

**Land at Gate Farm,
High Street, Sutton Benger**
Ground Investigation
Report

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Ground Investigation Report

For

Gleeson Land

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Executive Summary

This presents the salient points of the report and should not be referred to in isolation.

Instruction	In October 2025, Gleeson Land commissioned Rodgers Leask Ltd (RLL) to undertake a ground investigation and prepare a Ground Investigation Report (GIR) for Land at Gate Farm, High Street, Sutton Benger (the Site)
Scope of Works	▪ A review of the Phase 1 Desk Study (which contains environmental searches) and existing third-party ground investigation data. ▪ An intrusive ground investigation comprising windowless sampling boreholes, trial pits, soakaways and TRL DCPs. ▪ Chemical and geotechnical testing on samples collected during the investigation. ▪ Preliminary ground gas monitoring. ▪ A generic quantitative risk assessment of the chemical status of the soils and groundwater in relation to the Conceptual Model. ▪ Assessment of the geotechnical ground conditions and recommendations for foundations, floor slabs, buried concrete, earthworks and abnormal ground related construction issues. ▪ Additional groundwater level monitoring over the winter period.
Proposed Development	Outline planning permission (with all matters reserved except means of access, from the B4069) for up to 90 no. (class C3) residential dwellings (including 40% affordable dwellings) including the creation of new vehicular access (from the B4069), pedestrian and cycle paths, parking spaces, public open space, biodiversity enhancement, landscape planting, surface water attenuation, associated infrastructure and other associated works.
Site Location and Description	The Site is located to the north of the B4069 within the village of Sutton Benger, approximately 7km north-east of Chippenham. The Site is approximately centred on National Grid Reference 393999E, 178513N, with the nearest postcode being SN15 4RE. The Site has a roughly rectangular outline and covers an area of approximately 4.97 hectares (ha). It comprises agricultural fields and is accessed via a track and gated entrance located in the eastern corner of Site, off the B4069.
History	The Site has remained greenfield agricultural land throughout the available mapping record.
Published Geology, Hydrogeology & Hydrology	No Made Ground was encountered during the intrusive investigation. According to published geological records, the Site is underlain by the Kellaways Sand Member, comprising of sandstone. River Terrace Deposits, consisting of sand and gravel, are associated with areas closest to the eastern boundary of the Site. Alluvium, comprising clay, silt and sand, are associated with areas closest to the northern boundary.

	Kellaways Sand Member is classified as a Secondary A aquifer in the northern half of the Site and is classified as an Unproductive in the south half. The superficial deposits are classified as a Secondary A aquifer. A normal fault is recorded in the wider vicinity, trending southwest to northeast approximately 182 m northwest of the Site. Two WFD surface water body catchments are present on the Site and are associated with two rivers. One relates to the River Avon (Tetbury Avon within the river Marden catchment), and the other is associated with Sutton Benger Brook within the River Avon (Bristol catchment). Both watercourses are located along the northern boundary of the Site. The northern boundary of the Site lies within flood zones 2 and 3, associated with the watercourse immediately to the north. The Site lies within a groundwater Source Protection Zone (SPZ) Zone 2c (outer catchment within confined aquifer).
Ground Conditions Encountered	■ The following ground conditions were encountered during the works: ■ TOPSOIL comprising grass over brown slightly sandy slightly gravelly clay - encountered in all locations to a maximum depth of 0.30m bgl; ■ KELLAWAYS SAND MEMBER typically comprising very soft to very stiff light brown sandy CLAY; or medium dense sandy GRAVEL; or medium dense gravelly SAND; or firm reddish brown slightly sandy slightly gravelly CLAY - encountered in all locations to a maximum depth of 4.10m bgl, except at SA01, TP03, TP013; ■ ALLUVIUM typically comprising firm to stiff grey mottled orangish brown clay – encountered only in WS01 to a maximum depth of 5.00m bgl. ■ RIVER TERRACE DEPOSITS typically comprising firm light brown sandy gravelly CLAY; or loose to medium dense light brown slightly clayey very sandy GRAVEL; or medium dense light brown silty sandy GRAVEL – encountered in SA01, TP03, TP13, WS03, and WS05 to a maximum depth of 2.85m bgl. Made Ground was not encountered during the intrusive works.
Contamination Issues	No visual or olfactory indications of contamination was observed during the investigation. Chemical testing undertaken on soils across the Site indicate no elevated concentrations of contaminants above S4UL for residential development with homegrown produce.
Ground Gas/Radon	Gas: Based on the gas monitoring completed to date, monitoring wells indicate an initial CS-1 classification. Gas protections measures are therefore not considered necessary at this stage. Radon: Online UK radon mapping indicates that the Site is located within an area where less than 1% of dwellings are affected by radon. Accordingly, no radon protection measures are required within the floor slab of the proposed dwellings or extensions.

Foundations	Generally, the site is suitable for conventional strip or trench fill foundations excavated into the firm to stiff clay or medium dense sand and gravel of the Kellaways Formation where an allowable bearing pressure of 100 kPa should be achievable. Depending on the final development layout, a piled foundation maybe required for some of the plots located in the vicinity of TP07-TP12 & WS04 located in the southwest of the site where the Kellaway Formation was recorded to be soft. This area is highlighted on drawing 25317-RLL-25-XX-DR-O-003 P3 located in Appendix A. If piling is required then to confirm deeper ground conditions for pile design, some further ground investigation comprising combined percussive and rotary boreholes is recommended, with the boreholes drilled to depths of circa 20m. In situ Standard Penetration Tests should be conducted during forwarding of the boreholes and collected soil samples submitted for appropriate geotechnical laboratory testing.
Mining	There are no records of mining on Site or within 500m of its boundary.
Buried Concrete Classification	A Design Sulphate (DS) class of DS-1 and Aggressive Chemical Environment for Concrete (ACEC) class of AC-1 should be adopted for the Site.
Soakaway Testing	SA01 was positioned in the location of the proposed infiltration basin. At SA01, an effective depth of 25% was achieved, with infiltration rates of 1.43×10^{-5} m/s for the first test, and 1.50×10^{-5} m/s for the second (albeit extrapolated). The results of the groundwater level monitoring over the winter months of 2025/2026 recorded shallow groundwater, therefore it is not possible to achieve 1m of freeboard below the base of the infiltration basin (assumed to be 1m below existing ground levels). Therefore on this basis the site should be positively drained to the watercourse on the northern site boundary.
Waste Management	Reference should be made to the RLL Site specific Waste Management Strategy (ref. 25317-25-XX-RP-O-0007 dated November 2025.)
Recommendations for Further Works	▪ A copy of this report, particularly the chemical testing, should be issued to the local contaminated land officer to confirm that they agree that the material on Site is classified as non-hazardous and can be disposed off Site as this classification, if required. ▪ A copy of this report should be issued to the LPA to discharge any prestart Site planning conditions; ▪ A tree survey maybe required, extending beyond the Site boundaries, to inform foundation design; ▪ An ecology survey maybe required, covering the Site and adjacent areas; ▪ An Earthworks Specification will be required for any proposed earthworks;

	▪ Additional geotechnical testing will be required for any cut materials that are to be re-used in earthworks, or for any material to be imported to Site; ▪ Confirm with the local water supply company that the Site is suitable for standard PE water supply pipework; ▪ A CL:AIRE approved Materials Management Plan (MMP) will be required for the re-use of soils on Site; ▪ In-situ CBR testing will be required to inform road and hardstanding design. ▪ 20m deep dynamic sample/rotary boreholes in the southwest of the site to confirm design information for a piled foundation solution.
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1.0 Introduction

1.1. Terms of Reference

In October 2025, Gleeson Land commissioned Rodgers Leask Ltd (RLL) to undertake a ground investigation and prepare a Ground Investigation Report (GIR) for a Site at Gate Farm, High Street, Sutton Benger.

A Site Location Plan and Site Boundary Plan are included in **Appendix A**. The area included within the red line boundary is hereafter referred to as the 'Site'.

1.2. Proposed Development

It is understood that the Site has outline planning permission (with all matters reserved except means of access, from the B4069) for up to 90 no. (class C3) residential dwellings (including 40% affordable dwellings) including the creation of new vehicular access (from the B4069), pedestrian and cycle paths, parking spaces, public open space, biodiversity enhancement, landscape planting, surface water attenuation, associated infrastructure and other associated works.

A copy of the Illustrative Site Layout (drawing STN-GEN-SW-DR-MP-06 A) is included in **Appendix A**.

1.3. Objectives and Scope of the Report

The objectives and scope of the investigation were defined within the RLL Fee Proposal reference RL/P25-317/002 dated 18 November 2025. In order to achieve the outline objectives, the scope of this study comprise:

- A review of the Phase 1 Desk Study (which contains environmental searches) and existing third-party ground investigation data.
- An intrusive ground investigation comprising windowless sampling boreholes, trial pits, soakaways and TRL DCPs.
- Chemical and geotechnical testing on samples collected during the investigation.
- Preliminary ground gas monitoring.
- A generic quantitative risk assessment of the chemical status of the soils and groundwater in relation to the Conceptual Model.
- Assessment of the geotechnical ground conditions and recommendations for foundations, floor slabs, buried concrete, earthworks and abnormal ground related construction issues.

Subsequent to the ground investigation a programme of long term groundwater level monitoring was undertaken over the winter of 2025/2026.

1.4. Sources of Information

The following documents and data sources have been reviewed in preparation of this GIR and should be read in conjunction with this report:

- Phase 1 Geo-Environmental Desk Study, RLL, ref. 25317-RLL-25-XX-RP-O-0001 dated September 2025.
- Waste Management Strategy, RLL, ref. 25317-25-XX-RP-O-0007 dated November 2025.

1.5. Limitations and Confidentiality

All conclusions and recommendations made within this report are based upon and limited to the factual information obtained as part of this investigation. No responsibility can be taken by RLL for information obtained by third parties, and it has been assumed that all third-party information provided is true and correct.

No liability can be accepted for conditions not revealed within the exploratory holes or pits undertaken by this investigation. The exploratory points cover only a small proportion of the total Site area. RLL has where necessary undertaken extrapolation between locations and no responsibility can be taken for different conditions which may occur between locations.

RLL has undertaken the work in accordance with our understanding of current best practice at the time of undertaking the report. Further assessment and revision of the report may be required should new information come to light or legislation/changes to best practice be introduced after the date of issue of the report.

RLL has prepared the report for the sole use and reliance of the Client. The report may not be used or relied upon by any unauthorised third party without the explicit written agreement of RLL. The interpretive work undertaken within this report remains the intellectual property of RLL and must not be divulged to any commercial third party without prior written agreement of RLL.

At the time of writing, detailed information on the proposed structures, such as detailed layout, loadings and serviceability limits, was not available. Accordingly, where geotechnical design advice is provided it is for information only and should be reassessed by a competent specialist once the development layout and structural loadings are known.

2.0 Site Setting

2.1. Site Location and Description

The Site is located to the north of the B4069 within the village of Sutton Benger, approximately 7km north-east of Chippenham. The Site is approximately centred on National Grid Reference 393999E, 178513N, with the nearest postcode being SN15 4RE.

A plan of the Site is presented in **Appendix A**. The boundary of the Site is indicated by the red line.

The land within the red line boundary will henceforth be referred to as the "Site".

The Site has a roughly rectangular outline and covers an area of approximately 4.97 hectares (ha). It comprises agricultural fields and is accessed via a track and gated entrance located in the eastern corner of Site, off the B4069.

Overhead electricity cables run broadly north to south across the eastern portion of the Site, with a pole mounted electricity transformer located within the Site boundary. A raised manhole is present in the north-west corner of the central field, associated with a foul water sewer that trends north-west to south-east across the centre of the Site.

An unnamed watercourse flows west to east adjacent to the northern boundary. A man-made lake lies immediately adjacent to the north-west corner of the Site and drains into this watercourse via a series of overflows, sluice gates and weirs.

The highest point of the Site is located in the south-west corner approximately 66m AOD, falling northwards to approximately 59m AOD. Overall, the Site is relatively flat.

2.2. Site Boundaries and Surrounding Area

The Site is bounded to the north by ancient woodlands and an unnamed watercourse. To the west, the boundary is defined by an electric fence and a sparsely vegetated hedgerow. The southern boundary comprises a hedgerow and the B4069. To the east, the Site is bordered by a hedgerow and wall forming the rear boundary of a neighbouring residential garden; a disused swimming pool is located adjacent to this boundary.

Within the surrounding area, land to the north comprises further significant areas of ancient woodland, beyond which lie additional agricultural land and woodland, as well as the M4 motorway running broadly east to west. To the west is additional residential properties, with further agricultural land beyond. To the east are residential dwellings forming part of the village of Sutton Benger.

2.3. Site History

Historical Ordnance Survey maps have been studied to identify former land uses of the Site and the surrounding area. Records have been obtained from a Groundsure Report, presented in the RLL Desk Study, which includes the Site and immediate surrounding area.

A summary is provided below, and more detailed information is available in the RL Desk study (25317-RLL-25-XX-RP-O-0001).

2.3.1. On Site

The earliest available historical maps show the Site was greenfield comprising two agricultural fields. No significant changes are recorded on the Site through to the present day. The boundary between the two fields, as shown on the 1900 1:2,500 maps.

2.3.2. Off Site

The surrounding area predominantly comprised agricultural fields, with Sutton Benger to the east and Draycot to the west. Draycot House and its associated estate are located to the north of the Site. Notable residential development within Sutton Benger is shown on the 1981-1982 1:10,000 mapping. The 2025 1:10,000 scale mapping also indicates the presence of a factory to the north of the Site.

The construction of the M4 motorway, approximately 800m north of the Site, is first shown on the 1974 1:10,560 maps.

A substantial portion of the Draycot House is no longer shown on the 1956-1960 1:10,560 maps. Historical records indicate that the estate land had been sold separately and was owned by farmers at that time. The house was considered too large for their need and was subsequently demolished between 1952 and 1954. Draycot Lake was originally excavated between approximately 1773 and 1775 and was restored in 1990 to its present-day condition.

2.4. UXO

Regional Unexploded Bomb Risk maps obtained from Zetica indicate that the Site is in a low-risk area for unexploded ordnance (UXO).

Given that the Site has historically remained undeveloped and that the historical maps do not show any obvious signs of wartime activity within the Site locality, the risk of encountering UXB is considered low. No further risk assessment is required.

2.5. Geology

2.5.1. Published Geology

Information pertaining to the underlying ground conditions at the Site has been obtained via the RL Desk Study,

The published geological information pertinent to Site is presented below.

Table 2.1 - Published Geology	
Geological Unit	
Superficial Deposits	River Terrace Deposits comprising sand and gravel are associated with areas closest to the eastern boundary of the Site. Alluvium comprising clay, silt and sand are associated with areas closest to the northern boundary of the Site.
Bedrock Geology	Kellaways Sand Member (sandstone) underlies the entire Site.

No linear bedrock features are mapped within the Site boundary. However, one recorded bedrock fault is located within approximately 182m northwest of Site.

2.6. Mining History

Information presented within the RLL Desk Study indicates that the Site is not located within an area of coal mining, and there are no records of quarrying having been undertaken within the Site.

2.7. Potential for Ground Stability Hazards

The following BGS classifications with regards to ground stability hazards:

Table 2.2 – Geological Hazards		
Hazard	Hazard Rating	Comments
Shrink - Swell Clays	Negligible to Very Low	Ground conditions are predominantly non-plastic to low plasticity. A very low hazard rating associated with the alluvium present around the watercourse along the northern boundary of the Site.
Landslides	Very Low	Slope stability problems may be present and should be anticipated. However, this is considered unlikely.
Ground Dissolution of Soluble Rocks	Negligible	Soluble rocks are either not present or are not prone to dissolution. Dissolution features are unlikely.
Compressible Deposits	Negligible to Moderate	The majority of the Site is classified as negligible hazard. However, the alluvium in the northern part of the Site is classified as moderate hazard. This indicates that compressibility and uneven settlement hazards are likely to be present, and the variability and compressible nature of these deposits should be specifically considered.
Collapsible Deposits	Negligible to Very Low	The alluvium in the north of Site is classified as negligible hazard, while the remainder of the Site is classified as low risk. This indicates that potential collapses when deposits are loaded and saturated are unlikely to be present.
Running Sands	Very Low to Low	There is a low potential for running sands problems if groundwater levels rise or if sandy strata are exposed to water. For the majority of the Site, this risk is considered very low. However, in the eastern portion of the Site, associated with the River Terrace Deposits, running sands could occur if the water table rises rapidly.

2.8. Radon

The Site is not in a radon affected area, as less than 1% of properties are above the action level. Therefore, radon protective measures are not required in the construction of new dwellings or extensions.

2.9. Hydrogeology

Information presented in the RLL Desk Study indicates that the underlying bedrock comprises the Kellaways Sand Member, classified as Secondary A Aquifer in the northern half of the Site, and Unproductive in the southern half. The superficial deposits are classified as a Secondary A Aquifer.

One groundwater abstraction licence is recorded approximately 869m southwest of the Site, described as 'Ground Water – Fresh, General Use Relating to Secondary Category (Medium Loss)'. No potable water abstractions are recorded within 2,00m of the Site. The Site is located within Source Protection Zone (SPZ) 2c, defined as the outer catchment of a confined aquifer.

2.10. Hydrology

Two WFD surface water body catchments are present on the Site and are associated with two rivers. One relates to the River Avon (Tetbury Avon within the river Marden catchment), and the other is associated with Sutton Benger Brook within the River Avon (Bristol catchment). Both watercourses are located along the northern boundary of the Site.

The northern boundary of the Site lies within Flood Zone 2 and 3, associated with the watercourse immediately to the north:

- Flood Zone 2 designations are given to land with between 1% and 0.1% annual probability of river flooding or between 0.5% and 0.1% risk of sea flooding.
- Flood Zone 3 designations are given to land with a 1% annual probability or greater of fluvial flooding or a 0.5% annual probability or greater of sea flooding.

The Risk of flooding from Rivers and the Sea (RoFRaS) rating is classifies the northern boundary as high to medium risk, associated with the adjacent watercourses.

2.11. Landfills and Other Waste Sites

A summary is provided below, and more detailed information is available in the RL Desk study (25-317-RLL-25-XX-RP-O-0001).

Table 2.3 – Land fills and Other Waste Sites		
Category		Summary
Historical Industrial Sites from 1:10,000 mapping	<i>Potentially contaminative use within 500m</i>	On Site One historical record has been identified on Site, relating to a pumping house shown on the 1925 mapping and associated with the watercourse located along the northern boundary. Off Site Thirteen historical records have been identified off Site. These relate to an unspecified factory located approximately 253m east, unspecified tanks located 371m northeast (present on the 1982 mapping), a refused heap located 439m northeast (present on the 1885 mapping), and an old gravel pit indicated on maps dated from 1899 to 1960.
	<i>Historical Tank Database</i>	On Site No records. Off Site Twelve historical records have been identified off Site relating to unspecified tanks, tanks, and a gasometer located between 291m and 414m from the Site. 12 No. historical records for the Unspecified Tanks, Tanks and Gasometer between 415m and 291m from Site.
	<i>Potentially infilled Land within 250m</i>	On Site No records. Off Site No records.
Environmental Permits, Incidents and Authorisations	<i>Part IIA EPA 1990</i>	The Site is not determined as Contaminated Land.
	<i>Records of List 2 Dangerous Substance Inventory Sites</i>	No records within 500m.

Table 2.3 – Land fills and Other Waste Sites

Category		Summary
	<i>Licensed Discharge Consents</i>	On Site No records within 500m. Off Site One record relates to a 'Miscellaneous Discharges – Surface Water' into a tributary of the River Avon (Bristol); consent was revoked in 2016.
	<i>Pollution Incidents</i>	Six records have been identified within 500m of the Site. The most significant relates to a Category 2 incident in 2006 associated with an air impact. Four of the records relate to Category 3 water impacts.
Landfills and other Waste Disposal Sites	<i>EA registered, BGS survey, Local Authority and Historical Mapping</i>	No records within 250m.
Current land Use	<i>Current Industrial Sites</i>	One record identifies a telecommunications mast located approximately 123m of the Site.
Designated Environmentally Sensitive Sites	<i>SSSI's, NNR's, AONB's</i>	One record relates to a SSSI, Sutton Lane Meadows, located approximately 769m southeast of the Site. One record identifies designated ancient woodland at Weir Wood, located approximately 1km north of the Site. No other environmental sensitive sites have been identified within 1km of the Site

3.0 Ground Investigation

3.1. Introduction

A ground investigation was undertaken at the Site by RLL in November 2025 and comprised machine excavated trial pits and soakaway tests, windowless sample boreholes and TRL DCPs.

The main objectives of the investigation were to assess the baseline contamination profile for the Site and provide a preliminary geotechnical profile to understand likely foundation options.

A borehole location plan ref 25317-RLL-25-XX-DR-O-0003 is presented in **Appendix A**.

3.2. Scope of Works

The ground investigation comprised the following scope of works.

Table 3.1 – Scope of Works				
Investigation Technique	No. Of Intrusive Points	Location Ref:	Final Depth Range (m)	Rationale
Trial Pits (TPs) utilising a 8-ton tracked excavator	13	TP1 to TP13	2.50 – 4.10	Excavated to determine ground conditions across the Site and to obtain soil samples for laboratory testing.
Window sample (WS) boreholes	5	WS01 to WS05	1.00 – 5.00	Drilled to determine ground conditions across the Site, to undertake Standard Penetration Tests (SPTs). WS01, WS03 and WS04 were installed with ground gas and groundwater monitoring wells.
Soakaways test excavated using a 8-tonne tracked excavator	1	SA01	1.00	Test located in the area of the proposed attenuation basins to assess the potential for the use of soakaways for infiltration to ground.

Table 3.1 – Scope of Works

Investigation Technique	No. Of Intrusive Points	Location Ref:	Final Depth Range (m)	Rationale
TRL DCP Insitu CBR tests	6	DC1 to DCP6	0.93 – 0.97	Tests positions along the proposed main highway alignment to provide preliminary CBR data for highway design.

The exploratory holes were logged in general accordance with BS 5930:2015+A1:2020 'Code of Practice for Site Investigations' and copies of exploratory hole logs and photographs are included in **Appendix B**.

3.3. Site Constraints

The following constraints were identified during the intrusive works which prevented the full scope of works to be undertaken:

- WS02 and WS05: Installation was not completed due to shallow SPT refusal due to hard ground conditions. All other exploratory holes were terminated at their intended depths.
- WS03: Terminated at 2.8m bgl due to unstable ground conditions and multiple collapses. As a result, the borehole could only be installed to a depth of 2.0m bgl.

3.4. Underground services

Prior to the commencement of intrusive works, all exploratory hole locations were cleared for underground services by trained personnel using a Cable Avoidance Tool (CAT) and signal generator (Genny).

In addition, hand-dug service clearance pits were excavated at each borehole to a depth of approximately 1.2m bgl prior to drilling.

3.5. Overground services

The following overground services were identified during the Site walkover and confirmed during the intrusive ground investigation:

- Overhead electricity cables run broadly north to south across the eastern portion of the Site, with a pole mounted electricity transformer located within the Site boundary.

- A raised manhole is present in the north-west corner of the central field, associated with a foul water sewer that trends north-west to south-east across the centre of the Site.

3.6. Window Sample Boreholes

The ground investigation included five window sample (WS) boreholes (WS01 to WS05). Upon completion, WS01, WS03, and WS04 were installed with monitoring pipework with response zones between 1.00m bgl to 5.00m bgl, except WS03. WS03 was installed to 2.00m bgl due to encountering unstable ground conditions during drilling. The remaining boreholes were backfilled with arisings and reinstated at the ground surface.

Standard penetration tests (SPTs) were undertaken at 1m intervals in WS01 to WS05 to assess soil strength and relative density. All WS locations were drilled to depths ranging between 0.90m bgl and 5.00m bgl.

WS01 and WS02 were located along the northern boundary of the original Site and are now situated outside the revised Site boundary. However, the data obtained has been retained within this report as it provides useful contextual information on the ground conditions.

3.7. Trial Pits

Thirteen trial pits (TP01-TP13) were excavated during the intrusive ground investigation. The majority were excavated in areas proposed for development and associated highways, (ref. Illustrative Site Layout, Stantec, ref. STN-GEN-SW-DR-MP-06 A dated July 2025) and were excavated to depths of up to 4.10m bgl.

All trial pits were distributed across the Site to investigate the continuity of ground conditions.

3.8. Soakaway

One trial pit (SA01) was excavated specifically for soakaway testing to assess the permeability of shallow soils for drainage purposes. SA01 was excavated to 1.00m bgl.

Two soakaway tests were undertaken within SA01. Both tests achieved an effective depth of 25%, with infiltration rates of 1.43×10^{-5} m/s for the first test, and 1.50×10^{-5} m/s for the second. However, it should be noted that the results from the second test were extrapolated to achieve an effective depth of 75%.

These results indicate that soakaway drainage at this location is potentially suitable. However, additional testing at SA01 is required to meet the necessary

drainage design requirements. Furthermore, additional soakaway testing is recommended to confirm the suitability of infiltration across the Site.

Results from the soakaway tests are presented in **Appendix D**.

3.9. Gas and Water Monitoring

No made ground was encountered in any of the exploratory hole locations. Monitoring pipework was installed to assist with establishing the gas regime and inform the ground gas risk assessment of the Site. Additionally, to identify any potential ground related risks affecting contamination, foundation designs, or cost allowances.

Four rounds of ground gas monitoring and seven rounds of groundwater level monitoring have been undertaken as part of the ground investigation works. On some occasions, monitoring data could not be obtained due to the borehole becoming flooded with groundwater or inability to remove the borehole bung.

