-	-	-
Chromium (hexavalent)	mg/kg	1.8	MCERTS	-	-	-	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	-	-	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	-	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	-
Petroleum Hydrocarbons								
Petroleum Range Organics (C6 - C10) $_{HS\_1D\_TOTAL}$	mg/kg	0.1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH\_CU\_1D\_AL}$	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH\_CU\_1D\_AL}$	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AL}$	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12 $_{EH\_CU\_1D\_AR}$	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16 $_{EH\_CU\_1D\_AR}$	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AR}$	mg/kg	10	MCERTS	-	-	-	-	-
TPH (C10 - C12) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	2	MCERTS	-	-	-	-	-
TPH (C12 - C16) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	4	MCERTS	-	-	-	-	-
TPH (C16 - C21) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	1	MCERTS	-	-	-	-	-
TPH (C21 - C40) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	10	MCERTS	-	-	-	-	-
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-	-

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Lab Sample Number				2299062	2299063	2299064	2299065	2299066
Sample Reference				JWS3	JWS4	JWS4	JBH1	JBH2
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.50	0.50	2.50	1.60	0.75
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
Benzene	µg/kg	1	MCERTS	-	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-	-
Styrene	µg/kg	1	MCERTS	-	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-62384
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Lab Sample Number				2299067	2299068	2299069
Sample Reference				JBH3	JBH4	JBH9
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				0.75	0.75	1.70
Date Sampled				25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	16	13	9.6
Total mass of sample received	kg	0.001	NONE	1	1	1
Asbestos in Soil	Type	N/A	ISO 17025	-	-	-
Asbestos Analyst ID	N/A	N/A	N/A	N/A	N/A	N/A
General Inorganics						
pH - Automated	pH Units	N/A	MCERTS	8.1	8.1	8.6
Total Cyanide	mg/kg	1	MCERTS	-	-	-
Total Sulphate as SO4	mg/kg	50	MCERTS	570	540	620
Total Sulphate as SO4	%	0.005	MCERTS	0.057	0.054	0.062
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.025	0.007	0.003
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	24.7	7	3
Total Sulphur	mg/kg	50	MCERTS	280	260	280
Total Sulphur	%	0.005	MCERTS	0.028	0.026	0.028
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	-	-	-
Total Phenols						
Total Phenols (monohydric)	mg/kg	1	MCERTS	-	-	-
Speciated PAHs						
Naphthalene	mg/kg	0.05	MCERTS	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-
Total PAH						
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	-	-	-

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Lab Sample Number				2299067	2299068	2299069
Sample Reference				JBH3	JBH4	JBH9
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				0.75	0.75	1.70
Date Sampled				25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Heavy Metals / Metalloids						
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	-	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-	-
Chromium (hexavalent)	mg/kg	1.8	MCERTS	-	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-
Monoaromatics & Oxygenates						
Benzene	µg/kg	1	MCERTS	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-
Petroleum Hydrocarbons						
Petroleum Range Organics (C6 - C10) HS_1D_TOTAL	mg/kg	0.1	MCERTS	-	-	-
TPH-CWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.001	MCERTS	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.001	MCERTS	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.001	MCERTS	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35) EH_CU+HS_1D_AL	mg/kg	10	MCERTS	-	-	-
TPH-CWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.001	MCERTS	-	-	-
TPH-CWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.001	MCERTS	-	-	-
TPH-CWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.001	MCERTS	-	-	-
TPH-CWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	-	-	-
TPH-CWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	-	-	-
TPH-CWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	-	-	-
TPH-CWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	-	-	-
TPH-CWG - Aromatic (EC5 - EC35) EH_CU+HS_1D_AR	mg/kg	10	MCERTS	-	-	-
TPH (C10 - C12) EH_CU_1D_TOTAL	mg/kg	2	MCERTS	-	-	-
TPH (C12 - C16) EH_CU_1D_TOTAL	mg/kg	4	MCERTS	-	-	-
TPH (C16 - C21) EH_CU_1D_TOTAL	mg/kg	1	MCERTS	-	-	-
TPH (C21 - C40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	-	-	-
VOCs						
Chloromethane	µg/kg	1	ISO 17025	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-

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Lab Sample Number				2299067	2299068	2299069
Sample Reference				JBH3	JBH4	JBH9
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				0.75	0.75	1.70
Date Sampled				25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-
Benzene	µg/kg	1	MCERTS	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-
Styrene	µg/kg	1	MCERTS	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 22-62384
Project / Site name: Phase 10 Heyford Park Camp Road OX25 5HD

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2299047	JWS1	None Supplied	0.1	Brown loam with vegetation.
2299048	JWS2	None Supplied	0.1	Brown loam with vegetation and stones.
2299049	JWS3	None Supplied	0.1	Brown clay and loam with vegetation.
2299050	JWS4	None Supplied	0.1	Brown loam with vegetation and stones.
2299051	JWS5	None Supplied	0.1	Brown loam with vegetation and stones.
2299052	JBH1	None Supplied	0.25	Brown clay and loam with vegetation and stones.
2299053	JBH2	None Supplied	0.25	Brown gravelly loam with vegetation and stones.
2299054	JBH3	None Supplied	0.25	Brown gravelly loam with vegetation and stones.
2299055	JBH4	None Supplied	0.1	Brown loam with vegetation and stones.
2299056	JBH4	None Supplied	1.5	Brown clay and loam.
2299057	JBH5	None Supplied	0.25	Brown gravelly loam with vegetation and stones.
2299058	JHB6	None Supplied	0.25	Brown clay and loam with gravel and vegetation.
2299059	JBH8	None Supplied	0.1	Brown loam with vegetation and stones.
2299060	JWS1	None Supplied	1.2	Brown clay and sand with stones.
2299061	JWS3	None Supplied	1.5	Brown clay and loam with gravel and vegetation.
2299062	JWS3	None Supplied	3.5	Brown clay.
2299063	JWS4	None Supplied	0.5	Brown clay and loam with gravel.
2299064	JWS4	None Supplied	2.5	Brown clay and loam with vegetation.
2299065	JBH1	None Supplied	1.6	Brown clay and loam with stones.
2299066	JBH2	None Supplied	0.75	Brown clay and loam with stones.
2299067	JBH3	None Supplied	0.75	Brown clay and loam with gravel.
2299068	JBH4	None Supplied	0.75	Brown clay and loam with gravel and vegetation.
2299069	JBH9	None Supplied	1.7	Brown clay and sand.

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Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
PRO (Soil)	Determination of hydrocarbons C6-C10 by headspace GC-MS.	In-house method based on USEPA8260	L088-PL	W	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS

Analytical Report Number : 22-62384
Project / Site name: Phase 10 Heyford Park Camp Road OX25 5HD

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

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Analytical Report Number : 22-62381

Replaces Analytical Report Number: 22-62381, issue no. 1
Additional analysis undertaken.

Project / Site name:	Phase 10, Heyford Park, Camp Road, OX25 5HD	**Samples received on:**	30/05/2022
Your job number:	JJ2513	**Samples instructed on/ Analysis started on:**	01/06/2022
Your order number:	P4280JJ2513.9	**Analysis completed by:**	01/07/2022
Report Issue Number:	2	**Report issued on:**	12/07/2022
Samples Analysed:	22 soil samples		

Signed: [redacted]

Joanna Wawrzeczko
Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299007	2299008	2299009	2299010	2299011
Sample Reference				JTP1	JTP3	JTP5	JTP6	JTP7
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.25	0.25	0.75	0.25	0.75
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	31	< 0.1	27	< 0.1
Moisture Content	%	0.01	NONE	17	12	10	8	19
Total mass of sample received	kg	0.001	NONE	1	1	1	1	1
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Analyst ID	N/A	N/A	N/A	GFI	N/A	GFI	N/A	GFI
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.9	8.2	8.2	8.1	-
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	-
Total Sulphate as SO4	mg/kg	50	MCERTS	940	660	900	650	-
Total Sulphate as SO4	%	0.005	MCERTS	-	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.013	0.016	0.04	0.0078	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	12.9	15.5	39.6	7.8	-
Total Sulphur	mg/kg	50	MCERTS	-	-	-	-	-
Total Sulphur	%	0.005	MCERTS	-	-	-	-	-
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	3	-	1.2	-	-
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.42	0.2	< 0.05	< 0.05	0.82
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.18
Fluoranthene	mg/kg	0.05	MCERTS	1	0.58	< 0.05	< 0.05	1.5
Pyrene	mg/kg	0.05	MCERTS	0.87	0.59	< 0.05	< 0.05	1.4
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.58	0.37	< 0.05	< 0.05	0.79
Chrysene	mg/kg	0.05	MCERTS	0.58	0.35	< 0.05	< 0.05	0.76
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.66	0.39	< 0.05	< 0.05	0.69
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.31	0.23	< 0.05	< 0.05	0.39
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.61	0.36	< 0.05	< 0.05	0.7
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.32	0.27	< 0.05	< 0.05	0.35
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.42	0.32	< 0.05	< 0.05	0.42
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	5.79	3.66	< 0.80	< 0.80	8.03

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299007	2299008	2299009	2299010	2299011
Sample Reference				JTP1	JTP3	JTP5	JTP6	JTP7
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.25	0.25	0.75	0.25	0.75
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	18	21	5.3	26	-
Boron (water soluble)	mg/kg	0.2	MCERTS	1	0.3	0.2	0.5	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	-
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	31	61	15	36	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	21	14	13	21	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	36	35	9.5	50	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	21	25	14	24	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	83	56	29	62	-
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Petroleum Hydrocarbons								
Petroleum Range Organics (C6 - C10) $_{HS\_1D\_TOTAL}$	mg/kg	0.1	MCERTS	-	< 0.1	-	< 0.1	-
TPH-CWG - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	-	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	-	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	-	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH\_CU\_1D\_AL}$	mg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH\_CU\_1D\_AL}$	mg/kg	2	MCERTS	< 2.0	-	< 2.0	-	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	-	< 8.0	-	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	-	< 8.0	-	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AL}$	mg/kg	10	MCERTS	< 10	-	< 10	-	< 10
TPH-CWG - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	-	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	-	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	-	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 $_{EH\_CU\_1D\_AR}$	mg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 $_{EH\_CU\_1D\_AR}$	mg/kg	2	MCERTS	< 2.0	-	< 2.0	-	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10	-	< 10	-	< 10
TPH-CWG - Aromatic >EC21 - EC35 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10	-	< 10	-	< 10
TPH-CWG - Aromatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AR}$	mg/kg	10	MCERTS	< 10	-	< 10	-	< 10
TPH (C10 - C12) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	2	MCERTS	-	< 2.0	-	< 2.0	-
TPH (C12 - C16) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	4	MCERTS	-	< 4.0	-	< 4.0	-
TPH (C16 - C21) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	1	MCERTS	-	1.4	-	< 1.0	-
TPH (C21 - C40) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	10	MCERTS	-	< 10	-	< 10	-
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299007	2299008	2299009	2299010	2299011
Sample Reference				JTP1	JTP3	JTP5	JTP6	JTP7
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.25	0.25	0.75	0.25	0.75
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	-	< 1.0

PCBs by GC-MS

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299007	2299008	2299009	2299010	2299011
Sample Reference				JTP1	JTP3	JTP5	JTP6	JTP7
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.25	0.25	0.75	0.25	0.75
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-	-
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299012	2299013	2299014	2299015	2299016
Sample Reference				JTP8	JTP10	JTP11	JTP11	JTP12
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	1.50	0.25	1.20	0.25
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	28	38	22	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	8.9	10	5.7	13	7.9
Total mass of sample received	kg	0.001	NONE	1	1	1	1	1
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Amosite	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	-	-	-	-
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	-	-	-	-
Asbestos Analyst ID	N/A	N/A	N/A	GFI	N/A	N/A	N/A	N/A
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.2	-	8.1	-	7.9
Total Cyanide	mg/kg	1	MCERTS	< 1.0	-	1.6	-	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	1100	-	820	-	610
Total Sulphate as SO4	%	0.005	MCERTS	-	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.039	-	0.011	-	0.016
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	38.6	-	10.7	-	16.4
Total Sulphur	mg/kg	50	MCERTS	-	-	-	-	-
Total Sulphur	%	0.005	MCERTS	-	-	-	-	-
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	-	-	-	-	1.9
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	0.55	< 0.05	< 0.05	-	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	0.43	< 0.05	< 0.05	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	1.9	< 0.05	< 0.05	-	< 0.05
Fluorene	mg/kg	0.05	MCERTS	1.2	< 0.05	< 0.05	-	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	26	< 0.05	< 0.05	-	< 0.05
Anthracene	mg/kg	0.05	MCERTS	6.9	< 0.05	< 0.05	-	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	46	< 0.05	< 0.05	-	< 0.05
Pyrene	mg/kg	0.05	MCERTS	39	< 0.05	< 0.05	-	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	22	< 0.05	< 0.05	-	< 0.05
Chrysene	mg/kg	0.05	MCERTS	21	< 0.05	< 0.05	-	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	29	< 0.05	< 0.05	-	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	9.1	< 0.05	< 0.05	-	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	25	< 0.05	< 0.05	-	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	9.9	< 0.05	< 0.05	-	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	2.2	< 0.05	< 0.05	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	11	< 0.05	< 0.05	-	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	253	< 0.80	< 0.80	-	< 0.80

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299012	2299013	2299014	2299015	2299016
Sample Reference				JTP8	JTP10	JTP11	JTP11	JTP12
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	1.50	0.25	1.20	0.25
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	17	-	15	-	23
Boron (water soluble)	mg/kg	0.2	MCERTS	0.4	-	0.3	-	0.7
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	-	< 0.2	-	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	-	2	-	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	31	-	20	-	34
Copper (aqua regia extractable)	mg/kg	1	MCERTS	15	-	14	-	19
Lead (aqua regia extractable)	mg/kg	1	MCERTS	100	-	17	-	28
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	-	< 0.3	-	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	18	-	14	-	23
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	110	-	41	-	61
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Petroleum Hydrocarbons								
Petroleum Range Organics (C6 - C10) $_{HS\_1D\_TOTAL}$	mg/kg	0.1	MCERTS	-	-	< 0.1	-	< 0.1
TPH-CWG - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH\_CU\_1D\_AL}$	mg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH\_CU\_1D\_AL}$	mg/kg	2	MCERTS	< 2.0	< 2.0	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	18	< 8.0	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	65	< 8.0	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AL}$	mg/kg	10	MCERTS	84	< 10	-	-	-
TPH-CWG - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-	-
TPH-CWG - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-	-
TPH-CWG - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-	-
TPH-CWG - Aromatic >EC10 - EC12 $_{EH\_CU\_1D\_AR}$	mg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
TPH-CWG - Aromatic >EC12 - EC16 $_{EH\_CU\_1D\_AR}$	mg/kg	2	MCERTS	9.2	< 2.0	-	-	-
TPH-CWG - Aromatic >EC16 - EC21 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	130	< 10	-	-	-
TPH-CWG - Aromatic >EC21 - EC35 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	320	< 10	-	-	-
TPH-CWG - Aromatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AR}$	mg/kg	10	MCERTS	460	< 10	-	-	-
TPH (C10 - C12) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	2	MCERTS	-	-	< 2.0	-	< 2.0
TPH (C12 - C16) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	4	MCERTS	-	-	< 4.0	-	< 4.0
TPH (C16 - C21) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	1	MCERTS	-	-	< 1.0	-	< 1.0
TPH (C21 - C40) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	10	MCERTS	-	-	< 10	-	< 10
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	-
Chloroethane	µg/kg	1	NONE	< 1.0	< 1.0	-	-	-
Bromomethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	-
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	< 1.0	-	-	-

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299012	2299013	2299014	2299015	2299016
Sample Reference				JTP8	JTP10	JTP11	JTP11	JTP12
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	1.50	0.25	1.20	0.25
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Trichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	-	-	-
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Dibromomethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	-
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	-
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Styrene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Tribromomethane	µg/kg	1	NONE	< 1.0	< 1.0	-	-	-
o-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Bromobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	-

PCBs by GC-MS

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299012	2299013	2299014	2299015	2299016
Sample Reference				JTP8	JTP10	JTP11	JTP11	JTP12
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	1.50	0.25	1.20	0.25
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	-	-	< 0.007	< 0.007	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299017	2299018	2299019	2299020	2299021
Sample Reference				JTP13	JTP14	JTP15	JTP16	JSTP1
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.10	0.75	0.25	0.75	0.75
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	22	-
Moisture Content	%	0.01	NONE	6.6	18	9.7	13	-
Total mass of sample received	kg	0.001	NONE	1	1	1	1	-
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	Not-detected	-	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Analyst ID	N/A	N/A	N/A	N/A	GFI	N/A	GFI	GFI
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.8	8.3	7.9	-	-
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Total Sulphate as SO4	mg/kg	50	MCERTS	850	630	800	-	-
Total Sulphate as SO4	%	0.005	MCERTS	-	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.013	0.014	0.014	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	13.1	13.8	14	-	-
Total Sulphur	mg/kg	50	MCERTS	-	-	-	-	-
Total Sulphur	%	0.005	MCERTS	-	-	-	-	-
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	2.6	-	-	1.4	-
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	-
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	0.75	< 0.05	< 0.05	-
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	2.3	< 0.05	0.5	-
Pyrene	mg/kg	0.05	MCERTS	< 0.05	1.9	< 0.05	0.4	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	1	< 0.05	< 0.05	-
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.7	< 0.05	< 0.05	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	1.1	< 0.05	< 0.05	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.56	< 0.05	< 0.05	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.84	< 0.05	< 0.05	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.53	< 0.05	< 0.05	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.71	< 0.05	< 0.05	-
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	10.3	< 0.80	0.9	-

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299017	2299018	2299019	2299020	2299021
Sample Reference				JTP13	JTP14	JTP15	JTP16	JSTP1
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.10	0.75	0.25	0.75	0.75
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	16	17	26	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	1.1	1	0.8	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
Chromium (hexavalent)	mg/kg	1.8	MCERTS	3.1	< 1.8	< 1.8	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	27	29	42	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	18	19	23	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	59	43	65	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	12	19	29	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	51	96	71	-	-
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
Toluene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
Ethylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
p & m-xylene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
o-xylene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
Petroleum Hydrocarbons								
Petroleum Range Organics (C6 - C10) HS_1D_TOTAL	mg/kg	0.1	MCERTS	< 0.1	-	< 0.1	-	-
TPH-CWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.001	MCERTS	-	< 0.001	-	< 0.001	-
TPH-CWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.001	MCERTS	-	< 0.001	-	< 0.001	-
TPH-CWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.001	MCERTS	-	< 0.001	-	< 0.001	-
TPH-CWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
TPH-CWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	-	< 2.0	-	< 2.0	-
TPH-CWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	-	< 8.0	-	< 8.0	-
TPH-CWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	-	< 8.0	-	< 8.0	-
TPH-CWG - Aliphatic (EC5 - EC35) EH_CU+HS_1D_AL	mg/kg	10	MCERTS	-	< 10	-	< 10	-
TPH-CWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.001	MCERTS	-	< 0.001	-	< 0.001	-
TPH-CWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.001	MCERTS	-	< 0.001	-	< 0.001	-
TPH-CWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.001	MCERTS	-	< 0.001	-	< 0.001	-
TPH-CWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
TPH-CWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	-	< 2.0	-	< 2.0	-
TPH-CWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	-	< 10	-	< 10	-
TPH-CWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	-	16	-	< 10	-
TPH-CWG - Aromatic (EC5 - EC35) EH_CU+HS_1D_AR	mg/kg	10	MCERTS	-	23	-	< 10	-
TPH (C10 - C12) EH_CU_1D_TOTAL	mg/kg	2	MCERTS	< 2.0	-	< 2.0	-	-
TPH (C12 - C16) EH_CU_1D_TOTAL	mg/kg	4	MCERTS	< 4.0	-	< 4.0	-	-
TPH (C16 - C21) EH_CU_1D_TOTAL	mg/kg	1	MCERTS	< 1.0	-	< 1.0	-	-
TPH (C21 - C40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	< 10	-	< 10	-	-
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	< 1.0	-	< 1.0	-
Chloroethane	µg/kg	1	NONE	-	< 1.0	-	< 1.0	-
Bromomethane	µg/kg	1	ISO 17025	-	< 1.0	-	< 1.0	-
Vinyl Chloride	µg/kg	1	NONE	-	< 1.0	-	< 1.0	-
Trichlorofluoromethane	µg/kg	1	NONE	-	< 1.0	-	< 1.0	-

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299017	2299018	2299019	2299020	2299021
Sample Reference				JTP13	JTP14	JTP15	JTP16	JSTP1
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.10	0.75	0.25	0.75	0.75
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,1-Dichloroethene	µg/kg	1	NONE	-	< 1.0	-	< 1.0	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	< 1.0	-	< 1.0	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
Trichloromethane	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	< 1.0	-	< 1.0	-
Benzene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
Tetrachloromethane	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
Trichloroethene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
Dibromomethane	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
Bromodichloromethane	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0	-	< 1.0	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0	-	< 1.0	-
Toluene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	< 1.0	-	< 1.0	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	< 1.0	-	< 1.0	-
Tetrachloroethene	µg/kg	1	NONE	-	< 1.0	-	< 1.0	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	< 1.0	-	< 1.0	-
Chlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
Ethylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
p & m-Xylene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
Styrene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
Tribromomethane	µg/kg	1	NONE	-	< 1.0	-	< 1.0	-
o-Xylene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
Isopropylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
Bromobenzene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	< 1.0	-	< 1.0	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	< 1.0	-	< 1.0	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	< 1.0	-	< 1.0	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0	-	< 1.0	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	< 1.0	-	< 1.0	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	< 1.0	-	< 1.0	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	< 1.0	-	< 1.0	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0	-	< 1.0	-

PCBs by GC-MS

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299017	2299018	2299019	2299020	2299021
Sample Reference				JTP13	JTP14	JTP15	JTP16	JSTP1
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.10	0.75	0.25	0.75	0.75
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-	-
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299022	2299023	2299024	2299025	2299026
Sample Reference				JSTP1	JSTP4	JTP1	JTP2	JTP6
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.40	0.25	0.75	0.75	1.50
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	17	22
Moisture Content	%	0.01	NONE	19	14	11	16	10
Total mass of sample received	kg	0.001	NONE	1	1	1	1	1
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Analyst ID	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.1	7.8	8.1	8.5	8.6
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Total Sulphate as SO4	mg/kg	50	MCERTS	850	1200	560	800	780
Total Sulphate as SO4	%	0.005	MCERTS	-	-	0.056	0.08	0.078
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.03	0.017	0.013	0.008	0.0087
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	29.7	17.2	12.9	8	8.7
Total Sulphur	mg/kg	50	MCERTS	-	-	250	350	320
Total Sulphur	%	0.005	MCERTS	-	-	0.025	0.035	0.032
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	-	-	-	-	-
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	-
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	1.3	< 0.05	-	-	-
Anthracene	mg/kg	0.05	MCERTS	0.25	< 0.05	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	3	0.5	-	-	-
Pyrene	mg/kg	0.05	MCERTS	2.6	0.47	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.58	0.36	-	-	-
Chrysene	mg/kg	0.05	MCERTS	1.2	0.18	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	1.2	0.4	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.66	0.22	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.88	0.23	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.77	0.24	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1	0.34	-	-	-
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	13.3	2.94	-	-	-

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299022	2299023	2299024	2299025	2299026
Sample Reference				JSTP1	JSTP4	JTP1	JTP2	JTP6
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.40	0.25	0.75	0.75	1.50
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	14	23	-	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	1.8	1.4	-	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-	-
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	-	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	24	33	-	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	15	25	-	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	28	37	-	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	15	22	-	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	51	86	-	-	-
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
o-xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Petroleum Hydrocarbons								
Petroleum Range Organics (C6 - C10) $_{HS\_1D\_TOTAL}$	mg/kg	0.1	MCERTS	-	< 0.1	-	-	-
TPH-CWG - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH\_CU\_1D\_AL}$	mg/kg	1	MCERTS	< 1.0	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH\_CU\_1D\_AL}$	mg/kg	2	MCERTS	< 2.0	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AL}$	mg/kg	10	MCERTS	< 10	-	-	-	-
TPH-CWG - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12 $_{EH\_CU\_1D\_AR}$	mg/kg	1	MCERTS	< 1.0	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16 $_{EH\_CU\_1D\_AR}$	mg/kg	2	MCERTS	< 2.0	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AR}$	mg/kg	10	MCERTS	14	-	-	-	-
TPH (C10 - C12) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	2	MCERTS	-	< 2.0	-	-	-
TPH (C12 - C16) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	4	MCERTS	-	< 4.0	-	-	-
TPH (C16 - C21) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	1	MCERTS	-	< 1.0	-	-	-
TPH (C21 - C40) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	10	MCERTS	-	< 10	-	-	-
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Chloroethane	µg/kg	1	NONE	< 1.0	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-	-	-	-

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299022	2299023	2299024	2299025	2299026
Sample Reference				JSTP1	JSTP4	JTP1	JTP2	JTP6
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.40	0.25	0.75	0.75	1.50
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-	-
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Styrene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Tribromomethane	µg/kg	1	NONE	< 1.0	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-

PCBs by GC-MS

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299022	2299023	2299024	2299025	2299026
Sample Reference				JSTP1	JSTP4	JTP1	JTP2	JTP6
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.40	0.25	0.75	0.75	1.50
Date Sampled				25/05/2022	25/05/2022	25/05/2022	25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-	-
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299027	2299028
Sample Reference				JTP12	JTP15
Sample Number				None Supplied	None Supplied
Depth (m)				0.75	0.75
Date Sampled				25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Stone Content	%	0.1	NONE	30	35
Moisture Content	%	0.01	NONE	8.1	11
Total mass of sample received	kg	0.001	NONE	1	1
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	-
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-
Asbestos Analyst ID	N/A	N/A	N/A	N/A	N/A
General Inorganics					
pH - Automated	pH Units	N/A	MCERTS	8	8.2
Total Cyanide	mg/kg	1	MCERTS	-	-
Total Sulphate as SO4	mg/kg	50	MCERTS	670	780
Total Sulphate as SO4	%	0.005	MCERTS	0.067	0.078
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.024	0.0039
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	24.2	3.9
Total Sulphur	mg/kg	50	MCERTS	310	350
Total Sulphur	%	0.005	MCERTS	0.031	0.035
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	-	-
Total Phenols					
Total Phenols (monohydric)	mg/kg	1	MCERTS	-	-
Speciated PAHs					
Naphthalene	mg/kg	0.05	MCERTS	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-
Total PAH					
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	-	-

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299027	2299028
Sample Reference				JTP12	JTP15
Sample Number				None Supplied	None Supplied
Depth (m)				0.75	0.75
Date Sampled				25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Heavy Metals / Metalloids					
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-
Chromium (hexavalent)	mg/kg	1.8	MCERTS	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Monoaromatics & Oxygenates					
Benzene	µg/kg	1	MCERTS	-	-
Toluene	µg/kg	1	MCERTS	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-
o-xylene	µg/kg	1	MCERTS	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-
Petroleum Hydrocarbons					
Petroleum Range Organics (C6 - C10) HS_1D_TOTAL	mg/kg	0.1	MCERTS	-	-
TPH-CWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.001	MCERTS	-	-
TPH-CWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.001	MCERTS	-	-
TPH-CWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.001	MCERTS	-	-
TPH-CWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	-	-
TPH-CWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	-	-
TPH-CWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	-	-
TPH-CWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	-	-
TPH-CWG - Aliphatic (EC5 - EC35) EH_CU+HS_1D_AL	mg/kg	10	MCERTS	-	-
TPH-CWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.001	MCERTS	-	-
TPH-CWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.001	MCERTS	-	-
TPH-CWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.001	MCERTS	-	-
TPH-CWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	-	-
TPH-CWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	-	-
TPH-CWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	-	-
TPH-CWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	-	-
TPH-CWG - Aromatic (EC5 - EC35) EH_CU+HS_1D_AR	mg/kg	10	MCERTS	-	-
TPH (C10 - C12) EH_CU_1D_TOTAL	mg/kg	2	MCERTS	-	-
TPH (C12 - C16) EH_CU_1D_TOTAL	mg/kg	4	MCERTS	-	-
TPH (C16 - C21) EH_CU_1D_TOTAL	mg/kg	1	MCERTS	-	-
TPH (C21 - C40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	-	-
VOCs					
Chloromethane	µg/kg	1	ISO 17025	-	-
Chloroethane	µg/kg	1	NONE	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299027	2299028
Sample Reference				JTP12	JTP15
Sample Number				None Supplied	None Supplied
Depth (m)				0.75	0.75
Date Sampled				25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
1,1-Dichloroethene	µg/kg	1	NONE	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-
Benzene	µg/kg	1	MCERTS	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-
Toluene	µg/kg	1	MCERTS	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-
Styrene	µg/kg	1	MCERTS	-	-
Tribromomethane	µg/kg	1	NONE	-	-
o-Xylene	µg/kg	1	MCERTS	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-

PCBs by GC-MS

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Lab Sample Number				2299027	2299028
Sample Reference				JTP12	JTP15
Sample Number				None Supplied	None Supplied
Depth (m)				0.75	0.75
Date Sampled				25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
PCB Congener 28	mg/kg	0.001	MCERTS	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-
Total PCBs by GC-MS					
Total PCBs	mg/kg	0.007	MCERTS	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513.9

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
2299012	JTP8	0.50	140	Loose Fibres	**Chrysotile & Amosite**	< 0.001	**< 0.001**

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

Analytical Report Number : 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2299007	JTP1	None Supplied	0.25	Brown loam with gravel and vegetation.
2299008	JTP3	None Supplied	0.25	Brown loam with vegetation and stones.
2299009	JTP5	None Supplied	0.75	Brown clay and loam with gravel and vegetation.
2299010	JTP6	None Supplied	0.25	Brown clay and loam with vegetation and stones.
2299011	JTP7	None Supplied	0.75	Brown clay and loam with gravel.
2299012	JTP8	None Supplied	0.5	Brown clay and loam with vegetation and stones.
2299013	JTP10	None Supplied	1.5	Brown gravelly sand with stones.
2299014	JTP11	None Supplied	0.25	Brown loam and clay with vegetation and stones.
2299015	JTP11	None Supplied	1.2	Brown sand.
2299016	JTP12	None Supplied	0.25	Brown clay and loam with gravel and vegetation.
2299017	JTP13	None Supplied	0.1	Brown loam with vegetation.
2299018	JTP14	None Supplied	0.75	Brown clay and sand with vegetation and gravel
2299019	JTP15	None Supplied	0.25	Brown clay and loam with gravel and vegetation.
2299020	JTP16	None Supplied	0.75	Brown clay and loam with stones.
2299022	JSTP1	None Supplied	1.4	Brown clay and loam with gravel and vegetation.
2299023	JSTP4	None Supplied	0.25	Brown loam with vegetation.
2299024	JTP1	None Supplied	0.75	Brown clay and sand with gravel.
2299025	JTP2	None Supplied	0.75	Light brown clay and sand with stones.
2299026	JTP6	None Supplied	1.5	Light brown sand with stones.
2299027	JTP12	None Supplied	0.75	Brown sand with gravel and stones.
2299028	JTP15	None Supplied	0.75	Brown clay and sand with gravel and stones.

