Factual Ground Investigation Report

Upper Acre, Horton Heath

Stantec

Stantec UK Limited

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1 Introduction

1.1 Terms of reference

In August 2025, Stantec were commissioned by Eastleigh Borough Council, (the client) to undertake a ground investigation to provide ground and groundwater conditions for a proposed residential development at Horton Heath. The site is located to the west of Burnett's Lane, Eastleigh and is associated with the wider development known as One Horton Heath.

The site currently comprises of an open field with Burnett's Lane running parallel along the site's eastern boundary. The southern eastern corner of the field is being used by Hope and Clay, the earthworks contractor for the wider One Horton Heath development, to temporarily store muckaway soil from the adjacent site. These areas are shown on the exploratory hole location plan (ref: 332612639 Figure 2 P01) presented in .

Stantec understands that the proposed development is to comprise of a residential development. A proposed development layout (One Horton Heath Indicative Masterplan, ref: 29607A/1000A Revision C January 2023), is presented in Appendix A.

Due to the similarities of the work undertaken within the Northern Areas of One Horton Heath, the investigation works have been undertaken in accordance with the existing Stantec ground investigation specification (reference: 332612639-SP-3501-V00) with the exception of cable percussion boreholes being replaced with windowless sample boreholes. The works were appointed as a variation to Stantec's existing appointment.

1.2 Objectives

The works have been commissioned to confirm the ground and groundwater conditions to assist with the design of the development.

The objectives of the ground investigation are:

- to confirm the presence and depth of any shallow groundwater in the near surface soils;
- to confirm the infiltration potential of the near surface soils and groundwater levels; and
- to confirm the ground conditions to determine geotechnical parameters.

1.3 Scope

The scope of the ground investigation comprises:

- the excavation of approximately 11 no. trial pits to a range of depths from 1.50m to 3.40m bgl with the recovery of soils sample for geotechnical analysis at selected locations across the sites;
- infiltration testing in 5 no. selected trial pit locations in general accordance with BRE 365;
- the sinking of 4 no. windowless sample boreholes to a maximum depth of 5.45m bgl with standard penetration testing during drilling;

- the installation of a groundwater monitoring well at each borehole location required to monitor groundwater levels;
- geotechnical testing on selected soil samples to determine geotechnical parameters; and
- groundwater monitoring on a monthly basis for 8 months to include monitoring extending over the winter period.

This report provides factual information and data from the ground investigation and does not include geotechnical or geoenvironmental assessment.

1.4 Regulatory context and guidance

The investigation work has been carried out in general compliance with recognised good practice, including (but not limited to) BS 5930:2015+A1:2020, BS 10175:2011+A2:2017 and the AGS (2006) 'Good Practice Guidelines for Site Investigations'.

The geotechnical aspects of this report are prepared in general accordance with BS EN 1997-1+A1: 2013, BS EN 1997-2:2007 and BS 8004:2015+A1:2020. This report constitutes a factual Ground Investigation Report (GIR) as described in Part 2 of Eurocode 7 (BS EN 1997-2) (EC7). However, it is not intended to fulfil the requirements of a Geotechnical Design Report (GDR) as specified in EC7 and does not include geotechnical data interpretation.

Where relevant the relevant requirements of the current edition of NHBC Standards have also been applied.

Throughout the report the term 'geotechnical' is used to describe aspects relating to the physical nature of the site (such as foundation requirements). The term 'geoenvironmental' is used to describe aspects relating to ground-related environmental issues (such as potential contamination). However, it should be appreciated that this is an integrated investigation, and these two main aspects are inter-related. Designers should take all aspects of the investigation into account.

2 Ground investigation

2.1 Site works

The ground investigation works, including the rationale based on the findings of the preliminary risk assessment, is summarised in Table 2.1.

The fieldwork took place between 2nd September and 5th September 2025. The ground investigation locations were surveyed in using a Total Station GPS survey instrument and are shown on the Exploratory Hole Location Plan (Stantec Drawing 332612639 Figure 2 P01) in Appendix A.

The logs, including details of ground conditions, soil sampling, in situ testing and any installations, are also presented in Appendix B. The weather conditions during the Stantec fieldwork and for the previous week were sunny, warm with some rain spells.

Table 2.1: Summary of site works

Activity	Method	No.	Name	Depth Range (m bgl)	In situ tests	Rationale
Drilling, Pitting and Probing						
Boreholes	Windowless Sample	4	WS1001-WS1004	5.45	SPT UT100	• To confirm ground conditions and presence and depth of groundwater. • To collect soil samples to determine geotechnical parameters. • Install groundwater monitoring wells.
Trial pits	Machine (JCB 3X)	11	TP1001 – TP1004, SA1001/A/B-SA1005	1.50 – 3.40	Hand shear vane (HSV)	• To confirm ground conditions and presence and depth of groundwater. • To collect soil samples to determine geotechnical parameters.
Other in situ testing or monitoring						
Infiltration	BRE 365	5	SA1001-SA1005	1.50 – 3.00		• To confirm infiltration potential of the near surface soils.

Wells for monitoring groundwater levels were installed in all boreholes. A summary of the monitoring well installations is presented in Table 2.2. Installation details were provided by Stantec UK Limited during the ground investigation.

Table 2.2: Summary of monitoring installations

Location	Ground level (m OD)	Standpipe / piezometer diameter	Screen top and base depth (m bgl)	Screen top and base elevation (m OD)	Strata targeted
WS1001	27.06	50	1.0 – 5.0	26.06 – 21.06	Wittering Formation
WS1002	21.30	50	1.0 – 4.0	20.30 – 17.30	
WS1003	24.41	50	1.0 – 5.0	23.41 – 19.41	
WS1004	23.47	50	1.0 – 4.0	22.47 – 19.47	

2.2 Geo-environmental testing

2.2.1 Sampling strategy and protocols

Exploratory hole positions were positioned to cover gaps in the historical ground investigation across Upper Acre and to confirm the ground conditions previously encountered by others.

No specific features were identified as requiring targeted investigation and a reasonably even spacing was used. No other specific sampling statistics or grid were utilised in this instance.

Samples were taken, stored and transported in general accordance with BS 10175:2011+A2:2017.

2.2.2 Geo-environmental monitoring

Gas and groundwater monitoring boreholes have been monitored on one occasion. The results are presented in Appendix D. Monitoring is ongoing with a further seven visits over the next six months proposed and this report will be updated on completion of the monitoring.

2.3 Geotechnical testing

2.3.1 Geotechnical laboratory testing

The geotechnical tests undertaken by Stantec are summarised in Table 2.3 and the test certificates are provided in Appendix C. Wherever possible, UKAS accredited procedures have been used.

Table 2.3: Summary of sample numbers for geotechnical tests

Test	Wittering Formation
Moisture content	12
Atterberg limits (4 Point)	10
Particle size distribution (wet sieve)	4
Particle size distribution (sedimentation)	4
Sulfate and aggressive chemical environment classification for buried concrete classification (Full BRE SD1 Suite)	5
Optimum Moisture Content / Maximum Dry Density Relationship (2.5kg rammer)	2
Optimum Moisture Content / Maximum Dry Density Relationship (4.5kg rammer)	2

Test	Wittering Formation
Hand Shear Vane	4

2.4 Constraints

A stockpile of site won/muckaway material, which was being excavated from the adjacent site by earthworks contractors Hope and Clay was being stored within the southwest corner of the Upper Acre field, and three locations originally proposed within that area were subsequently moved. This area of stockpiled material is approximately 220m in length by 110m wide and is shown on the Exploratory Hole Location Plan (Stantec Drawing 332612639 Figure 3 P01) in Appendix A.

3 Ground Investigation records and data

3.1 Physical ground conditions

3.1.1 Summary of strata encountered

The following presents a summary of the properties of the ground and groundwater conditions encountered, based on field observations, interpretation of the field data and laboratory test results, taking into account drilling, excavation and sampling methods, transport, handling and specimen preparation.

All relevant data from the Stantec investigation are used from this point forward.

Detail of the Stantec ground investigation works are provided on the exploratory logs in Appendix B. A summary of the ground encountered in the investigation is presented in Table 3.1 and the individual strata are described in the sections below.

Table 3.1: Strata encountered

Stratum	Depth to top (m bgl)	Depth to base (m bgl)	Thickness (m) (range)	Thickness (m) (average)
Topsoil	0	0.20 – 0.50	0.20 – 0.50	0.34
Wittering Formation	0.20 – 0.50	>1.50 - >5.45	-	-
>base of stratum not proven				

3.1.2 Surface covering

The following surface cover was identified during the fieldworks:

- Grass and other vegetation covering approximately 75% of the site; and
- Hope and Clay's site won/muck away stockpiles, covering approximately 25% of the site.

3.1.3 Topsoil

Topsoil was encountered below grass between 0.20m and 0.50m bgl, with an average thickness of 0.34m. The topsoil comprised dark brown slightly clayey fine to coarse sand with frequent rootlets and occasional subangular to rounded fine to coarse flint gravels.

For the purposes of this report, topsoil is defined as the upper layer of an in situ soil profile, usually darker in colour and more fertile than the layer below (subsoil), which is a product of natural chemical, physical, biological and environmental processes, but does not imply compliance with BS 3882:2015. Reuse of topsoil as a growing medium at the site should be determined by the landscape architect or the landscape Contractors.

3.1.4 Wittering Formation

The Wittering Formation was encountered underlying the topsoil across all locations from 0.20m and 0.50m bgl to a maximum depth of 5.45m bgl. The base of the stratum was unproven. During the investigation the material was noted to be very variable in principal soil type, colour and consistency. The stratum can be split up into two principal soil types being cohesive or granular in nature as well as showing weathering and unweathered conditions.

Stantec expects that the colour change from and orange brown to a grey and blue grey with depth likely represents a transitional weathering profile within the Wittering Formation.

In three locations, red clay land drains were encountered at 0.90m bgl within SA1003, TP1001 and TP1003, this is likely associated with the land being used for agricultural purposes, as a way to manage surface water flow.

Cohesive material

The cohesive materials were encountered within fourteen out of fifteen of the exploratory hole locations. This ranged from 0.20m and 2.10m bgl at the top to 1.50m and 5.45m bgl at the base with an average thickness of 2.54m. This was generally described as:

- Soft to firm brown/orange brown mottled light grey sandy clay with rare flint gravels (weathered); and
- Soft to firm brown/dark grey and blue grey thinly laminated sandy silty clay (unweathered).

Granular material

The granular materials were encountered within thirteen out of fifteen of the exploratory hole locations. This ranged from 0.30m and 2.30m bgl at the top to 2.0m and 5.45m bgl at the base, with an average thickness of 1.90m. This was generally described as:

- Orange brown/ brown/ mottled grey clayey fine to coarse sand with rare rootlets (weathered); and,
- Orange brown and grey brown thinly laminated clayey sand (weathered transitioning into unweathered).

3.2 Groundwater

3.2.1 Groundwater observations and levels

Groundwater encountered during the investigation is listed in Table 3.2. A groundwater observation represents the depth at which groundwater was first observed and is likely to be deeper than the actual water table level at that location.

Table 3.2: Groundwater occurrence

Stratum	Date	Location	Fieldwork		Comment
			Groundwater observation (m bgl)	Groundwater after drilling (m bgl)	
Wittering Formation	02/09/2025	WS1001	3	4	-
		WS1002	3	2.8	-
		WS1003	2.5	4.5	-
		WS1004	1.88	1.7	-
	04/09/2025	SA1001	2.60	-	Slow to moderate water seepage
		SA1001A	2.40	-	Slow water seepage

Three visits have been undertaken to monitor the groundwater levels post-fieldwork. This has been summarised in Table 3.3 below. Additional monitoring rounds are due to be completed, and the report will be updated with the results once completed.

Table 3.3: Groundwater level data summary

Round	Date range	Location	Post-fieldwork monitoring	
			Depth to groundwater (range) (m bgl)	Groundwater elevation (range) (m AOD)
Round 1	11/09/2025	WS1001	2.11	24.95
		WS1002	1.89	19.41
		WS1003	1.76	22.65
		WS1004	0.73	23.47
Round 2	16/10/2025	WS1001	2.30	24.76
		WS1002	2.03	19.27
		WS1003	0.84	23.57
		WS1004	0.73	22.74
Round 3	07/11/2025	WS1001	2.36	24.7
		WS1002	1.495	19.805
		WS1003	0.96	23.45
		WS1004	0.52	22.95

3.2.2 Infiltration tests

The results of the infiltration testing undertaken are summarised in Table 3.4. The soakaway test calculation sheets are presented in Appendix D.

Testing was carried out in accordance with Stantec's 1-day assessment methodology. This is in general accordance with BRE Digest 365 (BRE DG 2016) where infiltration rates allow three test runs during a working day (or where there is no infiltration), but where low infiltration rates were encountered the available time may not have been sufficient to fully comply with the BRE test method (i.e. three runs of the test).

Table 3.4: Infiltration test results

Stratum	Location	Depth to base of pit (m bgl)	Infiltration rate (m/s)			
			Run 1	Run 2	Run 3	Comment
Wittering Formation	SA1001B	2.0	1.64×10^{-6}*	-	-	~6 hours 10 minutes to reach 75% water loss.
	SA1002	3.0	Testing terminated**	-	-	Test run for ~23 hours, did not reach the required 75% water loss.
	SA1003	2.98	Testing terminated**	-	-	Test run for ~23 hours, did not reach the required 75% water loss.
	SA1004	1.50	Testing terminated**	-	-	Test run for ~5 hours did not reach the required 75% water loss
	SA1005	1.52	Testing terminated**	-	-	Test run ~22 hours 45 minutes, did not reach the required 75% water loss.

*Where less than three tests were possible in a particular location the results provided should be considered indicative only and should not be used for design purposes.

**Testing terminated due to slow infiltration rate and not reaching the required 75% water loss.

3.2.3 Groundwater summary

In general, groundwater has been recorded to be shallow within the Wittering Formation. Groundwater levels during the investigation and post field-work monitoring are recorded between 0.73m and 3.00m bgl.

Within one out of the five locations, an infiltration rate of 1.64×10^{-6} was calculated (SA1001B). All other soakaway locations exhibited very slow infiltration rates and did not reach the required 75% water loss during the time tested and therefore an infiltration rate could not be calculated.

3.3 Ground gases (carbon dioxide and methane)

Records from the gas monitoring boreholes are presented in Appendix D and summarised in To date two out of three monitoring visits have recorded gas concentrations, with no further visits anticipated to monitor gas. Atmospheric pressures recorded on the two occasions were 1001mb and 1028mb.

Table 3.5.

To date two out of three monitoring visits have recorded gas concentrations, with no further visits anticipated to monitor gas. Atmospheric pressures recorded on the two occasions were 1001mb and 1028mb.

Table 3.5: Range of ground gas data

Stratum	Location	Methane (%)	Carbon dioxide (%)	Oxygen (%)	Steady flow rate (l/hr)	Comment
Wittering Formation	WS1001	<LOD**	0 - 1.70	18.40 – 21.40	<LOD**	CO, HS2 recorded 0ppm.
	WS1002	<LOD**	0 – 4.40	17 – 19.70	<LOD** to -0.1	CO, HS2 recorded 0ppm. Second round recorded a steady flow rate of -0.1l/hr.
	WS1003	<LOD**	0.10 – 0.90	18.80 – 20.70	<LOD** to -0.1	CO, HS2 recorded 0ppm. Second round recorded a steady flow rate of -0.1l/hr.
	WS1004*	<LOD** - 0.1	1.40 – 4.50	17.70 - 18.70	<LOD** to -6.7	Peak flow reached 80.70l/hr and at 30 seconds decreased to 11.20l/hr and became steady at 0l/hr within 1 minute. The second round recorded a peak flow of 7.1l/hr becoming stable at 6.7l/hr. This is likely attributed to the flooded response zone.
*Response zone of pipe flooded						
**LOD – Limit of Detection						

3.4 Geotechnical data

3.4.1 Introduction

Laboratory test results are contained in Appendix C with in situ test results shown on the relevant exploratory hole logs or datasheet in Appendix B. The following sections summarise the main findings.

3.4.2 Plasticity

The results of plasticity index tests on samples of soil are summarised in Table 3.6.

Table 3.6: Plasticity Index

Stratum	No. of tests	Plasticity Index		
		Min.	Max.	Av.
Wittering Formation (cohesive)	10	21	53	33

3.4.3 Particle Size Distribution

Particle Size Distribution test (PSDs) results are summarised in Table 3.7 and summary descriptions and PSD plots of the material analysed are presented in Appendix C.

Table 3.7: PSD results summary

Stratum	No. of tests	Fines <0.063mm	Clay %	Silt %	Sand %	Gravel %
Wittering Formation (cohesive)	4	51 - 60	22 - 27	29 - 33	23 - 47	0 - 17

3.4.4 Soil Strength

Table 3.8 summarises information pertaining to the shear strength of the soils according to geological stratum. Factual results are summarised for laboratory tests, field tests (e.g. hand shear vane) and uncorrected Standard Penetration Tests (SPT N_{60}). Where the SPT N_{60} is used to infer shear strength by published correlation, this is also tabulated.

Table 3.8: Soil strength results

Stratum	No. of tests	SPT N_{60} (N-value) (range)	c_u (kPa)	Method
Wittering Formation (cohesive)	14	4 - 22	[a]18 - 99	SPT – Windowles.
	10	-	30 - 140	Hand shear vane

a) After Stroud (1989) and a preliminary F1 value of 4.5

3.5 Relative Density

Table 3.9 summarises information pertaining to the relative density of the granular soils according to geological stratum. Factual results are summarised for laboratory tests, field tests (e.g. SPT, CPT, dynamic probe correlation).

Table 3.9: Relative density results and derived values

Stratum	No. of tests	SPT N_{60} (N-value) (Range)	Method
Wittering Formation (granular)	6	7 - 35	SPT – Windowless (Peck et. al. (1967).

3.5.1 Compaction and moisture content

Table 3.10 and Table 3.11 presents a summary of the moisture content tests and compaction studies undertaken at the site.

Table 3.10: Compaction study results

Stratum	No. tests	Method	Natural moisture content (%) (range)	Optimum Water Content (%) (range)	Particle density (Mg/m³) (range)	Maximum dry density (Mg/m³) (range)
Wittering Formation (cohesive)	2	2.5kg Rammer	13.6 – 34.4	17 - 24	2.60 – 2.65	1.54 – 1.76

Table 3.11: Undrained Shear Strength (Hand Shear Vane at Compaction Point)

Stratum	Sample	Depth (m bgl)	Optimum Water Content (%)	Average Strength at Optimum Water Content (kPa)
Wittering Formation (cohesive)	TP1001	3.00	27	130
	TP1002	1.80	N/A	UTP
	SA1002	3.00	N/A	UTP
	SA1003	0.50	19	130
UTP – Unable to Penetrate				

3.5.2 Water Content

Table 3.12 presents a summary of the water content tests undertaken at the site.

Table 3.12: Water Content

Stratum	No. tests	Water Content (%)
Wittering Formation (cohesive)	12	13.6 – 43.9

4 Uncertainties and limitations

4.1 Site specific comments

The gas and groundwater monitoring programme undertaken to date and included in this report is not yet completed. Monitoring is ongoing and the conclusions of this report will be updated following its completion.

The area to the southwest of site was being used by Hope and Clay (One Horton Heath earthworks contractor) to store site won/muckaway material from the adjacent site, and therefore this area was unable to be investigated.

4.2 General comments

Stantec Hydrock Limited (Stantec) has prepared this report in accordance with the instructions of Eastleigh Borough Council (the Client), under the terms of appointment for Stantec, for the sole and specific use of the Client and parties commissioned by them to undertake work where reliance is placed on this report. Any third parties who use the information contained herein do so at their own risk. Stantec shall not be responsible for any use of the report or its contents for any purpose other than that for which it was prepared or for use of the report by any parties not defined in Stantec's appointment.

This report details the findings of work carried out in September 2025. The report has been prepared by Stantec on the basis of available information obtained during the study period. Although every reasonable effort has been made to gather all relevant information, not all potential environmental constraints or liabilities associated with the site may have been revealed.

Stantec has used reasonable skill, care and diligence in the design of the investigation of the site and in its interpretation of the information obtained. The inherent variation of ground conditions allows only definition of the actual conditions at the locations and depths of trial pits and boreholes at the time of the investigation. At intermediate locations, conditions can only be inferred.

Groundwater data are only representative of the dates on which they were obtained and both levels and quality may vary.

Plans that provide assessment of foundation types and depths are indicative and subject to further design. This design should incorporate a detailed assessment of the influence of trees, influence of cut to fill proposals and geological conditions.

Unless otherwise stated, the recommendations in this report assume that ground levels will remain as existing. If there is to be any re-profiling (e.g. to create development platforms or for flood alleviation) then the recommendations may not apply.

Information provided by third parties has been used in good faith and is taken at face value; however, Stantec cannot guarantee its accuracy or completeness.

Where the existing report(s) prepared by others have been provided by the Client, it is assumed that these have been either commissioned by the Client, or can be assigned to the Client, and can be relied

upon by Stantec. Should this not be the case Stantec should be informed immediately as additional work may be required. Stantec is not responsible for any factual errors or omissions in the supplied data, or for the opinions and recommendations of others. It is possible that the conditions described may have since changed through natural processes or later activities.

The work has been carried out in general accordance with recognised best practice. Unless otherwise stated, no assessment has been made for the presence of radioactive substances or unexploded ordnance. Where the phrase 'suitable for use' is used in this report, it is in keeping with the terminology used in planning control and does not imply any specific warranty or guarantee offered by Stantec.

The chemical analyses reported were scheduled for the purposes of risk assessment with respect to human health, plant life and controlled waters as discussed in the report. Whilst the results may be useful in applying the Hazardous Waste Assessment Methodology given in Environment Agency Technical Guidance WM3, they are not primarily intended for that purpose and additional analysis will be required at the time of disposal to fully classify waste. Discussion and comment with regards to waste classification are preliminary and do not form the requirements of 'Basic Characterisation' as required.

Assessment and testing for the presence of coal tar has only been completed at the locations of exploratory holes undertaken for risk assessment purposes. This investigation is not designed to provide a definitive assessment of the risk from coal tar, nor the waste classification for bituminous bound pavement arisings at the site.

Unless otherwise stated, at the time of this investigation the future routes of water supply pipes had not been established. This investigation and sampling strategy may not be fully compliant with UKWIR recommendations. Consequently, a targeted investigation and specific sampling and chemical testing may be required at a later date once the routes of the supply pipes are known. In addition, it is recommended that the relevant water supply company be contacted at an early stage to confirm its requirements for assessment, which may not necessarily be the same as those recommended by UKWIR.

Whilst the preliminary risk assessment process has identified potential risks to construction workers, consideration of occupational health and safety issues is beyond the scope of this report.

The non-specialist UXO screening has been undertaken for the purposes of ground investigation only (i.e. low risk activity in accordance with CIRIA Report C681). Further assessment should be undertaken with regards to other higher risk activities e.g. construction.

Please note that notwithstanding any site observations concerning the presence or otherwise of archaeological sites, asbestos-containing materials or invasive weeds, this report does not constitute a formal survey of these potential constraints and specialist advice should be sought.

Any site boundary line depicted on plans does not imply legal ownership of land.

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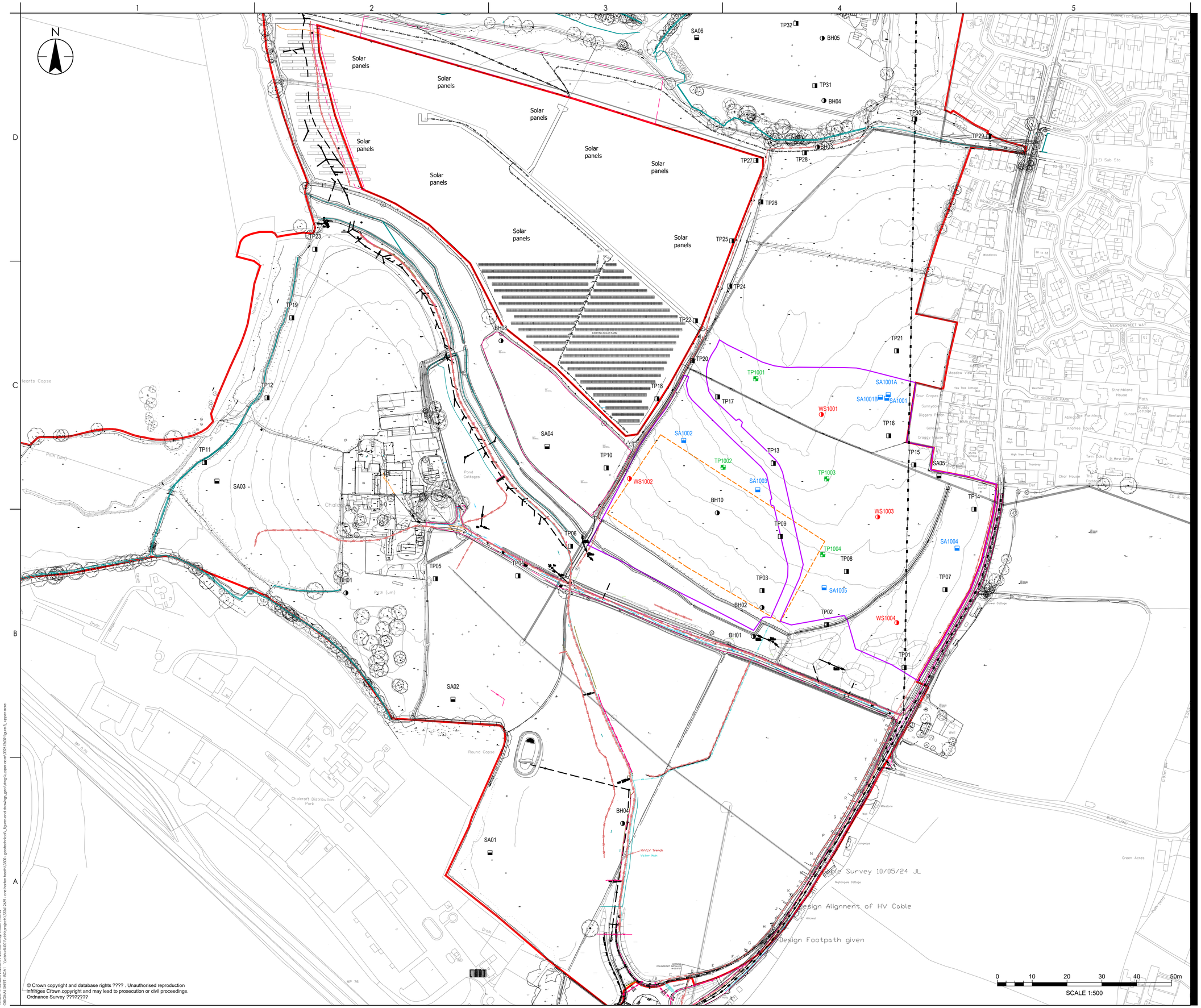
Appendices

Appendix A Drawings



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Plotted: 11:09 2025.09.11 4:29:34 PM By: Cotton, David
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Notes

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake their own investigation where the presence of any existing sewers, services, plant or apparatus may affect their operations.

Key

- Site Boundary
- Parcel Development Platform
- Proposed Pond
- Clay Stockpile Area
- Borehole Location
- Trial Pit Location
- Trial Pit with Infiltration Test
- Historical Borehole
- Historical Trial Pit
- Historical Soakaway

P01 FIRST ISSUE	davco	RPa	RPa	2025.09.11
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Issue Status

For Information

This document is suitable only for the purpose noted above.
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Client/Project Logo

Client/Project

Eastleigh Borough Council

One Horton Heath

Upper Acre

Title

Exploratory Hole Location Plan

Project No. 332612639

A1 Scale 1:2000

Revision **P01**

Figure No. **Figure 3**

Eastleigh Borough Council

Key

- Residential
- Non-residential
- Local Centre
- Primary School
- Link Road
- Secondary Road
- Bridleway

N

0 25 50 75 100 200m

Scale 1:2500

Revision C

January 2023 **29607A/1000A**

One Horton Heath Indicative Masterplan

CLAGUE ARCHITECTS

Appendix B Exploratory Hole Logs and Photographs

Logs

Stantec	Project: Upper Acre, One Horton Heath	Trialpit No SA1001 Page No. 1 of 1	
Method: Trial Pit	Date(s): 04/09/2025	Logged By: LC	Checked By: DM
Client: Eastleigh Borough Council	Co-ords: 449144.40, 116737.85	Stability: Stable	Dimensions: 2.70m × 0.70m / Scale: 1:25
Hydrock Project No: 332612639	Ground Level: 26.11m OD	Plant: PC80MR	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Grass over dark brown slightly clayey fine to coarse SAND with frequent rootlets. (TOPSOIL)	0.50	(0.50)	25.61	
				Orange brown clayey fine to coarse SAND with rare rootlets. (WITTERING FORMATION - GRANULAR)	0.75	(0.25)	25.36	
				Firm orange brown mottled light grey sandy CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)	1.90	(1.15)	24.21	
2.00	B			Orange brown slightly clayey to clayey fine to coarse SAND. (WITTERING FORMATION - GRANULAR)	2.50	(0.60)	23.61	
2.60 2.60	B D		▼	Soft dark grey and blue grey thinly laminated sandy CLAY. Sand is blue grey fine to coarse SAND. (WITTERING FORMATION - COHESIVE)	2.60	(0.10)	23.51	
				Base of Excavation at 2.60m				

General Remarks:
1. Location cleared by third-party specialist and surveyed using a Lecia Geomax GPS. 2. Excavated to 2.60m bgl. 3. Groundwater encountered - slow water seepage at 2.60m bgl. 4. Soakaway pit terminated due to water ingress. 5. Backfilled with arisings.

Logged in general accordance with BS5930:2015

Stantec	Project: Upper Acre, One Horton Heath	Trialpit No SA1001A Page No. 1 of 1

Method: Trial Pit	Date(s): 04/09/2025	Logged By: LC	Checked By: DM
Client: Eastleigh Borough Council	Co-ords: 449146.00, 116742.00	Stability: Stable	Dimensions: 2.60m × 0.70m / Scale: 1:25
Hydrock Project No: 332612639		Plant: PC80MR	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Grass over dark brown slightly clayey fine to coarse SAND with frequent rootlets. (TOPSOIL)	0.30	(0.30)		
				Soft to firm orange brown sandy CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)	0.80	(0.50)		
				Firm orange brown mottled light grey sandy CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)	1.70	(0.90)		
				Orange brown and brown very clayey fine to coarse SAND. (WITTERING FORMATION - GRANULAR)	2.40	(0.70)		
				Base of Excavation at 2.40m				

General Remarks:
1. Additional location cleared with CAT & Genny by Stantec Hydrock engineer due to groundwater ingress in SA1001. 2. Approximate coordinates taken from What3Words. 3. Ground level unknown. 4. Excavated to 2.40m bgl. 5. Groundwater encountered - slow water seepage at 2.40m bgl. 6. Soakaway pit terminated and backfilled with arisings.