All monitoring data is included in **Appendix C**.

3.10. Ground Conditions

The ground conditions encountered during the fieldwork generally comprised Topsoil underlain by the Kellaways Sand Member, except for SA01, TP03, TP13, and WS01. TP03 and TP13 comprised of Topsoil underlain by River Terrace Deposits. River Terrace Deposits in SA01, were overlaid by the Kellaways Sand Member. WS01 encountered Alluvium Deposits that were overlaid by the Kellaways Sand Member.

The following section describes the strata encountered in additional detail. The depths given are from ground level, as it existed at the time of the investigation. Detailed descriptions are presented on the individual exploratory hole logs.

Table 3.2 - Ground Conditions			
Strata Encountered (Trial Pits)	Mean Depth to top of strata (m)	Mean Depth to base of strata (m)	Mean Thickness of strata (m)
1: Topsoil Typically comprising grass over brown slightly sandy slightly gravelly CLAY. Encountered in all locations.	0.00	0.23	0.23
2: Kellaways Sand Member	0.23	*base not determined in	

Table 3.2 - Ground Conditions

Strata Encountered (Trial Pits)	Mean Depth to top of strata (m)	Mean Depth to base of strata (m)	Mean Thickness of strata (m)
Typically comprising stiff light brown sandy CLAY; or sandy GRAVEL; or gravelly SAND; or reddish brown slightly sandy slightly gravelly CLAY Encountered in all locations excepting SA01, TP03 and TP13.		the majority of locations. [depth of exploration 5.00]	*base not determined
3: Alluvium Deposits (Superficial Deposits) Typically comprising grey mottled orangish brown CLAY. Encountered in WS01.	2.5	*base not determined. [depth of exploration 5.00]	*base not determined
4: River Terrace Deposits (Superficial Deposits) Typically comprising light brown sandy gravelly CLAY; or light brown slightly clayey very sandy GRAVEL; or light brown silty sandy GRAVEL Encountered in SA01, TP03, TP13, WS03, and WS05	0.65	*base not determined. [depth of exploration]	*base not determined

The Kellaways clay located in the southwestern portion of the site (TP07 to TP12 and WS 04) was found to be soft extending to a maximum depth of 3.9m in TP8. The SPT in WS04 at 3.0m bgl recorded an N Value of 0.

3.10.1. Field Observations

There was no visual or olfactory of gross contamination present in any of the exploratory locations.

During the drilling of WS03, multiple collapses were encountered due to the instability within the borehole. As a result, drilling was terminated at 2.80m bgl and the monitoring pipework was installed to a depth of 2.0m bgl. All other exploratory locations remained stable during the intrusive investigation.

3.11. Groundwater Level

3.11.1. During Fieldwork

Groundwater was encountered in twelve exploratory hole locations during the intrusive investigation. The relative depths and corresponding exploratory holes are summarised in the table below.

Table 3.3 - Water Strikes

Borehole	Depth of Groundwater Strike (m bgl)	
TP1	2.05	Water strike
TP2	1.80	Water strike
TP3	2.10	Water strike
TP4	3.85	Water strike
TP5	3.50	Water strike
TP8	3.80	Water strike
TP10	3.80	Water strike
TP13	2.85	Water strike
WS01	1.20	Water strike
WS02	0.90	Water strike
WS03	1.80	Water strike
WS05	0.90	Water strike

3.11.2. Post Fieldwork Groundwater Monitoring

Post fieldwork groundwater level monitoring was undertaken in all boreholes that were installed with monitoring pipework across the Site (WS01, WS03, and WS04). Groundwater Monitoring was carried out during December 2025 to March 2026. The results are summarised below:

Table 3.4 - Groundwater monitoring results.

Hole ID	Date	Groundwater level (m bgl)
WS01	12/12/2025	0.78
	05/01/2026	0.90
	12/01/2026	0.83
	19/01/2026	0.43
	28/01/2026	Borehole flooded
	06/02/2026	Borehole flooded
	18/02/2026	0.64
	4/03/2026	0.73
WS03	12/12/2025	0.84
	05/01/2026	1.03
	12/01/2026	0.98
	19/01/2026	0.51
	28/01/2026	0.2

Table 3.4 - Groundwater monitoring results.		
Hole ID	Date	Groundwater level (m bgl)
	06/02/2026	Unable to remove bung
	18/02/2026	0.42
	4/03/2026	Unable to access due to archaeological works
WS04	12/12/2025	1.77
	05/01/2026	2.30
	12/01/2026	2.06
	19/01/2026	1.22
	28/01/2026	0.79
	06/02/2026	Unable to remove bung
	18/02/2026	0.94
	4/03/2026	1.45

4.0 Chemical Testing

4.1. Risks to Human Health

4.1.1. Soils

A total of ten soil samples were collected during the ground investigation and scheduled for laboratory analysis for the purpose of contamination testing. The samples were analysed for heavy metals, cyanides, phenols, polycyclic aromatic hydrocarbons (PAHs), asbestos and organochloride pesticides. Not every determinand was analysed in every sample.

Four samples were obtained from Topsoil and six were collected from Kellaways Sand Member.

The laboratory results were assessed against the Category 4 Screening Values (C4SL) for a residential end use with plant uptake.

No exceedances were recorded.

Asbestos was not identified in any of the ten samples analysed. Furthermore, no exceedances of organic chloride pesticides were identified in the samples tested.

Laboratory certificates and screening is presented within **Appendix F**.

4.2. Risk to Controlled Waters

No Made Ground was identified at the Site. Therefore, no pollutant linkages have been identified between the Site and nearby controlled waters, including Sutton Benger Brook, the River Avon (Bristol), or the underlying aquifer.

4.3. Assessment Approach

The RLL desk study did not identify any potential pollutant linkages between the Site and groundwater. Accordingly, groundwater sampling was not undertaken as part of this investigation.

The lack of significant elevations of heavy metals, cyanides, phenols, polycyclic aromatic hydrocarbons (PAHs) concentrations within the soil samples indicate that the Site is unlikely to pose a significant risk to controlled waters.

4.4. Risks to Structures

Five samples were tested for BRE water-soluble sulphate and pH to assist with the concrete Design Sulphate classification.

Four tests were undertaken on samples from the Kellaways Member and one from the River Terrace Deposits to provide an initial sulphate assessment.

The laboratory results were assessed in accordance with BRE Special Digest 1 2005: Concrete in Aggressive Ground. Due to the history of the Site, it has been designated as a greenfield Site with mobile groundwater.

A summary of the water-soluble sulphate data is provided in the table below.

Table 4.1 - Summary of Water-Soluble Sulphate Data		
Details	Kellaways Sand Member	River Terrace Deposits
No. of Tests	4	1
pH Range	7.5 – 8.3	8.3
Water Soluble Sulphate Range (mg/l)	10-72	21
Total Potential Sulphate (%)	0.06 – 0.12	0.12
Oxidisable Sulphate (%)	0.00 – 0.07	0.04
Design Sulphate Class	DS-1	DS-1
ACEC Class	AC-1	AC-1

An assessment of potentially oxidisable sulphates (OS) has been made. As the majority of samples contained OS are less than 0.3% thus it is considered the Kellaways Sand Member and River Terrace deposits are unlikely to contain OS.

In accordance with BRE SD1 (2005) and based on the pH and sulphate testing, the following grades of buried concrete should be adopted:

- Kellaways Member – DS-1 AC-1s;
- River Terrace Deposits - DS-1 AC-1s.

Any fill imported to increase levels will require further assessment.

5.0 Ground Gas

5.1. Assessment Approach

The RLL Desk Study did not identify any potential pollutant linkages associated with ground gas. In addition, no Made Ground was encountered during the ground investigation

Notwithstanding this, monitoring wells were installed in WS01, WS03, and WS04 to assess potential ground gas risk at the Site. The wells were constructed with response zones between 1.00m bgl and 5.00m bgl, with the exception of WS03, which was screened between 1.00m bgl and 2.00m bgl.

5.2. Gas Monitoring Results

Four rounds of ground gas monitoring were undertaken between the 12th January and 5th February 2026. Monitoring was carried out using a Gas Data GM25 infra-red landfill gas analyser with integral flow measuring capability.

No detectable methane was encountered (<0.1% detection limit of instrument) and a maximum concentration of 1.7 % for carbon dioxide was recorded. No detectable flows were measured during the monitoring rounds.

The monitoring results are presented in **Appendix C**. A summary of the monitoring results is presented in the table below.

Table 5.1 - Gas Monitoring Summary						
Hole ID	Date	Barometric Pressure (mb)	Peak Methane (%)	Peak Carbon Dioxide (%)	Min Oxygen (%)	Steady Flow Rate (l/hr)
WS01	12/01/26	1000	0.0	0.5	19.8	0.0
	19/01/26	1012	0.0	0.5	19.9	0.0
	28/01/26	994	0.0	-	-	0.0
	05/02/26	981	0.0	-	-	0.0
WS03	12/01/26	1000	0.0	0.1	19.8	0.0
	19/01/26	1012	0.0	0.4	19.9	0.0
	28/01/26	994	0.0	1.3	18.6	0.0
	05/02/26	981	0.0	1.4	18.4	0.0
WS04	12/01/26	1000	0.0	0.1	19.4	0.0
	19/01/26	1012	0.0	0.7	19.7	0.0
	28/01/26	994	0.0	1.7	18.3	0.0

	05/02/26	981	0.0	1.8	19.4	0.0
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5.3. Gas Screening Values (GSVs)

GSVs were calculated for each monitoring borehole and are initially conservatively based on the peak methane and carbon dioxide readings and the steady flow rate encountered within each exploratory hole.

Table 5.2 - Gas Screening Values

Hole ID	CH ₄ GSV	CO ₂ GSV	Borehole Characterisation
WS01	0.0003	0.0015	Characteristic Situation 1
WS03	0.0003	0.0042	Characteristic Situation 1
WS04	0.0003	0.0054	Characteristic Situation 1

*0.1% CH₄ concentration used on any value less than 0.1%, based on the gas analyser margin of error.

**0.3 l/hr flow has been used on any value less than 0.3 l/hr, based on the gas analyser margin of error.

All monitoring locations recorded peak carbon dioxide concentrations below the 5% v/v threshold for CS-2 protection.

In accordance with CIRIA C665 and British Standard BS8485:2015+A1:2019, and based on gas monitoring undertaken to date, all boreholes would fall under a CS-1 classification. Under this classification, no specific ground gas protection measures are required for the proposed development.

6.0 Updated Conceptual Site Model (CSM)

This section provides a qualitative assessment of the risks posed from potential on and off Site contamination sources identified from the information presented in the previous sections. The CSM considers the findings of the ground investigations that have been undertaken at the Site.

The assessment carried out assumes that the Site will be redeveloped for a residential with plant uptake end-use. Should the end-use be altered, potential pathways and receptors should be re-assessed.

The CSM below has been developed based on the commonly adopted source-pathway-receptor model as recommended within the Land Contamination Risk Management (LCRM) guidance from the Environment Agency¹.

6.1. Potential Pollutant Linkages

6.1.1. Sources

The Site is a greenfield Site previously used for agricultural purposes. Soil analysis undertaken as part of this ground investigation did not identify any elevated concentrations of contaminants when assessed against generic assessment criteria for residential end use with plant uptake. No asbestos or pesticides were identified.

Made Ground and organic peat within the Alluvium were not encountered during the ground investigation.

There was no visual or olfactory evidence of hydrocarbons contamination observed during the investigation, including within the trial pit located in proximity to the pole-mounted transformer (a potential source of petroleum hydrocarbons and/or PCBs).

Four rounds of ground gas monitoring have been completed. The Site has been initially classified as Characteristic Situation 1 (CS1). In accordance with BS8485:2015+A1:2019, a CS1 classification indicates that specific gas protection measures for methane and carbon dioxide are not required. Radon protection measures are also not considered necessary.

6.1.2. Receptors

Human Health

¹ <https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm>

Based on a residential with homegrown produce end use, as defined by the Environmental Agency's guidance, there is potential for exposure of Site end-users to contaminants in soils via the following pathways:

- Direct ingestion of soil and dust via gardens and landscaped areas;
- Dermal contact with soil directly and indoor dust from any garden or landscaped areas;
- Inhalation of dust;
- Ingestion of contaminated water via plastic pipes.

Contamination in soils may also present a risk to construction workers. As such, appropriate risk assessments and safety measures (PPE / hygiene rules) will need to be implemented in order to provide adequate protection.

Where risks to future Site-users are identified, these can typically be mitigated by the placement of clean cover in landscaped or garden areas, increasing the overall depth to residual contamination. Given the absence of an identified source terms, clean cover shall not be necessary.

Controlled Waters

No leachate or water samples were collected during this investigation, as risks to controlled waters are not considered significant due to the lack of significant sources of contamination.

Structures

In accordance with the recommendations given within BRE SD1 and based on the pH and sulphate testing, a Design Sulphate (DS) class of DS-1 and Aggressive Chemical Environment for Concrete (ACEC) class of AC-1 should be adopted for the Kellaway Member.

Radon protection measures are not required.

6.1.3. Proposed Mitigation

It is considered that the contamination risk associated with the Site is considered to be negligible, subject to the implantation of the following actions:

- Measures to be put in place during construction to protect a Secondary A aquifer, Sutton Benger Brook and several drainage changes present from run off.
- Any imported materials used to raise ground levels, as well as any Topsoil imported for use in garden or landscaped areas, will need to be assessed for suitability and screened against agreed import criteria. This will form

part of a Site-specific Materials Management Plan taking into account risks to both human health and controlled waters.

- In accordance with the recommendations given within BRE SD1 and based on the pH and sulphate testing, a Design Sulphate (DS) class of DS-1 and Aggressive Chemical Environment for Concrete (ACEC) class of AC-1 should be adopted for the Kellaways Sand Member and the River Terrace Deposits.
- If Made Ground is encountered during the earthworks, it should remain separate from natural soils and may require additional testing to identify any potential contamination and material classification for disposal off Site.
- All required and recommended measures outlined in the RLL Waste Management Strategy must be adhered to (ref. 25317-25-XX-RP-O-0007, RLL dated November 2025)

Assuming the above measures are implemented, it is considered that there will be a negligible risk posed to human health or controlled waters post-development.

7.0 Geotechnical Assessment

Samples collected on Site were sent for geotechnical laboratory testing, which were undertaken in accordance with BS1377:1990. The testing was undertaken by Structural Soils Ltd included the following:

- 10 No. moisture content;
- 9 No. Atterberg limits;
- 5 No. particle size distribution by wet sieving; and
- 5 No. BRE SD1 full suite.

The above testing provided results to show the principal geotechnical properties of the major geological units identified during the ground investigation.

Geotechnical Laboratory certificates are included within **Appendix G**. A summary of the geotechnical laboratory results is presented below.

7.1. Topsoil

Topsoil was encountered in all window sample locations. One sample was obtained for Atterberg limits and moisture contents. No particle size distribution testing was undertaken on Topsoil samples.

Table 7.1 - Summary of Geotechnical Results for Topsoil

Parameter	No of Tests	Value Range	Assessment
Moisture Content (%)	1	28.4	-
Liquid Limit (%)	1	49	Modified Plasticity Index: 29% Medium Volume Change Potential
Plastic Limit (%)	1	20	
Plasticity Index	1	29	
% passing 425µm sieve	1	100	

7.2. Kellaways Sand Member

Eight soil samples were obtained from the Kellaways Sand Member and tested for Atterberg limits and moisture content. One sample (TP05 at 1.80m bgl) was identified as non-plastic and is therefore excluded from the summary table below.

Table 7.2 - Summary of Geotechnical Results for Kellaways Sand Member

Parameter	No of Tests	Value Range	Mean	Assessment
Moisture Content (%)	8	11.1 - 37.8	20.8	-
Liquid Limit (%)	7	28.0 – 49.0	42.7	Modified Plasticity Index: 14.0% - 22.5% (17.3) Low to Medium Volume Change Potential (Medium Volume Change Potential should be used for foundation design)
Plastic Limit (%)	7	14.0 – 21.0	17.4	
Plasticity Index (%)	7	14.0 – 23.0	18.3	
% passing 425µm sieve	7	65.0 – 100.0	94.3	

Three particle size distribution tests were carried out on samples of the Kellaways Sand Member. The results are summarised in the table below:

Table 7.3 - Summary of Particle Size Distribution Test Results for Kellaways Sand Member

Location	Depth (m bgl)	Sample Proportion %					Description	CC 601 Earthworks classification
		Clay	Silt	Sand	Gravel	Cobbles		
TP02	1.0	8		22	70	0	silty very sandy GRAVEL	Class 1B/1C
TP07	2.5	74		26	0	0	slightly sandy CLAY	Class 2A/2B
TP09	3.0	18		25	57	0	clayey very sandy GRAVEL	Class 2B/2C

Particle size distribution results indicate an initial classification ranging between Class 1B/1C, Class 2A/2B and Class 2B/2C.

7.3. River Terrace Deposits

River Terrace Deposits were encountered in SA01, TP03, TP13, WS03, and WS05. One sample was obtained for Atterberg limits and moisture content testing.

Table 7.4 - Summary of Geotechnical Results for River Terrace Deposits

Parameter	No of Tests	Value Range	Assessment
Moisture Content (%)	1	13.7	-
Liquid Limit (%)	1	30	Modified Plasticity Index: 15% Low to Medium Volume Change Potential.
Plastic Limit (%)	1	15	
Plasticity Index	1	15	
% passing 425µm sieve	1	45	

Two particle size distribution tests were undertaken on samples of the River Terrace Deposits. The results are summarised in the table below:

Table 7.5 - Summary of Particle Size Distribution Test Results for River Terrace Deposits

Location	Depth (m bgl)	Sample Proportion %					Description	CC 601 Earthworks classification
		Clay	Silt	Sand	Gravel	Cobbles		
SA01	1.0	13		23	64	0	clayey very sandy GRAVEL	Class 1B/1C
TP03	3.40	6		13	81	0	clayey sandy GRAVEL	Class 1B/1C

Particle size distribution results indicate an initial classification of Class 1B/1C.

7.4. In-Situ Soil Strength Tests

7.4.1. Dynamic Cone Penetrometer CBR Testing

Six TRL Dynamic Cone Penetrometer tests were undertaken by RLL, with the results summarised below and presented in full in **Appendix E**.

CBR tests were undertaken from ground level, the initial layer shown on the TRL DCP results relates to the topsoil and can be ignored for design purposes.

Table 7.6 - DCP Results

Location	Depth (m bgl)	CBR Range (%)	Notes
DCP-01	GL - 0.104	2.2	Topsoil
	0.104 - 0.560	5.7	
	0.560 - 0.839	70.6	
DCP-02	GL - 0.09	2.6	Topsoil
	0.09 - 0.253	4.5	Topsoil
	0.253 - 0.385	12	
	0.385 - 0.445	26	
	0.445 - 0.495	69	
	0.495 - 0.545	125	
	0.545 - 0.635	111	
	0.635 - 0.785	56	
	0.785 - 0.82	87	
DRP - 03	GL - 0.096	2.4	Topsoil
	0.096 - 0.303	6.9	Topsoil
	0.303 - 0.496	5.4	
	0.496 - 0.672	7.0	
	0.672 - 0.834	7.7	
DCP-04	GL - 0.096	2.4	Topsoil
	0.096 - 0.586	5.6	
	0.586 - 0.826	10.7	
DCP-05	GL - 0.088	2.7	Topsoil
	0.088 - 0.528	8.1	
	0.528 - 0.831	6.7	
DP-06	GL - 0.070	3.4	Topsoil
	0.070 - 0.754	5.5	
	0.754 - 0.830	20	

It should be noted that several results encountered penetration depths of 1mm or less per blow. These results are likely a result of striking a cobble or gravel; as such may not be representative and can affect the CBR conversion calculation.

On the basis of the TRL DCP CBR testing undertaken a preliminary design CBR of 5 to 10% should be used for highway design. In accordance with the Wiltshire Council standards there is a requirement for 250mm capping and 200mm subbase. Confirmatory plate load CBR testing will be required to confirm these values prior to construction.

7.4.2. Standard Penetration Tests

Standard Penetration Tests were undertaken generally at 1m intervals in WS01 to WS05 in accordance with the methodology outline in British Standard BS EN 22476-3 2005+A1:2011. Full details of the test results are contained on the individual borehole logs.

A summary of the results is presented below together with a recommended characteristic value (N) based on a statistical analysis using either a minimum value or the 50% fractile, depending on the data set. The N values have been corrected to N₆₀ or (N₁)₆₀ values, in accordance with BS EN 22476-3. RLL has used a conservative SPT Hammer energy ratio of 71% to calculate the N₆₀ values.

Table 7.7 - SPT Data				
Location	Depth (m bgl)	N ₆₀ or (N ₁) ₆₀ Value	Consistency	Geology
WS01	1.20	0	Very Soft	Alluvium
WS01	2.00	2	Very Soft	Alluvium
WS01	3.00	26	Stiff	Alluvium
WS01	4.00	36	Stiff	Alluvium
WS01	5.00	32	Stiff	Alluvium
WS02	0.90	58	Very Stiff	Kellaways Sand Member
WS03	0.85	47	Very Stiff	Kellaways Sand Member
WS03	1.80	37	Dense	Kellaways Sand Member
WS04	1.20	6	Firm	Kellaways Sand Member
WS04	2.00	0	Very Soft	Kellaways Sand Member
WS04	3.00	0	Very Soft	Kellaways Sand Member
WS04	4.00	26	Medium Dense	Kellaways Sand Member
WS04	5.00	20	Medium Dense	Kellaways Sand Member
WS05	1.20	58	Very dense	Kellaways Sand Member

Figure 1 present the distribution of SPT N60/N(1)60 values against depth for the Kellaways Sand Member, River Terrace Deposit and Alluvium across the Site.

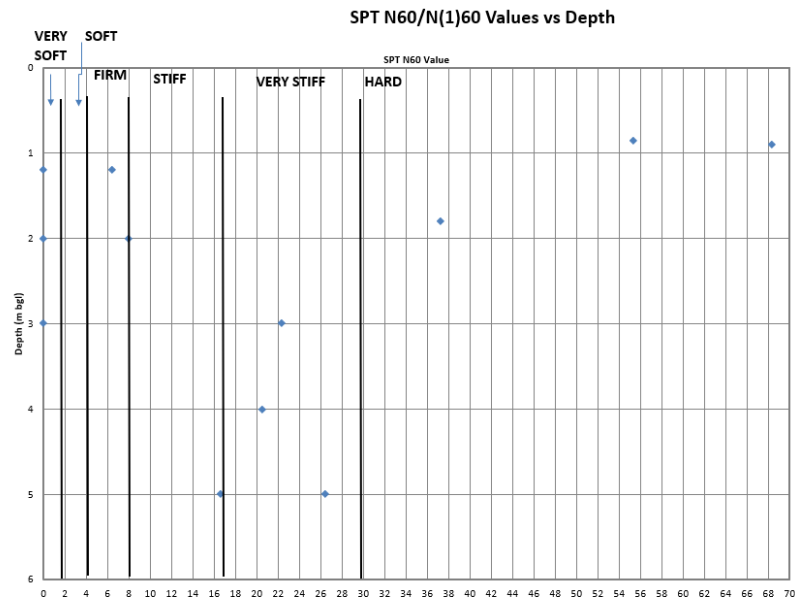


Figure.1 – Showing corrected SPT N60 values with depth.

7.5. Undrained Shear Strength Profile

The undrained shear strength of the cohesive material encountered at depth beneath the Site has been determined by empirical correlation as described in CIRIA Report C143 (after Stroud and Butler, 1975):

$$c_u = N_{60} f_1 \text{ (kN/m}^2\text{)} \quad [1]$$

Where c_u is the undrained shear strength, N_{60} is the corrected SPT N value and f_1 is an empirical correlation factor based on the soil plasticity index. Derived C_u values are presented against depth in the accompanying figure.

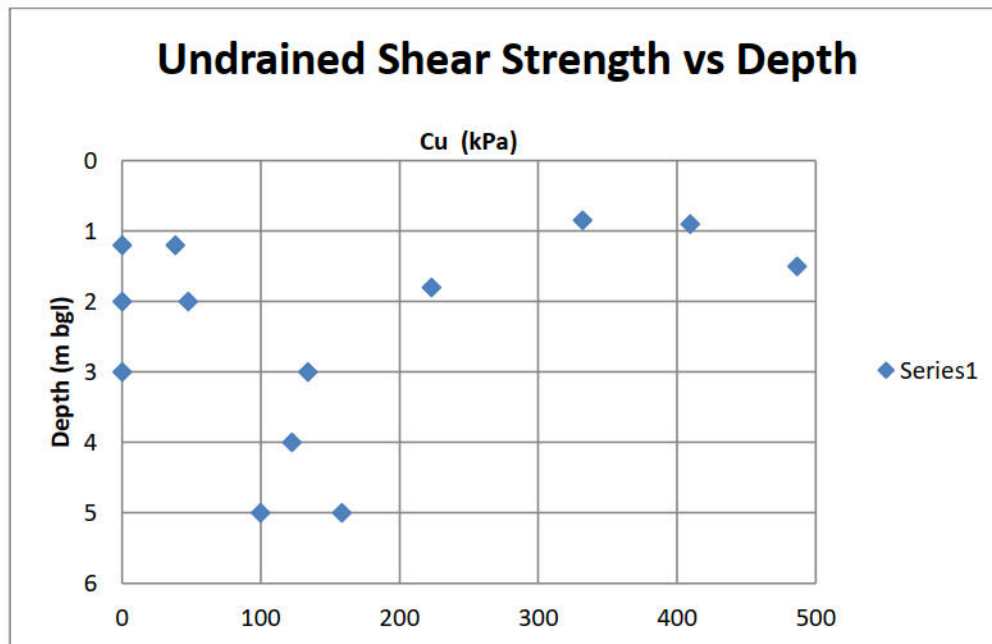


Figure.2 – Showing undrained shear strength with depth.