Analytical Report Number : 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
PRO (Soil)	Determination of hydrocarbons C6-C10 by headspace GC-MS.	In-house method based on USEPA8260	L088-PL	W	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS

Analytical Report Number : 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	MCERTS
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Analytical Report Number : 22-62381
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

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Analytical Report Number : 22-62942

Project / Site name:	Phase 10h Heyford Park, Camp Road, OX25 5HD	**Samples received on:**	30/05/2022
Your job number:	JJ2513	**Samples instructed on/ Analysis started on:**	07/06/2022
Your order number:	P4280JJ2513 9	**Analysis completed by:**	14/06/2022
Report Issue Number:	1	**Report issued on:**	14/06/2022
Samples Analysed:	2 soil samples		

Signed: [redacted]

Adam Fenwick
Technical Reviewer
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 22-62942
Project / Site name: Phase 10h Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513 9

Lab Sample Number				2302564	2302565
Sample Reference				JSTP2	JSTP2
Sample Number				None Supplied	None Supplied
Depth (m)				1.00	0.50
Date Sampled				25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	18	14
Total mass of sample received	kg	0.001	NONE	0.8	0.8

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-
Asbestos Analyst ID	N/A	N/A	N/A	MDB	N/A

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.1	8.0
Total Cyanide	mg/kg	1	MCERTS	< 1.0	-
Total Sulphate as SO4	mg/kg	50	MCERTS	790	700
Total Sulphate as SO4	%	0.005	MCERTS	-	0.07
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.071	0.054
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	70.8	53.5
Total Sulphur	mg/kg	50	MCERTS	-	450
Total Sulphur	%	0.005	MCERTS	-	0.045

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	-

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	-
Fluorene	mg/kg	0.05	MCERTS	< 0.05	-
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	-
Anthracene	mg/kg	0.05	MCERTS	< 0.05	-
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-
Pyrene	mg/kg	0.05	MCERTS	< 0.05	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	-
Chrysene	mg/kg	0.05	MCERTS	< 0.05	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	-

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	-

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	16	-
Boron (water soluble)	mg/kg	0.2	MCERTS	1.1	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	-
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	58	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	26	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	20	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	49	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	110	-

Analytical Report Number: 22-62942
Project / Site name: Phase 10h Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513 9

Lab Sample Number				2302564	2302565
Sample Reference				JSTP2	JSTP2
Sample Number				None Supplied	None Supplied
Depth (m)				1.00	0.50
Date Sampled				25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Monoaromatics & Oxygenates					
Benzene	µg/kg	1	MCERTS	< 1.0	-
Toluene	µg/kg	1	MCERTS	< 1.0	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-
o-xylene	µg/kg	1	MCERTS	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-
Petroleum Hydrocarbons					
TPH-CWG - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH\_CU\_1D\_AL}$	mg/kg	1	MCERTS	< 1.0	-
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH\_CU\_1D\_AL}$	mg/kg	2	MCERTS	< 2.0	-
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	-
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	-
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AL}$	mg/kg	10	MCERTS	< 10	-
TPH-CWG - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aromatic >EC10 - EC12 $_{EH\_CU\_1D\_AR}$	mg/kg	1	MCERTS	< 1.0	-
TPH-CWG - Aromatic >EC12 - EC16 $_{EH\_CU\_1D\_AR}$	mg/kg	2	MCERTS	< 2.0	-
TPH-CWG - Aromatic >EC16 - EC21 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10	-
TPH-CWG - Aromatic >EC21 - EC35 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10	-
TPH-CWG - Aromatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AR}$	mg/kg	10	MCERTS	< 10	-

Analytical Report Number: 22-62942
Project / Site name: Phase 10h Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513 9

Lab Sample Number				2302564	2302565
Sample Reference				JSTP2	JSTP2
Sample Number				None Supplied	None Supplied
Depth (m)				1.00	0.50
Date Sampled				25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
VOCs					
Chloromethane	µg/kg	1	ISO 17025	< 1.0	-
Chloroethane	µg/kg	1	NONE	< 1.0	-
Bromomethane	µg/kg	1	ISO 17025	< 1.0	-
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-
Trichloromethane	µg/kg	1	MCERTS	< 1.0	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-
Benzene	µg/kg	1	MCERTS	< 1.0	-
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-
Dibromomethane	µg/kg	1	MCERTS	< 1.0	-
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-
Toluene	µg/kg	1	MCERTS	< 1.0	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	-
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	-
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	-
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	-
Styrene	µg/kg	1	MCERTS	< 1.0	-
Tribromomethane	µg/kg	1	NONE	< 1.0	-
o-Xylene	µg/kg	1	MCERTS	< 1.0	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	-
Bromobenzene	µg/kg	1	MCERTS	< 1.0	-
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	-
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-
Butylbenzene	µg/kg	1	MCERTS	< 1.0	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	-

Analytical Report Number: 22-62942
Project / Site name: Phase 10h Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513 9

Lab Sample Number				2302564	2302565
Sample Reference				JSTP2	JSTP2
Sample Number				None Supplied	None Supplied
Depth (m)				1.00	0.50
Date Sampled				25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 22-62942
Project / Site name: Phase 10h Heyford Park, Camp Road, OX25 5HD

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2302564	JSTP2	None Supplied	1	Brown clay and sand with gravel.
2302565	JSTP2	None Supplied	0.5	Brown clay and sand with gravel.

Analytical Report Number : 22-62942
Project / Site name: Phase 10h Heyford Park, Camp Road, OX25 5HD

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS

Analytical Report Number : 22-62942
Project / Site name: Phase 10h Heyford Park, Camp Road, OX25 5HD

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

Sample Deviation Report

Analytical Report Number : 22-62942
Project / Site name: Phase 10h Heyford Park, Camp Road, OX25 5HD

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis.Please note that the associated result(s) may be unreliable and should be interpreted with care.

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
JSTP2	None Supplied	S	2302564	c	Total cyanide in soil	L080-PL	c

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Analytical Report Number : 22-62946

Project / Site name:	Phase 10h Heyford Park, Camp Road, OX25 5HD	**Samples received on:**	30/05/2022
Your job number:	JJ2513	**Samples instructed on/ Analysis started on:**	07/06/2022
Your order number:	P4280JJ2513 8	**Analysis completed by:**	14/06/2022
Report Issue Number:	1	**Report issued on:**	14/06/2022
Samples Analysed:	2 soil samples		

Signed: [redacted]

Adam Fenwick
Technical Reviewer
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 22-62946
Project / Site name: Phase 10h Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513 8

Lab Sample Number				2302609	2302610
Sample Reference				JTP7	JTP8
Sample Number				None Supplied	None Supplied
Depth (m)				0.10-0.75	0.10
Date Sampled				25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Stone Content	%	0.1	NONE	22	13
Moisture Content	%	0.01	NONE	9.4	7.6
Total mass of sample received	kg	0.001	NONE	0.8	0.8

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-
Asbestos Analyst ID	N/A	N/A	N/A	MDB	N/A

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	-	7.8
Total Sulphate as SO4	mg/kg	50	MCERTS	-	780
Total Sulphate as SO4	%	0.005	MCERTS	-	0.078
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	0.008
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	8
Total Sulphur	mg/kg	50	MCERTS	-	400
Total Sulphur	%	0.005	MCERTS	-	0.04
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	3.6	-

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	-

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	-
Fluorene	mg/kg	0.05	MCERTS	< 0.05	-
Phenanthrene	mg/kg	0.05	MCERTS	0.66	-
Anthracene	mg/kg	0.05	MCERTS	0.2	-
Fluoranthene	mg/kg	0.05	MCERTS	1.9	-
Pyrene	mg/kg	0.05	MCERTS	1.7	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.1	-
Chrysene	mg/kg	0.05	MCERTS	0.93	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.98	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.62	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.99	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.51	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.65	-

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	10.3	-

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	-
Toluene	µg/kg	1	MCERTS	< 1.0	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-
o-xylene	µg/kg	1	MCERTS	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-

Analytical Report Number: 22-62946
Project / Site name: Phase 10h Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513 8

Lab Sample Number				2302609	2302610
Sample Reference				JTP7	JTP8
Sample Number				None Supplied	None Supplied
Depth (m)				0.10-0.75	0.10
Date Sampled				25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Petroleum Hydrocarbons					
TPH-CWG - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH\_CU\_1D\_AL}$	mg/kg	1	MCERTS	< 1.0	-
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH\_CU\_1D\_AL}$	mg/kg	2	MCERTS	< 2.0	-
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	-
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	-
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AL}$	mg/kg	10	MCERTS	< 10	-
TPH-CWG - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aromatic >EC10 - EC12 $_{EH\_CU\_1D\_AR}$	mg/kg	1	MCERTS	< 1.0	-
TPH-CWG - Aromatic >EC12 - EC16 $_{EH\_CU\_1D\_AR}$	mg/kg	2	MCERTS	< 2.0	-
TPH-CWG - Aromatic >EC16 - EC21 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10	-
TPH-CWG - Aromatic >EC21 - EC35 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	36	-
TPH-CWG - Aromatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AR}$	mg/kg	10	MCERTS	45	-

Analytical Report Number: 22-62946
Project / Site name: Phase 10h Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513 8

Lab Sample Number				2302609	2302610
Sample Reference				JTP7	JTP8
Sample Number				None Supplied	None Supplied
Depth (m)				0.10-0.75	0.10
Date Sampled				25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
VOCs					
Chloromethane	µg/kg	1	ISO 17025	< 1.0	-
Chloroethane	µg/kg	1	NONE	< 1.0	-
Bromomethane	µg/kg	1	ISO 17025	< 1.0	-
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-
Trichloromethane	µg/kg	1	MCERTS	< 1.0	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-
Benzene	µg/kg	1	MCERTS	< 1.0	-
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-
Dibromomethane	µg/kg	1	MCERTS	< 1.0	-
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-
Toluene	µg/kg	1	MCERTS	< 1.0	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	-
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	-
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	-
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	-
Styrene	µg/kg	1	MCERTS	< 1.0	-
Tribromomethane	µg/kg	1	NONE	< 1.0	-
o-Xylene	µg/kg	1	MCERTS	< 1.0	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	-
Bromobenzene	µg/kg	1	MCERTS	< 1.0	-
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	-
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-

Analytical Report Number: 22-62946
Project / Site name: Phase 10h Heyford Park, Camp Road, OX25 5HD
Your Order No: P4280JJ2513 8

Lab Sample Number				2302609	2302610
Sample Reference				JTP7	JTP8
Sample Number				None Supplied	None Supplied
Depth (m)				0.10-0.75	0.10
Date Sampled				25/05/2022	25/05/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Butylbenzene	µg/kg	1	MCERTS	< 1.0	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	-
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 22-62946
Project / Site name: Phase 10h Heyford Park, Camp Road, OX25 5HD

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2302609	JTP7	None Supplied	0.10-0.75	Brown clay and loam with gravel and stones.
2302610	JTP8	None Supplied	0.1	Brown clay and loam with gravel and stones.

Analytical Report Number : 22-62946
Project / Site name: Phase 10h Heyford Park, Camp Road, OX25 5HD

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

Analytical Report Number : 22-62946
Project / Site name: Phase 10h Heyford Park, Camp Road, OX25 5HD

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

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Analytical Report Number : 22-65946

Replaces Analytical Report Number: 22-65946, issue no. 1
Client sampling date amended.

Project / Site name:	Phase 10, Heyford Park, Camp Road, OX25	**Samples received on:**	17/06/2022
Your job number:	JJ2513	**Samples instructed on/ Analysis started on:**	20/06/2022
Your order number:	P4280JJ2513 12	**Analysis completed by:**	06/07/2022
Report Issue Number:	2	**Report issued on:**	06/07/2022
Samples Analysed:	17 water samples		

Signed: [redacted]

Adam Fenwick
Technical Reviewer
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 22-65946
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25

Your Order No: P4280JJ2513 12

Lab Sample Number				2319614	2319615	2319616	2319617	2319618
Sample Reference				JBH1	JBH2	JBH3	JBH4	JBH5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				16/06/2022	16/06/2022	16/06/2022	16/06/2022	16/06/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.2	7.2	6.9	7.0	7.3
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	500	500	940	580	470
Total Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Sulphate as SO4	µg/l	45	ISO 17025	11100	15300	32900	1500	26900
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	19	52	470	420	< 15
Hardness - Total	mgCaCO3/l	1	ISO 17025	346	299	666	405	293
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	0.18	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	0.45	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	0.7	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	1.33	< 0.16
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	29	50	66	76	32
Calcium (dissolved)	mg/l	0.012	ISO 17025	130	110	250	150	110
Magnesium (dissolved)	mg/l	0.005	ISO 17025	3.4	3.2	7.3	5.7	2.5
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.34	0.19	0.47	2.78	< 0.15
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	1.4	2.4	6.5	0.6	5
Lead (dissolved)	µg/l	0.2	ISO 17025	1.8	< 0.2	< 0.2	< 0.2	< 0.2
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	1.3	1.7	2.3	2.5	2.3
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Zinc (dissolved)	µg/l	0.5	ISO 17025	3.1	2.3	4.5	5.3	7.2

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Lab Sample Number				2319614	2319615	2319616	2319617	2319618
Sample Reference				JBH1	JBH2	JBH3	JBH4	JBH5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				16/06/2022	16/06/2022	16/06/2022	16/06/2022	16/06/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	40	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	78	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	530	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	650	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	210	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	200	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	50	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	460	< 10

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Lab Sample Number				2319614	2319615	2319616	2319617	2319618
Sample Reference				JBH1	JBH2	JBH3	JBH4	JBH5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				16/06/2022	16/06/2022	16/06/2022	16/06/2022	16/06/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Lab Sample Number				2319614	2319615	2319616	2319617	2319618
Sample Reference				JBH1	JBH2	JBH3	JBH4	JBH5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				16/06/2022	16/06/2022	16/06/2022	16/06/2022	16/06/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

U/S = Unsuitable Sample I/S = Insufficient Sample

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Lab Sample Number				2319619	2319620	2319621	2319622	2319623
Sample Reference				JBH6	JBH7	JBH8	JBH9	JWS2
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				16/06/2022	17/06/2022	17/06/2022	17/06/2022	17/06/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.2	7.2	7.7	7.5	7.7
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	480	480	570	660	1300
Total Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1.0	2.8	1.5	26	< 1.0
Sulphate as SO4	µg/l	45	ISO 17025	2070	6350	25800	31600	51500
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	52	22	< 15	< 15	200
Hardness - Total	mgCaCO3/l	1	ISO 17025	312	300	276	364	438
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	29	53	34	33	250
Calcium (dissolved)	mg/l	0.012	ISO 17025	120	110	110	140	160
Magnesium (dissolved)	mg/l	0.005	ISO 17025	3	3.6	2.8	3.6	12
Arsenic (dissolved)	µg/l	0.15	ISO 17025	< 0.15	0.7	0.19	0.49	0.81
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	3.5	5.3	7.2	3.9	3.5
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	0.3	1.1	0.7
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	< 0.5	1.2	1.2	1.9	2.1
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6	< 0.6	< 0.6	< 0.6	0.8
Zinc (dissolved)	µg/l	0.5	ISO 17025	4.4	3.9	4.6	4.8	8.1

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Lab Sample Number				2319619	2319620	2319621	2319622	2319623
Sample Reference				JBH6	JBH7	JBH8	JBH9	JWS2
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				16/06/2022	17/06/2022	17/06/2022	17/06/2022	17/06/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	730	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	580	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	1300	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	390	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	350	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	750	< 10	< 10	< 10	< 10

Analytical Report Number: 22-65946
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25

Your Order No: P4280JJ2513 12

Lab Sample Number				2319619	2319620	2319621	2319622	2319623
Sample Reference				JBH6	JBH7	JBH8	JBH9	JWS2
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				16/06/2022	17/06/2022	17/06/2022	17/06/2022	17/06/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Analytical Report Number: 22-65946
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25

Your Order No: P4280JJ2513 12

Lab Sample Number				2319619	2319620	2319621	2319622	2319623
Sample Reference				JBH6	JBH7	JBH8	JBH9	JWS2
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				16/06/2022	17/06/2022	17/06/2022	17/06/2022	17/06/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-65946
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25

Your Order No: P4280JJ2513 12

Lab Sample Number				2319624	2319625	2319626	2319627	2319628
Sample Reference				JWS3	BH05	BH10	BH11	BH12
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.3	7.5	7.4	7.8	7.5
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	900	530	600	550	680
Total Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	1.1	< 1.0
Sulphate as SO4	µg/l	45	ISO 17025	13500	3120	2850	39200	9550
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	340	< 15	39	< 15	53
Hardness - Total	mgCaCO3/l	1	ISO 17025	442	267	289	292	402
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	0.49	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	0.83	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	0.34	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	1.66	< 0.16	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	140	39	49	42	42
Calcium (dissolved)	mg/l	0.012	ISO 17025	160	100	110	110	150
Magnesium (dissolved)	mg/l	0.005	ISO 17025	9	2.6	2.9	3.3	4.3
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.78	0.61	0.31	0.59	< 0.15
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	3.2	1.9	5.6	8.1	5.1
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	0.4	< 0.2	< 0.2
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	5.1	2	0.7	0.7	0.7
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Zinc (dissolved)	µg/l	0.5	ISO 17025	3	2.3	2.8	9.5	2.1

Analytical Report Number: 22-65946
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25

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Lab Sample Number				2319624	2319625	2319626	2319627	2319628
Sample Reference				JWS3	BH05	BH10	BH11	BH12
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	80	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	110	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	350	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	540	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	140	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	120	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	72	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	340	< 10	< 10

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Project / Site name: Phase 10, Heyford Park, Camp Road, OX25

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Lab Sample Number				2319624	2319625	2319626	2319627	2319628
Sample Reference				JWS3	BH05	BH10	BH11	BH12
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Analytical Report Number: 22-65946
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25

Your Order No: P4280JJ2513 12

Lab Sample Number				2319624	2319625	2319626	2319627	2319628
Sample Reference				JWS3	BH05	BH10	BH11	BH12
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-65946
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25

Your Order No: P4280JJ2513 12

Lab Sample Number				2319629	2319630
Sample Reference				BH13	BH14
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				15/06/2022	15/06/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
General Inorganics					
pH	pH Units	N/A	ISO 17025	7.7	7.5
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	530	570
Total Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1.0	< 1.0
Sulphate as SO4	µg/l	45	ISO 17025	34400	31200
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	< 15	< 15
Hardness - Total	mgCaCO3/l	1	ISO 17025	247	290
Total Phenols					
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10
Speciated PAHs					
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Total PAH					
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16
Heavy Metals / Metalloids					
Boron (dissolved)	µg/l	10	ISO 17025	37	33
Calcium (dissolved)	mg/l	0.012	ISO 17025	95	110
Magnesium (dissolved)	mg/l	0.005	ISO 17025	2.5	2.7
Arsenic (dissolved)	µg/l	0.15	ISO 17025	< 0.15	< 0.15
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.5
Copper (dissolved)	µg/l	0.5	ISO 17025	2	5.1
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	0.5	1.2
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6	< 0.6
Zinc (dissolved)	µg/l	0.5	ISO 17025	2.4	2.9

Analytical Report Number: 22-65946
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25

Your Order No: P4280JJ2513 12

Lab Sample Number				2319629	2319630
Sample Reference				BH13	BH14
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				15/06/2022	15/06/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Monoaromatics & Oxygenates					
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0
Petroleum Hydrocarbons					
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10

Analytical Report Number: 22-65946
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25

Your Order No: P4280JJ2513 12

Lab Sample Number				2319629	2319630
Sample Reference				BH13	BH14
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				15/06/2022	15/06/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
VOCs					
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0

Analytical Report Number: 22-65946
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25

Your Order No: P4280JJ2513 12

Lab Sample Number				2319629	2319630
Sample Reference				BH13	BH14
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				15/06/2022	15/06/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 22-65946
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	ISO 17025
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Ammonium as NH4 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025

Analytical Report Number : 22-65946
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Low level total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

Analytical Report Number : 22-65946
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis.Please note that the associated result(s) may be unreliable and should be interpreted with care.

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
BH05	None Supplied	W	2319625	bc	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
BH05	None Supplied	W	2319625	bc	Ammoniacal Nitrogen as N in water	L082-PL	c
BH05	None Supplied	W	2319625	bc	Ammonium as NH4 in water	L082-PL	c
BH05	None Supplied	W	2319625	bc	Electrical conductivity at 20oC of water	L031-PL	c
BH05	None Supplied	W	2319625	bc	Volatile organic compounds in water	L073B-PL	b
BH05	None Supplied	W	2319625	bc	pH at 20oC in water (automated)	L099-PL	c
BH10	None Supplied	W	2319626	bc	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
BH10	None Supplied	W	2319626	bc	Ammoniacal Nitrogen as N in water	L082-PL	c
BH10	None Supplied	W	2319626	bc	Ammonium as NH4 in water	L082-PL	c
BH10	None Supplied	W	2319626	bc	Electrical conductivity at 20oC of water	L031-PL	c
BH10	None Supplied	W	2319626	bc	Volatile organic compounds in water	L073B-PL	b
BH10	None Supplied	W	2319626	bc	pH at 20oC in water (automated)	L099-PL	c
BH11	None Supplied	W	2319627	bc	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
BH11	None Supplied	W	2319627	bc	Ammoniacal Nitrogen as N in water	L082-PL	c
BH11	None Supplied	W	2319627	bc	Ammonium as NH4 in water	L082-PL	c
BH11	None Supplied	W	2319627	bc	Electrical conductivity at 20oC of water	L031-PL	c
BH11	None Supplied	W	2319627	bc	Volatile organic compounds in water	L073B-PL	b
BH11	None Supplied	W	2319627	bc	pH at 20oC in water (automated)	L099-PL	c
BH12	None Supplied	W	2319628	bc	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
BH12	None Supplied	W	2319628	bc	Ammoniacal Nitrogen as N in water	L082-PL	c
BH12	None Supplied	W	2319628	bc	Ammonium as NH4 in water	L082-PL	c
BH12	None Supplied	W	2319628	bc	Electrical conductivity at 20oC of water	L031-PL	c
BH12	None Supplied	W	2319628	bc	Volatile organic compounds in water	L073B-PL	b
BH12	None Supplied	W	2319628	bc	pH at 20oC in water (automated)	L099-PL	c
BH13	None Supplied	W	2319629	bc	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
BH13	None Supplied	W	2319629	bc	Ammoniacal Nitrogen as N in water	L082-PL	c
BH13	None Supplied	W	2319629	bc	Ammonium as NH4 in water	L082-PL	c
BH13	None Supplied	W	2319629	bc	Electrical conductivity at 20oC of water	L031-PL	c
BH13	None Supplied	W	2319629	bc	Volatile organic compounds in water	L073B-PL	b
BH13	None Supplied	W	2319629	bc	pH at 20oC in water (automated)	L099-PL	c
BH14	None Supplied	W	2319630	bc	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
BH14	None Supplied	W	2319630	bc	Ammoniacal Nitrogen as N in water	L082-PL	c
BH14	None Supplied	W	2319630	bc	Ammonium as NH4 in water	L082-PL	c
BH14	None Supplied	W	2319630	bc	Electrical conductivity at 20oC of water	L031-PL	c
BH14	None Supplied	W	2319630	bc	Volatile organic compounds in water	L073B-PL	b
BH14	None Supplied	W	2319630	bc	pH at 20oC in water (automated)	L099-PL	c
JBH1	None Supplied	W	2319614	bc	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JBH1	None Supplied	W	2319614	bc	Ammoniacal Nitrogen as N in water	L082-PL	c
JBH1	None Supplied	W	2319614	bc	Ammonium as NH4 in water	L082-PL	c
JBH1	None Supplied	W	2319614	bc	Electrical conductivity at 20oC of water	L031-PL	c
JBH1	None Supplied	W	2319614	bc	Volatile organic compounds in water	L073B-PL	b
JBH1	None Supplied	W	2319614	bc	pH at 20oC in water (automated)	L099-PL	c
JBH2	None Supplied	W	2319615	bc	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JBH2	None Supplied	W	2319615	bc	Ammoniacal Nitrogen as N in water	L082-PL	c
JBH2	None Supplied	W	2319615	bc	Ammonium as NH4 in water	L082-PL	c
JBH2	None Supplied	W	2319615	bc	Electrical conductivity at 20oC of water	L031-PL	c
JBH2	None Supplied	W	2319615	bc	Volatile organic compounds in water	L073B-PL	b
JBH2	None Supplied	W	2319615	bc	pH at 20oC in water (automated)	L099-PL	c
JBH3	None Supplied	W	2319616	bc	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JBH3	None Supplied	W	2319616	bc	Ammoniacal Nitrogen as N in water	L082-PL	c
JBH3	None Supplied	W	2319616	bc	Ammonium as NH4 in water	L082-PL	c
JBH3	None Supplied	W	2319616	bc	Electrical conductivity at 20oC of water	L031-PL	c
JBH3	None Supplied	W	2319616	bc	Volatile organic compounds in water	L073B-PL	b
JBH3	None Supplied	W	2319616	bc	pH at 20oC in water (automated)	L099-PL	c
JBH4	None Supplied	W	2319617	bc	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JBH4	None Supplied	W	2319617	bc	Ammoniacal Nitrogen as N in water	L082-PL	c
JBH4	None Supplied	W	2319617	bc	Ammonium as NH4 in water	L082-PL	c
JBH4	None Supplied	W	2319617	bc	Electrical conductivity at 20oC of water	L031-PL	c
JBH4	None Supplied	W	2319617	bc	Volatile organic compounds in water	L073B-PL	b

Analytical Report Number : 22-65946
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis.Please note that the associated result(s) may be unreliable and should be interpreted with care.

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
BH05	None Supplied	W	2319625	bc	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JBH4	None Supplied	W	2319617	bc	pH at 20oC in water (automated)	L099-PL	c
JBH5	None Supplied	W	2319618	bc	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JBH5	None Supplied	W	2319618	bc	Ammoniacal Nitrogen as N in water	L082-PL	c
JBH5	None Supplied	W	2319618	bc	Ammonium as NH4 in water	L082-PL	c
JBH5	None Supplied	W	2319618	bc	Electrical conductivity at 20oC of water	L031-PL	c
JBH5	None Supplied	W	2319618	bc	Volatile organic compounds in water	L073B-PL	b
JBH5	None Supplied	W	2319618	bc	pH at 20oC in water (automated)	L099-PL	c
JBH6	None Supplied	W	2319619	bc	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JBH6	None Supplied	W	2319619	bc	Ammoniacal Nitrogen as N in water	L082-PL	c
JBH6	None Supplied	W	2319619	bc	Ammonium as NH4 in water	L082-PL	c
JBH6	None Supplied	W	2319619	bc	Electrical conductivity at 20oC of water	L031-PL	c
JBH6	None Supplied	W	2319619	bc	Volatile organic compounds in water	L073B-PL	b
JBH6	None Supplied	W	2319619	bc	pH at 20oC in water (automated)	L099-PL	c
JBH7	None Supplied	W	2319620	bc	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JBH7	None Supplied	W	2319620	bc	Ammoniacal Nitrogen as N in water	L082-PL	c
JBH7	None Supplied	W	2319620	bc	Ammonium as NH4 in water	L082-PL	c
JBH7	None Supplied	W	2319620	bc	Electrical conductivity at 20oC of water	L031-PL	c
JBH7	None Supplied	W	2319620	bc	Volatile organic compounds in water	L073B-PL	b
JBH7	None Supplied	W	2319620	bc	pH at 20oC in water (automated)	L099-PL	c
JBH8	None Supplied	W	2319621	bc	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JBH8	None Supplied	W	2319621	bc	Ammoniacal Nitrogen as N in water	L082-PL	c
JBH8	None Supplied	W	2319621	bc	Ammonium as NH4 in water	L082-PL	c
JBH8	None Supplied	W	2319621	bc	Electrical conductivity at 20oC of water	L031-PL	c
JBH8	None Supplied	W	2319621	bc	Volatile organic compounds in water	L073B-PL	b
JBH8	None Supplied	W	2319621	bc	pH at 20oC in water (automated)	L099-PL	c
JBH9	None Supplied	W	2319622	bc	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JBH9	None Supplied	W	2319622	bc	Ammoniacal Nitrogen as N in water	L082-PL	c
JBH9	None Supplied	W	2319622	bc	Ammonium as NH4 in water	L082-PL	c
JBH9	None Supplied	W	2319622	bc	Electrical conductivity at 20oC of water	L031-PL	c
JBH9	None Supplied	W	2319622	bc	Volatile organic compounds in water	L073B-PL	b
JBH9	None Supplied	W	2319622	bc	pH at 20oC in water (automated)	L099-PL	c
JWS2	None Supplied	W	2319623	bc	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JWS2	None Supplied	W	2319623	bc	Ammoniacal Nitrogen as N in water	L082-PL	c
JWS2	None Supplied	W	2319623	bc	Ammonium as NH4 in water	L082-PL	c
JWS2	None Supplied	W	2319623	bc	Electrical conductivity at 20oC of water	L031-PL	c
JWS2	None Supplied	W	2319623	bc	Volatile organic compounds in water	L073B-PL	b
JWS2	None Supplied	W	2319623	bc	pH at 20oC in water (automated)	L099-PL	c
JWS3	None Supplied	W	2319624	bc	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JWS3	None Supplied	W	2319624	bc	Ammoniacal Nitrogen as N in water	L082-PL	c
JWS3	None Supplied	W	2319624	bc	Ammonium as NH4 in water	L082-PL	c
JWS3	None Supplied	W	2319624	bc	Electrical conductivity at 20oC of water	L031-PL	c
JWS3	None Supplied	W	2319624	bc	Volatile organic compounds in water	L073B-PL	b
JWS3	None Supplied	W	2319624	bc	pH at 20oC in water (automated)	L099-PL	c

UKAS TESTING
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Analytical Report Number : 22-74656

Replaces Analytical Report Number: 22-74656, issue no. 1
Client sampling date amended.

Project / Site name:	Phase 10, Heyford Park, Camp Road, OX25 5HD	**Samples received on:**	29/07/2022
Your job number:	JJ2513	**Samples instructed on/ Analysis started on:**	29/07/2022
Your order number:	P4280JJ2513 15	**Analysis completed by:**	17/08/2022
Report Issue Number:	2	**Report issued on:**	17/08/2022
Samples Analysed:	15 water samples		

Signed: [redacted]

Joanna Wawrzeczko
Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 22-74656
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD

Your Order No: P4280JJ2513 15

Lab Sample Number				2369591	2369592	2369593	2369594	2369595
Sample Reference				JBH1	JBH2	JBH3	JBH4	JBH5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				27/07/2022	27/07/2022	27/07/2022	27/07/2022	27/07/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	0.28	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	0.5	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	0.71	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	1.49	< 0.16
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Analytical i2 Environmental Science

Analytical Report Number: 22-74656
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD

Your Order No: P4280JJ2513 15

Lab Sample Number				2369591	2369592	2369593	2369594	2369595
Sample Reference				JBH1	JBH2	JBH3	JBH4	JBH5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				27/07/2022	27/07/2022	27/07/2022	27/07/2022	27/07/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	200	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	280	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	480	< 10
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Analytical Report Number: 22-74656
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD

Your Order No: P4280JJ2513 15

Lab Sample Number				2369591	2369592	2369593	2369594	2369595
Sample Reference				JBH1	JBH2	JBH3	JBH4	JBH5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				27/07/2022	27/07/2022	27/07/2022	27/07/2022	27/07/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-74656
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD

Your Order No: P4280JJ2513 15

Lab Sample Number				2369596	2369597	2369598	2369599	2369600
Sample Reference				JBH6	JBH7	JBH8	JBH9	BH05
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				27/07/2022	27/07/2022	27/07/2022	27/07/2022	27/07/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

UKAS TESTING
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Analytical i2 Environmental Science

Analytical Report Number: 22-74656
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD

Your Order No: P4280JJ2513 15

Lab Sample Number				2369596	2369597	2369598	2369599	2369600
Sample Reference				JBH6	JBH7	JBH8	JBH9	BH05
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				27/07/2022	27/07/2022	27/07/2022	27/07/2022	27/07/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	390	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	190	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	580	< 10	< 10	< 10	< 10
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Analytical Report Number: 22-74656
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD

Your Order No: P4280JJ2513 15

Lab Sample Number				2369596	2369597	2369598	2369599	2369600
Sample Reference				JBH6	JBH7	JBH8	JBH9	BH05
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				27/07/2022	27/07/2022	27/07/2022	27/07/2022	27/07/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-74656
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD

Your Order No: P4280JJ2513 15

Lab Sample Number				2369601	2369602	2369603	2369604	2369605
Sample Reference				BH10	BH11	BH12	BH13	BH14
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				27/07/2022	27/07/2022	27/07/2022	27/07/2022	27/07/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Analytical Report Number: 22-74656
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD

Your Order No: P4280JJ2513 15

Lab Sample Number				2369601	2369602	2369603	2369604	2369605
Sample Reference				BH10	BH11	BH12	BH13	BH14
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				27/07/2022	27/07/2022	27/07/2022	27/07/2022	27/07/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	96	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	93	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	14	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_\#1\_\#2\_MS}$	µg/l	10	NONE	200	< 10	< 10	< 10	< 10
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Analytical Report Number: 22-74656
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD

Your Order No: P4280JJ2513 15

Lab Sample Number				2369601	2369602	2369603	2369604	2369605
Sample Reference				BH10	BH11	BH12	BH13	BH14
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				27/07/2022	27/07/2022	27/07/2022	27/07/2022	27/07/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 22-74656
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	ISO 17025
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

Sample Deviation Report

Analytical Report Number : 22-74656
Project / Site name: Phase 10, Heyford Park, Camp Road, OX25 5HD

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis.Please note that the associated result(s) may be unreliable and should be interpreted with care.

