



Ground Investigation Report

at

**New Care Home, Providence Hill, Bursledon,
Southampton, Hampshire SO31 8AP**

for

Colten Care Limited

**Reference: 22051/GIR Rev1.02
December 2025**

Control Document

Project

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This is not a valid document for use in the design of the project unless it is titled Final in the document status box.

Current regulations and good practice were used in the preparation of this report. The recommendations given in this report must be reviewed by an appropriately qualified person at the time of preparation of the scheme design to ensure that any recommendations given remain valid in light of changes in regulation and practice, or additional information obtained regarding the site.



Commission

This document comprises the Ground Investigation Report (GIR) and incorporates the results, discussion, and conclusions to this intrusive works. General site data is recorded below:

Commission Record	
Client	Colten Care Limited
Site Name	New Care Home, Providence Hill, Bursledon, Southampton, Hampshire SO31 8AP
Grid Reference	SU 48276 10649
Soils Limited Quotation Ref	Q30182rev2, dated 23 rd July 2025
Clients Purchase Order	Q30182rev2 Order Form, signed 23 rd July 2025

The record of revision to this document is presented below:

Record Of Revisions		
Revision	Date	Reason
1.0	October 2025	First issue to Client.
1.01	November 2025	To include retaining wall design parameters and gas monitoring results.
1.02	December 2025	To include sampling regime rationale for contamination analysis.

Note(s): The latest revised document supersedes all previous revisions of the GIR produced by Soils Limited.

Documents associated with this development that must be referred to are given below.

Record Of Associated Documents				
Reference	Type	Date	Creator	
70122557-PRA-R04	Preliminary Risk Assessment	Apr 25	WSP	
6185-WLA-ZZ-XX-DR-A-0050	Site Sections 1	Mar 25	WLAWilliamsLester	
6185-WLA-ZZ-XX-DR-A-0051	Site Sections 2			
6185-WLA-ZZ-XX-DR-A-0010	Updated Proposed Site Plan	June 25		
6185-WLA-ZZ-XX-DR-A-0005	Location and Block Plan	Undated		
10880 / 01/ B	Topographic Survey	Dec 23	P Stubbington Land Surveys	
2499-TF-XX-00-DR-L-1002	Landscape General Arrangement 1	Mar 24	Terraforma Landscape Architects	
2499-TF-XX-00-DR-L-1003	Landscape General Arrangement 2			
197.5004-0002 P06	Proposed Drainage Strategy Layout	Mar 24	Paul Basham Associates	
25397-GAP-XX-XX-DR-S 1000 to 1003	Retaining Wall Plan, Sections & Elevations	Nov 25	Godsell Arnold Partnership Ltd	

Limitations and Disclaimers

The report was prepared solely for the brief described in our quotation and Section 1.1 of this report. We disclaim any responsibility to the Client and others in respect of any matters outside the scope of our engagement.

We have exercised all reasonable skill, care and diligence within the terms of the Contract with the Client, incorporation of our General Conditions of Contract of Business and taking into account the resources devoted to us by agreement with the Client.

This report is a snapshot of the site and conditions taken only at the time of our investigation works and described in our reporting. The ground is a product of continuing natural and artificial processes, and has variation by depth and location that cannot be determined absolutely. While a ground investigation will aim to understand and mitigate, risk cannot be eliminated.

Current regulations and good practice were used in the preparation of this report. Consideration of any subsequent changes to regulations or practice that may have occurred following issue of this report is the responsibility of the user.

If the term “competent person” is used in this report or any Soils Limited document, it means an engineering geologist or civil engineer with a minimum of three years post graduate experience in the understanding and application of the appropriate codes of practice.

Unless the site investigation works have been designed and specified in accordance with EC7, this report is not a Ground Investigation Report as defined by Eurocode 7.

Any reference to ground level relates to the site level at the time of the investigation, unless otherwise stated. Ground elevations and coordinates are only provided when this forms part of our engagement.

A survey of the possible presence or absence of invasive species including Japanese Knotweed is outside the scope of this investigation.

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License for and reliance on this report is only valid once we have been paid in full for this engagement. In the event of non-payment, we reserve the right to notify parties other than the client of failure to pay and our cancellation of license and reliance.

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Section I Introduction

I.1 Objective of Investigation

The Client commissioned Soils Limited to undertake an intrusive ground investigation and to prepare a Ground Investigation Report to supply the Client and their designers with information regarding ground conditions, to assist in preparing a foundation scheme for development that was appropriate to the settings present on the site.

The investigation was to be undertaken to provide comment on appropriate foundation options for the proposed development. The investigation was to be made by means of in-situ testing and geotechnical laboratory testing undertaken on soil samples taken from the exploratory holes.

No Preliminary Investigation Report was undertaken by Soils Limited for the site. To assist in delineating the scope of works outlined above, reference was also made to the Preliminary Risk Assessment Report, ref: 70122557-PRA-R04, by WSP, dated April 2025, which was supplied to Soils Limited by the Client, on which reliance has been assumed.

Following liaison and agreement with the Client and as recommended in the above report (ref: 70122557-PRA-R04), soil samples were to be taken for chemical laboratory testing for a range of typical brownfield contaminants, to aid safe redevelopment and the protection of vulnerable receptors, as dictated by the Conceptual Site Model (CSM) in the Preliminary Risk Assessment Report (ref: 70122557-PRA-R04, by WSP, April 2025) and/or the Revised Conceptual Site Model presented in Appendix E.1.

In addition, and following instructions from the Client, one (1No.) additional soil sample was taken for Waste Acceptance Criteria (WAC) analysis to give an indication for the classification of soil material for off-site disposal.

I.2 Site Description

The site comprised an approximately 2.75-acre plot of land, roughly triangular in shape. At the time of the intrusive investigation (August–September 2025), the area had been cleared of its previously dense vegetation and was predominantly covered in topsoil, interspersed with occasional patches of weeds, nettles, brambles, and sparse low-level shrubbery.

The site boundaries were densely vegetated with large mature trees and substantial shrubbery. Prior to clearance works undertaken in July to August 2025, the north-western part of the site was similarly covered with dense vegetation including mature trees.

The surrounding area was predominantly residential, with housing located to the south and to the north across the A27 and Goslings Turning, respectively. Immediately to the west, the site was bordered by residential properties with gardens, commercial premises, and a small woodland area.

The general area exhibited a moderate slope of approximately 5°, from the NW to the SE. Notably, the central portion of the site featured a steeper slope of around 11°, descending from 49.27m AOD in the south-west to 36.73m AOD in the north-east (Topographic Survey by P Stubbington Land Surveys, dated December 2023).

The site location plan is given in Figure 1. An aerial photograph of the site and its close environs has been included in Figure 2.

1.3 Proposed Development

The proposed development comprised a four-storey (lower and upper ground floor, first and second floor) 68no. bed care home, located in the eastern portion of the site, along with three close-care residential cottages situated to the west. A sunken courtyard was proposed at the lower ground floor level in the southeastern section of the care home building. The proposed courtyard was to be terraced into the existing slope, estimated to extend at a depth of approximately 2.90m below existing ground level to the north-east (north-east side is circa 2.90m lower than the south-west side of the proposed courtyard).

The scheme also included the construction of a new vehicular access road and three parking areas positioned centrally within the site at varying elevations, supported by precast panel retaining wall structures and pedestrian access paths close to the perimeter of the care home building and to the south-east corner.

The proposed plans incorporated areas of communal soft landscaping including a woodland garden to the east of the care home. It was understood that the proposed development did not include provisions for private gardens; however, the proposed cottages to the west may potentially incorporate them.

In compiling this report reliance was placed on drawings outlined in the Record of Associated Documents. The recommendations provided within this report are made exclusively in relation to the scheme outlined above and must not be applied to any other scheme without further consultation with Soils Limited. Soils Limited must be notified about any change or deviation from the scheme outlined.

Development plans provided by the Client are presented in Appendix G.

1.4 Anticipated Geology

The 1:50,000 BGS map showed the site to be located directly upon the bedrock Wittering Formation with no superficial deposits overlying.

1.4.1 Wittering Formation

The Wittering Formation comprises greyish brown laminated clay; wavy- to lenticular-bedded sand interbedded with clay in equal proportions; and fine- to medium-grained sparsely glauconitic sand.