The Kellaways Sand Member predominately exhibits low strength cohesive soils (<30Kpa), within WS04 located in the southwest of the site. This is confirmed in with field observations in trial pits TP07 to TP11 where soft clay was observed.

There is significant variability in inferred undrained strength within and between strata. The C_u values should therefore be considered indicative and interpreted alongside the field descriptions and other available test data. Elevated values may reflect local dense/cemented horizons or partial penetration/refusal effects.

7.6. Preliminary Geotechnical Considerations

7.6.1. Groundwater Control

Due to the generally low permeability of the cohesive soils across parts of the Site and the recorded shallow groundwater present, excavations may require dewatering during autumn/winter months or following periods of heavy rainfall. It should be possible to control this and ingress of perched water through sump pumping. A discharge position should be sought for the relocation of water accumulating during the works; it may be possible to discharge into the surface water network with suitable control of suspended solids and permissions.

7.6.2. Excavations

Multiple collapses were observed during the drilling of WS03. Excavations left open for extended periods should be battered back to a safe angle or installed with appropriate trench support systems. No personnel should entry into unsupported excavation.

7.6.3. Slope Stability

No significant slopes or slope instability issues were observed on Site. Therefore, slope stability is not considered to be a significant issue. However, any proposed retaining walls, embankments and/or temporary works should be designed by a suitably qualified engineer.

It is currently unknown whether any significant changes in level will be required for the proposed redevelopment. Where significant changes of ground elevation do occur, consideration will have to be given to the impact on foundation solution adopted.

7.6.4. Soakaways

Soakaway testing was undertaken as part of the 2025 RLL ground investigation. SA01 was positioned in the location of the proposed infiltration basin. At SA01, an effective depth of 25% was achieved, with infiltration rates of 1.43×10^{-5} m/s for the first test, and 1.50×10^{-5} m/s for the second (albeit extrapolated).

The results of the groundwater level monitoring over the winter months of 2025/2026 recorded shallow groundwater, therefore it is not possible to achieve 1m of freeboard below the base of the infiltration basin (assumed to be 1m below existing ground levels). Therefore on this basis the site should be positively drained to the watercourse on the northern site boundary.

However, additional testing at this location is required to meet BRE 365 requirements, which specify that three valid tests achieving at least 25% effective depth are required to confirm the design infiltration rate.

Additional testing is required to assess suitability for infiltration drainage in other areas of the Site, as these areas are currently considered unsuitable for infiltration-based drainage solutions.

7.7. Earthworks

Details of earthworks and finished floor levels were not available at the time of the investigation. For any proposed earthworks, it is recommended that they are undertaken in a controlled manner using appropriate methods in

accordance with an Engineer's Earthworks Specification in order to minimise the settlement of hardstanding areas and services where any additional fill is placed.

7.8. Preliminary Foundation Appraisal

7.8.1. Proposed Development

It is understood that the Site is to be developed for residential dwellings. At the time of reporting, no indicative foundation loading information has been provided.

7.8.2. Foundation Recommendations

Generally, the site is suitable for conventional strip or trench fill foundations excavated into the firm to stiff clay or medium dense sand and gravel of the Kellaways Formation where an allowable bearing pressure of 100 kPa should be achievable.

Depending on the final development layout, a piled foundation maybe required for some of the plots located in the vicinity of TP07-TP12 & WS04 located in the southwest of the site where the Kellaway Formation was recorded to be soft. This area is highlighted on drawing 25317-RLL-25-XX-DR-O-003 P3 located in **Appendix A**. If piling is required then to confirm deeper ground conditions for pile design, some further ground investigation comprising combined percussive and rotary boreholes is recommended, with the boreholes drilled to depths of circa 20m. In situ Standard Penetration Tests should be conducted during forwarding of the boreholes and collected soil samples submitted for appropriate geotechnical laboratory testing.

7.8.3. Tree Influence

The natural deposits present on Site are assessed to have low to medium volume change potential; therefore, a medium volume change potential should be assumed. Given the presence of trees, the medium volume change potential of the shallow soils must be taken into consideration when designing foundations.

If trees are too be removed, there is a potential for swelling of clay soils due to an increase in moisture content following their removal. Conventional shallow foundations and ground bearing floor slabs may therefore be susceptible by heave.

A tree survey will be required to inform the detailed foundation design. Foundations and floor slabs may need to be designed to accommodate potential heave in accordance with NHBC guidance.

Where tree influence is significant, piled foundations or locally deepening of foundations to shallow rock (where this has been identified as non-plastic) may be required.

It is currently unknown whether significant changes in ground level will be required as part of the proposed development. Should substantial changes in ground elevation occur, the implication of the selected foundation solutions will need to be carefully considered.

Foundations should be designed by a structural engineer, appropriate to the loads being imposed. Should any contrasting ground/ localised soft spots be encountered at founding level, localised deepening and/ or steel reinforcement mesh may be required in the base of foundations.

Care must be taken during construction to prevent softening of clay soils at foundation level. Foundations should be cast as soon as possible following excavation. Where immediate casting is not possible, a thin layer of blinding concrete should be placed to protect the exposed clay surface.

7.9. Floor Slabs

Based on ground gas monitoring, the Site is classified as Characteristic Situation 1. Therefore, no additional gas assessment is required

The type and specification of floor slabs should be confirmed during detailed design. A beam and block suspended slab is considered suitable. Ground bearing slabs are also considered to be feasible outside of the influence of trees and where less than 600mm of upfill is proposed, and subject to the requirements for soil gas protection measures.

7.10. Buried Concrete

Buried concrete should be to Design Sulphate (DS) class and Aggressive Chemical Environment for Concrete (ACEC) class of DS-1/ AC-1. However, further assessment is required once the overall Site levels and development proposals are confirmed.

7.11. Pavement Construction

On the basis of the TRL DCP CBR testing undertaken a preliminary design CBR of 5 to 10% should be used for highway design. On the basis of these values the Wiltshire Council standard highway construction details specific a requirement for 250mm capping and 200mm subbase. Confirmatory plate load CBR testing will be required to confirm these values.

The fill material should be assessed for its geotechnical and chemical suitability prior to import. Unsuitable soils should not be accepted. Material should be tested as it is placed to test compliance with the specified compaction criteria. In situ CBR testing is recommended at Member level to assess compliance with required pavement design.

7.12. Waste Management

No Made Ground was encountered during the Site investigation. Should it be encountered is anticipated to remain on Site.

If Made Ground requires off Site disposal to landfill, it is likely to be classified as 'non-hazardous waste'. The chemical results should be forwarded to the proposed landfill Site and the waste classification confirmed prior to disposing of any surplus soils. The waste code from the European Waste Catalogue (EWC) for the soils would be 17 05 04 'Soil and Stones - other than those mentioned in 17 05 03'. Alternatively, excess material could be sent to a soil treatment facility for recovery and re-use elsewhere.

Where it is proposed to re-use Site won materials or import fill materials to raise Site levels, it is recommended that this is undertaken in accordance with a CL:AIRE approved Materials Management Plan (MMP) under the Definition of Waste: Code of Practice (DoWCoP).

Further details are provided in the RLL Waste Management Strategy (ref. 25317-25-XX-RP-O-0007 dated November 2025).

8.0 Conclusions and Recommendations

The Site is considered to present a negligible to low risk to human health and controlled waters. No requirement has been identified for remedial measures or incorporation of gas protection at this stage.

The Site generally comprises Topsoil underlain by the Kellaways Sand Member, with the exception of TP03 and TP13. At TP03 and TP13, Topsoil directly overlies River Terrace Deposits. At SA01, the River Terrace Deposits are overlaid by the Kellaways Sand Member. At WS01, located in the north of the site adjacent to the watercourse Alluvium was recorded extending to great than 5m bgl.

No contamination has been identified across the Site.

Site won Topsoil is considered chemically suitable for reuse. Any imported Topsoil should be tested to confirm its suitability for use. An allowance should be made for a suitable thickness of Topsoil (150mm is a minimum requirement for gardens) for a growing medium for any garden or landscaped areas.

If Site-won material is required for off Site disposal, it is likely to be classified as 'non-hazardous waste'. Chemical results should be forwarded to the proposed landfill Site for confirmation prior to disposal. The waste code from the European Waste Catalogue (EWC) for the soils would be 17 05 04 'Soil and Stones - other than those mentioned in 17 05 03'. Alternatively, excess material could be sent to a soil treatment facility for recovery and re-use elsewhere.

Based on the current ground gas monitoring results, new structures should be classified as Characteristics Situation 1. Accordingly, additional gas protection measures are not deemed necessary.

Radon protection is not required.

It is anticipated that the Site is suitable for standard PE water supply pipework.

Due to the presence of shallow groundwater, it is not possible to provide 1m of freeboard below the base of the infiltration basin, therefore it is recommended that surface water is positively drained into the watercourse to the north of the site.

Based on the November 2025 RLL ground investigation, traditional strip or trench fill foundations are considered likely to be suitable for two to three storey residential dwellings over the majority of the site, however the Kellaways Clays were found to be soft in the southwest of the site.

Depending on the final development layout, a piled foundation maybe required for some of the plots located in the southwest of the site where the Kellaway Formation was recorded to be soft. If piling is required then additional deep boreholes will be required in this area to confirm design information for a piled solution.

Structural loadings and appropriate foundation depths must be confirmed during detailed design. A medium volume change potential should be assumed, which may necessitate localised deepening of foundations.

In accordance with the recommendations given within BRE SD1 and based on the pH and sulphate testing, a Design Sulphate (DS) class of DS-1 and Aggressive Chemical Environment for Concrete (ACEC) class of AC-1 should be adopted for the existing ground conditions for buried concrete.

A CL:AIRE approved Materials Management Plan (MMP) may be required to facilitate the re-use of soils on Site, in accordance with the Waste Management Strategy previously provided by RLL (ref. 25317-25-XX-RP-O-0007 dated November 2025).

The following further works are recommended:

- A copy of this report, particularly the chemical results, should be issued to the local contaminated land officer to confirm that they agree that the material on Site is classified as non-hazardous and can be disposed off Site as this classification if off Site disposal is required.
- A copy of this report should be issued to the LPA to discharge any prestart Site planning conditions;
- A tree survey maybe required, extending beyond the Site boundaries, to inform foundation design;
- An ecology survey maybe required, covering the Site and adjacent areas;
- An Earthworks Specification will be required for any proposed earthworks;
- Additional geotechnical testing will be required for any materials that are to be re-used in earthworks, or for any material to be imported to Site;
- Confirm with the local water supply company that the Site is suitable for standard PE water supply pipework;
- A CL:AIRE approved Materials Management Plan (MMP) will be required for the re-use of soils on Site;

- In-situ CBR testing will be required to inform road and hardstanding design.
- 20m deep dynamic sample/rotary boreholes in the southwest of the site to confirm design information for a piled foundation solution

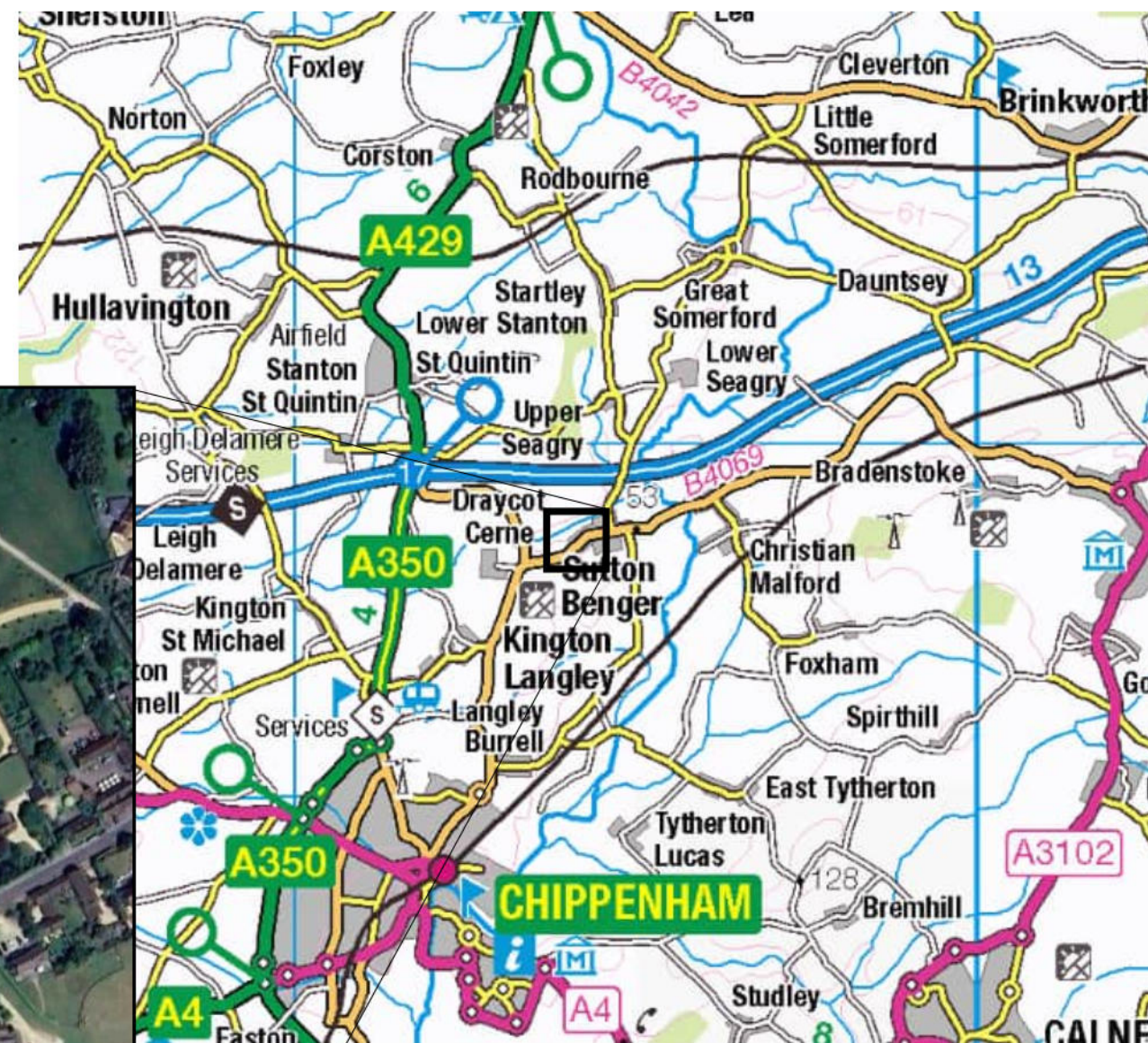
9.0 References

1. Spink, T.W. and Norbury, D.R., 1993. The engineering geological description of weak rocks and overconsolidated soils. *Proceedings 26th Regional Meeting of Engineering Group of Geological Society*, Leeds.
2. British Standard BS EN 1997-1: 2004. Eurocode 7: Geotechnical Design –Part 1: General Rules.
3. British Standard BS EN 1997-2: 2007. Eurocode 7: Geotechnical Design – Part 2: Ground Investigation and Testing.
4. UK National Annex to BS EN 1997-1: 2004. British Standards Institution.
5. British Standards Institution: BS 5930:2015+A1:2020 ‘Code of practice for ground investigations.’ BSI 2015+A1:2020.
6. British Standards Institution. BS 10175:2011+A2:2017. Investigation of potentially contaminated Sites – Code of practice.
7. British Standards Institute: BS 1377:2022 ‘Methods of test for soils for civil engineering purposes. Classification tests and determination of geotechnical properties.
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9. British Standard BS EN 22476-2: 2005+A1:2011. Geotechnical Investigation and Testing – Field Testing – Part 3: Standard Penetration Test. British Standards Institution.
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12. Spink, T.W. and Norbury, D.R., 1993. The engineering geological description of weak rocks and overconsolidated soils. *Proceedings 26th Regional Meeting of Engineering Group of Geological Society*, Leeds.
13. Nathanial et. al., (2009), The LQM/CIEH Generic Assessment Criteria for Human Health Risk Assessment (2nd edition), Land Quality Press, Nottingham

14. Wheale, G. et al, 2010, Guidance for the Selection of Water Supply Pipes to be Used in Brownfield Sites, UK Water Industry Research Ltd, report reference 10/WM03/21.
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16. BRE Special Digest 1, Concrete in Aggressive Ground 3rd Edition 2005 (including 2017 amendments), IHS BRE Press.
17. Land Contamination Risk Management (LCRM) guidance from the Environment Agency 2021

<https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm>

Appendix A: Drawings



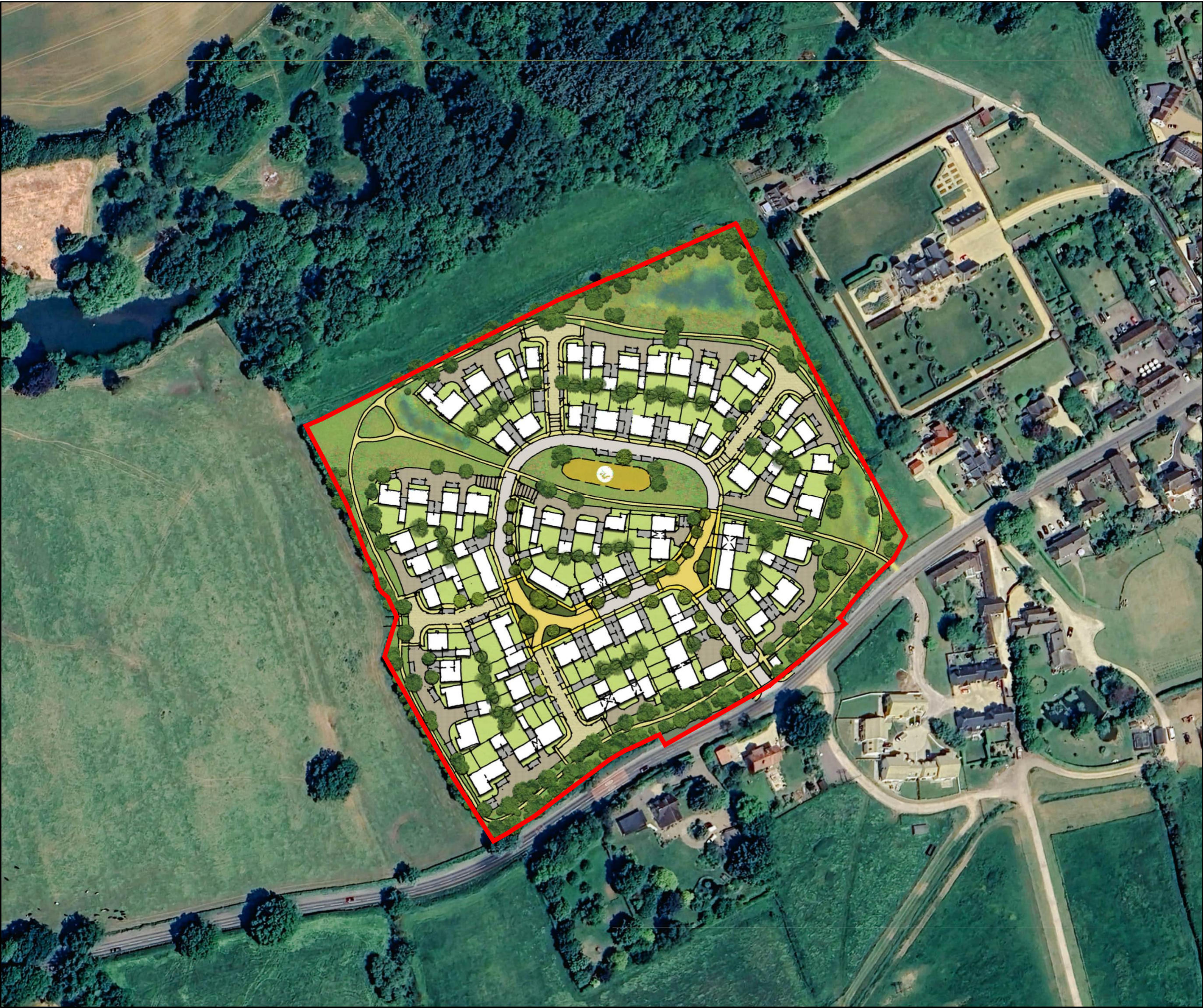
Legend:

Current Site Boundary

Project ID: P25-317
 Project Title: Land at Gate Farm, Sutton Benger
 Client: Gleeson Land Ltd

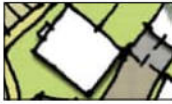
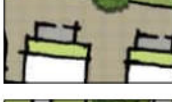
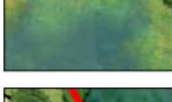
Title: Figure 1 – Site Location Plan
 Scale: Not to scale
 Engineer: JC
 Contractor:
 Date: Nov 2025





The scaling of this drawing cannot be assured

Revision	Date	Drn	Ckd
D Graphics Updated	12.03.26	JW	TL

-  Site Boundary
-  Dwelling House
-  Gardens
-  Primary Vehicular Route
-  Formal Square
-  Shared Surface
-  Lane / Private Drive
-  Parking
-  Footpath
-  Play Space
-  Attenuation Basin and Swale
-  Proposed Tree Planting
-  Existing Tree Planting

Project
Sutton Benger

Drawing Title
Illustrative Site Layout

Date
31.07.25

Project No
333102291

Scale
1:1,250 @A2

Drawing No
STN-GEN-SW-DR-MP-06

Drawn by
M.D.

Check by
F.M./S.B.

Revision
D



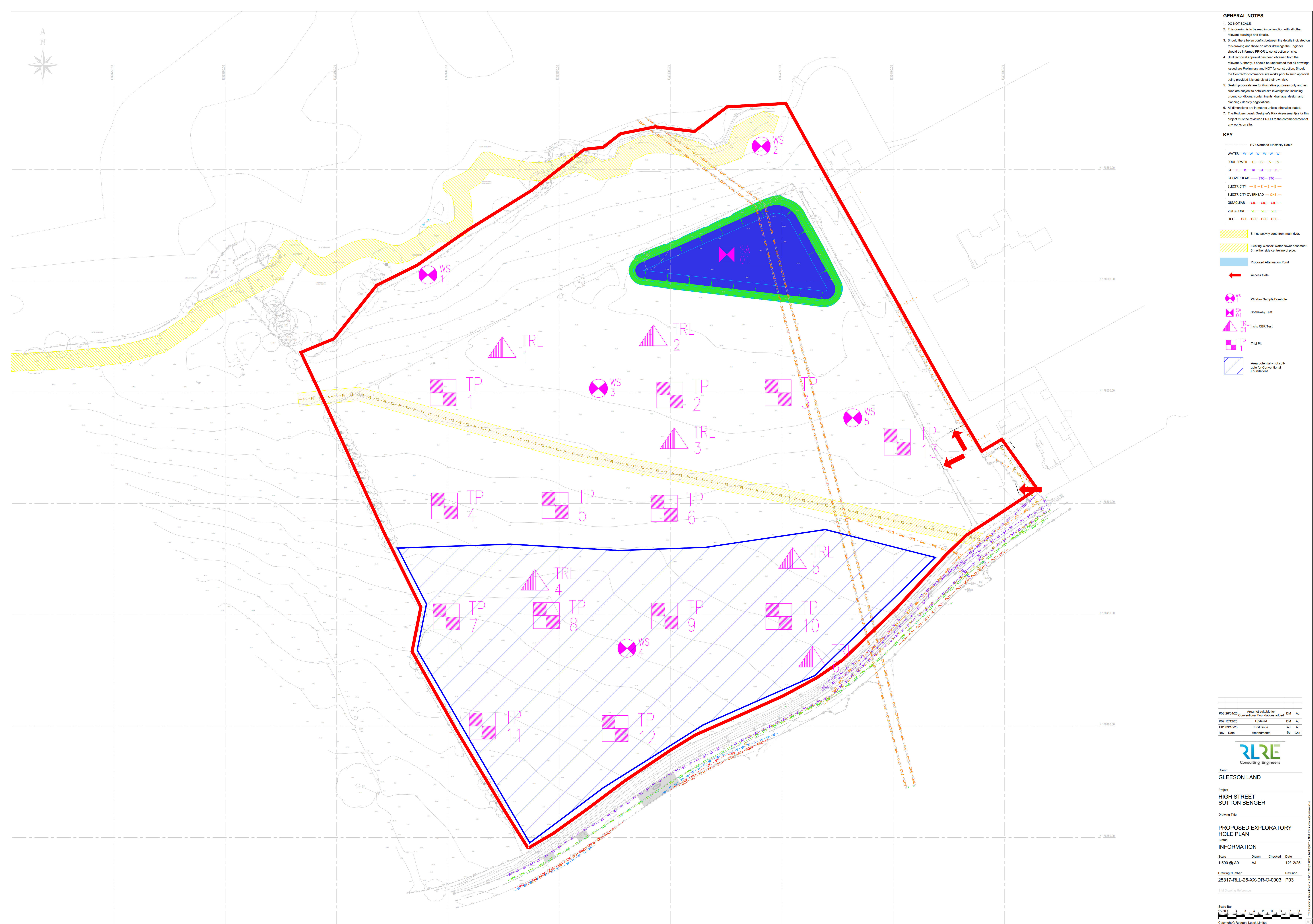


Stantec

DRAFT

Stantec UK Limited
The Blade
Abbey Square
Reading
RG1 3BE
T: 0118 9430 000

stantec.com\uk



GENERAL NOTES

- DO NOT SCALE.**
- This drawing is to be read in conjunction with all other relevant drawings and details.
- Should there be an conflict between the details indicated on this drawing and those on other drawings the Engineer should be informed **PRIOR** to construction on site.
- Until technical approval has been obtained from the relevant Authority, it should be understood that all drawings issued are Preliminary and NOT for construction. Should the Contractor commence site works prior to such approval being provided it is entirely at their own risk.
- Sketch proposals are for illustrative purposes only and as such are subject to detailed site investigation including ground conditions, contaminants, drainage, design and planning / design negotiations.
- All dimensions are in metres unless otherwise stated.
- The Rodgers Leach Designer's Risk Assessment(s) for this project must be reviewed **PRIOR** to the commencement of any works on site.