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
BH05	None Supplied	W	2369600	b	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
BH05	None Supplied	W	2369600	b	Volatile organic compounds in water	L073B-PL	b
BH10	None Supplied	W	2369601	b	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
BH10	None Supplied	W	2369601	b	Volatile organic compounds in water	L073B-PL	b
BH11	None Supplied	W	2369602	b	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
BH11	None Supplied	W	2369602	b	Volatile organic compounds in water	L073B-PL	b
BH12	None Supplied	W	2369603	b	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
BH12	None Supplied	W	2369603	b	Volatile organic compounds in water	L073B-PL	b
BH13	None Supplied	W	2369604	b	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
BH13	None Supplied	W	2369604	b	Volatile organic compounds in water	L073B-PL	b
BH14	None Supplied	W	2369605	b	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
BH14	None Supplied	W	2369605	b	Volatile organic compounds in water	L073B-PL	b
JBH1	None Supplied	W	2369591	b	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JBH1	None Supplied	W	2369591	b	Volatile organic compounds in water	L073B-PL	b
JBH2	None Supplied	W	2369592	b	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JBH2	None Supplied	W	2369592	b	Volatile organic compounds in water	L073B-PL	b
JBH3	None Supplied	W	2369593	b	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JBH3	None Supplied	W	2369593	b	Volatile organic compounds in water	L073B-PL	b
JBH4	None Supplied	W	2369594	b	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JBH4	None Supplied	W	2369594	b	Volatile organic compounds in water	L073B-PL	b
JBH5	None Supplied	W	2369595	b	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JBH5	None Supplied	W	2369595	b	Volatile organic compounds in water	L073B-PL	b
JBH6	None Supplied	W	2369596	b	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JBH6	None Supplied	W	2369596	b	Volatile organic compounds in water	L073B-PL	b
JBH7	None Supplied	W	2369597	b	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JBH7	None Supplied	W	2369597	b	Volatile organic compounds in water	L073B-PL	b
JBH8	None Supplied	W	2369598	b	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JBH8	None Supplied	W	2369598	b	Volatile organic compounds in water	L073B-PL	b
JBH9	None Supplied	W	2369599	b	BTEX and MTBE in water (Monoaromatics)	L073B-PL	b
JBH9	None Supplied	W	2369599	b	Volatile organic compounds in water	L073B-PL	b

APPENDIX 4 – GEOTECHNICAL LABORATORY TEST RESULTS

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

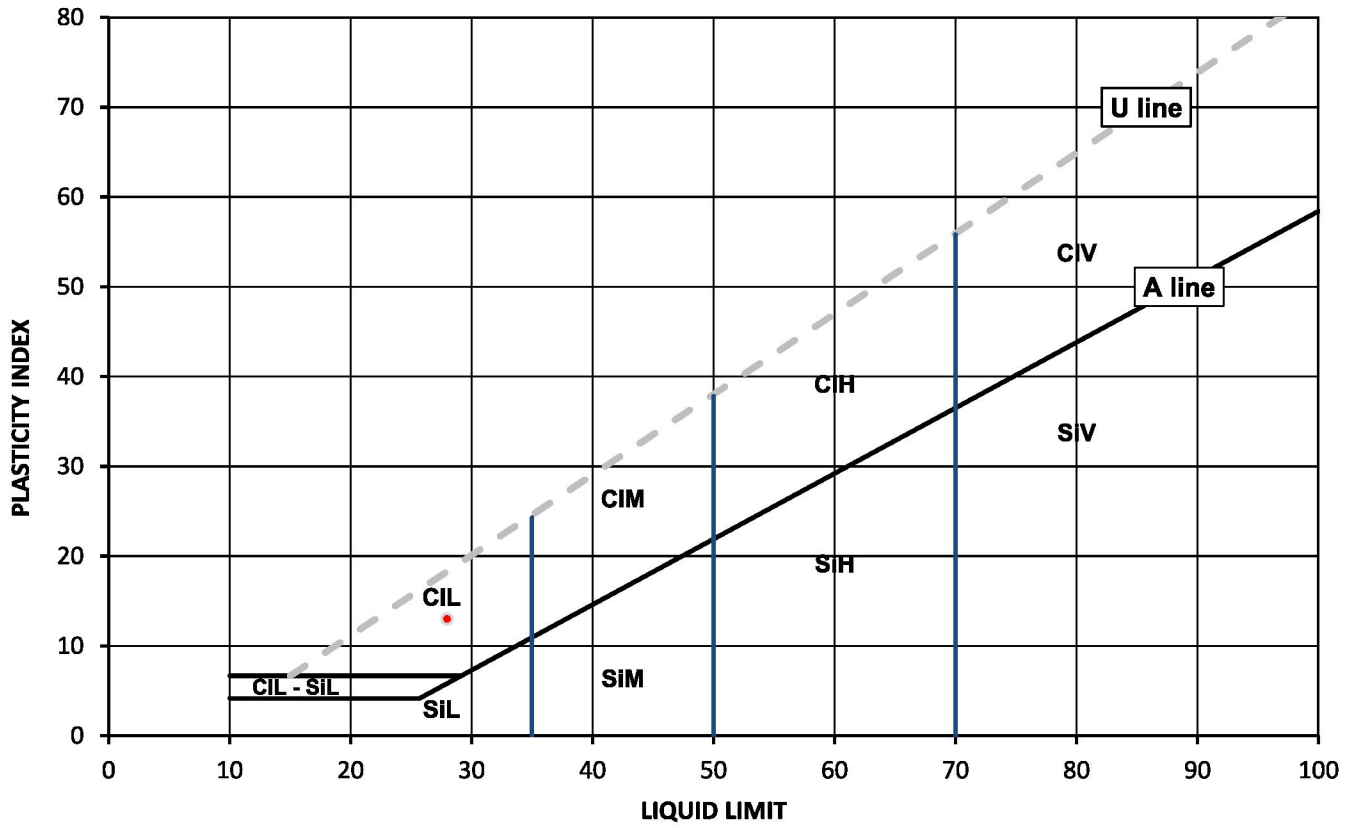
Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63317
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2304795	Depth Top [m]:	1.00
Hole No.:	JWS1	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Light brown slightly gravelly very sandy CLAY		
Sample Preparation:	Tested after >425um removed by hand		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
23	28	15	13	98



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 23/06/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING
4041

Environmental Science

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63317
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

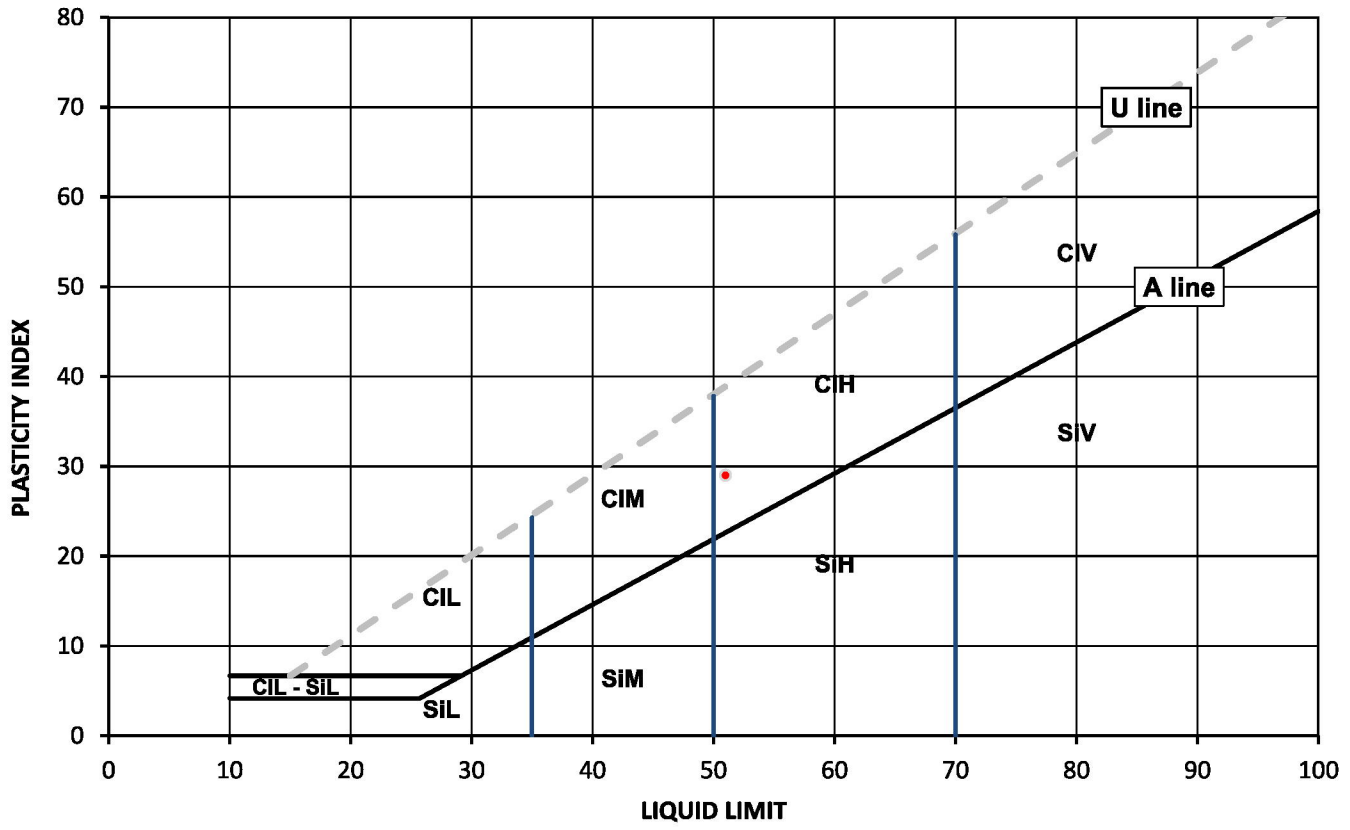
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2304796	Depth Top [m]:	2.50
Hole No.:	JWS3	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Light brown slightly sandy CLAY		

Sample Preparation: Tested in natural condition

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
21	51	22	29	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 23/06/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63317
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

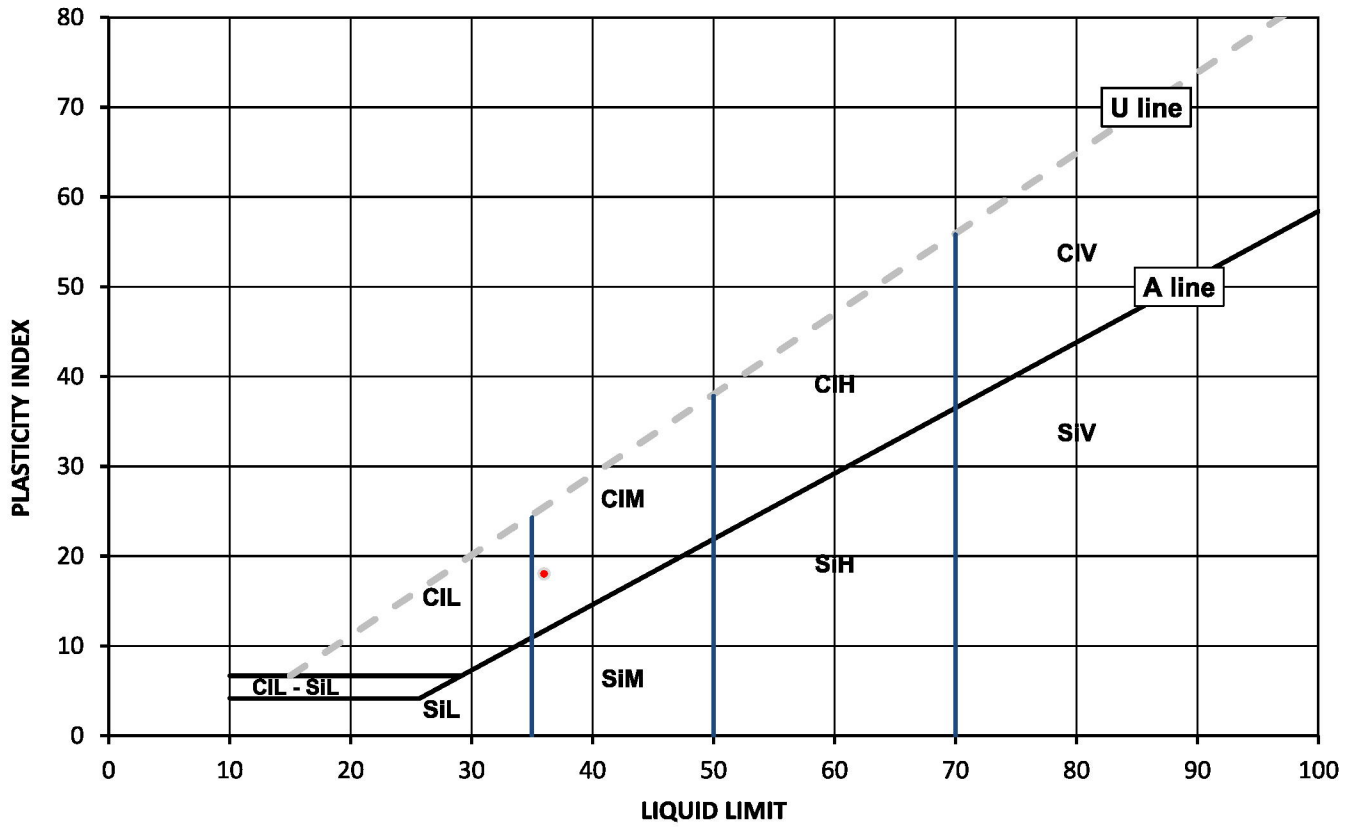
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2304797	Depth Top [m]:	1.50
Hole No.:	JWS4	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Light brown gravelly sandy CLAY		

Sample Preparation: Tested after washing to remove >425um

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
19	36	18	18	61



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 23/06/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63317
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

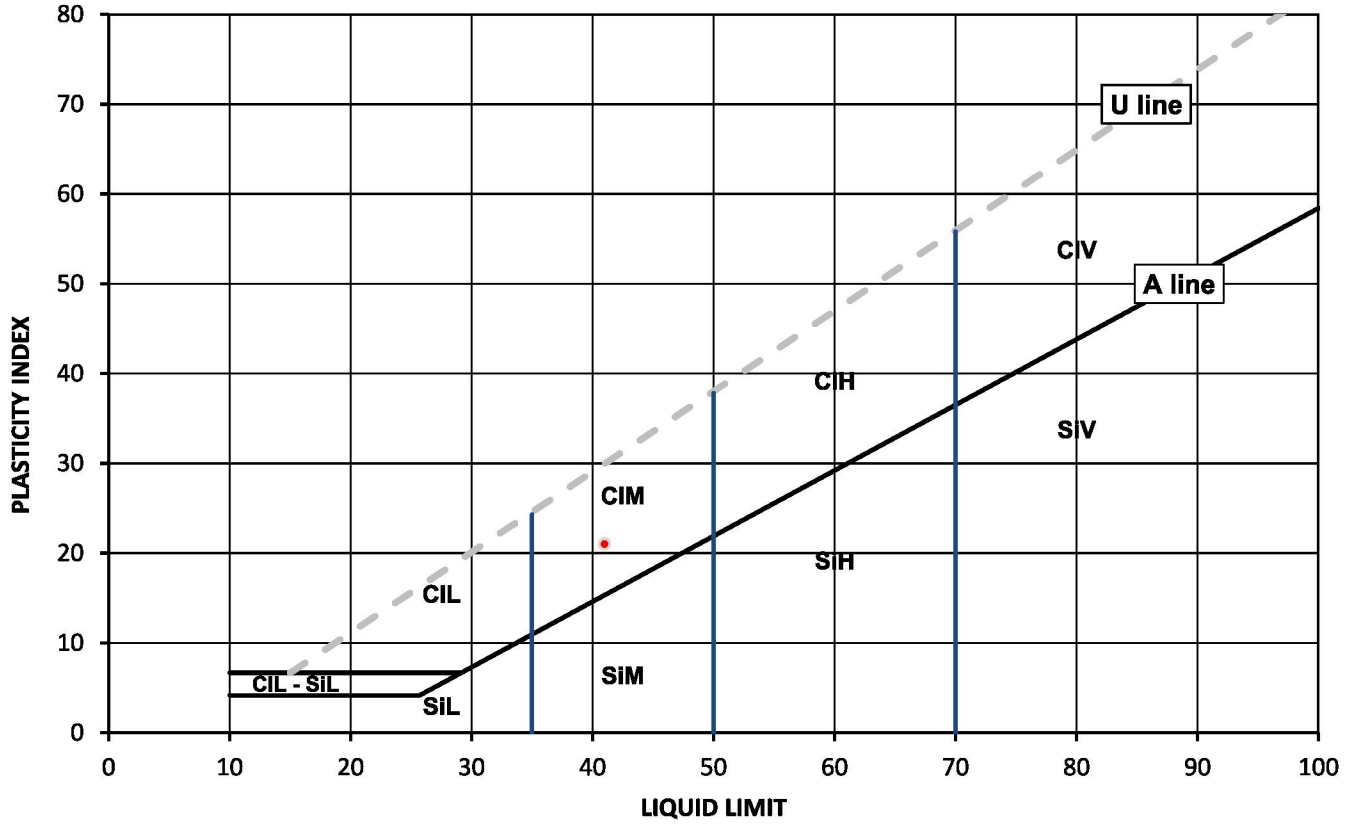
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2304798	Depth Top [m]:	0.50
Hole No.:	JWS5	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown sandy CLAY		

Sample Preparation: Tested in natural condition

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
16	41	20	21	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 23/06/2022

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

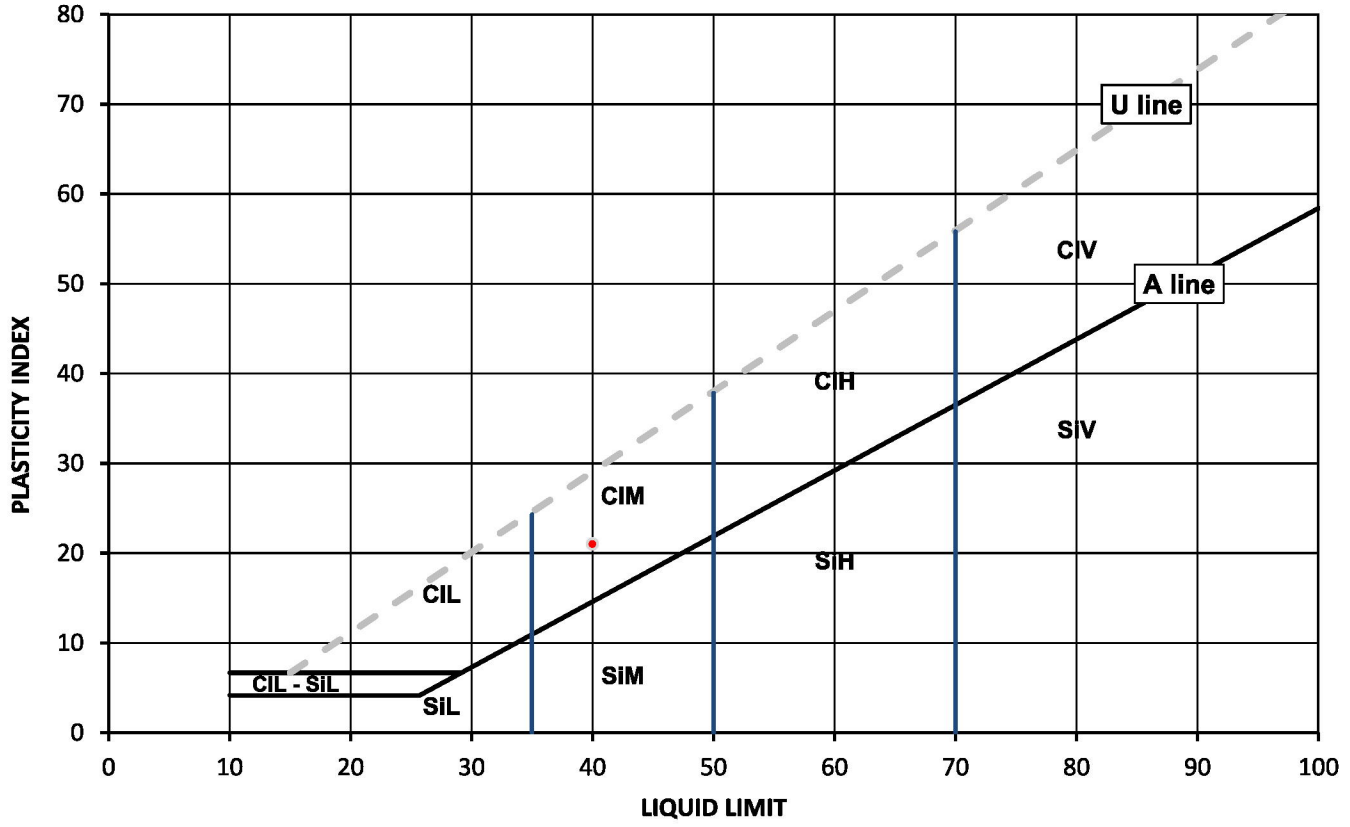
Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63317
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2304799	Depth Top [m]:	0.75
Hole No.:	JBH1	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown slightly gravelly sandy CLAY		
Sample Preparation:	Tested after >425um removed by hand		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
19	40	19	21	97



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 23/06/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING
4041

Environmental Science

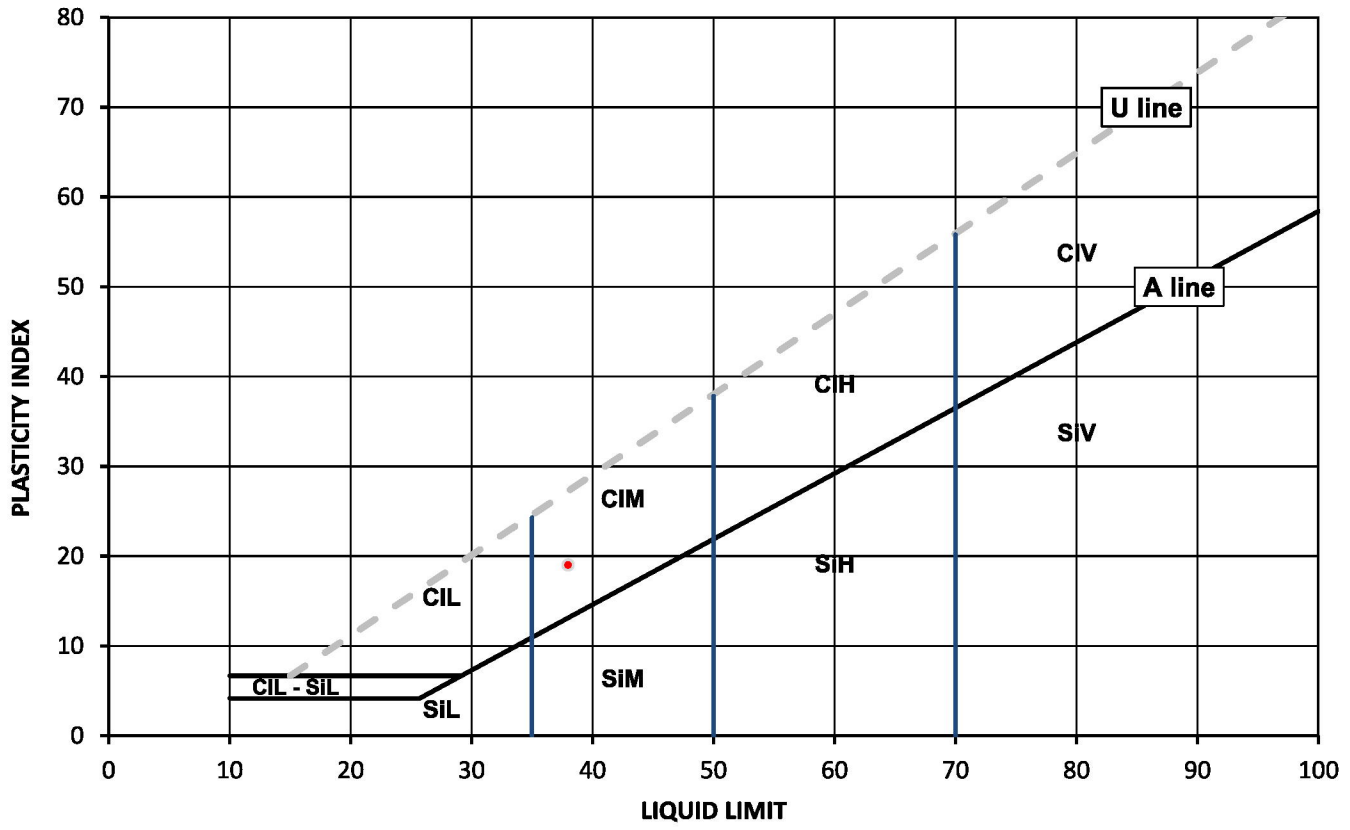
Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63317
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2304800	Depth Top [m]:	1.50
Hole No.:	JBH2	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Light grey slightly gravelly sandy CLAY		
Sample Preparation:	Tested after washing to remove >425um		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
29	38	19	19	96



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 23/06/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING
4041

Environmental Science

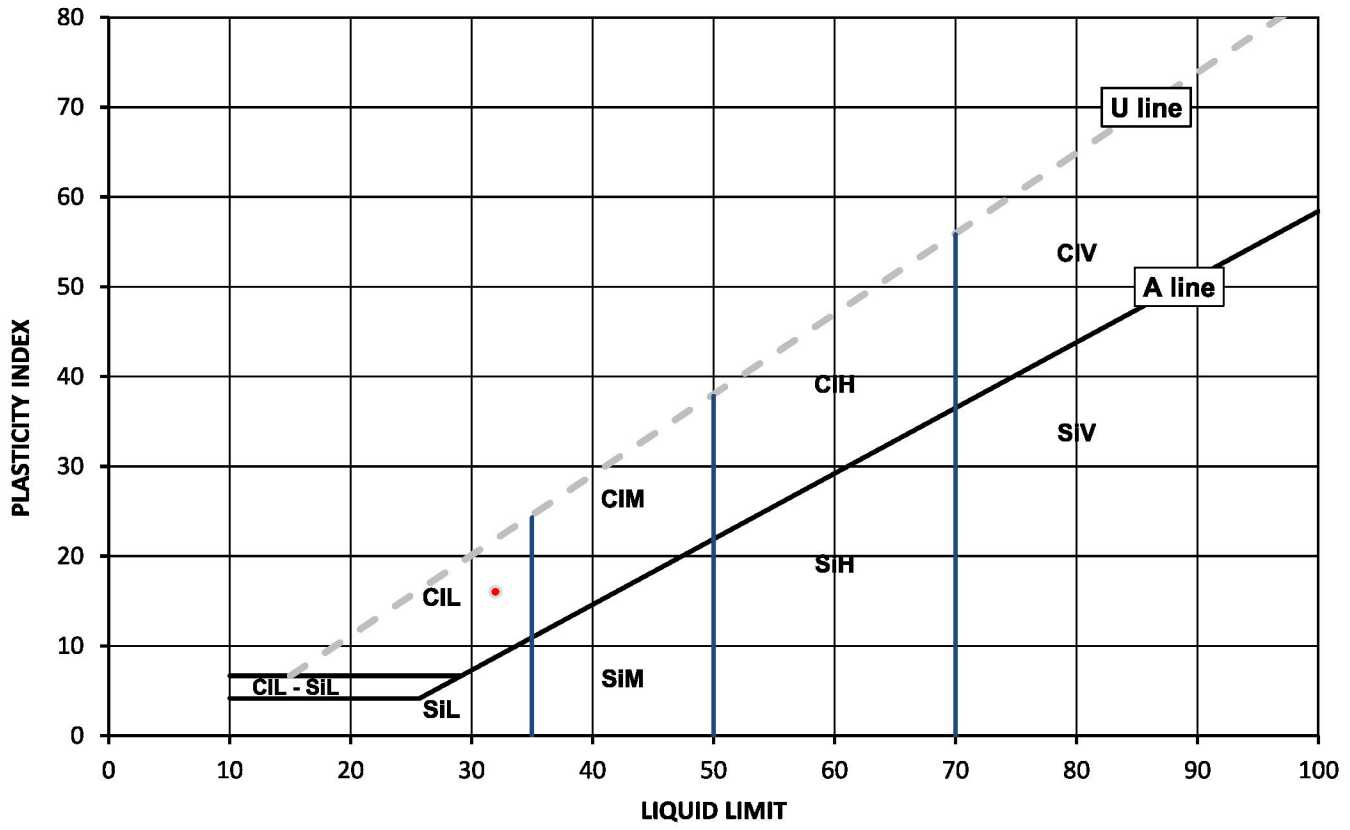
Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63317
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2304801	Depth Top [m]:	1.50
Hole No.:	JBH3	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Light grey gravelly very sandy CLAY		
Sample Preparation:	Tested after washing to remove >425um		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
16	32	16	16	64



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 23/06/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING
4041

Environmental Science

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63317
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

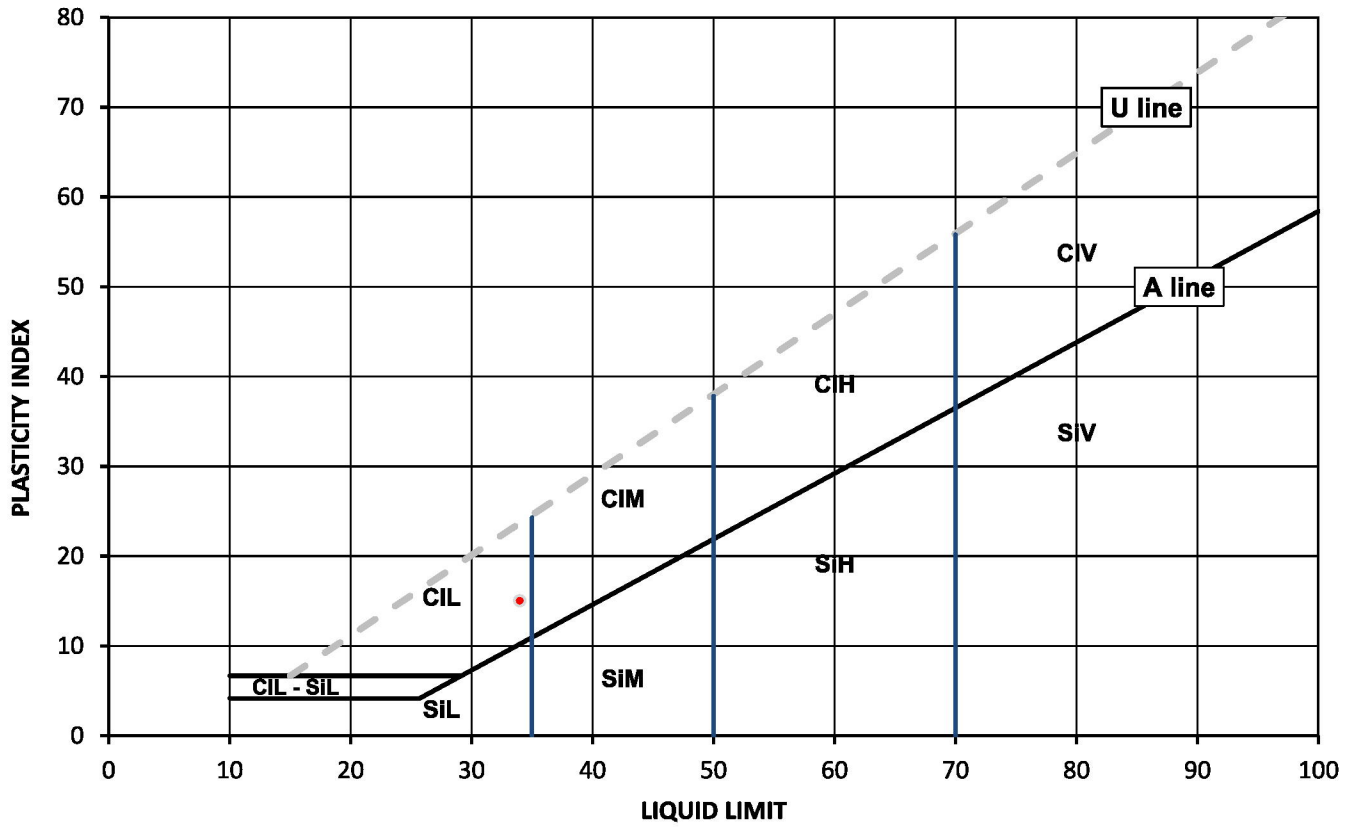
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2304804	Depth Top [m]:	1.50
Hole No.:	JBH8	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Light brown gravelly very sandy CLAY		