Logged in general accordance with BS5930:2015

Stantec	Project: Upper Acre, One Horton Heath	Trialpit No SA1001B Page No. 1 of 1

Method: Trial Pit	Date(s): 04/09/2025	Logged By: LC	Checked By: DM
Client: Eastleigh Borough Council	Co-ords: 449137.00, 116739.00	Stability: Stable	Dimensions: 1.70m × 0.70m
Hydrock Project No: 332612639		Plant: PC80MR	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Grass over dark brown slightly clayey fine to coarse SAND with frequent rootlets. (TOPSOIL)	0.40	(0.40)		
				Orange brown mottled light grey clayey fine to coarse SAND. (WITTERING FORMATION - GRANULAR)	2.00	(1.60)		
				Base of Excavation at 2.00m				

General Remarks:
1. Additional location cleared with CAT & Genny by Stantec Hydrock engineer due to groundwater ingress in SA1001A. 2. Approximate coordinates taken from What3Words. 3. Ground level unknown. 4. Excavated to 2.00m bgl. 5. No groundwater encountered. 6. Pit installed with gravel, pipework and arisings to undertake soakaway testing in general accordance with BRE365. Testing undertaken from 0.60m to 2.0m bgl.

Logged in general accordance with BS5930:2015

Stantec	Project: Upper Acre, One Horton Heath	Trialpit No SA1002 Page No. 1 of 1	
Method: Trial Pit	Date(s): 03/09/2025	Logged By: LC	Checked By: DM
Client: Eastleigh Borough Council	Co-ords: 448911.05, 116689.40	Stability: Stable	Dimensions: 2.10m × 0.60m / Scale: 1:25
Hydrock Project No: 332612639	Ground Level: 23.98m OD	Plant: PC80MR	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Grass over dark brown slightly clayey fine to coarse SAND with frequent rootlets. (TOPSOIL)	0.30	(0.30)	23.68	
				Orange brown slightly clayey fine to coarse SAND. (WITTERING FORMATION - GRANULAR)	0.90	(0.60)	23.08	
0.90	HSV	110/58/72kPa						
1.00	D			Firm light grey mottled orange brown sandy CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)	1.50	(0.60)	22.48	
				Brown mottled grey brown slightly clayey fine to coarse SAND. (WITTERING FORMATION - GRANULAR)	2.70	(1.20)	21.28	
2.00	B							
				Orange brown and grey brown thinly laminated clayey fine to coarse SAND. (WITTERING FORMATION - GRANULAR)	3.00	(0.30)	20.98	
3.00	B			Base of Excavation at 3.00m				

General Remarks:
1. Location cleared by third-party specialist and surveyed using a Lecia Geomax GPS. 2. Excavated to 3.00m bgl. 3. Hand Shear Vanes completed in cohesive material only. 4. No groundwater encountered. 5. Pit installed with gravel, pipework and arisings to undertake soakaway testing in general accordance with BRE365. Testing undertaken from 2.0m to 3.0m bgl.

Logged in general accordance with BS5930:2015

Stantec	Project: Upper Acre, One Horton Heath	Trialpit No SA1003 Page No. 1 of 1	
Method: Trial Pit	Date(s): 04/09/2025	Logged By: LC	Checked By: DM
Client: Eastleigh Borough Council	Co-ords: 448996.09, 116632.73	Stability: Stable	Dimensions: 2.10m × 0.70m / Scale: 1:25
Hydrock Project No: 332612639	Ground Level: 24.50m OD	Plant: PC80MR	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Grass over dark brown fine to coarse SAND with frequent rootlets. (TOPSOIL)	0.20	(0.20)	24.30	
				Brown slightly clayey fine to coarse SAND with occasional rootlets and occasional subangular to rounded fine to coarse flint gravels. (TOPSOIL)	0.40	(0.20)	24.10	
0.50	B			Orangish brown clayey fine to coarse SAND with rare rootlets. (WITTERING FORMATION - GRANULAR)	0.90	(0.50)	23.60	
1.00 1.00	D HSV	88/98/108kPa		Firm light grey mottled orange sandy CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE) *... At 0.90m bgl: on northwest face red clay drainage pipe running SW-NE.*	1.90	(1.00)	22.60	
2.00 2.00	D HSV	84/94/96kPa		Light grey mottled orange brown clayey fine to coarse SAND. (WITTERING FORMATION - GRANULAR)	2.70	(0.80)	21.80	
				Stiff dark grey sandy silty CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)	3.00	(0.30)	21.50	
				Base of Excavation at 3.00m				

General Remarks:
1. Location cleared by third-party specialist and surveyed using a Lecia Geomax GPS. 2. Excavated to 3.00m bgl. 3. Hand Shear Vanes completed in cohesive material only. 4. No groundwater encountered. 5. Pit installed with gravel, pipework and arisings to undertake soakaway testing in general accordance with BRE365. Testing undertaken from 1.90m to 3.0m bgl.

Logged in general accordance with BS5930:2015

Stantec	Project: Upper Acre, One Horton Heath	Trialpit No SA1004 Page No. 1 of 1	
Method: Trial Pit	Date(s): 04/09/2025	Logged By: LC	Checked By: DM
Client: Eastleigh Borough Council	Co-ords: 449225.05, 116565.63	Stability: Stable	Dimensions: 1.40m × 0.60m / Scale: 1:25
Hydrock Project No: 332612639	Ground Level: 24.72m OD	Plant: PC80MR	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Grass over dark brown slightly clayey fine to coarse SAND with frequent rootlets. (TOPSOIL)	0.35	(0.35)	24.37	
1.00 1.00	B D			Soft orange brown mottled grey sandy CLAY with rare subangular fine to coarse flint gravels. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)	1.50	(1.15)	23.22	
				Base of Excavation at 1.50m				

General Remarks:
1. Location cleared by third-party specialist and surveyed using a Lecia Geomax GPS. 2. Excavated to 1.50m bgl. 3. No groundwater encountered. 4. Pit installed with gravel, pipework and arisings to undertake soakaway testing in general accordance with BRE365. Testing undertaken from 0.60m to 1.50m bgl

Logged in general accordance with BS5930:2015

Stantec	Project: Upper Acre, One Horton Heath	Trialpit No SA1005 Page No. 1 of 1	
Method: Trial Pit	Date(s): 04/09/2025	Logged By: LC	Checked By: DM
Client: Eastleigh Borough Council	Co-ords: 449072.30, 116520.27	Stability: Stable	Dimensions: 1.30m × 0.70m / Scale: 1:25
Hydrock Project No: 332612639	Ground Level: 22.42m OD	Plant: PC80MR	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Grass over dark brown slightly clayey fine to coarse SAND with frequent rootlets and occasional subangular to rounded fine to coarse flint gravels. (TOPSOIL)	0.50	(0.50)	21.92	
0.50	D							
0.60	HSV	58/68/54kPa		Firm orange brown slightly sandy CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)	1.40	(0.90)	21.02	
1.50	D			Soft light grey mottled orange brown very sandy CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)	1.60	(0.20)	20.82	
1.50	HSV	30/34/38kPa		Base of Excavation at 1.60m				

General Remarks:
1. Location cleared by third-party specialist and surveyed using a Lecia Geomax GPS. 2. Excavated to 1.60m bgl. 3. Hand Shear Vanes completed in cohesive material only. 4. No groundwater encountered. 5. Pit installed with gravel, pipework and arisings to undertake soakaway testing in general accordance with BRE365.

Logged in general accordance with BS5930:2015

Stantec	Project: Upper Acre, One Horton Heath	Trialpit No TP1001 Page No. 1 of 1	
Method: Trial Pit	Date(s): 03/09/2025	Logged By: LC	Checked By: DM
Client: Eastleigh Borough Council	Co-ords: 448993.87, 116760.33	Stability: Stable	Dimensions: 2.60m × 0.60m / Scale: 1:25
Hydrock Project No: 332612639	Ground Level: 27.76m OD	Plant: PC80MR	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Grass over dark brown slightly clayey fine to coarse SAND with frequent rootlets and occasional subangular to rounded fine to coarse flint gravels. (TOPSOIL)	0.40	(0.40)	27.36	
				Firm light brown mottled orange slightly sandy silty CLAY with rare rootlets. (WITTERING FORMATION - COHESIVE)	0.70	(0.30)	27.06	
1.00	D			Firm light brown mottled orange very sandy CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE) *... At 0.90m bgl: on northeast face of trial pit fragments of red clay drainage pipe.*	1.60	(0.90)	26.16	
2.00 2.00	B D			Orange brown and light grey very clayey fine to coarse SAND. (WITTERING FORMATION - GRANULAR)	2.80	(1.20)	24.96	
3.00 3.00	B D			Firm brown thinly laminated sandy silty CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)	3.20	(0.40)	24.56	
3.40	D			Firm grey thinly laminated slightly sandy silty CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)	3.40	(0.20)	24.36	
				Base of Excavation at 3.40m				

General Remarks:
1. Location cleared by third-party specialist and surveyed using a Lecia Geomax GPS. 2. Excavated to 3.40m bgl. 3. No groundwater encountered. 4. Backfilled with arisings.

Logged in general accordance with BS5930:2015

Stantec	Project: Upper Acre, One Horton Heath	Trialpit No TP1002 Page No. 1 of 1	
Method: Trial Pit	Date(s): 03/09/2025	Logged By: LC	Checked By: DM
Client: Eastleigh Borough Council	Co-ords: 448956.34, 116658.62	Stability: Stable	Dimensions: 2.60m × 0.60m / Scale: 1:25
Hydrock Project No: 332612639	Ground Level: 24.58m OD	Plant: PC80MR	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Grass over dark brown gravelly clayey fine to coarse SAND with frequent rootlets. Gravel is angular to rounded fine to coarse of flint. (TOPSOIL)	0.20	(0.20)	24.38	
0.50	D			Stiff orange brown mottled greyish brown slightly sandy CLAY. Sand is find to coarse. (WITTERING FORMATION - COHESIVE)				
0.80	HSV	140/60kPa				(1.30)		
1.50	D				1.50		23.08	
1.50	HSV	32/62/58kPa		Soft orange brown mottled light grey sandy CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)	1.70	(0.20)	22.88	
1.80	B			Orange brown mottled brown clayey fine to coarse SAND. (WITTERING FORMATION - GRANULAR)	2.00	(0.30)	22.58	
2.50	B			Soft brown mottled orange brown very sandy silty CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)				
2.50	D					(1.00)		
				Soft dark grey thinly laminated slightly sandy silty CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)	3.00		21.58	
3.40	D					(0.40)		
				Base of Excavation at 3.40m	3.40		21.18	

General Remarks:
1. Location cleared by third-party specialist and surveyed using a Lecia Geomax GPS. 2. Excavated to 3.40m bgl. 3. Hand Shear Vanes completed in cohesive material only. 4. No groundwater encountered. 5. Backfilled with arisings.

Logged in general accordance with BS5930:2015

Stantec	Project: Upper Acre, One Horton Heath	Trialpit No TP1003 Page No. 1 of 1	
Method: Trial Pit	Date(s): 03/09/2025	Logged By: LC	Checked By: DM
Client: Eastleigh Borough Council	Co-ords: 449075.38, 116645.27	Stability: Stable	Dimensions: 2.70m × 0.60m / Scale: 1:25
Hydrock Project No: 332612639	Ground Level: 26.09m OD	Plant: PC80MR	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Grass over dark brown slightly clayey fine to coarse SAND with frequent rootlets. (TOPSOIL)	0.30	(0.30)	25.79	
0.50	B			Brown slightly clayey fine to coarse SAND with occasional rootlets and occasional subangular to rounded medium and coarse flint gravels. (WITTERING FORMATION - GRANULAR)	0.60	(0.30)	25.49	
1.00	D			Firm orange brown mottled light grey sandy silty CLAY with rare rootlets. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE) *... Between 0.90m and 1.00m bgl: On south face corner of pit red clay drainage pipe*	1.20	(0.60)	24.89	
				Orange and light grey thinly laminated very clayey fine to coarse SAND. (WITTERING FORMATION - GRANULAR)	1.70	(0.50)	24.39	
1.80	B			Light brown, dark brown and orange brown thinly laminated very clayey fine to coarse SAND. (WITTERING FORMATION - GRANULAR)	2.20	(0.50)	23.89	
3.00 3.00	D HSV	60/56/68kPa		Soft and firm grey brown and blue grey thinly laminated very sandy CLAY. Sand is blue grey fine to coarse. (WITTERING FORMATION - COHESIVE)	3.20	(1.00)	22.89	
				Base of Excavation at 3.20m				

General Remarks:
1. Location cleared by third-party specialist and surveyed using a Lecia Geomax GPS. 2. Excavated to 3.20m bgl. 3. Hand Shear Vanes completed in cohesive material only. 4. No groundwater encountered. 5. Backfilled with arisings.

Logged in general accordance with BS5930:2015

Stantec	Project: Upper Acre, One Horton Heath	Trialpit No TP1004 Page No. 1 of 1	
Method: Trial Pit	Date(s): 03/09/2025	Logged By: LC	Checked By: DM
Client: Eastleigh Borough Council	Co-ords: 449070.79, 116558.30	Stability: Stable	Dimensions: 2.70m × 0.60m / Scale: 1:25
Hydrock Project No: 332612639	Ground Level: 23.91m OD	Plant: PC80MR	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Grass over dark brown slightly gravelly slightly clayey fine to coarse SAND with frequent rootlets. Gravel is angular to rounded fine to coarse of flint. (TOPSOIL)	0.30	(0.30)	23.61	
0.50	D			Stiff orange brown and brown slightly sandy silty CLAY with occasional rootlets and rare angular to rounded fine to coarse flint gravel. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)	0.60	(0.30)	23.31	
1.00	D			Soft and firm orange brown mottled light grey sandy CLAY. (WITTERING FORMATION - COHESIVE)				
1.50	D				2.00	(1.40)	21.91	
2.20	D			Very soft dark brown mottled light brown very sandy CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)	2.30	(0.30)	21.61	
3.00	D			Soft and firm dark grey thinly laminated sandy silty CLAY. Sand is fine to coarse. (WITTERING FORMATION - GRANULAR)				
3.00	HSV	56/60/72kPa				(1.10)		
3.40	HSV	40/70/56kPa		Base of Excavation at 3.40m	3.40		20.51	

General Remarks:
1. Location cleared by third-party specialist and surveyed using a Lecia Geomax GPS. 2. Excavated to 3.40m bgl. 3. Hand Shear Vanes completed in cohesive material only. 4. No groundwater encountered. 5. Backfilled with arisings.

Logged in general accordance with BS5930:2015

Stantec	Project: Upper Acre, One Horton Heath	Borehole No WS1001 Page No. 1 of 1	
Method: Dynamic (Windowless) Sampler	Date(s): 02/09/2025	Logged By: LC	Drilled By: CK Drilling
Client: Eastleigh Borough Council	Co-ords: 449069.15, 116719.28	Checked By: DM	Rig: Archway Dart
Hydrock Project No: 332612639	Ground Level: 27.06m OD		Scale: 1:30

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrum-entation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
							Grass over dark brown fine to coarse SAND with frequent rootlets. (TOPSOIL)	0.30	(0.30)	26.76		
			0.50 - 1.00	B			Loose light brown mottled orange brown slightly clayey fine to coarse SAND with rare subangular medium flint gravels. (WITTERING FORMATION - GRANULAR)	1.50	(1.20)	25.56		
			0.50 - 1.00	D								
1.20 - 2.00	101mm	100%	1.20	SPT	N=8 (0,2,2,2,2,2)							
							Orange and red brown mottled light brown thinly laminated very clayey fine to coarse SAND. (WITTERING FORMATION - GRANULAR)	2.10	(0.60)	24.96		
2.00 - 3.00	92mm	100%	2.00	SPT	N=9 (2,2,2,2,3,2)							
			2.00	D			Firm blue grey thinly laminated very sandy CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)	3.00	(0.90)	24.06		
			2.50	D								
3.00 - 4.00	79mm	90%	3.00	SPT	N=10 (2,1,2,2,3,3)		Stiff brown grey CLAY with occasional blue grey fine to coarse sand partings. (WITTERING FORMATION - COHESIVE)	4.00	(1.00)	23.06		
4.00 - 5.00	70mm	75%	4.00	SPT	N=12 (2,2,3,3,3,3)		Stiff grey sandy CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)	5.45	(1.45)	21.61		
			4.00	D								
			5.00	SPT	N=15 (2,2,3,4,4,4)							
							End of Borehole at 5.45m					

General Remarks:
1. Location cleared by third-party specialist and surveyed using a Lecia Geomax GPS. 2. Water strike encountered at 3.00m bgl during drilling - groundwater dipped at 4.00m bgl post drilling. 3. Drilled to 5.45m bgl. 4. Monitoring pipe installed - Response zone 1.0m to 5.0bgl.

Logged in general accordance with BS5930:2015

Stantec	Project: Upper Acre, One Horton Heath	Borehole No WS1002 Page No. 1 of 1	
Method: Dynamic (Windowless) Sampler	Date(s): 02/09/2025	Logged By: LC	Drilled By: CK Drilling
Client: Eastleigh Borough Council	Co-ords: 448848.61, 116645.64	Checked By: DM	Rig: Archway Dart
Hydrock Project No: 332612639	Ground Level: 21.30m OD		Scale: 1:30

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrum-entation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
							Grass over dark brown slightly clayey fine to coarse SAND with frequent rootlets. (TOPSOIL)	0.20	(0.20)	21.10		
			0.50	ES			Firm yellow brown mottled orange brown sandy CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)					
			0.50 - 1.00	B								
			0.50 - 1.00	D								
							1		(1.55)			
1.20 - 2.00	101mm	100%	1.20	SPT	N=10 (1,1,2,3,2,3)							
			1.75 - 2.50	B				1.75		19.56		
							Medium dense brown mottled orange thinly laminated clayey fine to coarse SAND. (WITTERING FORMATION - GRANULAR)					
2.00 - 3.00	92mm	100%	2.00	SPT	N=11 (2,2,2,2,3,4)		2		(0.80)			
								2.55		18.76		
							Orange brown and dark brown thinly laminated clayey fine to coarse SAND. (WITTERING FORMATION - GRANULAR)	2.65	(0.10)	18.66		
							Firm dark grey thinly laminated sandy CLAY. Sand is blue grey fine to coarse. (WITTERING FORMATION - COHESIVE)					
3.00 - 4.00	79mm	75%	3.00	SPT	N=17 (3,3,4,4,4,5)		3					
			3.00	D					(2.05)			
4.00 - 5.00	70mm	50%	4.00	SPT	N=22 (2,4,3,4,7,8)		4					
			4.00	D								
			4.50 - 5.00	B				4.70		16.60		
							Dense blue grey slightly clayey fine to coarse SAND. (WITTERING FORMATION - GRANULAR)					
			5.00	SPT	N=35 (5,6,7,7,10,11)		5		(0.75)			
								5.45		15.86		
							End of Borehole at 5.45m					
							6					

General Remarks:
1. Location cleared by third-party specialist and surveyed using a Lecia Geomax GPS. 2. Water strike encountered at 2.90m bgl during drilling - groundwater dipped at 2.85m bgl post drilling. 3. Drilled to 5.45m bgl. 4. Monitoring pipe installed - Response zone 1.0m to 4.0m bgl.

Logged in general accordance with BS5930:2015

Stantec	Project: Upper Acre, One Horton Heath	Borehole No WS1003 Page No. 1 of 1	
Method: Dynamic (Windowless) Sampler	Date(s): 02/09/2025	Logged By: LC	Drilled By: CK Drilling
Client: Eastleigh Borough Council	Co-ords: 449133.82, 116601.48	Checked By: DM	Rig: Archway Dart
Hydrock Project No: 332612639	Ground Level: 24.41m OD		Scale: 1:30

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrum-entation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
			0.20	ES			Grass over dark brown slightly clayey fine to coarse SAND with occasional rootlets and subangular to subrounded fine to coarse chalk and redbrick gravels. (TOPSOIL)	0.40	(0.40)	24.01		
			0.50 - 1.00	D			Firm orange brown mottled yellow brown sandy CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)	1.60	(1.20)	22.81		
1.20 - 2.00	101mm	100%	1.20	SPT	N=10 (0,1,3,3,2,2)							
			1.50 - 2.00	B			Brown mottled orange red thinly laminated clayey fine to coarse SAND. (WITTERING FORMATION - GRANULAR)	2.00	(0.40)	22.41		
2.00 - 3.00	92mm	100%	2.00	SPT	N=7 (1,1,1,2,2,2)		Stiff grey and blue grey thinly laminated sandy CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)		(3.45)			
3.00 - 4.00	79mm	95%	3.00	SPT	N=9 (2,2,2,2,2,3)							
			3.00	D								
4.00 - 5.00	70mm	90%	4.00	SPT	N=10 (2,1,1,2,3,4)							
			5.00	SPT	N=9 (2,2,2,2,3,2)							
			5.00	D				5.45		18.96		
							End of Borehole at 5.45m					

General Remarks:
1. Location cleared by third-party specialist and surveyed using a Lecia Geomax GPS. 2. Water strike encountered at 2.50m bgl during drilling - groundwater dipped at 4.50m bgl post drilling. 3. Drilled to 5.45m bgl. 4. Monitoring pipe installed - Response zone 1.0m to 5.0m bgl.

Logged in general accordance with BS5930:2015

Stantec	Project: Upper Acre, One Horton Heath	Borehole No WS1004 Page No. 1 of 1	
Method: Dynamic (Windowless) Sampler	Date(s): 02/09/2025	Logged By: LC	Drilled By: CK Drilling
Client: Eastleigh Borough Council	Co-ords: 449155.78, 116480.06	Checked By: DM	Rig: Archway Dart
Hydrock Project No: 332612639	Ground Level: 23.47m OD		Scale: 1:30

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrum-entation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
							Grass over dark brown slightly clayey fine to coarse SAND with frequent rootlets. (TOPSOIL)	0.30	(0.30)	23.17		
			0.50 - 1.00	B			Firm light brown slightly sandy CLAY with rare subangular fine to coarse flint gravels. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE)	0.50	(0.20)	22.97		
			0.50 - 1.00	D			Orange slightly clayey fine to coarse SAND. (WITTERING FORMATION - GRANULAR)	1.20	(0.70)	22.27		
1.20 - 2.00	101mm	100%	1.20	SPT	N=4 (0,0,1,1,1,1)		Soft orange brown mottled light grey sandy CLAY. Sand is fine to coarse. (WITTERING FORMATION - COHESIVE) *... At 1.30m bgl: Singular rounded coarse pebble.*	1.85	(0.65)	21.62		
			1.50	D			Orange brown fine to coarse SAND. (WITTERING FORMATION - GRANULAR)	2.00	(0.15)	21.47		
2.00 - 3.00	92mm	90%	2.00	SPT	N=7 (2,2,1,2,2,2)		Loose grey brown slightly clayey fine to coarse SAND. (WITTERING FORMATION - GRANULAR)	2.50	(0.50)	20.97		
3.00 - 4.00	79mm	40%	3.00	SPT	N=9 (0,0,2,2,2,3)		Stiff grey brown sandy CLAY. Sand is blue grey fine to coarse. (WITTERING FORMATION - COHESIVE) *... Between 2.70m and 3.00m bgl: Thinly laminated grey brown clayey SAND. Sand is yellow brown fine to coarse.*	3.90	(1.40)	19.57		
			3.00	D								
4.00 - 5.00	70mm	5%	4.00	SPT	N=9 (1,0,1,3,2,3)		Loose grey brown fine to coarse SAND. (WITTERING FORMATION - GRANULAR)	5.45	(1.55)	18.02		
			5.00	SPT	N=8 (1,1,1,2,2,3)		End of Borehole at 5.45m					
			5.00	D								

General Remarks:
1. Location cleared by third-party specialist and surveyed using a Lecia Geomax GPS. 2. Water strike encountered at 1.88m bgl during drilling - groundwater dipped at 1.70m bgl post drilling. 3. Drilled to 5.45m bgl. 4. Hole collapsed to 4.0m bgl during install of pipe. 5. Monitoring pipe installed - Response zone 1.0m to 4.0m bgl.

Logged in general accordance with BS5930:2015

Photographs

Photograph: 1	
Date: 02/09/2025	
Direction: NE	
Description: Hope and Clay muck away stockpile covering the south west area Upper Acre.	
Photograph: 2	
Date: 02/09/2025	
Direction: S	
Description: Hope and Clay muck away stockpile covering the south west area Upper Acre.	

Photograph: 3	
Date: 02/09/2025	
Direction: NE	
Description: Remainder of Upper Acre field to the North east.	
Photograph: 4	
Date: 02/09/2025	
Direction: N/A	
Description: WS1001 hand pit excavated to 1.20m bgl.	

Photograph: 5 Date: 02/09/2025 Direction: N/A Description: WS101 arisings from hand pit from	
Photograph: 6 Date: 02/09/2025 Direction: N/A Description: WS101 arisings drilled from 1.20m bgl to 5.45m bgl.	

Photograph: 7 Date: 02/09/2025 Direction: N/A Description: WS1002 hand pit excavated to 1.20 m bgl.	
Photograph: 8 Date: 02/09/2025 Direction: N/A Description: WS1002 hand pit arisings.	

Photograph: 9	
Date: 02/09/2025	
Direction: N/A	
Description: WS1002 arisings drilled from 1.20m to 5.45m bgl.	
Photograph: 10	
Date: 02/09/2025	
Direction: N/A	
Description: WS1003 hand pit excavated to 1.20m bgl.	

Photograph: 11	
Date: 02/09/2025	
Direction: N/A	
Description: WS1003 soil arisings from handpit.	
Photograph: 12	
Date: 02/09/2025	
Direction: N/A	
Description: WS1003 arisings drilled from 1.20m to 5.45m bgl.	

Photograph: 13 Date: 02/09/2025 Direction: N/A Description: WS1004 handpit excavated to 1.20m bgl.	
Photograph: 14 Date: 02/09/2025 Direction: N/A Description: WS1004 soil arisings from handpit.	

Photograph: 15	
Date: 02/09/2025	
Direction: N/A	
Description: WS1004 soil arisings drilled from 1.20m to 5.45m bgl.	
Photograph: 16	
Date: 03/09/2025	
Direction: S	
Description: TP1001 excavated to 3.40m bgl.	

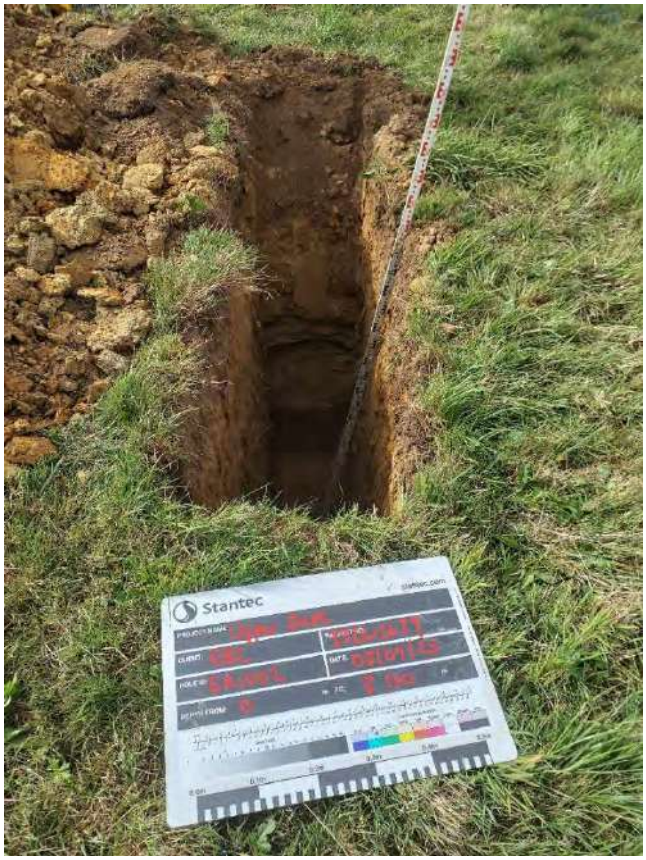
Photograph: 17 Date: 03/09/2025 Direction: SE Description: TP1001 soil arisings excavated from trial pit.	
Photograph: 18 Date: 03/09/2025 Direction: N/A Description: TP1001 excavated to 3.40m bgl.	

Photograph: 19	
Date: 03/09/2025	
Direction: W	
Description: TP1002 excavated to 3.40m bgl.	
Photograph: 20	
Date: 03/09/2025	
Direction: SW	
Description: TP1002 soil arisings from trial pit.	

Photograph: 21 Date: 03/09/2025 Direction: N/A Description: TP1002 excavated to 3.40m bgl.	
Photograph: 22 Date: 03/09/2025 Direction: S Description: TP1003 excavated to 3.20m bgl.	

Photograph: 23 Date: 03/09/2025 Direction: SE Description: TP1003 soil arisings from trial pit.	
Photograph: 24 Date: 03/09/2025 Direction: N/A Description: TP1003 excavated to 3.20m bgl.	

Photograph: 25	
Date: 03/09/2025	
Direction: N	
Description: TP1004 excavated to 3.40m bgl.	
Photograph: 26	
Date: 03/09/2025	
Direction: NW	
Description: TP1004 soil arisings excavated from trial pit.	

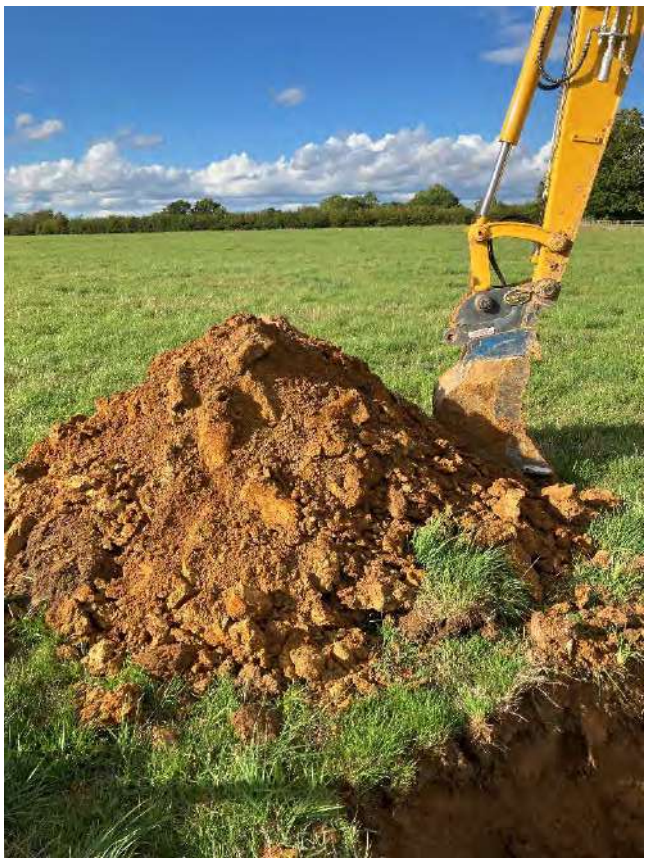
Photograph: 27	
Date: 03/09/2025	
Direction: N/A	
Description: TP1004 excavated to 3.40m bgl.	
Photograph: 28	
Date: 03/09/2025	
Direction: W	
Description: SA1002 excavated to 3.0m bgl. Backfilled with gravel to 2.0m bgl, and pipework and arisings to ground level to undertake soakaway testing.	

Photograph: 29 Date: 03/09/2025 Direction: SW Description: SA1002 soil arisings from trial pit.	
Photograph: 30 Date: 03/09/2025 Direction: N/A Description: SA1002 excavated to 3.0m bgl.	