Section 2 Site Works

2.1 Proposed Project Works

The proposed intrusive investigation was designed to provide information on the ground conditions and to aid the design of foundations for the proposed commercial mixed residential development. The intended investigation, as outlined within the Soils Limited quotation (Q30182rev2, dated 23rd July 2025), was to comprise the following items, as specified by the Client:

- Underground service checking of proposed test hole locations via CAT and Genny (signal generator)
- 2No. (up to) 20.00m deep cable percussive boreholes to inform piling design
- 8No. (up to) 4.00m deep windowless sampler boreholes
- 8No. (up to) 6.00m deep super heavy dynamic probes (DPSH-B)
- 6No. plate load tests for CBR testing
- 3No. infiltration tests in general accordance with BRE365
- 3No. monitoring wells in windowless sampler borehole locations
- 3No. return gas and groundwater monitoring visits
- Geotechnical laboratory testing
- Contamination laboratory analysis including WAC testing

2.1.1 Actual Project Works

The actual project works were undertaken between the 11th and 14th August and 17th to 19th September 2025, with subsequent sample logging, laboratory testing, monitoring, and reporting. The actual works comprised:

- Underground service checking of test hole locations via CAT and Genny
- 2No. 20.00m deep cable percussive boreholes (BH1 and BH2)
- 6No. 4.00m deep windowless sampler boreholes (WS1 to WS6)
- 6No. 6.00m deep super heavy dynamic probes (DPSH-B) (DP1 to DP6)
- 5No. plate load tests to depths of 0.30 to 0.60m bgl, to obtain CBR results
- 3No. trial pit infiltration test locations (TPSK1 to TPSK3) in general accordance with BRE365
- 3No. 4.00m deep standpipes installed in windowless sampler boreholes for groundwater and gas monitoring
- 3No. post-site works gas and groundwater monitoring visits
- Geotechnical laboratory testing
- Contamination laboratory analysis including 2No. WAC tests

The exploratory hole locations indicated by the Client on the plan provided to Soils Limited prior to commencement of site works were fewer in number than those originally specified in the quotation.

Three exploratory holes (WS1, WS4 and WS6) were backfilled with gravel and bentonite following the installation of a monitoring well to 4.00m bgl. The remaining three windowless sampler boreholes (WS2, WS3 and WS5) were backfilled with gravel upon completion. Details of the monitoring wells are provided on the logs included in Appendix B.1.

The trial pits (TPSK1 to TPSK3) and cable percussive boreholes (BH1 and BH2) were backfilled with arisings upon completion (and upon completion of the infiltration testing in TPSK1 to TPSK3) and mounded over to allow future settlement.

Following completion of site works, soil cores were logged and sub-sampled so that samples could be sent to the laboratory for both contamination and geotechnical testing.

2.2 Ground Conditions

On 11th August 2025, three (3no.) windowless sampler boreholes (WS1 to WS3) were drilled, using a Premier drilling rig, to a depth of 4.00m below ground level (bgl).

A standpipe was installed within WS1 to allow for continued monitoring of both groundwater and gas.

Three (3no.) super heavy dynamic probes, (DP1 to DP3) were driven prior and adjacent to their corresponding windowless sampler borehole to a depth of 6.00m bgl.

Between 11th and 14th August 2025, two (2no.) cable percussive boreholes (BH1 and BH2) were drilled, using a Dando 2000 drilling rig, to a depth of 20.00m bgl.

On 17th September 2025, three (3no.) trial pits (TPSK1 to TPSK3) were machine excavated, using a JCB 3CX, to depths ranging between 3.00 and 3.10m bgl. Infiltration testing was undertaken within the trial pits, as requested by the Client, in general accordance with BRE365, the results of which are presented in Section 3.3.

On 19th September 2025, the remaining three (3No.) windowless sampler boreholes (WS4 to WS6) were drilled, using a Premier drilling rig, to a depth of 4.00m bgl.

A standpipe was installed within the locations of WS4 and WS6 to allow for continued monitoring of both groundwater and gas.

Three (3no.) super heavy dynamic probes, (DP3 to DP6) were driven prior and adjacent to their corresponding windowless sampler borehole to a depth of 6.00m bgl.

All exploratory hole locations were provided by the Client on a plan provided to Soils Limited prior to the site works.

It must be noted that the exploratory holes were carried out at varying elevations, ranging from approximately 35.00m AOD (BH1) to 44.00m AOD (TPSK3).

The maximum depths of exploratory holes have been included in Table 2.1.

Table 2.1 Final Depth of Exploratory Holes

Exploratory Hole	Depth (m bgl)	Probe Hole	Depth (m bgl)
WS1 ^w	4.00	DPI	6.00
WS2	4.00	DP2	6.00
WS3	4.00	DP3	6.00
WS4 ^w	4.00	DP4	6.00
WS5	4.00	DP5	6.00
WS6 ^w	4.00	DP6	6.00
BH1	20.00		
BH2	20.00		
TPSK1	3.10		
TPSK2	3.00		
TPSK3	3.00		

Note(s): ^w - well installation. The depths given taken from the ground level on-site at the time of investigation.

The approximate exploratory hole locations are shown on Figure 3.

The soil conditions encountered were recorded and soil sampling commensurate with the purposes of the investigation was carried out. The depths given on the exploratory hole logs and quoted in this report were measured from ground level.

For more complete information about the soils encountered within the general area of the site reference must be made to the detailed records given within Appendix B, but for the purposes of discussion, the succession of conditions encountered in the exploratory holes in descending order can be summarised as:

Made Ground/Topsoil (MG/TS)
Wittering Formation (WTT)

The ground conditions encountered in the exploratory holes are summarised in Table 2.2.

Table 2.2 Ground Conditions

Strata	Depth Encountered (m bgl)		Typical Thickness (m)	Typical Description
	Top	Bottom		
MG/TS	0.00	0.05 – 0.50	0.25	MG: Soft, dark orangish grey and brown, gravelly, silty CLAY with rare to occasional fine ash and brick fragments. TS: Light brown, gravelly SILT to very soft, greyish orange mottled orange and grey, silty CLAY.
WTT	0.05 – 0.50	>20.00 ^{1 2}	Not proven ²	Very soft to soft, light orangish grey mottled brown, sandy CLAY. Occasionally overlying orange to yellowish brown, clayey, fine SAND.

Note(s): ¹ Final depth of exploratory hole. ² Base of strata not encountered. The depths given in this table are taken from the ground level on-site at the time of investigation.

The soils encountered from immediately below ground surface have been described in the following manner. Where the soil incorporated an organic content such as either decomposing leaf litter or roots or has been identified as part of the in-situ weathering profile, it has been described as Topsoil both on the logs and within this report. Where man has clearly either placed the soil, or the composition altered, with say greater than an estimated 5% of a non-natural constituent, it has been referred to as Made Ground both on the log and within this report.

2.3 Ground Conditions Encountered in Exploratory Holes

The ground conditions encountered in exploratory holes have been described below in descending order. The engineering logs are presented in Appendix B.1.

2.3.1 Made Ground and Topsoil

Soils described as Made Ground were encountered in six out of the eleven exploratory holes from ground level to depths ranging between 0.30 and 0.40m bgl.

The Made Ground typically comprised soft, dark orangish grey and brown, silty CLAY with rare to occasional fine ash, brick fragments, fine to coarse angular to subangular flint gravel and fine organic (plant) material. Rare fine roots and occasional rootlets were noted.

Soils described as Topsoil were encountered in the remaining five exploratory holes from ground level to depths ranging between 0.050 and 0.50m bgl.

The Topsoil generally comprised light brown, gravelly SILT to very soft, greyish orange mottled orange and grey, silty CLAY with frequent fine to medium roots and rootlets. Gravel was angular to subangular fine to coarse flint.

The established depths of Made Ground and Topsoil found at each exploratory hole location have been included in Table 2.3.

Table 2.3 Established Depth of Made Ground/Topsoil

Exploratory Hole	Strata	Depth (m bgl)	Exploratory Hole	Strata	Depth (m bgl)
WS1[DP1]	MG	0.40	BH1	TS	0.50
WS2[DP2]	MG	0.30	BH2	TS	0.50
WS3[DP3]	MG	0.30	TPSK1	MG	0.30
WS4[DP4]	TS	0.20	TPSK2	MG	0.35
WS5[DP5]	TS	0.23	TPSK3	MG	0.40
WS6[DP6]	TS	0.05			

2.3.2 Wittering Formation

The soils of the Wittering Formation were encountered beneath the Made Ground / Topsoil in each of the trial holes persisting to the final investigated depth, 20.00m bgl.

The Wittering Formation bedrock typically comprised very soft to soft, light orangish grey mottled brown, sandy CLAY with rare fine to coarse angular to sub-angular flint gravel

and occasional intermittent pockets of light orangish brown, fine to coarse sand. Overlying orange to yellowish brown, clayey, fine SAND interbedded with clay in WS/DP1 to WS/DP6. Sand was also present in BH1 as a band from 3.50 to 7.00m bgl. Occasional rootlets were noted.

The sand layer was encountered across the site within exploratory holes WS/DP1 to WS/DP6 and in BH1, at depths ranging from 2.50 (DP1) to 5.00m bgl (DP6). This pattern suggests an increase in the thickness of the overlying clay stratum toward the northwest, which may also be influenced by the site's topographic gradient.

2.4 Roots

Roots (including rootlets and decayed rootlets) were encountered in all eleven exploratory holes to depths ranging between 1.25 and 2.50m bgl. The established depth of root penetration found at the exploratory hole locations has been included in Table 2.4.

Table 2.4 Established Depth of Root Penetration

Exploratory Hole	Depth (m bgl)	Exploratory Hole	Depth (m bgl)
WS1	1.40	BH1	2.50
WS2	1.25	BH2	2.20
WS3	2.50	TPSK1	1.40
WS4	1.90	TPSK2	1.80
WS5	2.20	TPSK3	2.50
WS6	1.70		

Roots may be found to greater depth at other locations on the site particularly close to trees and/or trees that have been removed both within the site and its close environs.