Sample Preparation: Tested after washing to remove >425um

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
4.8	34	19	15	44



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 23/06/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING
4041

Environmental Science

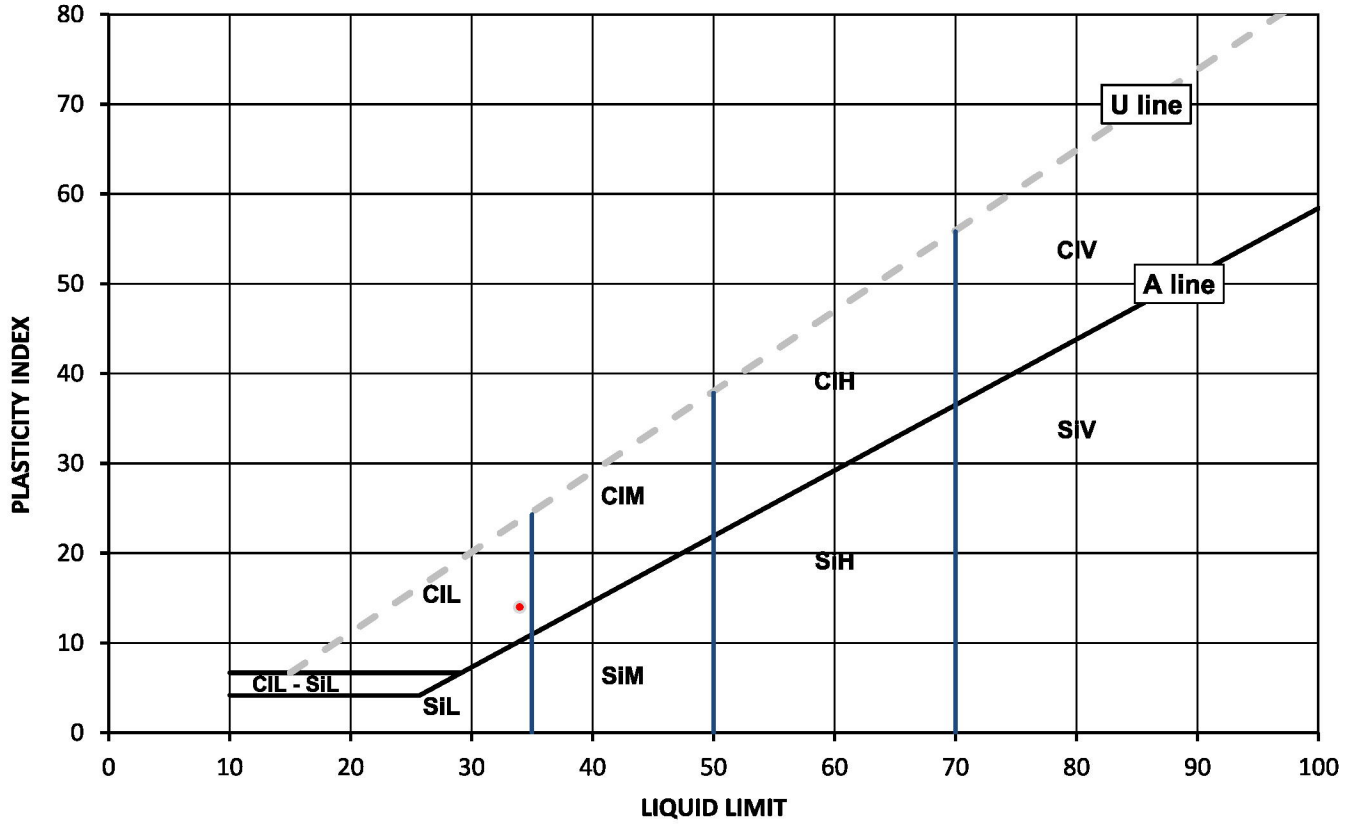
Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63317
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2304805	Depth Top [m]:	1.00
Hole No.:	JBH9	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Yellowish brown slightly gravelly very sandy CLAY		
Sample Preparation:	Tested after washing to remove >425um		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
20	34	20	14	79



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 23/06/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING
4041

Environmental Science

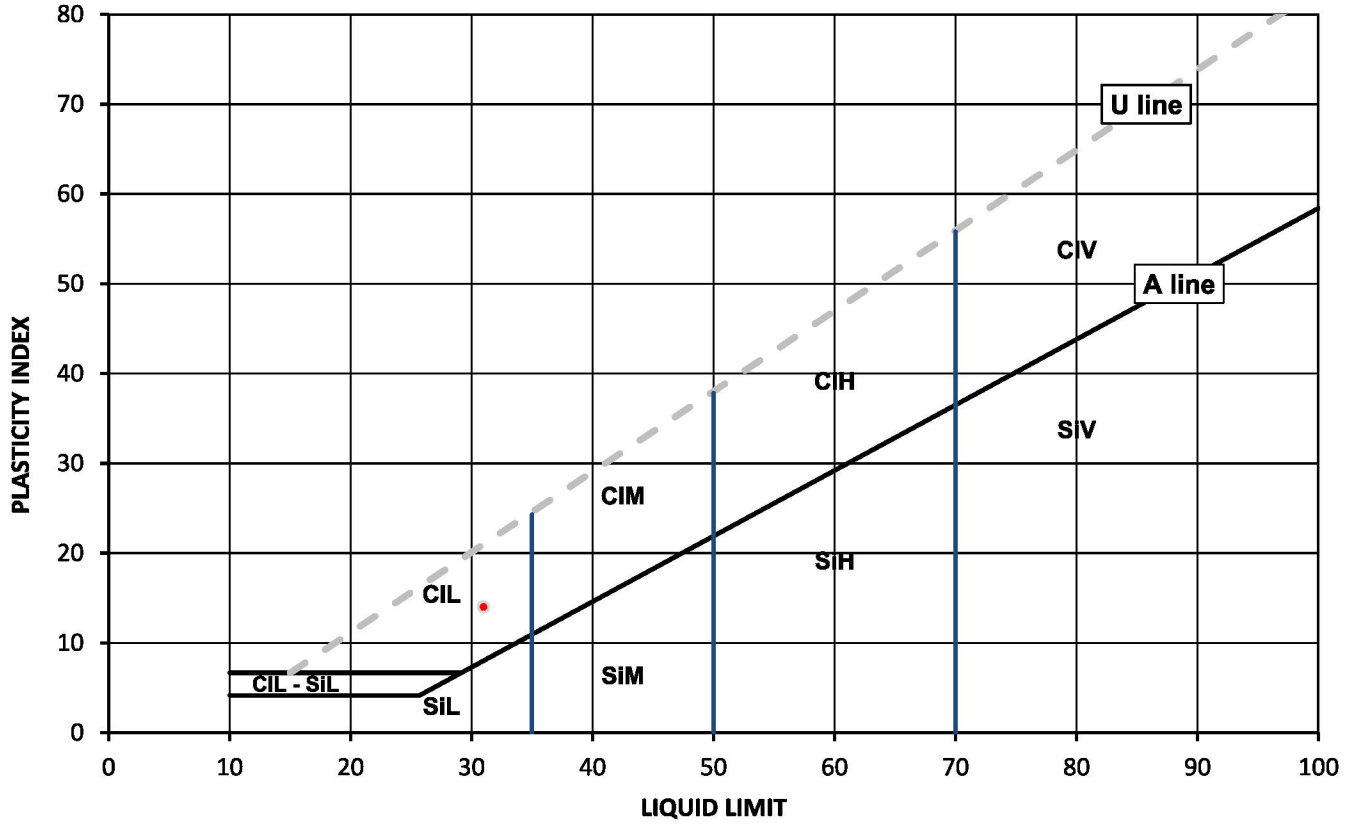
Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63317
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	16/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2309417	Depth Top [m]:	0.50
Hole No.:	WS3	Depth Base [m]:	1.50
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Light brown very gravelly sandy CLAY		
Sample Preparation:	Tested after washing to remove >425um		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
2.6	31	17	14	46



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 23/06/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING
4041

Environmental Science

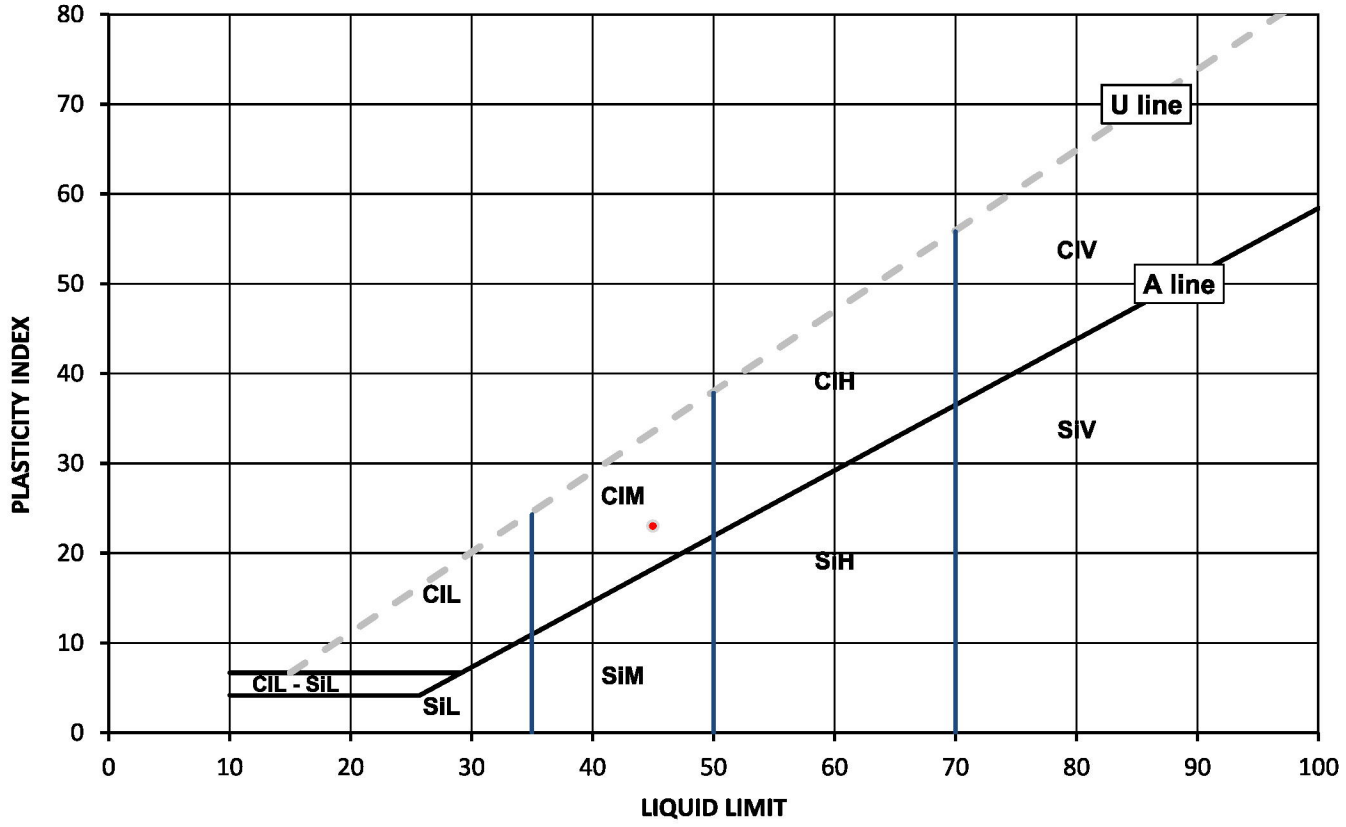
Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63317
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	22/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2317245	Depth Top [m]:	0.50
Hole No.:	JWS2	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	B
Sample Description:	Brown slightly gravelly slightly sandy CLAY		
Sample Preparation:	Tested after washing to remove >425um		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
14	45	22	23	82



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 23/06/2022

GF 236.12

SUMMARY REPORT

SUMMARY OF CLASSIFICATION TEST RESULTS

Tested in Accordance with:

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Jomas Associates Ltd

Client Address: Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD

Contact: Shaw Carter

Site Address: Phase 10, Heyford Park, Camp Road, OX25 5HD

Water Content by BS 1377-2:1990: Clause 3.2; Atterberg by BS 1377-2: 1990: Clause 4.3 (4 Point Test), Clause 4.4 (1 Point Test) and 5; PD by BS 1377-2: 1990: Clause 8.2

Client Reference: JJ2513
Job Number: 22-63317
Date Sampled: 25/05 - 25/05/2022
Date Received: 30/05/2022
Date Tested: 14/06 - 22/06/2022
Sampled By: Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Water Content BS 1377-2 [W]	Water Content BS EN ISO 17892-2 [W]	Atterberg				Density			Total Porosity#		
		Reference	Depth Top	Depth Base	Type					% Passing 425um	WL	Wp	Ip	bulk	dry	PD			
			m	m				%	%	%	%	%	%	Mg/m3	Mg/m3	Mg/m3	%		
2304799	JBH1	Not Given	0.75	Not Given	D	Brown slightly gravelly sandy CLAY	Atterberg 4 Point	19		97	40	19	21						
2304800	JBH2	Not Given	1.50	Not Given	D	Light grey slightly gravelly sandy CLAY	Atterberg 4 Point	29		96	38	19	19						
2304801	JBH3	Not Given	1.50	Not Given	D	Light grey gravelly very sandy CLAY	Atterberg 4 Point	16		64	32	16	16						
2304804	JBH8	Not Given	1.50	Not Given	D	Light brown gravelly very sandy CLAY	Atterberg 4 Point	4.8		44	34	19	15						
2304805	JBH9	Not Given	1.00	Not Given	D	Yellowish brown slightly gravelly very sandy CLAY	Atterberg 4 Point	20		79	34	20	14						
2304795	JWS1	Not Given	1.00	Not Given	D	Light brown slightly gravelly very sandy CLAY	Atterberg 4 Point	23		98	28	15	13						
2317245	JWS2	Not Given	0.50	Not Given	B	Brown slightly gravelly slightly sandy CLAY	Atterberg 4 Point	14		82	45	22	23						
2304796	JWS3	Not Given	2.50	Not Given	D	Light brown slightly sandy CLAY	Atterberg 4 Point	21		100	51	22	29						
2304797	JWS4	Not Given	1.50	Not Given	D	Light brown gravelly sandy CLAY	Atterberg 4 Point	19		61	36	18	18						
2304798	JWS5	Not Given	0.50	Not Given	D	Brown sandy CLAY	Atterberg 4 Point	16		100	41	20	21						

Note: # Non accredited; NP - Non plastic

Comments:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 23/06/2022

SUMMARY REPORT

SUMMARY OF CLASSIFICATION TEST RESULTS

Tested in Accordance with:

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Jomas Associates Ltd

Client Address: Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD

Water Content by BS 1377-2:1990: Clause 3.2; Atterberg by BS 1377-2: 1990: Clause 4.3 (4 Point Test), Clause 4.4 (1 Point Test) and 5; PD by BS 1377-2: 1990: Clause 8.2

Client Reference: JJ2513
Job Number: 22-63317
Date Sampled: 25/05/2022
Date Received: 30/05/2022
Date Tested: 16/06/2022
Sampled By: Not Given

Contact: Shaw Carter

Site Address: Phase 10, Heyford Park, Camp Road, OX25 5HD

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Water Content BS 1377-2 [W]	Water Content BS EN ISO 17892-2 [W]	Atterberg				Density			Total Porosity#		
		Reference	Depth Top	Depth Base	Type					% Passing 425um	WL	Wp	Ip	bulk	dry	PD			
			m	m				%	%	%	%	%	%	Mg/m3	Mg/m3	Mg/m3	%		
2309417	WS3	Not Given	0.50	1.50	D	Light brown very gravelly sandy CLAY	Atterberg 4 Point	2.6		46	31	17	14						

Note: # Non accredited; NP - Non plastic

Comments:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 23/06/2022

SUMMARY REPORT

DETERMINATION OF WATER CONTENT

Tested in Accordance with: BS 1377-2: 1990: Clause 3.2

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Jomas Associates Ltd

Client Address: Lakeside House, 1 Furzeground Way,
Stockley Park, UB11 1BD

Contact: Shaw Carter

Site Address: Phase 10, Heyford Park, Camp Road, OX25 5HD

Client Reference: JJ2513
Job Number: 22-63317
Date Sampled: 25/05 - 25/05/2022
Date Received: 30/05/2022
Date Tested: 14/06 - 22/06/2022
Sampled By: Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	WC	Sample preparation / Oven temperature at the time of testing			
		Reference	Depth Top m	Depth Base m	Type			%				
2304799	JBH1	Not Given	0.75	Not Given	D	Brown slightly gravelly sandy CLAY		19	Sample was quartered, oven dried at 109 °C			
2304800	JBH2	Not Given	1.50	Not Given	D	Light grey slightly gravelly sandy CLAY		29	Sample was quartered, oven dried at 109 °C			
2304801	JBH3	Not Given	1.50	Not Given	D	Light grey gravelly very sandy CLAY		16	Sample was quartered, oven dried at 109 °C			
2304804	JBH8	Not Given	1.50	Not Given	D	Light brown gravelly very sandy CLAY		4.8	Sample was whole tested, oven dried at 109 °C			
2304805	JBH9	Not Given	1.00	Not Given	D	Yellowish brown slightly gravelly very sandy CLAY		20	Sample was quartered, oven dried at 109 °C			
2304795	JWS1	Not Given	1.00	Not Given	D	Light brown slightly gravelly very sandy CLAY		23	Sample was quartered, oven dried at 109 °C			
2317245	JWS2	Not Given	0.50	Not Given	B	Brown slightly gravelly slightly sandy CLAY		14	Sample was quartered, oven dried at °C			
2304796	JWS3	Not Given	2.50	Not Given	D	Light brown slightly sandy CLAY		21	Sample was quartered, oven dried at 109 °C			
2304797	JWS4	Not Given	1.50	Not Given	D	Light brown gravelly sandy CLAY		19	Sample was whole tested, oven dried at 109 °C			
2304798	JWS5	Not Given	0.50	Not Given	D	Brown sandy CLAY		16	Sample was quartered, oven dried at 109 °C			

Comments:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 23/06/2022

SUMMARY REPORT

DETERMINATION OF WATER CONTENT

Tested in Accordance with: BS 1377-2: 1990: Clause 3.2

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Jomas Associates Ltd

Client Address: Lakeside House, 1 Furzeground Way,
Stockley Park, UB11 1BD

Contact: Shaw Carter

Site Address: Phase 10, Heyford Park, Camp Road, OX25 5HD

Client Reference: JJ2513
Job Number: 22-63317
Date Sampled: 25/05/2022
Date Received: 30/05/2022
Date Tested: 16/06/2022
Sampled By: Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	WC	Sample preparation / Oven temperature at the time of testing			
		Reference	Depth Top m	Depth Base m	Type			%				
2309417	WS3	Not Given	0.50	1.50	D	Light brown very gravelly sandy CLAY		2.6	Sample was quartered, oven dried at 109 °C			

Comments:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 23/06/2022

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

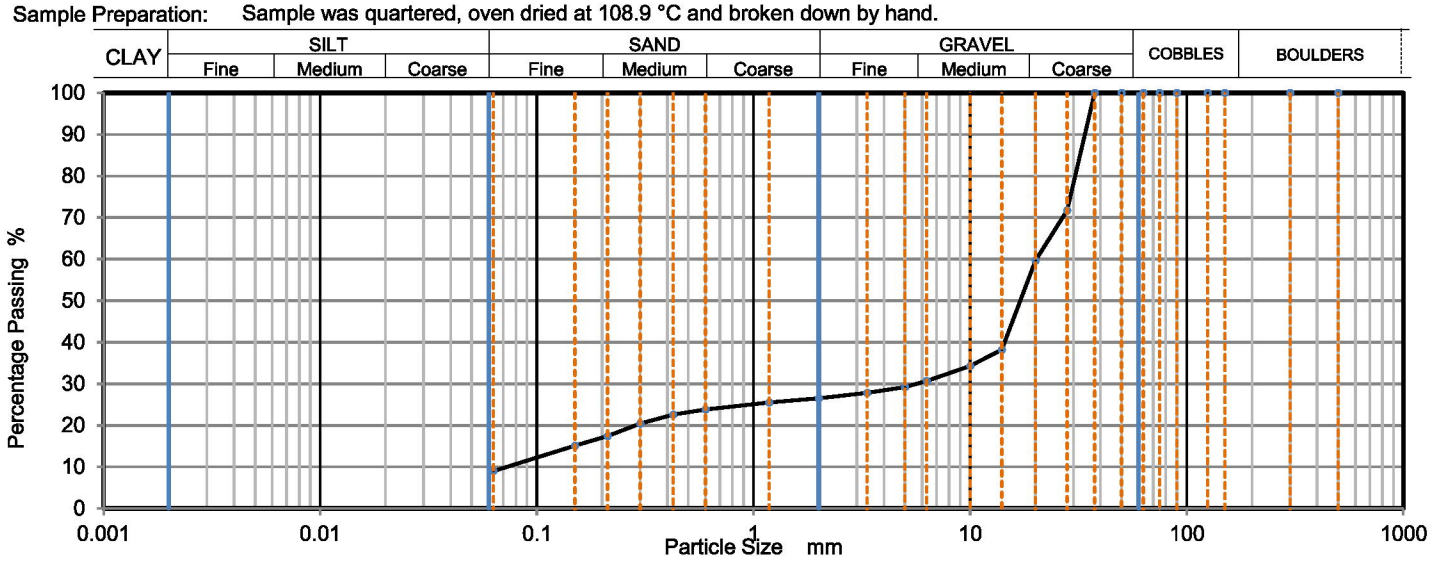
4041

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63317
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2304802	Depth Top [m]:	0.75
Hole No.:	JBH5	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown sandy clayey GRAVEL		
Sample Preparation:	Sample was quartered, oven dried at 108.9 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	72		
20	60		
14	38		
10	34		
6.3	31		
5	29		
3.35	28		
2	27		
1.18	26		
0.6	24		
0.425	23		
0.3	20		
0.212	17		
0.15	15		
0.063	10		

Sample Proportions	% dry mass
Very coarse	0
Gravel	74
Sand	17
Fines <0.063mm	10

Grading Analysis		
D100	mm	37.5
D60	mm	20.2
D30	mm	5.66
D10	mm	0.0639
Uniformity Coefficient		320
Curvature Coefficient		25

Uniformity Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 23/06/2022

GF 100.21

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

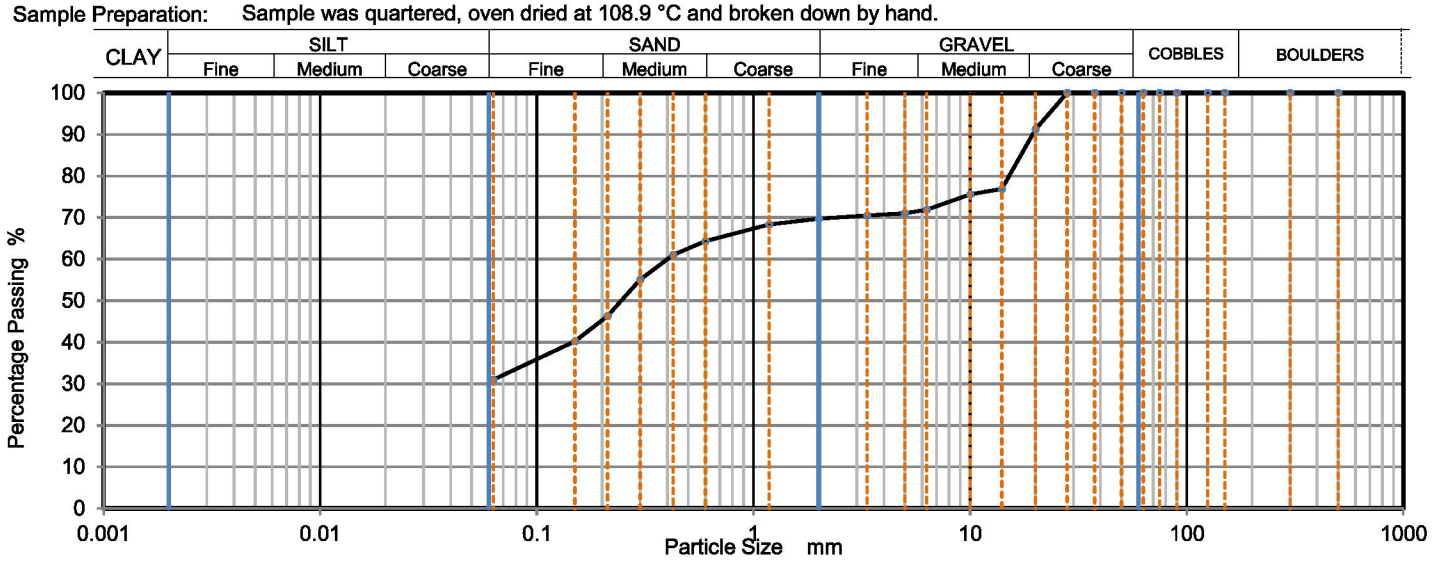
Environmental Science

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63317
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2304803	Depth Top [m]:	1.00
Hole No.:	JBH6	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown very gravelly very clayey SAND		
Sample Preparation:	Sample was quartered, oven dried at 108.9 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	91		
14	77		
10	76		
6.3	72		
5	71		
3.35	71		
2	70		
1.18	68		
0.6	64		
0.425	61		
0.3	55		
0.212	46		
0.15	40		
0.063	32		

Sample Proportions	% dry mass
Very coarse	0
Gravel	30
Sand	38
Fines <0.063mm	31

Grading Analysis		
D100	mm	28
D60	mm	0.401
D30	mm	
D10	mm	
Uniformity Coefficient		> 6.4
Curvature Coefficient		

Uniformity Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 23/06/2022

GF 100.21

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

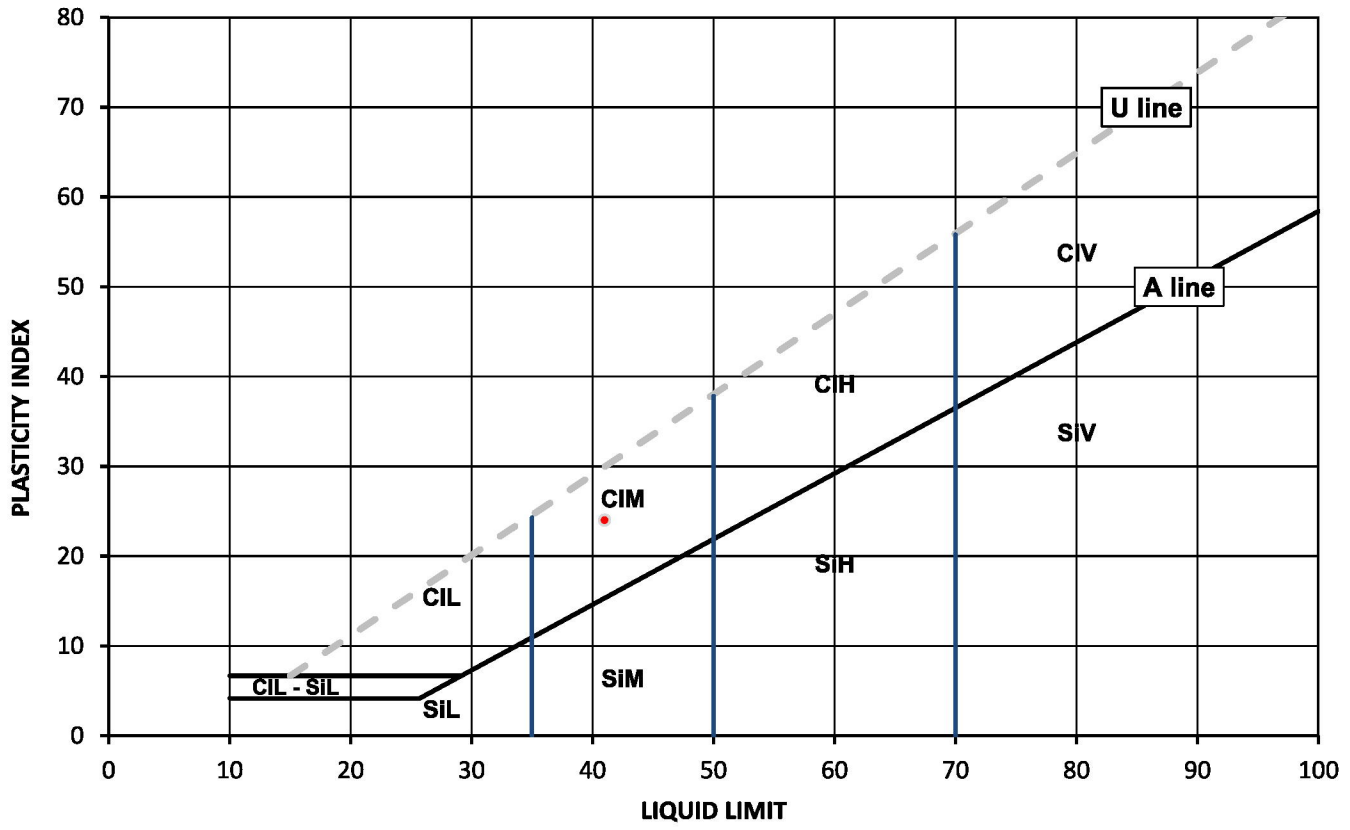
Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305195	Depth Top [m]:	1.75
Hole No.:	JTP7	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Yellowish brown slightly gravelly sandy CLAY		
Sample Preparation:	Tested after washing to remove >425um		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
23	41	17	24	70



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

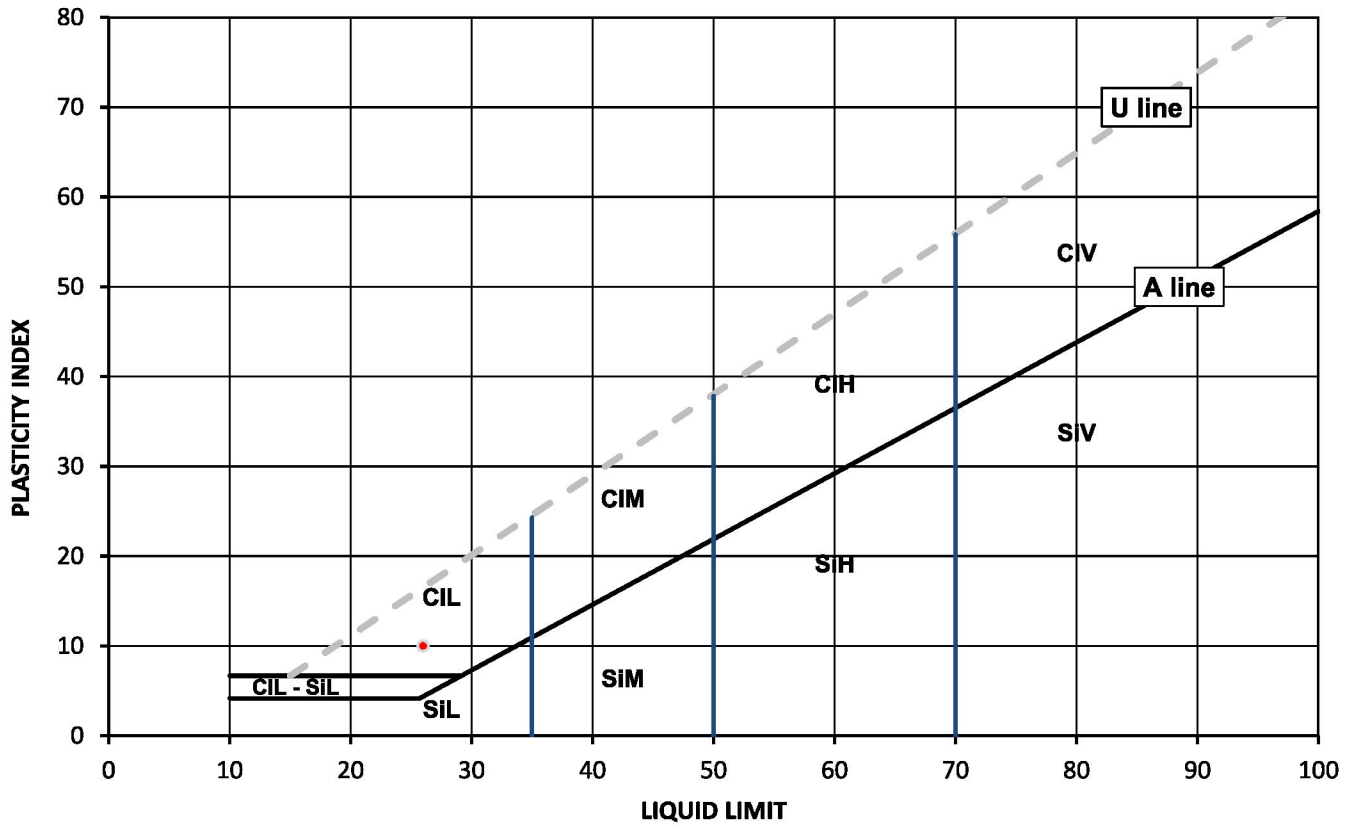
Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305196	Depth Top [m]:	2.50
Hole No.:	JTP7	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Light brown slightly gravelly very sandy CLAY		
Sample Preparation:	Tested after washing to remove >425um		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
17	26	16	10	71