Photograph: 31	
Date: 04/09/2025	
Direction: E	
Description: SA1001 excavated to 2.60m bgl.	
Photograph: 32	
Date: 04/09/2025	
Direction: SE	
Description: SA1001 soil arisings from trial pit.	

Photograph: 33	
Date: 04/09/2025	
Direction: N/A	
Description: SA1001A excavated to 2.60m bgl. Groundwater encountered at base.	
Photograph: 34	
Date: 04/09/2025	
Direction: E	
Description: SA1001A excavated to 2.40m bgl	

Photograph: 35	
Date: 04/09/2025	
Direction: NE	
Description: SA1001A soil arisings excavated from trial pit.	
Photograph: 36	
Date: 04/09/2025	
Direction: N/A	
Description: SA1001A excavated to 2.40m bgl. Groundwater seepage encountered at base.	

Photograph: 37 Date: 04/09/2025 Direction: E Description: SA1001B excavated to 2.0m bgl. Backfilled with gravel to 0.60m bgl with pipework and arisings to ground level to undertake soakaway testing.	
Photograph: 38 Date: 04/09/2025 Direction: N Description: SA1001B soil arisings excavated from trial pit	

Photograph: 39 Date: 04/09/2025 Direction: N/A Description: SA1001B excavated to 2.00m bgl	
Photograph: 40 Date: 04/09/2025 Direction: W Description: SA1003 excavated to 3.0m bgl. Backfilled with gravel to 1.90m bgl, pipework and arisings to ground level to undertake soakaway testing.	

Photograph: 41 Date: 04/09/2025 Direction: SW Description: SA1003 soil arisings excavated from trial pit.	
Photograph: 42 Date: 04/09/2025 Direction: N/A Description: SA1003 excavated to 3.0m bgl.	

Photograph: 43 Date: 04/09/2025 Direction: NE Description: SA1004 excavated to 1.50m bgl. Backfilled with gravel to 0.60m bgl, pipework and arisings to ground level to undertake soakaway testing.	
Photograph: 44 Date: 04/09/2025 Direction: N Description: SA1004 soil arisings excavated from trial pit	

Photograph: 45 Date: 04/092025 Direction: N/A Description: SA1004 excavated to 1.50m bgl.	
Photograph: 46 Date: 04/09/2025 Direction: N Description: SA1005 excavated to 1.60m bgl. Backfilled with gravel to 0.70m bgl, pipework and arisings to ground level to undertake soakaway testing.	

Photograph: 47	
Date: 04/09/2025	
Direction: NW	
Description: SA1005 soil arisings excavated from trial pit.	
Photograph: 48	
Date: 04/09/2025	
Direction: N/A	
Description: SA1005 excavated to 1.60m bgl.	

Photograph: 49	
Date: 05/09/2025	
Direction: SW	
Description: WS1001 borehole well installed with raised tophat cover.	
Photograph: 50	
Date: 11/09/2025	
Direction: S	
Description: WS1002 borehole well installed with raised tophat cover.	

Photograph: 51 Date: 05/09/2025 Direction: SE Description: WS1003 borehole well installed with raised tophat cover.	
Photograph: 52 Date: 05/09/2025 Direction: E Description: WS1004 borehole well installed with raised tophat cover.	

Appendix C Geotechnical test results

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022,
cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022,cl 5.2 and 6

4041

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	02/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	17/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

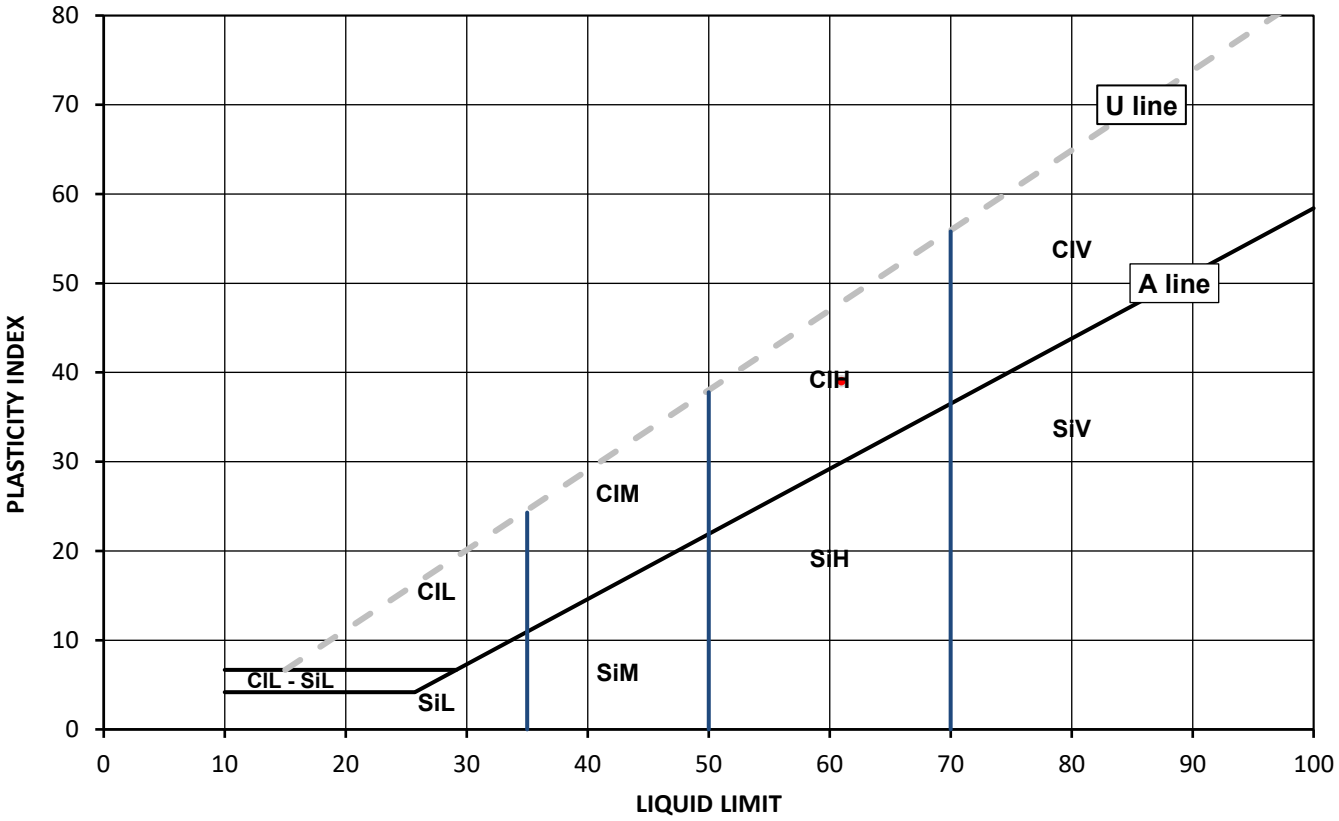
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676663	Depth Top [m]:	4.00
Hole No.:	WS1001	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown CLAY		

Sample Preparation: Tested in natural condition; The water content in the sample was increased
Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
33.0	61	22	39	0.28	0.72	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 EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

Remarks:

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.

Signed: Katarzyna Koziel
Geotechnical Reporting Team Leader
for and on behalf of i2 Analytical Ltd

 Date Reported: 01/10/2025 **GF 337.16**

i2 Analytical Ltd, Unit 8, Harrowden Road, Brackmills Industrial Estate, Northampton, NN4 7EB

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022,
cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022,cl 5.2 and 6

4041

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	02/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	17/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

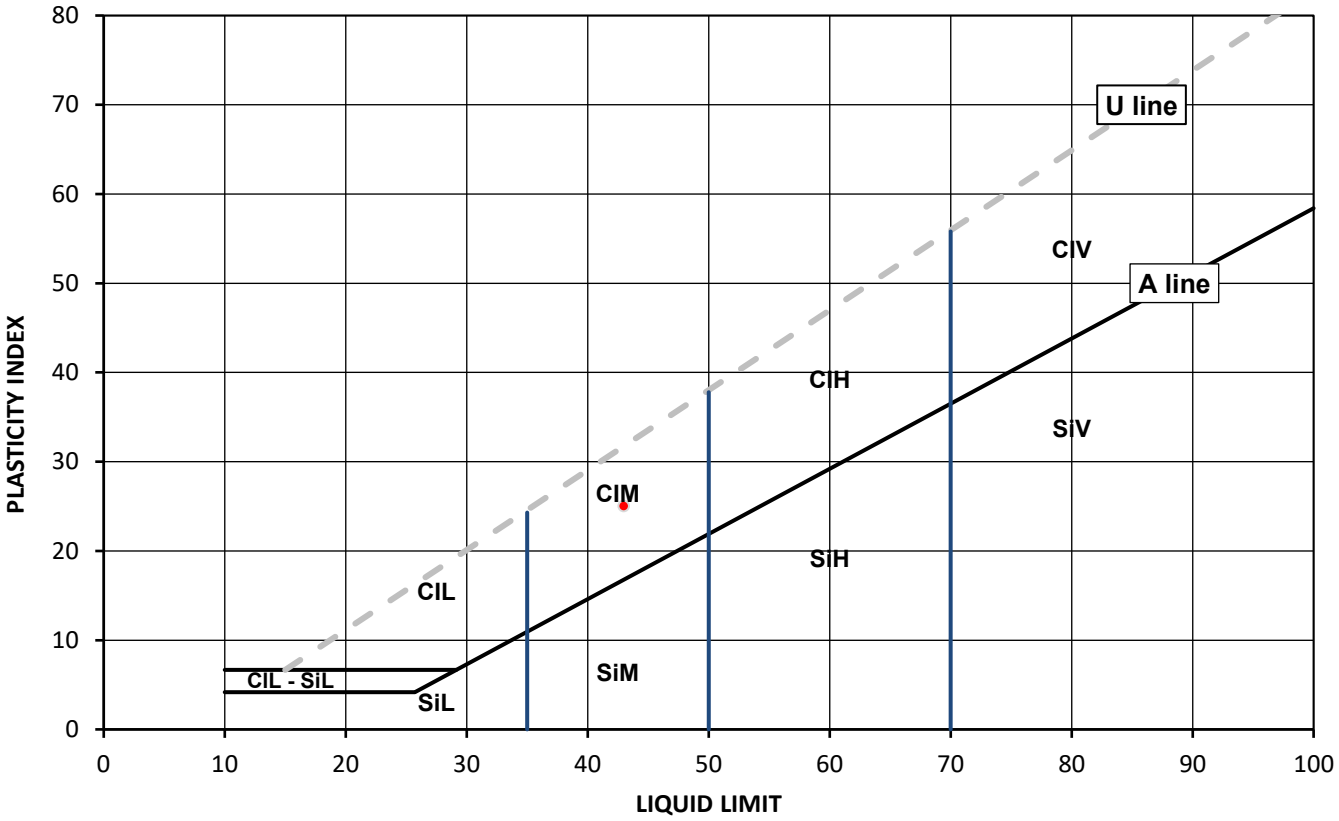
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676664	Depth Top [m]:	4.00
Hole No.:	WS1002	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown sandy CLAY		

Sample Preparation: Tested in natural condition; The water content in the sample was increased
Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
31.5	43	18	25	0.56	0.44	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 EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

Remarks:

Signed: Katarzyna Koziel
Geotechnical Reporting Team Leader
for and on behalf of i2 Analytical Ltd

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 Date Reported: 01/10/2025 **GF 337.16**

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022,
cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022,cl 5.2 and 6

4041

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	02/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	17/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

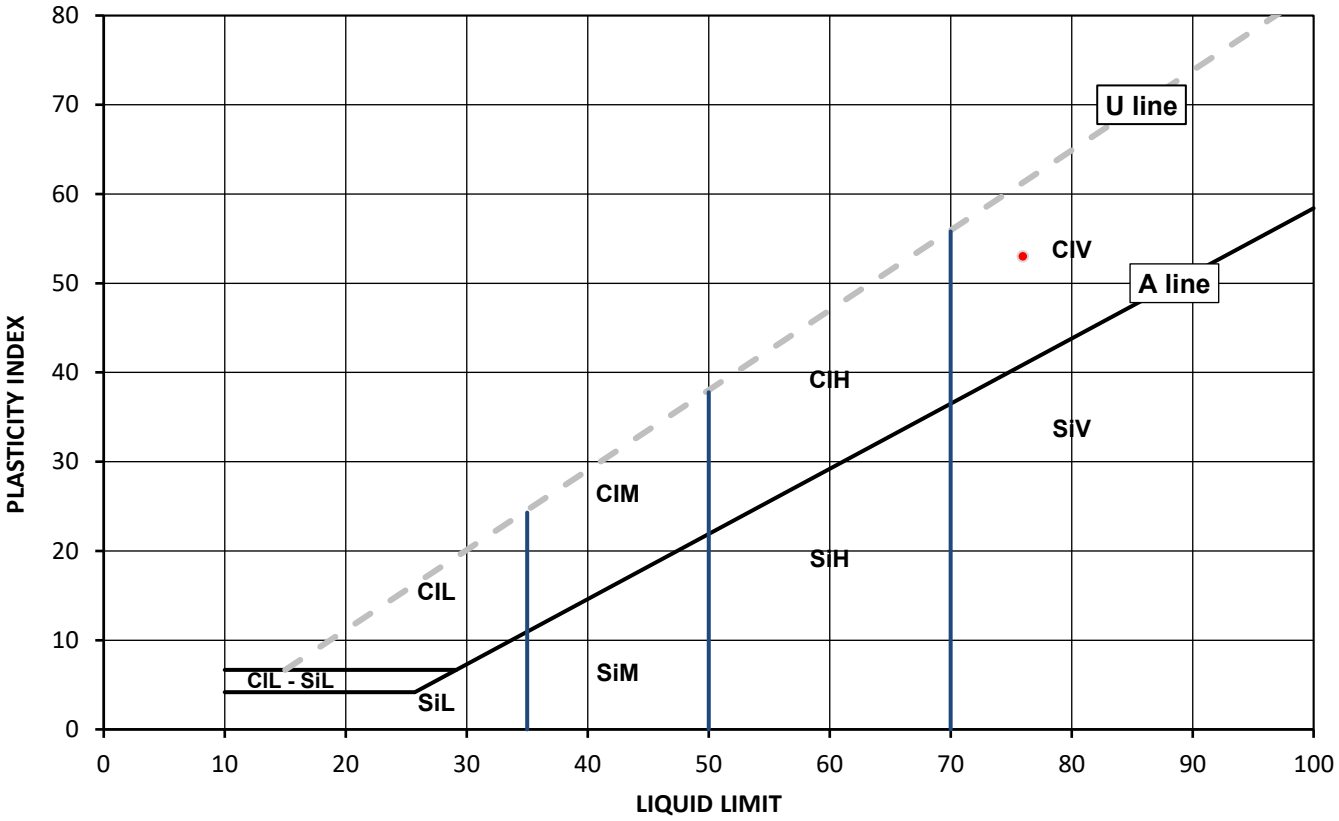
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676665	Depth Top [m]:	0.50
Hole No.:	WS1003	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown CLAY		

Sample Preparation: Tested in natural condition; The water content in the sample was increased
Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
30.4	76	23	53	0.13	0.87	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 EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

Remarks:

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Signed: Katarzyna Koziel
Katarzyna Koziel
Geotechnical Reporting Team Leader
for and on behalf of i2 Analytical Ltd

 Date Reported: 01/10/2025 **GF 337.16**

i2 Analytical Ltd, Unit 8, Harrowden Road, Brackmills Industrial Estate, Northampton, NN4 7EB

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022,
cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022,cl 5.2 and 6

4041

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	02/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	17/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

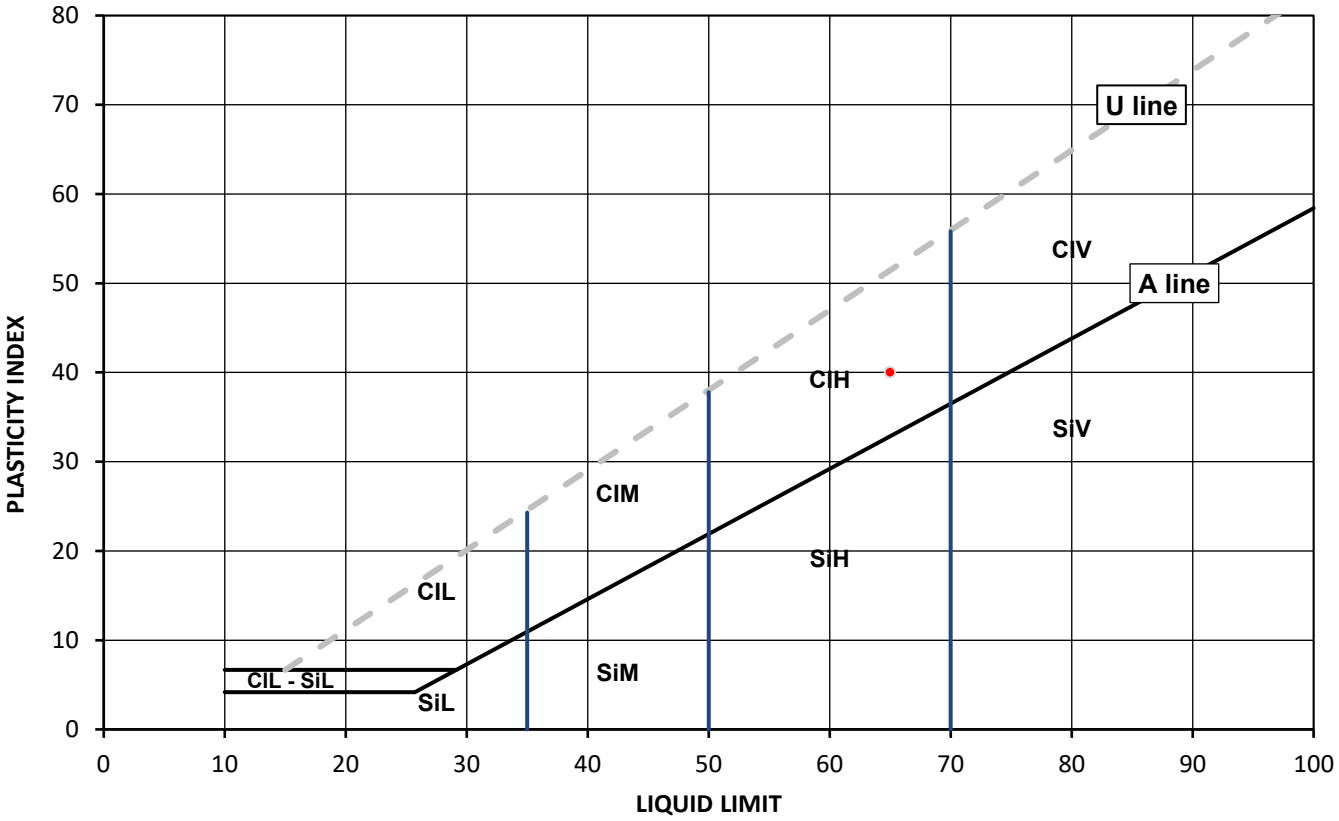
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676666	Depth Top [m]:	5.00
Hole No.:	WS1003	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown CLAY		

Sample Preparation: Tested in natural condition; The water content in the sample was increased
Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
30.3	65	25	40	0.13	0.88	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 EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

Remarks:

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Signed: Katarzyna Koziel
Geotechnical Reporting Team Leader
for and on behalf of i2 Analytical Ltd

 Date Reported: 01/10/2025 **GF 337.16**

i2 Analytical Ltd, Unit 8, Harrowden Road, Brackmills Industrial Estate, Northampton, NN4 7EB

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022,
cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022,cl 5.2 and 6

4041

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	02/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	17/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

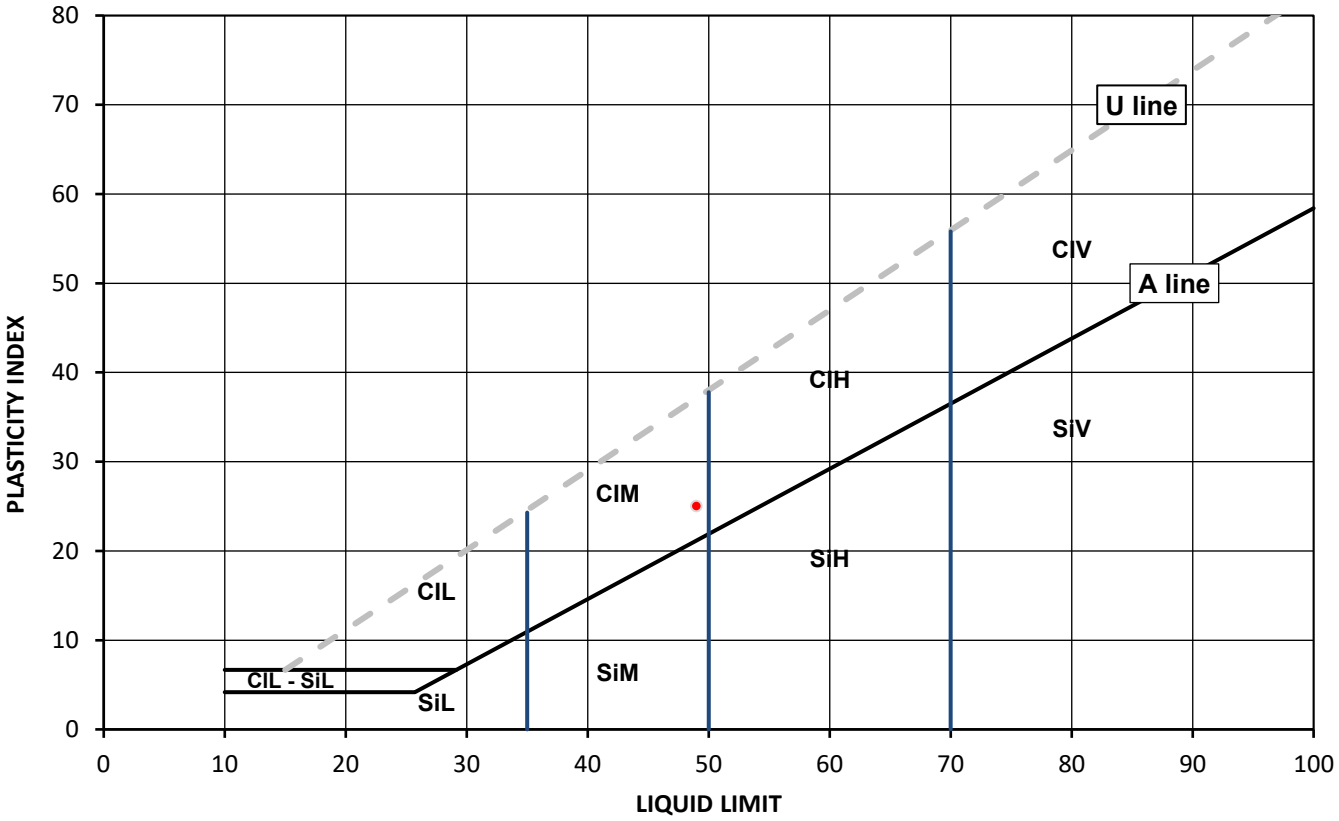
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676667	Depth Top [m]:	1.50
Hole No.:	WS1004	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown slightly sandy CLAY		

Sample Preparation: Tested in natural condition; The water content in the sample was increased
Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
35.1	49	24	25	0.44	0.56	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 EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

Remarks:

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 Date Reported: 01/10/2025 **GF 337.16**

i2 Analytical Ltd, Unit 8, Harrowden Road, Brackmills Industrial Estate, Northampton, NN4 7EB

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022,
cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022,cl 5.2 and 6

4041

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	03/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	17/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

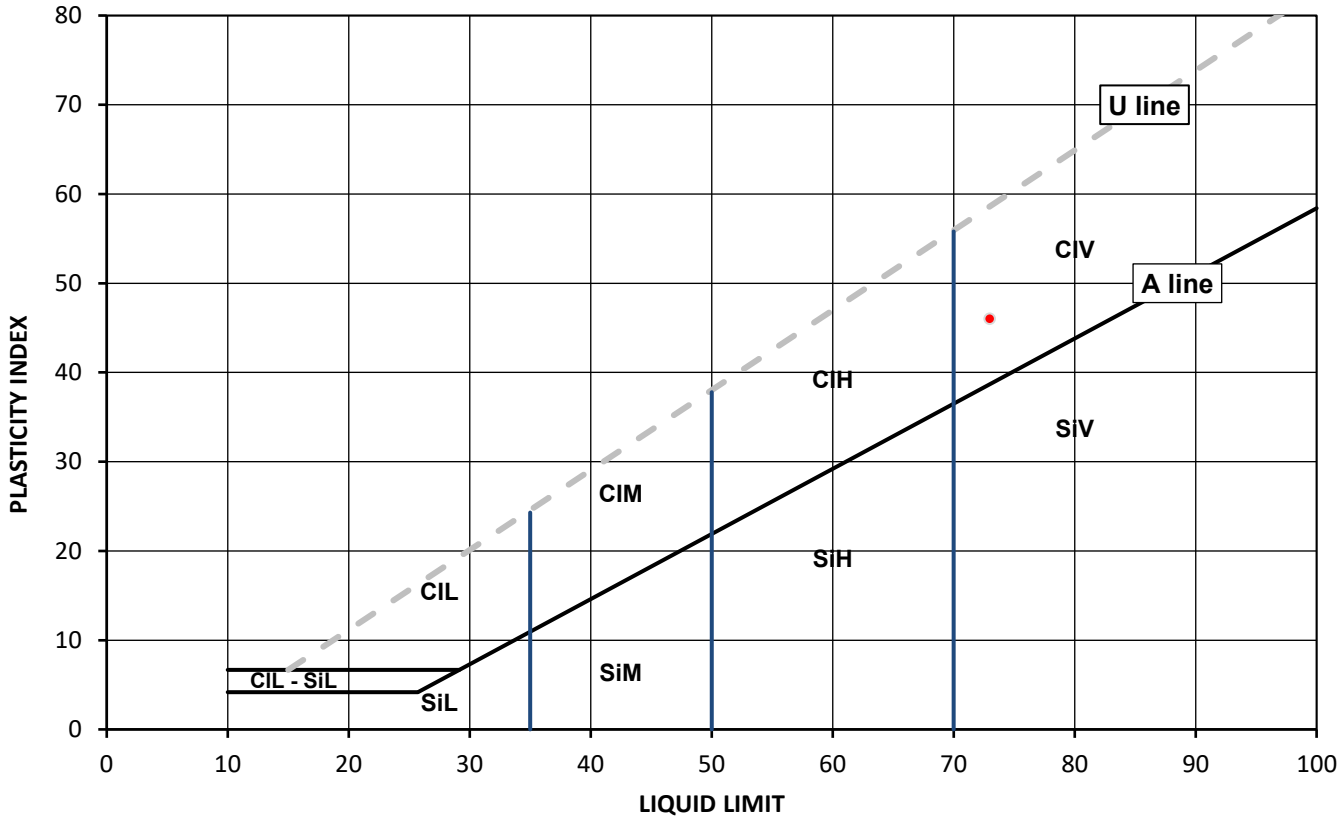
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676669	Depth Top [m]:	1.50
Hole No.:	TP1002	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown CLAY		

Sample Preparation: Tested in natural condition; The water content in the sample was increased
Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
35.6	73	27	46	0.20	0.80	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 EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

Remarks:

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Geotechnical Reporting Team Leader
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 Date Reported: 01/10/2025 **GF 337.16**

i2 Analytical Ltd, Unit 8, Harrowden Road, Brackmills Industrial Estate, Northampton, NN4 7EB

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022,
cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022,cl 5.2 and 6

4041

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	03/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	18/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

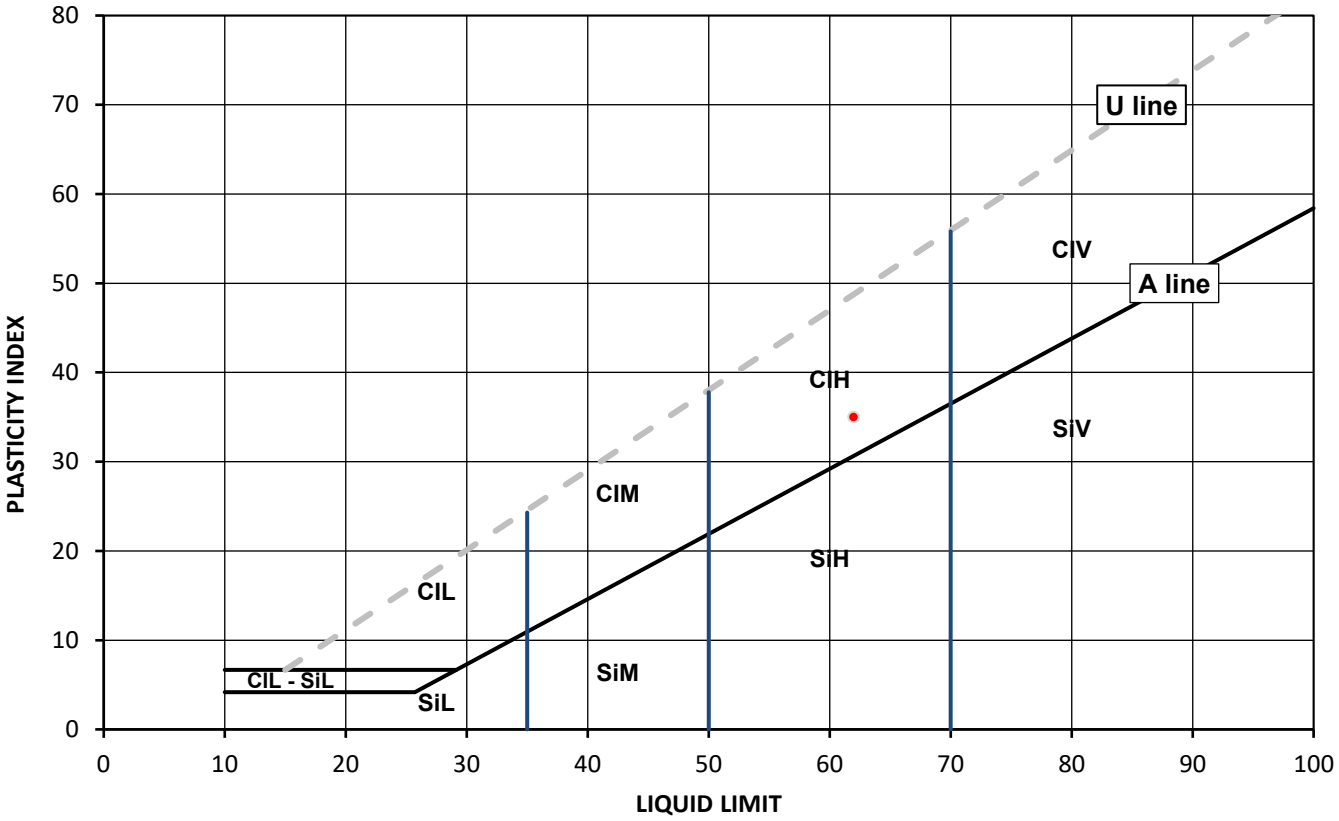
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676671	Depth Top [m]:	2.50
Hole No.:	TP1002	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	B
Sample Description:	Light brown CLAY		