At the time of the intrusive investigation (August–September 2025), the area had been cleared of its previously dense vegetation and was predominantly covered in topsoil, interspersed with occasional patches of weeds, nettles, brambles, and sparse low-level shrubbery.

The site boundaries were densely vegetated with large mature trees and substantial shrubbery. Prior to clearance works undertaken in July–August 2025, the north-western part of the site was similarly covered with dense vegetation including mature trees.

A search on 'Google Earth™' of an aerial photograph of the site and its environs dated 2003, showed the vegetation covering the site to have remained largely unchanged until July 2025 when the site was cleared. This was confirmed by the Topographic Survey by P Stubbington Land Surveys, dated December 2023.

It must be emphasised that the probability of determining the maximum depth of roots from a narrow diameter borehole is low. A direct observation such as from within a trial pit is necessary to gain a better indication of the maximum root depth.

2.5 Groundwater

Groundwater was encountered within eight of the eleven exploratory holes and was struck at depths between 2.50 and 5.00m bgl.

Changes in groundwater level occur for reasons including seasonal effects and variations in drainage. The investigation was conducted in August and September (2025), when groundwater levels should typically be close or at their annual minimum (lowest) elevation.

The groundwater levels during site works are presented in table 2.5.

Table 2.5 Groundwater Records

Exploratory Hole	Date	Strike Depth (m bgl)	Standing (m bgl)
WS1	11/08/2025	3.20	3.20 after 20mins
WS2		2.70	2.70 after 20mins
WS3		3.00	3.00 after 20mins
BH1	11/08/2025	4.50	4.20 after 20mins
BH2	13/08/2025	5.00	4.70 after 10mins
TPSK1	18/09/2025	Not encountered	
TPSK2			
TPSK3			
WS4	19/09/2025	3.20	3.50 after 30mins
WS5		3.30	3.80 after 30mins
WS6		2.50	2.30 after 30mins

A well was installed in the location of WS1, WS4 and WS6 to allow for groundwater / ground-gas monitoring on three (3No.) occasions, following liaison and agreement with the Client upon completion of the site works and has been presented in Table 2.6.

Table 2.6 Groundwater Monitoring

Exploratory Hole	Well Depth (m bgl)	Depth to Water (m bgl)			
		11-13/08 ¹ & 18-19/09 25 ¹	03/10/25 ²	23/10/25 ²	20/11/25 ²
WS1	4.00	3.20	Dry	Dry	Dry
WS4	4.00	3.20	2.93	2.79	2.15
WS6	4.00	2.50	1.88	1.54	- ³

Note(s): ¹ Groundwater strike during site works. ² Groundwater level during subsequent monitoring. ³ Location could not be monitored, as at the time of the visit, the area had been excavated, and the well had been removed.

Groundwater levels in WS4 and WS6 were observed to rise toward their annual peak, which typically occurs in March, as anticipated. WS1 was recorded as dry during all three monitoring visits.

Groundwater equilibrium conditions may only be conclusively established, if a series of observations are made via groundwater monitoring wells over an extended period, typically to include Winter.

Section 3 Geotechnical In-Situ and Laboratory Testing

3.1 Standard Penetration Tests

Standard Penetration Tests (SPTs) were undertaken in BH1 and BH2. The results were interpreted based on the classifications outlined in Appendix C.1, Table C.1.1 to Table C.1.2.

Table 3.1 Hammer Efficiency

SPT Hammer Ref	Energy Ratio Er (%)
Dando 2000 - SDA7	73

Table 3.2 Standard Penetration Tests (SPT) Interpretation

Strata	Depth Range (m bgl)	N60 Range	Soil Classification	Inferred Cohesion
WTT (C)	0.50 – 20.00	4 – 42	Very low to Very high	Cu = 20 – 210kPa
WTT (G) ¹	3.50 – 7.00	14 – 18	Medium dense	n/a

Note(s): SPT “N60” values presented have been corrected in accordance with BS EN 22476 Part 3. C=cohesive, G=granular

¹ Encountered as a band in BH1.

The cohesive strength of Wittering Formation was generally increasing with depth. A relative density variation trend with depth could not be determined for the granular beds of the Wittering Formation, as they were only encountered as a band (3.50m in thickness) in BH1.

A full interpretation of the SPT results, is outlined in Appendix C.2, Table C.2.1.

3.2 Dynamic Probe Tests

The results were converted to equivalent SPT “N60” values based on dynamic energy using commercial computer software (Geostru). Interpretation interpreted based on the classifications outlined in Appendix C.1, Table C.1.1 to Table C.1.2.

Table 3.3 Hammer Efficiency

Rig Reference	Energy Ratio Er (%)
Premier IV (WS1 to WS3)	90.85
Premier III (WS4 to WS6)	90.64

Table 3.4 Inferred SPT Interpretation

Strata	Depth Range (m bgl)	Inferred N60 Range	Cohesive Strength / Relative Density	Inferred Cohesion (Cu kPa)
WTT (C)	0.05 – 5.00	<2 – 21	Extremely low to High	<10 – 105
WTT (G)	1.85 – 6.00	8 - 25	Loose to Medium dense	n/a

Note(s): SPT “N60” values presented have been corrected in accordance with BS EN 22476 Part 3. C=cohesive, G=granular

A strength variation trend with depth could not be determined for the cohesive soils of the Wittering Formation. The relative density of the granular beds of the bedrock was generally increasing with depth; however, in most locations (DP2 to DP6), these were only encountered below 3.00m bgl.

A full interpretation of the DPSH tests, is outlined in Appendix C.2, Table C.2.2.

3.3 Infiltration Tests

Infiltration testing was attempted in TPSK1 to TPSK3 within the cohesive soils of the Wittering Formation. BRE DG365:2016 states that for an accurate infiltration rate to be obtained a soakage pit needs to be filled three times in quick succession. Each test can only be ended once 75% of the water present has drained away. Testing comprised pouring clean water via a water tanker into the open trial hole, the drop-in water level over time was then recorded to give an indication of soakage potential.

A full test cycle was not completed in any of the trial pits due to insufficient head loss over time. All three tests were left running overnight, and the recorded head losses over a period of just over 24 hours were 64%, 50%, and 51% for TPSK1, TPSK2, and TPSK3, respectively. As such, the tests did not fully comply with BRE Digest 365 “Soakaway Design”.

Infiltration rates could not be calculated due to the poor drainage observed, as detailed in Table 3.5.

Table 3.5 Infiltration

Trial Hole (Test No.)	Test Stratum	Test Depth (m bgl)	Infiltration Rate (m/sec)	Notes
TPSK1(S1)	WTT	3.10	-	No infiltration rate was calculated due to the clayey nature of the soils encountered and the lack of infiltration recorded.
TPSK2(S1)		3.00	-	
TPSK3(S1)		3.00	-	

Notes: WTT = Wittering Formation

For a soakaway to be viable it is required to empty by 50% in a 24-hour period in saturated ground conditions.

It is likely that infiltration testing undertaken at increased depths within the granular beds of the Wittering Formation may result in improved infiltration rates.

3.4 Plate Load Tests

5No. in-situ CBR tests (PLT1 to PLT5) via plate load testing equipment were carried out in accordance with BS:1377 Part 9: 1990 Clause 4.8, at locations selected by the Client and indicated on a plan provided by the Client. Test pits were excavated to depths between 0.30 and 0.60m below ground level (bgl), and a 300mm diameter steel bearing plate was used. A tracked 8.0tn excavator was used as Kentledge and jacked against the plate in increments: five loading followed by one unloading cycle with corresponding

settlement recorded by three settlement gauges in PLT1 to PLT4. Four loading cycles followed by one unloading cycle were carried out in PLT5, due to the soft nature (lower strength) of the soils tested.

It should be noted that the required loadings were not provided by the Client and therefore five loading intervals ranging from 49.9 to 253kPa were applied; the settlement upon unloading was measured.

A summary of the test results is outlined in Table 3.6.

Table 3.6 Summary of Plate Load Tests

Test	Coordinates		Height (m)	Depth (m bgl)	Maximum		Unloading (mm)	Estimated CBR (%)
	North	Easting			Load	Settlement		
PLT1	505336.14	11855.35	48.0	0.30	253	3.44	1.61	10.0
PLT2	505335.51	11854.63	44.0	0.60	252	5.72	3.24	5.7
PLT3	505335.88	11854.28	44.0	0.30	252	16.27	5.34	4.0
PLT4	505335.12	11852.56	42.0	0.30	252	8.78	6.10	5.1
PLT5	505335.73	11852.77	41.0	0.30	203	20.81	17.85	2.9

Notes: Load in kPa, Settlement in mm, Unloading in mm, Height = m (estimated from drawings)

The plate load testing results are presented in Appendix C.3.