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

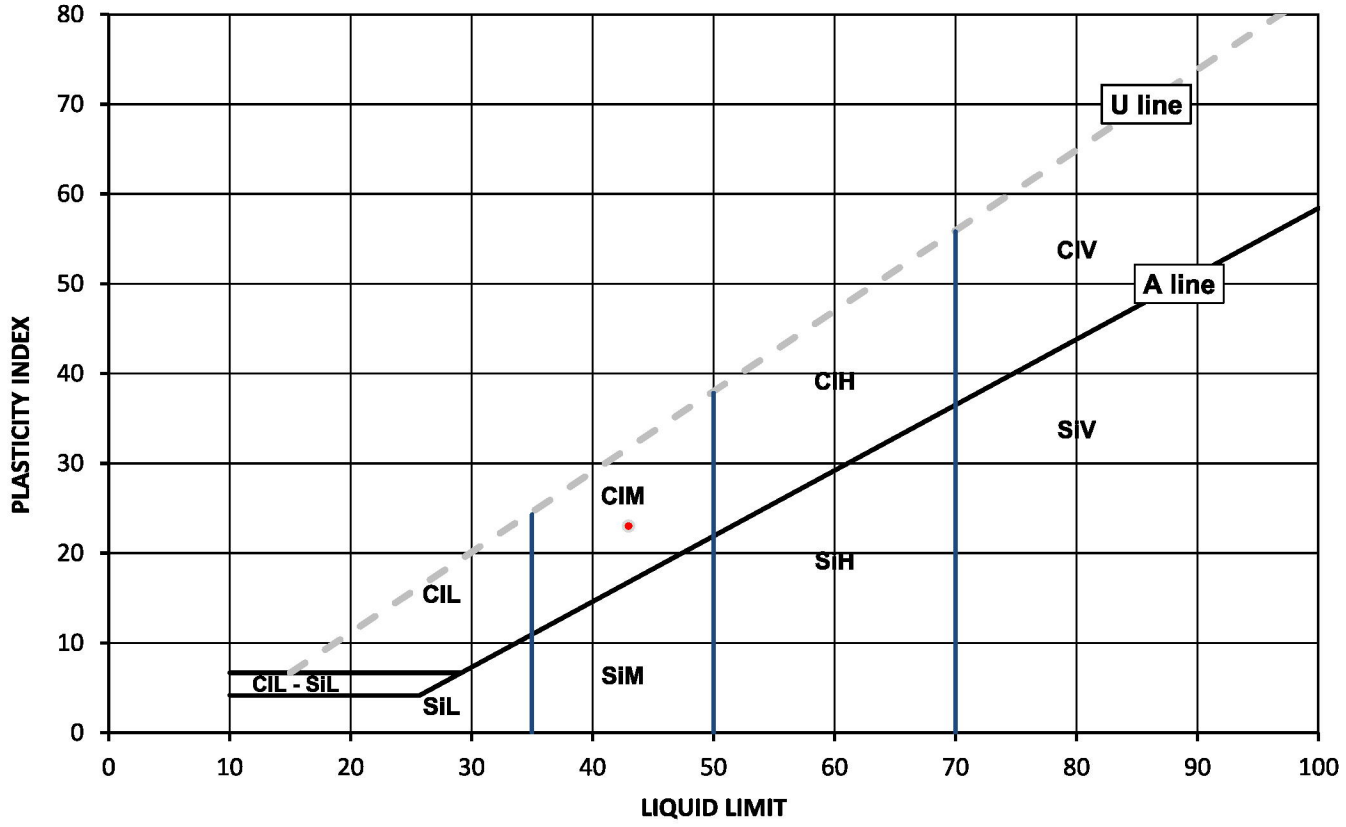
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305197	Depth Top [m]:	1.00
Hole No.:	JTP10	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown slightly gravelly sandy CLAY		

Sample Preparation: Tested after washing to remove >425um

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
17	43	20	23	88



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING
4041

Environmental Science

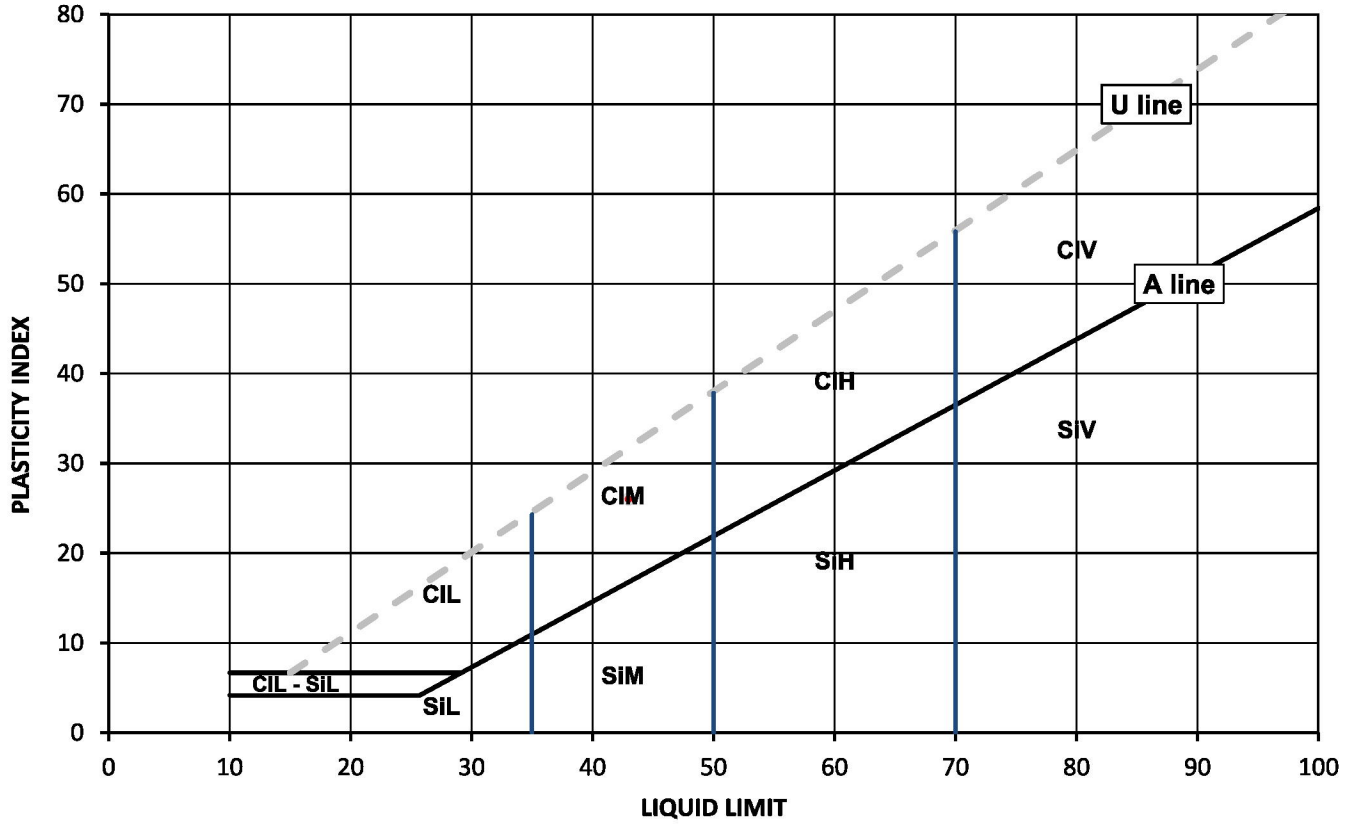
Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305199	Depth Top [m]:	2.50
Hole No.:	JTP10	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Yellowish brown slightly gravelly sandy CLAY		
Sample Preparation:	Tested after >425um removed by hand		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
16	43	17	26	96



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING
4041

Environmental Science

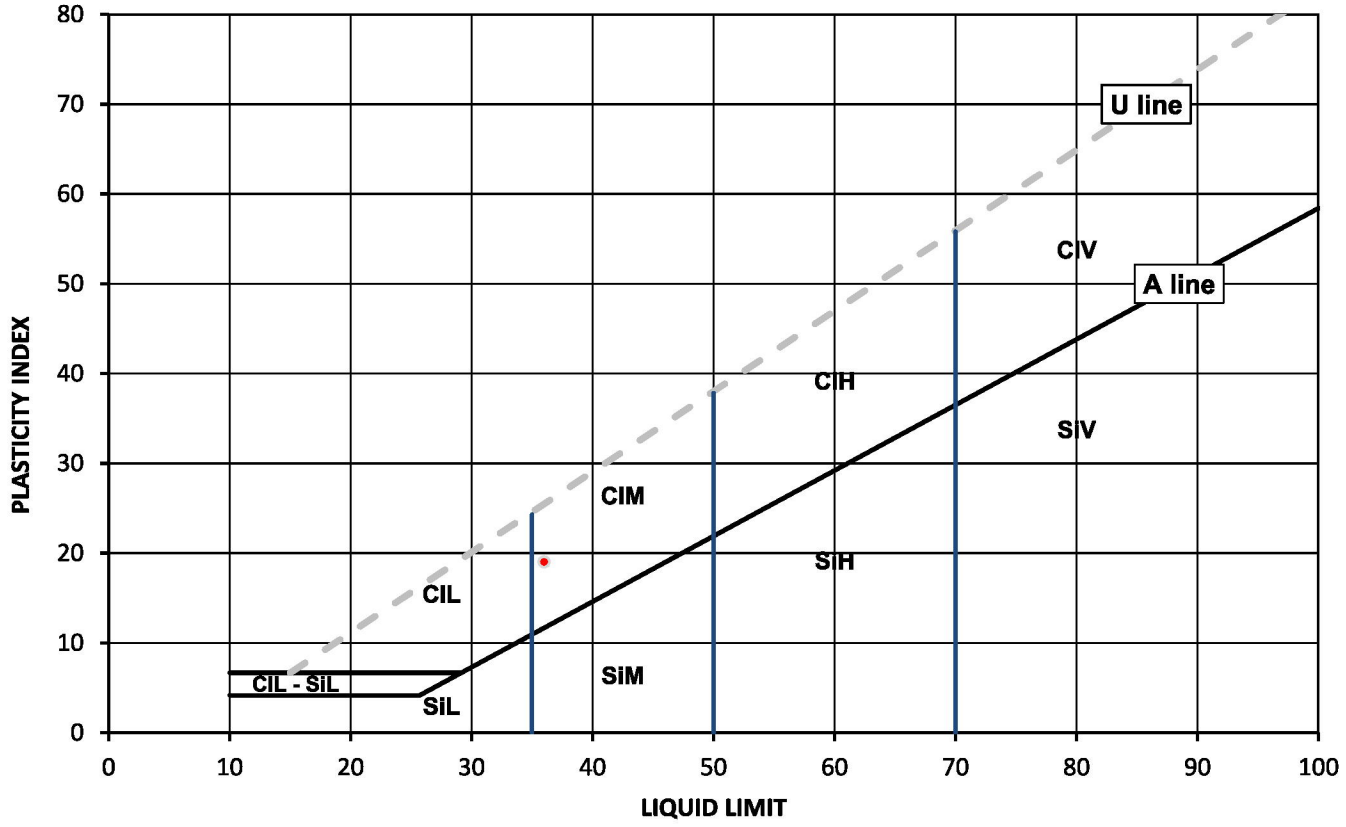
Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305203	Depth Top [m]:	1.75
Hole No.:	JTP14	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Yellowish brown gravelly sandy CLAY		
Sample Preparation:	Tested after washing to remove >425um		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
17	36	17	19	62



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

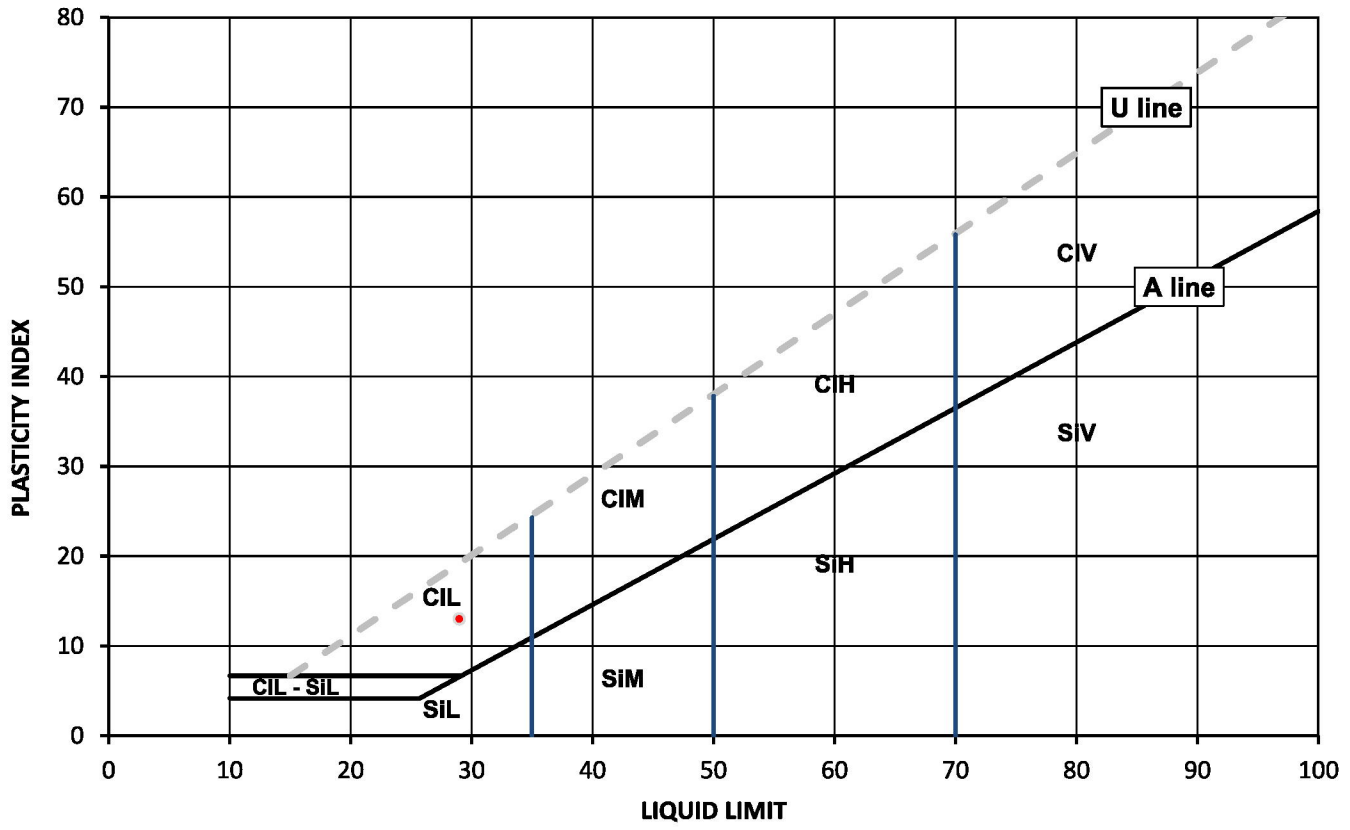
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305204	Depth Top [m]:	3.00
Hole No.:	JTP14	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Light brown slightly gravelly very sandy CLAY		

Sample Preparation: Tested after washing to remove >425um

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
19	29	16	13	88



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

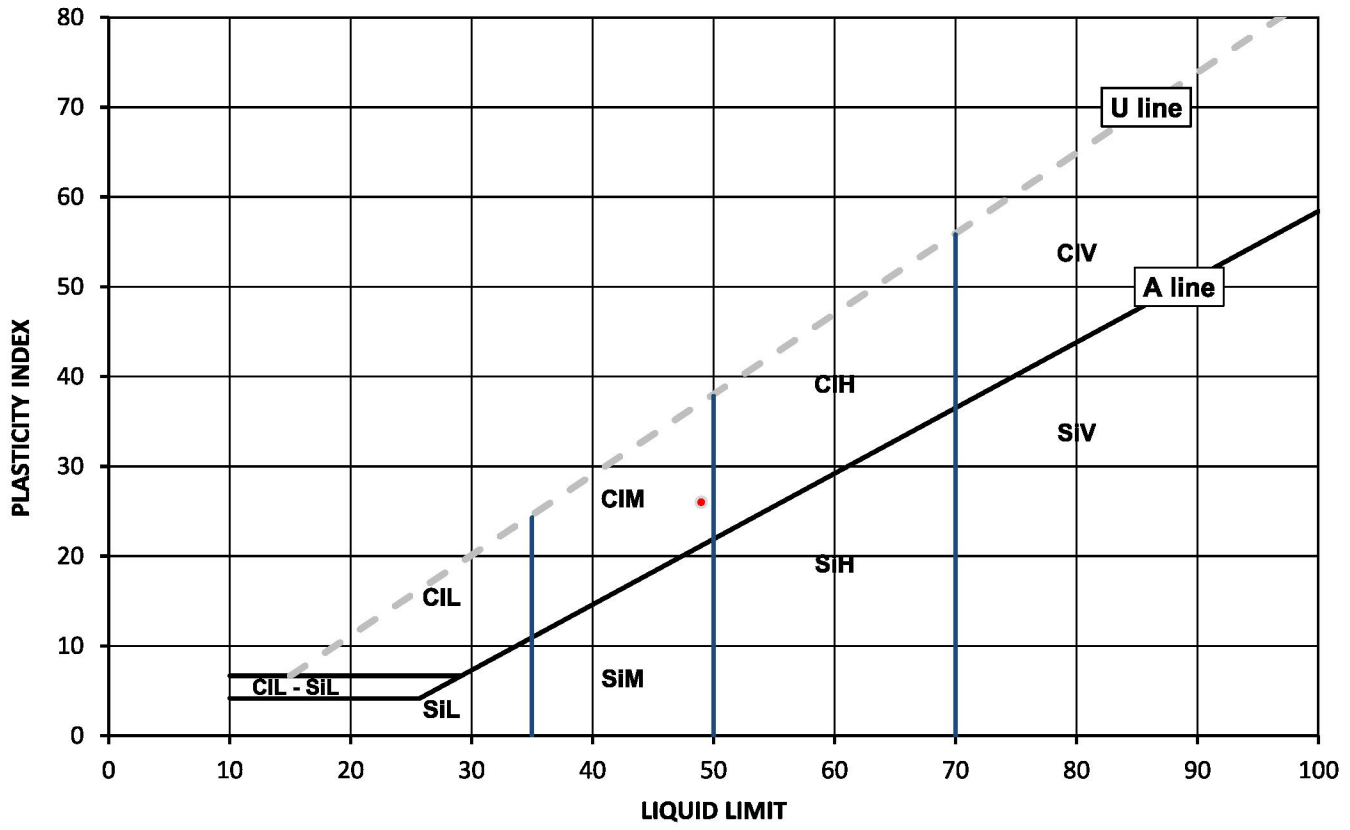
Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305207	Depth Top [m]:	2.50
Hole No.:	JTP16	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Light brown slightly gravelly slightly sandy CLAY		
Sample Preparation:	Tested after washing to remove >425um		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
24	49	23	26	98



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

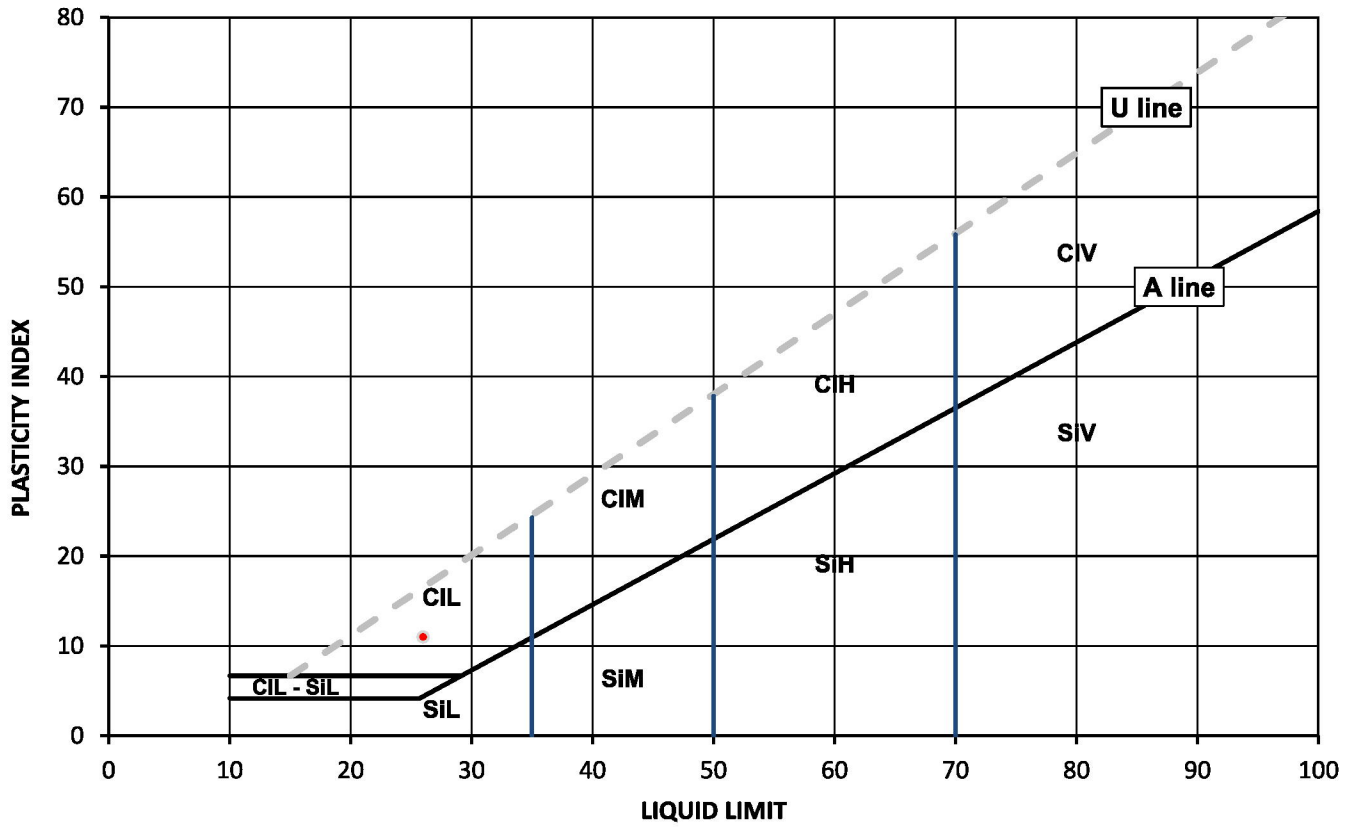
Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305208	Depth Top [m]:	1.75
Hole No.:	JSTP1	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Light brown very sandy CLAY		
Sample Preparation:	Tested in natural condition		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
22	26	15	11	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

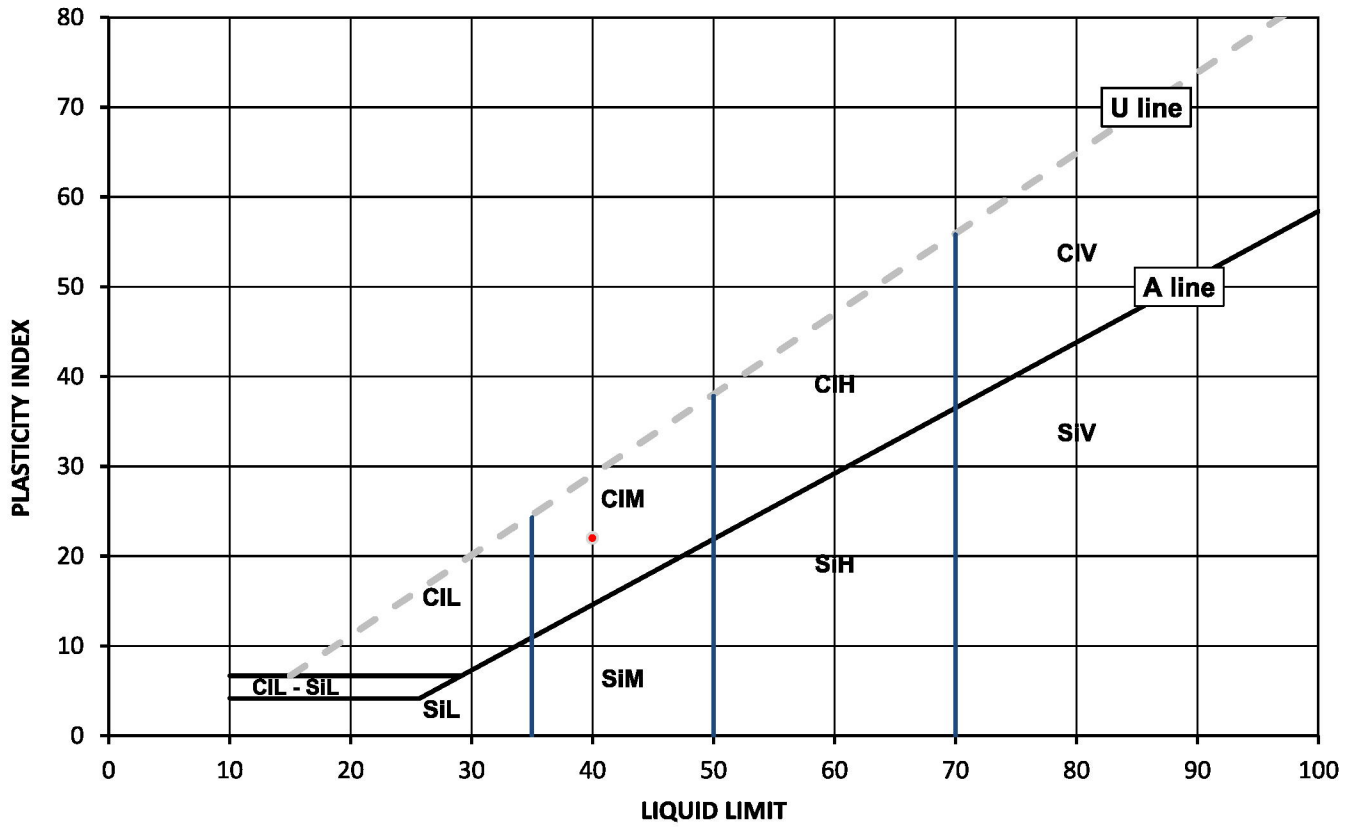
Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305209	Depth Top [m]:	2.00
Hole No.:	JSTP2	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Yellowish brown slightly gravelly sandy CLAY		
Sample Preparation:	Tested after >425um removed by hand		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
23	40	18	22	82



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 236.12

SUMMARY REPORT

SUMMARY OF CLASSIFICATION TEST RESULTS

Tested in Accordance with:

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Jomas Associates Ltd

Client Address: Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD

Contact: Shaw Carter

Site Address: Phase 10, Heyford Park, Camp Road, OX25 5HD

Water Content by BS 1377-2:1990: Clause 3.2; Atterberg by BS 1377-2: 1990: Clause 4.3 (4 Point Test), Clause 4.4 (1 Point Test) and 5; PD by BS 1377-2: 1990: Clause 8.2

Client Reference: JJ2513
Job Number: 22-63391
Date Sampled: 25/05/2022
Date Received: 30/05/2022
Date Tested: 14/06/2022
Sampled By: Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Water Content BS 1377-2 [W]	Water Content BS EN ISO 17892-2 [W]	Atterberg				Density			Total Porosity#		
		Reference	Depth Top	Depth Base	Type					% Passing 425um	WL	Wp	Ip	bulk	dry	PD			
			m	m				%	%	%	%	%	%	Mg/m3	Mg/m3	Mg/m3	%		
2305208	JSTP1	Not Given	1.75	Not Given	D	Light brown very sandy CLAY	Atterberg 4 Point	22		100	26	15	11						
2305209	JSTP2	Not Given	2.00	Not Given	D	Yellowish brown slightly gravelly sandy CLAY	Atterberg 4 Point	23		82	40	18	22						
2305197	JTP10	Not Given	1.00	Not Given	D	Brown slightly gravelly sandy CLAY	Atterberg 4 Point	17		88	43	20	23						
2305199	JTP10	Not Given	2.50	Not Given	D	Yellowish brown slightly gravelly sandy CLAY	Atterberg 4 Point	16		96	43	17	26						
2305203	JTP14	Not Given	1.75	Not Given	D	Yellowish brown gravelly sandy CLAY	Atterberg 4 Point	17		62	36	17	19						
2305204	JTP14	Not Given	3.00	Not Given	D	Light brown slightly gravelly very sandy CLAY	Atterberg 4 Point	19		88	29	16	13						
2305207	JTP16	Not Given	2.50	Not Given	D	Light brown slightly gravelly slightly sandy CLAY	Atterberg 4 Point	24		98	49	23	26						
2305195	JTP7	Not Given	1.75	Not Given	D	Yellowish brown slightly gravelly sandy CLAY	Atterberg 4 Point	23		70	41	17	24						
2305196	JTP7	Not Given	2.50	Not Given	D	Light brown slightly gravelly very sandy CLAY	Atterberg 4 Point	17		71	26	16	10						

Note: # Non accredited; NP - Non plastic

Comments:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

SUMMARY REPORT

DETERMINATION OF WATER CONTENT

Tested in Accordance with: BS 1377-2: 1990: Clause 3.2

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Jomas Associates Ltd

Client Address: Lakeside House, 1 Furzeground Way,
Stockley Park, UB11 1BD

Contact: Shaw Carter

Site Address: Phase 10, Heyford Park, Camp Road, OX25 5HD

Client Reference: JJ2513
Job Number: 22-63391
Date Sampled: 25/05/2022
Date Received: 30/05/2022
Date Tested: 14/06/2022
Sampled By: Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	WC	Sample preparation / Oven temperature at the time of testing			
		Reference	Depth Top m	Depth Base m	Type			%				
2305208	JSTP1	Not Given	1.75	Not Given	D	Light brown very sandy CLAY		22	Sample was quartered, oven dried at 109 °C			
2305209	JSTP2	Not Given	2.00	Not Given	D	Yellowish brown slightly gravelly sandy CLAY		23	Sample was quartered, oven dried at 109 °C			
2305197	JTP10	Not Given	1.00	Not Given	D	Brown slightly gravelly sandy CLAY		17	Sample was quartered, oven dried at 109 °C			
2305199	JTP10	Not Given	2.50	Not Given	D	Yellowish brown slightly gravelly sandy CLAY		16	Sample was quartered, oven dried at 109 °C			
2305203	JTP14	Not Given	1.75	Not Given	D	Yellowish brown gravelly sandy CLAY		17	Sample was quartered, oven dried at 109 °C			
2305204	JTP14	Not Given	3.00	Not Given	D	Light brown slightly gravelly very sandy CLAY		19	Sample was quartered, oven dried at 109 °C			
2305207	JTP16	Not Given	2.50	Not Given	D	Light brown slightly gravelly slightly sandy CLAY		24	Sample was quartered, oven dried at 109 °C			
2305195	JTP7	Not Given	1.75	Not Given	D	Yellowish brown slightly gravelly sandy CLAY		23	Sample was quartered, oven dried at 109 °C			
2305196	JTP7	Not Given	2.50	Not Given	D	Light brown slightly gravelly very sandy CLAY		17	Sample was quartered, oven dried at 109 °C			