EY

- | | |
|--|---|
| | HV Overhead Electricity Cable |
| | Water — W — W — W — W — W — W — |
| | Foul Sewer — F — F — F — F — F — F — |
| | BT — BT — BT — BT — BT — BT — BT — |
| | BT Overhead — BT — BT — BT — BT — |
| | Electricity — E — E — E — E — |
| | Electricity Overhead — OHE — |
| | Gigaclear — GIG — GIG — GIG — |
| | Vodafone — VDF — VDF — VDF — |
| | OCU — OCU — OCU — OCU — |
| | 8m no activity zone from main river. |
| | Existing Wessex Water sewer easement.
3m either side centreline of pipe. |
| | Imperial Attenuation Pond |
| | Access Gate |
| | Window Sample Borehole |
| | Soakaway Test |
| | Initial CBR Test |
| | Trial Pit |
| | Area potentially not suitable for Conventional Foundations |

P03	26/04/26	Area not suitable for Conventional Foundations added	DM	AJ
P02	12/12/25	Updated	DM	AJ
P01	03/10/25	First Issue	AJ	AJ
Rev	Date	Amendments	By	Chk



GLEESON LAND

Project

HIGH STREET SUTTON BINGER

Drawing Title

PROPOSED EXPLORATORY HOLE PLAN

INFORMATION

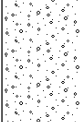
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1/8" = 1' @ A0	AJ		12/12/25
Drawing Number			Revision
15317-RLL-25-XX-DR-O-0003			P03

Scale Bar



Appendix B: Exploratory Logs

				Trial Pit Log			Trialpit No SA1 Sheet 1 of 1		
Project Name: Sutton Benger				Project No. P25-317		Co-ords: 394021.86 - 178615.20 Level:		Date 19/11/2025	
Location: Sutton Benger, Wiltshire						Dimensions (m):		Scale 1:25	
Client: Gleeson Land						Depth 1.00		Logged DM	

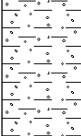
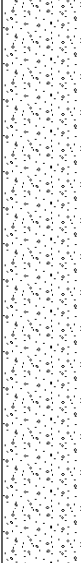
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.50 - 1.00	B		0.20 0.30 1.00		 TOPSOIL: Grass over brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone and limestone. Frequent roots and rootlets were observed.  Firm (inferred) light brown slightly sandy slightly silty gravelly CLAY. Gravel is subrounded fine to medium of sandstone. (RIVER TERRACE DEPOSITS)  Medium Dense (inferred) light brown clayey very sandy GRAVEL. Gravel is subangular to subrounded fine to coarse of sandstone. (RIVER TERRACE DEPOSITS)	End of pit at 1.00 m

Remarks: 1. Trial pit was excavated to 1.00m bgl . 2. Groundwater was not encountered. 3. Stability of the trial pit was stable. 4. Pit terminated at 1.00m bgl to undertake soakaway test. 4. Trial pit was drained and backfilled on completion. 5. No visible or olfactory evidence of contamination.

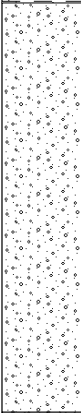
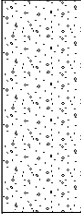
Stability: Stable



				Trial Pit Log			Trialpit No TP01 Sheet 1 of 1		
Project Name: Sutton Benger				Project No. P25-317		Co-ords: 393892.03 - 178555.61 Level:		Date 19/11/2025	
Location: Sutton Benger, Wiltshire						Dimensions (m): 4 0.55		Scale 1:25	
Client: Gleeson Land						Depth 3.00		Logged DM	

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
▼	0.15	D		0.15			TOPSOIL: Grass over brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone and limestone. Frequent roots and rootlets were observed.	1	
	0.60	ES		0.80			Firm (inferred) light brown slightly sandy slightly silty gravelly CLAY. Gravel is subrounded fine to medium of sandstone. (KELLAWAYS SAND MEMBER)		
							Medium Dense (inferred) light brown gravelly SAND. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of sandstone. (KELLAWAYS SAND MEMBER)		2
	2.90	B		2.70 3.00			Firm (inferred) blueish grey slightly gravelly slightly sandy CLAY with lenses of light brown gravelly SAND. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of sandstone and shell fragments. (KELLAWAYS SAND MEMBER) End of pit at 3.00 m		3
								4	
								5	

Remarks: 1. Trial pit excavated to 3.00m bgl. 2. Groundwater encountered at 2.05m bgl. 3. Stability of the trial pit was stable. 4. Trial pit was backfilled on completion. 5. No visible or olfactory evidence of contamination.		
Stability: Stable		

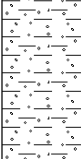
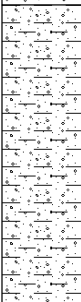
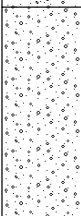
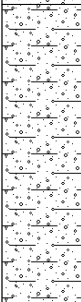
				Trial Pit Log			Trialpit No TP02 Sheet 1 of 1		
Project Name: Sutton Benger				Project No. P25-317		Co-ords: 393993.76 - 178554.54 Level:		Date 18/11/2025	
Location: Sutton Benger, Wiltshire				Dimensions (m):		4		Scale 1:25	
Client: Gleeson Land				Depth 2.50				Logged DM	
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
				0.25			TOPSOIL: Grass over brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone and limestone. Frequent roots and rootlets were observed. Firm (inferred) reddish brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to medium of sandstone. (KELLAWAYS SAND MEMBER)		
	0.40 0.40	D ES		0.45					
	1.00 1.00	B D					Medium Dense (inferred) light brown slightly silty very sandy GRAVEL. Gravel is subangular to subrounded fine to medium of sandstone. (KELLAWAYS SAND MEMBER)		
				1.80					
				2.50			Loose to medium dense (inferred) light brown slightly silty very gravelly SAND. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of sandstone. (KELLAWAYS SAND MEMBER)		
						End of pit at 2.50 m			
Remarks:				1. Trial pit excavated to 2.50m bgl. 2. Groundwater was not encountered. 3. Stability of the trial pit was stable. 4. Trial pit was backfilled on completion. 5. No visible or olfactory evidence of contamination.					
Stability: Stable									

				Trial Pit Log			Trialpit No TP03 Sheet 1 of 1		
Project Name: Sutton Benger				Project No. P25-317		Co-ords: 394042.49 - 178555.61 Level:		Date 18/11/2025	
Location: Sutton Benger, Wiltshire						Dimensions (m): 4 0.55		Scale 1:25	
Client: Gleeson Land						Depth 2.85		Logged DM	

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.00 - 0.25	ES		0.25			TOPSOIL: Grass over brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone and limestone. Frequent roots and rootlets were observed.
	0.25 - 0.60	D		0.60			Firm (inferred) light brown sandy gravelly CLAY. Gravel is subrounded fine to medium of sandstone. (RIVER TERRACE DEPOSITS)
	0.25 - 0.60	D					Loose to medium dense (inferred) light brown clayey sandy GRAVEL. Gravel is subangular to subrounded fine to coarse of sandstone. (RIVER TERRACE DEPOSITS)
							
	2.00	B		2.50			Medium dense (inferred) light brown slightly clayey sandy GRAVEL. Gravel is subangular to subrounded fine to coarse of sandstone. (RIVER TERRACE DEPOSITS)
				2.85		----- End of pit at 2.85 m	

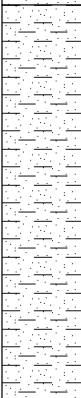
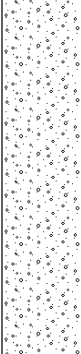
Remarks: 1. Trial pit excavated to 2.85m bgl. 2. Groundwater encountered at 2.10m bgl. 3. Stability of the trial pit was stable. 4. Trial pit was backfilled on completion. 5. No visible or olfactory evidence of contamination.		
Stability: Stable		

				Trial Pit Log			Trialpit No TP04 Sheet 1 of 1		
Project Name: Sutton Benger				Project No. P25-317		Co-ords: 393892.57 - 178504.76		Date 19/11/2025	
Location: Sutton Benger, Wiltshire				Dimensions (m):		4		Scale 1:25	
Client: Gleeson Land				Depth 3.85		0.55		Logged DM	
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
▼	0.20	ES		0.20			TOPSOIL: Grass over brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone and limestone. Frequent roots and rootlets were observed.		
	0.40	D					Firm (inferred) light brown slightly sandy gravelly CLAY. Gravel is subrounded fine to medium of sandstone. (KELLAWAYS SAND MEMBER)		
	1.20	D		1.00			Firm (inferred) light brown slightly sandy slightly gravelly CLAY. Gravel is subrounded fine to medium of sandstone. (KELLAWAYS SAND MEMBER)		
	2.90	B		2.80			Medium Dense (inferred) light brown slightly silty clayey SAND. Sand is fine to coarse. (KELLAWAYS SAND MEMBER)		
				3.85			End of pit at 3.85 m		
Remarks: 1. Trial pit excavated to 3.85m bgl. 2. Groundwater encountered at 3.85m bgl. 3. Stability of the trial pit was stable. 4. Trial pit was backfilled on completion. 5. No visible or olfactory evidence of contamination.									
Stability: Stable									
									

				Trial Pit Log				Trialpit No TP05 Sheet 1 of 1	
Project Name: Sutton Benger				Project No. P25-317		Co-ords: 393942.34 - 178505.03 Level:		Date 19/11/2025	
Location: Sutton Benger, Wiltshire						Dimensions (m): 4		Scale 1:25	
Client: Gleeson Land						Depth 3.70		Logged DM	
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
▼	0.25	ES		0.25			TOPSOIL: Grass over brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone and limestone. Frequent roots and rootlets were observed.		
				0.80			Firm (inferred) light brown slightly sandy slightly silty gravelly CLAY. Gravel is subrounded fine to medium of sandstone. (KELLAWAYS SAND MEMBER)		
				1.80			Soft (inferred) light brown sandy gravelly CLAY. Gravel is subrounded fine to medium of sandstone. (KELLAWAYS SAND MEMBER)		
	1.80	D		2.50			Medium Dense (inferred) light brown slightly clayey very sandy GRAVEL. Gravel is subrounded fine to medium of sandstone. (KELLAWAYS SAND MEMBER)		
				3.50			Loose to medium dense (inferred) light brown mottled blue grey clayey sandy GRAVEL. Gravel is subrounded fine to medium of sandstone. (KELLAWAYS SAND MEMBER)		
	3.60	D		3.70			Medium Dense (inferred) light brown slightly clayey sandy GRAVEL. Gravel is angular to subangular fine to coarse of sandstone. (KELLAWAYS SAND MEMBER) End of pit at 3.70 m		
Remarks: 1. Trial pit excavated to 3.70m bgl. 2. Groundwater encountered at 3.50m bgl. 3. Stability of the trial pit was stable. 4. Trial pit was backfilled on completion. 5. No visible or olfactory evidence of contamination.									
Stability: Stable									

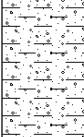
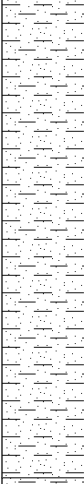
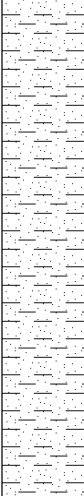


				Trial Pit Log			Trialpit No TP06 Sheet 1 of 1		
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Location: Sutton Benger, Wiltshire						Dimensions (m): Depth 3.30 0.55 4		Scale 1:25 Logged DM	
Client: Gleeson Land									

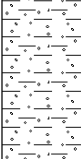
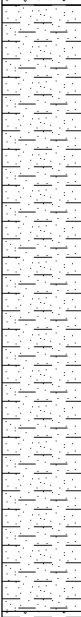
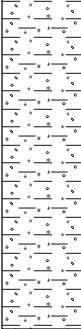
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20	ES		0.30			TOPSOIL: Grass over brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone and limestone. Frequent roots and rootlets were observed.	1
	0.30	D					Firm (inferred) light brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subrounded fine to medium of sandstone. (KELLAWAYS SAND MEMBER)	
				0.80			Firm (inferred) light brown slightly silty sandy CLAY. Sand is fine to coarse. (KELLAWAYS SAND MEMBER).	2
	2.10	B		2.10			Loose to medium dense (inferred) light brown sandy GRAVEL. Gravel is subangular to subrounded of sandstone. (KELLAWAYS SAND MEMBER)	3
				3.30		End of pit at 3.30 m		4
								5

Remarks: 1. Trial pit excavated to 3.30m bgl. 2. Groundwater was not encountered. 3. Stability of the trial pit was stable. 4. Trial pit was backfilled on completion. 5. No visible or olfactory evidence of contamination.		
Stability: Stable		

				Trial Pit Log			Trialpit No TP07 Sheet 1 of 1		
Project Name: Sutton Benger				Project No. P25-317		Co-ords: 393893.41 - 178454.99 Level:		Date 19/11/2025	
Location: Sutton Benger, Wiltshire						Dimensions (m): 4 0.55		Scale 1:25	
Client: Gleeson Land						Depth 4.00		Logged DM	

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.20			TOPSOIL: Grass over brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone and limestone. Frequent roots and rootlets were observed.	
	0.70	D		0.70			Soft (inferred) light brown sandy gravelly CLAY. Gravel is subrounded fine to medium of sandstone. (KELLAWAYS SAND MEMBER)	1
	1.00 1.00	D ES					Soft (inferred) light brown sandy CLAY. Sand is fine to coarse. (KELLAWAYS SAND MEMBER)	2
	2.50	B		2.30			Soft to firm (inferred) light brown slightly sandy CLAY. Sand is fine to coarse. (KELLAWAYS SAND MEMBER)	3
				4.00			End of pit at 4.00 m	4
								5

Remarks: 1. Trial pit excavated to 4.00m bgl. 2. Groundwater was not encountered. 3. Stability of the trial pit was stable. 4. Trial pit was backfilled on completion. 5. No visible or olfactory evidence of contamination.		
Stability: Stable		

				Trial Pit Log			Trialpit No TP08 Sheet 1 of 1		
Project Name: Sutton Benger				Project No. P25-317		Co-ords: 393938.36 - 178455.52 Level:		Date 19/11/2025	
Location: Sutton Benger, Wiltshire						Dimensions (m): 4 0.55		Scale 1:25	
Client: Gleeson Land						Depth 3.90		Logged DM	
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
▼				0.25			TOPSOIL: Grass over brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone and limestone. Frequent roots and rootlets were observed.		
	0.80	ES		0.80			Soft (inferred) light brown slightly silty slightly sandy gravelly CLAY. Gravel is subrounded fine to coarse of sandstone. (KELLAWAYS SAND MEMBER)		
	2.00	D		2.80			Soft (inferred) light brown slightly sandy CLAY. Sand is fine to coarse. (KELLAWAYS SAND MEMBER)		
				3.90			Soft to firm (inferred) light brown mottled grey slightly sandy gravelly CLAY. Gravel is angular to subangular fine to coarse of sandstone and shell fragments. (KELLAWAYS SAND MEMBER)		
							End of pit at 3.90 m		4
									5
Remarks: 1. Trial pit excavated to 3.90m bgl. 2. Groundwater encountered at 3.80m bgl. 3. Stability of the trial pit was stable. 4. Trial pit was backfilled on completion. 5. No visible or olfactory evidence of contamination.									
Stability: Stable									



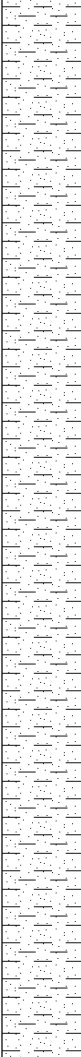
				Trial Pit Log			Trialpit No TP09 Sheet 1 of 1		
Project Name: Sutton Benger				Project No. P25-317		Co-ords: 393991.47 - 178455.39 Level:		Date 20/11/2025	
Location: Sutton Benger, Wiltshire						Dimensions (m): 4		Scale 1:25	
Client: Gleeson Land						Depth 3.80		Logged DM	

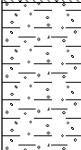
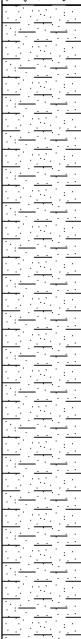
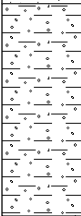
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.50 0.50	D ES		0.15		 TOPSOIL: Grass over brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone and limestone. Frequent roots and rootlets were observed. Soft (inferred) light brown slightly sandy gravelly CLAY. Gravel is subrounded fine to medium of sandstone. (KELLAWAYS SAND MEMBER)		
				0.80		 Soft to firm (inferred) light brown slightly sandy CLAY. Sand is fine to coarse. (KELLAWAYS SAND MEMBER)	1	
	2.00	D					2	
	3.00 3.00	B ES		2.80		 Loose to medium dense (inferred) light brown clayey very sandy GRAVEL. Gravel is subangular to subrounded fine to coarse of sandstone. (KELLAWAYS SAND MEMBER)	3	
				3.80		End of pit at 3.80 m	4	
							5	

Remarks: 1. Trial pit excavated to 3.80m bgl. 2. Groundwater was not encountered. 3. Stability of the trial pit was stable. 4. Trial pit was backfilled on completion. 5. No visible or olfactory evidence of contamination.		
Stability: Stable		

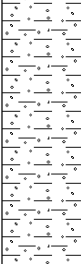
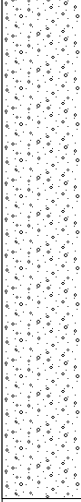
				Trial Pit Log			Trialpit No TP10 Sheet 1 of 1		
Project Name: Sutton Benger				Project No. P25-317		Co-ords: 394042.70 - 178455.12 Level:		Date 20/11/2025	
Location: Sutton Benger, Wiltshire				Dimensions (m):		4 		Scale 1:25	
Client: Gleeson Land				Depth 3.90		0.55 		Logged DM	

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
▼	0.20	ES		0.20			TOPSOIL: Grass over brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone and limestone. Frequent roots and rootlets were observed.	1	
				0.70			Soft (inferred) light brown slightly sandy gravelly CLAY. Gravel is subrounded fine to medium of sandstone. (KELLAWAYS SAND MEMBER)		
	1.20	D					Firm (inferred) light brown very sandy CLAY. Sand is fine to coarse. (KELLAWAYS SAND MEMBER)		2
									
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				Trial Pit Log			Trialpit No TP11 Sheet 1 of 1			
Project Name: Sutton Benger				Project No. P25-317		Co-ords: 393909.59 - 178405.87 Level:		Date 19/11/2025		
Location: Sutton Benger, Wiltshire				Dimensions (m):		4		Scale 1:25		
Client: Gleeson Land				Depth 4.10		0.55		Logged DM		
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
	Depth	Type	Results							
	0.20	ES		0.25			TOPSOIL: Grass over brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone and limestone. Frequent roots and rootlets were observed.			
	0.50	D		0.55			Soft (inferred) light brown slightly sandy gravelly CLAY. Gravel is subrounded fine to medium of sandstone. (KELLAWAYS SAND MEMBER)			
	1.50	D					Soft to firm (inferred) light brown sandy CLAY. Sand is fine to coarse. (KELLAWAYS SAND MEMBER)			
				4.10			End of pit at 4.10 m			
Remarks: 1. Trial pit excavated to 4.10m bgl. 2. Groundwater was not encountered. 3. Stability of the trial pit was stable. 4. Trial pit was backfilled on completion. 5. No visible or olfactory evidence of contamination.										
Stability: Stable										

				Trial Pit Log			Trialpit No TP12 Sheet 1 of 1		
Project Name: Sutton Benger				Project No. P25-317		Co-ords: 393969.26 - 178404.80 Level:		Date 19/11/2025	
Location: Sutton Benger, Wiltshire				Dimensions (m):		4 		Scale 1:25	
Client: Gleeson Land				Depth 3.60		0.55 		Logged ES	
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.20	D		0.30			TOPSOIL: Grass over brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone and limestone. Frequent roots and rootlets were observed.		
	0.50	ES						Soft (inferred) light brown gravelly slightly sandy gravelly CLAY. Gravel is subrounded fine to medium of sandstone. (KELLAWAYS SAND MEMBER)	
				0.80			Soft (inferred) light brown slightly sandy CLAY. Sand is fine to coarse. (KELLAWAYS SAND MEMBER)		
		3.00	D		2.90			Soft to firm (inferred) light brown mottled grey slightly sandy gravelly CLAY. Gravel is angular to subangular fine to coarse of sandstone and shell fragments. (KELLAWAYS SAND MEMBER)	
				3.60		End of pit at 3.60 m			
1 2 3 4 5									
Remarks: 1. Trial pit excavated to 3.60m bgl. 2. Groundwater was not encountered. 3. Stability of the trial pit was stable. 4. Trial pit was backfilled on completion. 5. No visible or olfactory evidence of contamination.									
Stability: Stable									

				Trial Pit Log				Trialpit No TP13 Sheet 1 of 1	
Project Name: Sutton Benger				Project No. P25-317		Co-ords: 394095.96 - 178533.40 Level:		Date 20/11/2025	
Location: Sutton Benger, Wiltshire						Dimensions (m): Depth 2.85 0.55 4		Scale 1:25 Logged DM	
Client: Gleeson Land									

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
▼				0.30			TOPSOIL: Grass over brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone and limestone. Frequent roots and rootlets were observed.	1
	0.80	D					Soft to firm (inferred) light brown slightly sandy gravelly CLAY. Gravel is subrounded fine to medium of sandstone. (RIVER TERRACE DEPOSITS)	
	1.50	ES		1.20			Medium Dense (inferred) light brown slightly clayey very sandy GRAVEL. Gravel is subangular to subrounded fine to coarse of sandstone. (RIVER TERRACE DEPOSITS)	2
				2.85			End of pit at 2.85 m	3
								4
								5

Remarks: 1. Trial pit excavated to 2.85m bgl. 2. Groundwater encountered at 2.85m bgl. 3. Stability of the trial pit was stable. 4. Trial pit was backfilled on completion. 5. No visible or olfactory evidence of contamination.		
Stability: Stable		

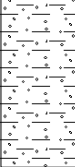
				Borehole Log			Borehole No. WS01 Sheet 1 of 1		
Project Name: Sutton Benger				Project No. P25-317		Co-ords: 393891E - 178603N		Hole Type WS	
Location: Sutton Benger, Wiltshire				Level:		Scale 1:27		Logged By ES	
Client: Gleeson Land				Dates: 18/11/2025					

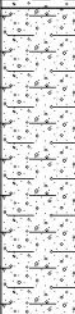
Scale	Sample and In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strikes	Well
	Depth (m)	Ref.	Type	Results						
1	0.20					TOPSOIL: Grass over brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone and limestone. Frequent roots and rootlets were observed. Very soft orangish brown mottled greyish brown silty CLAY. (ALLUVIUM)				
	0.40	1	ES							
	0.80	2	D							
2	1.20		SPT	N=0 (0,0/0,0,0,0)						
	2.00		SPT	N=7 (1,0/0,1,2,4)						
	2.30									
3	2.50	3	D			Loose grey clayey sandy GRAVEL. Gravel is subrounded to rounded fine to coarse of sandstone. (ALLUVIUM)				
	3.00		SPT	N=22 (5,4/4,5,6,7)						
	4.00		SPT	N=31 (4,5/6,7,8,10)						
5	5.00		SPT	N=27 (3,4/5,7,7,8)		Firm to stiff grey mottled orangish brown CLAY. (ALLUVIUM)				
	End of Borehole at 5.000m									

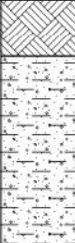
Remarks

1. Groundwater encountered at 1.20m bgl, rising to 1.00m bgl. 2. Windowless sampler drilling commenced from 0.0m bgl. 3. Borehole terminated in natural strata due to target depth was achieved. 4. Borehole installed to 5.00m bgl on completion.



					Borehole Log			Borehole No. WS02 Sheet 1 of 1		
Project Name: Sutton Benger					Project No. P25-317		Co-ords: 394041E - 178660N		Hole Type WS	
Location: Sutton Benger, Wiltshire					Level:			Scale 1:27		
Client: Gleeson Land					Dates: 18/11/2025			Logged By ES		
Scale	Sample and In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strikes	Well
	Depth (m)	Ref.	Type	Results						
1	0.20	1	ES		0.30	TOPSOIL: Grass over brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone and limestone. Frequent roots and rootlets were observed.				
	0.50	2	ES			Stiff to very stiff orangish brown slightly sandy gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone. (KELLAWAYS SAND MEMBER)				
	0.90		SPT	50 (8,15/50 for 95mm)	0.90	End of Borehole at 0.900m				
2										
3										
4										
5										
Remarks										
1. Groundwater encountered at 0.90m bgl, rising to 0.70m bgl. 2. Windowless sampler drilling commenced from 0.0m bgl. 3. Borehole terminated in natural strata due to hard strata. 4. Borehole was backfilled with arisings.										