Sample Preparation: Tested in natural condition; The water content in the sample was increased
Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
43.9	62	27	35	0.49	0.51	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 EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

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TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022,
cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022,cl 5.2 and 6

4041

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	03/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	17/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

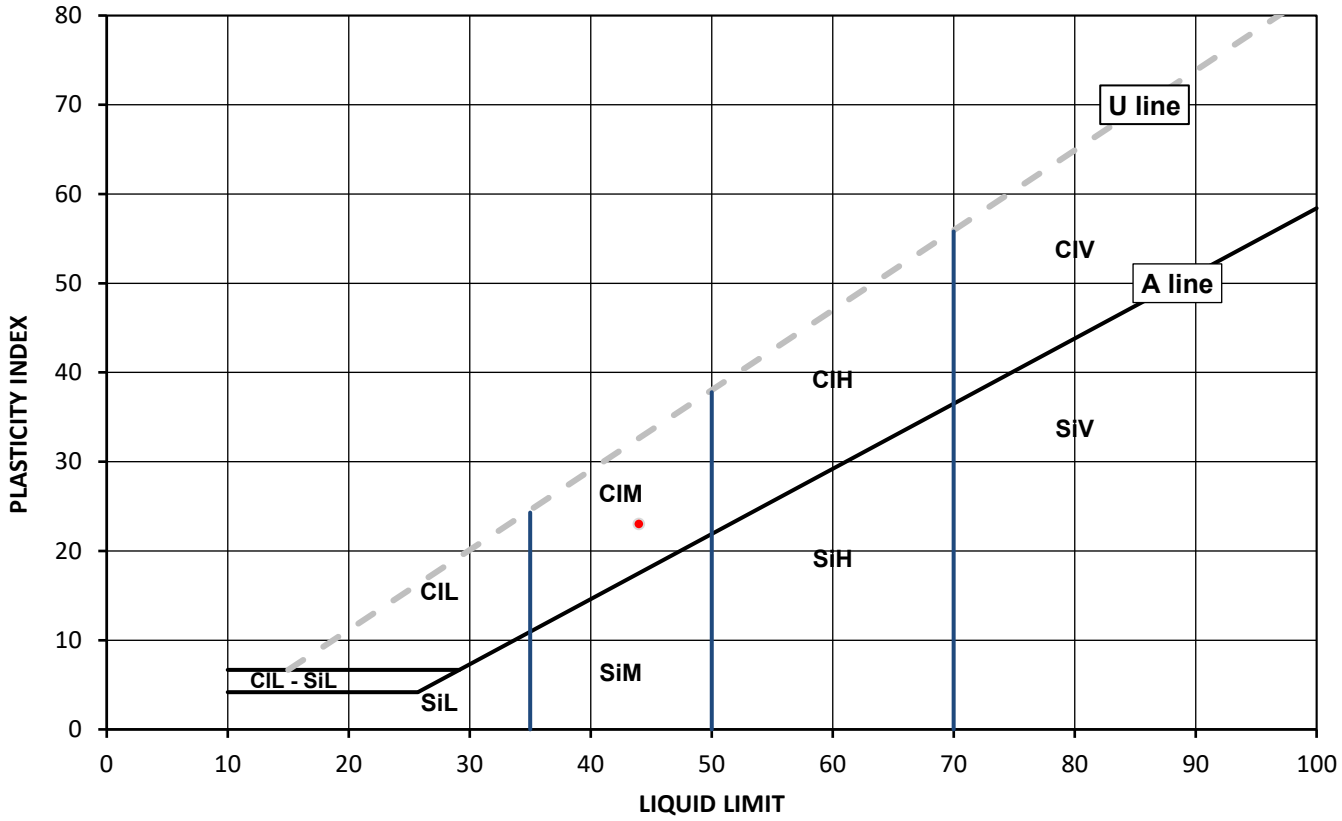
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676672	Depth Top [m]:	0.50
Hole No.:	TP1004	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown slightly gravelly sandy CLAY with roots		

Sample Preparation: Tested after >0.425mm removed by hand; The water content in the sample was increased
Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
13.6	44	21	23	-0.30	1.30	94



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 EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

Remarks:

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 Date Reported: 01/10/2025 **GF 337.16**

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022,
cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022,cl 5.2 and 6

4041

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	03/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	17/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

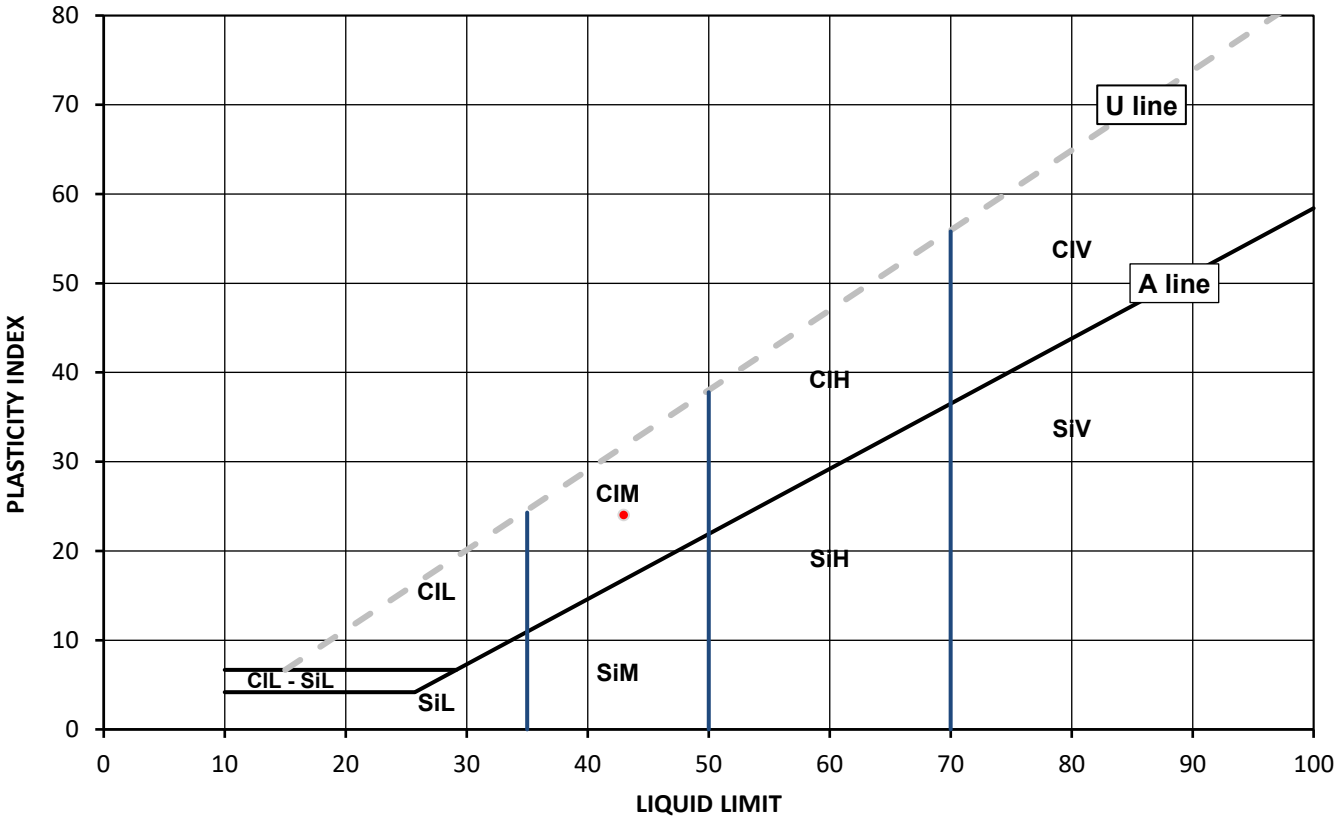
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676673	Depth Top [m]:	2.20
Hole No.:	TP1004	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown sandy CLAY		

Sample Preparation: Tested in natural condition; The water content in the sample was increased
Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
34.5	43	19	24	0.67	0.33	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 EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

Remarks:

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 Date Reported: 01/10/2025 **GF 337.16**

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022,
cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022,cl 5.2 and 6

4041

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	04/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	18/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

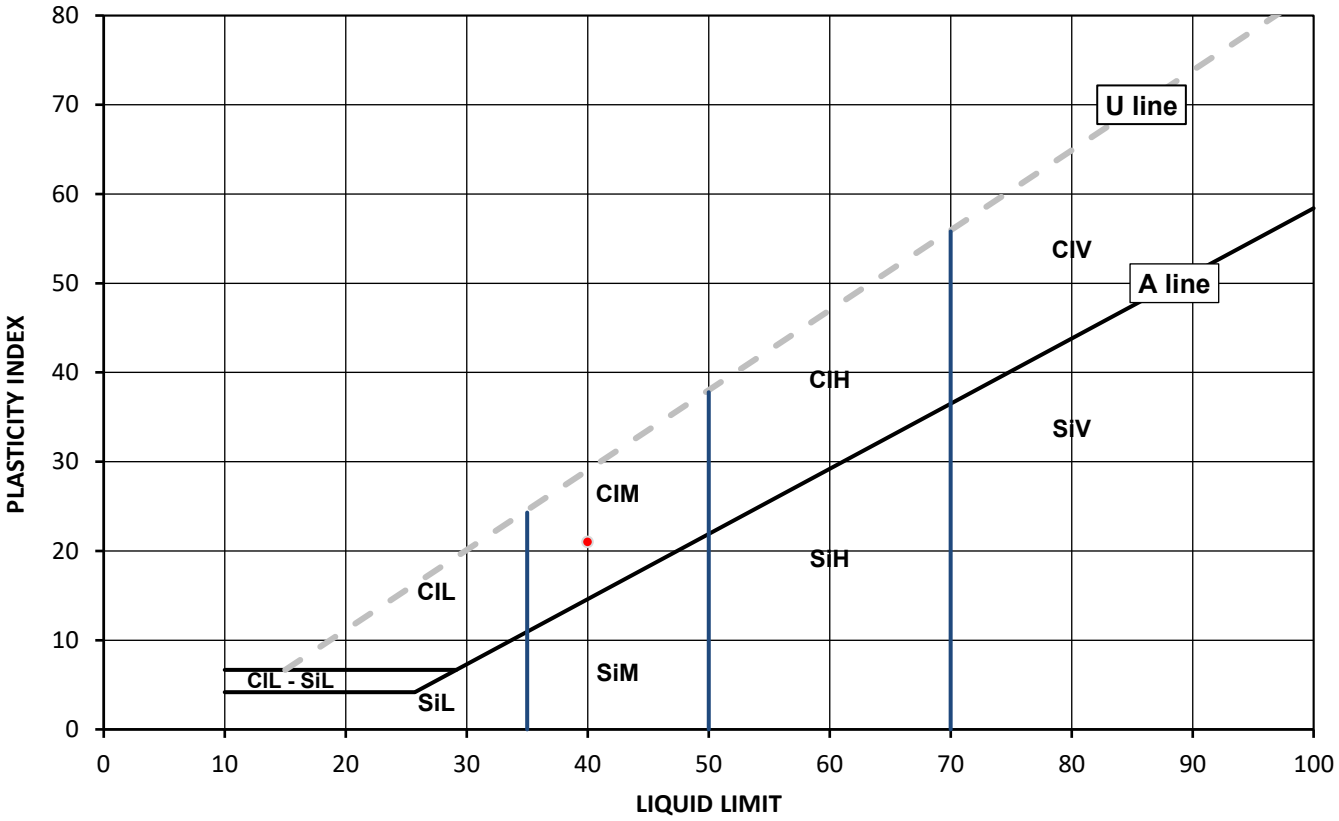
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676675	Depth Top [m]:	0.50
Hole No.:	SA1003	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	B
Sample Description:	Yellowish brown slightly gravelly sandy silty CLAY		

Sample Preparation: Tested after >0.425mm removed by hand; The water content in the sample was increased
Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
13.6	40	19	21	-0.24	1.24	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 EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

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for and on behalf of i2 Analytical Ltd

 Date Reported: 01/10/2025 **GF 337.16**

i2 Analytical Ltd, Unit 8, Harrowden Road, Brackmills Industrial Estate, Northampton, NN4 7EB

SUMMARY REPORT

SUMMARY OF CLASSIFICATION TEST RESULTS

Tested in Accordance with:

4041

BS EN ISO 17892-12:2018+A2:2022 cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022, cl 5.2 and 6. W by BS EN ISO 17892-1:2014+A1:2022.

Client: Hydrock Consultants Ltd

Client Address: Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP

Contact: Lily Cherry

Site Address: Upper Acre, One Horton Heath

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 332612639
Job Number: 25-048528-1
Date Sampled: 02/09 - 03/09/2025
Date Received: 08/09/2025
Date Tested: 17/09 - 18/09/2025
Sampled By: Client - LC

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	W	Liquid & Plastic Limit							Density		
		Reference	Depth Top m	Depth Base m	Type			%	% Passing 425um %	WL* %	Correlation Factor	Wp %	Ip %	Cone type	Sample Preparation	bulk Mg/m3	dry Mg/m3	PD Mg/m3
676663	WS1001	Not Given	4.00	Not Given	D	Brown CLAY	Atterberg 4 Point	33.0	100	61	-	22	39	80g/30 deg	N / I			
676664	WS1002	Not Given	4.00	Not Given	D	Brown sandy CLAY	Atterberg 4 Point	31.5	100	43	-	18	25	80g/30 deg	N / I			
676665	WS1003	Not Given	0.50	Not Given	D	Brown CLAY	Atterberg 4 Point	30.4	100	76	-	23	53	80g/30 deg	N / I			
676666	WS1003	Not Given	5.00	Not Given	D	Brown CLAY	Atterberg 4 Point	30.3	100	65	-	25	40	80g/30 deg	N / I			
676667	WS1004	Not Given	1.50	Not Given	D	Brown slightly sandy CLAY	Atterberg 4 Point	35.1	100	49	-	24	25	80g/30 deg	N / I			
676668	TP1001	Not Given	3.00	Not Given	B	Light brown slightly gravelly slightly sandy clayey SILT		34.4										
676669	TP1002	Not Given	1.50	Not Given	D	Brown CLAY	Atterberg 4 Point	35.6	100	73	-	27	46	80g/30 deg	N / I			
676671	TP1002	Not Given	2.50	Not Given	B	Light brown CLAY	Atterberg 4 Point	43.9	100	62	-	27	35	80g/30 deg	N / I			
676672	TP1004	Not Given	0.50	Not Given	D	Brown slightly gravelly sandy CLAY with roots	Atterberg 4 Point	13.6	94	44	-	21	23	80g/30 deg	R / I			
676673	TP1004	Not Given	2.20	Not Given	D	Brown sandy CLAY	Atterberg 4 Point	34.5	100	43	-	19	24	80g/30 deg	N / I			

Note: # Non accredited; NP - Non plastic; N - Tested in natural condition, R - Tested after >0,425mm removed by hand, WR - Tested after washing to remove >425mm; I - The water content in the sample was increased , D - The water content in the sample was decreased; * - One point liquid limit corrected as per the report Correlation Factor by Clayton C.R.I and Jukes A.W (1978)

Comments:

Signed:

Katarzyna Koziel
Geotechnical Reporting Team Leader
for and on behalf of i2 Analytical Ltd

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Date Reported: 01/10/2025 **GF 362.17**

SUMMARY REPORT

SUMMARY OF CLASSIFICATION TEST RESULTS

Tested in Accordance with:

BS EN ISO 17892-12:2018+A2:2022 cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022, cl 5.2 and 6. W by BS EN ISO 17892-1:2014+A1:2022.

4041

Client: Hydrock Consultants Ltd

Client Address: Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP

Contact: Lily Cherry

Site Address: Upper Acre, One Horton Heath

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 332612639
Job Number: 25-048528-1
Date Sampled: 03/09 - 04/09/2025
Date Received: 08/09/2025
Date Tested: 18/09/2025
Sampled By: Client - LC

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	W	Liquid & Plastic Limit							Density		
		Reference	Depth Top	Depth Base	Type				% Passing 425um	WL*	Correlation Factor	Wp	Ip	Cone type	Sample Preparation	bulk	dry	PD
			m	m				%	%	%		%	%			Mg/m3	Mg/m3	Mg/m3
676674	SA1002	Not Given	3.00	Not Given	B	Yellowish brown sandy clayey SILT		33.8										
676675	SA1003	Not Given	0.50	Not Given	B	Yellowish brown slightly gravelly sandy silty CLAY	Atterberg 4 Point	13.6	97	40	-	19	21	80g/30 deg	R / I			

Note: # Non accredited; NP - Non plastic; N - Tested in natural condition, R - Tested after >0,425mm removed by hand, WR - Tested after washing to remove >425mm; I - The water content in the sample was increased , D - The water content in the sample was decreased; * - One point liquid limit corrected as per the report Correlation Factor by Clayton C.R.I and Jukes A.W (1978)

Comments:

Signed:

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Date Reported: 01/10/2025 **GF 362.17**

SUMMARY REPORT

DETERMINATION OF WATER CONTENT

Tested in Accordance with: BS EN ISO 17892-1:2014+A1:2022, BS 1377-2: 2022, clause 4.1

4041

Client: Hydrock Consultants Ltd

Client Address: Suite 8, White Building,
1-4 Cumberland Place, Southampton,
Hampshire, SO15 2NP

Contact: Lily Cherry

Site Address: Upper Acre, One Horton Heath

Client Reference: 332612639
Job Number: 25-048528-1
Date Sampled: 02/09 - 03/09/2025
Date Received: 08/09/2025
Date Tested: 17/09 - 18/09/2025
Sampled By: Client - LC

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	WC											
		Reference	Depth Top m	Depth Base m	Type			%											
676663	WS1001	Not Given	4.00	Not Given	D	Brown CLAY		33.0											
676664	WS1002	Not Given	4.00	Not Given	D	Brown sandy CLAY		31.5											
676665	WS1003	Not Given	0.50	Not Given	D	Brown CLAY		30.4											
676666	WS1003	Not Given	5.00	Not Given	D	Brown CLAY		30.3											
676667	WS1004	Not Given	1.50	Not Given	D	Brown slightly sandy CLAY		35.1											
676668	TP1001	Not Given	3.00	Not Given	B	Light brown slightly gravelly slightly sandy clayey SILT		34.4											
676669	TP1002	Not Given	1.50	Not Given	D	Brown CLAY		35.6											
676671	TP1002	Not Given	2.50	Not Given	B	Light brown CLAY		43.9											
676672	TP1004	Not Given	0.50	Not Given	D	Brown slightly gravelly sandy CLAY with roots		13.6											
676673	TP1004	Not Given	2.20	Not Given	D	Brown sandy CLAY		34.5											

Comments:

Signed:

Katarzyna Koziel
Geotechnical Reporting Team Leader
for and on behalf of i2 Analytical Ltd

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Date Reported: 01/10/2025

GF 126.20

SUMMARY REPORT

DETERMINATION OF WATER CONTENT

Tested in Accordance with: BS EN ISO 17892-1:2014+A1:2022, BS 1377-2: 2022, clause 4.1

4041

Client: Hydrock Consultants Ltd

Client Address: Suite 8, White Building,
1-4 Cumberland Place, Southampton,
Hampshire, SO15 2NP

Contact: Lily Cherry

Site Address: Upper Acre, One Horton Heath

Client Reference: 332612639
Job Number: 25-048528-1
Date Sampled: 03/09 - 04/09/2025
Date Received: 08/09/2025
Date Tested: 18/09/2025
Sampled By: Client - LC

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	WC											
		Reference	Depth Top m	Depth Base m	Type			%											
676674	SA1002	Not Given	3.00	Not Given	B	Yellowish brown sandy clayey SILT		33.8											
676675	SA1003	Not Given	0.50	Not Given	B	Yellowish brown slightly gravelly sandy silty CLAY		13.6											

Comments:

Signed:

Katarzyna Koziel
Geotechnical Reporting Team Leader
for and on behalf of i2 Analytical Ltd

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Date Reported: 01/10/2025

GF 126.20

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS EN ISO 17892-4:2016, BS 1377-2:2022 cl. 10

4041

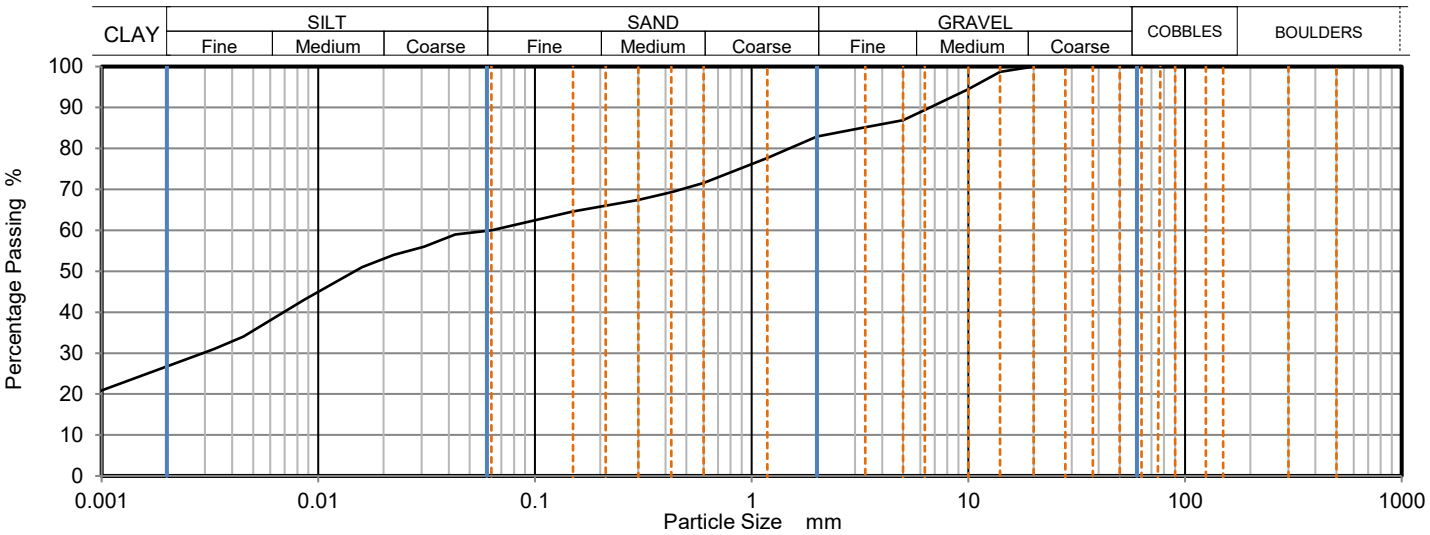
Normec i2 Analytical

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	03/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	18/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676668	Depth Top [m]:	3.00
Hole No.:	TP1001	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	B
Sample Description:	Light brown slightly gravelly slightly sandy clayey SILT		
Sample Preparation:	Sample was quartered, oven dried at 107.1 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0428	59
300	100	0.0308	56
150	100	0.0222	54
125	100	0.0159	51
90	100	0.0086	43
75	100	0.0045	34
63	100	0.0033	31
50	100	0.0008	19
37.5	100		
28	100		
20	100		
14	99		
10	95		
6.3	89		
5	87		
3.35	85		
2	83		
1.18	78		
0.6	72	Particle density	(assumed)
0.425	69	2.65	Mg/m3
0.3	67		
0.212	66		
0.15	65		
0.063	60		

Sample Proportions	% dry mass
Very coarse	0
Gravel	17
Sand	23
Silt	33
Clay	27

Grading Analysis		
D100	mm	20
D60	mm	0.0624
D30	mm	0.00305
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with ISO 17892 -4, by sieving and hydrometer sedimentation

Remarks:

Signed: Katarzyna Koziel

Katarzyna Koziel
Geotechnical Reporting Team Leader
for and on behalf of i2 Analytical Ltd

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 Date Reported: 01/10/2025 **GF 366.13**

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS EN ISO 17892-4:2016, BS 1377-2:2022 cl. 10

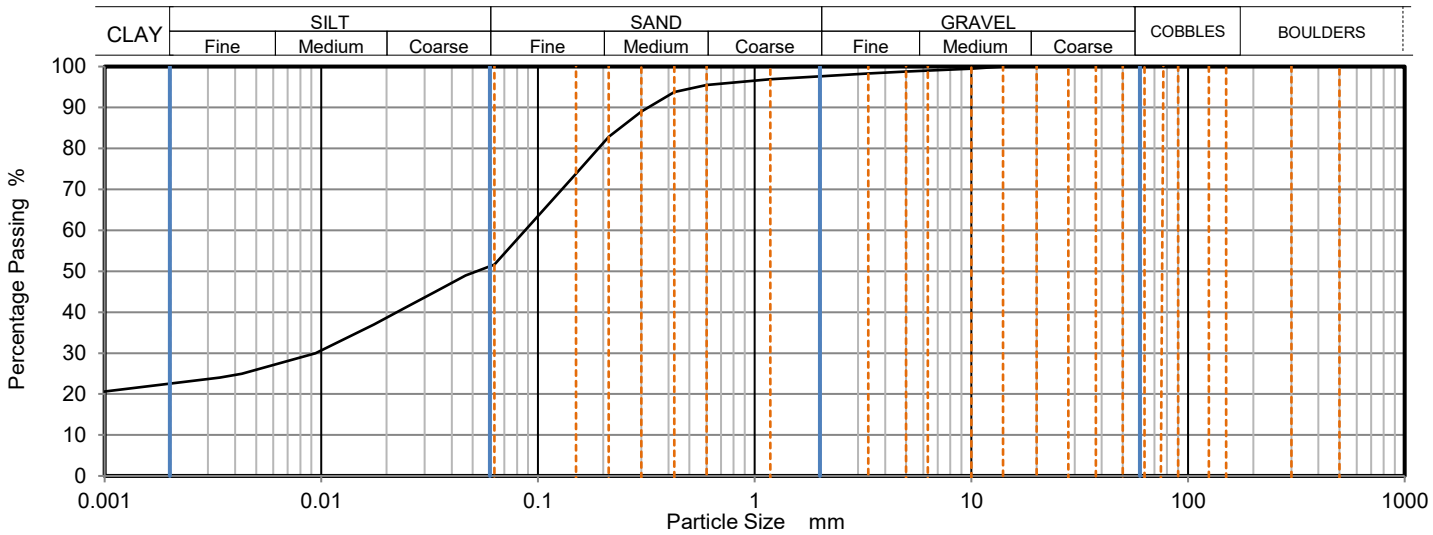
4041

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	03/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	18/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676670	Depth Top [m]:	1.80
Hole No.:	TP1002	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	B
Sample Description:	Yellowish brown slightly gravelly sandy clayey SILT		
Sample Preparation:	Sample was quartered, oven dried at 107.1 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0463	49
300	100	0.0335	45
150	100	0.0242	41
125	100	0.0175	37
90	100	0.0094	30
75	100	0.0043	25
63	100	0.0034	24
50	100	0.0008	20
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	99		
5	99		
3.35	98		
2	98		
1.18	97		
0.6	96	Particle density	(assumed)
0.425	94	2.65	Mg/m3
0.3	89		
0.212	83		
0.15	74		
0.063	52		

Sample Proportions	% dry mass
Very coarse	0
Gravel	2
Sand	47
Silt	29
Clay	22

Grading Analysis		
D100	mm	14
D60	mm	0.0874
D30	mm	0.00969
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with ISO 17892 -4, by sieving and hydrometer sedimentation

Remarks:

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.