Comments:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

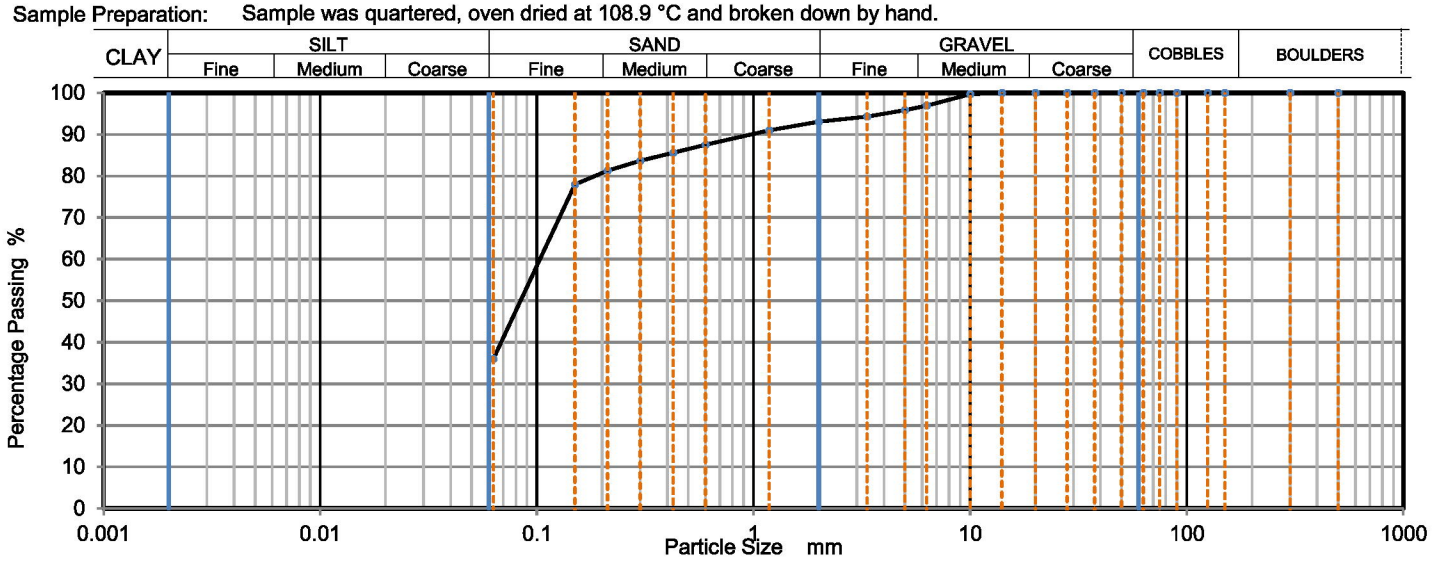
Environmental Science

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305191	Depth Top [m]:	1.50
Hole No.:	JTP2	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Yellowish brown slightly gravelly very clayey SAND		
Sample Preparation:	Sample was quartered, oven dried at 108.9 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	97		
5	96		
3.35	94		
2	93		
1.18	91		
0.6	88		
0.425	86		
0.3	84		
0.212	81		
0.15	78		
0.063	37		

Sample Proportions	% dry mass
Very coarse	0
Gravel	7
Sand	56
Fines <0.063mm	37

Grading Analysis		
D100	mm	14
D60	mm	0.103
D30	mm	
D10	mm	
Uniformity Coefficient		> 1.6
Curvature Coefficient		

Uniformity Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 100.21

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

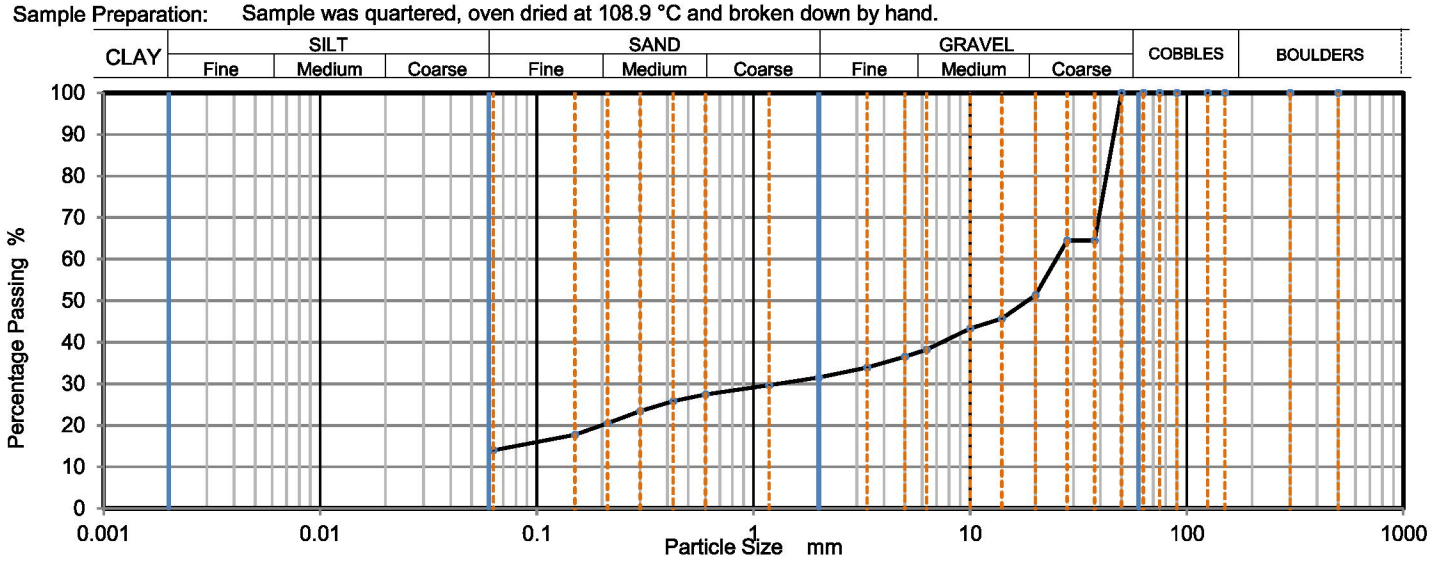
4041

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305192	Depth Top [m]:	1.50
Hole No.:	JTP3	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Yellowish brown clayey sandy GRAVEL		
Sample Preparation:	Sample was quartered, oven dried at 108.9 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	65		
28	65		
20	51		
14	46		
10	43		
6.3	38		
5	37		
3.35	34		
2	32		
1.18	30		
0.6	27		
0.425	26		
0.3	23		
0.212	21		
0.15	18		
0.063	14		

Sample Proportions	% dry mass
Very coarse	0
Gravel	68
Sand	17
Fines <0.063mm	14

Grading Analysis		
D100	mm	50
D60	mm	24.9
D30	mm	1.27
D10	mm	
Uniformity Coefficient		> 400
Curvature Coefficient		

Uniformity Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 100.21

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

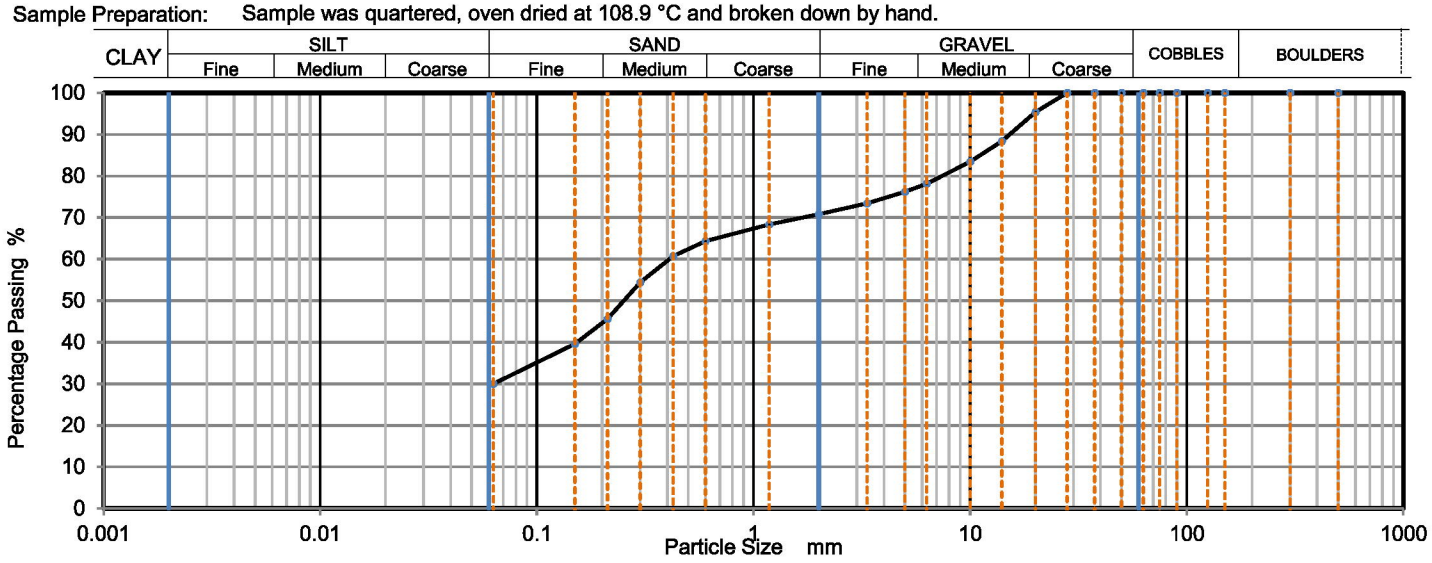
Environmental Science

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305193	Depth Top [m]:	0.50
Hole No.:	JTP4	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown very gravelly very clayey SAND		
Sample Preparation:	Sample was quartered, oven dried at 108.9 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	95		
14	88		
10	83		
6.3	78		
5	76		
3.35	73		
2	71		
1.18	68		
0.6	64		
0.425	61		
0.3	54		
0.212	46		
0.15	40		
0.063	30		

Sample Proportions	% dry mass
Very coarse	0
Gravel	29
Sand	41
Fines <0.063mm	30

Grading Analysis		
D100	mm	28
D60	mm	0.408
D30	mm	
D10	mm	
Uniformity Coefficient		> 6.5
Curvature Coefficient		

Uniformity Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 100.21

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

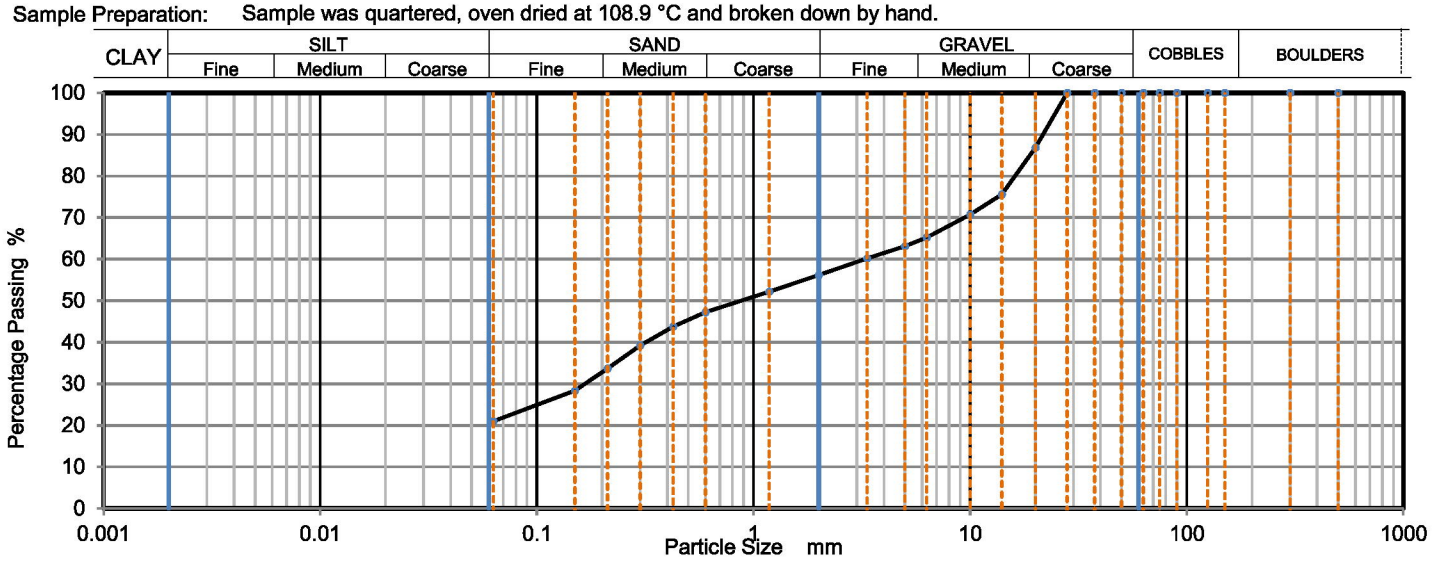
4041

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305194	Depth Top [m]:	0.75
Hole No.:	JTP6	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Yellowish brown clayey very sandy GRAVEL		
Sample Preparation:	Sample was quartered, oven dried at 108.9 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	87		
14	76		
10	71		
6.3	65		
5	63		
3.35	60		
2	56		
1.18	52		
0.6	47		
0.425	44		
0.3	39		
0.212	34		
0.15	28		
0.063	22		

Sample Proportions	% dry mass
Very coarse	0
Gravel	44
Sand	35
Fines <0.063mm	22

Grading Analysis		
D100	mm	28
D60	mm	3.27
D30	mm	0.167
D10	mm	
Uniformity Coefficient		> 52
Curvature Coefficient		

Uniformity Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 100.21

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

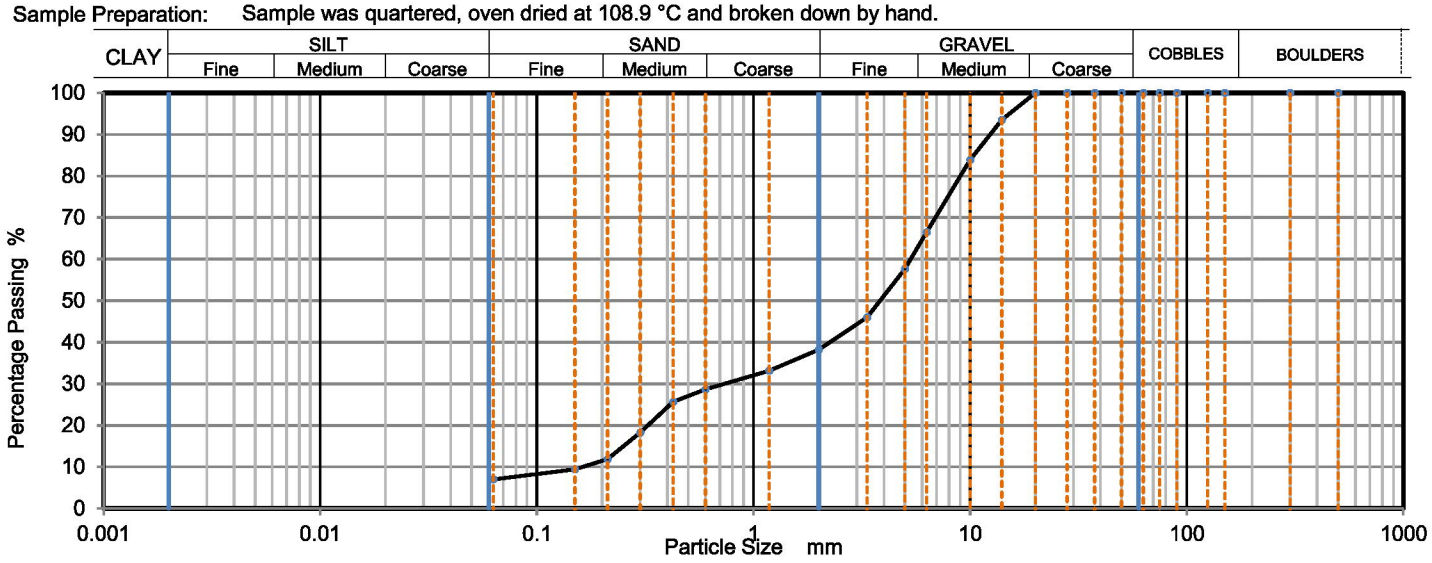
Environmental Science

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305198	Depth Top [m]:	1.80
Hole No.:	JTP10	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Yellowish brown clayey sandy GRAVEL		
Sample Preparation:	Sample was quartered, oven dried at 108.9 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	94		
10	84		
6.3	67		
5	58		
3.35	46		
2	38		
1.18	33		
0.6	29		
0.425	26		
0.3	18		
0.212	12		
0.15	9		
0.063	8		

Sample Proportions	% dry mass
Very coarse	0
Gravel	62
Sand	31
Fines <0.063mm	8

Grading Analysis		
D100	mm	20
D60	mm	5.32
D30	mm	0.73
D10	mm	0.162
Uniformity Coefficient		33
Curvature Coefficient		0.62

Uniformity Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 100.21

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

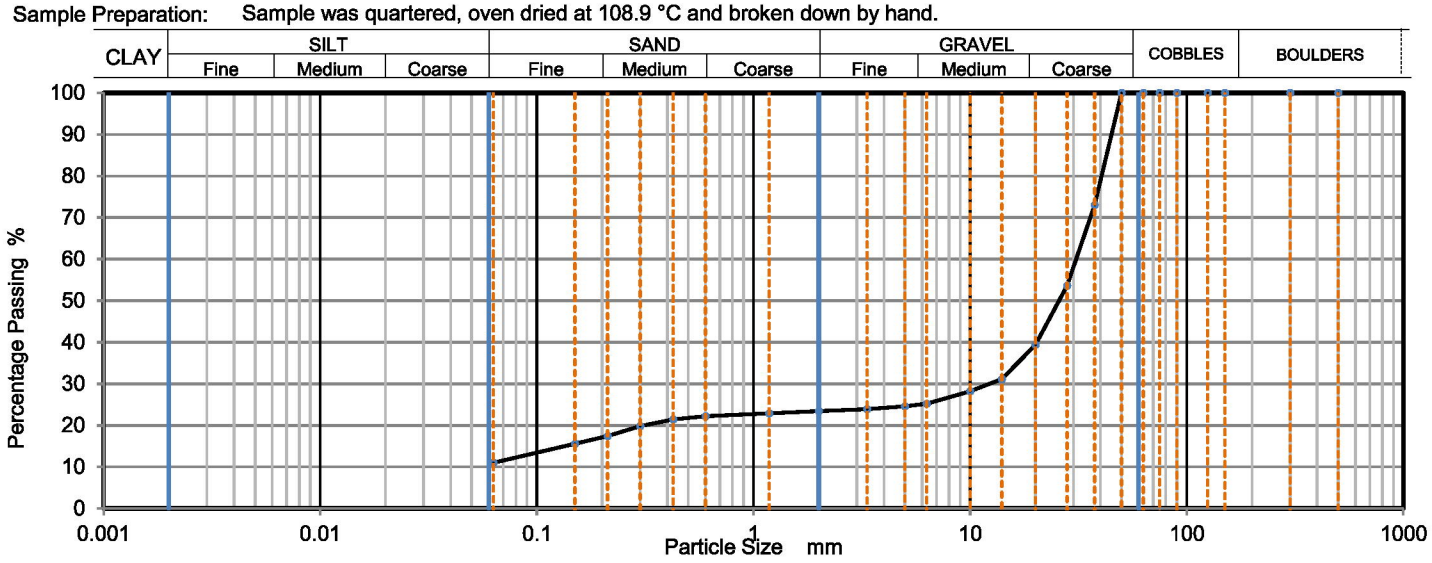
4041

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305200	Depth Top [m]:	0.50
Hole No.:	JTP11	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown clayey sandy GRAVEL		
Sample Preparation:	Sample was quartered, oven dried at 108.9 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	73		
28	54		
20	39		
14	31		
10	28		
6.3	25		
5	25		
3.35	24		
2	23		
1.18	23		
0.6	22		
0.425	21		
0.3	20		
0.212	17		
0.15	16		
0.063	12		

Sample Proportions	% dry mass
Very coarse	0
Gravel	77
Sand	12
Fines <0.063mm	12

Grading Analysis		
D100	mm	50
D60	mm	30.8
D30	mm	12.3
D10	mm	
Uniformity Coefficient		> 490
Curvature Coefficient		

Uniformity Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 100.21

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

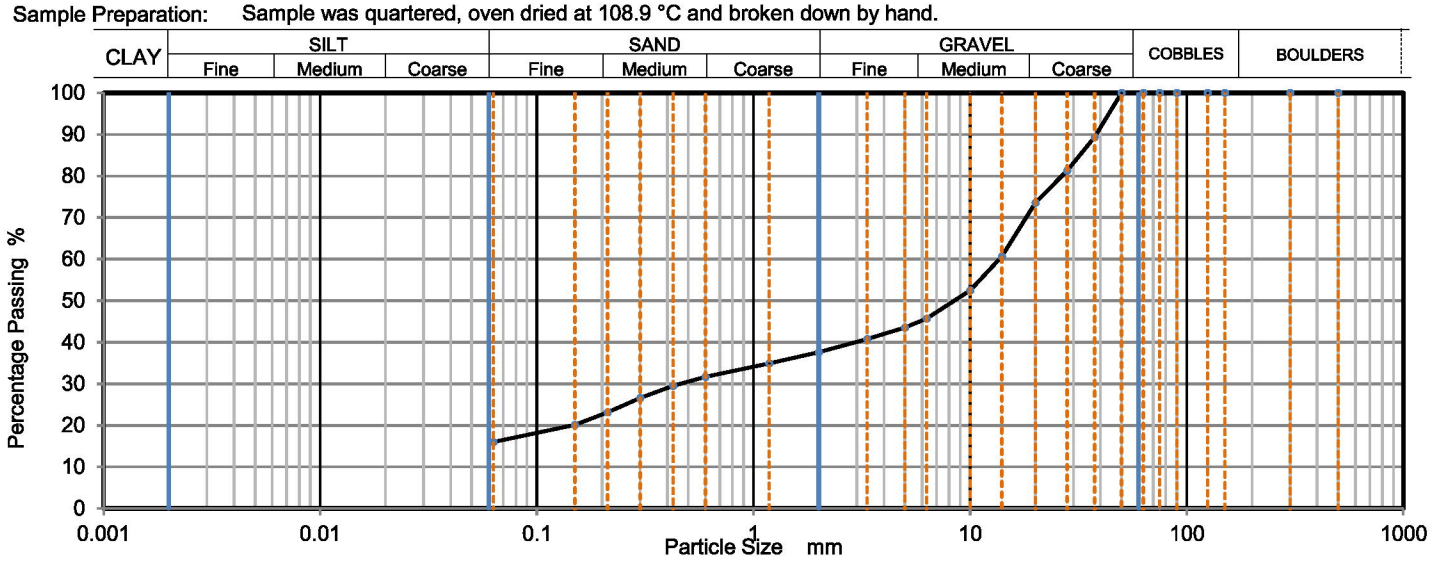
4041

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305201	Depth Top [m]:	1.40
Hole No.:	JTP12	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Light brown clayey sandy GRAVEL		
Sample Preparation:	Sample was quartered, oven dried at 108.9 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	89		
28	81		
20	74		
14	61		
10	53		
6.3	46		
5	44		
3.35	41		
2	38		
1.18	35		
0.6	32		
0.425	30		
0.3	27		
0.212	23		
0.15	20		
0.063	16		

Sample Proportions	% dry mass
Very coarse	0
Gravel	62
Sand	21
Fines <0.063mm	16

Grading Analysis		
D100	mm	50
D60	mm	13.7
D30	mm	0.458
D10	mm	
Uniformity Coefficient		> 220
Curvature Coefficient		

Uniformity Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 100.21

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

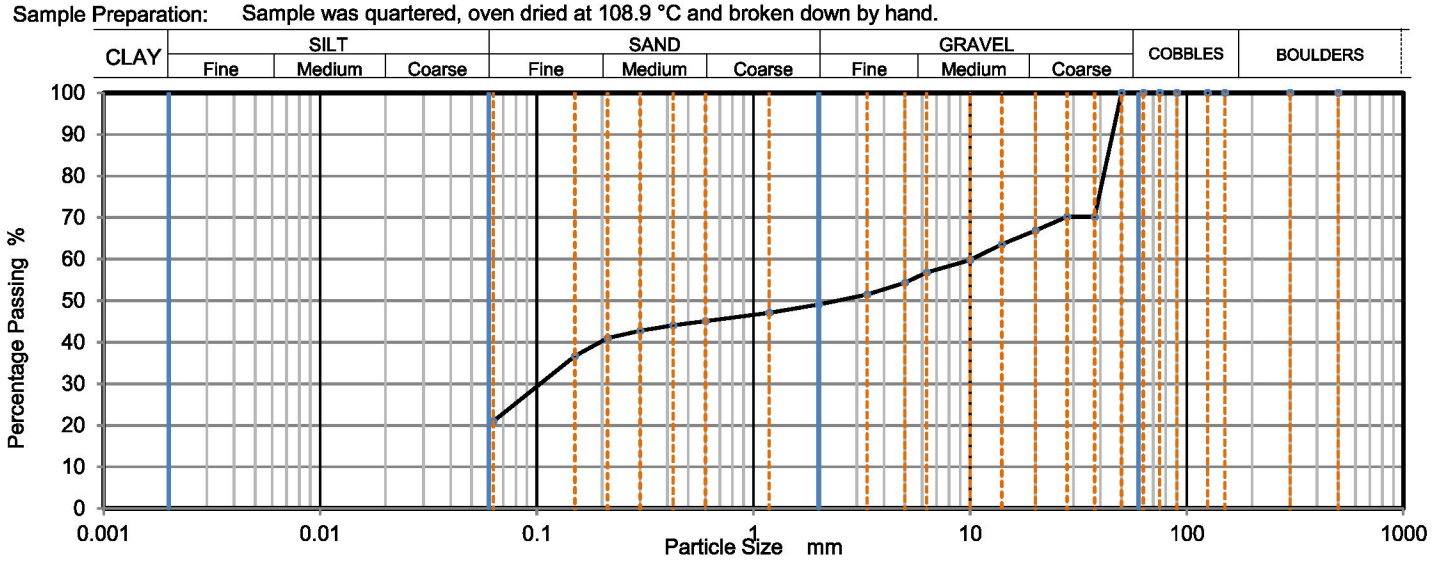
Environmental Science

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305202	Depth Top [m]:	0.75
Hole No.:	JTP13	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Yellowish brown clayey very sandy GRAVEL		
Sample Preparation:	Sample was quartered, oven dried at 108.9 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	70		
28	70		
20	67		
14	64		
10	60		
6.3	57		
5	54		
3.35	52		
2	49		
1.18	47		
0.6	45		
0.425	44		
0.3	43		
0.212	41		
0.15	37		
0.063	21		

Sample Proportions	% dry mass
Very coarse	0
Gravel	51
Sand	28
Fines <0.063mm	21

Grading Analysis		
D100	mm	50
D60	mm	10.2
D30	mm	0.102
D10	mm	
Uniformity Coefficient		> 160
Curvature Coefficient		

Uniformity Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 100.21

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

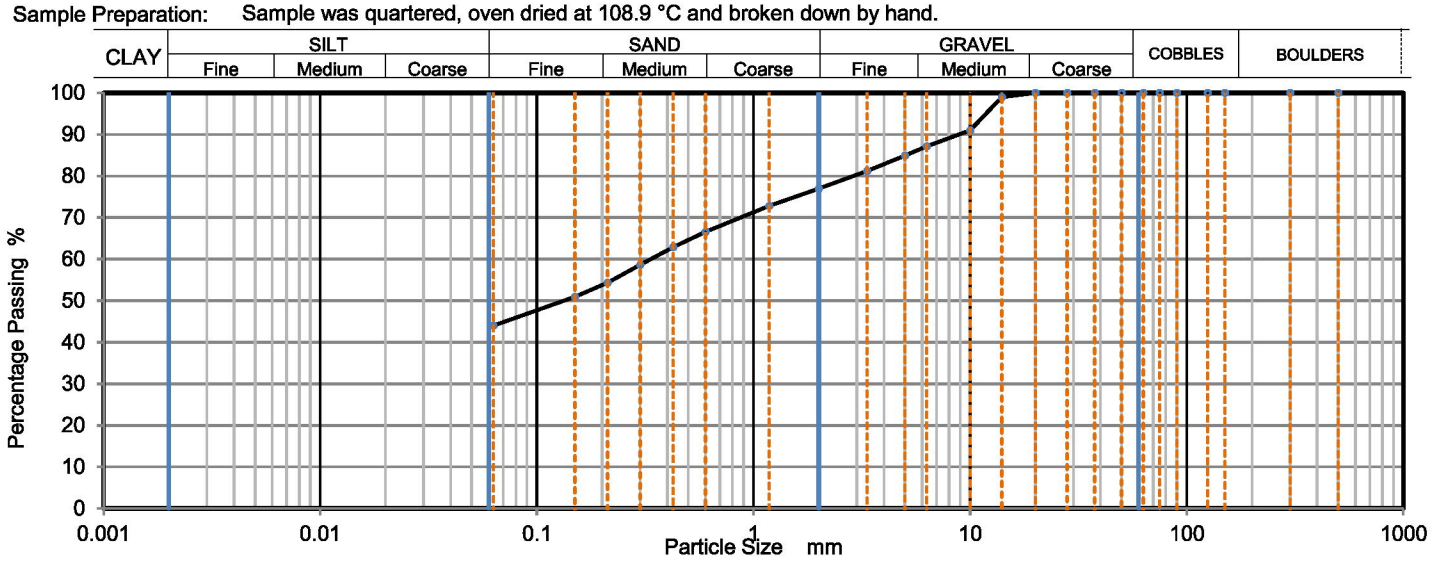
4041

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305205	Depth Top [m]:	1.60
Hole No.:	JTP15	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Light brown gravelly very sandy CLAY		
Sample Preparation:	Sample was quartered, oven dried at 108.9 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	99		
10	91		
6.3	87		
5	85		
3.35	81		
2	77		
1.18	73		
0.6	67		
0.425	63		
0.3	59		
0.212	54		
0.15	51		
0.063	44		

Sample Proportions	% dry mass
Very coarse	0
Gravel	23
Sand	33
Fines <0.063mm	44

Grading Analysis		
D100	mm	20
D60	mm	0.336
D30	mm	
D10	mm	
Uniformity Coefficient		> 5.3
Curvature Coefficient		