3.5 Atterberg Limit Tests

Atterberg Limit tests were performed on six samples; all obtained from the cohesive beds of Wittering Formation. The results were classified in accordance with BRE Digest 240 and NHBC Standards Chapter 4.2.

Table 3.7 Atterberg Limit Results Classification

Strata	Depth Range (m bgl)	Volume Change Potential	
		NHBC	BRE 240
WTT (C)	1.20 – 11.0	Low to High	Low to High

Details are in Table C.2.3, Appendix C.2 and the laboratory report in Appendix C.3.

3.6 Particle Size Distribution Tests

Particle Size Distribution (PSD) tests were performed on three samples from the granular beds of Wittering Formation.

Table 3.8 Particle Size Distribution Classification

Strata	Depth (m bgl)	Volume Change Potential	
		NHBC	BRE 240
WTT (G)	2.60 – 6.00	No	Yes

The PSD test classified the samples tested as having a volume change potential in accordance with BRE 240 due to exceedance of silt/clay content over the 15% threshold. Nonetheless, a cohesive soil is only classified as having a volume change potential if it is also plastic and an Atterberg Limit test can be conducted on the strata; considering the dominance of gravel and sand content (67 - 85%) in the samples, they would be classified as granular therefore expected to be non-plastic.

A full interpretation of the PSD tests, is outlined in Table C.2.4, Appendix C.2 and the laboratory report in Appendix C.3.

3.7 Sulphate and pH Tests

Water soluble sulphate (2:1) and pH testing in accordance with Building Research Establishment Special Digest 1, 2005, 'Concrete in Aggressive Ground' was carried out on three samples from the cohesive beds of Wittering Formation and on one sample from the granular beds of the stratum.

Table 3.9 Sulphate and pH Test Results

Strata	Depth (m bgl)	Sulphate Concentration (mg/l)	pH
WTT (C)	0.90, 1.60, 8.00	<10 – 608	5.1 – 6.50
WTT (G)	2.10	28	4.5

The significance of the sulphate and pH Test results is discussed in Section 5.4 and the laboratory report in Appendix C.3.

Section 4 Engineering Appraisal

4.1 Established Ground Conditions

An engineering appraisal of the soil types encountered during the site investigation and likely to be encountered during the redevelopment of this site is presented. Soil descriptions are based on analysis of disturbed samples taken from the exploratory holes.

4.1.1 Made Ground and Topsoil

Soils described as Made Ground were encountered in six out of the eleven exploratory holes from ground level to depths ranging between 0.30 and 0.40m bgl. Soils described as Topsoil were encountered in the remaining five exploratory holes from ground level to depths ranging between 0.05 and 0.50m bgl.

Foundations must not be placed on non-engineered fill unless such use can be justified on the basis of a thorough ground investigation and detailed design. Foundations must be taken through any Topsoil and/or Made Ground and either into, or onto a suitable underlying natural stratum of adequate bearing characteristics.

4.1.2 Wittering Formation

The soils of the Wittering Formation were encountered beneath the Made Ground / Topsoil in each of the trial holes persisting to the final investigated depth of 20.00m bgl.

The soils of Wittering Formation were encountered in WS1 to WS6 and inferred at greater depths within DP1 to DP6, as predominantly cohesive at shallow depths overlying the granular beds, and as predominantly cohesive in the cable percussive boreholes (BH1 and BH2). The upper horizons of the cohesive beds of Wittering Formation are effectively normally consolidated due to weathering and are expected to display low to moderate bearing capacities, with moderate to high settlement characteristics. The lower horizons of the cohesive beds of Wittering Formation are overconsolidated, and as such are expected to display moderate bearing and settlement characteristics. The granular beds of Wittering Formation are expected to possess moderate bearing and settlement characteristics; however, in most locations across the site (DP2 to DP6), these beds were inferred at depths exceeding 3.00m bgl and can therefore only be considered for a deep foundation solution or strip foundations within the lower ground floor.

4.1.3 Guidance on Shrinkable Soils

The ground conditions were established as Made ground / Topsoil with a typical thickness of 0.25m, overlying the bedrock of Wittering Formation.

The volume change potential for each stratum was established and presented in Table 4.1.

Table 4.1 Established Volume Change Potential by Strata

Strata	Volume Change Potential		Established Lower Boundary (m bgl)
	BRE	NHBC	
WTT (C)	High	High	5.00
WTT (G)	None	None	7.00+
WTT (C)	High	High	20.00+

The granular soils of the Wittering Formation had no volume change potential. The cohesive soils of the Wittering Formation were classified as having a high volume change potential. Design for a high volume change potential soil must therefore be adopted for the proposed scheme.

4.1.4 Groundwater

Groundwater was encountered within eight of the eleven exploratory holes and was struck at depths between 2.50 and 5.00m bgl, during site works.

The minimum groundwater depth measured to date was at 1.54m bgl, at location WS6 (23/10/2025).

Further groundwater monitoring was conducted within the standpipes following completion of site works and has been presented in Table 2.6.

Section 5 Foundation Scheme

5.1 Foundation Recommendations

Foundations **must not** be constructed within any Made Ground/Topsoil due to the likely variability and potential for large load induced settlements both total and differential.

Roots (including rootlets and decayed rootlets) were encountered in all eleven exploratory holes to depths ranging between 1.25 and 2.50m bgl. If roots are encountered during the construction phase foundations **must not be placed within any live root penetrated or desiccated cohesive soils or those with a volume change potential**. Should the foundation excavations reveal such materials, the excavations **must** be extended to greater depth in order to bypass these unsuitable soils. Excavations must be checked by a suitable person prior to concrete being poured.

Considering the nature of the proposed development and ground conditions encountered, shallow foundations could only be feasible in the vicinity of DP1, where the cohesive soils exhibited good engineering properties and absence of deep roots, however adopting a dual foundation solution for a single structure, can make the design both uneconomical and result in potential differential settlements.

A strip foundation option within the granular soils of Wittering Formation could be considered for the lower ground floor, however, the use of a dual foundation solution for the proposed care home can lead to substantial differential settlements.

Consequently, piled foundations must be adopted for both the four-storey care home (including the lower ground floor) located in the eastern part of the site, and the three residential cottages situated in the western part of the site. A ground bearing slab could be used for the sunken courtyard cut into the existing slope, to the south-east side of the care home.

The adoption of piled foundations is suggested due to:

- The insufficient engineering properties of the shallow cohesive soils (the building loads would exceed the bearing capacity of the shallow soils which are not suitable for supporting such loads)
- Deep root penetrated cohesive soils of high volume change potential encountered across the site.
- The lateral discontinuity of the sand layer across the site suggests that construction of the lower ground floor would span both granular and cohesive soils, potentially resulting in significant differential settlement.
- Potentially relatively shallow groundwater.

5.1.1 Lower Ground Floor and Stability Requirements

This report does not comprise a basement impact assessment (BIA) and no calculations of the impact of the proposed works on the surrounding ground and/or structures was requested by the Client. The following comments are of a very general non-specific nature.

Should lateral and vertical ground movements and the damage category resulting works be required this can be undertaken by Soils Limited.

The excavation of the proposed lower ground floor was estimated at 2.90m bgl. Groundwater was encountered within eight of the eleven exploratory holes and was struck at depths between 2.00 and 5.00m bgl during site works and subsequent monitoring, with a minimum groundwater depth of 1.88m bgl recorded to date.

Groundwater levels could rise, particularly after prolonged periods of wet weather.

If the construction works take place during the winter months or during/after prolonged periods of wet weather perched water could accumulate or groundwater could be found migrating through the granular deposits of the Wittering Formation. If any water ingress is not prevented by dewatering, the basement slab could become “buoyant” whilst empty. This must be taken into account in the design. Support of excavation and dewatering with pumps from sumps introduced into the floor of the excavation must be considered.

In the absence of robust long-term groundwater monitoring data from the wells installed, full hydrostatic pressure (worst credible case) must be taken into account for the design of the proposed basement slab/walls or the worst credible levels as defined by EC – 7.

The proposed basement excavation is likely to extend into the groundwater within the clayey (low-permeable) bands of the Wittering Formation.

Mitigation measures to control groundwater and avoid the unwanted and uncontrolled development of consolidation settlements could be employed such as local dewatering during construction, either by exclusion, extraction, or a combination. If extraction methods are used, best practice must be adopted to prevent the loss of material from the surrounding ground.

5.1.2 Stability Issues

The excavation of the lower ground floor must not affect the integrity of any adjacent structures or land beyond the site boundaries. Where there is a sufficient distance between the site boundary and the basement excavation, support may be permitted using a wide strip foundation to form an earth retaining structure. In other cases, the most suitable form of construction should be within a coffer dam structure using a sheet piles, secant or contiguous concrete piled wall around the periphery of the structure.

Generally cantilevered piled walls have an open face to embedded ratio of about one to two ie. a supported face 2.90m in height would require a penetration into the ground, below the base of the excavation, of about 6.00m. Should the piled wall be purely an unsupported cantilever then it is likely that quite deep section sheet piles or large diameter bored piles would be required. Installing a braced waling to the wall could reduce the sheet section, or diameter of the piles.