Signed: Katarzyna Koziel

Katarzyna Koziel
Geotechnical Reporting Team Leader
for and on behalf of i2 Analytical Ltd

 Date Reported: 01/10/2025 **GF 366.13**

i2 Analytical Ltd, Unit 8, Harrowden Road, Brackmills Industrial Estate, Northampton, NN4 7EB

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS EN ISO 17892-4:2016, BS 1377-2:2022 cl. 10

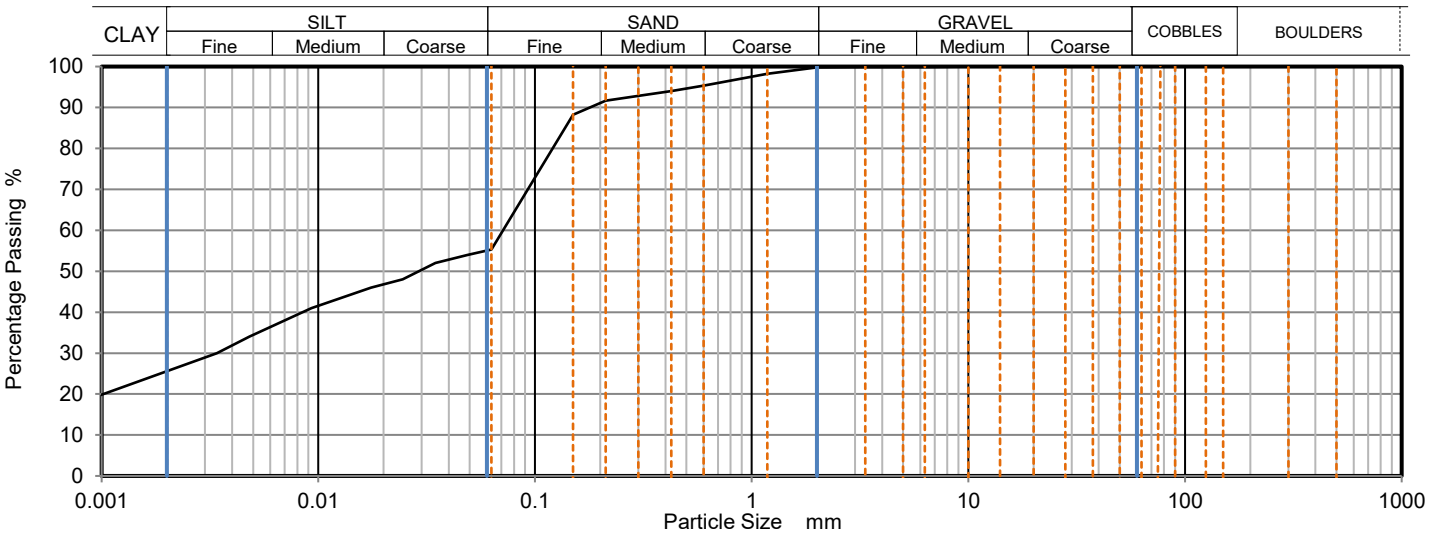
4041

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	03/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	18/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676674	Depth Top [m]:	3.00
Hole No.:	SA1002	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	B
Sample Description:	Yellowish brown sandy clayey SILT		
Sample Preparation:	Sample was quartered, oven dried at 107.1 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0487	54
300	100	0.0347	52
150	100	0.0245	48
125	100	0.0175	46
90	100	0.0093	41
75	100	0.0048	34
63	100	0.0034	30
50	100	0.0008	18
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	98		
0.6	95	Particle density	(assumed)
0.425	94	2.65	Mg/m3
0.3	93		
0.212	92		
0.15	88		
0.063	55		

Sample Proportions	% dry mass
Very coarse	0
Gravel	0
Sand	44
Silt	30
Clay	26

Grading Analysis		
D100	mm	10
D60	mm	0.0713
D30	mm	0.00328
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with ISO 17892 -4, by sieving and hydrometer sedimentation

Remarks:

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Signed: Katarzyna Koziel

Katarzyna Koziel
Geotechnical Reporting Team Leader
for and on behalf of i2 Analytical Ltd

 Date Reported: 01/10/2025 **GF 366.13**

i2 Analytical Ltd, Unit 8, Harrowden Road, Brackmills Industrial Estate, Northampton, NN4 7EB

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS EN ISO 17892-4:2016, BS 1377-2:2022 cl. 10

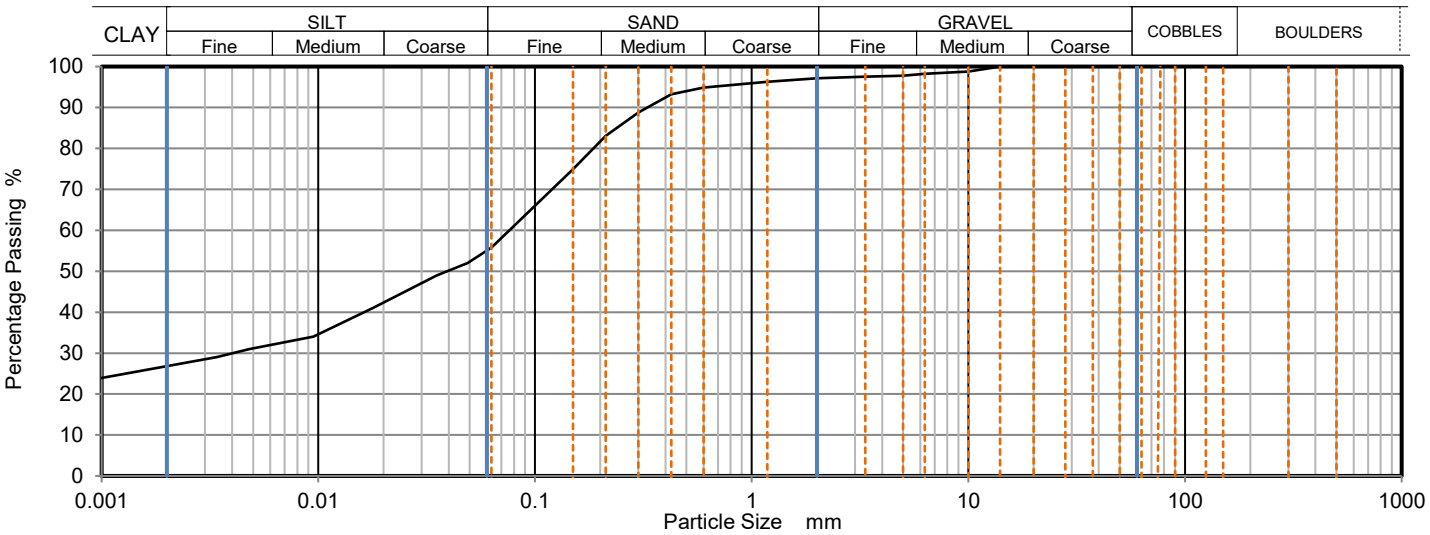
4041

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	04/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	18/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676675	Depth Top [m]:	0.50
Hole No.:	SA1003	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	B
Sample Description:	Yellowish brown slightly gravelly sandy silty CLAY		
Sample Preparation:	Sample was quartered, oven dried at 107.1 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0490	52
300	100	0.0352	49
150	100	0.0250	45
125	100	0.0178	41
90	100	0.0095	34
75	100	0.0048	31
63	100	0.0034	29
50	100	0.0008	23
37.5	100		
28	100		
20	100		
14	100		
10	99		
6.3	98		
5	98		
3.35	98		
2	97		
1.18	96		
0.6	95	Particle density	(assumed)
0.425	93	2.65	Mg/m3
0.3	89		
0.212	83		
0.15	75		
0.063	56		

Sample Proportions	% dry mass
Very coarse	0
Gravel	3
Sand	41
Silt	29
Clay	27

Grading Analysis		
D100	mm	14
D60	mm	0.0761
D30	mm	0.00427
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with ISO 17892 -4, by sieving and hydrometer sedimentation

Remarks:

Signed:

Katarzyna Koziel
Geotechnical Reporting Team Leader
for and on behalf of i2 Analytical Ltd

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 Date Reported: 01/10/2025 **GF 366.13**

TEST CERTIFICATE

DETERMINATION OF DRY DENSITY/WATER CONTENT RELATIONSHIP COMPACTION METHOD USING 2.5 KG RAMMER

Tested in Accordance with: BS 1377-2: 2022, cl.11

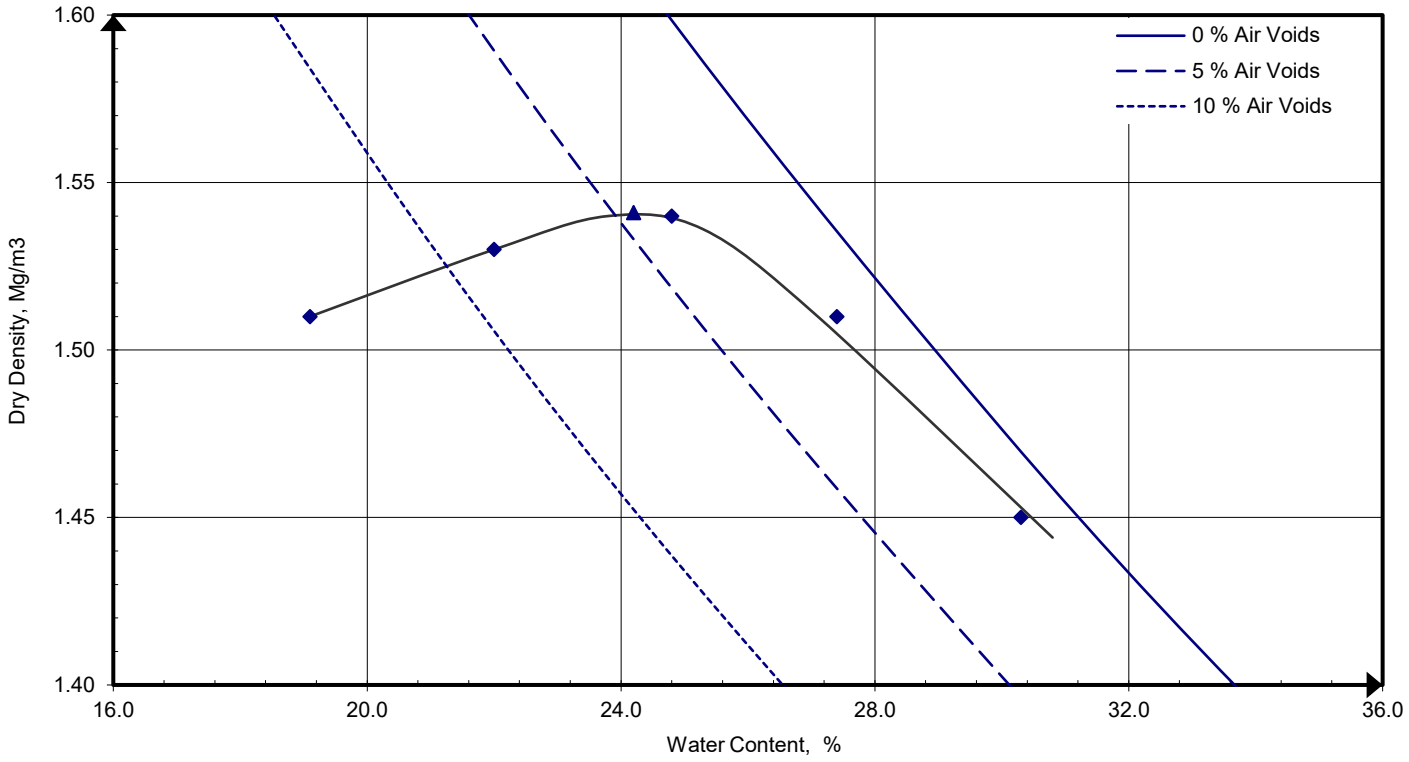
4041

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	03/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	26/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676668	Depth Top [m]:	3.00
Hole No.:	TP1001	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	B
Sample Description:	Light brown slightly gravelly slightly sandy clayey SILT		
Sample Preparation:	Sample was quartered and broken down by hand. Material used was natural.		



Compaction Point No.		1	2	3	4	5
Water Content	%	19.1	22.0	24.8	27.4	30.3
Dry Density	Mg/m³	1.51	1.53	1.54	1.51	1.45

Grading zone	1
Mould Type	1 Litre
Samples Used	Single sample tested

Material Retained on 37.5 mm Sieve	%	0
Material Retained on 20.0 mm Sieve	%	0
Particle Density - Assumed	Mg/m³	2.65
As received Water Content	%	34.4
Maximum Dry Density	Mg/m³	**1.54**

Optimum Water Content	%	**24**

Note: BS 1377-2:2022, cl 11.3

Remarks:

Signed: Katarzyna Koziel

Katarzyna Koziel
Geotechnical Reporting Team Leader
for and on behalf of i2 Analytical Ltd

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 Date Reported: 01/10/2025 **GF 599.3**

i2 Analytical Ltd, Unit 8, Harrowden Road, Brackmills Industrial Estate, Northampton, NN4 7EB

TEST CERTIFICATE

DETERMINATION OF DRY DENSITY/WATER CONTENT RELATIONSHIP COMPACTION METHOD USING 2.5 KG RAMMER

Tested in Accordance with: BS 1377-2: 2022, cl.11

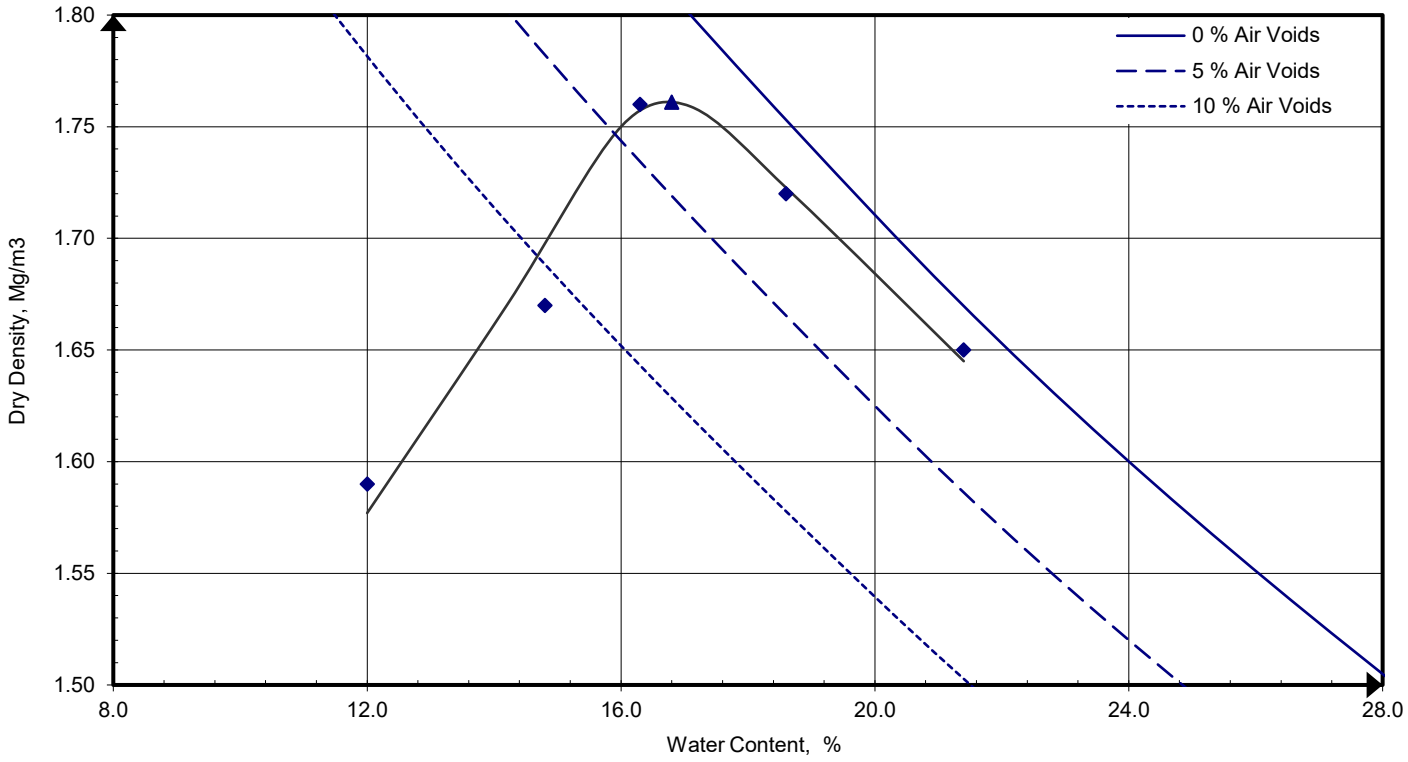
4041

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	04/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	26/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676675	Depth Top [m]:	0.50
Hole No.:	SA1003	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	B
Sample Description:	Yellowish brown slightly gravelly sandy silty CLAY		
Sample Preparation:	Sample was quartered and broken down by hand. Material used was natural.		



Compaction Point No.		1	2	3	4	5
Water Content	%	12.0	14.8	16.3	18.6	21.4
Dry Density	Mg/m³	1.59	1.67	1.76	1.72	1.65

Grading zone	1
Mould Type	1 Litre
Samples Used	Single sample tested

Material Retained on 37.5 mm Sieve	%	0
Material Retained on 20.0 mm Sieve	%	0
Particle Density - Assumed	Mg/m³	2.60
As received Water Content	%	13.6
Maximum Dry Density	Mg/m³	**1.76**

Optimum Water Content	%	**17**

Note: BS 1377-2:2022, cl 11.3

Remarks:

Signed: Katarzyna Koziel

Katarzyna Koziel
Geotechnical Reporting Team Leader
for and on behalf of i2 Analytical Ltd

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 Date Reported: 01/10/2025 **GF 599.3**

TEST CERTIFICATE

DETERMINATION OF UNDRAINED SHEAR STRENGTH AT EACH COMPACTION POINT USING HAND VANE APPARATUS

Tested in Accordance with: Guideline for Hand Shear Vane Test*

Normec i2 Analytical

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	03/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	26/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676668	Depth Top [m]:	3.00
Hole No.:	TP1001	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	B
Soil Description:	Light brown slightly gravelly slightly sandy clayey SILT		

Moisture Content %	Shear Vane Reading 1 kPa	2 kPa	3 kPa	4 kPa	Average kPa	Tv kPa
19	UTP	UTP	UTP	UTP	UTP	
22	UTP	UTP	UTP	UTP	UTP	
25	>130	>130	>130	>130	130	
27	118	98	112	92	105	
30	68	70	60	72	68	

Note: UTP - Unable To Penetrate; * - Guideline for Hand Held Shear Vane Test, New Zealand Geotechnical Society INC, August 2001

Remarks: Compacted by: Light Compaction (BS 1377-2:2022, cl. 11.3, 11.4).

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Signed: Katarzyna Koziel

Katarzyna Koziel
Geotechnical Reporting Team Leader
for and on behalf of i2 Analytical Ltd

 Date Reported: 01/10/2025 **GF 275.13**

i2 Analytical Ltd, Unit 8, Harrowden Road, Brackmills Industrial Estate, Northampton, NN4 7EB

TEST CERTIFICATE

DETERMINATION OF UNDRAINED SHEAR STRENGTH AT EACH COMPACTION POINT USING HAND VANE APPARATUS

Tested in Accordance with: Guideline for Hand Shear Vane Test*

Normec i2 Analytical

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	03/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	26/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676670	Depth Top [m]:	1.80
Hole No.:	TP1002	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	B
Soil Description:	Yellowish brown slightly gravelly sandy clayey SILT		

Moisture Content %	Shear Vane Reading 1 kPa	2 kPa	3 kPa	4 kPa	Average kPa	Tv kPa
11	UTP	UTP	UTP	UTP	UTP	
14	UTP	UTP	UTP	UTP	UTP	
16	UTP	UTP	UTP	UTP	UTP	
19	UTP	UTP	UTP	UTP	UTP	
22	UTP	UTP	UTP	UTP	UTP	

Note: UTP - Unable To Penetrate; * - Guideline for Hand Held Shear Vane Test, New Zealand Geotechnical Society INC, August 2001

Remarks: Compacted by: Heavy Compaction (BS 1377-2:2022, cl. 11.5, 11.6) .

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Signed: Katarzyna Koziel

Katarzyna Koziel
Geotechnical Reporting Team Leader
for and on behalf of i2 Analytical Ltd

 Date Reported: 01/10/2025 **GF 275.13**

i2 Analytical Ltd, Unit 8, Harrowden Road, Brackmills Industrial Estate, Northampton, NN4 7EB

TEST CERTIFICATE

DETERMINATION OF UNDRAINED SHEAR STRENGTH AT EACH COMPACTION POINT USING HAND VANE APPARATUS

Tested in Accordance with: Guideline for Hand Shear Vane Test*

Normec i2 Analytical

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	03/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	26/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676674	Depth Top [m]:	3.00
Hole No.:	SA1002	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	B
Soil Description:	Yellowish brown sandy clayey SILT		

Moisture Content %	Shear Vane Reading 1 kPa	2 kPa	3 kPa	4 kPa	Average kPa	Tv kPa
8.1	UTP	UTP	UTP	UTP	UTP	
11	UTP	UTP	UTP	UTP	UTP	
14	UTP	UTP	UTP	UTP	UTP	
16	UTP	UTP	UTP	UTP	UTP	
19	UTP	UTP	UTP	UTP	UTP	

Note: UTP - Unable To Penetrate; * - Guideline for Hand Held Shear Vane Test, New Zealand Geotechnical Society INC, August 2001

Remarks: Compacted by: Heavy Compaction (BS 1377-2:2022, cl. 11.5, 11.6) .

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Signed: Katarzyna Koziel

Katarzyna Koziel
Geotechnical Reporting Team Leader
for and on behalf of i2 Analytical Ltd

 Date Reported: 01/10/2025 **GF 275.13**

i2 Analytical Ltd, Unit 8, Harrowden Road, Brackmills Industrial Estate, Northampton, NN4 7EB

TEST CERTIFICATE

DETERMINATION OF UNDRAINED SHEAR STRENGTH AT EACH COMPACTION POINT USING HAND VANE APPARATUS

Tested in Accordance with: Guideline for Hand Shear Vane Test*

Normec i2 Analytical

Client:	Hydrock Consultants Ltd	Client Reference:	332612639
Client Address:	Suite 8, White Building, 1-4 Cumberland Place, Southampton, Hampshire, SO15 2NP	Job Number:	25-048528-1
		Date Sampled:	04/09/2025
		Date Received:	08/09/2025
Contact:	Lily Cherry	Date Tested:	26/09/2025
Site Address:	Upper Acre, One Horton Heath	Sampled By:	Client - LC

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	676675	Depth Top [m]:	0.50
Hole No.:	SA1003	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	B
Soil Description:	Yellowish brown slightly gravelly sandy silty CLAY		

Moisture Content %	Shear Vane Reading 1 kPa	2 kPa	3 kPa	4 kPa	Average kPa	Tv kPa
12	UTP	UTP	UTP	UTP	UTP	
15	UTP	UTP	UTP	UTP	UTP	
16	UTP	UTP	UTP	UTP	UTP	
19	128	>130	>130	>130	130	
21	70	60	58	58	62	

Note: UTP - Unable To Penetrate; * - Guideline for Hand Held Shear Vane Test, New Zealand Geotechnical Society INC, August 2001

Remarks: Compacted by: Light Compaction (BS 1377-2:2022, cl. 11.3, 11.4).

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Signed: Katarzyna Koziel

Katarzyna Koziel
Geotechnical Reporting Team Leader
for and on behalf of i2 Analytical Ltd

 Date Reported: 01/10/2025 **GF 275.13**

i2 Analytical Ltd, Unit 8, Harrowden Road, Brackmills Industrial Estate, Northampton, NN4 7EB

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Analytical Report Number : 25-048530

Project / Site name:	Upper Acre, One Horton Heath	**Samples received on:**	08/09/2025
Your job number:	332612639	**Samples instructed on/ Analysis started on:**	11/09/2025
Your order number:	EPL047529	**Analysis completed by:**	19/09/2025
Report Issue Number:	1	**Report issued on:**	19/09/2025
Samples Analysed:	5 soil samples		

Signed:

Anna Goc
PL Head of Reporting Team
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
air	- once the analysis is complete

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

Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

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.

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The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 25-048530
Project / Site name: Upper Acre, One Horton Heath
Your Order No: EPL047529

Lab Sample Number				676679	676680	676681	676682	676683
Sample Reference				WS1001	WS1003	WS1003	WS1004	WS1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				2.50	0.50	5.00	1.50	5.00
Date Sampled				02/09/2025	02/09/2025	02/09/2025	02/09/2025	02/09/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	20	24	21	25	23
Total mass of sample received	kg	0.1	NONE	0.5	0.1	0.1	0.1	0.1
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	7.7	6.6	8.4	5.8	6.5
Total Sulphate as SO_4	mg/kg	50	MCERTS	470	240	330	250	440
Total Sulphate as SO_4	%	0.005	MCERTS	0.047	0.024	0.033	0.025	0.044
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	250	120	200	83	91
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.123	0.0595	0.0999	0.0416	0.0455
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	123	59.5	99.9	41.6	45.5
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	7.1	8.9	11	9.6	10
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	3.5	4.4	5.7	4.8	5.1
Total Sulphur	mg/kg	50	MCERTS	4500	200	5900	480	4700
Total Sulphur	%	0.005	MCERTS	0.448	0.02	0.59	0.048	0.474
Ammoniacal Nitrogen as NH_4^+	mg/kg	0.5	MCERTS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ammonium as NH_4^+ (10:1 leachate equivalent)	mg/l	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Water Soluble Nitrate (2:1) as NO_3	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Water Soluble Nitrate (2:1) as NO_3 (leachate equivalent)	mg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Heavy Metals / Metalloids								
Magnesium (leachate equivalent)	mg/l	2.5	NONE	9.6	< 2.5	13	< 2.5	4.4
Magnesium (water soluble)	mg/kg	5	NONE	19	< 5.0	26	< 5.0	8.9

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number : 25-048530
Project / Site name: Upper Acre, One Horton Heath

* 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 *
676679	WS1001	None Supplied	2.5	Brown clay and sand
676680	WS1003	None Supplied	0.5	Brown clay and sand
676681	WS1003	None Supplied	5	Brown clay
676682	WS1004	None Supplied	1.5	Brown clay and sand
676683	WS1004	None Supplied	5	Brown clay and sand

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The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number : 25-048530
Project / Site name: Upper Acre, One Horton Heath

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES	In-house method based on TRL 447	L038B	D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
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	L038B	D	MCERTS
Water Soluble Nitrate (leachate equivalent)	Determination of nitrate by reaction with sodium salicylate and colorimetry	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction	L078-PL	W	NONE
Nitrate, water soluble, in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction	L078-PL	W	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser	In-house method	L082B	D	MCERTS
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082B	W	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
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' 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.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

Appendix D Site monitoring data

Ground Gas and groundwater results

332612639 - Upper Acre, One Horton Heath Groundwater Monitoring

			Round 1 - 11/09/2025					
	Ground level (m AOD)	Tophat height (m)	GW level from Tophat (m)	GW level (m bgl)	GW level (m AOD)	Base of borehole from Tophat (m)	Base of borehole (m bgl)	Base of borehole (m AOD)
WS1001	27.06	0.45	2.56	2.11	24.95	5.05	4.6	22.46
WS1002	21.3	0.42	2.31	1.89	19.41	4.12	3.7	17.6
WS1003	24.41	0.46	2.22	1.76	22.65	5.12	4.66	19.75
WS1004	23.47	0.41	1.14	0.73	22.74	3.46	3.05	20.42

			Round 2 - 16/10/2025					
	Ground level (m AOD)	Tophat height (m)	GW level from Tophat (m)	GW level (m bgl)	GW level (m AOD)	Base of borehole from Tophat (m)	Base of borehole (m bgl)	Base of borehole (m AOD)
WS1001	27.06	0.45	2.75	2.3	24.76	5.12	4.67	22.39
WS1002	21.3	0.42	2.45	2.03	19.27	4	3.58	17.72
WS1003	24.41	0.46	1.3	0.84	23.57	5.12	4.66	19.75
WS1004	23.47	0.41	1.14	0.73	22.74	2.83	2.42	21.05

			Round 3 - 07/11/2025					
	Ground level (m AOD)	Tophat height (m)	GW level from Tophat (m)	GW level (m bgl)	GW level (m AOD)	Base of borehole from Tophat (m)	Base of borehole (m bgl)	Base of borehole (m AOD)
WS1001	27.06	0.45	2.81	2.36	24.7	5.07	4.62	22.44
WS1002	21.3	0.42	1.915	1.495	19.805	4.08	3.66	17.64
WS1003	24.41	0.46	1.42	0.96	23.45	5.1	4.64	19.77
WS1004	23.47	0.41	0.93	0.52	22.95	2.8	2.39	21.08

Stantec

Ground Gas Monitoring Form

Project Details			
Project Name:	Upper Acre, One Horton Heath	**Project Number:**	332612639
Visit Details			
Date:	11/09/2025	**Weather:**	Sunny, cloudy with rain
Time:	09:30	**Monitoring Round:**	1
Comments:		**Recorded by:**	LC
Well Details			
Monitoring point ID:	WS1001	**Casing Level above GL (m):**	0.45
Single or dual gas tap:	Single	**Top of Screen (m bgl):**	1.00
Pipe Material:	PVC	**Base of Screen (m bgl):**	5.00
Pipe Diameter D (mm):	50	**Top of Screen (m b.casing):**	
Hole Diameter R (mm):		**Base of Screen (m b.casing):**	
Expected headspace air volume:			
Equipment Details			
Gas Analyser Model:	GFM 436	**Instrument Serial Number:**	
Calibration Date:	24/09/2025	**Span gas check ok:**	
PID instrument:	-	**Instrument Serial Number:**	
Calibration Date:	-	**Calibration check ok:**	

Well conditons:

Good condition, gas tap closed.

Well measurement readings

Parameter Details - for Not Recorded use "NR" and explain why in Well Conditions. For non-detect use the displayed value.

Time (hh:mm:ss)	Relative BH pressure (hPA/mb)	Borehole flow (litres/hour)	CH4 (%)	CO2 (%)	O2 (%)	CO (ppm)	H2S (ppm)	LEL (%)
0:00:00	0	0.00	0.00	0.00	19.80	0.00	0.00	0.00
0:00:30	-	0.00	0.00	1.70	18.50	0.00	0.00	0.00
0:01:00	-		0.00	1.70	18.40	0.00	0.00	0.00
0:02:00	-		0.00	1.70	18.40	0.00	0.00	0.00
0:03:00	-		0.00	1.70	18.40	0.00	0.00	0.00
0:04:00	-		0.00	1.70	18.40	0.00	0.00	0.00
0:05:00	-		0.00	1.70	18.40	0.00	0.00	0.00
0:06:00	-							
0:07:00	-							
0:08:00	-							
0:09:00	-							
0:10:00	-							
Steady State		0.00	0.00	18.40	1.70	0.00	0.00	0.00

Ambient readings

Atmospheric pressure (mb):	1001.00						
Ambient concentrations:		**CH4**	**CO2**	**O2**	**CO**	**H2S**	**LEL**
		0.00	0.00	20.30	0.00	0.00	0.00

Observations during monitoring

Stable readings after 5 mins

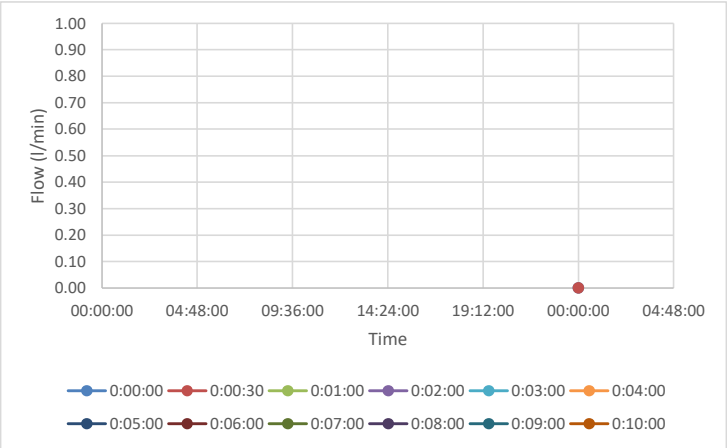
Vapour/Gas Samples (note Sample Ref must include monitoring round as prefix)

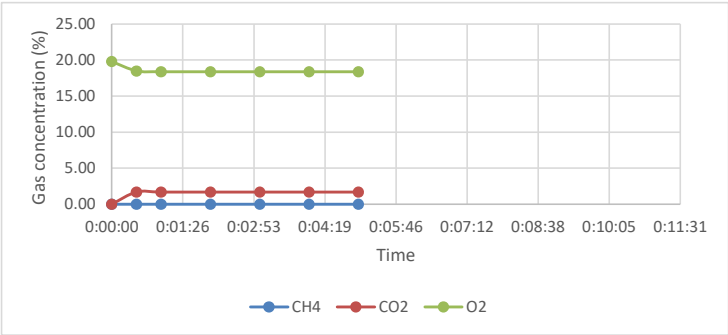
Sample Depth (mbgl):	Sample Ref:	Sample Type:	Container Type:	Sample Size (l):	Starting vacuum:	End vacuum:	Sampling Rate (l/min):
QA/QC Samples							
☐ Duplicate							
☐ Triplicate							

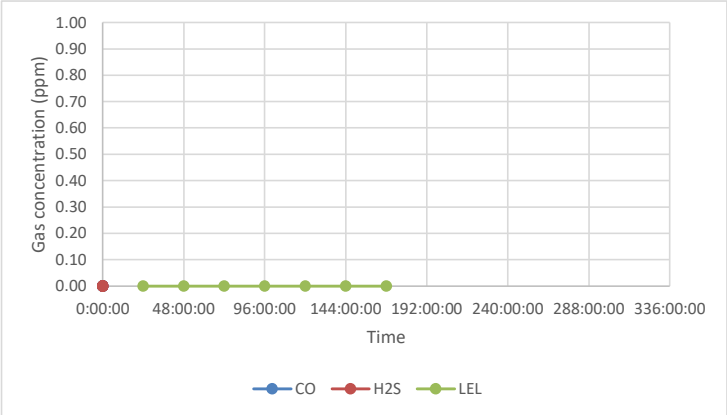
Groundwater Gauging:

Equipment Details:					
Dipmeter type:				**Instrument serial number:**	
Monitoring Data					
Monitoring Datum				**Water Level Depth (m bd):**	2.56
NAPL Gauging:	**LNAPL**	**DNAPL**		**Measured Well Depth (m bd):**	5.05
Depth to NAPL (m bd):				**Water Level Depth (m bgl):**	2.11
NAPL Thickness (mm):				**Measured Well Depth (m bgl):**	**4.60**

Ground Gas Monitoring Form







Ground Gas Monitoring Form

Project Details			
Project Name:	Upper Acre, One Horton Heath	**Project Number:**	332612639
Visit Details			
Date:	16/10/2025	**Weather:**	Sunny, cloudy with rain
Time:		**Monitoring Round:**	2
Comments:		**Recorded by:**	ER
Well Details			
Monitoring point ID:	WS1001	**Casing Level above GL (m):**	0.45
Single or dual gas tap:	Single	**Top of Screen (m bgl):**	1.00
Pipe Material:	PVC	**Base of Screen (m bgl):**	5.00
Pipe Diameter D (mm):	50	**Top of Screen (m b.casing):**	
Hole Diameter R (mm):		**Base of Screen (m b.casing):**	
Expected headspace air volume:			
Equipment Details			
Gas Analyser Model:	GFM 436	**Instrument Serial Number:**	
Calibration Date:	24/09/2025	**Span gas check ok:**	
PID instrument:	-	**Instrument Serial Number:**	
Calibration Date:	-	**Calibration check ok:**	

Well conditons:

Good condition, gas tap closed.