Uniformity Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 100.21

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

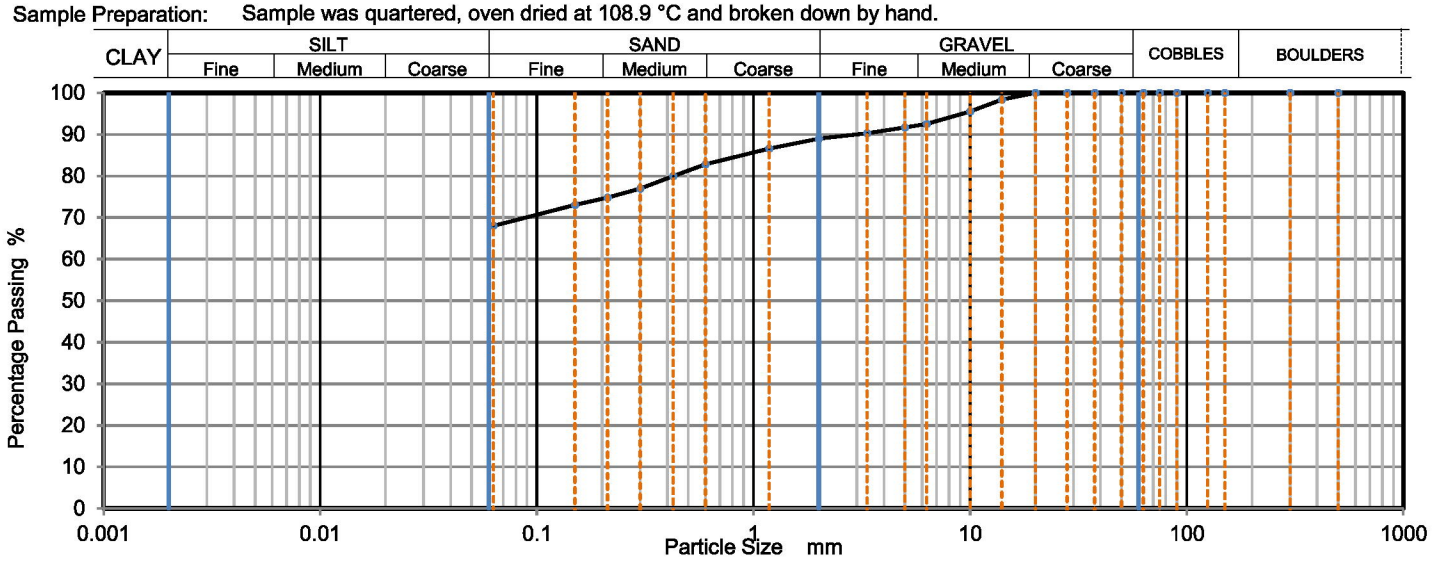
4041

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305206	Depth Top [m]:	1.75
Hole No.:	JTP16	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Light brown gravelly sandy CLAY		
Sample Preparation:	Sample was quartered, oven dried at 108.9 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	98		
10	96		
6.3	93		
5	92		
3.35	90		
2	89		
1.18	87		
0.6	83		
0.425	80		
0.3	77		
0.212	75		
0.15	73		
0.063	69		

Sample Proportions	% dry mass
Very coarse	0
Gravel	11
Sand	20
Fines <0.063mm	69

Grading Analysis		
D100	mm	20
D60	mm	
D30	mm	
D10	mm	
Uniformity Coefficient		N/A
Curvature Coefficient		

Uniformity Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 100.21

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

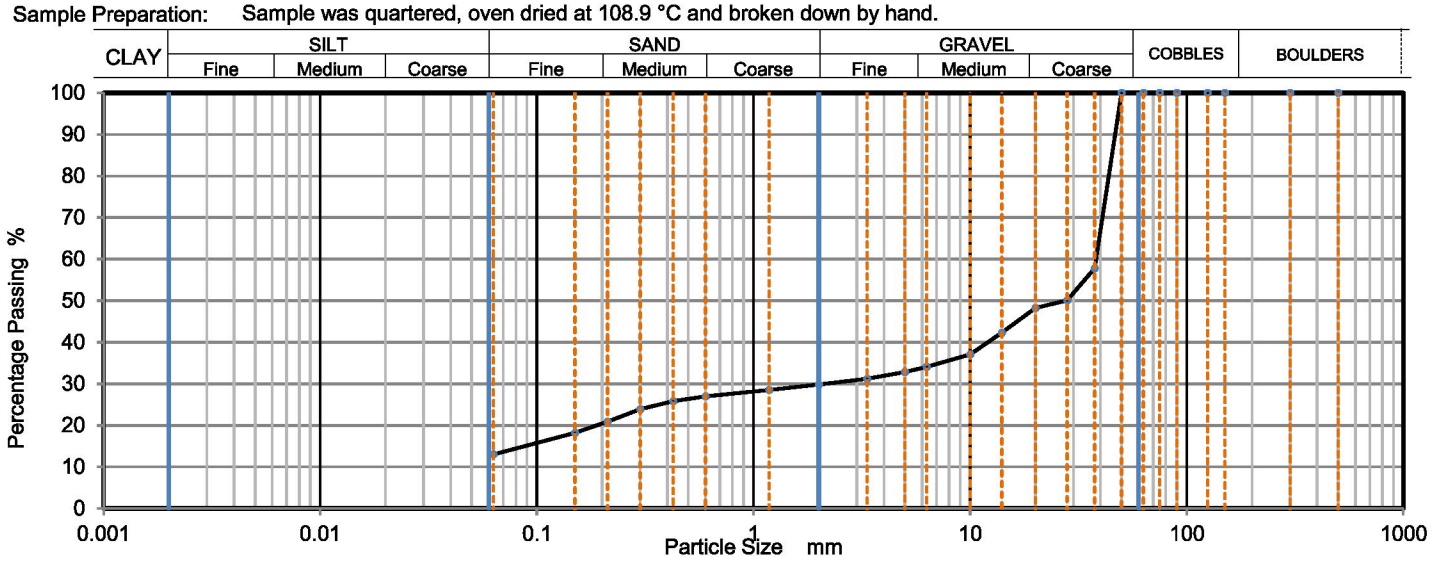
Environmental Science

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305210	Depth Top [m]:	0.75
Hole No.:	JSTP3	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Yellowish brown clayey sandy GRAVEL		
Sample Preparation:	Sample was quartered, oven dried at 108.9 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	58		
28	50		
20	48		
14	42		
10	37		
6.3	34		
5	33		
3.35	31		
2	30		
1.18	29		
0.6	27		
0.425	26		
0.3	24		
0.212	21		
0.15	18		
0.063	14		

Sample Proportions	% dry mass
Very coarse	0
Gravel	70
Sand	16
Fines <0.063mm	14

Grading Analysis		
D100	mm	50
D60	mm	38.1
D30	mm	2.17
D10	mm	
Uniformity Coefficient		> 600
Curvature Coefficient		

Uniformity Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 100.21

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

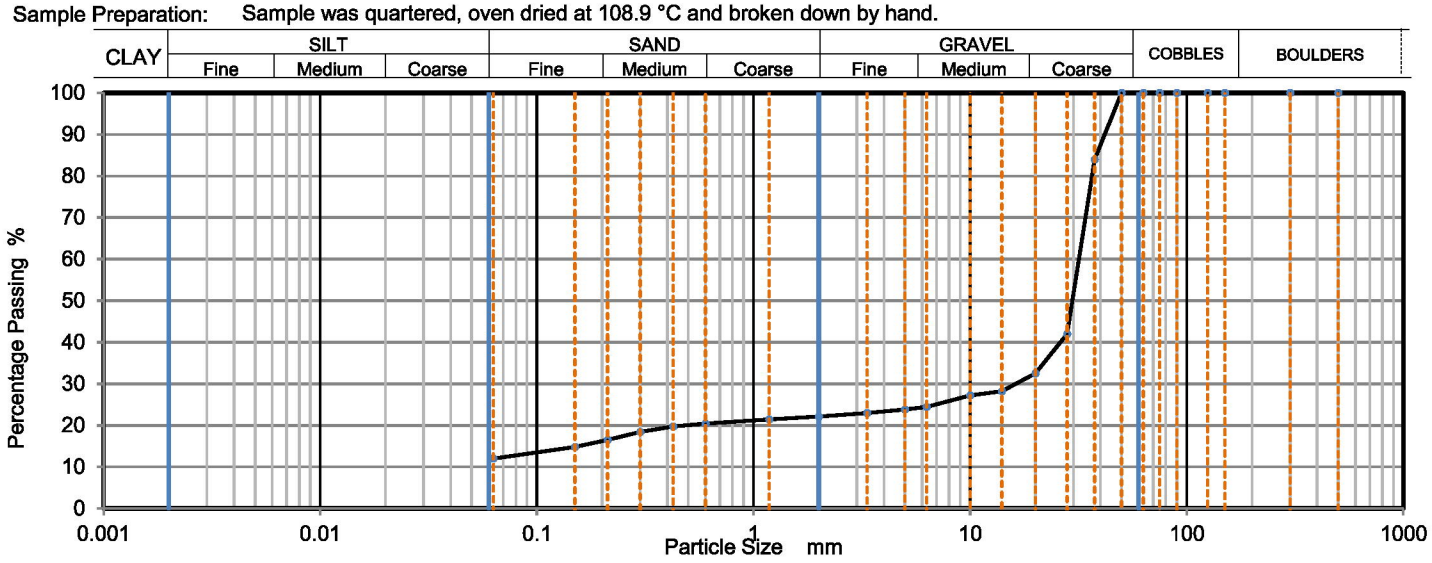
Environmental Science

Client:	Jomas Associates Ltd	Client Reference:	JJ2513
Client Address:	Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Job Number:	22-63391
		Date Sampled:	25/05/2022
		Date Received:	30/05/2022
Contact:	Shaw Carter	Date Tested:	14/06/2022
Site Address:	Phase 10, Heyford Park, Camp Road, OX25 5HD	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2305211	Depth Top [m]:	0.75
Hole No.:	JSTP4	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown clayey sandy GRAVEL		
Sample Preparation:	Sample was quartered, oven dried at 108.9 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	84		
28	42		
20	33		
14	28		
10	27		
6.3	24		
5	24		
3.35	23		
2	22		
1.18	21		
0.6	20		
0.425	20		
0.3	18		
0.212	17		
0.15	15		
0.063	12		

Sample Proportions	% dry mass
Very coarse	0
Gravel	78
Sand	10
Fines <0.063mm	12

Grading Analysis		
D100	mm	50
D60	mm	31.7
D30	mm	16.2
D10	mm	
Uniformity Coefficient		> 500
Curvature Coefficient		

Uniformity Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed: [redacted]

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 20/06/2022

GF 100.21

APPENDIX 5 – SOIL GAS MONITORING RECORDS

GAS AND GROUNDWATER MONITORING BOREHOLE RECORD SHEET

Site: Phase 10, Heyford Park	**Operative(s):** JAR	**Date:** 08/06/2022	**Time:** 9:30	**Round:** 1	**Page:** 1

MONITORING EQUIPMENT

Instrument Type	**Instrument Make**	**Serial No.**	**Date Last Calibrated**
Analox	GA5000	G505801	01/10/2021
PID	Phocheck tiger	T-106448	01/03/2021
Dip Meter	GeoTech		

MONITORING CONDITIONS

Weather Conditions: Sunny W/ Cloud	**Ground Conditions:** Dry	**Temperature:** 17°C
Barometric Pressure (mbar): 989	**Barometric Pressure Trend (24hr):** Falling	**Ambient Concentration:** **0.2**% CH_4, 0.2% CO_2, 23.4% O_2

MONITORING RESULTS

Monitoring Point Location	Flow		Atmospheric Pressure (mbar)	CH_4 %	CH_4 % LEL	CO_2 %	O_2 %	VOC (ppm)		H_2S (ppm)	CO (ppm)	Depth to product (mbgl)	Depth to water (mbgl)	Depth to base of well (mbgl)
	Peak	Steady						Peak	Steady					
JWS1	0.1	0.1	991	0.2	-	1.3	19.7	2.5	2.0	0	0	-	-	1.36
JWS2	0.1	0.0	991	0.2	-	0.4	21.6	7.1	4.4	0	0	-	1.12	1.81
JWS3	0.1	0.1	990	0.2	-	2.5	20.2	0.7	0.5	0	0	-	1.36	3.28
JWS5	0.1	0.1	991	0.2	-	1.2	20.0	3.2	1.1	0	0	-	-	1.57
JBH1	0.0	0.0	990	0.2	-	1.1	18.7	8.0	6.1	0	0	-	3.61	7.27
JBH2	0.1	0.0	991	0.2	-	0.0	16.0	10.9	8	0	21	-	1.63	7.97
JBH3	0.1	0.1	990	0.2	-	4.2	15.6	8.8	3.3	0	0	-	1.83	7.27

GAS AND GROUNDWATER MONITORING BOREHOLE RECORD SHEET

Site: Phase 10, Heyford Park	**Operative(s):** JAR	**Date:** 08/06/2022	**Time:** 9:30	**Round:** 1	**Page:** 2

MONITORING EQUIPMENT

Instrument Type	**Instrument Make**	**Serial No.**	**Date Last Calibrated**
Analox	GA5000	G505801	01/10/2021
PID	Phocheck tiger	T-106448	01/03/2021
Dip Meter	GeoTech		

MONITORING CONDITIONS

Weather Conditions: Sunny W/ Cloud	**Ground Conditions:** Dry	**Temperature:** 17°C
Barometric Pressure (mbar): 989	**Barometric Pressure Trend (24hr):** Falling	**Ambient Concentration:** **0.2**% CH_4, 0.2% CO_2, 23.4% O_2

MONITORING RESULTS

Monitoring Point Location	Flow		Atmospheric Pressure (mbar)	CH_4 %	CH_4 % LEL	CO_2 %	O_2 %	VOC (ppm)		H_2S (ppm)	CO (ppm)	Depth to product (mbgl)	Depth to water (mbgl)	Depth to base of well (mbgl)
	Peak	Steady						Peak	Steady					
JBH4	0.0	0.0	991	1.2	-	1.6	15.5	451.4	335	0	0	-	1.52	7.63
JBH5	0.1	0.1	991	0.2	-	0.1	20.0	3.3	1.9	0	0	-	3.34	8.06
JBH6	0.1	0.1	991	0.7	-	1.0	19.2	264	250	0	0	-	3.7	8.1
JBH7	- 0.0	- 0.1	989	0.2	-	6.8	15.5	0.7	0.7	0	0	-	2.71	8.04
JBH8	0.2	0.2	991	0.2	-	1.2	19.0	24.1	21.1	0	1	-	2.92	7.3
JBH9	0.1	0.1	991	0.2	-	1.9	17.9	2.7	2.6	0	0	-	4.45	7.43
BH05	- 0.0	- 0.0	990	0.2	-	3.1	19.3	1.5	1.5	0	0	-	2.03	7.26

GAS AND GROUNDWATER MONITORING BOREHOLE RECORD SHEET

Site: Phase 10, Heyford Park	**Operative(s):** JAR	**Date:** 08/06/2022	**Time:** 9:30	**Round:** 1	**Page:** 3

MONITORING EQUIPMENT

Instrument Type	**Instrument Make**	**Serial No.**	**Date Last Calibrated**
Analox	GA5000	G505801	01/10/2021
PID	Phocheck tiger	T-106448	01/03/2021
Dip Meter	GeoTech		

MONITORING CONDITIONS

Weather Conditions: Sunny W/ Cloud	**Ground Conditions:** Dry	**Temperature:** 17°C
Barometric Pressure (mbar): 989	**Barometric Pressure Trend (24hr):** Falling	**Ambient Concentration:** **0.2**% CH_4, 0.2% CO_2, 23.4% O_2

MONITORING RESULTS

Monitoring Point Location	Flow		Atmospheric Pressure (mbar)	CH_4 %	CH_4 % LEL	CO_2 %	O_2 %	VOC (ppm)		H_2S (ppm)	CO (ppm)	Depth to product (mbgl)	Depth to water (mbgl)	Depth to base of well (mbgl)
	Peak	Steady						Peak	Steady					
BH10	0.1	0.1	991	0.2	-	2.3	19.9	73.2	12.2	0	0	-	2.78	7.81
BH11	0.1	0.1	991	0.2	-	0.6	19.5	27.9	5.9	0	0	-	2.79	7.63
BH12	0.2	0.2	991	0.2	-	2.2	18.6	32.5	23.5	0	0	-	4.4	7.55
BH13	0.3	0.3	991	0.2	-	0.5	20.7	112.2	34.2	0	0	-	3.58	7.69
BH14	0.2	0.2	991	0.1	-	0.9	18.9	3.6	1.1	0	0	-	3.18	7.80

GAS AND GROUNDWATER MONITORING BOREHOLE RECORD SHEET

Site: Phase 10, Heyford Park	**Operative(s):** RAY	**Date:** 14/06/2022	**Time:** 09:30	**Round:** 2	**Page:** 1

MONITORING EQUIPMENT

Instrument Type	**Instrument Make**	**Serial No.**	**Date Last Calibrated**
Analox	GA5000	G505801	01/10/2021
PID	Phocheck tiger	T-106448	01/03/2021
Dip Meter	GeoTech		

MONITORING CONDITIONS

Weather Conditions: Sunny	**Ground Conditions:** Dry	**Temperature:** 16°C
Barometric Pressure (mbar): 1007	**Barometric Pressure Trend (24hr):** Falling	**Ambient Concentration:** 0.3 %CH_4, 0.2 %CO_2, 23.8%O_2

MONITORING RESULTS

Monitoring Point Location	Flow		Atmospheric Pressure (mbar)	CH_4 %	CH_4 % LEL	CO_2 %	O_2 %	VOC (ppm)		H_2S (ppm)	CO (ppm)	Depth to product (mbgl)	Depth to water (mbgl)	Depth to base of well (mbgl)
	Peak	Steady						Peak	Steady					
JWS1	+0.3	+0.3	1007	0.2	-	0.8	20.5	7.7	5.5	0	0	-	DRY	1.27
JWS2	+0.2	+0.2	1007	0.2	-	0.3	20.8	10.4	7.2	0	0	-	1.22	1.70
JWS3	+0.3	+0.3	1008	0.2	-	3.2	20.8	2.1	1.6	0	0	-	1.38	3.30
JSW5	+0.2	+0.2	1005	0.2	-	1.0	19.2	74.5	27.2	1	0	-	DRY	1.48
JBH1	+0.2	+0.2	1007	0.2	-	0.5	20.3	9.3	7.6	0	0	-	3.66	7.14
JBH2	+0.2	+0.2	1007	0.2	-	0.0	15.7	18.0	12.7	1	19	-	1.70	7.90
JBH3	+0.2	+0.2	1007	0.3	-	4.1	15.9	15.2	10.4	0	0	-	1.89	7.19

GAS AND GROUNDWATER MONITORING BOREHOLE RECORD SHEET

Site: Phase 10, Heyford Park	**Operative(s):** RAY	**Date:** 14/06/2022	**Time:** 09:30	**Round:** 2	**Page:** 2

MONITORING EQUIPMENT

Instrument Type	**Instrument Make**	**Serial No.**	**Date Last Calibrated**
Analox	GA5000	G505801	01/10/2021
PID	Phocheck tiger	T-106448	01/03/2021
Dip Meter	GeoTech		

MONITORING CONDITIONS

Weather Conditions: Sunny	**Ground Conditions:** Dry	**Temperature:** 16°C
Barometric Pressure (mbar): 1007	**Barometric Pressure Trend (24hr):** Falling	**Ambient Concentration:** 0.3 %CH_4, 0.2 %CO_2, 23.8%O_2

MONITORING RESULTS

Monitoring Point Location	Flow		Atmospheric Pressure (mbar)	CH_4 %	CH_4 % LEL	CO_2 %	O_2 %	VOC (ppm)		H_2S (ppm)	CO (ppm)	Depth to product (mbgl)	Depth to water (mbgl)	Depth to base of well (mbgl)
	Peak	Steady						Peak	Steady					
JBH4	-0.2	-0.2	1008	1.3	-	5.4	12.7	343.7	326.0	1	0	-	1.58	7.51
JBH5	+0.3	+0.3	1007	0.2	-	0.1	20.0	6.2	4.8	0	0	-	3.59	7.99
JBH6	+0.2	+0.2	1006	0.8	-	1.1	19.4	188.7	168.4	0	0	-	3.91	7.92
JBH7	+0.3	+0.3	1007	0.3	-	7.1	15.5	4.1	2.9	0	0	-	2.78	7.93
JBH8	+0.3	+0.3	1008	0.3	-	1.4	20.5	23.4	20.6	0	1	-	3.19	7.44
JBH9	+0.3	+0.3	1006	0.2	-	1.6	18.4	32.4	21.7	1	0	-	4.86	7.39
BH05	+0.3	+0.3	1008	0.2	-	4.6	18.6	3.6	3.4	0	0	-	2.11	7.23

GAS AND GROUNDWATER MONITORING BOREHOLE RECORD SHEET

Site: Phase 10, Heyford Park	**Operative(s):** RAY	**Date:** 14/06/2022	**Time:** 09:30	**Round:** 2	**Page:** 3

MONITORING EQUIPMENT

Instrument Type	**Instrument Make**	**Serial No.**	**Date Last Calibrated**
Analox	GA5000	G505801	01/10/2021
PID	Phocheck tiger	T-106448	01/03/2021
Dip Meter	GeoTech		

MONITORING CONDITIONS

Weather Conditions: Sunny	**Ground Conditions:** Dry	**Temperature:** 16°C
Barometric Pressure (mbar): 1007	**Barometric Pressure Trend (24hr):** Falling	**Ambient Concentration:** 0.3 %CH_4, 0.2 %CO_2, 23.8%O_2

MONITORING RESULTS

Monitoring Point Location	Flow		Atmospheric Pressure (mbar)	CH_4 %	CH_4 % LEL	CO_2 %	O_2 %	VOC (ppm)		H_2S (ppm)	CO (ppm)	Depth to product (mbgl)	Depth to water (mbgl)	Depth to base of well (mbgl)
	Peak	Steady						Peak	Steady					
BH10	+0.2	+0.2	1008	0.3	-	1.90	21.4	67.3	24.8	1	0	-	2.97	7.80
BH11	+0.3	+0.3	1008	0.2	-	0.7	21.4	23.1	10.7	0	0	-	3.04	7.90
BH12	+0.2	+0.2	1006	0.2	-	0.2	21.4	7.0	3.6	0	0	-	4.12	7.92
BH13	+0.2	+0.2	1006	0.2	-	0.9	20.3	6.7	3.8	0	0	-	3.84	7.93
BH14	+0.2	+0.2	1007	0.2	-	0.8	18.7	7.4	4.9	0	0	-	3.46	7.84

GAS AND GROUNDWATER MONITORING BOREHOLE RECORD SHEET

Site: Phase 10, Heyford Park	**Operative(s):** RAY	**Date:** 26/07/2022	**Time:** 09:30	**Round:** 3	**Page:** 1

MONITORING EQUIPMENT

Instrument Type	**Instrument Make**	**Serial No.**	**Date Last Calibrated**
Analox	GA5000	G505801	01/10/2021
PID	Phocheck tiger	T-106448	01/03/2021
Dip Meter	GeoTech		

MONITORING CONDITIONS

Weather Conditions: Overcast	**Ground Conditions:** Damp	**Temperature:** 15°C
Barometric Pressure (mbar): 1006	**Barometric Pressure Trend (24hr):** Rising	**Ambient Concentration:** 0.0 %CH_4, 0.1 %CO_2, 21.2%O_2

MONITORING RESULTS

Monitoring Point Location	Flow		Atmospheric Pressure (mbar)	CH_4 %	CH_4 % LEL	CO_2 %	O_2 %	VOC (ppm)		H_2S (ppm)	CO (ppm)	Depth to product (mbgl)	Depth to water (mbgl)	Depth to base of well (mbgl)
	Peak	Steady						Peak	Steady					
JWS1	+0.3	+0.3	1007	0.0	-	1.0	20.5	11.1	6.5	0	1	-	DRY	1.37
JWS2	+0.2	+0.2	1007	0.0	-	2.0	18.7	25.3	9.5	0	1	-	1.49	1.80
JWS3	+0.2	+0.2	1006	0.0	-	2.9	18.1	1.9	1.8	0	0	-	1.74	3.34
JSW5	+0.2	+0.2	1007	0.0	-	0.9	20.7	8.2	5.1	0	1	-	DRY	1.54
JBH1	+0.2	+0.2	1006	0.0	-	0.5	20.8	10.2	5.5	0	2	-	3.72	7.18
JBH2	+0.2	+0.2	1007	0.0	-	0.0	17.4	64.9	15.7	0	7	-	1.96	7.96
JBH3	+0.3	+0.3	1006	0.0	-	5.7	14.0	166.4	24.5	0	0	-	2.18	7.22

GAS AND GROUNDWATER MONITORING BOREHOLE RECORD SHEET

Site: Phase 10, Heyford Park	**Operative(s):** RAY	**Date:** 26/07/2022	**Time:** 09:30	**Round:** 3	**Page:** 2

MONITORING EQUIPMENT

Instrument Type	**Instrument Make**	**Serial No.**	**Date Last Calibrated**
Analox	GA5000	G505801	01/10/2021
PID	Phocheck tiger	T-106448	01/03/2021
Dip Meter	GeoTech		

MONITORING CONDITIONS

Weather Conditions: Overcast	**Ground Conditions:** Damp	**Temperature:** 15°C
Barometric Pressure (mbar): 1006	**Barometric Pressure Trend (24hr):** Rising	**Ambient Concentration:** 0.0 %CH_4, 0.1 %CO_2, 21.2%O_2

MONITORING RESULTS

Monitoring Point Location	Flow		Atmospheric Pressure (mbar)	CH_4 %	CH_4 % LEL	CO_2 %	O_2 %	VOC (ppm)		H_2S (ppm)	CO (ppm)	Depth to product (mbgl)	Depth to water (mbgl)	Depth to base of well (mbgl)
	Peak	Steady						Peak	Steady					
JBH4	+0.3	+0.3	1006	1.5	-	9.3	7.8	564.9	517.2	0	0	-	1.83	7.01
JBH5	+0.2	+0.2	1007	0.0	-	0.3	20.4	19.5	12.7	0	1	-	4.03	8.09
JBH6	+0.2	+0.2	1006	0.1	-	1.2	20.1	84.3	64.2	0	1	-	5.02	7.99
JBH7	+0.2	+0.2	1006	0.0	-	7.9	15.1	2.4	1.8	0	0	-	3.07	8.02
JBH8	+0.2	+0.2	1007	0.0	-	1.4	20.1	22.1	7.6	0	1	-	3.50	7.34
JBH9	+0.2	+0.2	1007	0.0	-	1.6	20.3	12.6	7.1	0	1	-	5.77	7.38
BH05	+0.3	+0.3	1006	0.0	-	7.3	14.7	1.8	1.6	0	0	-	2.47	7.20

GAS AND GROUNDWATER MONITORING BOREHOLE RECORD SHEET

Site: Phase 10, Heyford Park	**Operative(s):** RAY	**Date:** 26/07/2022	**Time:** 09:30	**Round:** 3	**Page:** 3

MONITORING EQUIPMENT

Instrument Type	**Instrument Make**	**Serial No.**	**Date Last Calibrated**
Analox	GA5000	G505801	01/10/2021
PID	Phocheck tiger	T-106448	01/03/2021
Dip Meter	GeoTech		

MONITORING CONDITIONS

Weather Conditions: Overcast	**Ground Conditions:** Damp	**Temperature:** 15°C
Barometric Pressure (mbar): 1006	**Barometric Pressure Trend (24hr):** Rising	**Ambient Concentration:** 0.0 %CH_4, 0.1 %CO_2, 21.2%O_2

MONITORING RESULTS

Monitoring Point Location	Flow		Atmospheric Pressure (mbar)	CH_4 %	CH_4 % LEL	CO_2 %	O_2 %	VOC (ppm)		H_2S (ppm)	CO (ppm)	Depth to product (mbgl)	Depth to water (mbgl)	Depth to base of well (mbgl)
	Peak	Steady						Peak	Steady					
BH10	+0.1	+0.1	1007	0.0	-	3.8	14.7	30.7	14.4	0	1	-	3.26	7.86
BH11	+0.2	+0.2	1006	0.0	-	0.8	20.2	23.6	6.3	0	0	-	3.94	7.70
BH12	+0.3	+0.3	1007	0.0	-	1.8	20.1	22.4	7.2	0	0	-	4.87	7.96
BH13	+0.3	+0.3	1007	0.0	-	0.8	20.5	17.1	6.2	0	1	-	5.02	7.99
BH14	+0.2	+0.2	1007	0.0	-	1.4	18.7	28.3	16.2	0	1	-	3.80	7.91

APPENDIX 6 – GROUNDWATER SAMPLING RECORDS

LOW FLOW GROUNDWATER MONITORING BOREHOLE RECORD SHEET					
Site: Heyford Park	**Operative(s):** RAY	**Date:** 15/06/2022	**Time:** 09:30	**Round:** 1	**Page:** 1 of 3

MONITORING EQUIPMENT			
Instrument Type	**Instrument Make**	**Serial No.**	**Date Last Calibrated**
SmarTROLL MP	In-Situ	674243	18/02/2022
Dip Meter	In-Situ		

MONITORING CONDITIONS		
Weather Conditions: Sunny	**Ground Conditions:** Dry	**Temperature:** 19°C

Hole ID	Temperature (°C)	Specific Conductivity (µS/cm)	pH	(ORP) Oxidation-Reduction Potential (mV)	(RDO) Rugged Dissolved Oxygen Concentration (mg/L)	Depth to product – NB do not sample if present	Water Level (Start of testing)	Water Level (End of testing)	Depth to base of well (m)	Sample depth (tube intake depth) – (m)	Comments
BH05	13.42	566.83	7.66	158.6	1.82	-	2.16	2.36	7.23	2.56	Stable at 28 mins Turbid
BH10	14.22	651.31	7.68	125.3	1.55	-	3.05	3.20	7.80	3.55	Stable at 30 mins Slightly turbid
BH11	15.92	604.83	7.38	138.6	4.71	-	3.15	3.18	7.90	3.65	Stable at 10 mins Slightly turbid
BH12	14.25	773.34	7.36	121.5	2.38	-	4.09	4.22	7.92	4.59	Stable at 22 mins Slightly turbid
BH13	13.65	575.00	7.41	138.4	6.20	-	3.98	4.02	7.93	4.48	Stable at 12 mins Slightly turbid
BH14	13.41	622.99	7.32	132.2	1.66	-	3.48	3.67	7.84	3.98	Stable at 26 mins Slightly turbid
JBH1	13.50	689.32	7.68	160.0	1.69	-	3.65	3.82	7.14	4.15	Stable at 24 mins Turbid
JBH2	12.81	665.50	7.91	155.1	1.69	-	1.82	1.96	7.90	2.32	Stable at 24 mins Turbid

LOW FLOW GROUNDWATER MONITORING BOREHOLE RECORD SHEET					
Site: Heyford Park	**Operative(s):** RAY	**Date:** 15/06/2022	**Time:** 09:30	**Round:** 1	**Page:** 2 of 3

MONITORING EQUIPMENT			
Instrument Type	**Instrument Make**	**Serial No.**	**Date Last Calibrated**
SmarTROLL MP	In-Situ	674243	18/02/2022
Dip Meter	In-Situ		

MONITORING CONDITIONS		
Weather Conditions: Sunny	**Ground Conditions:** Dry	**Temperature:** 19°C

Hole ID	Temperature (°C)	Specific Conductivity (µS/cm)	pH	(ORP) Oxidation-Reduction Potential (mV)	(RDO) Rugged Dissolved Oxygen Concentration (mg/L)	Depth to product – NB do not sample if present	Water Level (Start of testing)	Water Level (End of testing)	Depth to base of well (m)	Sample depth (tube intake depth) – (m)	Comments
JBH3	13.40	1564.6	7.54	157.8	1.95	-	2.08	2.10	7.19	2.58	Stable at 20 mins Turbid
JBH4	14.29	850.79	7.18	109.1	2.16	-	1.78	1.83	7.51	2.28	Stable at 38 mins Slightly turbid
JBH5	13.13	627.34	7.32	133.9	2.66	-	3.76	7.84	7.99	4.26	Stable at 22 mins Turbid
JBH6	13.95	649.42	7.33	117.5	1.62	-	3.99	4.05	7.92	4.49	Stable at 26 mins Slightly turbid and slight hydrocarbon smell.
JBH7	13.23	657.28	7.65	141.0	2.05	-	2.83	2.96	7.93	3.33	Stable at 28 mins Slightly turbid
JBH8	14.30	596.74	7.40	133.6	2.01	-	3.24	2.40	7.44	3.74	Stable at 8 mins Slightly turbid
JBH9	17.72	753.95	7.78	164.0	3.73	-	5.06	5.36	7.39	5.86	RDO not stable at 26 mins Turbid

LOW FLOW GROUNDWATER MONITORING BOREHOLE RECORD SHEET

Site: Heyford Park	**Operative(s):** RAY	**Date:** 15/06/2022	**Time:** 09:30	**Round:** 1	**Page:** 3 of 3