		Borehole Log				Borehole No. WS03 Sheet 1 of 1				
Project Name: Sutton Benger		Project No. P25-317		Co-ords: 393968E - 178552N		Hole Type WS				
Location: Sutton Benger, Wiltshire				Level:		Scale 1:27				
Client: Gleeson Land				Dates: 18/11/2025		Logged By ES				
Scale	Sample and In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strikes	Well
	Depth (m)	Ref.	Type	Results						
1	0.85		SPT	N=40 (6,6/6,11,11,12)		0.20	TOPSOIL: Grass over brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone and limestone. Frequent roots and rootlets were observed. Stiff to very stiff orangish brown slightly sandy gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone. (KELLAWAYS SAND MEMBER)	 		
						0.90	Dense orangish brown clayey sandy GRAVEL. Gravel is angular and subangular fine to coarse of sandstone. (KELLAWAYS SAND MEMBER)			
2	1.80		SPT	N=32 (6,8/10,7,7,8)						
	2.00	1	D							
3						2.80	End of Borehole at 2.800m			
4										
5										
Remarks 1. Groundwater encountered at 1.80m bgl. 2. Windowless sampler drilling commenced from 0.0m bgl. 3. Borehole terminated in natural strata due to multiple collapses. 4. Borehole was installed to 2.00m bgl on completion.										

					Borehole Log			Borehole No. WS04 Sheet 1 of 1		
Project Name: Sutton Benger					Project No. P25-317		Co-ords: 393980E - 178435N		Hole Type WS	
Location: Sutton Benger, Wiltshire					Level:			Scale 1:27		
Client: Gleeson Land					Dates: 18/11/2025			Logged By ES		
Scale	Sample and In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strikes	Well
	Depth (m)	Ref.	Type	Results						
1						0.20	TOPSOIL: Grass over brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone and limestone. Frequent roots and rootlets were observed. Soft to firm orangish brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone. (KELLAWAYS SAND MEMBER)			
						0.90	Soft to very soft orangish brown silty CLAY. (KELLAWAYS SAND MEMBER)			
	1.20		SPT	N=5 (1,0/1,2,1,1)						
	1.50	1	D							
2	2.00		SPT	N=0 (0,0/0,0,0,0)						
3	3.00		SPT	N=0 (0,0/0,0,0,0)						
						3.40	Very soft orangish brown sandy silty CLAY. Sand is fine and medium. (KELLAWAYS SAND MEMBER)			
						3.60	Medium Dense orangish brown mottled greyish brown clayey silty SAND. Sand is fine to coarse. (KELLAWAYS SAND MEMBER)			
4	3.80	2	D							
	4.00		SPT	N=22 (3,3/3,5,6,8)						
5	5.00		SPT	N=17 (4,4/5,3,3,6)		5.00	End of Borehole at 5.000m			
Remarks										
1. Groundwater was not encountered. 2. Windowless sampler drilling commenced from 0.0m bgl. 3. Borehole terminated in natural strata due to target depth was achieved. 4. Borehole installed to 5.00m bgl on completion.										

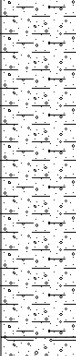
					Borehole Log			Borehole No. WS05 Sheet 1 of 1		
Project Name: Sutton Benger					Project No. P25-317		Co-ords: 394082E - 178538N		Hole Type WS	
Location: Sutton Benger, Wiltshire					Level:			Scale 1:27		
Client: Gleeson Land					Dates: 18/11/2025			Logged By ES		
Scale	Sample and In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strikes	Well
	Depth (m)	Ref.	Type	Results						
1	1.20		SPT	N=50 (1,2/50 for 290mm)		0.20	TOPSOIL: Grass over brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone and limestone. Frequent roots and rootlets were observed. Firm to stiff orangish brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse of sandstone. (KELLAWAYS SAND MEMBER)	 		
						1.50 1.60	Very dense orangish brown clayey sandy GRAVEL. Gravel is angular and subangular fine to coarse of sandstone. (Recorded from SPT Split-Spoon) (KELLAWAYS SAND MEMBER) End of Borehole at 1.600m			
2										
3										
4										
5										
Remarks										
1. Groundwater encountered at 0.90m bgl, rising to 0.70m bgl. 2. Windowless sampler drilling commenced from 0.0m bgl. 3. Borehole terminated in natural strata due to hard strata. 4. Borehole was backfilled with arisings.										

Photo No.:	1	Date:	18/11/25	
Description:	TP01			
				
Photo No.:	2	Date:	18/11/25	
Description:	Trial Pit Arisings			
				

Photo No.:	3	Date:	18/11/25	
TP103		Trial Pit Arisings		



Photo No.:	4	Date:	18/11/25	
TP104		Trial Pit Arisings		



Photo No.:	5	Date:	18/11/25	
Description:		TP02		



Photo No.:	6	Date:	18/11/25	
Description:		Trial Pit Arisings		



Photo No.:	7	Date:	18/11/25	
Description:		Trial Pit Arisings		
				

Photo No.:	8	Date:	18/11/25	
Description:		Trial Pit Arisings		
				

Site Walkover Photo Log

Sutton Benger
P25-317
Gleeson Land

Photo No.:	9	Date:	18/11/25	
Description:		TP03		

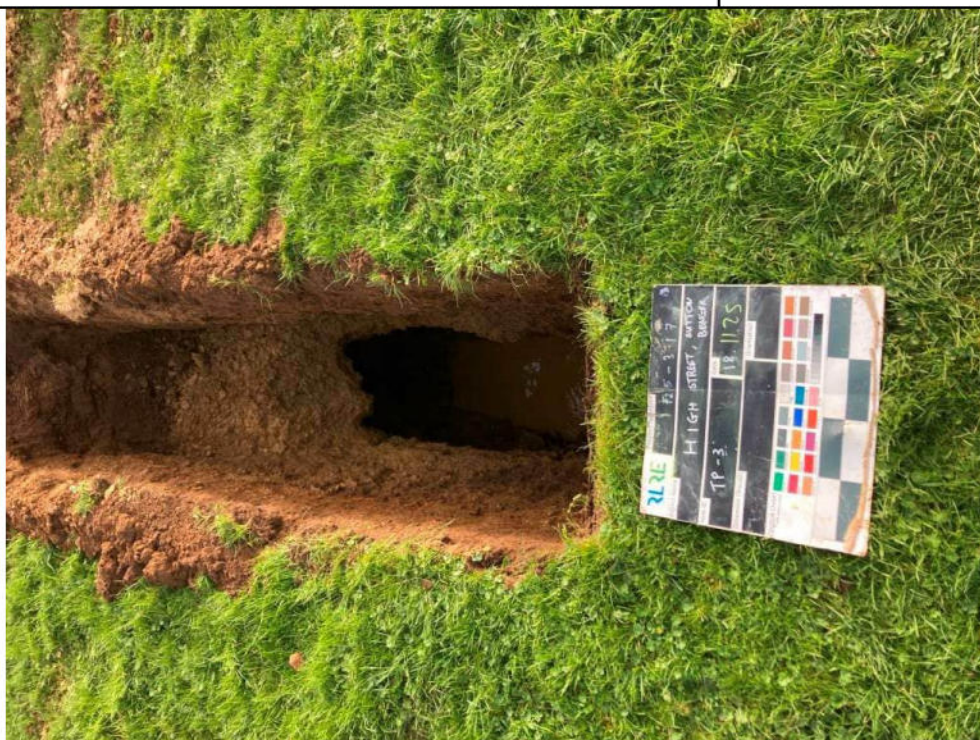


Photo No.:	10	Date:	18/11/25	
Description:		Trial Pit Arisings		



Photo No.:	11	Date:	18/11/25	
Description:		Trial Pit Arisings		



Photo No.:	12	Date:	18/11/25	
Description:		Trial Pit Arisings		



Photo No.:	13	Date:	18/11/25	
Description:		TP04		



Photo No.:	14	Date:	18/11/25	
Description:		Trial Pit Arisings		



Photo No.:	15	Date:	18/11/25	
Description:		Trial Pit Arisings		
				
Photo No.:	16	Date:	18/11/25	
Description:		Trial Pit Arisings		
				

Site Walkover Photo Log

Sutton Benger
P25-317
Gleeson Land

Photo No.:	17	Date:	18/11/25	
Description:	TP05			

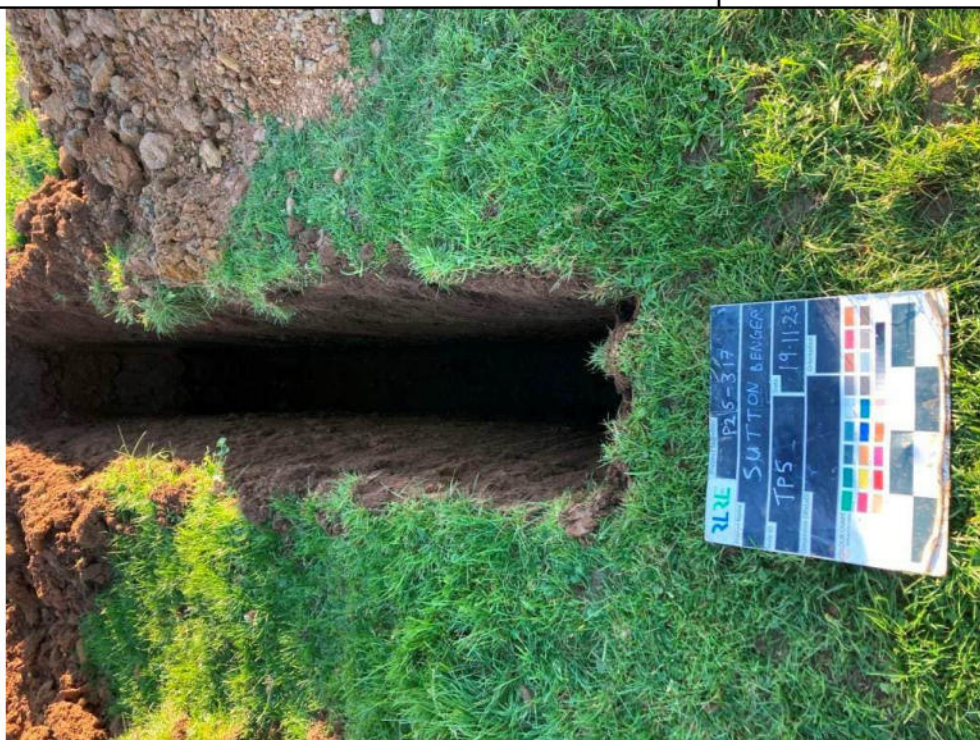


Photo No.:	18	Date:	18/11/25	
Description:	Trial Pit Arisings			



Site Walkover Photo Log

Sutton Benger
P25-317
Gleeson Land

Photo No.:	19	Date:	18/11/25	
Description:		Trial Pit Arisings		



Photo No.:	20	Date:	18/11/25	
Description:		Trial Pit Arisings		



Photo No.:	21	Date:	18/11/25	
Description:		TP06		



Photo No.:	22	Date:	18/11/25	
Description:		Trial Pit Arisings		



Photo No.:	23	Date:	18/11/25	
Description:		Trial Pit Arisings		



Photo No.:	24	Date:	18/11/25	
Description:		Trial Pit Arisings		



Photo No.:	25	Date:	18/11/25	
Description:		TP07		
				
Photo No.:	26	Date:	18/11/25	
Description:		Trial Pit Arisings		
				

Photo No.:	27	Date:	18/11/25	
Description:		Trial Pit Arisings		



Photo No.:	28	Date:	18/11/25	
Description:		Trial Pit Arisings		



Site Walkover Photo Log

Sutton Benger
P25-317
Gleeson Land

Photo No.:	29	Date:	18/11/25	
Description:		TP08		



Photo No.:	30	Date:	18/11/25	
Description:		Trial Pit Arisings		



Photo No.:	31	Date:	18/11/25	
Description:		Trial Pit Arisings		
				
Photo No.:	32	Date:	18/11/25	
Description:		Trial Pit Arisings		
				

Photo No.:	33	Date:	18/11/25	
Description:		TP09		



Photo No.:	34	Date:	18/11/25	
Description:		Trial Pit Arisings		



Site Walkover Photo Log

Sutton Benger
P25-317
Gleeson Land

Photo No.:	35	Date:	18/11/25	
Description:		Trial Pit Arisings		
				
Photo No.:	36	Date:	18/11/25	
Description:		Trial Pit Arisings		
				

Photo No.:	37	Date:	18/11/25	
Description:		TP10		
				
Photo No.:	38	Date:	18/11/25	
Description:		Trial Pit Arisings		
				

Site Walkover Photo Log

Sutton Benger
P25-317
Gleeson Land

Photo No.:	39	Date:	18/11/25	
Description:		Trial Pit Arisings		



Photo No.:	40	Date:	18/11/25	
Description:		Trial Pit Arisings		



Photo No.:	41	Date:	18/11/25	
Description:		TP11		



Photo No.:	42	Date:	18/11/25	
Description:		Trial Pit Arisings		



Photo No.:	43	Date:	18/11/25	
Description:		Trial Pit Arisings		
				
Photo No.:	44	Date:	18/11/25	
Description:		Trial Pit Arisings		
				

Site Walkover Photo Log

Sutton Benger
P25-317
Gleeson Land

Photo No.:	45	Date:	18/11/25	
Description:		TP12		

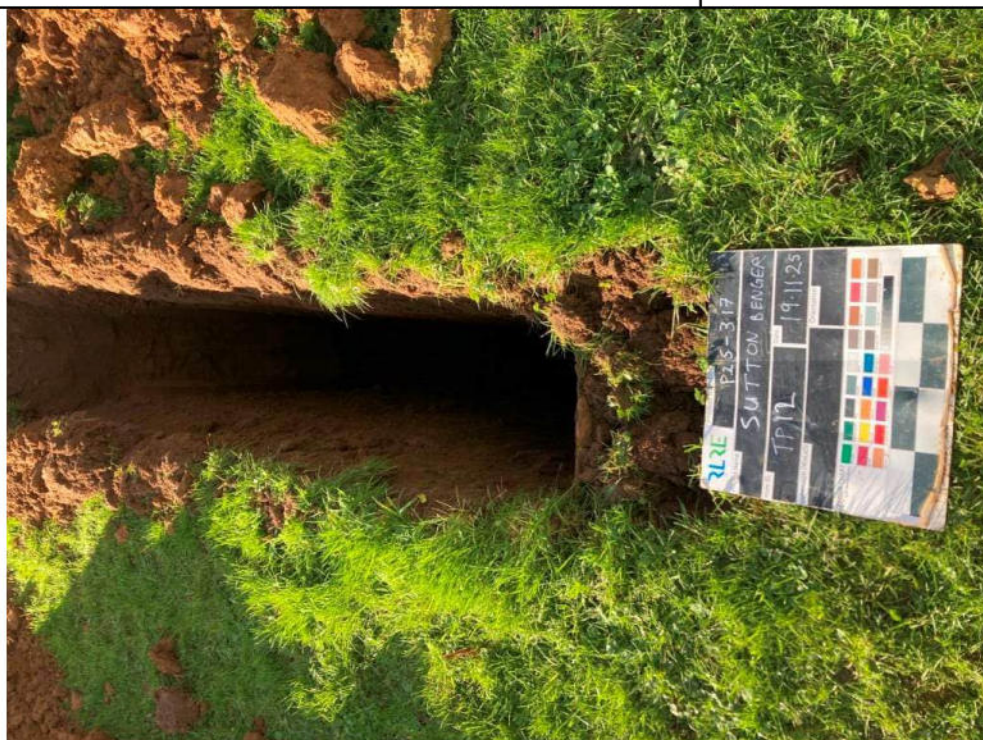


Photo No.:	46	Date:	18/11/25	
Description:		Trial Pit Arisings		



Photo No.:	47	Date:	18/11/25	
Description:		Trial Pit Arisings		
				
Photo No.:	48	Date:	18/11/25	
Description:		Trial Pit Arisings		
				

Site Walkover Photo Log

Sutton Benger
P25-317
Gleeson Land

Photo No.:	49	Date:	18/11/25	
Description:		TP13		
				
Photo No.:	50	Date:	18/11/25	
Description:		Trial Pit Arisings		
				

Photo No.:	51	Date:	18/11/25	
Description:		Trial Pit Arisings		



Photo No.:	52	Date:	18/11/25	
Description:		Trial Pit Arisings		



Photo No.:	53	Date:	18/11/25	
Description:		WS01		



Photo No.:	54	Date:	18/11/25	
Description:		WS03		



Site Walkover Photo Log

Sutton Benger
P25-317
Gleeson Land

Photo No.:	55	Date:	18/11/25	
Description:	WS04			
				
Photo No.:	56	Date:	18/11/26	
Description:	XXX			
0				

Appendix C:

Gas and Water Monitoring Results

P25-317 Sutton Benger - Ground Gas/Water Monitoring

WS01																				
Date	Oxygen Concentration (%)		Carbon dioxide concentration (%)		Methane concentration (%)		Flow Rate		Gas Screening Value	3 Days preceding Barometric Pressure (mb)			Pressure (mb)	Pressure Trend	Depth of Water (m)	Base Level (m)	Water Level (m)	H2S (ppm)	CO (ppm)	
	Minimum	Steady	Peak	Steady	Peak	Steady	Peak	Steady		3rd	2nd	1st						Peak	Peak	
15/12/25															4.22	5.00	0.78			
05/01/26															4.10	5.00	0.90			
12/01/26	19.8	19.8	0.5	0.5	0.0	0.0	0.0	0.0	0	999.0	1012.0	1003.0	1000	rising	4.17	5.00	0.83	0.0	0.0	
19/01/26	19.9	20.1	0.5	0.5	0.0	0.0	0.0	0.0	0	986.0	985.0	1005.0	1012	rising	4.57	5.00	0.43	0.0	0.0	
28/01/26	Unable to carry out due to groundwater - Borehole flooded with groundwater																			
06/02/26	Unable to carry out due to groundwater - Borehole flooded with groundwater																			
18/02/26															4.36	5.00	0.64			
04/03/26															4.27	5.00	0.73			

Determining the Gas Screening Value

Maximum Carbon dioxide concentration ^{1*}	Maximum methane ^{1*}	Maximum flow rate ²
0.5	0.1	0.3

¹0.3 l/hr Flow has been used on any value less than 0.3 l/hr based on gas analyser potential error.

Gas Screening Value (l/hr) = Max. borehole flow rate (l/hr) x Max. gas concentration (%)

Gas Screening Value CO2 =	0.0015
Gas Screening Value CH4 =	0.0003

WS03																					
Date	Oxygen Concentration (%)		Carbon dioxide concentration (%)		Methane concentration (%)		Flow Rate		Gas Screening Value	3 Days preceding Barometric Pressure (mb)			Pressure	Pressure Trend	Depth To Water (m)	Base Level (m)	Water Level (m)	H2S (ppm)	CO (ppm)		
	Minimum	Steady	Peak	Steady	Peak	Steady	Peak	Steady		3rd	2nd	1st						Peak	Peak		
15/12/25															1.16	2.00	0.84				
05/01/26															0.97	2.00	1.03				
12/01/26	19.8	19.9	0.1	0.1	0.0	0.0	0.0	0.0	0	999.0	1012.0	1003.0	1000	rising	1.02	2.00	0.98				
19/01/26	19.9	20.3	0.4	0.4	0.0	0.0	0.0	0.0	0	986.0	985.0	1005.0	1012	rising	1.49	2.00	0.51	0.0	0.0		
28/01/26	18.6	18.7	1.3	1.3	0.0	0.0	0.0	0.0	0	994.0	985.0	998.0	994	steady	1.80	2.00	0.20	0.0	0.0		
06/02/26	18.4	18.5	1.4	1.4	0.0	0.0	0.0	0.0	0	983.0	992.0	103.0	981	steady	-	-	Unable to remove bung	0.0	0.0		
18/02/26															1.37	1.79	0.42				
04/03/26															-	-	No Access due to Archeology				

Determining the Gas Screening Value

Maximum Carbon dioxide concentration	Maximum methane	Maximum flow rate ²
1.4	0.1	0.3

¹0.3 l/hr Flow has been used on any value less than 0.3 l/hr based on gas analyser potential error.

Gas Screening Value (l/hr) = Max. borehole flow rate (l/hr) x Max. gas concentration (%)

Gas Screening Value CO2 =	0.0042
Gas Screening Value CH4 =	0.0003

WS04																					
Date	Oxygen Concentration (%)		Carbon dioxide concentration (%)		Methane concentration (%)		Flow Rate		Gas Screening Value	3 Days preceding Barometric Pressure (mb)			Pressure	Pressure Trend	Depth To Water (m)	Base Level (m)	Water Level (m)	H2S (ppm)	CO (ppm)		
	Minimum	Steady	Peak	Steady	Peak	Steady	Peak	Steady		3rd	2nd	1st						Peak	Peak		
15/12/25															3.23	5.00	1.77				
05/01/26															2.70	5.00	2.30				
12/01/26	19.4	19.4	0.1	0.1	0.0	0.0	0.0	0.0	0	999.0	1012.0	1003.0	1000	rising	2.94	5.00	2.06	0.0	0.0		
19/01/26	19.7	19.8	0.7	0.7	0.0	0.0	0.0	0.0	0	986.0	985.0	1005.0	1012	rising	3.78	5.00	1.22	0.0	0.0		
28/01/26	18.3	18.4	1.7	1.7	0.0	0.0	0.0	0.0	0	994.0	985.0	996.0	994	steady	4.21	5.00	0.79	0.0	0.0		
06/02/26	19.4	19.6	1.8	1.6	0.0	0.0	0.0	0.0	0	983.0	992.0	103.0	981	steady		5.00	Unable to remove bung	0.0	0.0		
18/02/26															4.06	5.00	0.94				
04/03/26															3.55	5.00	1.45				

Determining the Gas Screening Value

Maximum Carbon dioxide concentration	Maximum methane	Maximum flow rate ²
1.8	0.1	0.3

¹0.3 l/hr Flow has been used on any value less than 0.3 l/hr based on gas analyser potential error.