Well measurement readings

Parameter Details - for Not Recorded use "NR" and explain why in Well Conditions. For non-detect use the displayed value.

Time (hh:mm:ss)	Relative BH pressure (hPA/mb)	Borehole flow (litres/hour)	CH4 (%)	CO2 (%)	O2 (%)	CO (ppm)	H2S (ppm)	LEL (%)
0:00:00	0	0.00	0.00	0.10	20.70	0.00	0.00	0.00
0:00:30	-	0.00	0.00	0.20	20.70	0.00	0.00	0.00
0:01:00	-		0.00	0.20	20.90	0.00	0.00	0.00
0:02:00	-		0.00	0.20	21.00	0.00	0.00	0.00
0:03:00	-		0.00	0.10	21.00	0.00	0.00	0.00
0:04:00	-		0.00	0.10	21.10	0.00	0.00	0.00
0:05:00	-		0.00	0.10	21.40	0.00	0.00	0.00
0:06:00	-		0.00	0.10	21.40	0.00	0.00	0.00
0:07:00	-		0.00	0.10	21.40	0.00	0.00	0.00
0:08:00	-		0.00	0.10	21.40	0.00	0.00	0.00
0:09:00	-		0.00	0.10	21.40	0.00	0.00	0.00
0:10:00	-		0.00	0.10	21.40	0.00	0.00	0.00
Steady State			0.00	0.10	21.40	0.00	0.00	0.00

Ambient readings

Atmospheric pressure (mb):	1028.00						
Ambient concentrations:		**CH4**	**CO2**	**O2**	**CO**	**H2S**	**LEL**
		0.00	0.00	20.80	0.00	0.00	0.00

Observations during monitoring

Stable readings after 5 mins

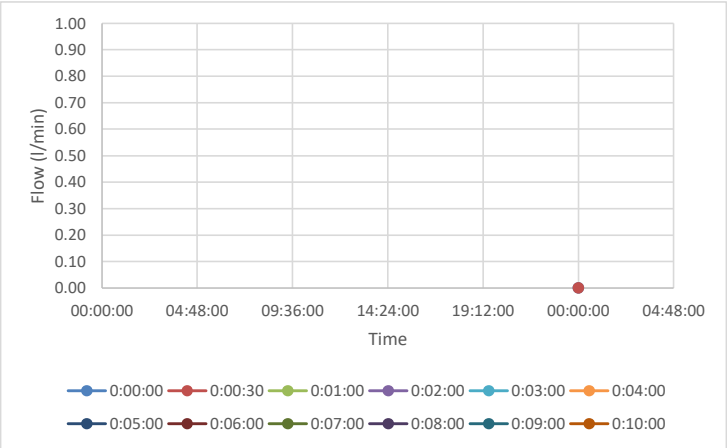
Vapour/Gas Samples (note Sample Ref must include monitoring round as prefix)

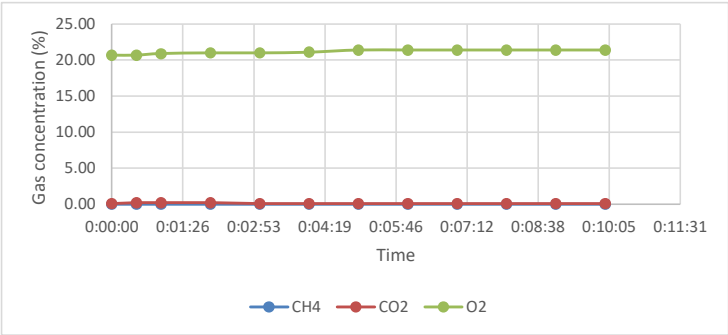
Sample Depth (mbgl):	Sample Ref:	Sample Type:	Container Type:	Sample Size (l):	Starting vacuum:	End vacuum:	Sampling Rate (l/min):
QA/QC Samples							
☐ Duplicate							
☐ Triplicate							

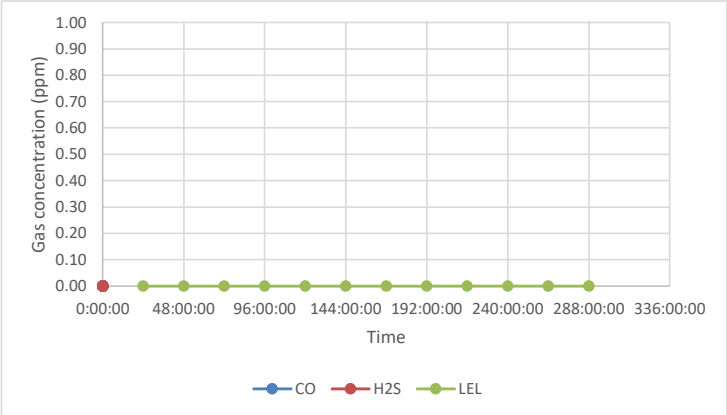
Groundwater Gauging:

Equipment Details:					
Dipmeter type:				**Instrument serial number:**	
Monitoring Data					
Monitoring Datum				**Water Level Depth (m bd):**	2.75
NAPL Gauging:	**LNAPL**	**DNAPL**		**Measured Well Depth (m bd):**	5.12
Depth to NAPL (m bd):				**Water Level Depth (m bgl):**	2.30
NAPL Thickness (mm):				**Measured Well Depth (m bgl):**	**4.67**

Ground Gas Monitoring Form







Stantec

Ground Gas Monitoring Form

Project Details			
Project Name:	Upper Acre, One Horton Heath	**Project Number:**	332612639
Visit Details			
Date:	11/09/2025	**Weather:**	Sunny, cloudy with rain
Time:	09:00	**Monitoring Round:**	1
Comments:		**Recorded by:**	LC
Well Details			
Monitoring point ID:	WS1002	**Casing Level above GL (m):**	0.42
Single or dual gas tap:	Single	**Top of Screen (m bgl):**	1.00
Pipe Material:	PVC	**Base of Screen (m bgl):**	4.00
Pipe Diameter D (mm):	50	**Top of Screen (m b.casing):**	
Hole Diameter R (mm):		**Base of Screen (m b.casing):**	
Expected headspace air volume:			
Equipment Details			
Gas Analyser Model:	GFM 436	**Instrument Serial Number:**	
Calibration Date:	24/09/2025	**Span gas check ok:**	
PID instrument:	-	**Instrument Serial Number:**	
Calibration Date:	-	**Calibration check ok:**	

Well conditons:

Good condition, gas tap closed.

Well measurement readings

Parameter Details - for Not Recorded use "NR" and explain why in Well Conditions. For non-detect use the displayed value.

Time (hh:mm:ss)	Relative BH pressure (hPA/mb)	Borehole flow (litres/hour)	CH4 (%)	CO2 (%)	O2 (%)	CO (ppm)	H2S (ppm)	LEL (%)
0:00:00	0	0.00	0.00	0.00	19.70	0.00	0.00	0.00
0:00:30	-	0.00	0.00	0.80	19.30	0.00	0.00	0.00
0:01:00	-		0.00	0.80	19.20	0.00	0.00	0.00
0:02:00	-		0.00	0.80	19.20	0.00	0.00	0.00
0:03:00	-		0.00	0.80	19.20	0.00	0.00	0.00
0:04:00	-		0.00	0.80	19.20	0.00	0.00	0.00
0:05:00	-		0.00	0.80	19.20	0.00	0.00	0.00
0:06:00	-							
0:07:00	-							
0:08:00	-							
0:09:00	-							
0:10:00	-							
Steady State		0.00	0.00	0.80	19.20	0.00	0.00	0.00

Ambient readings

Atmospheric pressure (mb):	1001.00						
Ambient concentrations:		**CH4**	**CO2**	**O2**	**CO**	**H2S**	**LEL**
		0.00	0.00	20.10	0.00	0.00	0.00

Observations during monitoring

Stable readings after 5 mins, brown silt on dip probe.

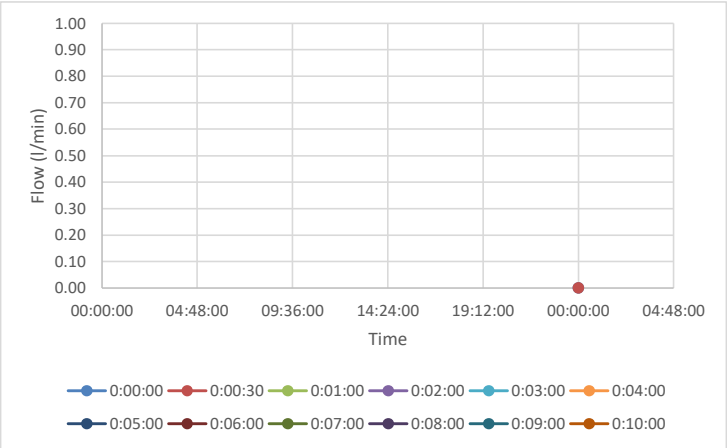
Vapour/Gas Samples (note Sample Ref must include monitoring round as prefix)

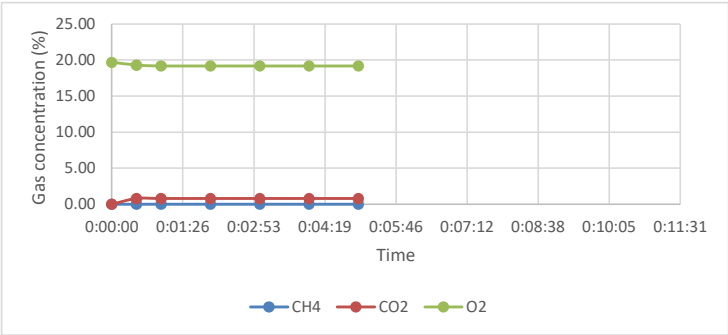
Sample Depth (mbgl):	Sample Ref:	Sample Type:	Container Type:	Sample Size (l):	Starting vacuum:	End vacuum:	Sampling Rate (l/min):
QA/QC Samples							
☐ Duplicate							
☐ Triplicate							

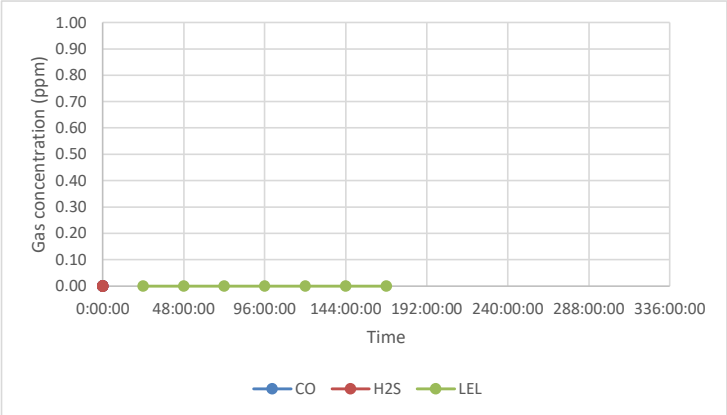
Groundwater Gauging:

Equipment Details:			
Dipmeter type:		**Instrument serial number:**	
Monitoring Data			
Monitoring Datum		**Water Level Depth (m bd):**	2.31
NAPL Gauging:	**LNAPL** / **DNAPL**	**Measured Well Depth (m bd):**	4.12
Depth to NAPL (m bd):		**Water Level Depth (m bgl):**	1.89
NAPL Thickness (mm):		**Measured Well Depth (m bgl):**	**3.70**

Ground Gas Monitoring Form







Stantec

Ground Gas Monitoring Form

Project Details			
Project Name:	Upper Acre, One Horton Heath	**Project Number:**	332612639
Visit Details			
Date:	16/10/2025	**Weather:**	Sunny, cloudy with rain
Time:		**Monitoring Round:**	2
Comments:		**Recorded by:**	ER
Well Details			
Monitoring point ID:	WS1002	**Casing Level above GL (m):**	0.42
Single or dual gas tap:	Single	**Top of Screen (m bgl):**	1.00
Pipe Material:	PVC	**Base of Screen (m bgl):**	4.00
Pipe Diameter D (mm):	50	**Top of Screen (m b.casing):**	
Hole Diameter R (mm):		**Base of Screen (m b.casing):**	
Expected headspace air volume:			
Equipment Details			
Gas Analyser Model:	GFM 436	**Instrument Serial Number:**	
Calibration Date:	24/09/2025	**Span gas check ok:**	
PID instrument:	-	**Instrument Serial Number:**	
Calibration Date:	-	**Calibration check ok:**	

Well conditons:

Good condition, gas tap closed.

Well measurement readings

Parameter Details - for Not Recorded use "NR" and explain why in Well Conditions. For non-detect use the displayed value.

Time (hh:mm:ss)	Relative BH pressure (hPA/mb)	Borehole flow (litres/hour)	CH4 (%)	CO2 (%)	O2 (%)	CO (ppm)	H2S (ppm)	LEL (%)
0:00:00	0	-0.10	0.00	3.20	19.40	0.00	0.00	0.00
0:00:30	-	-0.10	0.00	4.40	17.70	0.00	0.00	0.00
0:01:00	-		0.10	4.40	17.20	0.00	0.00	0.00
0:02:00	-		0.00	4.40	17.20	0.00	0.00	0.00
0:03:00	-		0.00	4.40	17.20	0.00	0.00	0.00
0:04:00	-		0.00	4.40	17.00	0.00	0.00	0.00
0:05:00	-		0.00	4.40	17.00	0.00	0.00	0.00
0:06:00	-		0.00	4.40	17.00	0.00	0.00	0.00
0:07:00	-		0.00	4.40	17.00	0.00	0.00	0.00
0:08:00	-		0.00	4.40	17.00	0.00	0.00	0.00
0:09:00	-		0.00	4.40	17.00	0.00	0.00	0.00
0:10:00	-		0.00	4.40	17.00	0.00	0.00	0.00
Steady State			0.00	4.40	17.00	0.00	0.00	0.00

Ambient readings

Atmospheric pressure (mb):	1028.00						
Ambient concentrations:		**CH4**	**CO2**	**O2**	**CO**	**H2S**	**LEL**
		0.00	0.00	20.80	0.00	0.00	0.00

Observations during monitoring

Stable readings after 5 mins

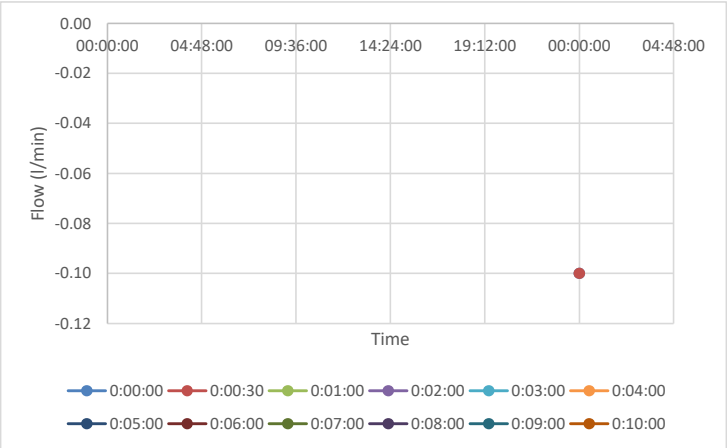
Vapour/Gas Samples (note Sample Ref must include monitoring round as prefix)

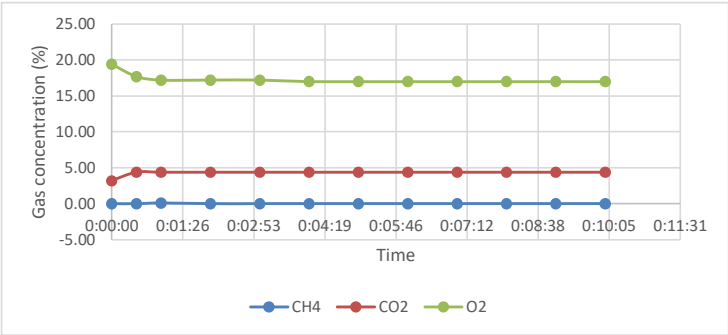
Sample Depth (mbgl):	Sample Ref:	Sample Type:	Container Type:	Sample Size (l):	Starting vacuum:	End vacuum:	Sampling Rate (l/min):
QA/QC Samples							
☐ Duplicate							
☐ Triplicate							

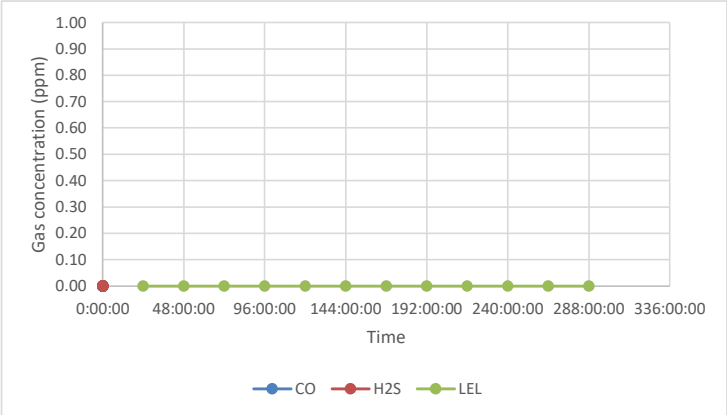
Groundwater Gauging:

Equipment Details:					
Dipmeter type:				**Instrument serial number:**	
Monitoring Data					
Monitoring Datum				**Water Level Depth (m bd):**	2.45
NAPL Gauging:	**LNAPL**	**DNAPL**		**Measured Well Depth (m bd):**	4.00
Depth to NAPL (m bd):				**Water Level Depth (m bgl):**	2.03
NAPL Thickness (mm):				**Measured Well Depth (m bgl):**	**3.58**

Ground Gas Monitoring Form







Stantec

Ground Gas Monitoring Form

Project Details			
Project Name:	Upper Acre, One Horton Heath	**Project Number:**	332612639
Visit Details			
Date:	11/09/025	**Weather:**	Sunny, cloudy with rain
Time:	09:50	**Monitoring Round:**	1
Comments:		**Recorded by:**	LC
Well Details			
Monitoring point ID:	WS1003	**Casing Level above GL (m):**	0.46
Single or dual gas tap:	Single	**Top of Screen (m bgl):**	1.00
Pipe Material:	PVC	**Base of Screen (m bgl):**	5.00
Pipe Diameter D (mm):	50	**Top of Screen (m b.casing):**	1.46
Hole Diameter R (mm):		**Base of Screen (m b.casing):**	5.46
Expected headspace air volume:			
Equipment Details			
Gas Analyser Model:	GFM 436	**Instrument Serial Number:**	
Calibration Date:	24/09/2025	**Span gas check ok:**	
PID instrument:	-	**Instrument Serial Number:**	
Calibration Date:	-	**Calibration check ok:**	

Well conditons:

Good condition, gas tap closed.

Well measurement readings

Parameter Details - for Not Recorded use "NR" and explain why in Well Conditions. For non-detect use the displayed value.

Time (hh:mm:ss)	Relative BH pressure (hPA/mb)	Borehole flow (litres/hour)	CH4 (%)	CO2 (%)	O2 (%)	CO (ppm)	H2S (ppm)	LEL (%)
0:00:00	0	0.00	0.00	0.10	19.80	0.00	0.00	0.00
0:00:30	-	0.00	0.00	0.90	18.80	0.00	0.00	0.00
0:01:00	-		0.00	0.90	18.80	0.00	0.00	0.00
0:02:00	-		0.00	0.90	18.80	0.00	0.00	0.00
0:03:00	-		0.00	0.90	18.80	0.00	0.00	0.00
0:04:00	-		0.00	0.90	18.80	0.00	0.00	0.00
0:05:00	-		0.00	0.90	18.80	0.00	0.00	0.00
0:06:00	-							
0:07:00	-							
0:08:00	-							
0:09:00	-							
0:10:00	-							
Steady State		0.00	0.00	0.90	18.80	0.00	0.00	0.00

Ambient readings

Atmospheric pressure (mb):	1001.00						
Ambient concentrations:		**CH4**	**CO2**	**O2**	**CO**	**H2S**	**LEL**
		0.00	0.00	20.30	0.00	0.00	0.00

Observations during monitoring

stable after 5 mins

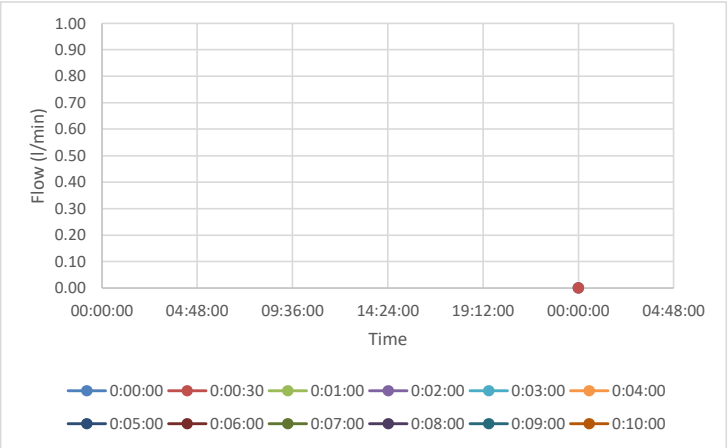
Vapour/Gas Samples (note Sample Ref must include monitoring round as prefix)

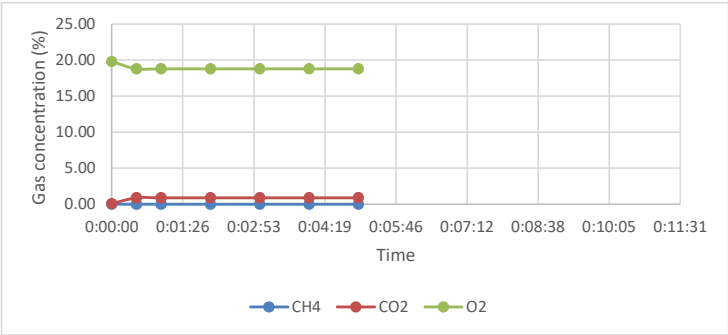
Sample Depth (mbgl):	Sample Ref:	Sample Type:	Container Type:	Sample Size (l):	Starting vacuum:	End vacuum:	Sampling Rate (l/min):
QA/QC Samples							
☐ Duplicate							
☐ Triplicate							

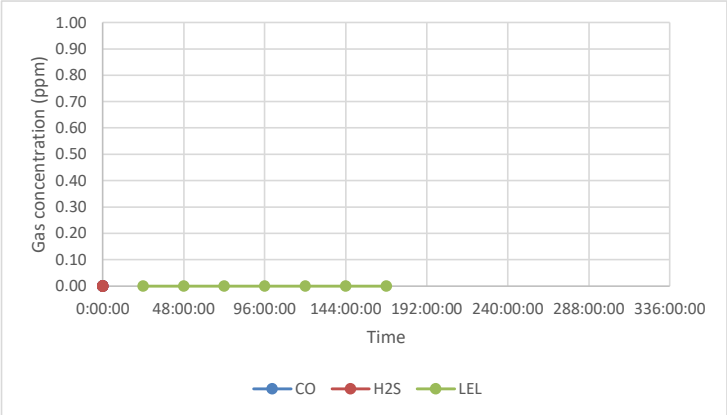
Groundwater Gauging:

Equipment Details:			
Dipmeter type:		**Instrument serial number:**	
Monitoring Data			
Monitoring Datum		**Water Level Depth (m bd):**	2.22
NAPL Gauging:	**LNAPL** / **DNAPL**	**Measured Well Depth (m bd):**	5.12
Depth to NAPL (m bd):		**Water Level Depth (m bgl):**	1.76
NAPL Thickness (mm):		**Measured Well Depth (m bgl):**	**4.66**

Ground Gas Monitoring Form







Stantec

Ground Gas Monitoring Form

Project Details			
Project Name:	Upper Acre, One Horton Heath	**Project Number:**	332612639
Visit Details			
Date:	16/10/2025	**Weather:**	Sunny, cloudy with rain
Time:		**Monitoring Round:**	2
Comments:		**Recorded by:**	ER
Well Details			
Monitoring point ID:	WS1003	**Casing Level above GL (m):**	0.46
Single or dual gas tap:	Single	**Top of Screen (m bgl):**	1.00
Pipe Material:	PVC	**Base of Screen (m bgl):**	5.00
Pipe Diameter D (mm):	50	**Top of Screen (m b.casing):**	1.46
Hole Diameter R (mm):		**Base of Screen (m b.casing):**	5.46
Expected headspace air volume:			
Equipment Details			
Gas Analyser Model:	GFM 436	**Instrument Serial Number:**	
Calibration Date:	24/09/2025	**Span gas check ok:**	
PID instrument:	-	**Instrument Serial Number:**	
Calibration Date:	-	**Calibration check ok:**	

Well conditons:

Good condition, gas tap closed.

Well measurement readings

Parameter Details - for Not Recorded use "NR" and explain why in Well Conditions. For non-detect use the displayed value.

Time (hh:mm:ss)	Relative BH pressure (hPA/mb)	Borehole flow (litres/hour)	CH4 (%)	CO2 (%)	O2 (%)	CO (ppm)	H2S (ppm)	LEL (%)
0:00:00	0	-0.10	0.10	1.30	20.70	0.00	0.00	0.00
0:00:30	-	-0.10	0.00	1.30	20.70	0.00	0.00	0.00
0:01:00	-		0.00	1.30	20.60	0.00	0.00	0.00
0:02:00	-		0.00	1.30	20.20	0.00	0.00	0.00
0:03:00	-		0.00	1.30	20.20	0.00	0.00	0.00
0:04:00	-		0.00	1.30	20.20	0.00	0.00	0.00
0:05:00	-		0.00	1.30	20.20	0.00	0.00	0.00
0:06:00	-		0.00	1.30	20.20	0.00	0.00	0.00
0:07:00	-		0.00	1.30	20.20	0.00	0.00	0.00
0:08:00	-		0.00	1.30	20.20	0.00	0.00	0.00
0:09:00	-		0.00	1.30	20.20	0.00	0.00	0.00
0:10:00	-		0.00	1.30	20.20	0.00	0.00	0.00
Steady State		-0.10	0.00	1.30	20.20	0.00	0.00	0.00

Ambient readings

Atmospheric pressure (mb):	1020.00						
Ambient concentrations:		**CH4**	**CO2**	**O2**	**CO**	**H2S**	**LEL**
		0.00	0.00	20.80	0.00	0.00	0.00

Observations during monitoring

stable after 5 mins

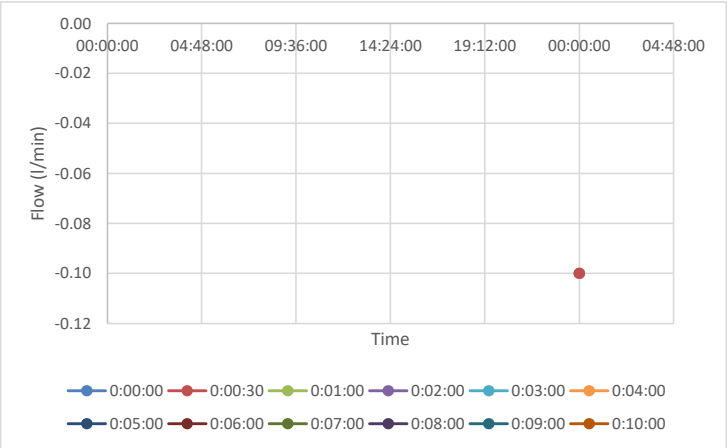
Vapour/Gas Samples (note Sample Ref must include monitoring round as prefix)

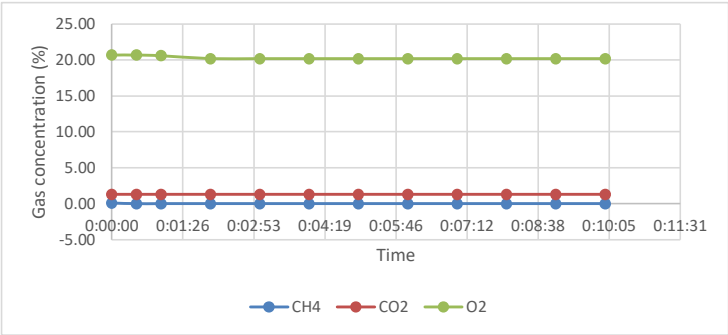
Sample Depth (mbgl):	Sample Ref:	Sample Type:	Container Type:	Sample Size (l):	Starting vacuum:	End vacuum:	Sampling Rate (l/min):
QA/QC Samples							
☐ Duplicate							
☐ Triplicate							

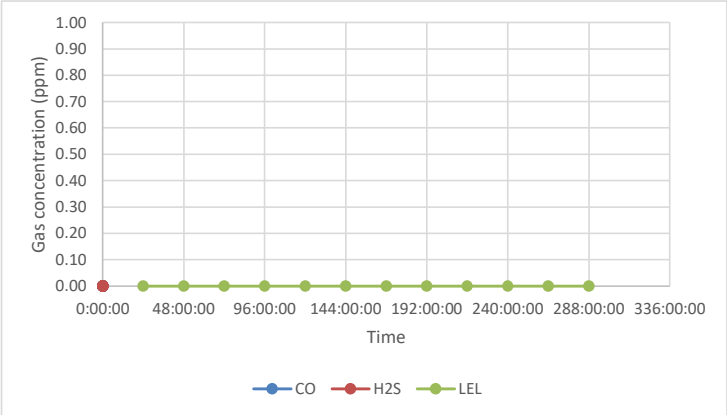
Groundwater Gauging:

Equipment Details:					
Dipmeter type:				**Instrument serial number:**	
Monitoring Data					
Monitoring Datum				**Water Level Depth (m bd):**	1.30
NAPL Gauging:	**LNAPL**	**DNAPL**		**Measured Well Depth (m bd):**	5.12
Depth to NAPL (m bd):				**Water Level Depth (m bgl):**	0.84
NAPL Thickness (mm):				**Measured Well Depth (m bgl):**	**4.66**

Ground Gas Monitoring Form







Ground Gas Monitoring Form

Project Details			
Project Name:	Upper Acre, One Horton Heath	**Project Number:**	332612639
Visit Details			
Date:	11/09/2025	**Weather:**	Sunny, cloudy with rain
Time:	10:00	**Monitoring Round:**	1
Comments:		**Recorded by:**	LC
Well Details			
Monitoring point ID:	WS1004	**Casing Level above GL (m):**	0.41
Single or dual gas tap:	Single	**Top of Screen (m bgl):**	1.00
Pipe Material:	PVC	**Base of Screen (m bgl):**	4.00
Pipe Diameter D (mm):	50	**Top of Screen (m b.casing):**	
Hole Diameter R (mm):		**Base of Screen (m b.casing):**	
Expected headspace air volume:			
Equipment Details			
Gas Analyser Model:	GFM 436	**Instrument Serial Number:**	
Calibration Date:	24/09/2025	**Span gas check ok:**	
PID instrument:	-	**Instrument Serial Number:**	
Calibration Date:	-	**Calibration check ok:**	

Well conditons:

Good condition, gas tap closed.