5.1.3 Anticipated Heave

Given the anticipated volume of soil being excavated (circa 3.00m bgl), loads applied (lightly loaded courtyard) and high volume change potential of the soils, long term heave

could be moderate to significant (**>25mm**). Immediate heave is likely to have a minimal effect as it would take place soon after excavation and any immediate heave is likely to be removed during the excavation of the basement slab in order to achieve the correct dig level prior to casting the slab.

It must be mentioned that it was assumed that excavations will be kept dry and either concreted or blinded as soon after excavation. If water is allowed for even a short time to enter excavations, not only will a greater heave be experiencing owing to the soil increasing in volume by taking up water, but the shear strength, and hence the bearing capacity, will also be reduced.

Note(s): For the calculations of the immediate heave, the E_y (Young's Modulus) for unloading was taken as equal to the E_y for loading, which is considered to be a conservative approach. For the calculations of the long-term swelling, the ratio of swelling index (C_s) compression index (C_c) was taken as $C_s = C_c/5$ (*Reference: Simon & Menzies, Foundation Engineering*).

5.1.4 Piled Foundations

The foundations for the proposed care home and residential cottages must be piled. The piled foundations must be taken through any Topsoil/Made Ground into suitable strength soils of the Wittering Formation.

The proposed structure includes a lower ground floor; however, given that adjacent buildings are located approximately 40m away, the peripheral walls of the lower ground floor are not expected to exert any significant influence on neighbouring properties.

The construction of a piled foundation is a specialist job with the actual pile working load depending on the pile type and installation method. Prior to finalising the foundation design the advice from a reputable contractor who is familiar with the ground and groundwater conditions present at the site must be sought.

The vertical load capacities are provided for varying diameters and lengths of bored piles taken into the Wittering Formation, based on in-situ testing and must only be used for preliminary design purposes.

These values have been calculated for a ground modelled as cohesive due to the nature of soils encountered in BH1 and BH2. A factor of safety of 3 was applied to the characteristic line derived from testing undertaken, for both the shaft and base load capacities. An N_c value of 9 and Alpha value of 0.45 has been used for the cohesive soils of the Wittering Formation.

The bearing values given in Appendix D.1, are applicable to single vertically loaded piles. Where piles are to be constructed in groups the bearing value of each individual pile should be reduced by a factor of about 0.8 and a calculation made to check the factor of safety against block failure.

From ground level the upper 4.00m of the pile shaft has been ignored in the preliminary pile design given.

To prevent necking of the green concrete, temporary casing may be required where the pile passes through the Made Ground or Wittering Formation and below the groundwater table. To achieve the full bearing value a pile should penetrate the bearing stratum by at least five times the pile diameter.

No allowance has been made for negative skin friction that could be generated where piles pass through Made Ground and very soft cohesive soils underlying the site. The negative skin friction must be applied to the pile working load and must not be factored.

5.2 Retaining Wall

The proposed retaining walls were designed as precast concrete units with provision for reinforcement. Their foundations would be set at approximately 1.00m bgl, bearing on the cohesive soils of the Wittering Formation.

If the foundation is to include lateral load from retained soil, then the distribution of loads on the foundation will be trapezoidal and the maximum pressure will be at the toe of the foundation. The foundation has to resist both overturning and sliding forces. The overturning forces are derived from the loads imposed both by the soils retained, by any line loads from structures to the rear of the wall and by groundwater.

Foundations must not be constructed over former structures and other hard spots. The foundations design must be suitable for the conditions present at the site.

The anticipated settlement includes both elastic settlement and long-term drained settlement (in the case of cohesive soils).

Although groundwater was encountered at depth it may rise considerably and as stated in EC7, the worst-case scenario must be adopted for the design of earth retaining structures and drainage must be incorporated into the design.

5.2.1 Soil's Characteristic Strength Values

Using commercial software and published data, Table 5.1 presents the calculated characteristic values for the cohesive soils of Wittering Formation at approximately 1.00m bgl. At this depth, the soils of the Wittering Formation were considered to be normally consolidated, due to weathering processes.

Table 5.1 Characteristic Soil Strength Values within the Cohesive Soils of Wittering Formation

Depth (m bgl)	ϕ : Friction Angle (°)	γ_{sat} : Unit Weight (kN/m ³)	E_y : Young's Modulus (kPa)	E_d : Oedometric Modulus (kPa)	C_u : Undrained Cohesion (kPa)
1.00	19	19	6500	4800	15
Depth (m bgl)	ϕ' : Effective Friction Angle (°)	γ' : Dry Unit Weight (kN/m ³)	K_o : Earth Pressure Coefficient at Rest	K_a : Active Earth Pressure	K_p : Passive Earth Pressure
1.00	22	16	0.62 (nc)	0.40	2.2

Notes: ¹ Values given from limited in-situ and laboratory testing. ² Values given from limited in-situ testing and published data for the Wittering Formation.
nc = normally consolidated

The values provided for the soils of Wittering Formation were derived from limited in-situ testing and also supplemented from published data.

Please note that the proposed solution requires a proper design before being finalised and that the current report does not provide a confirmation of the suitability of the proposed solution.

It would be recommended to carry out specific testing for the definition of the mechanical soil properties of the soils laid and compacted at the back of the retaining structures. This should comprise the definition of bulk unit weight (dry and saturated), of soil strength parameters in drained conditions and in undrained conditions (assuming cohesive soils are used) and the definition of the related lateral earth pressure coefficients at rest (K_0), in active conditions (K_a) and in passive conditions (K_p).

5.3 Slope Stability

A slope stability assessment was not commissioned as part of this investigation. The following comments are general in nature and nonspecific.

Natural slopes, in cohesive soils in England, typically stand with a factor of safety against sliding of about one during periods when the groundwater is at or close to ground level. Factors such as drainage installed into the slope and foliage can enhance the overall or local stability of the slope but generally only marginally.

Interference by humans in the profile of a natural slope, the groundwater regime in or around the slope, or in the loading on a slope, can initiate both local and/or overall instability. Natural erosional processes, such as a river or the sea eroding the toe of a slope can, and does, initiate instability.

Humanmade slopes, such as railway cuttings, can be stable over long periods of time and then fail decades after their construction (due to equalisation of pore water pressures within the slope). Embankments, if not properly engineered can have failures in the short-term due to excess porewater pressures being setup during construction.

Analyses of slopes generally takes the form of a back analyses of the existing ground profile to permit an assessment of the strength parameters within the soil mass being estimated. Laboratory testing, of various forms depending on the slope type or failure, of soils samples taken through the ground section is then undertaken and the strength parameters found compared to those estimated from the back analyses. The comparison may then be used to provide background data to establish the failure mechanism, to design remedial works or to check the factor of safety against failure of a standing slope. Slope stability analysis must consider the stability of the site and land both upslope and downslope of it.

Initial design parameters can be taken from published values for the mobilised or residual strength of Wittering Formation and worst-case assumptions of winter groundwater levels, though these would need to be verified by laboratory analysis and groundwater monitoring.

For a slope of circa 11° , with “worst credible” parameters of $c' = 0$ and $\phi' = 14^\circ$, stability is generally acceptable if drainage and existing foliage is maintained.

5.4 Subsurface Concrete

The sulphate and pH tests carried out in accordance with BRE Special Digest 1, 2005, ‘Concrete in Aggressive Ground’, established the site concrete classifications for each stratum as presented in Table 5.2. The classification given, was based on the ‘mobile groundwater case’, as groundwater was present within the soils underlying the site.

Table 5.2 Concrete Classification

Stratum	Design Sulphate Class	ACEC Class
WTT (C)	DS-2	AC-4z
WTT (G)	DS-I	AC-4z

Concrete to be placed in contact with soil or groundwater must be designed in accordance with the recommendations of Building Research Establishment Special Digest 1 2005, ‘Concrete in Aggressive Ground’ taking into account any possible exposure of potentially pyrite bearing natural ground and the pH of the soils.

5.5 Excavations

Shallow excavations in the Made Ground/Topsoil and upper soils of Wittering Formation are likely to be marginally stable in the short term at best.

Deeper excavations taken into the Wittering Formation are likely to be unstable and require support. Unsupported earth faces formed during excavation may be liable to collapse without warning and suitable safety precautions must therefore be taken to ensure that such earth faces are adequately supported or battered back to a safe angle of repose.

The potential for slope instability must be carefully assessed during any groundworks, as cutting trenches across the slope is likely to be necessary. Such excavation can reduce lateral support and may initiate slip surfaces or rotational failures, particularly in clay-rich or saturated soils.

Excavations beneath the groundwater table are likely to be unstable and dewatering of foundation trenches may be necessary.

Section 6 Site Drainage

6.1 Soakaways

Due to the generally impermeable nature of the soils of the Wittering Formation underlying the site, no infiltration rate could be calculated from the in-situ tests undertaken. Therefore, the use of soakaways on site would not be a viable option due to the poor drainage characteristics of the Wittering Formation.

It is recommended that the results of the testing are passed to a drainage engineer for confirmation.

Consultation with the Environment Agency must be sought regarding any use which may have an impact on groundwater resources.