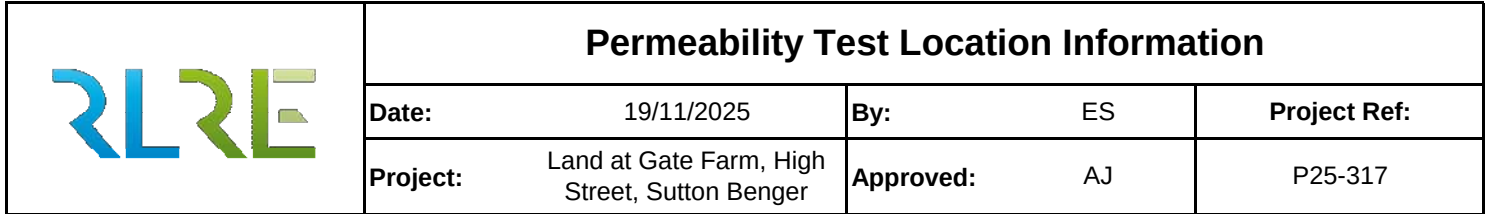
*** Data extracted from continuous ground gas monitoring, no flow and water level data recorded

Gas Screening Value (l/hr) = Max. borehole flow rate (l/hr) x Max. gas concentration (%)

Gas Screening Value CO2 =	0.0054
Gas Screening Value CH4 =	0.0003

Appendix D:

Soakaway Test Results

[illegible]

	Permeability Test Location Information			
	Date:	19/11/2025	By:	ES
	Project:	Sutton Benger	Approved:	AJ
				Project Ref: P25-317

Location ID:	SA01 T1	Start Fill:	09:34:00	Water Used (m3):	1.92
Effective Depth:	0.57	End Fill:	09:35:00	Water Volume at End of Fill (m3):	1.03
25% Effective Depth:	0.57	Rate of Fill (m/s):	3.20E-02	Rate of Infiltration During Fill (m/s):	1.47E-02
75% Effective Depth:	0.86	Elapsed Time to 25% Effective Depth (mins):	30	Depth of Topsoil (m):	0.2
		Elapsed Time to 75% Effective Depth (mins):	180	Depth of Subsoil (m):	1

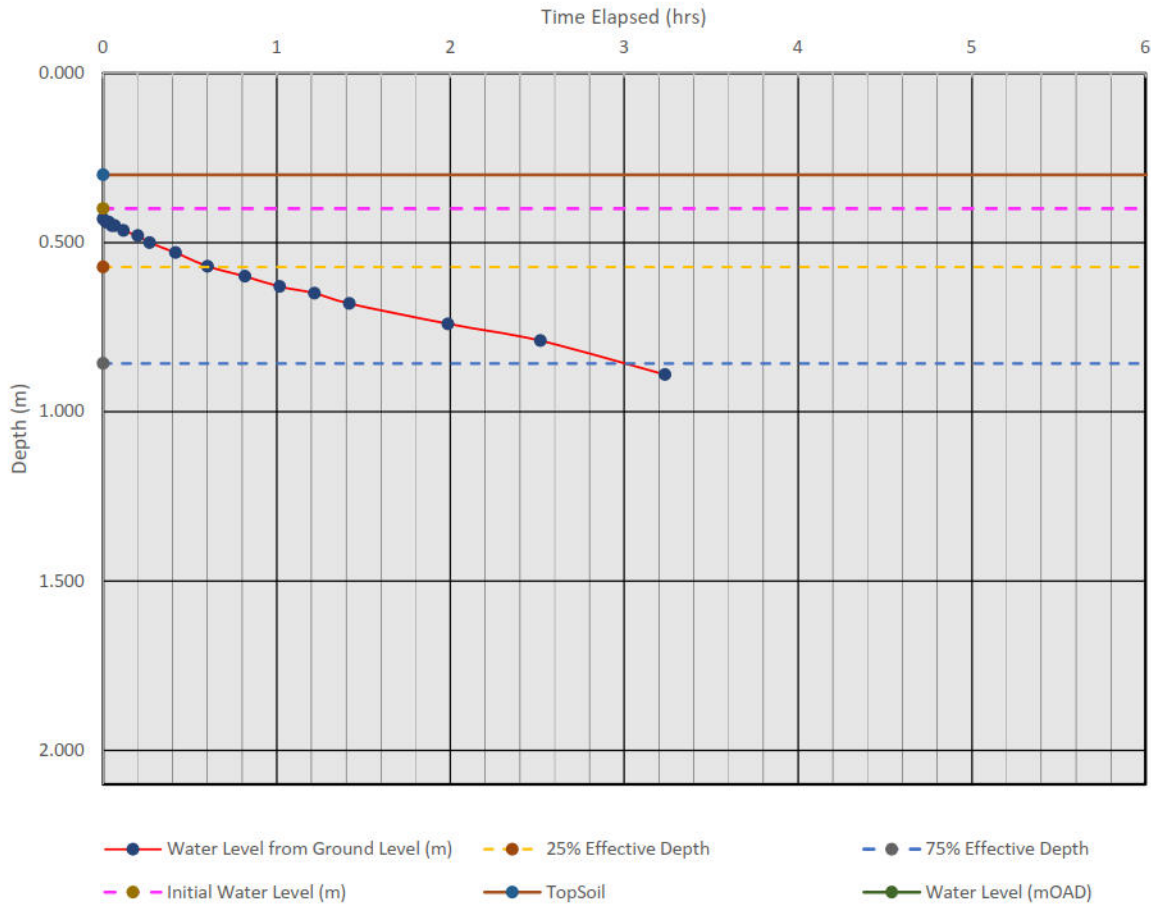
Date	Time	Water Level from Ground Level (m)	Elapsed Time (hrs)	Rate of Change of Water	Water Level (mOAD)
19/11/2025	09:35:00	0.400			
19/11/2025	09:36:00	0.430	0.0		
19/11/2025	09:37:00	0.440	0.0	0.01	-0.44
19/11/2025	09:38:00	0.440	0.0	0.00	-0.44
19/11/2025	09:39:00	0.450	0.0	0.01	-0.45
19/11/2025	09:40:00	0.450	0.1	0.00	-0.45
19/11/2025	09:43:00	0.465	0.1	0.01	-0.47
19/11/2025	09:48:00	0.480	0.2	0.00	-0.48
19/11/2025	09:52:00	0.500	0.3	0.00	-0.50
19/11/2025	10:01:00	0.530	0.4	0.00	-0.53
19/11/2025	10:12:00	0.570	0.6	0.00	-0.57
19/11/2025	10:25:00	0.600	0.8	0.00	-0.60
19/11/2025	10:37:00	0.630	1.0	0.00	-0.63
19/11/2025	10:49:00	0.650	1.2	0.00	-0.65
19/11/2025	11:01:00	0.680	1.4	0.00	-0.68
19/11/2025	11:35:00	0.740	2.0	0.00	-0.74
19/11/2025	12:07:00	0.790	2.5	0.00	-0.79
19/11/2025	12:50:00	0.890	3.2	0.00	-0.89



Permeability Test Location Information

Date:	19/11/2025	By:	ES	Project Ref:
Project:	Sutton Benger	Approved:	AJ	P25-317

P25-317 Sutton Benger SA01 T1



Time for outflow between 75% and 25 % effective depth (secs):	9000.00
--	---------

vol between 75% and 25% (m3):	0.52
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as50 m2	4.01
----------------	------

<i>f</i> (m/s)	1.43E-05
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	Permeability Test Location Information				
	Date:	19/11/2025	By:	ES	Project Ref:
	Project:	Sutton Benger	Approved:	AJ	P25-317

Location ID:	SA01 T2
Effective Depth:	0.65
25% Effective Depth:	0.51
75% Effective Depth:	0.84

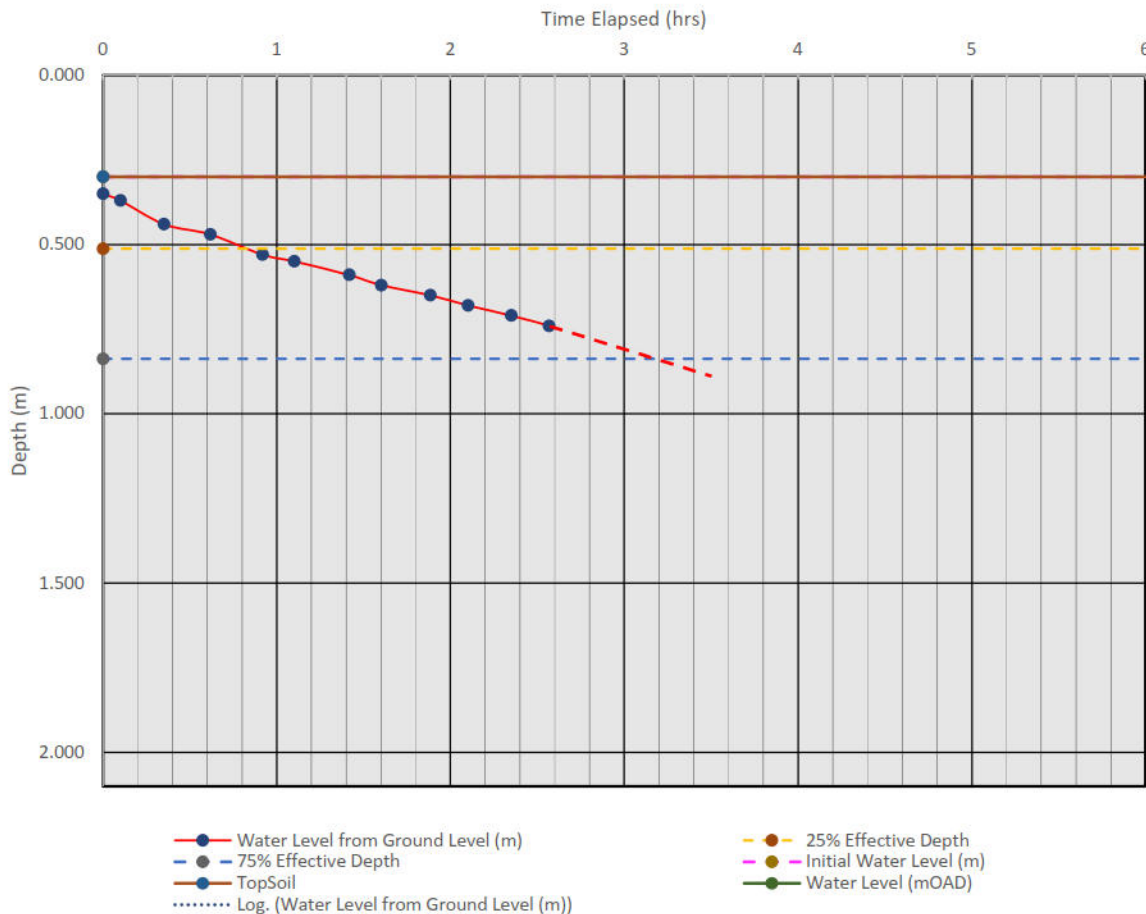
[illegible]



Permeability Test Location Information

Date:	19/11/2025	By:	ES	Project Ref:
Project:	Sutton Benger	Approved:	AJ	P25-317

P25-317 Sutton Benger SA01 T2



Time for outflow between 75% and 25 % effective depth (secs):	9120.00
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vol between 75% and 25% (m3):	0.59
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as50 m2	4.32
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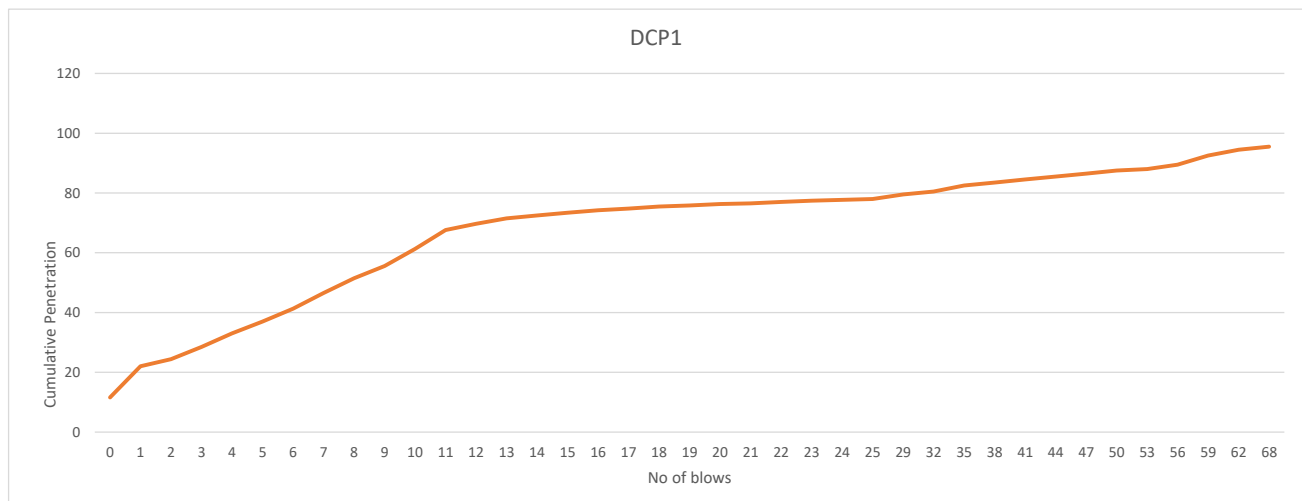
f (m/s)	1.50E-05
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Appendix E:

DCP Test Results

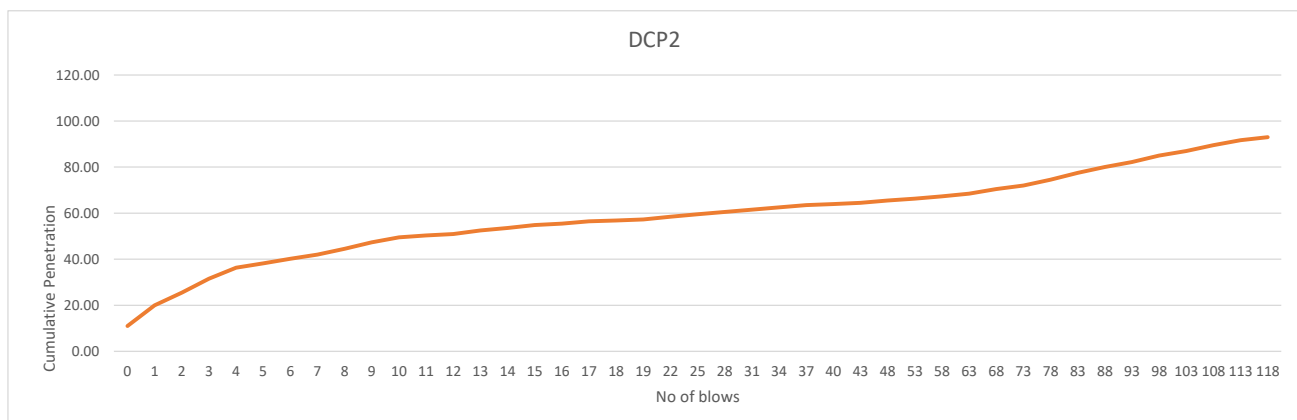
DCP1

No of blows	DCP scale reading (cm)	DCPI60 pen/blow (mm)	Cummalative Penetration (mm)	CBR Value %	Cummalitve pennetration (cm)	Layer thickness (mm)	Average CBR%
0	11.6	0	0		0	104	2.2
1	22	104	104	2.2	10.4		
2	24.4	24	128	10.5	12.8	456	5.7
3	28.5	41	169	6.0	16.9		
4	33	45	214	5.4	21.4		
5	37	40	254	6.1	25.4		
6	41.3	43	297	5.7	29.7		
7	46.5	52	349	4.6	34.9		
8	51.5	50	399	4.8	39.9		
9	55.6	41	440	6.0	44		
10	61.3	57	497	4.2	49.7		
11	67.6	63	560	3.8	56		
12	69.7	21	581	12.1	58.1	159	70.6
13	71.5	18	599	14.2	59.9		
14	72.5	10	609	26.5	60.9		
15	73.4	9	618	29.6	61.8		
16	74.2	8	626	33.5	62.6		
17	74.8	6	632	45.4	63.2		
18	75.5	7	639	38.6	63.9		
19	75.8	3	642	94.6	64.2		
20	76.3	5	647	55.1	64.7		
21	76.5	2	649	145.1	64.9		
22	77	5	654	55.1	65.4		
23	77.4	4	658	69.8	65.8		
24	77.7	3	661	94.6	66.1		
25	78	3	664	94.6	66.4		
29	79.5	4	679	74.7	67.9		
32	80.5	3	689	84.6	68.9		
35	82.5	7	709	40.7	70.9		
38	83.5	3	719	84.6	71.9		
41	84.5	3	729	84.6	72.9		
44	85.5	3	739	84.6	73.9		
47	86.5	3	749	84.6	74.9		
50	87.5	3	759	84.6	75.9		
53	88	2	764	176.0	76.4		
56	89.5	5	779	55.1	77.9		
59	92.5	10	809	26.5	80.9		
62	94.5	7	829	40.7	82.9		
68	95.5	2	839	176.0	83.9		



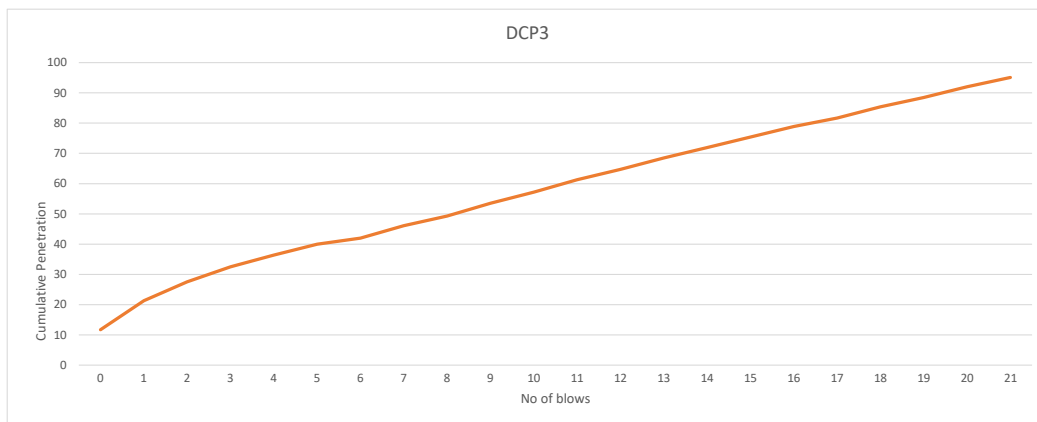
DCP2

No of blows	DCP scale reading (cm)	DCPI60 pen/blow (mm)	Cummalative Penetration (mm)	CBR Value %	Cummalitve pennetration (cm)	Layer thickness (mm)	Average CBR%
0	11.00	0	0		0.00	90	2.6
1	20.00	90	90	2.6	9.00		
2	25.50	55	145	4.4	14.50		
3	31.50	60	205	4.0	20.50	163	4.5
4	36.30	48	253	5.0	25.30		
5	38.20	19	272	13.4	27.20		
6	40.20	20	292	12.7	29.20	132	12
7	42.00	18	310	14.2	31.00		
8	44.50	25	335	10.1	33.50		
9	47.30	28	363	8.9	36.30		
10	49.50	22	385	11.5	38.50		
11	50.30	8	393	33.5	39.30	60	29
12	51.00	7	400	38.6	40.00		
13	52.50	15	415	17.3	41.50		
14	53.60	11	426	23.9	42.60		
15	54.80	12	438	21.8	43.80		
16	55.50	7	445	38.6	44.50	29	69
17	56.50	10	455	26.5	45.50		
18	56.80	3	458	94.6	45.80		
19	57.30	5	463	55.1	46.30		
22	58.50	4	475	69.8	47.50		
25	59.50	3	485	84.6	48.50	15	125
28	60.50	3	495	84.6	49.50		
31	61.50	3	505	84.6	50.50		
34	62.50	3	515	84.6	51.50		
37	63.50	3	525	84.6	52.50		
40	64.00	2	530	176.0	53.00	18	111
43	64.50	2	535	176.0	53.50		
48	65.50	2	545	145.1	54.50		
53	66.30	2	553	183.8	55.30		
58	67.30	2	563	145.1	56.30		
63	68.50	2	575	119.7	57.50	30	56
68	70.50	4	595	69.8	59.50		
73	72.00	3	610	94.6	61.00		
78	74.50	5	635	55.1	63.50		
83	77.50	6	665	45.4	66.50		
88	80.00	5	690	55.1	69.00	7	87
93	82.20	4	712	63.1	71.20		
98	85.00	6	740	48.9	74.00		
103	87.00	4	760	69.8	76.00		
108	89.50	5	785	55.1	78.50		
113	91.70	4	807	63.1	80.70	7	87
118	93.00	3	820	110.0	82.00		



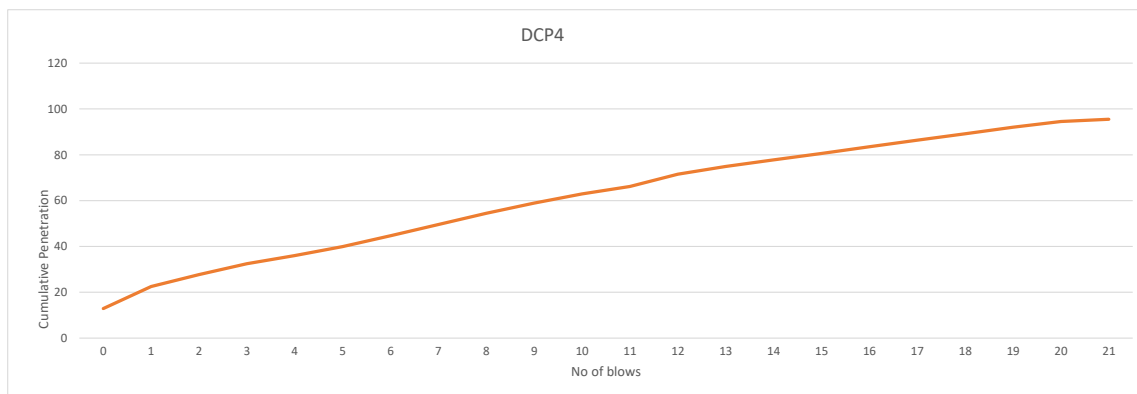
DCP3

No of blows	DCP scale reading (cm)	DCPI60 pen/blow (mm)	Cummalative Penetration (mm)	CBR Value %	Cummaltive pennetration (cm)	Layer thickness (mm)	Average CBR%
0	11.7	0	0		0	96	2.4
1	21.3	96	96	2.4	9.6		
2	27.5	62	158	3.8	15.8		
3	32.5	50	208	4.8	20.8	207	6.9
4	36.4	39	247	6.3	24.7		
5	40	36	283	6.8	28.3		
6	42	20	303	12.7	30.3		
7	46.1	41	344	6.0	34.4		
8	49.3	32	376	7.7	37.6	193	5.4
9	53.5	42	418	5.8	41.8		
10	57.2	37	455	6.6	45.5		
11	61.3	41	496	1.0	49.6		
12	64.7	34	530	7.3	53		
13	68.5	38	568	6.5	56.8	176	7.0
14	71.9	34	602	7.3	60.2		
15	75.4	35	637	7.0	63.7		
16	78.9	35	672	7.0	67.2		
17	81.7	28	700	8.9	70		
18	85.4	37	737	6.6	73.7	162	7.7
19	88.5	31	768	8.0	76.8		
20	92	35	803	7.0	80.3		
21	95.1	31	834	8.0	83.4		



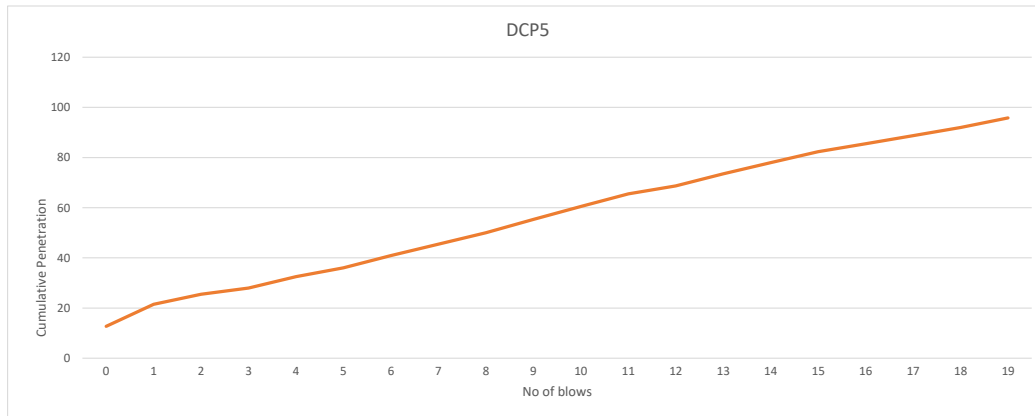
DCP4

No of blows	DCP scale reading (cm)	DCPI60 pen/blow (mm)	Cumulative Penetration (mm)		CBR Value %	Cumulative pennetration (cm)	Layer thickness (mm)	Average CBR%
0	12.9	0	0			0	96	2.4
1	22.5	96	96	0.38	2.4	9.6		
2	27.7	52	148	0.67	4.6	14.8	490	5.6
3	32.5	48	196	0.70	5.0	19.6		
4	36	35	231	0.85	7.0	23.1		
5	39.9	39	270	0.80	6.3	27		
6	44.7	48	318	0.70	5.0	31.8		
7	49.6	49	367	0.69	4.9	36.7		
8	54.5	49	416	0.69	4.9	41.6		
9	58.9	44	460	0.74	5.5	46		
10	62.9	40	500	0.79	6.1	50		
11	66.2	33	533	0.87	7.5	53.3		
12	71.5	53	586	0.66	4.5	58.6		
13	74.9	34	620	0.86	7.3	62	240	10.7
14	77.8	29	649	0.93	8.6	64.9		
15	80.6	28	677	0.95	8.9	67.7		
16	83.5	29	706	0.93	8.6	70.6		
17	86.4	29	735	0.93	8.6	73.5		
18	89.2	28	763	0.95	8.9	76.3		
19	92	28	791	0.95	8.9	79.1		
20	94.5	25	816	1.00	10.1	81.6		
21	95.5	10	826	1.42	26.5	82.6		



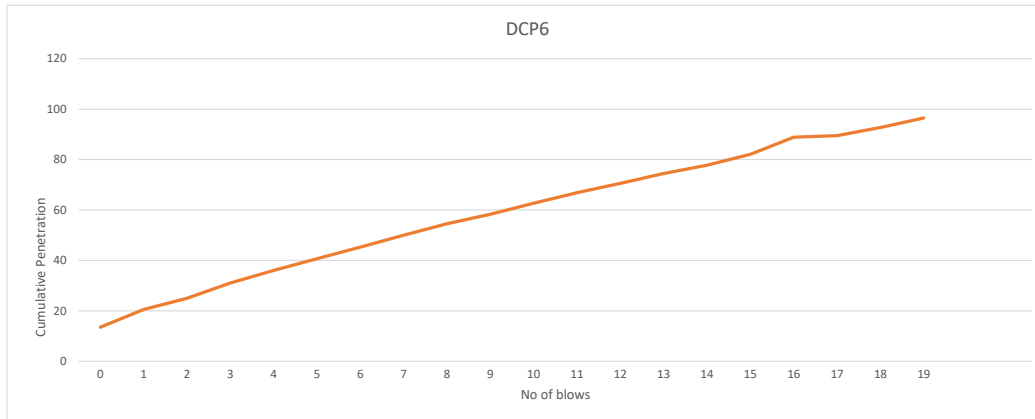
DCP5

No of blows	DCP scale reading (cm)	DCPI60 pen/blow (mm)	Cummalative Penetration (mm)	CBR Value %	Cummaltive pennetration (cm)	Layer thickness (mm)	Average CBR%
0	12.7	0	0		0	88	2.7
1	21.5	88	88	2.7	8.8		
2	25.5	40	128	6.1	12.8		
3	28	25	153	10.1	15.3	440	8.1
4	32.5	45	198	5.4	19.8		
5	36	35	233	7.0	23.3		
6	40.9	49	282	4.9	28.2		
7	45.5	46	328	5.3	32.8		
8	50	45	373	5.4	37.3		
9	55.3	53	426	4.5	42.6		
10	60.5	52	478	4.6	47.8		
11	65.5	50	528	4.8	52.8		
12	68.7	32	560	7.7	56		
13	73.5	48	608	5.0	60.8	303	6.7
14	78	45	653	5.4	65.3		
15	82.3	43	696	5.7	69.6		
16	85.5	32	728	7.7	72.8		
17	88.7	32	760	7.7	76		
18	92	33	793	7.5	79.3		
19	95.8	38	831	6.5	83.1		