Well measurement readings

Parameter Details - for Not Recorded use "NR" and explain why in Well Conditions. For non-detect use the displayed value.

Time (hh:mm:ss)	Relative BH pressure (hPA/mb)	Borehole flow (litres/hour)	CH4 (%)	CO2 (%)	O2 (%)	CO (ppm)	H2S (ppm)	LEL (%)
0:00:00	0	80.70	0.00	1.40	18.70	10.00	0.00	0.00
0:00:30	-	11.20	0.00	2.20	18.10	13.00	0.00	0.00
0:01:00	-	0.00	0.00	2.20	18.10	20.00	0.00	0.00
0:02:00	-		0.00	2.20	18.10	21.00	0.00	0.00
0:03:00	-		0.00	2.20	18.10	22.00	0.00	0.00
0:04:00	-		0.00	2.20	18.10	20.00	0.00	0.00
0:05:00	-		0.00	2.30	17.70	21.00	0.00	0.00
0:06:00	-		0.00	2.30	17.70	16.00	0.00	0.00
0:07:00	-		0.00	2.30	17.70	15.00	0.00	0.00
0:08:00	-		0.00	2.30	17.80	15.00	0.00	0.00
0:09:00	-		0.00	2.30	17.90	13.00	0.00	0.00
0:10:00	-		0.00	2.30	18.00	13.00	0.00	0.00
Steady State		0.00	0.00	2.30	18.10	12.00	0.00	0.00

Ambient readings

Atmospheric pressure (mb):	1000.00						
Ambient concentrations:		**CH4**	**CO2**	**O2**	**CO**	**H2S**	**LEL**
		0.00	0.00	20.40	0.00	0.00	0.00

Observations during monitoring

Peak flow at 80.7, decreasing to 0 within 40 seconds. O2 and CO still fluctuating after 10 mins, silted up to 2.90m dip tape slowly going down well from there to 3.46m. Groundwater has flooded the well.

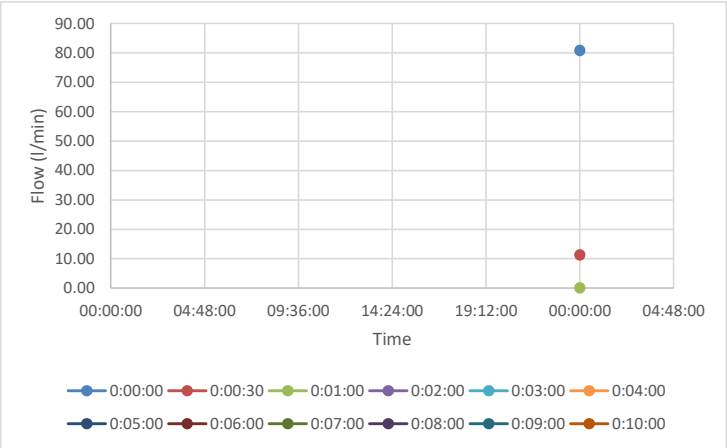
Vapour/Gas Samples (note Sample Ref must include monitoring round as prefix)

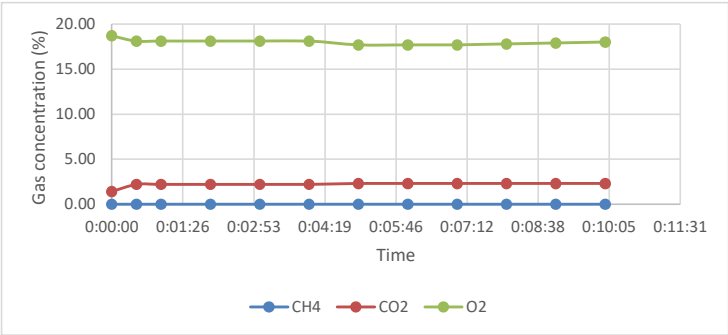
Sample Depth (mbgl):	Sample Ref:	Sample Type:	Container Type:	Sample Size (l):	Starting vacuum:	End vacuum:	Sampling Rate (l/min):
QA/QC Samples							
☐ Duplicate							
☐ Triplicate							

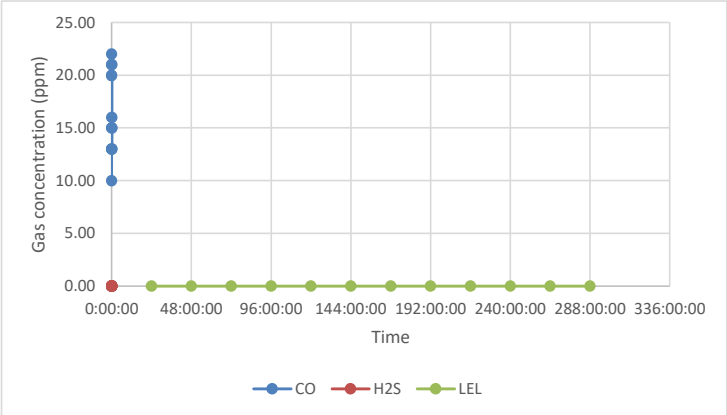
Groundwater Gauging:

Equipment Details:					
Dipmeter type:				**Instrument serial number:**	
Monitoring Data					
Monitoring Datum				**Water Level Depth (m bd):**	1.14
NAPL Gauging:	**LNAPL**	**DNAPL**		**Measured Well Depth (m bd):**	3.46
Depth to NAPL (m bd):				**Water Level Depth (m bgl):**	0.73
NAPL Thickness (mm):				**Measured Well Depth (m bgl):**	**3.05**

Ground Gas Monitoring Form







Stantec

Ground Gas Monitoring Form

Project Details			
Project Name:	Upper Acre, One Horton Heath	**Project Number:**	332612639
Visit Details			
Date:	16/10/2025	**Weather:**	Sunny, cloudy with rain
Time:		**Monitoring Round:**	2
Comments:		**Recorded by:**	ER
Well Details			
Monitoring point ID:	WS1004	**Casing Level above GL (m):**	0.41
Single or dual gas tap:	Single	**Top of Screen (m bgl):**	1.00
Pipe Material:	PVC	**Base of Screen (m bgl):**	4.00
Pipe Diameter D (mm):	50	**Top of Screen (m b.casing):**	
Hole Diameter R (mm):		**Base of Screen (m b.casing):**	
Expected headspace air volume:			
Equipment Details			
Gas Analyser Model:	GFM 436	**Instrument Serial Number:**	
Calibration Date:	24/09/2025	**Span gas check ok:**	
PID instrument:	-	**Instrument Serial Number:**	
Calibration Date:	-	**Calibration check ok:**	

Well conditons:

Good condition, gas tap closed.

Well measurement readings

Parameter Details - for Not Recorded use "NR" and explain why in Well Conditions. For non-detect use the displayed value.

Time (hh:mm:ss)	Relative BH pressure (hPA/mb)	Borehole flow (litres/hour)	CH4 (%)	CO2 (%)	O2 (%)	CO (ppm)	H2S (ppm)	LEL (%)
0:00:00	0	-7.10	0.00	1.30	20.20	0.00	0.00	0.00
0:00:30	-	-7.10	0.10	4.40	18.30	0.00	0.00	0.00
0:01:00	-	-7.10	0.10	4.40	18.30	0.00	0.00	0.00
0:02:00	-	-7.10	0.10	4.40	18.20	0.00	0.00	0.00
0:03:00	-	-6.70	0.10	4.40	17.70	0.00	0.00	0.00
0:04:00	-	-6.70	0.10	4.40	17.70	0.00	0.00	0.00
0:05:00	-	-6.70	0.10	4.40	17.70	0.00	0.00	0.00
0:06:00	-	-6.70	0.10	4.50	17.70	0.00	0.00	0.00
0:07:00	-	-6.70	0.10	4.50	17.70	0.00	0.00	0.00
0:08:00	-	-6.70	0.10	4.50	17.70	0.00	0.00	0.00
0:09:00	-	-6.70	0.10	4.50	17.70	0.00	0.00	0.00
0:10:00	-	-6.70	0.10	4.50	17.70	0.00	0.00	0.00
Steady State		-6.70	0.10	4.50	17.70	0.00	0.00	0.00

Ambient readings

Atmospheric pressure (mb):	1028.00						
Ambient concentrations:		**CH4**	**CO2**	**O2**	**CO**	**H2S**	**LEL**
		0.00	0.00	20.80	0.00	0.00	0.00

Observations during monitoring

Stable readings after 5 minutes

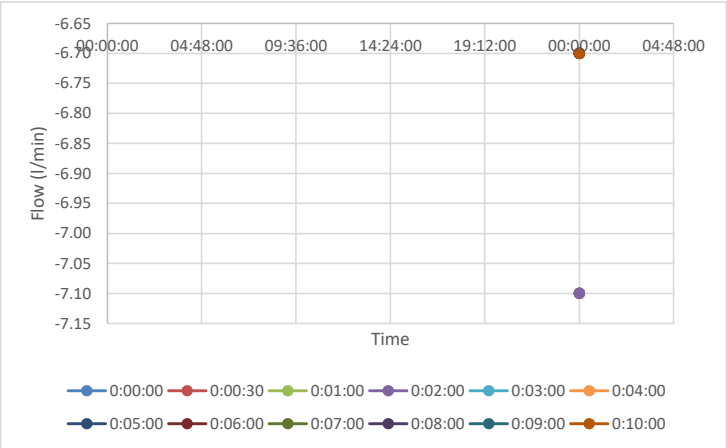
Vapour/Gas Samples (note Sample Ref must include monitoring round as prefix)

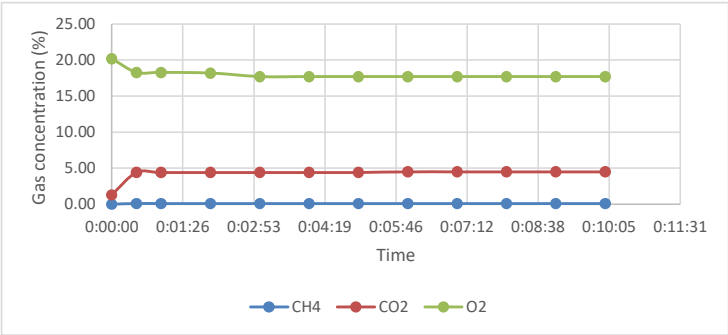
Sample Depth (mbgl):	Sample Ref:	Sample Type:	Container Type:	Sample Size (l):	Starting vacuum:	End vacuum:	Sampling Rate (l/min):
QA/QC Samples							
☐ Duplicate							
☐ Triplicate							

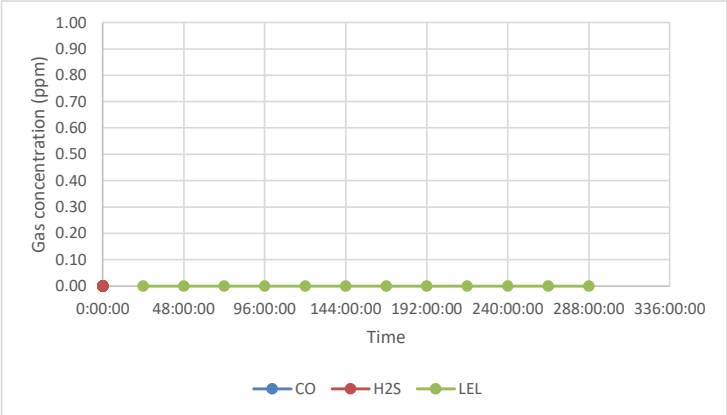
Groundwater Gauging:

Equipment Details:			
Dipmeter type:		**Instrument serial number:**	
Monitoring Data			
Monitoring Datum		**Water Level Depth (m bd):**	1.14
NAPL Gauging:	**LNAPL** / **DNAPL**	**Measured Well Depth (m bd):**	2.83
Depth to NAPL (m bd):		**Water Level Depth (m bgl):**	0.73
NAPL Thickness (mm):		**Measured Well Depth (m bgl):**	**2.42**

Ground Gas Monitoring Form







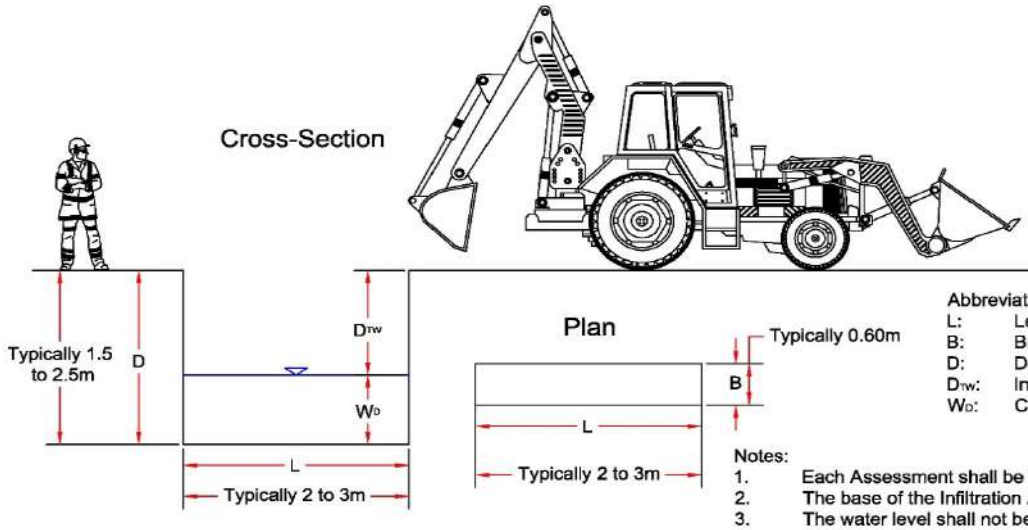
Infiltration data

1 DAY INFILTRATION ASSESSMENT - AIDE MEMOIR

Site: Upper Acre, One Horton Heath
Client: Eastleigh Borough Council
Test Location SA1001B **Date of start** 05/09/2025 **Date at end** 05/09/2025

ANTICIPATED GROUND PROFILE FROM DESK STUDY	ACTUAL GROUND PROFILE FROM EXCAVATION
GROUND LEVEL	GROUND LEVEL
BASE OF PIT	BASE OF PIT

INFILTRATION ASSESSMENT PIT TYPICAL DIMENSIONS



ACTUAL DIMENSIONS			
L			
B			
D			
D_{TW}			
W_D			

Abbreviations:
- L: Length of Infiltration Assessment Pit.
- B: Breadth / Width of Infiltration Assessment Pit.
- D: Depth of Infiltration Assessment Pit.
- D_{TW}: Initial Depth to Top of Water.
- W_D: Calculated Water Depth.

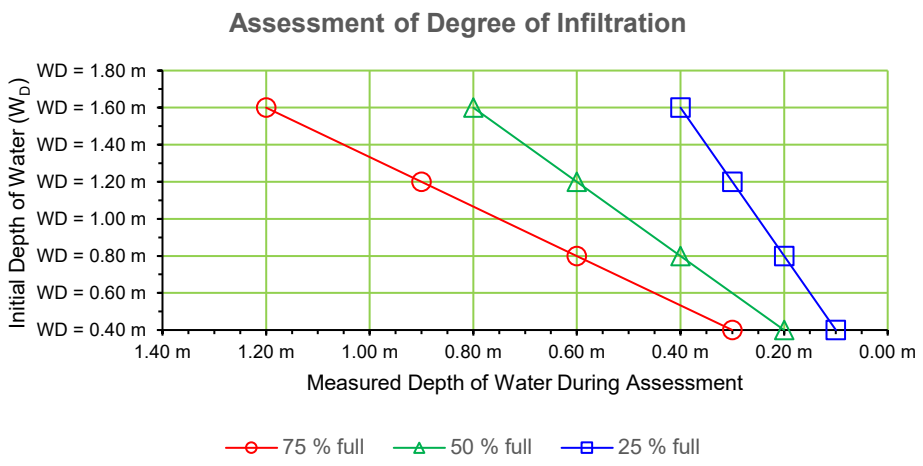
Notes:
1. Each Assessment shall be limited to a single stratum.
2. The base of the Infiltration Assessment Pit shall be below all Made Ground,
3. The water level shall not be raised above the base of the Made Ground.
4. The base of the Infiltration Assessment Pit shall be at least 1m into the stratum which is to be assessed.
5. The base of the Infiltration Assessment Pit shall be above the Water Table.
6. Minimum target depth of water of 1.0m.
7. Where any of the above conditions cannot be met, it shall be reported immediately to the Project Manager for additional guidance before the test is commenced.

Calculated Water Depth (W_D) = D - D_{TW}

Maximum Fill Volume (V_w) = W_o x B x L

Corrected Water Volume (V_{wc}) = V_w x Gravel Porosity (P_t)

Infiltration	RUN 1		RUN 2		RUN 3	
	W_D		W_D		W_D	
	W_{D1}	D_{TW1}	W_{D2}	D_{TW2}	W_{D3}	D_{TW3}
75% full						
25% full						



SITE OBSERVATIONS - VOLUME LOSS		
Test Run	Infiltration Records up to 6 Hours	Comments
1	<25%	Unlikely without significant attenuation
	<75%	Requires additional BRE DG365 testing
	>75%	Refer to results of Run 2
2	<25%	Unlikely without significant attenuation
	<75%	Requires additional BRE DG365 testing
	>75%	Refer to results of Run 3
3	<25%	Unlikely without significant attenuation
	<75%	Requires additional BRE DG365 testing
	>75%	Indicative Infiltration Rate achieved.

1 DAY INFILTRATION ASSESSMENT - WORKSHEET

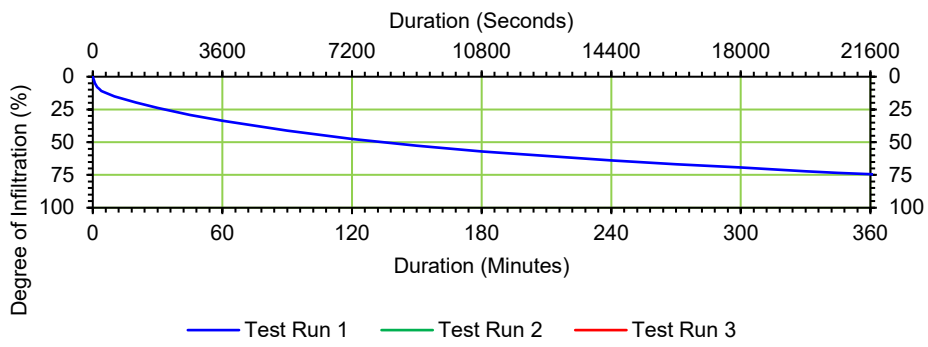
Site: Upper Acre, One Horton Heath
Client: Eastleigh Borough Council
Test Location SA1001B **Date of start** 05/09/2025 **Date at end** 05/09/2025

Test Run 1		Test Run 2		Test Run 3	
Pit Dimensions (m)		**Pit Dimensions (m)**		**Pit Dimensions (m)**	
Trial Pit Length (L)	1.700m	Trial Pit Length (L)		Trial Pit Length (L)	
Trial Pit Breadth / Width (B)	0.700m	Trial Pit Breadth / Width (B)		Trial Pit Breadth / Width (B)	
Effective Depth (D)	2.000m	Effective Depth (D)		Effective Depth (D)	
Time at Start of Filling	8.16	Time at Start of Filling		Time at Start of Filling	
Time at End of Filling	8.19	Time at End of Filling		Time at End of Filling	
Depth from Surface to Water (D_{TW})	0.630m	Depth below Surface to Water (D_{TW})		Depth below Surface to Water (D_{TW})	
Water Depth (W_D)	1.370m	Water Depth (W_D)	-	Water Depth (W_D)	-
Maximum Fill Volume (V_W)	1.630m³	Maximum Fill Volume (V_W)	-	Maximum Fill Volume (V_W)	-
Gravel used to backfill Test Pit	Yes	Gravel used to backfill Test Pit	No	Gravel used to backfill Test Pit	No
Porosity of Gravel Backfill (P_t)	0.300	Porosity of Gravel Backfill (P_t)		Porosity of Gravel Backfill (P_t)	
Corrected Water Volume (V_{WC})	0.489m³	Corrected Water Volume (V_{WC})	-	Corrected Water Volume (V_{WC})	-

Time to soakaway

Test Run 1 Time Day	Time	Depth to water (m bgl)	Duration Seconds	Test Run 2 Time Day	Time	Depth to water (m bgl)	Duration Seconds	Test Run 3 Time Day	Time	Depth to water (m bgl)	Duration Seconds
1	8.190	0.630	0								
1	8.200	0.700	60								
1	8.210	0.740	120								
1	8.220	0.760	180								
1	8.230	0.780	240								
1	8.240	0.790	300								
1	8.290	0.835	600								
1	8.390	0.900	1200								
1	8.490	0.955	1800								
1	9.040	1.030	2700								
1	9.190	1.090	3600								
1	9.490	1.195	5400								
1	10.190	1.280	7200								
1	10.490	1.350	9000								
1	11.190	1.410	10800								
1	11.490	1.460	12600								
1	12.190	1.505	14400								
1	12.490	1.545	16200								
1	13.190	1.580	18000								
1	13.490	1.620	19800								
1	14.040	1.635	20700								
1	14.190	1.650	21600								
1	14.250	1.660	21960								

25% water loss (75% full)	0.973m	**25% water loss (75% full)**	-	**25% water loss (75% full)**	-
50% water loss (50% full)	1.315m	**50% water loss (50% full)**	-	**50% water loss (50% full)**	-
75% water loss (25% full)	1.658m	**75% water loss (25% full)**	-	**75% water loss (25% full)**	-
25% time (seconds)	2010 sec	**25% time (seconds)**	-	**25% time (seconds)**	-
75% time (seconds)	21870 sec	**75% time (seconds)**	-	**75% time (seconds)**	-
Vp 75-25	0.245m³	**Vp 75-25**	-	**Vp 75-25**	-
as 50 (Actual area from test)	7.502m²	**as 50 (Actual area from test)**	-	**as 50 (Actual area from test)**	-
tp 75 - 25	19860 sec	**tp 75 - 25**		**tp 75 - 25**	
Soil Infiltration Rate	**1.64E-06m/s**	**Soil Infiltration Rate**	-	**Soil Infiltration Rate**	-



Form completed by		
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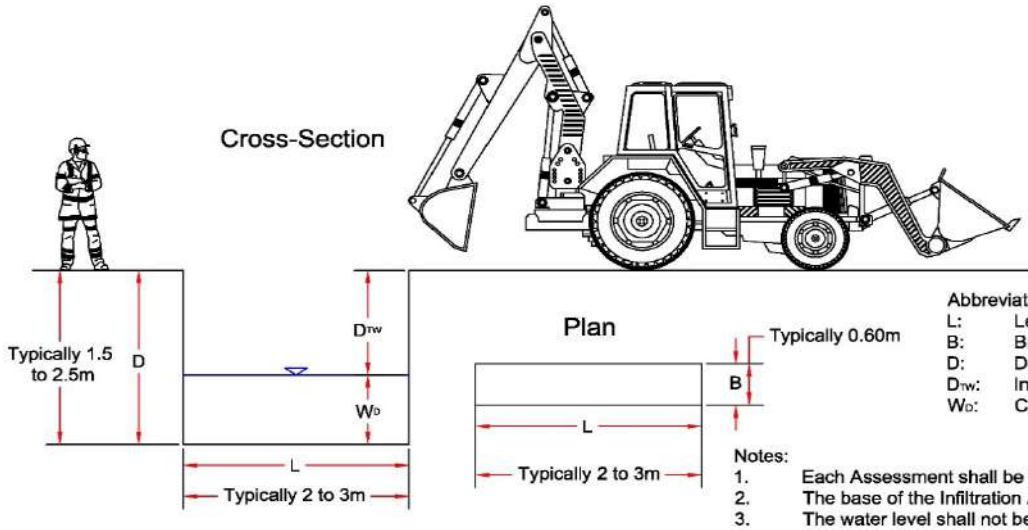
	SIGN	L.Cherry
	DATE	05/09/2025
Calculated By	PRINT	Lily Cherry
	SIGN	L.Cherry
	DATE	05/09/2025
Checked by	PRINT	
	SIGN	
	DATE	

1 DAY INFILTRATION ASSESSMENT - AIDE MEMOIR

Site: Upper Acre, One Horton Heath
Client: Eastleigh Borough Council
Test Location **Date of start** 04/09/2025 **Date at end** 05/09/2025

ANTICIPATED GROUND PROFILE FROM DESK STUDY	ACTUAL GROUND PROFILE FROM EXCAVATION
GROUND LEVEL	GROUND LEVEL
BASE OF PIT	BASE OF PIT

INFILTRATION ASSESSMENT PIT TYPICAL DIMENSIONS



ACTUAL DIMENSIONS			
L			
B			
D			
D_{TW}			
W_D			

Abbreviations:
- L: Length of Infiltration Assessment Pit.
- B: Breadth / Width of Infiltration Assessment Pit.
- D: Depth of Infiltration Assessment Pit.
- D_{TW}: Initial Depth to Top of Water.
- W_D: Calculated Water Depth.

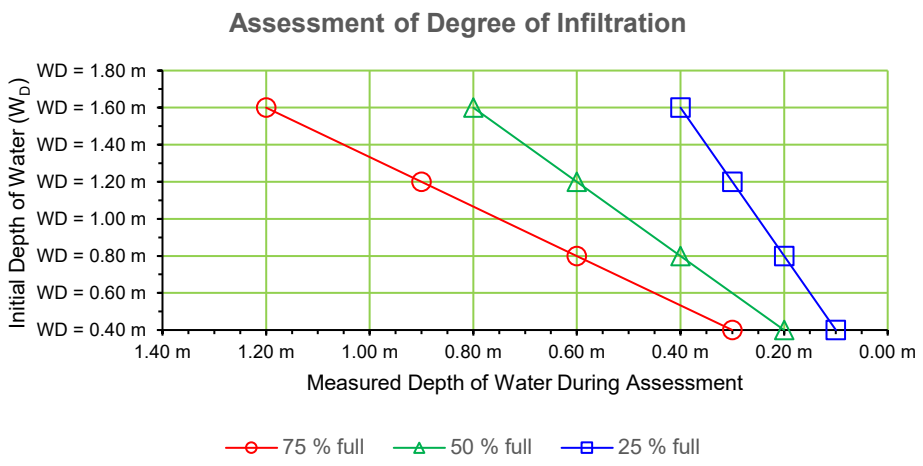
Calculated Water Depth (W_D) = D - D_{TW}

Maximum Fill Volume (V_w) = W_D x B x L

Corrected Water Volume (V_{wc}) = V_w x Gravel Porosity (P_t)

Notes:
1. Each Assessment shall be limited to a single stratum.
2. The base of the Infiltration Assessment Pit shall be below all Made Ground,
3. The water level shall not be raised above the base of the Made Ground.
4. The base of the Infiltration Assessment Pit shall be at least 1m into the stratum which is to be assessed.
5. The base of the Infiltration Assessment Pit shall be above the Water Table.
6. Minimum target depth of water of 1.0m.
7. Where any of the above conditions cannot be met, it shall be reported immediately to the Project Manager for additional guidance before the test is commenced.

Infiltration	RUN 1		RUN 2		RUN 3	
	W_D		W_D		W_D	
	W_{D1}	D_{TW1}	W_{D2}	D_{TW2}	W_{D3}	D_{TW3}
75% full						
25% full						



SITE OBSERVATIONS - VOLUME LOSS		
Test Run	Infiltration Records up to 6 Hours	Comments
1	<25%	Unlikely without significant attenuation
	<75%	Requires additional BRE DG365 testing
	>75%	Refer to results of Run 2
2	<25%	Unlikely without significant attenuation
	<75%	Requires additional BRE DG365 testing
	>75%	Refer to results of Run 3
3	<25%	Unlikely without significant attenuation
	<75%	Requires additional BRE DG365 testing
	>75%	Indicative Infiltration Rate achieved.