Section 7 Determination of Chemical Analysis

7.1 Site Characterisation and Revised Conceptual Site Model

No Preliminary Investigation Report was undertaken by Soils Limited for the site. Reliance was placed in the Preliminary Risk Assessment Report (ref: 70122557-PRA-R04, by WSP), dated April 2025, which was supplied to Soils Limited by the Client and according to which potential on-site or off-site sources of soil and groundwater contamination were identified and comprised the following:

- Made Ground and asbestos sheeting associated with former buildings and outbuildings – on site source
- Bonfire activity on site – on site source
- Fly-tipped waste – on site source
- Historical agricultural practices – on site source
- Made Ground from surrounding land uses – off site source
- Historical landfill – off site source
- Gasoil tank – off site source

As discussed in the Preliminary Risk Assessment Report (ref: 70122557-PRA-R04), by WSP:

- The site is underlain by a Secondary A Aquifer relating to the Wittering Formation bedrock.
- The groundwater beneath the site is of Medium vulnerability.
- No records of groundwater abstractions were identified within 1000m from the site.
- The nearest surface water feature was a tertiary river that runs along the northern site boundary.
- The site was not located within a source protection zone (SPZ) and there are no SPZ recorded within 500m of the site.

The present intrusive investigation (by Soils Limited) established the presence of Made Ground in six out of the eleven exploratory holes from ground level to depths ranging between 0.30 and 0.40m bgl. There were no significant visual or olfactory indicators of contamination noted in the Made Ground.

Shallow groundwater was not encountered within the Made Ground or Topsoil during the site works or subsequent monitoring.

7.2 Soil Sampling

Exploratory hole locations were established to provide an overview of ground conditions across the site in relation to the proposed construction, together with enabling the collection of samples to enable chemical characterisation of the underlying strata.

A non-targeted sampling strategy is appropriate when there is:

- No adequate information available regarding the likely locations of contamination;
- No sensitive areas where there is a need for a high degree of confidence.

A targeted sampling strategy is appropriate when there is:

- Adequate information available regarding the likely locations of contamination
- Sensitive areas where there is a need for a high degree of confidence.

The CSM of the Preliminary Risk Assessment Report (ref: 70122557-PRA-R04, by WSP), identified potential sources and a targeted sampling pattern was adopted as appropriate to these sources to provide coverage of the site as a whole.

Representative samples for potential environmental testing were obtained from the exploratory holes at depths of between 0.10 and 0.60m considering the prevailing site conditions and the findings of the initial conceptual site model, to allow appropriate representation of the materials encountered, with additional samples to be obtained, if necessary, where there was visual or olfactory evidence of contamination.

Table 7.1 outlines the sampling undertaken.

Table 7.1 Sampling Strategy

Sample	Strategy	Proposed Use
WS1:0.20	Area of former bonfire & agricultural activity – Made Ground	Soft landscaping in proposed communal area to the east of the main building.
WS2:0.10	Area of former bonfire & agricultural activity – Made Ground	In area of proposed courtyard – on the boundary of proposed paving and soft landscaping.
WS3:0.20	Close to gasoline tank adjacent to the SE – Made Ground	Soft landscaping in proposed communal area to the south of the main building.
WS6:0.20	Area of fly tipping – Topsoil	Area of proposed soft landscaping within the private bungalow gardens to the north-west.
WS6:0.60	Area of fly tipping – Cohesive soils of the bedrock	
TPSK1:0.20	Area of former bonfire & agricultural activity – Made Ground	In area of proposed courtyard – on the boundary of proposed paving and soft landscaping.
TPSK2:0.20	Area of former bonfire & agricultural activity – Made Ground	In proposed communal area to the north-west of the main building – on the boundary of proposed paving and soft landscaping.

7.3 Determination of Chemical Analysis

The driver for determination of the analysis suite was the information obtained from the Preliminary Risk Assessment Report (ref: 70122557-PRA-R04, by WSP) and the present intrusive investigation.

The chemical analyses were carried out on 1no. sample of Topsoil, 5no. samples of Made Ground and 2no. samples of the Wittering Formation bedrock. The nature of the analyses is detailed in Table 7.2.

Table 7.2 Chemical Analyses Suites - Soil

No. of Tests		Determinants
MG/TS	WTT	
6	2	Asbestos screening
6	2	Metal suites: Arsenic, Boron (Water Soluble), Cadmium, Chromium (total & hexavalent), Copper, Lead, Mercury, Nickel, Selenium, Vanadium, Zinc
6	2	Organic Matter
6	2	pH
6	2	Polycyclic aromatic hydrocarbons (PAH) – (EPA 16)
6	2	Phenols – total monohydric
4	2	Extractable petroleum hydrocarbons (EPH) – Texas banding
2		Total petroleum hydrocarbons (TPH) – CWG banding
2		BTEX and MTBE
2		Polychlorinated biphenyls (PCB) – 7 Congeners
2		Cyanide total & free
2		Waste acceptance criteria (WAC)

The soil testing was carried out in compliance with the MCERTS performance standard, and the results are shown in Appendix E.2, test reports 25-07507, 25-07443, 25-08343 and 25-22312.

Given the absence of visual and olfactory indicators of contamination noted during the current intrusive investigation by Soils Limited, testing for organic compounds such as VOCs, SVOCs, etc. was not warranted. Within the context of all potential sources, the risk from herbicides and pesticides related to the historic cultivations / agricultural activities on site until 2017 (any pesticides/herbicides have a maximum life span of 4 to 5 years), were very low and therefore, they were not specifically tested for.

Section 8 Qualitative Risk Assessment

8.1 Assessment Criteria

The assessment criteria used to determine risks to human health are derived and explained within Appendix E.3.

8.2 Representative Contamination Criteria - Soil

In compiling this report reliance was placed on drawings outlined in the Record of Associated Documents. The recommendations provided within this report are made exclusively in relation to the scheme outlined above and must not be applied to any other scheme without further consultation with Soils Limited. Soils Limited must be notified about any change or deviation from the scheme outlined.

Based on the proposed development, the results of the chemical analysis have been compared against generic assessment criteria (GAC) for a '**Residential with home grown produce**' end use, as presented in SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination December 2014 (C4SL), derived for the protection of human health. Where this document has not published screening values for determinants, GACs derived for the same end use have been adopted from the following published guidance; DEFRA Soil Guideline Values (SGV) and LQM/CIEH/Suitable 4 Use Level (S4UL).

To assess the potential toxicity of organic determinants (Petroleum Hydrocarbons and Polyaromatic Hydrocarbons) to the human health, soils samples were analysed for Soil Organic Matter (SOM). The selected samples analysed recorded, SOM values of between 0.7% and 3.4%. For each soil sample tested, the resultant SOM allowed for the correct comparison to be made with the appropriate guideline value for each organic determinants analysed.

8.2.1 Risk Assessment – Made Ground/Topsoil

No exceedances were recorded within the sample of Topsoil and the five samples of the Made Ground tested when compared to GAC for a '*Residential with Home Grown Produce*' end use.

8.2.2 Risk Assessment – Wittering Formation

No exceedances were recorded within the two samples of the Wittering Formation tested when compared to GAC for a '*Residential with Home Grown Produce*' end use.

8.3 Asbestos

The test certificate for each sample submitted for contamination analysis during this investigation includes the results of an Asbestos Screen.

In each case 'Not detected' was reported.

This finding does not obviate the risk of asbestos being present on the site and the Client

must seek advice from qualified and competent asbestos specialist during and prior to undertaking works to ensure compliance with appropriate legislation and guidance.

8.4 Risk to Controlled Waters

From information provided in the Preliminary Risk Assessment Report (ref: 70122557-PRA-R04), by WSP, dated April 2025, the site was located on a Secondary A Aquifer (Wittering Formation) of Medium Groundwater Vulnerability, indicating that the soils maintain the potential to sustain large volumes of water.

The nearest surface watercourse feature was a tertiary river, located along the north site boundary. There were no Source Protection Zones within 1000m of the site.

The cohesive beds of the Wittering Formation bedrock reaching to a proven depth of 20.00m bgl, were assessed by the intrusive investigation as predominantly impermeable hence, not considered a sensitive receptor. The granular beds of the Wittering Formation inferred to a depth of 6.00m bgl could be considered a sensitive receptor.

Taking into consideration the limited thickness of Made Ground, and that there were not any visual or olfactory indicators of contamination in the Made Ground, there is not considered to be any significant risk to groundwater and no further assessment deemed necessary at this time.

The site is currently free draining to the underlying soils, and the proposed development will need to consider the implementation of a new drainage regime on site, as such the proposed development is considered to provide a betterment of site conditions where site drainage would not follow a pathway to impact on third party land or property.

8.5 Risk from Ground Gas Ingression

The Conceptual Site Model (CSM) in the Preliminary Risk Assessment Report, ref: 70122557-PRA-R04, by WSP, identified a low to moderate potential risk of ground gas and vapours pertaining to the site associated with Made Ground, fly tipped waste and bonfire activities on site, a historical landfill adjacent to the north and a gasoil tank to the immediate east of the site.