DCP6

No of blows	DCP scale reading (cm)	DCPI60 pen/blow (mm)	Cummalative Penetration (mm)	CBR Value %	Cummaltive pennetration (cm)	Layer thickness (mm)	Average CBR%
0	13.5	0	0		0	70	3.4
1	20.5	70	70	3.4	7		
2	25	45	115	5.4	11.5	684	5.5
3	31	60	175	4.0	17.5		
4	36	50	225	4.8	22.5		
5	40.7	47	272	5.2	27.2		
6	45.3	46	318	5.3	31.8		
7	50	47	365	5.2	36.5		
8	54.5	45	410	5.4	41		
9	58.3	38	448	6.5	44.8		
10	62.7	44	492	5.5	49.2		
11	66.9	42	534	5.8	53.4		
12	70.6	37	571	6.6	57.1		
13	74.5	39	610	6.3	61		
14	77.8	33	643	7.5	64.3		
15	82.1	43	686	5.7	68.6		
16	88.9	68	754	3.5	75.4	76	20
17	89.5	6	760	45.4	76		
18	92.7	32	792	7.7	79.2		
19	96.5	38	830	6.5	83		



Appendix F:

Chemical Test Results

Analytical Report Number: 25-37923
Project / Site name: Sutton Benger
Your Project No: P25-317

Chemtest Sample ID.:						25-37923	25-37923	25-37923	25-37923	25-37923	25-37923	25-37923	25-37923	25-37923
Client Sample ID.:						2057726	2057727	2057728	2057731	2057733	2057734	2057737	2057738	2057740
Client Reference:						ES1	ES1	ES1	ES1	ES1	ES1	ES1	ES1	ES2
Sample Type:						TP01	TP02	TP03	TP06	TP08	TP09	TP11	TP12	WS/BH02
Top Depth (m):						SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Bottom Depth (m):						0.6	0.4	0	0.2	0.8	0.5	0.2	0.5	0.5
Date Sampled:						0.6	0.4	0.25	0.2	0.8	0.5	0.2	0.5	0.5
Time Sampled:						20/11/2025	20/11/2025	20/11/2025	20/11/2025	20/11/2025	20/11/2025	20/11/2025	20/11/2025	20/11/2025
Asbestos Lab:						1200	1200	1200	1200	1200	1200	1200	1200	1200
Sample Stratum						DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	Generic Assessment Criteria Rest with Plant update	Max									
Moisture Content	%	0.020	NONE		19	16	16	16	18	18	15	19	15	16
Soil Colour			N/A		Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material			N/A		Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones	Stones
Soil Texture			N/A		Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay
ACM Type	Type	N/A	NONE		-	-	-	-	-	-	-	-	-	-
Asbestos Identification		N/A	UKAS		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
General Inorganics														
pH at 20C	pH Units	4.0	MCERTS		8.5	8	8	8.5	7.6	7.7	7.6	7.4	8.1	8.5
Speciated PAHs														
Naphthalene	mg/kg	0.1	MCERTS	15	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	mg/kg	0.1	NONE	170	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	210	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	MCERTS	170	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	95	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	MCERTS	2400	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	280	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	620	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	MCERTS	7.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	mg/kg	0.1	MCERTS	15	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	2.6	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	77	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	2.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	27	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	NONE	0.24	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.1	MCERTS	320	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total PAH														
Speciated Total EPA-16 PAHs	mg/kg	2	N		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Phenol														
Total Phenols	mg/kg	0.1	MCERTS	280	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Heavy Metals / Metalloids														
Arsenic	mg/kg	0.5	MCERTS	37	27.00	22.00	17.00	9.40	9.20	11.00	19.00	16.00	17.00	26.00
Beryllium	mg/kg	0.5	UKAS	1.7	1.60	1.60	1.20	< 0.5	< 0.5	< 0.5	0.90	0.70	0.80	1.00
Cadmium	mg/kg	0.1	MCERTS	26	0.47	0.47	0.35	0.23	0.28	0.24	0.14	0.29	< 0.10	0.42
Chromium (hexavalent)	mg/kg	0.5	NONE	6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chromium (III)	mg/kg	0.5	MCERTS	910	42.00	42.00	34.00	14.00	14.00	18.00	29.00	23.00	26.00	26.00
Copper	mg/kg	0.5	MCERTS	2400	480.00	480.00	39.00	11.00	12.00	14.00	16.00	15.00	15.00	16.00
Lead	mg/kg	0.5	MCERTS	200	110.00	110.00	40.00	20.00	20.00	23.00	19.00	28.00	14.00	35.00
Mercury	mg/kg	0.05	MCERTS	40	0.10	0.10	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	mg/kg	0.5	MCERTS	130	63.00	63.00	41.00	17.00	16.00	19.00	31.00	21.00	35.00	37.00
Selenium	mg/kg	0.25	MCERTS	250	2.00	2.00	0.99	0.38	0.39	0.55	0.64	0.73	0.72	1.20
Vanadium	mg/kg	0.5	UKAS	410	76.00	76.00	62.00	25.00	25.00	31.00	51.00	43.00	47.00	60.00
Zinc	mg/kg	0.5	MCERTS	3700	210.00	210.00	100.00	47.00	52.00	59.00	78.00	68.00	61.00	90.00
Pesticides and Herbicides														
Aldrin	mg/kg	0	NONE	5.7	< 0.0010	-	-	<0.0010	-	-	-	<0.0010	-	-
Dieldrin	mg/kg	0	NONE	0.97	< 0.0010	-	-	<0.0010	-	-	-	<0.0010	-	-
Endosulfan	mg/kg	0	NONE	7.4	< 0.0010	-	-	<0.0010	-	-	-	<0.0010	-	-

All Soil Organic Matter (SOM) dependant results based on SOM 1%



Final Report

Report No.: 25-37923-1

Initial Date of Issue: 15-Dec-2025

Re-Issue Details:

Client *Rodgers Leask Environmental*

Client Address: *Office 225
2430/2440 Aztec West
Almondsbury
Bristol
BS32 4AQ*

Contact(s):
*chris.wilson@rodgersleask.co.uk;
Elliot.sampson@rodgersleask.co.uk;
andy.jackson@rodgersleask.co.uk;
david.mccarroll@rodgersleask.co.uk*

Project *P25-317 Sutton Benger*

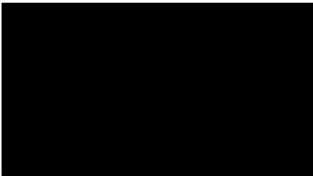
Quotation No.: Q25-39757 **Date Received:** 25-Nov-2025

Order No.: RLL 25-12-91 **Date Instructed:** 25-Nov-2025

No. of Samples: 10

Turnaround (Wkdays): 15 **Results Due:** 15-Dec-2025

Date Approved: 10-Dec-2025 **Subcon Results Due:** 16-Dec-2025

Details:  David Smith, Technical Director

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Soil

Project: P25-317 Sutton Benger

Client: Rodgers Leask Environmental		Chemtest Job No.:				25-37923	25-37923	25-37923	25-37923	25-37923	25-37923	25-37923
Quotation No.: Q25-39757		Chemtest Sample ID.:				2057726	2057727	2057728	2057731	2057733	2057734	2057737
		Client Sample ID.:				ES1	ES1	ES1	ES1	ES1	ES1	ES1
		Client Reference:				TP01	TP02	TP03	TP06	TP08	TP09	TP11
		Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):				0.6	0.4	0	0.2	0.8	0.5	0.2
		Bottom Depth (m):				0.6	0.4	0.25	0.2	0.8	0.5	0.2
		Date Sampled:				20-Nov-2025	20-Nov-2025	20-Nov-2025	20-Nov-2025	20-Nov-2025	20-Nov-2025	20-Nov-2025
		Time Sampled:				12:00	12:00	12:00	12:00	12:00	12:00	12:00
		Asbestos Lab:				DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD							
ACM Type		N	2192		N/A	-	-	-	-	-	-	-
Asbestos Identification		U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture		N	2030	%	0.020	16	16	16	18	18	15	19
Soil Colour		N	2030		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2030		N/A	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots
Soil Texture		N	2030		N/A	Clay	Clay	Clay	Clay	Clay	Clay	Clay
Organophosphorous Pesticides		SN		mg/kg	0.00			See Attached				See Attached
Organochlorine Pesticides		SN		mg/kg	0.00			See Attached				See Attached
pH at 20C		M	2010		4.0	8.0	8.0	8.5	7.6	7.7	7.6	7.4
Boron (Hot Water Soluble)		M	2120	mg/kg	0.40	< 0.40	0.63	0.89	0.60	0.74	< 0.40	0.49
Cyanide (Free)		M	2300	mg/kg	0.50	2.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic		M	2455	mg/kg	0.5	22	17	9.4	9.2	11	19	16
Beryllium		U	2455	mg/kg	0.5	1.6	1.2	< 0.5	< 0.5	< 0.5	0.9	0.7
Cadmium		M	2455	mg/kg	0.10	0.47	0.35	0.23	0.28	0.24	0.14	0.29
Chromium		M	2455	mg/kg	0.5	42	34	14	14	18	29	23
Copper		M	2455	mg/kg	0.50	480	39	11	12	14	16	15
Mercury		M	2455	mg/kg	0.05	0.10	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel		M	2455	mg/kg	0.50	63	41	17	16	19	31	21
Lead		M	2455	mg/kg	0.50	110	40	20	20	23	19	28
Selenium		M	2455	mg/kg	0.25	2.0	0.99	0.38	0.39	0.55	0.64	0.73
Vanadium		U	2455	mg/kg	0.5	76	62	25	25	31	51	43
Zinc		M	2455	mg/kg	0.50	210	100	47	52	59	78	68
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Fraction of Organic Carbon		M	2625		0.0010	0.0062	0.0072	0.021	0.020	0.012	0.0035	0.014
Naphthalene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P25-317 Sutton Benger

Client: Rodgers Leask Environmental		Chemtest Job No.:				25-37923	25-37923	25-37923	25-37923	25-37923	25-37923	25-37923
<i>Quotation No.: Q25-39757</i>		Chemtest Sample ID.:				2057726	2057727	2057728	2057731	2057733	2057734	2057737
		<i>Client Sample ID.:</i>				ES1	ES1	ES1	ES1	ES1	ES1	ES1
		<i>Client Reference:</i>				TP01	TP02	TP03	TP06	TP08	TP09	TP11
		<i>Sample Type:</i>				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		<i>Top Depth (m):</i>				0.6	0.4	0	0.2	0.8	0.5	0.2
		<i>Bottom Depth (m):</i>				0.6	0.4	0.25	0.2	0.8	0.5	0.2
		<i>Date Sampled:</i>				20-Nov-2025	20-Nov-2025	20-Nov-2025	20-Nov-2025	20-Nov-2025	20-Nov-2025	20-Nov-2025
		<i>Time Sampled:</i>				12:00	12:00	12:00	12:00	12:00	12:00	12:00
		<i>Asbestos Lab:</i>				DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD							
Chrysene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's		N	2800	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total Phenols		M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P25-317 Sutton Benger

Client: Rodgers Leask Environmental		Chemtest Job No.:				25-37923	25-37923	25-37923
<i>Quotation No.: Q25-39757</i>		Chemtest Sample ID.:				2057738	2057740	2057741
		<i>Client Sample ID.:</i>				ES1	ES1	ES2
		<i>Client Reference:</i>				TP12	WS/BH02	WS/BH02
		<i>Sample Type:</i>				SOIL	SOIL	SOIL
		<i>Top Depth (m):</i>				0.5	0.2	0.5
		<i>Bottom Depth (m):</i>				0.5	0.2	0.5
		<i>Date Sampled:</i>				20-Nov-2025	20-Nov-2025	20-Nov-2025
		<i>Time Sampled:</i>				12:00	12:00	12:00
		<i>Asbestos Lab:</i>				DURHAM	DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD			
ACM Type		N	2192		N/A	-	-	-
Asbestos Identification		U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture		N	2030	%	0.020	15	16	11
Soil Colour		N	2030		N/A	Brown	Brown	Brown
Other Material		N	2030		N/A	Stones	Stones	Stones
Soil Texture		N	2030		N/A	Clay	Clay	Clay
Organophosphorous Pesticides		SN		mg/kg	0.00			
Organochlorine Pesticides		SN		mg/kg	0.00			
pH at 20C		M	2010		4.0	8.1	8.5	8.4
Boron (Hot Water Soluble)		M	2120	mg/kg	0.40	< 0.40	0.70	< 0.40
Cyanide (Free)		M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Arsenic		M	2455	mg/kg	0.5	17	26	27
Beryllium		U	2455	mg/kg	0.5	0.8	1.0	1.0
Cadmium		M	2455	mg/kg	0.10	< 0.10	0.42	0.28
Chromium		M	2455	mg/kg	0.5	26	26	24
Copper		M	2455	mg/kg	0.50	15	16	16
Mercury		M	2455	mg/kg	0.05	< 0.05	< 0.05	< 0.05
Nickel		M	2455	mg/kg	0.50	35	37	44
Lead		M	2455	mg/kg	0.50	14	35	18
Selenium		M	2455	mg/kg	0.25	0.72	1.2	0.94
Vanadium		U	2455	mg/kg	0.5	47	60	62
Zinc		M	2455	mg/kg	0.50	61	90	86
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Fraction of Organic Carbon		M	2625		0.0010	0.0011	0.013	0.018
Naphthalene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P25-317 Sutton Benger

Client: Rodgers Leask Environmental		Chemtest Job No.:				25-37923	25-37923	25-37923
<i>Quotation No.: Q25-39757</i>		Chemtest Sample ID.:				2057738	2057740	2057741
		<i>Client Sample ID.:</i>				ES1	ES1	ES2
		<i>Client Reference:</i>				TP12	WS/BH02	WS/BH02
		<i>Sample Type:</i>				SOIL	SOIL	SOIL
		<i>Top Depth (m):</i>				0.5	0.2	0.5
		<i>Bottom Depth (m):</i>				0.5	0.2	0.5
		<i>Date Sampled:</i>				20-Nov-2025	20-Nov-2025	20-Nov-2025
		<i>Time Sampled:</i>				12:00	12:00	12:00
		<i>Asbestos Lab:</i>				DURHAM	DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD			
Chrysene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's		N	2800	mg/kg	2.0	< 2.0	< 2.0	< 2.0
Total Phenols		M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2010	pH Value of Soils	pH at 20°C	pH Meter	
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES	
2192	Asbestos Quantification in Soils Sediments Ballast & Aggregate Crushed Concrete & Demolition Rubble	Asbestos	Polarised light microscopy / Gravimetry	
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.	
2455	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.	
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazine.	
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.	

Report Information

Key	
U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Text example All items indicated in italic font represent customer-supplied information that may not be independently verified by the laboratory

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Any comments or interpretations are outside the scope of UKAS accreditation.

The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.

Uncertainty of measurement for the determinands tested are available upon request .

None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

All Asbestos testing is performed at the indicated laboratory .

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

Where analysis is performed on a dried and crushed sample, it has been prepared by crushing all of the sample. If material has been removed prior to crushing, or by request of the client, this will be stated on the report.

NEW_ASB Eurofins Chemtest Limited, 11 Depot Road, Newmarket, CB8 0AL

DURHAM Eurofins Chemtest Limited, Unit A North Wing, Prospect Business Park, Crookhall Lane, Consett, Co Durham, DH8 7PW

Sample Deviation Codes

As a result of any of the below deviations applying, the test results may be unreliable

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - The required amount of sample for analysis was not received
- H - Appropriate cooling measures were not taken for sample transportation

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.

All water samples will be retained for 14 days from the date of receipt.

Charges may apply to extended sample storage.

Report Information

Water Sample Category Key for Accreditation

DW - Drinking Water (Non-Regulatory)
GW - Ground Water
LE - Land Leachate
NA - Not Applicable
PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

Asbestos Tests LOD = LOQ

Limit of Detection = Limit of Quantification for asbestos results only

If you require extended retention of samples, please email your requirements to:
cs@etuki.eurofins.com

Eurofins Chemtest Ltd
CS Chemtest
11 Depot Road
NEWMARKET
United Kingdom

Certificate of analysis

Date: 10/12/2025

Please find enclosed the analytical results of the test carried out for the project.

Certificate number/Version	AR-421-2025-130134-01
Your project number	30395
Your project name	25-37923
Your order number	421-2025-130134
Project Quotation Name	-
Samples received on	01/12/2025
Your Sample taker	-
Start date	05/12/2025
This is last Test P Validation Ending Time	10/12/2025
Report date	10/12/2025
Appendices	A

Recognition Information:

AC: NEN EN ISO/IEC 17025: 2017, RvA L010

Additional information about the applied methods as well as the classification of the accuracy, are listed in our most recent and valid supplement: "Specification of methods of analyses".

This Certificate of Analysis shall not be reproduced except in full, without written approval of the laboratory. Interpretations and opinions are outside the scope of our accreditation, and all results relate only to samples supplied.

We are confident that we have performed the order in accordance with your expectations. If you have any remaining questions concerning this Certificate of Analysis, please don't hesitate to contact our Customer Support.

Yours sincerely,

Eurofins Analytico (Barneveld)


Ing. A. Veldhuizen
Technical Manager

Parameter Name	Unit	1	2
Characteristics			
<i>NEN-EN 15934</i>			
AC Dry matter	% w/w	80.9	81.2

Organic Chlorinated Pesticides			
<i>NEN 6980</i>			
AC Hexachlorobenzene	mg/kg dm	< 0.0010	< 0.0010
AC alpha-HCH	mg/kg dm	< 0.0010	< 0.0010
AC beta-HCH	mg/kg dm	< 0.0010	< 0.0010
AC gamma-HCH	mg/kg dm	< 0.0010	< 0.0010
AC delta-HCH	mg/kg dm	< 0.0010	< 0.0010
AC Aldrin	mg/kg dm	< 0.0010	< 0.0010
AC Dieldrin	mg/kg dm	< 0.0010	< 0.0010
AC Endrin	mg/kg dm	< 0.0010	< 0.0010
AC o,p'-DDT	mg/kg dm	< 0.0010	< 0.0010
AC p,p'-DDT	mg/kg dm	< 0.0010	< 0.0010
AC o,p'-DDE	mg/kg dm	< 0.0010	< 0.0010
AC p,p'-DDE	mg/kg dm	< 0.0010	< 0.0010
AC o,p'-DDD	mg/kg dm	< 0.0010	< 0.0010
AC p,p'-DDD	mg/kg dm	< 0.0010	< 0.0010
AC Heptachloor	mg/kg dm	< 0.0010	< 0.0010
AC alpha-Endosulfan	mg/kg dm	< 0.0010	< 0.0010
AC Endosulfansulfate	mg/kg dm	< 0.0020	< 0.0020
AC Heptachloorepoxide(cis- or A)	mg/kg dm	< 0.0010	< 0.0010
AC Heptachloorepoxide(trans- or B)	mg/kg dm	< 0.0010	< 0.0010
AC Telodrin	mg/kg dm	< 0.0010	< 0.0010
AC Isodrin	mg/kg dm	< 0.0010	< 0.0010
AC alpha-Chlordane	mg/kg dm	< 0.0010	< 0.0010
AC gamma-Chlorodane	mg/kg dm	< 0.0010	< 0.0010
AC Hexachlorobutadiene	mg/kg dm	< 0.0010	< 0.0010
AC Endosulfan, beta-	mg/kg dm	< 0.001	< 0.001
AC Chlorodane	mg/kg dm	< 0.002	< 0.002
AC DDD ,DDE, DDT	mg/kg dm	< 0.006	< 0.006
AC Drins (sum)	mg/kg dm	< 0.00	< 0.00
AC Sum 4 HCH-compounds	mg/kg dm	< 0.004	< 0.004
AC Heptachlor epoxide	mg/kg dm	< 0.002	< 0.002

No.	Customer Reference	Sample matrix	Your sampling date	Sample Code
1	2057728	Soil	05/12/2025	421-2025-00395225
2	2057737	Soil	05/12/2025	421-2025-00395226

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Eurofins Analytico BV

KvK/CoC No. 09088623

Gildeweg 42-46
3771 NB Barneveld
Netherlands

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BNP Paribas S.A. Netherlands
IBAN NL71BNPA0227924525
BIC/SWIFT-Code BNPANL2A
VAT Number: NL804314883B01

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Parameter Name	Unit	1	2
Organic Chlorinated Pesticides			
<i>NEN 6980</i>			
AC OCB (som) WB (factor 0,7)	mg/kg dm	< 0.024	< 0.024
AC ocb sum	mg/kg dm	< 0.021	< 0.021
ONP/OPP			
<i>Internal Method</i>			
AC Azinphos-ethyl	mg/kg dm	< 0.005	< 0.005
AC Azinphos-methyl	mg/kg dm	< 0.005	< 0.005
AC Bromophos-ethyl	mg/kg dm	< 0.02	< 0.02
AC Bromophos-methyl	mg/kg dm	< 0.02	< 0.02
AC Chlorpyrifos (-ethyl)	mg/kg dm	< 0.01	< 0.01
AC Chlorpyrifos-methyl	mg/kg dm	< 0.01	< 0.01
AC Coumaphos	mg/kg dm	< 0.005	< 0.005
AC Demeton-S/demeton-O-ethyl	mg/kg dm	< 0.02	< 0.02
AC Diazinon	mg/kg dm	< 0.005	< 0.005
AC Disulfoton	mg/kg dm	< 0.02	< 0.02
AC Fenitrothion	mg/kg dm	< 0.005	< 0.005
AC Fenthion	mg/kg dm	< 0.002	< 0.002
AC Malathion	mg/kg dm	< 0.005	< 0.005
AC Parathion	mg/kg dm	< 0.005	< 0.005
AC Parathion-methyl	mg/kg dm	< 0.01	< 0.01
AC Pyrazophos	mg/kg dm	< 0.005	< 0.005
AC Triazophos	mg/kg dm	< 0.02	< 0.02

No.	Customer Reference	Sample matrix	Your sampling date	Sample Code
1	2057728	Soil	05/12/2025	421-2025-00395225
2	2057737	Soil	05/12/2025	421-2025-00395226

Released by: NFZI

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3771 NB Barneveld
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IBAN NL71BNPA0227924525
BIC/SWIFT-Code BNPANL2A
VAT Number: NL804314883B01

AR-421-2025-130134-01
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Appendix (A): concerning subsample information referring to certificate of analysis AR-421-2025-130134-01

Container Code	Drill nr	Depth From	Depth To	Your sampling date
Sample Code	421-2025-00395225	Customer Reference	2057728	
0904847469				05/12/2025
Sample Code	421-2025-00395226	Customer Reference	2057737	
0904847470				05/12/2025

Appendix G:

Geotechnical Test Results



LABORATORY REPORT



Contract Number: PSL25/9235

Report Date: 02 March 2026

Client's Reference: P25-317

Client Name: Rodgers Leask
St James House
St Mary's Wharf
Mansfield Road
Derby
DE1 3TQ

For the attention of: Chris Browning

Contract Title: High Street, Sutton Benger

Date Received: 27/11/2025

Date Commenced: 27/11/2025

Date Completed: 09/01/2026

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins
(Managing Director)

R Berriman
(Associate Director)

S Royle
(Laboratory Manager)

L Knight
(Assistant Laboratory Manager)


D Nicholson
(Senior Technician)

T Watkins
(Senior Technician)

5 – 7 Hexthorpe Road,
Hexthorpe,
Doncaster,
DN4 0AR
Tel: 01302 768098
Email: rberriman@prosoils.co.uk
awatkins@prosoils.co.uk

Page 1 of

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP2	1	D	0.40		Brown slightly sandy slightly gravelly CLAY.
TP3	2	D	0.25	0.60	Brown sandy gravelly CLAY.
TP4	1	D	0.40		Brown slightly sandy CLAY.
TP4	2	D	1.20		Brown slightly sandy slightly gravelly CLAY.
TP5	1	D	1.80		Brown slightly clayey very sandy GRAVEL.
TP6	1	D	0.30		Brown sandy CLAY.
TP7	1	D	0.70		Brown sandy CLAY.
TP7	2	D	1.00		Brown sandy CLAY.
TP12	2	D	0.20		Brown slightly sandy CLAY.
TP12	3	D	3.00		Brown slightly sandy gravelly CLAY.
TP2	1	B	1.00		Brown silty very sandy GRAVEL.
SA1	1	B	0.50	1.00	Brown clayey very sandy GRAVEL.
TP3	1	B	2.00		Brown clayey sandy GRAVEL.
TP9	1	B	3.00		Brown clayey very sandy GRAVEL.
TP7	1	B	2.50		Brown slightly sandy CLAY.



High Street, Sutton Benger

Contract No:

PSL25/9235

Client Ref:

P25-317

Analytical Test Report	L25/13627/PSL/25-95587	Tested on Behalf of
Clients Project Reference	PSL25/9235 High Street, Sutton Benger	Professional Soils Laboratory
Clients Order Number	PSL25/9235	5/7 Hexthorpe Road
Sample(s) Analysed	5	Hexthorpe
Sample(s) received / instructed	15/12/2025 / 15/12/2025	Doncaster
Sample(s) Tested	15/12/2025 to 24/12/2025	
Report issued	24/12/2025	DN4 0AR
Report issue number	1	

Signed



David Ratcliffe
Director of Analytical Services

Notes:

General

This report shall not be reproduce except in full

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples were supplied by customer, results apply to the samples as received.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30°C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Stone Content was determined in accordance with CTS method statement MS - CL - Sample Prep and refers to the percentage of stones retained on a 10mm BS test sieve.