MONITORING EQUIPMENT

Instrument Type	**Instrument Make**	**Serial No.**	**Date Last Calibrated**
SmarTROLL MP	In-Situ	674243	18/02/2022
Dip Meter	In-Situ		

MONITORING CONDITIONS

Weather Conditions: Sunny	**Ground Conditions:** Dry	**Temperature:** 19°C

Hole ID	Temperature (°C)	Specific Conductivity (µS/cm)	pH	(ORP) Oxidation-Reduction Potential (mV)	(RDO) Rugged Dissolved Oxygen Concentration (mg/L)	Depth to product – NB do not sample if present	Water Level (Start of testing)	Water Level (End of testing)	Depth to base of well (m)	Sample depth (tube intake depth) – (m)	Comments
JWS1	-	-	-	-	-	-	-	-	--	-	DRY
JWS2	15.99	1096.7	7.62	160.6	4.51	-	1.26	1.36	1.70	1.50	Specific conductivity and pH not stable at 30 mins Turbid
JSW3	13.86	987.48	7.57	148.8	1.55	-	1.43	1.46	3.32	1.93	Stable at 26 mins Slightly turbid
JSW5	-	-	-	-	-	-	-	-	-	-	DRY

LOW FLOW GROUNDWATER MONITORING BOREHOLE RECORD SHEET					
Site: Heyford Park	**Operative(s):** RAY	**Date:** 27/07/2022	**Time:** 09:00	**Round:** 2	**Page:** 1 of 3

MONITORING EQUIPMENT			
Instrument Type	**Instrument Make**	**Serial No.**	**Date Last Calibrated**
SmarTROLL MP	In-Situ	674243	18/02/2022
Dip Meter	In-Situ		

MONITORING CONDITIONS		
Weather Conditions: Sunny with clouds	**Ground Conditions:** Dry	**Temperature:** 19°C

Hole ID	Temperature (°C)	Specific Conductivity (µS/cm)	pH	(ORP) Oxidation-Reduction Potential (mV)	(RDO) Rugged Dissolved Oxygen Concentration (mg/L)	Depth to product – NB do not sample if present	Water Level (Start of testing)	Water Level (End of testing)	Depth to base of well (m)	Sample depth (tube intake depth) – (m)	Comments
BH05	14.04	564.48	7.92	3.4	1.06	-	2.52	2.56	7.20	3.02	Slightly turbid Stable at 30mins.
BH10	7.88	624.91	7.88	-13	1.43	-	3.28	3.34	7.86	3.68	Clear Stable at 36 mins
BH11	17.60	632.82	7.90	15.7	6.11	-	4.02	4.08	7.70	4.52	Clear Stable at 12 mins
BH12	12.5	785.07	7.83	-4.7	5.26	-	4.86	4.91	7.96	5.36	Slightly turbid Stable at 24 mins
BH13	20.49	634.65	7.77	9.4	2.75	-	5.33	5.51	7.98	5.83	Clear Stable at 36 mins
BH14	16.18	624.66	7.77	6.8	1.26	-	3.92	4.05	7.91	4.42	Slightly turbid Stable at 33 mins
JBH1	14.94	691.55	7.68	2.3	1.13	-	3.73	3.74	7.18	4.23	Clear Stable at 36 mins
JBH2	15.05	562.91	7.74	8.3	2.56	-	1.97	2.24	7.96	2.47	Slightly turbid Stable at 27 mins

LOW FLOW GROUNDWATER MONITORING BOREHOLE RECORD SHEET					
Site: Heyford Park	**Operative(s):** RAY	**Date:** 27/07/2022	**Time:** 09:00	**Round:** 2	**Page:** 2 of 3

MONITORING EQUIPMENT			
Instrument Type	**Instrument Make**	**Serial No.**	**Date Last Calibrated**
SmarTROLL MP	In-Situ	674243	18/02/2022
Dip Meter	In-Situ		

MONITORING CONDITIONS		
Weather Conditions: Sunny with clouds	**Ground Conditions:** Dry	**Temperature:** 19°C

Hole ID	Temperature (°C)	Specific Conductivity (µS/cm)	pH	(ORP) Oxidation-Reduction Potential (mV)	(RDO) Rugged Dissolved Oxygen Concentration (mg/L)	Depth to product – NB do not sample if present	Water Level (Start of testing)	Water Level (End of testing)	Depth to base of well (m)	Sample depth (tube intake depth) – (m)	Comments
JBH3	14.04	1544.8	7.63	6.1	1.02	-	2.18	2.19	7.22	2.58	Slightly turbid Stable at 24 mins
JBH4	16.33	842.67	7.68	-25.6	0.76	-	1.87	1.87	2.37	7.01	Clear Stable at 27 mins
JBH5	16.20	658.49	7.80	4.9	1.11	-	4.03	4.04	8.09	4.53	Slightly turbid Stable at 27 mins
JBH6	21.70	622.61	7.87	-15.5	1.26	-	5.15	5.28	7.94	5.65	Clear Stable at 39 mins. Strong hydrocarbon smell.
JBH7	13.22	637.88	7.92	2.3	1.26	-	3.08	3.10	8.02	3.58	Clear Stable at 39 mins
JBH8	13.96	631.42	7.85	5.2	1.92	-	3.58	2.58	7.34	4.08	Clear Stable at 24 mins
JBH9	26.80	748.93	7.83	15.6	3.95	-	5.78	5.78	7.38	6.28	Clear Stable at 18 mins

LOW FLOW GROUNDWATER MONITORING BOREHOLE RECORD SHEET					
Site: Heyford Park	**Operative(s):** RAY	**Date:** 27/07/2022	**Time:** 09:00	**Round:** 2	**Page:** 3 of 3

MONITORING EQUIPMENT			
Instrument Type	**Instrument Make**	**Serial No.**	**Date Last Calibrated**
SmarTROLL MP	In-Situ	674243	18/02/2022
Dip Meter	In-Situ		

MONITORING CONDITIONS		
Weather Conditions: Sunny with clouds	**Ground Conditions:** Dry	**Temperature:** 19°C

Hole ID	Temperature (°C)	Specific Conductivity (µS/cm)	pH	(ORP) Oxidation-Reduction Potential (mV)	(RDO) Rugged Dissolved Oxygen Concentration (mg/L)	Depth to product – NB do not sample if present	Water Level (Start of testing)	Water Level (End of testing)	Depth to base of well (m)	Sample depth (tube intake depth) – (m)	Comments
JWS1	-	-	-	-	-	-	-	-	-	-	-
JWS2	-	-	-	-	-	-	-	-	-	-	-
JSW3	-	-	-	-	-	-	-	-	-	-	-
JSW5	-	-	-	-	-	-	-	-	-	-	-

Specific Conductivity (µS/cm)

This is a measure of the capability of a solution such as water in a stream to pass an electric current. This is an indicator of the concentration of dissolved electrolyte ions in the water. It doesn't identify the specific ions in the water. However, significant increases in conductivity may be an indicator that polluting discharges have entered the water.

Every creek will have a baseline conductivity depending on the local geology and soils. Higher conductivity will result from the presence of various ions including nitrate, phosphate, and sodium.

The basic unit of measurement for conductivity is micromhos per centimetre (µmhos/cm) or micro Siemens per centimetre (µS/cm). Either can be used, they are the same. It is a measure of the inverse of the amount of resistance an electric charge meets in traveling through the water. Distilled water has a conductivity ranging from 0.5 to 3 µS/cm, while most streams range between 50 to 1500 µS/cm. Freshwater streams ideally should have a conductivity between 150 to 500 µS/cm to support diverse aquatic life.

pH

A measure of a solution's acidity. In water, small numbers of water molecules (H_2O) will break apart or disassociate into hydrogen ions (H^+) and hydroxide ions (OH^-). Other compounds entering the water may react with these, leaving an imbalance in the numbers of hydrogen and hydroxide ions. When more hydrogen ions react, more hydroxide ions are left in solution and the water is basic; when more hydroxide ions react, more hydrogen ions are left and the water is acidic. pH is a measure of the number of hydrogen ions and thus a measure of acidity.

pH is measured on a logarithmic scale between 1 and 14 with 1 being extremely acid, 7 neutral, and 14 extremely basic. Because it is a logarithmic scale there is a tenfold increase in acidity for a change of one unit of pH, e.g. 5 is 100 times more acid than 7 on the pH scale. The largest variety of freshwater aquatic organisms prefer a pH range between 6.5 to 8.0.

(RDO) Rugged Dissolved Oxygen Concentration (mg/L)

Dissolved oxygen is oxygen gas molecules (O_2) present in the water. Plants and animals cannot directly use the oxygen that is part of the water molecule (H_2O), instead depending on dissolved oxygen for respiration. Oxygen enters streams from the surrounding air and as a product of photosynthesis from aquatic plants. Consistently high levels of dissolved oxygen are best for a healthy ecosystem.

Levels of dissolved oxygen vary depending on factors including water temperature, time of day, season, depth, altitude, and rate of flow. Water at higher temperatures and altitudes will have less dissolved oxygen. Dissolved oxygen reaches its peak during the day. At night, it decreases as photosynthesis has stopped while oxygen consuming processes such as respiration, oxidation, and respiration continue, until shortly before dawn.

Human factors that affect dissolved oxygen in streams include addition of oxygen consuming organic wastes such as sewage, addition of nutrients, changing the flow of water, raising the water temperature, and the addition of chemicals.

Dissolved oxygen is measured in mg/L.

0-2 mg/L: not enough oxygen to support life.
2-4 mg/L: only a few fish and aquatic insects can survive.
4-7 mg/L: good for many aquatic animals, low for cold water fish
7-11 mg/L: very good for most stream fish

(ORP) Oxidation- Reduction Potential (mV)

ORP is a measure of the cleanliness of the water & its ability to break down contaminants". It has a range of –2,000 to + 2,000 and units are in "mV" (millivolts).

APPENDIX 7 – SOIL INFILTRATION TEST RECORDS

BRE 365 INFILTRATION TESTS

JOMAS JOB NAME: Phase 10, Heyford Park, Camp Road, OX25 5HD **CALCULATING ENGINEER:** JRO **DATE:** 06 June 2022
APPROVED BY: SC **DATE:** 07 June 2022

JOMAS JOB NO.: P4280J2513
TEST LOCATION: JSTP1
DATE OF TEST: 25 May 2022

Pit Details

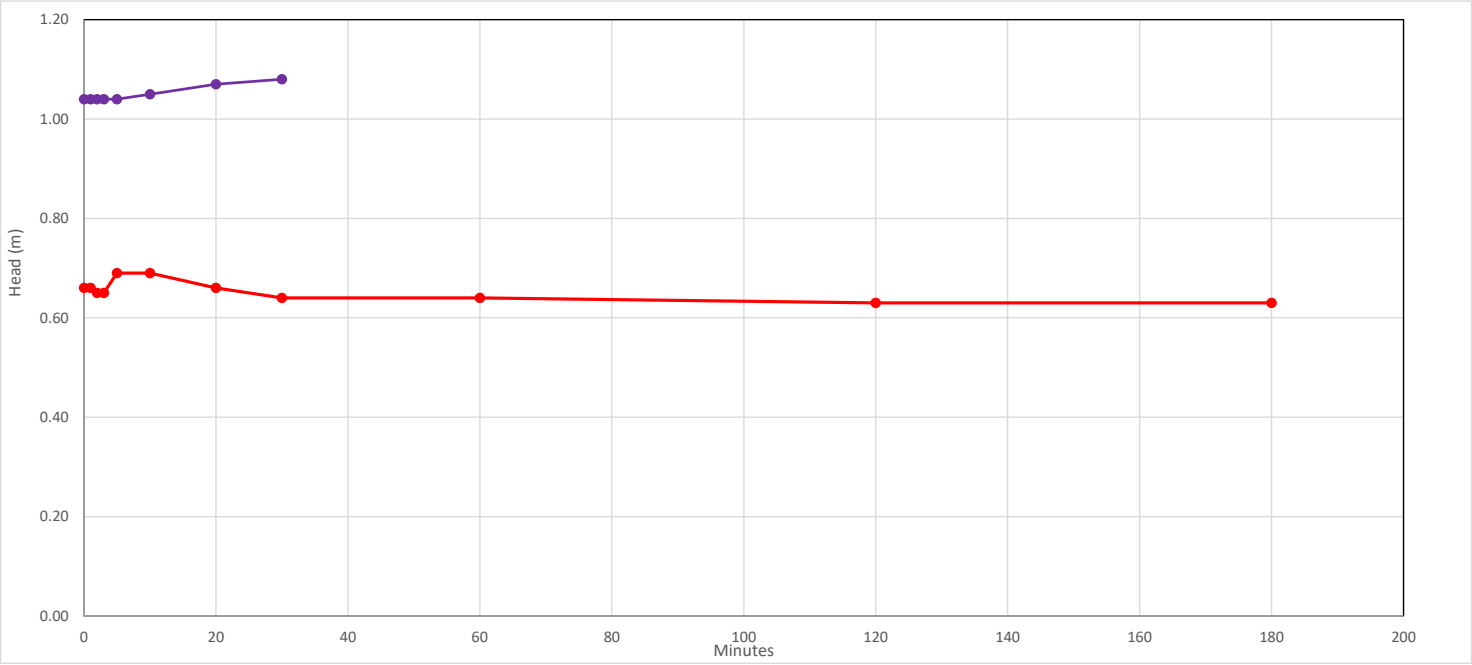
Length	2.4 m	
Breadth	0.6 m	
Depth (Test 1)	2.7 m	
Depth (Test 2)	3.3 m	
Groundwater? (Test 1)	Y	2.36 m bgl
Groundwater? (Test 2)	Y	3.04 m bgl
Filled With Gravel?	N	

	JSTP1 - Test 1	JSTP1 - Test 2	JSTP1 - Test 3
Dg 75% (m)	0.50	0.78	
Tp 75%			
Dg 25%	0.17	0.26	
Tp 25%			
Vp75% - Vp25% (m^3)	0.48	0.75	
ap50% (m^2)	3.42	4.56	
Tp75-Tp25 (min)			
Soil infiltration rate (m/sec)	Insuff. Drain	Insuff. Drain	
Permeability Description			
Drainage Condtions			

Notes:

Dw = depth to water
Dg = head of water in the pit

Test 1 undertaken on the 25/05/2022. Pit collapse in Test 1 at 5 minutes. Dw recorded as 1.73 mbgl after 24 hours. Test 2 undertaken on the 26/05/2022. Dw recorded as 1.87 mbgl after 19 hours.



JSTP1 - Test 1			JSTP1 - Test 2			JSTP1 - Test 3		
Min	Dw	Dg	Min	Dw	Dg	Min	Dw	Dg
0	1.70	0.66	0	2.26	1.04			
1	1.70	0.66	1	2.26	1.04			
2	1.71	0.65	2	2.26	1.04			
3	1.71	0.65	3	2.26	1.04			
5	1.67	0.69	5	2.26	1.04			
10	1.67	0.69	10	2.25	1.05			
20	1.70	0.66	20	2.23	1.07			
30	1.72	0.64	30	2.22	1.08			
60	1.72	0.64						
120	1.73	0.63						
180	1.73	0.63						

	Min	Dg		Min	Dg		Min	Dg
	Insuff. Drain			Insuff. Drain				
75%		0.495	75%		0.78	75%		
	Insuff. Drain			Insuff. Drain				
25%		0.165	25%		0.26	25%		

BRE 365 INFILTRATION TESTS

JOMAS JOB NAME: Phase 10, Heyford Park, Camp Road, OX25

CALCULATING ENGINEER: JRO **DATE:** 06 June 2022

APPROVED BY: SC **DATE:** 07 June 2022

JOMAS JOB NO.: P4280J2513

TEST LOCATION: JSTP2

DATE OF TEST: 25 May 2022

Pit Details

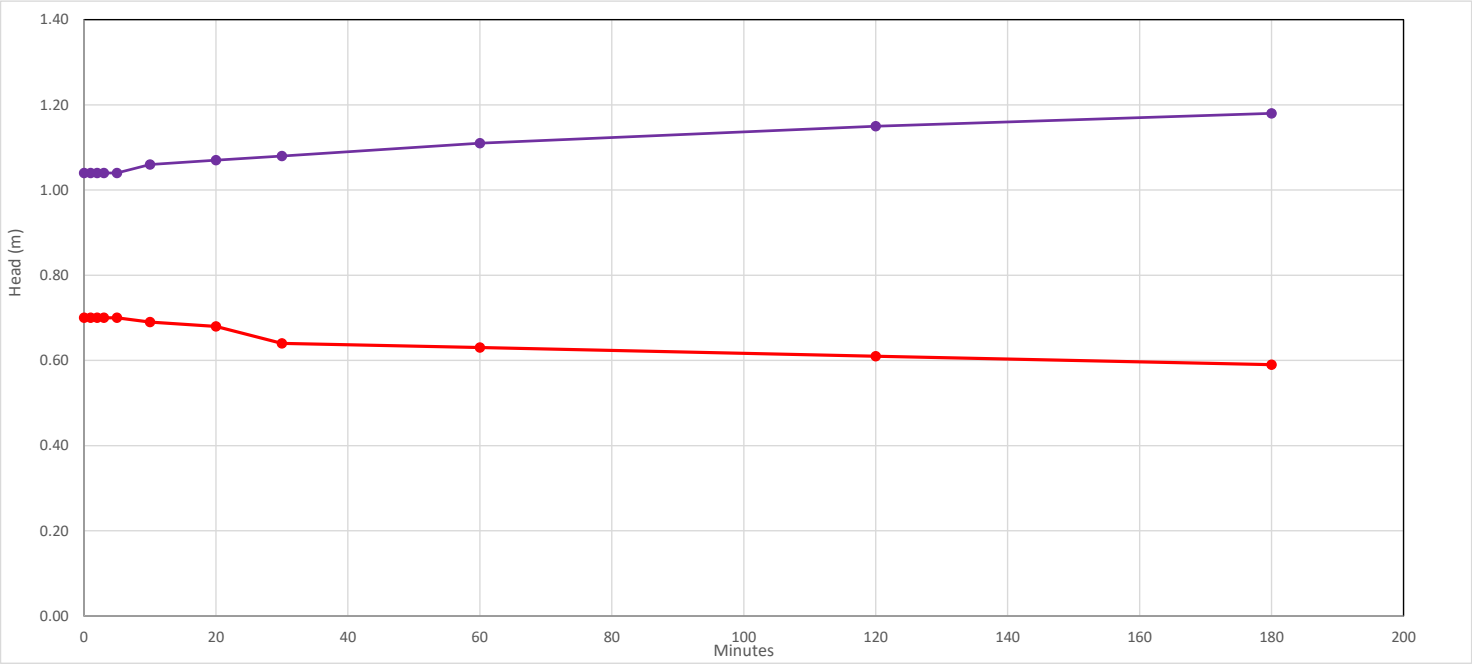
Length	2.3 m	
Breadth	0.6 m	
Depth (Test 1)	2.3 m	
Depth (Test 2)	2.9 m	
Groundwater? (Test 1)	Y	2 m bgl
Groundwater? (Test 2)	Y	2.65 m bgl
Filled With Gravel?	N	

	JSTP2 - Test 1	JSTP2 - Test 2	JSTP2 - Test 3
Dg 75% (m)	0.53	0.78	
Tp 75%			
Dg 25%	0.18	0.26	
Tp 25%			
Vp75% - Vp25% (m^3)	0.48	0.72	
ap50% (m^2)	3.41	4.40	
Tp75-Tp25 (min)			
Soil infiltration rate (m/sec)	Insuff. Drain	Insuff. Drain	
Permeability Description			
Drainage Condtions			

Notes:

Dw = depth to water
Dg = head of water in the pit

Test 1 undertaken on the 25/05/2022. Dw recorded as 1.45 mbgl after 20 hours. Test 2 undertaken on the 26/05/2022.



JSTP2 - Test 1			JSTP2 - Test 2			JSTP2 - Test 3		
Min	Dw	Dg	Min	Dw	Dg	Min	Dw	Dg
0	1.30	0.70	0	1.86	1.04			
1	1.30	0.70	1	1.86	1.04			
2	1.30	0.70	2	1.86	1.04			
3	1.30	0.70	3	1.86	1.04			
5	1.30	0.70	5	1.86	1.04			
10	1.31	0.69	10	1.84	1.06			
20	1.32	0.68	20	1.83	1.07			
30	1.36	0.64	30	1.82	1.08			
60	1.37	0.63	60	1.79	1.11			
120	1.39	0.61	120	1.75	1.15			
180	1.41	0.59	180	1.72	1.18			

	Min	Dg		Min	Dg		Min	Dg
	Insuff. Drain			Insuff. Drain				
75%		0.525	75%		0.78	75%		
	Insuff. Drain			Insuff. Drain				
25%		0.175	25%		0.26	25%		

BRE 365 INFILTRATION TESTS

JOMAS JOB NAME: Phase 10, Heyford Park, Camp Road, OX25

CALCULATING ENGINEER: JRO **DATE:** 06 June 2022

APPROVED BY: SC **DATE:** 07 June 2022

JOMAS JOB NO.: P4280J2513
TEST LOCATION: JSTP3
DATE OF TEST: 24 May 2022

Pit Details

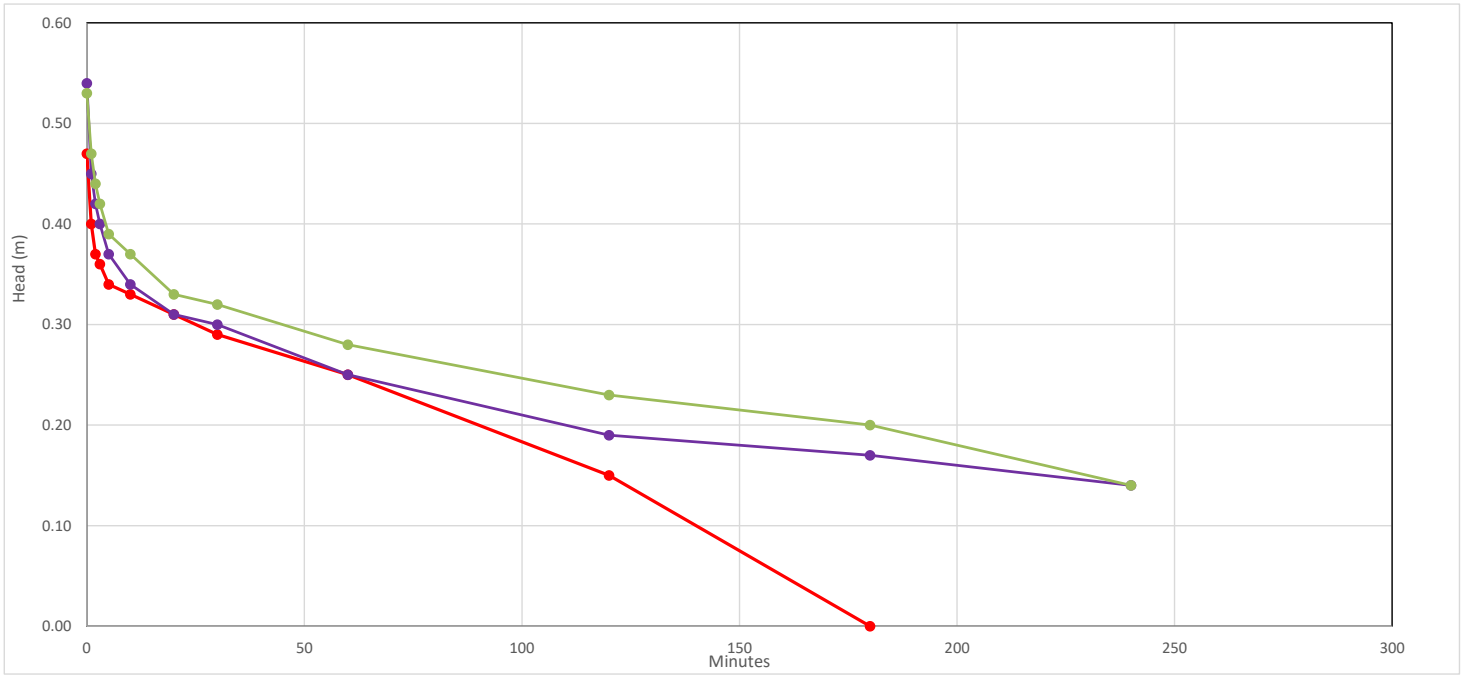
Length	2.0 m
Breadth	0.6 m
Depth	1.3 m
Groundwater?	N
Filled With Gravel?	N

	JSTP3 - Test 1	JSTP3 - Test 2	JSTP3 - Test 3
Dg 75% (m)	0.35	0.41	0.40
Tp 75%	3.75	2.75	4.50
Dg 25%	0.12	0.14	0.13
Tp 25%	133.00	255.00	253.93
Vp75% - Vp25% (m^3)	0.28	0.32	0.13
ap50% (m^2)	2.42	2.60	2.58
Tp75-Tp25 (min)	129.25	252.25	249.43
Soil infiltration rate (m/sec)	1.50E-05	8.22E-06	3.30E-06
Permeability Description	Medium	Low	Low
Drainage Condtions	Good	Poor	Poor

Notes:

Dw = depth to water
Dg = head of water in the pit

Test 1 undertaken on the 24/05/2022.
Test 2 undertaken on the 25/05/2022.
Test 3 undertaken on the 26/05/2022.



JSTP3 - Test 1			JSTP3 - Test 2			JSTP3 - Test 3		
Min	Dw	Dg	Min	Dw	Dg	Min	Dw	Dg
0	0.83	0.47	0	0.76	0.54	0	0.77	0.53
1	0.90	0.40	1	0.85	0.45	1	0.83	0.47
2	0.93	0.37	2	0.88	0.42	2	0.86	0.44
3	0.94	0.36	3	0.90	0.40	3	0.88	0.42
5	0.96	0.34	5	0.93	0.37	5	0.91	0.39
10	0.97	0.33	10	0.96	0.34	10	0.93	0.37
20	0.99	0.31	20	0.99	0.31	20	0.97	0.33
30	1.01	0.29	30	1.00	0.30	30	0.98	0.32
60	1.05	0.25	60	1.05	0.25	60	1.02	0.28
120	1.15	0.15	120	1.11	0.19	120	1.07	0.23
180	1.30	0.00	180	1.13	0.17	180	1.10	0.20
			240	1.16	0.14	240	1.16	0.14
	Min	Dg		Min	Dg		Min	Dg
	Interpolated			Interpolated			Interpolated	
75%	3.75	0.353	75%	2.75	0.405	75%	4.5	0.398
	Interpolated			Extrapolated			Extrapolated	
25%	133	0.118	25%	255	0.135	25%	253.9	0.133

BRE 365 INFILTRATION TESTS

JOMAS JOB NAME: Phase 10, Heyford Park, Camp Road, OX25
CALCULATING ENGINEER: JRO **DATE:** 06 June 2022
APPROVED BY: SC **DATE:** 07 June 2022

JOMAS JOB NO.: P4280J2513
TEST LOCATION: JSTP4
DATE OF TEST: 24 May 2022

Pit Details

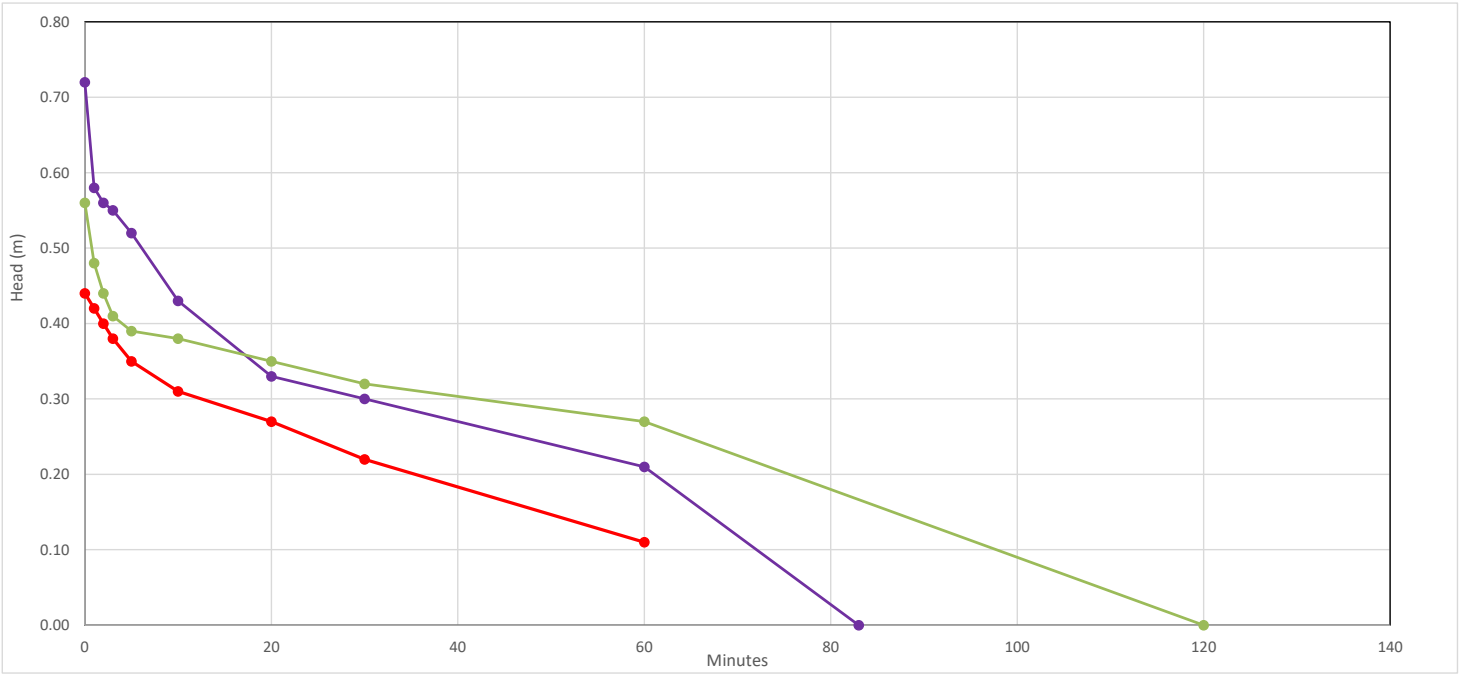
Length	2.3 m
Breadth	0.8 m
Depth	1.3 m
Groundwater?	N
Filled With Gravel?	N

	JSTP4 - Test 1	JSTP4 - Test 2	JSTP4 - Test 3
Dg 75% (m)	0.33	0.54	0.42
Tp 75%	7.50	3.67	2.67
Dg 25%	0.11	0.18	0.14
Tp 25%	60.00	63.29	88.89
Vp75% - Vp25% (m^3)	0.40	0.66	0.21
ap50% (m^2)	3.20	4.07	3.58
Tp75-Tp25 (min)	52.50	59.62	86.22
Soil infiltration rate (m/sec)	4.01E-05	4.55E-05	1.11E-05
Permeability Description	Medium	Medium	Medium
Drainage Condtions	Good	Good	Good

Notes:

Dw = depth to water
Dg = head of water in the pit

Test 1 undertaken on the 24/05/2022.
Test 2 undertaken on the 25/05/2022.
Test 3 undertaken on the 26/05/2022



JSTP4 - Test 1			JSTP4 - Test 2			JSTP4 - Test 3		
Min	Dw	Dg	Min	Dw	Dg	Min	Dw	Dg
0	0.86	0.44	0	0.58	0.72	0	0.74	0.56
1	0.88	0.42	1	0.72	0.58	1	0.82	0.48
2	0.90	0.40	2	0.74	0.56	2	0.86	0.44
3	0.92	0.38	3	0.75	0.55	3	0.89	0.41
5	0.95	0.35	5	0.78	0.52	5	0.91	0.39
10	0.99	0.31	10	0.87	0.43	10	0.92	0.38
20	1.03	0.27	20	0.97	0.33	20	0.95	0.35
30	1.08	0.22	30	1.00	0.30	30	0.98	0.32
60	1.19	0.11	60	1.09	0.21	60	1.03	0.27
			83	1.30	0.00	120	1.30	0.00

	Min	Dg		Min	Dg		Min	Dg
	Interpolated			Interpolated			Interpolated	
75%	7.5	0.33	75%	3.667	0.54	75%	2.667	0.42
	Interpolated			Interpolated			Interpolated	
25%	60	0.11	25%	63	0.18	25%	88.89	0.14

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