The current intrusive investigation recorded Made Ground at a typical thickness of 0.25m bgl across the site; no putrescible material was observed within the Made Ground.

Wells were installed three of the windowless sampler boreholes (WS1, WS4 and WS6) to allow combined groundwater/ground-gas monitoring on three (3No.) occasions, following instructions from the Client. Based on CIRIA C665, Planners may require a full 6No. or 9no. visits over a period of 6no. months, for a full Ground Gas Investigation.

The head-works comprised two gas taps, one of which was connected to an internal tube to draw gas from a point approximately one metre below ground level and the other tap to an internal tube terminating at a nominal depth of 300mm below ground level. The taps were connected to the flow and return ports on the gas analyser to enable

measurements of soil gas concentrations in the well to be taken without venting to the atmosphere.

Concentrations of Volatile Organic Compounds (VOCs) within the monitoring wells were measured using a Photo-Ionisation Detector (PID).

The results of the ground-gas monitoring are presented in Table 8.1 below and provided in Appendix F.

Table 8.1 Ground Gas Monitoring Results

Date (Baro Trend)	Trial Hole	CH ₄ (%v/v)	CO ₂ (%v/v)	O ₂ (%v/v)	H ₂ S (ppm)	CO (ppm)	LEL (%)	aP (mb)	VOC (ppm)	Flow (l/h)	Dp	H ₂ O (m bgl)
03/10/2025 (Rising)	WS1	<0.1	5.4	16.9	<1	2	<0.1	1003	<1	<1	<0.1	Dry
	WS4	<0.1	5.2	17.6	<1	2	<0.1	1003	<1	<1	<0.1	2.93
	WS6	<0.1	3.7	18.4	<1	2	<0.1	1003	<1	<1	<0.1	1.88
23/10/2025 (Falling)	WS1	<0.1	5.4	19.5	<1	<1	<0.1	989	<1	<1	<0.1	Dry
	WS4	<0.1	5.7	16.2	<1	<1	<0.1	989	<1	<1	<0.1	2.79
	WS6	<0.1	4.3	17.4	<1	<1	<0.1	989	<1	<1	<0.1	1.54
20/11/2025 (Falling)	WS1	<0.1	6.3	13.3	<1	<1	<0.1	1009	<1	<1	<0.1	Dry
	WS4	<0.1	5.7	16.9	<1	<1	<0.1	1009	<1	<1	<0.1	2.15
	WS6*	-	-	-	-	-	-	-	-	-	-	-
Minimum		<0.1	3.7	13.3	<1	<1	<0.1	989	<1	<1	<0.1	Dry
Maximum		<0.1	6.3	19.5	<1	2	<0.1	1009	<1	<1	<0.1	1.54

Note: Published barometric pressure trend data were obtained for each monitoring visit (data from weatheronline.co.uk). * Location could not be monitored, as at the time of the visit, the area had been excavated, and the well had been removed.

Based on the documentation presented in the “BS 8485:2015+A1:2019”, Code of practice for the design of protective measures for Methane and Carbon Dioxide ground gases for new buildings” the hazardous gas flow rate (Q_{hg}) was calculated using Equation 1:

$$Q_{hg} = (C_{hg}/100) q \quad \text{Equation 1}$$

Where:

C_{hg} is the measured hazardous gas concentration in percentage volume-by-volume

q is the flow rate in litres per hour of combined gases found by direct measurement – where the flow rate is zero or below the detection level of the instrument, this must default to the detection limit, in this case 0.1 ltr/hr.

Consequently, the Q_{hg} using carbon dioxide as the maximum C_{hg} was calculated using Equation 1. The flow rate used was 0.1 l/hr (detection limit) as no flow rate was recorded on any occasion.

$$Q_{hg} = (6.3/100) \times 0.1 = 0.0063 \text{ l/hr}$$

Based upon the site characteristic hazardous gas flow rate (Q_{hg}) the characteristic gas situation (CS) would be classified as CS1, as this is below the CS1/CS2 threshold of 0.07.

However, Carbon Dioxide levels exceeded 5% on every occasion in WS1 and WS4, which is generally regarded as the threshold for consideration of CS2.

Additionally, Carbon Monoxide was detected at a concentration of 2 ppm in WS1, WS4, and WS6 during the initial visit, which may indicate active ground gas generation.

Therefore, on the basis of the ground gas monitoring undertaken to date, the site technically falls into a Characteristic Gas Situation 2 (or CS2) and gas protection measures should be emplaced in accordance with BS 8485:2015.

On review it is considered that the design of the gas monitoring regime and the nature, location, number and design of the monitoring points was appropriate to the sources, pathways and receptors identified at this time.

8.5.1 Radon

According to the British Geological Survey, in conjunction with the Radiation Protection Division of the Health Protection Agency, the site is in an area where less than 1% of homes are estimated to be at or above the action level.

The site is not located in a radon affected area and no radon protective measures are necessary in the construction of new dwellings or extensions, although this should be confirmed by the Local Authorities (Building Control) since the proposed development includes a 'basement'.

8.6 Generic Quantitative Risk Assessment

Quantitative risk assessments are undertaken for the soil, groundwater and ground gas. The CSM of the Preliminary Risk Assessment Report, ref: 70122557-PRA-R04, by WSP, has been updated to take account of the assessments below and presented in Appendix E.1. The full laboratory chemical report is presented in Appendix E.2.

8.6.1 Soils

None of the eight (8no.) samples tested from the Made Ground, Topsoil and Wittering Formation recorded concentrations of determinants in excess of the relevant soil screening values for the proposed '*Residential with Home Grown Produce*' end use – the most onerous land use scenario.

8.6.2 Controlled Waters

The risk to the groundwater receptor would be negligible and no further assessment is necessary at this time as explained in Section 8.4.

8.6.3 Ground Gas

The Preliminary Risk Assessment Report, ref: 70122557-PRA-R04, by WSP, identified a low to moderate potential risk of ground gas and vapours pertaining to the site associated with Made Ground, fly tipped waste and bonfire activities on site, a historical landfill adjacent to the north and a gasoil tank to the immediate east of the site.

Monitoring of the wells installed within WS1, WS4 and WS6 has been undertaken on

three occasions.

The gas risk assessment concluded that precautionary CS₂ protection measures in accordance with BS 8485:2015 **are required** in this case, however, based on CIRIA C665, Planners may require a full 6No. or 9no. visits over a period of 6no. months, for a full Ground Gas Investigation.

8.6.4 Radon

Radon protective measures are **not necessary** in the construction of new dwellings or extensions. This should be confirmed by the Building Control.

8.7 Recommendations

Soil chemical analysis did not record any samples with substance levels over their representative guideline values. Therefore, there was no risk identified to vulnerable receptors of Human Health, Building Structures and Services or controlled waters.

Based on this investigation no further works are required, subject to agreement and approval of the local authority, which should be sought at the soonest opportunity.

A discovery strategy should be implemented to ensure that any unexpected contamination is suitably identified and addressed during the construction phase.

8.8 Protection of Services

Contamination of the ground may pose a risk to human health by permeating potable water supply pipes. To fulfil their statutory obligations, UK water supply companies require robust evidence from developers to demonstrate either that the ground in which new plastic supply pipes will be laid is free from contaminants specified in UKWIR Report 10/WM/03/21 Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites (UKWIR, 2010), or that the proposed remedial strategy will mitigate any existing risk. Water Companies often have their own criteria and further testing / screening against such criteria may be required to determine whether new plastic water pipes are appropriate. This will require further information regarding the depth and routes of proposed water supply routes.

8.9 Duty of Care

Groundworkers must maintain a good standard of personal hygiene including the wearing of overalls, boots, gloves and eye protectors and the use of dust masks during periods of dry weather.

8.10 Excavated Material

Excavated material as waste must be defined or classified prior to any disposal, transport, recycling or re-use at or by an appropriately licensed or exempt carrier and/or off-site disposal facility. The requirements inherent in both Duty of Care and Health and Safety must also be complied with. In order to determine what is to happen, what is

suitable, appropriate and most effective in the disposal of wastes, especially those subject to CDM waste management plan requirements, several factors must be considered, and competent advice must always be sought.

WAC analysis was undertaken on two samples one obtained from the Made Ground, and one from the Topsoil, to provide a general indication for future waste removal.

The WAC certificate is presented in Appendix E.2, within Test Reports 25-07507 and 25-22312.

8.11 HazWasteOnline

Further consideration of results using HazWasteOnline™ can be undertaken on request to give an indication of potentially hazardous properties in the materials analysed.

8.12 Re-use of Excavated Material On-site

The re-use of on-site soils may be undertaken either under the Environmental Permitting Regulations 2007 (EPR), in which case soils other than uncontaminated soils are classed as waste, or under the CL:AIRE Voluntary Code of Practice (CoP) which was published in September 2008 and is accepted as an alternative regime to the EPR.

8.13 Imported Material

Any soil, which is to be imported onto the site, must undergo chemical analysis to permit classification prior to its importation and placement in order to ascertain its status with specific regard to contamination, i.e. to prove that it is suitable for the purpose for which it is intended.