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

U = UKAS Accreditation, M = MCERTS Accreditation, N = Unaccredited, SC = Subcontracted

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377 - Part 2 : 2022 in accordance with BS EN ISO 17892 (as below)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Linear Shrinkage	Particle Density Mg/m ³	Liquid Limit %	Plastic Limit %	Plasticity Index %	Passing 0.425mm %	Remarks
TP2	1	D	0.40		18.9			38	18	20	97	Medium Plasticity CIM
TP3	2	D	0.25	0.60	13.7			30	15	15	45	Low Plasticity CIL
TP4	1	D	0.40		19.9			38	18	20	100	Medium Plasticity CIM
TP4	2	D	1.20		37.8			44	21	23	98	Medium Plasticity CIM
TP5	1	D	1.80		11.1				NP			
TP6	1	D	0.30		18.8			28	15	13	100	Low Plasticity CIL
TP7	1	D	0.70		20.1			32	16	16	100	Low Plasticity CIL
TP7	2	D	1.00		23.5			28	14	14	100	Low Plasticity CIL
TP12	2	D	0.20		28.4			49	20	29	100	Medium Plasticity CIM
TP12	3	D	3.00		16.0			42	20	22	65	Medium Plasticity CIM

Water Content - BS 1377 - Part 2 : 2022 : Clause 4 in accordance with BS EN ISO 17892 - 1 : 2014 + A1 : 2022

Linear Shrinkage - BS 1377 - Part 2 : 2022 : Clause 7

Particle Density (Gas Jar method) - BS 1377 - Part 2 : 2022 : Clause 9

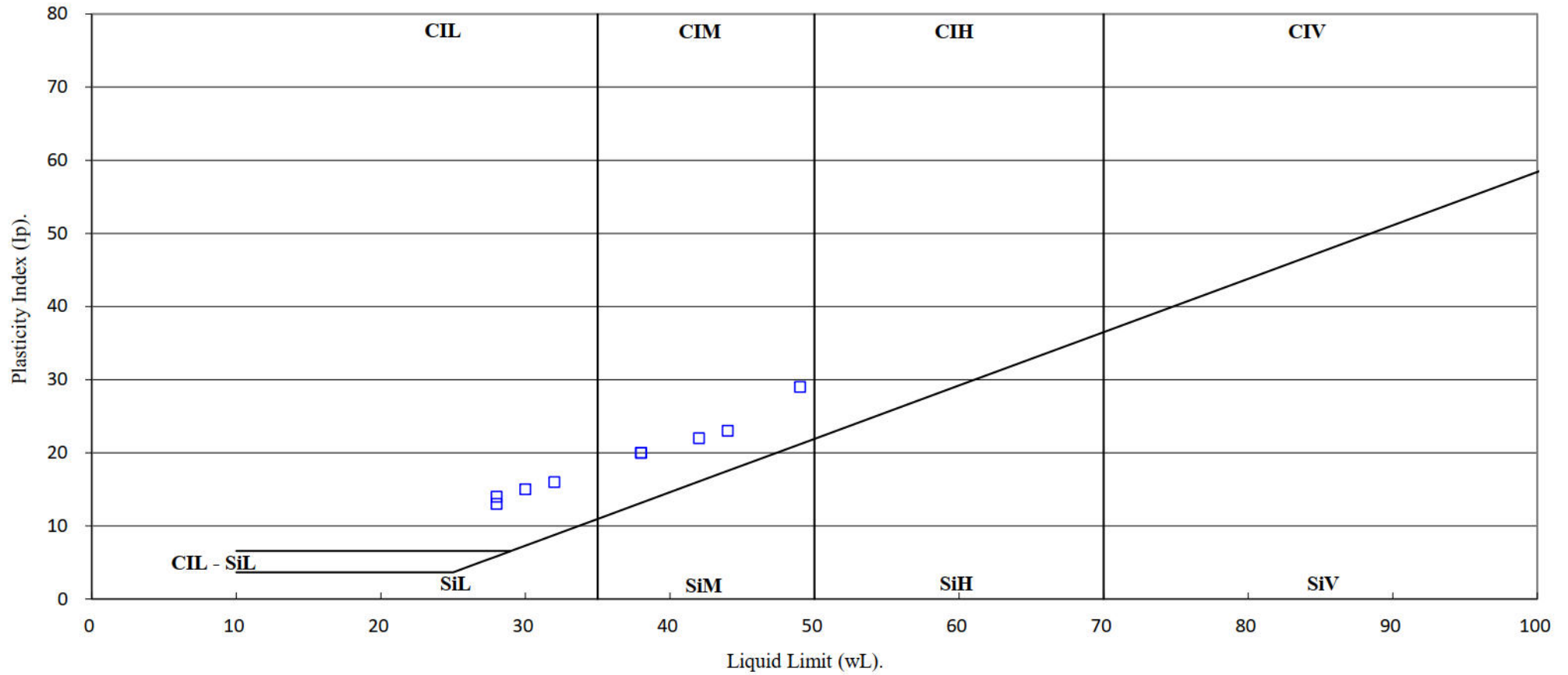
Liquid, Plastic Limit & Plasticity Index - BS 1377 - Part 2 : 2022 : Clause 5 & 6 in accordance with BS EN ISO 17892 - 12 : 2018 + A2 : 2022

SYMBOLS : NP = Non Plastic

 	High Street, Sutton Benger	Contract No:
		PSL25/9235
		Client Ref:
		P25-317

PLASTICITY CHART

BS EN ISO 14688-2:2017 Clause 4.4



High Street, Sutton Benger

Contract No:

PSL25/9235

Client Ref:

P25-317

PARTICLE SIZE DISTRIBUTION TEST

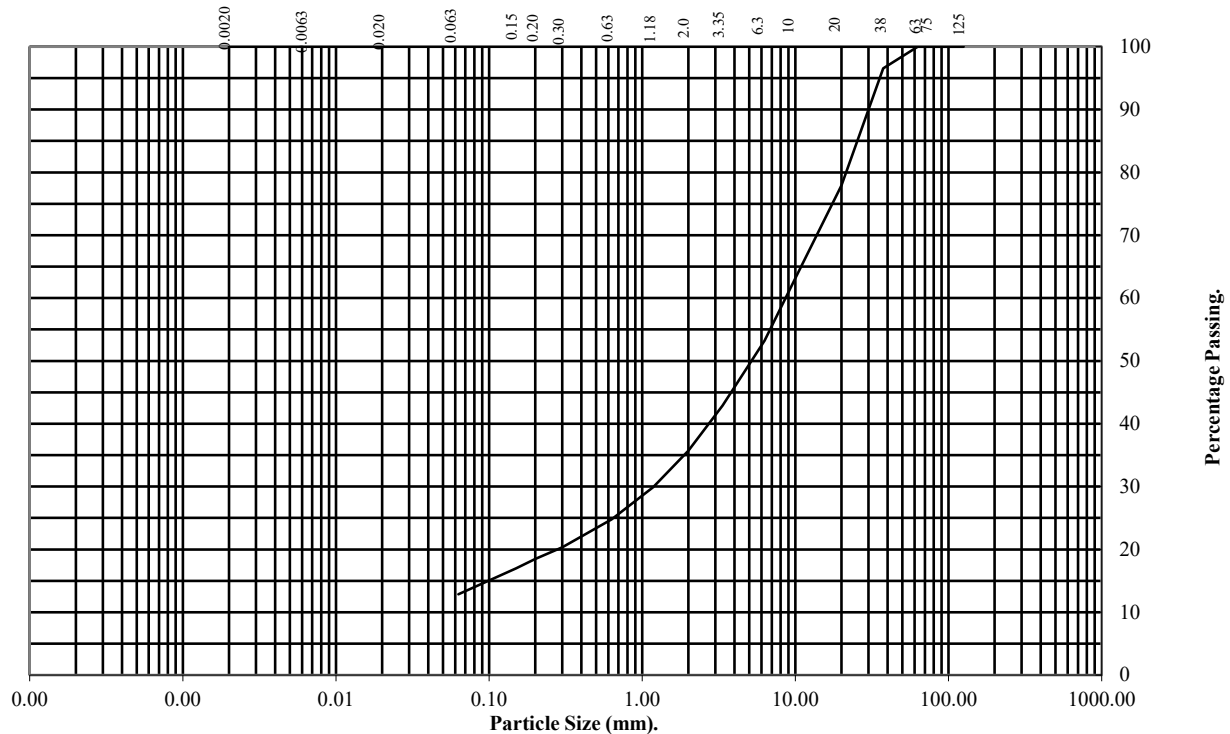
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number: SA1 Top Depth (m): 0.50

Sample Number: 1 Base Depth (m): 1.00

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	97
20	78
10	63
6.3	53
3.35	43
2	36
1.18	30
0.63	25
0.3	20
0.2	18
0.15	17
0.063	13

Soil Fraction	Total Percentage
Cobbles	0
Gravel	64
Sand	23
Silt/Clay	13

Remarks:

See Summary of Soil Descriptions



High Street, Sutton Benger

Contract No:
PSL25/9235
Client Ref:
P25-317

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

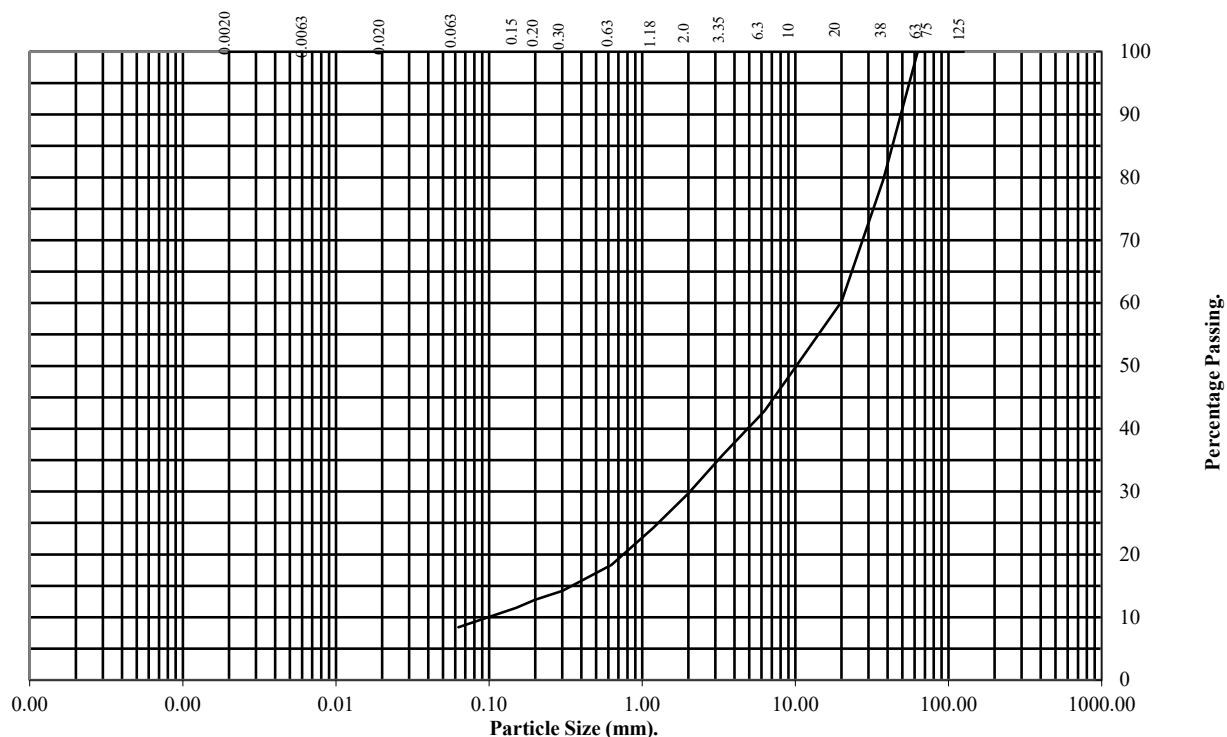
Hole Number: TP2

Top Depth (m): 1.00

Sample Number: 1

Base Depth (m):

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	80
20	60
10	50
6.3	43
3.35	36
2	30
1.18	24
0.63	18
0.3	14
0.2	13
0.15	11
0.063	8

Soil Fraction	Total Percentage
Cobbles	0
Gravel	70
Sand	22
Silt/Clay	8

Remarks:

See Summary of Soil Descriptions



High Street, Sutton Benger

Contract No:

PSL25/9235

Client Ref:

P25-317

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

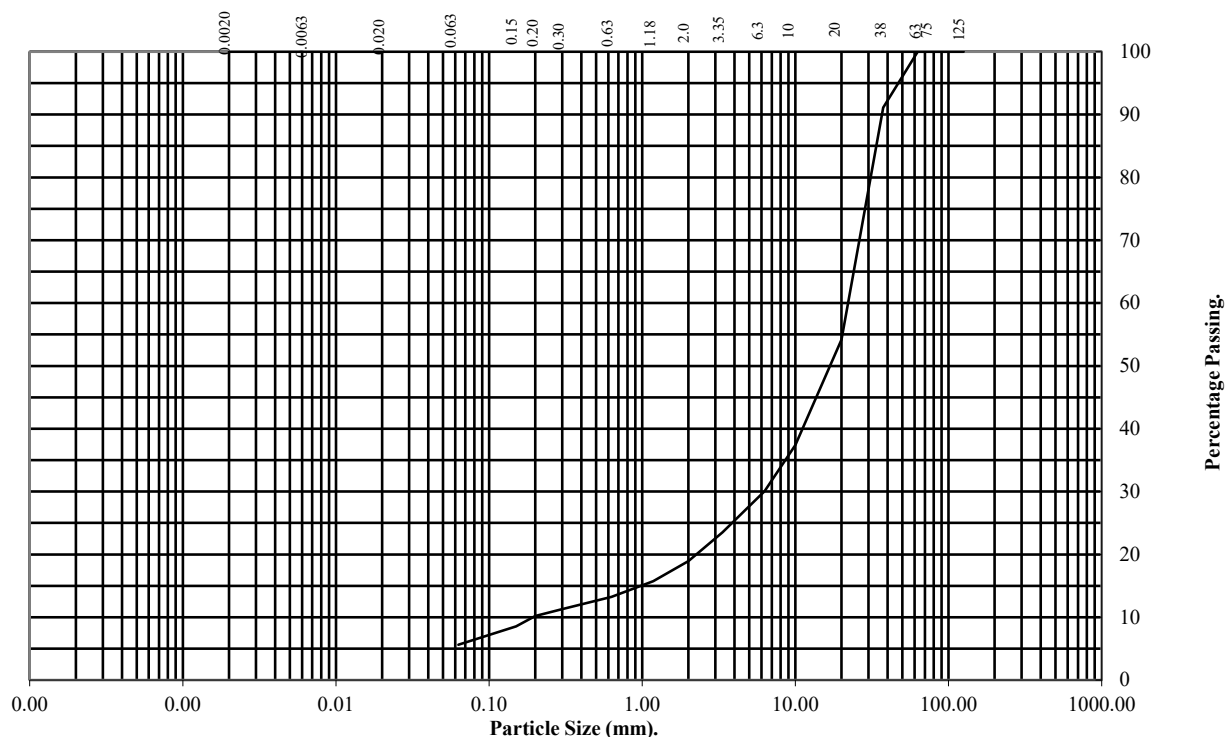
Hole Number: TP3

Top Depth (m): 2.00

Sample Number: 1

Base Depth (m):

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	91
20	54
10	37
6.3	30
3.35	24
2	19
1.18	16
0.63	13
0.3	11
0.2	10
0.15	9
0.063	6

Soil Fraction	Total Percentage
Cobbles	0
Gravel	81
Sand	13
Silt/Clay	6

Remarks:

See Summary of Soil Descriptions



High Street, Sutton Benger

Contract No:

PSL25/9235

Client Ref:

P25-317

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

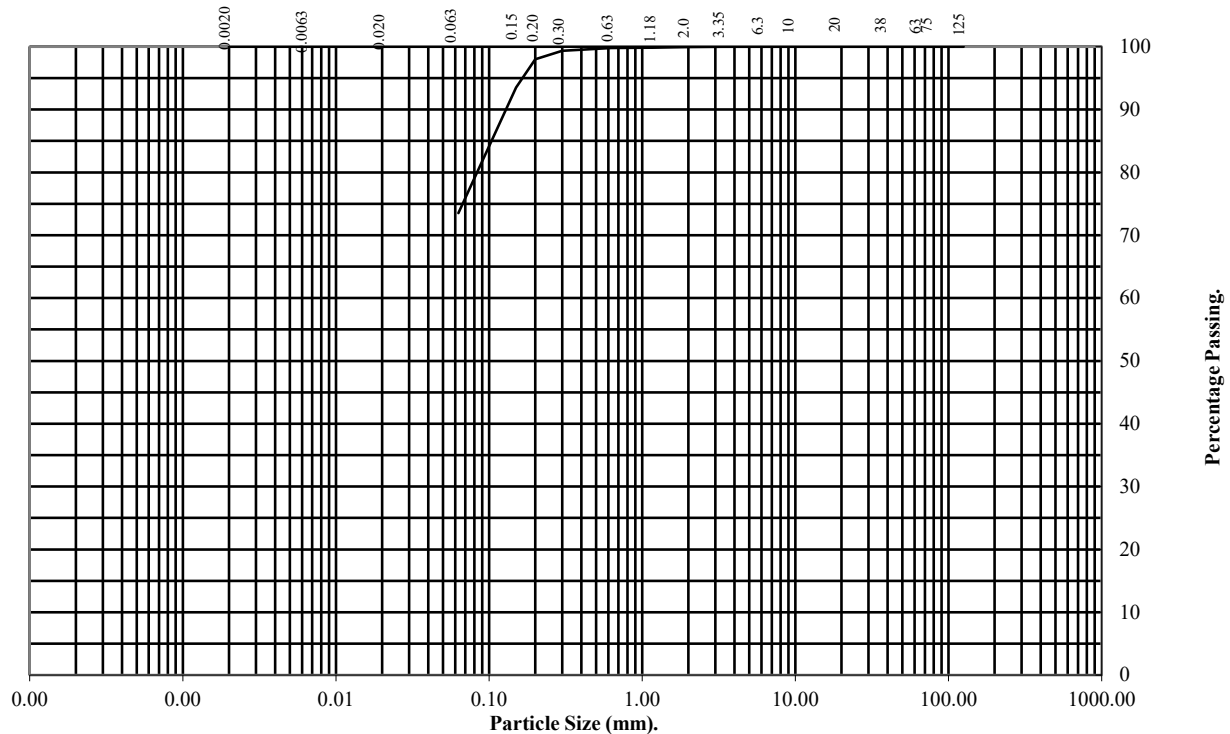
Hole Number: TP7

Top Depth (m): 2.50

Sample Number: 1

Base Depth (m):

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2	100
1.18	100
0.63	100
0.3	99
0.2	98
0.15	94
0.063	74

Soil Fraction	Total Percentage
Cobbles	0
Gravel	0
Sand	26
Silt/Clay	74

Remarks:

See Summary of Soil Descriptions



High Street, Sutton Benger

Contract No:
PSL25/9235
Client Ref:
P25-317

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

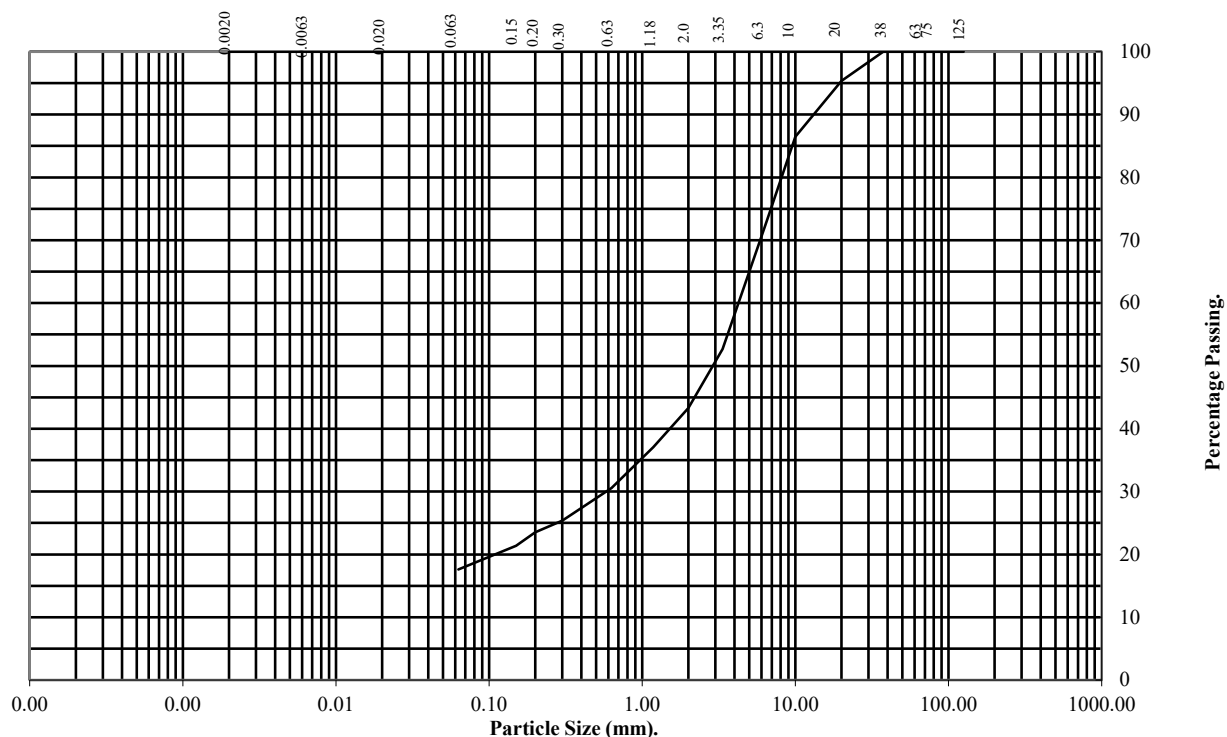
Hole Number: TP9

Top Depth (m): 3.00

Sample Number: 1

Base Depth (m):

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	95
10	86
6.3	72
3.35	53
2	43
1.18	37
0.63	31
0.3	25
0.2	24
0.15	21
0.063	18

Soil Fraction	Total Percentage
Cobbles	0
Gravel	57
Sand	25
Silt/Clay	18

Remarks:

See Summary of Soil Descriptions



High Street, Sutton Benger

Contract No:

PSL25/9235

Client Ref:

P25-317

L25/13627/PSL/25-95587

PSL25/9235 High Street, Sutton Benger

Analytical Test Results - ENV Analysis Soils

Lab Reference				665760	665761	665762	665763
Client Sample ID				-	-	-	-
Client Sample Location				TP1	TP3	TP8	TP9
Client Sample Type				D	D	D	D
Client Sample Number				D1	D1	D1	D2
Depth - Top (m)				0.15	0.25	2	2
Depth - Bottom (m)				0.15	0.6	2	2
Date of Sampling				-	-	-	-
Time of Sampling				-	-	-	-
Sample Matrix				Clay	Clay	Clay	Clay
Determinant	Units	LOD	Accreditation				
pH	pH units	1	M	7.5	8.3	8.2	8.3
Water Soluble Sulphate (as SO4)	mg/L	10	N	< 10	21	72	< 10
Nitrate as NO3	mg/L	1	N	10	7.4	1.2	< 1.0
Chloride	mg/L	0.1	N	2.0	2.8	2.2	0.5
Total Sulphur Content (as S)	%	0.01	U	0.04	0.04	0.04	0.02
Ammonium (NH4)	mg/L	1	N	1.3	4.2	1.3	1.3
Acid Soluble Sulphate	%	0.01	N	0.05	0.08	0.08	0.06
Magnesium	mg/L	1.5	N	1.8	< 1.5	< 1.5	< 1.5

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PSL25/9235 High Street, Sutton Benger

Analytical Test Results - ENV Analysis Soils

Lab Reference	665764
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Client Sample ID	-
Client Sample Location	TP10
Client Sample Type	D
Client Sample Number	D1
Depth - Top (m)	1.2
Depth - Bottom (m)	1.2
Date of Sampling	-
Time of Sampling	-
Sample Matrix	Clay

Determinant	Units	LOD	Accreditation	
pH	pH units	1	M	8.2
Water Soluble Sulphate (as SO ₄)	mg/L	10	N	22
Nitrate as NO ₃	mg/L	1	N	< 1.0
Chloride	mg/L	0.1	N	2.8
Total Sulphur Content (as S)	%	0.01	U	0.02
Ammonium (NH ₄)	mg/L	1	N	1.3
Acid Soluble Sulphate	%	0.01	N	0.04
Magnesium	mg/L	1.5	N	< 1.5

L25/13627/PSL/25-95587

PSL25/9235 High Street, Sutton Benger

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
665760	-	TP1	SOIL	-	Brown slightly sandy silty clay	-	-	100
665761	-	TP3	SOIL	-	Brown slightly sandy slightly gravelly silty clay	-	-	86
665762	-	TP8	SOIL	-	Brown silty slightly gravelly sandy clay	-	-	59
665763	-	TP9	SOIL	-	Brown silty clay	-	-	100
665764	-	TP10	SOIL	-	Brown silty clay	-	-	100

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PSL25/9235 High Street, Sutton Benger

Analysis Methodologies - Please refer to sample comments page (if present) for any changes to methods Methods

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Details
1377MGICP	BS1377 WS Magnesium (ICP)	Oven dried	Passing 2mm test sieve	Water Soluble Magnesium testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 10.
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis

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Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided

W - No time of sampling provided

C - Received in inappropriate container

H - Contains headspace

T - Temperature on receipt exceeds storage temperature

R - Sample(s) received with less than 2 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
665760		TP1				A
665761		TP3				A
665762		TP8				A
665763		TP9				A
665764		TP10				A



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