1 DAY INFILTRATION ASSESSMENT - WORKSHEET

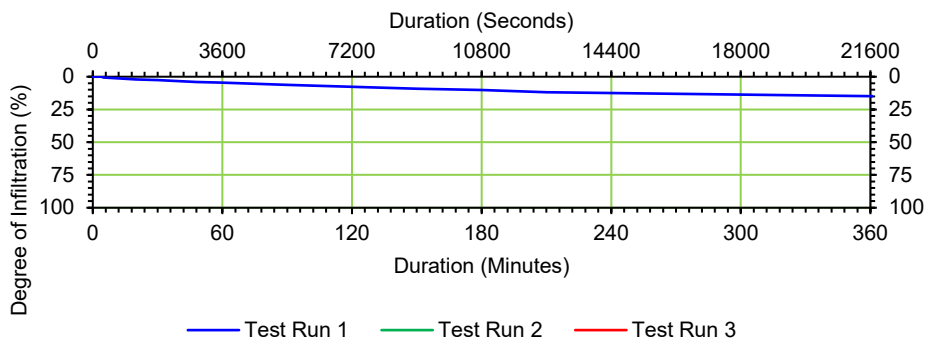
Site: Upper Acre, One Horton Heath
Client: Eastleigh Borough Council
Test Location SA1002 **Date of start** 04/09/2025 **Date at end** 05/09/2025

Test Run 1		Test Run 2		Test Run 3	
Pit Dimensions (m)		**Pit Dimensions (m)**		**Pit Dimensions (m)**	
Trial Pit Length (L)	2.200m	Trial Pit Length (L)		Trial Pit Length (L)	
Trial Pit Breadth / Width (B)	0.600m	Trial Pit Breadth / Width (B)		Trial Pit Breadth / Width (B)	
Effective Depth (D)	3.000m	Effective Depth (D)		Effective Depth (D)	
Time at Start of Filling	13.35	Time at Start of Filling		Time at Start of Filling	
Time at End of Filling	13.37	Time at End of Filling		Time at End of Filling	
Depth from Surface to Water (D_{TW})	2.020m	Depth below Surface to Water (D_{TW})		Depth below Surface to Water (D_{TW})	
Water Depth (W_D)	0.980m	Water Depth (W_D)	-	Water Depth (W_D)	-
Maximum Fill Volume (V_W)	1.294m³	Maximum Fill Volume (V_W)	-	Maximum Fill Volume (V_W)	-
Gravel used to backfill Test Pit	Yes	Gravel used to backfill Test Pit	No	Gravel used to backfill Test Pit	No
Porosity of Gravel Backfill (P_t)	0.300	Porosity of Gravel Backfill (P_t)		Porosity of Gravel Backfill (P_t)	
Corrected Water Volume (V_{WC})	0.388m³	Corrected Water Volume (V_{WC})	-	Corrected Water Volume (V_{WC})	-

Time to soakaway

Test Run 1 Time Day	Time	Depth to water (m bgl)	Duration Seconds	Test Run 2 Time Day	Time	Depth to water (m bgl)	Duration Seconds	Test Run 3 Time Day	Time	Depth to water (m bgl)	Duration Seconds
1	13.370	2.020	0								
1	13.380	2.020	60								
1	13.390	2.020	120								
1	13.400	2.020	180								
1	13.410	2.020	240								
1	13.420	2.025	300								
1	13.470	2.030	600								
1	13.520	2.035	900								
1	13.570	2.040	1200								
1	14.070	2.045	1800								
1	14.250	2.060	2880								
1	14.370	2.065	3600								
1	15.070	2.080	5400								
1	15.370	2.095	7200								
1	16.070	2.110	9000								
1	16.370	2.120	10800								
1	17.070	2.135	12600								
2	7.000	2.300	62580								
2	9.360	2.375	71940								
2	11.240	2.390	78420								
2	13.230	2.410	85560								
			85560								
			85560								

25% water loss (75% full)	2.265m	**25% water loss (75% full)**	-	**25% water loss (75% full)**	-
50% water loss (50% full)	2.510m	**50% water loss (50% full)**	-	**50% water loss (50% full)**	-
75% water loss (25% full)	2.755m	**75% water loss (25% full)**	-	**75% water loss (25% full)**	-
25% time (seconds)	51978 sec	**25% time (seconds)**	-	**25% time (seconds)**	-
75% time (seconds)	-	**75% time (seconds)**	-	**75% time (seconds)**	-
Vp 75-25	0.194m³	**Vp 75-25**	-	**Vp 75-25**	-
as 50 (Actual area from test)	15.376m²	**as 50 (Actual area from test)**	-	**as 50 (Actual area from test)**	-
tp 75 - 25		**tp 75 - 25**		**tp 75 - 25**	
Soil Infiltration Rate	-	**Soil Infiltration Rate**	-	**Soil Infiltration Rate**	-



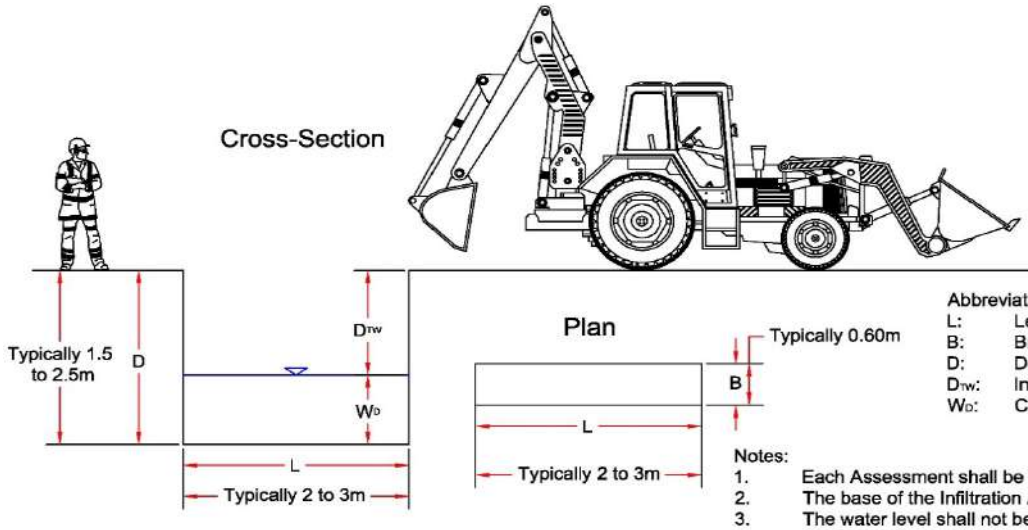
Form completed by		
Tested By	PRINT	Lily Cherry
	SIGN	L.Cherry
	DATE	05/09/2025
Calculated By	PRINT	Lily Cherry
	SIGN	L.Cherry
	DATE	05/09/2025
Checked by	PRINT	
	SIGN	
	DATE	

1 DAY INFILTRATION ASSESSMENT - AIDE MEMOIR

Site: Upper Acre, One Horton Heath
Client: Eastleigh Borough Council
Test Location SA1003 **Date of start** 04/09/2025 **Date at end** 05/09/2025

ANTICIPATED GROUND PROFILE FROM DESK STUDY	ACTUAL GROUND PROFILE FROM EXCAVATION
GROUND LEVEL	GROUND LEVEL
BASE OF PIT	BASE OF PIT

INFILTRATION ASSESSMENT PIT TYPICAL DIMENSIONS



ACTUAL DIMENSIONS			
L			
B			
D			
D_{TW}			
W_D			

Abbreviations:
- L: Length of Infiltration Assessment Pit.
- B: Breadth / Width of Infiltration Assessment Pit.
- D: Depth of Infiltration Assessment Pit.
- D_{TW}: Initial Depth to Top of Water.
- W_D: Calculated Water Depth.

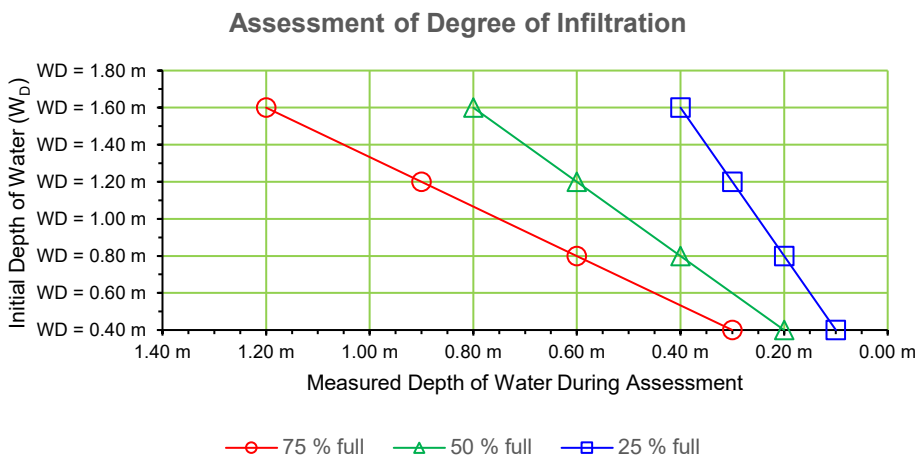
Notes:
1. Each Assessment shall be limited to a single stratum.
2. The base of the Infiltration Assessment Pit shall be below all Made Ground,
3. The water level shall not be raised above the base of the Made Ground.
4. The base of the Infiltration Assessment Pit shall be at least 1m into the stratum which is to be assessed.
5. The base of the Infiltration Assessment Pit shall be above the Water Table.
6. Minimum target depth of water of 1.0m.
7. Where any of the above conditions cannot be met, it shall be reported immediately to the Project Manager for additional guidance before the test is commenced.

Calculated Water Depth (W_D) = D - D_{TW}

Maximum Fill Volume (V_w) = W_o x B x L

Corrected Water Volume (V_{wc}) = V_w x Gravel Porosity (P_t)

Infiltration	RUN 1		RUN 2		RUN 3	
	W_D		W_D		W_D	
	W_{D1}	D_{TW1}	W_{D2}	D_{TW2}	W_{D3}	D_{TW3}
75% full						
25% full						



SITE OBSERVATIONS - VOLUME LOSS		
Test Run	Infiltration Records up to 6 Hours	Comments
1	<25%	Unlikely without significant attenuation
	<75%	Requires additional BRE DG365 testing
	>75%	Refer to results of Run 2
2	<25%	Unlikely without significant attenuation
	<75%	Requires additional BRE DG365 testing
	>75%	Refer to results of Run 3
3	<25%	Unlikely without significant attenuation
	<75%	Requires additional BRE DG365 testing
	>75%	Indicative Infiltration Rate achieved.

1 DAY INFILTRATION ASSESSMENT - WORKSHEET

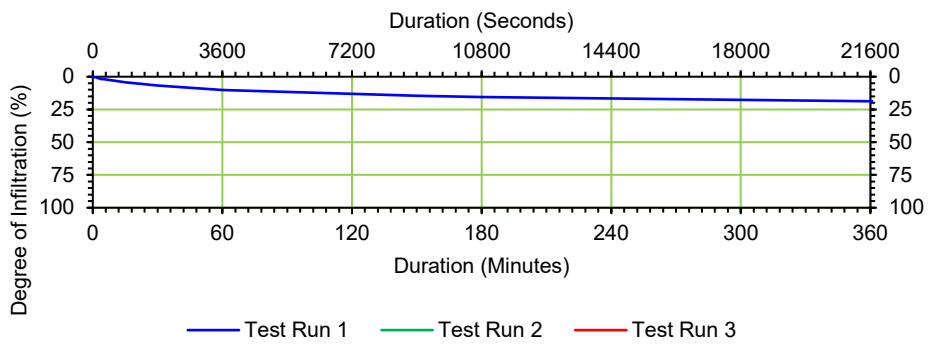
Site: Upper Acre, One Horton Heath
Client: Eastleigh Borough Council
Test Location SA1003 **Date of start** 04/09/2025 **Date at end** 05/09/2025

Test Run 1		Test Run 2		Test Run 3	
Pit Dimensions (m)		**Pit Dimensions (m)**		**Pit Dimensions (m)**	
Trial Pit Length (L)	2.100m	Trial Pit Length (L)		Trial Pit Length (L)	
Trial Pit Breadth / Width (B)	0.700m	Trial Pit Breadth / Width (B)		Trial Pit Breadth / Width (B)	
Effective Depth (D)	2.980m	Effective Depth (D)		Effective Depth (D)	
Time at Start of Filling	14.10	Time at Start of Filling		Time at Start of Filling	
Time at End of Filling	14.12	Time at End of Filling		Time at End of Filling	
Depth from Surface to Water (D_{TW})	1.945m	Depth below Surface to Water (D_{TW})		Depth below Surface to Water (D_{TW})	
Water Depth (W_D)	1.035m	Water Depth (W_D)	-	Water Depth (W_D)	-
Maximum Fill Volume (V_W)	1.521m³	Maximum Fill Volume (V_W)	-	Maximum Fill Volume (V_W)	-
Gravel used to backfill Test Pit	Yes	Gravel used to backfill Test Pit	No	Gravel used to backfill Test Pit	No
Porosity of Gravel Backfill (P_t)	0.300	Porosity of Gravel Backfill (P_t)		Porosity of Gravel Backfill (P_t)	
Corrected Water Volume (V_{WC})	0.456m³	Corrected Water Volume (V_{WC})	-	Corrected Water Volume (V_{WC})	-

Time to soakaway

Test Run 1 Time Day	Time	Depth to water (m bgl)	Duration Seconds	Test Run 2 Time Day	Time	Depth to water (m bgl)	Duration Seconds	Test Run 3 Time Day	Time	Depth to water (m bgl)	Duration Seconds
1	14.120	1.945	0								
1	14.130	1.950	60								
1	14.140	1.955	120								
1	14.150	1.960	180								
1	14.160	1.965	240								
1	14.170	1.965	300								
1	14.270	1.990	900								
1	14.420	2.015	1800								
1	15.120	2.050	3600								
1	15.420	2.065	5400								
1	16.120	2.080	7200								
1	16.420	2.095	9000								
1	17.120	2.105	10800								
2	7.020	2.260	60600								
2	9.380	2.280	69960								
2	11.250	2.290	76380								
2	13.300	2.300	83880								
			83880								
			83880								
			83880								
			83880								
			83880								
			83880								

25% water loss (75% full)	2.204m	**25% water loss (75% full)**	-	**25% water loss (75% full)**	-
50% water loss (50% full)	2.463m	**50% water loss (50% full)**	-	**50% water loss (50% full)**	-
75% water loss (25% full)	2.721m	**75% water loss (25% full)**	-	**75% water loss (25% full)**	-
25% time (seconds)	42527 sec	**25% time (seconds)**	-	**25% time (seconds)**	-
75% time (seconds)	-	**75% time (seconds)**	-	**75% time (seconds)**	-
Vp 75-25	0.228m³	**Vp 75-25**	-	**Vp 75-25**	-
as 50 (Actual area from test)	15.260m²	**as 50 (Actual area from test)**	-	**as 50 (Actual area from test)**	-
tp 75 - 25		**tp 75 - 25**		**tp 75 - 25**	
Soil Infiltration Rate	-	**Soil Infiltration Rate**	-	**Soil Infiltration Rate**	-



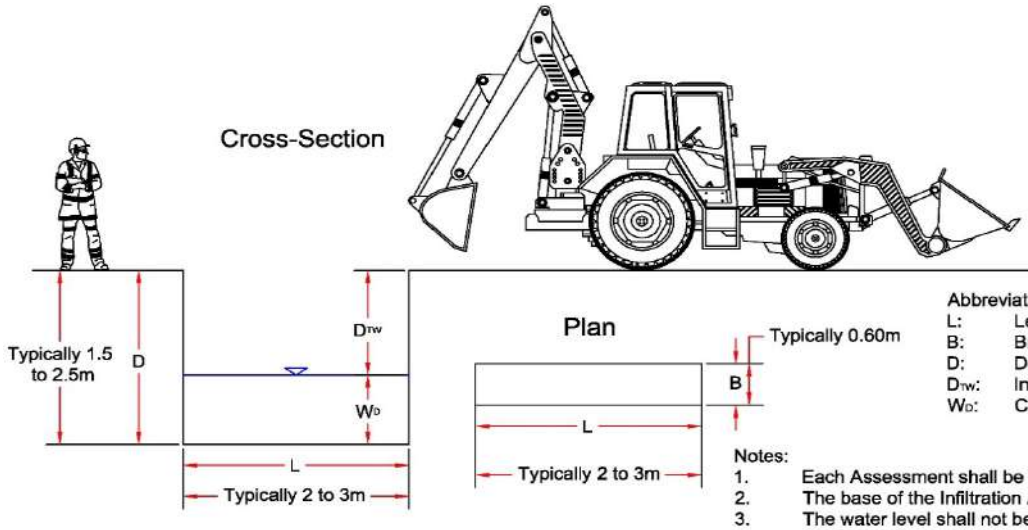
Form completed by		
Tested By	PRINT	Lily Cherry
	SIGN	L.Cherry
	DATE	05/09/2025
Calculated By	PRINT	Lily Cherry
	SIGN	L.Cherry
	DATE	05/09/2025
Checked by	PRINT	
	SIGN	
	DATE	

1 DAY INFILTRATION ASSESSMENT - AIDE MEMOIR

Site: Upper Acre, One Horton Heath
Client: Eastleigh Borough Council
Test Location SA1004 **Date of start** 04/09/2025 **Date at end** 05/09/2025

ANTICIPATED GROUND PROFILE FROM DESK STUDY	ACTUAL GROUND PROFILE FROM EXCAVATION
GROUND LEVEL	GROUND LEVEL
BASE OF PIT	BASE OF PIT

INFILTRATION ASSESSMENT PIT TYPICAL DIMENSIONS



ACTUAL DIMENSIONS			
L			
B			
D			
D_{TW}			
W_D			

Abbreviations:
- L: Length of Infiltration Assessment Pit.
- B: Breadth / Width of Infiltration Assessment Pit.
- D: Depth of Infiltration Assessment Pit.
- D_{TW}: Initial Depth to Top of Water.
- W_D: Calculated Water Depth.

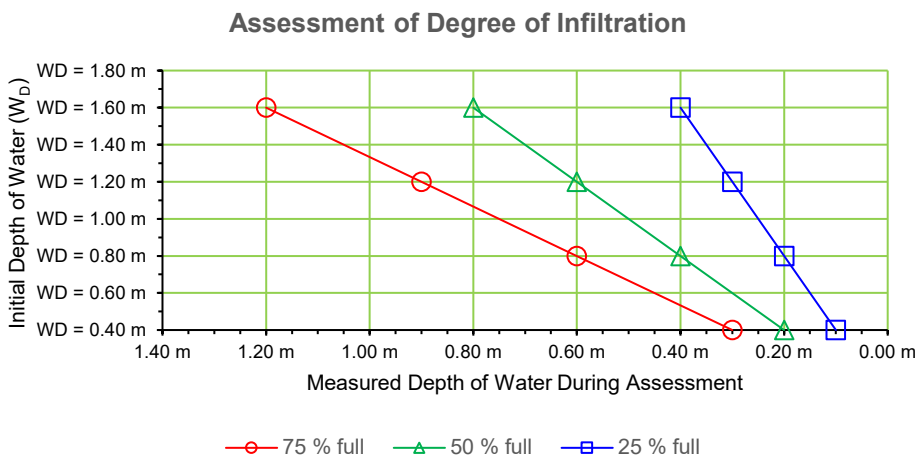
Notes:
1. Each Assessment shall be limited to a single stratum.
2. The base of the Infiltration Assessment Pit shall be below all Made Ground,
3. The water level shall not be raised above the base of the Made Ground.
4. The base of the Infiltration Assessment Pit shall be at least 1m into the stratum which is to be assessed.
5. The base of the Infiltration Assessment Pit shall be above the Water Table.
6. Minimum target depth of water of 1.0m.
7. Where any of the above conditions cannot be met, it shall be reported immediately to the Project Manager for additional guidance before the test is commenced.

Calculated Water Depth (W_D) = D - D_{TW}

Maximum Fill Volume (V_w) = W_o x B x L

Corrected Water Volume (V_{wc}) = V_w x Gravel Porosity (P_t)

Infiltration	RUN 1		RUN 2		RUN 3	
	W_D		W_D		W_D	
	W_{D1}	D_{TW1}	W_{D2}	D_{TW2}	W_{D3}	D_{TW3}
75% full						
25% full						



SITE OBSERVATIONS - VOLUME LOSS		
Test Run	Infiltration Records up to 6 Hours	Comments
1	<25%	Unlikely without significant attenuation
	<75%	Requires additional BRE DG365 testing
	>75%	Refer to results of Run 2
2	<25%	Unlikely without significant attenuation
	<75%	Requires additional BRE DG365 testing
	>75%	Refer to results of Run 3
3	<25%	Unlikely without significant attenuation
	<75%	Requires additional BRE DG365 testing
	>75%	Indicative Infiltration Rate achieved.

1 DAY INFILTRATION ASSESSMENT - WORKSHEET

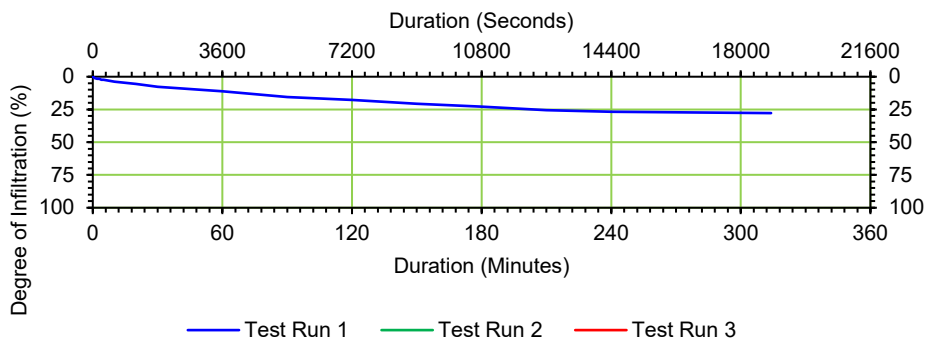
Site: Upper Acre, One Horton Heath
Client: Eastleigh Borough Council
Test Location SA1004 **Date of start** 04/09/2025 **Date at end** 05/09/2025

Test Run 1		Test Run 2		Test Run 3	
Pit Dimensions (m)		**Pit Dimensions (m)**		**Pit Dimensions (m)**	
Trial Pit Length (L)	1.400m	Trial Pit Length (L)		Trial Pit Length (L)	
Trial Pit Breadth / Width (B)	0.600m	Trial Pit Breadth / Width (B)		Trial Pit Breadth / Width (B)	
Effective Depth (D)	1.500m	Effective Depth (D)		Effective Depth (D)	
Time at Start of Filling	8.28	Time at Start of Filling		Time at Start of Filling	
Time at End of Filling	8.29	Time at End of Filling		Time at End of Filling	
Depth from Surface to Water (D_{TW})	0.600m	Depth below Surface to Water (D_{TW})		Depth below Surface to Water (D_{TW})	
Water Depth (W_D)	0.900m	Water Depth (W_D)	-	Water Depth (W_D)	-
Maximum Fill Volume (V_W)	0.756m³	Maximum Fill Volume (V_W)	-	Maximum Fill Volume (V_W)	-
Gravel used to backfill Test Pit	Yes	Gravel used to backfill Test Pit	No	Gravel used to backfill Test Pit	No
Porosity of Gravel Backfill (P_t)	0.300	Porosity of Gravel Backfill (P_t)		Porosity of Gravel Backfill (P_t)	
Corrected Water Volume (V_{WC})	0.227m³	Corrected Water Volume (V_{WC})	-	Corrected Water Volume (V_{WC})	-

Time to soakaway

Time		Depth to water	Duration	Time		Depth to water	Duration	Time		Depth to water	Duration
Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds
1	8.290	0.600	0								
1	8.300	0.610	60								
1	8.310	0.615	120								
1	8.320	0.615	180								
1	8.330	0.620	240								
1	8.340	0.620	300								
1	8.390	0.635	600								
1	8.490	0.650	1200								
1	8.590	0.670	1800								
1	9.290	0.700	3600								
1	9.590	0.740	5400								
1	10.290	0.760	7200								
1	10.590	0.785	9000								
1	11.290	0.805	10800								
1	11.590	0.830	12600								
1	12.290	0.840	14400								
1	13.430	0.850	18840								
			18840								
			18840								
			18840								
			18840								
			18840								
			18840								

25% water loss (75% full)	0.825m	**25% water loss (75% full)**	-	**25% water loss (75% full)**	-
50% water loss (50% full)	1.050m	**50% water loss (50% full)**	-	**50% water loss (50% full)**	-
75% water loss (25% full)	1.275m	**75% water loss (25% full)**	-	**75% water loss (25% full)**	-
25% time (seconds)	12240 sec	**25% time (seconds)**	-	**25% time (seconds)**	-
75% time (seconds)	-	**75% time (seconds)**	-	**75% time (seconds)**	-
Vp 75-25	0.113m³	**Vp 75-25**	-	**Vp 75-25**	-
as 50 (Actual area from test)	5.040m²	**as 50 (Actual area from test)**	-	**as 50 (Actual area from test)**	-
tp 75 - 25		**tp 75 - 25**		**tp 75 - 25**	
Soil Infiltration Rate	-	**Soil Infiltration Rate**	-	**Soil Infiltration Rate**	-



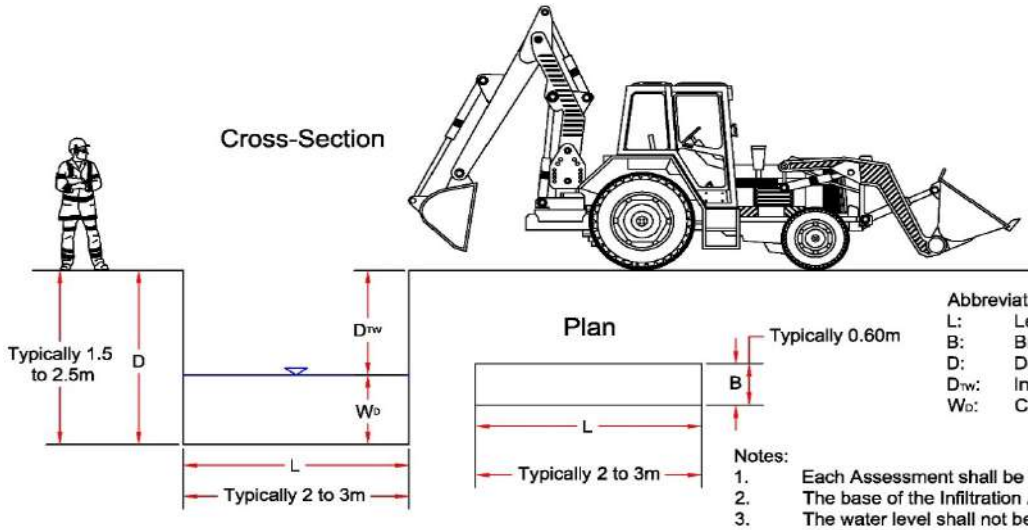
Form completed by		
Tested By	PRINT	Lily Cherry
	SIGN	L.Cherry
	DATE	05/09/2025
Calculated By	PRINT	Lily Cherry
	SIGN	L.Cherry
	DATE	05/09/2025
Checked by	PRINT	
	SIGN	
	DATE	

1 DAY INFILTRATION ASSESSMENT - AIDE MEMOIR

Site: Upper Acre, One Horton Heath
Client: Eastleigh Borough Council
Test Location SA1005 **Date of start** 04/09/2025 **Date at end** 05/09/2025

ANTICIPATED GROUND PROFILE FROM DESK STUDY	ACTUAL GROUND PROFILE FROM EXCAVATION
GROUND LEVEL	GROUND LEVEL
BASE OF PIT	BASE OF PIT

INFILTRATION ASSESSMENT PIT TYPICAL DIMENSIONS



ACTUAL DIMENSIONS			
L			
B			
D			
D_{TW}			
W_D			

Abbreviations:
- L: Length of Infiltration Assessment Pit.
- B: Breadth / Width of Infiltration Assessment Pit.
- D: Depth of Infiltration Assessment Pit.
- D_{TW}: Initial Depth to Top of Water.
- W_D: Calculated Water Depth.

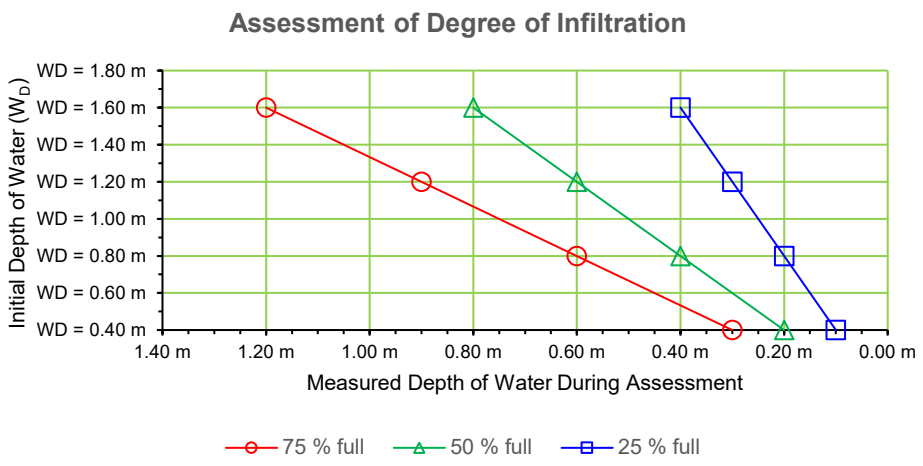
Notes:
1. Each Assessment shall be limited to a single stratum.
2. The base of the Infiltration Assessment Pit shall be below all Made Ground,
3. The water level shall not be raised above the base of the Made Ground.
4. The base of the Infiltration Assessment Pit shall be at least 1m into the stratum which is to be assessed.
5. The base of the Infiltration Assessment Pit shall be above the Water Table.
6. Minimum target depth of water of 1.0m.
7. Where any of the above conditions cannot be met, it shall be reported immediately to the Project Manager for additional guidance before the test is commenced.

Calculated Water Depth (W_D) = D - D_{TW}

Maximum Fill Volume (V_w) = W_o x B x L

Corrected Water Volume (V_{wc}) = V_w x Gravel Porosity (P_t)

Infiltration	RUN 1		RUN 2		RUN 3	
	W_D		W_D		W_D	
	W_{D1}	D_{TW1}	W_{D2}	D_{TW2}	W_{D3}	D_{TW3}
75% full						
25% full						



SITE OBSERVATIONS - VOLUME LOSS		
Test Run	Infiltration Records up to 6 Hours	Comments
1	<25%	Unlikely without significant attenuation
	<75%	Requires additional BRE DG365 testing
	>75%	Refer to results of Run 2
2	<25%	Unlikely without significant attenuation
	<75%	Requires additional BRE DG365 testing
	>75%	Refer to results of Run 3
3	<25%	Unlikely without significant attenuation
	<75%	Requires additional BRE DG365 testing
	>75%	Indicative Infiltration Rate achieved.

1 DAY INFILTRATION ASSESSMENT - WORKSHEET

Site: Upper Acre, One Horton Heath
Client: Eastleigh Borough Council
Test Location SA1005 **Date of start** 04/09/2025 **Date at end** 05/09/2025

Test Run 1		Test Run 2		Test Run 3	
Pit Dimensions (m)		**Pit Dimensions (m)**		**Pit Dimensions (m)**	
Trial Pit Length (L)	1.300m	Trial Pit Length (L)		Trial Pit Length (L)	
Trial Pit Breadth / Width (B)	0.700m	Trial Pit Breadth / Width (B)		Trial Pit Breadth / Width (B)	
Effective Depth (D)	1.520m	Effective Depth (D)		Effective Depth (D)	
Time at Start of Filling	14.51	Time at Start of Filling		Time at Start of Filling	
Time at End of Filling	14.53	Time at End of Filling		Time at End of Filling	
Depth from Surface to Water (D_{TW})	0.700m	Depth below Surface to Water (D_{TW})		Depth below Surface to Water (D_{TW})	
Water Depth (W_D)	0.820m	Water Depth (W_D)	-	Water Depth (W_D)	-
Maximum Fill Volume (V_W)	0.746m³	Maximum Fill Volume (V_W)	-	Maximum Fill Volume (V_W)	-
Gravel used to backfill Test Pit	Yes	Gravel used to backfill Test Pit	No	Gravel used to backfill Test Pit	No
Porosity of Gravel Backfill (P_t)	0.300	Porosity of Gravel Backfill (P_t)		Porosity of Gravel Backfill (P_t)	
Corrected Water Volume (V_{WC})	0.224m³	Corrected Water Volume (V_{WC})	-	Corrected Water Volume (V_{WC})	-

Time to soakaway

Time		Depth to water	Duration	Time		Depth to water	Duration	Time		Depth to water	Duration
Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds
1	14.530	0.700	0								
1	14.540	0.710	60								
1	14.550	0.710	120								
1	14.560	0.710	180								
1	14.570	0.710	240								
1	14.580	0.710	300								
1	15.030	0.715	600								
1	15.080	0.720	900								
1	15.230	0.725	1800								
1	15.530	0.730	3600								
1	16.230	0.735	5400								
1	16.530	0.740	7200								
1	17.230	0.745	9000								
2	7.040	0.790	58260								
2	9.450	0.790	67920								
2	11.260	0.790	73980								
2	13.380	0.790	81900								
			81900								
			81900								
			81900								
			81900								
			81900								
			81900								

25% water loss (75% full)	0.905m	**25% water loss (75% full)**	-	**25% water loss (75% full)**	-
50% water loss (50% full)	1.110m	**50% water loss (50% full)**	-	**50% water loss (50% full)**	-
75% water loss (25% full)	1.315m	**75% water loss (25% full)**	-	**75% water loss (25% full)**	-
25% time (seconds)	-	**25% time (seconds)**	-	**25% time (seconds)**	-
75% time (seconds)	-	**75% time (seconds)**	-	**75% time (seconds)**	-
Vp 75-25	0.112m³	**Vp 75-25**	-	**Vp 75-25**	-
as 50 (Actual area from test)	5.350m²	**as 50 (Actual area from test)**	-	**as 50 (Actual area from test)**	-
tp 75 - 25		**tp 75 - 25**		**tp 75 - 25**	
Soil Infiltration Rate	-	**Soil Infiltration Rate**	-	**Soil Infiltration Rate**	-

Form completed by		
Tested By	PRINT	Lily Cherry
	SIGN	L.Cherry
	DATE	05/09/2025
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	DATE	

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