8.14 Discovery Strategy

There may be areas of contamination not identified during the course of the investigation. Such occurrences may also be discovered during the demolition and construction phases for the redevelopment of the site.

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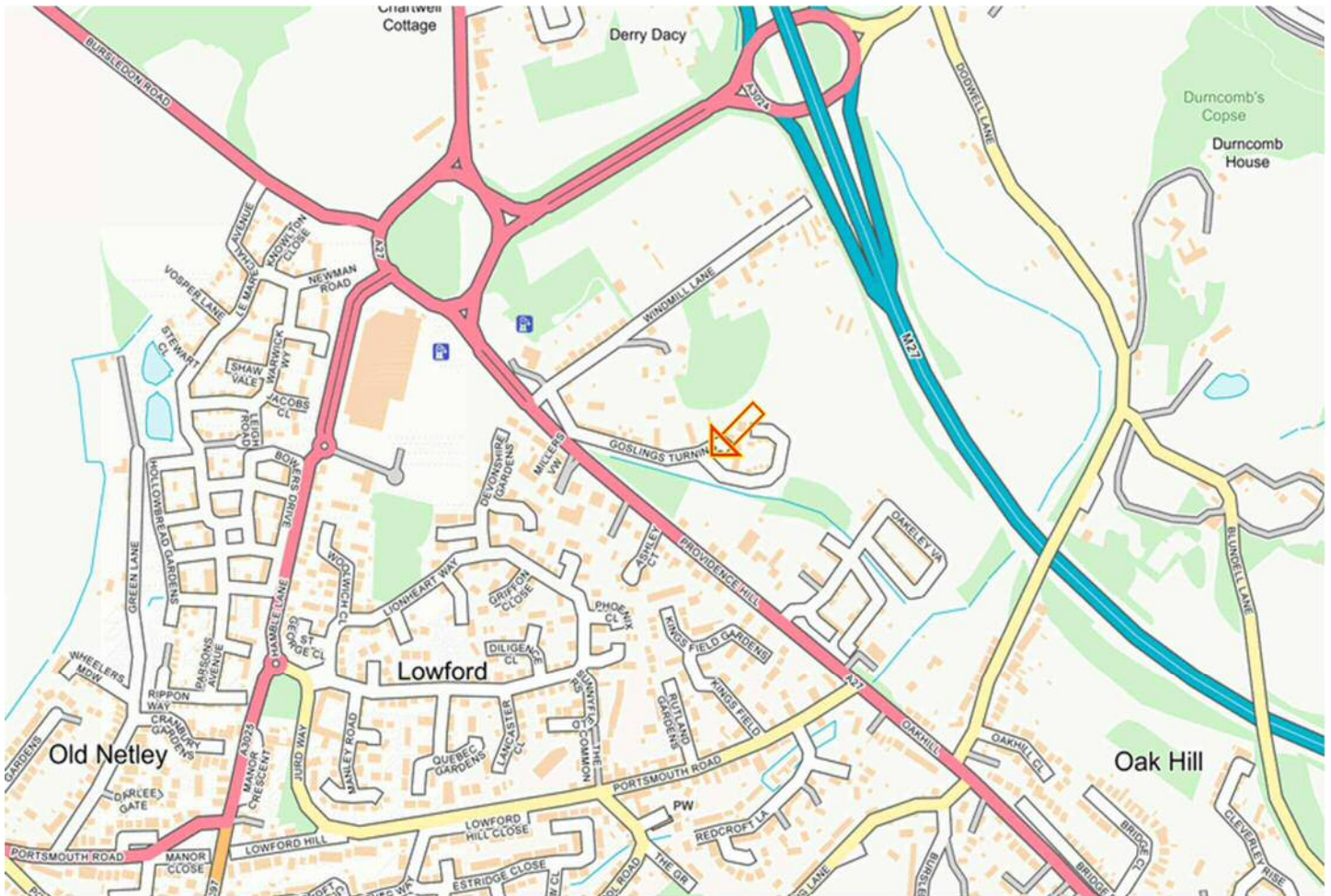


Figure I – Site Location Map



Job Number

22051

Project

New Care Home, Providence Hill, Bursledon, Southampton,
Hampshire SO31 8AP

Client

Colten Care Limited

Date

December 2025



Figure 2 – Aerial Photograph

Job Number

22051

Project

New Care Home, Providence Hill, Bursledon, Southampton, Hampshire SO31 8AP

Client

Colten Care Limited

Date

December 2025

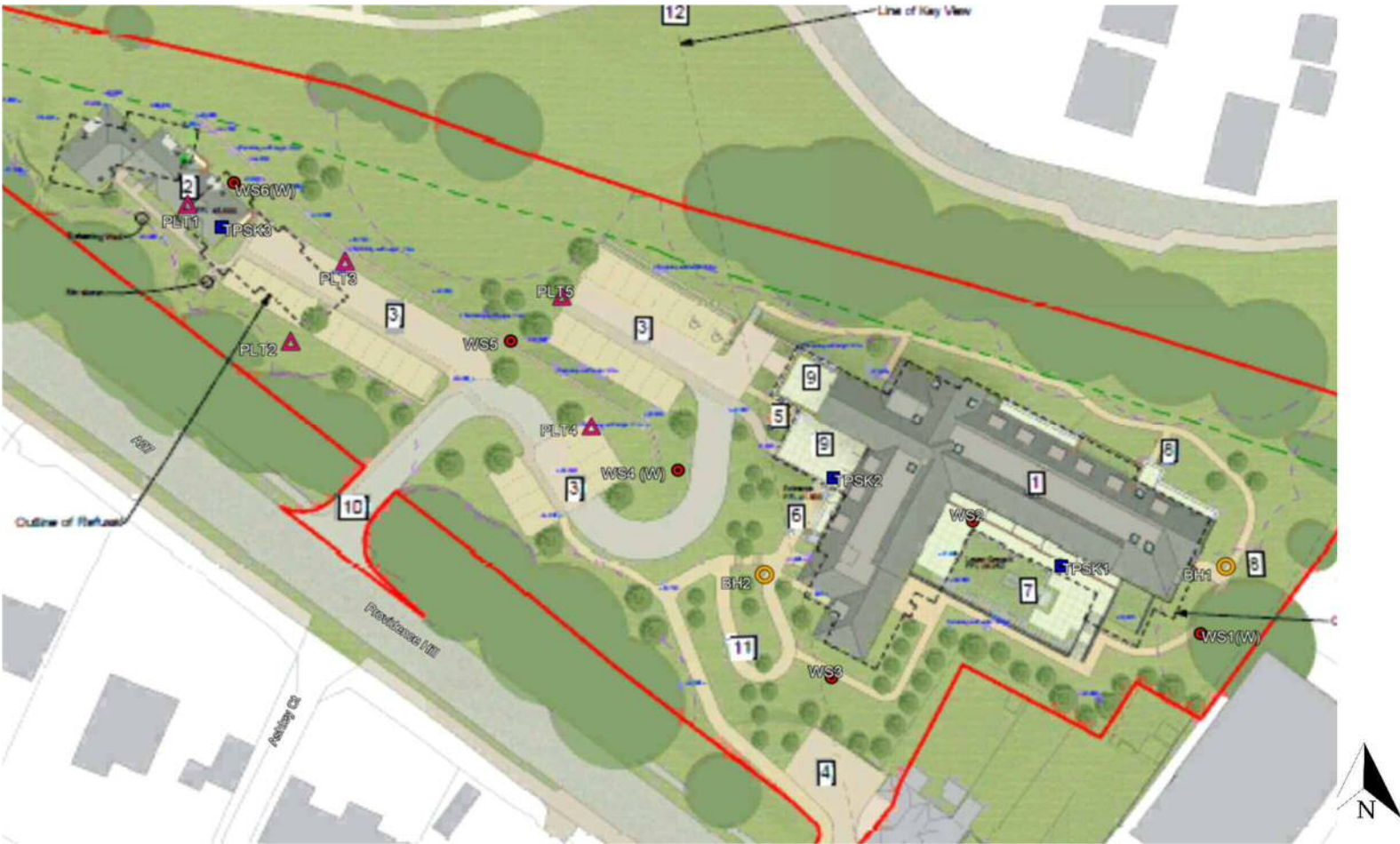


Figure 3 – Exploratory Hole Plan

Job Number

22051

Project

New Care Home, Providence Hill, Bursledon, Southampton, Hampshire SO31 8AP

Client

Colten Care Limited

Date

December 2025

Appendix A Standards and Resources

The site works, soil descriptions and geotechnical testing was undertaken in accordance with the following standards were applicable:

- BS 5930:2015 and BS EN ISO 22476-2&3:2005+A1:2011
- BS EN 1997-1:2004+A1:2013 Eurocode 7
- BS EN ISO 14688-1:2018
- BS EN ISO 14688-2:2018
- BS 10175:2011+A2:2017
- LCRM 2021 Environment Agency
- BS 8004:2015
- BS 1377:1990 Parts 1 to 8
- BRE Digest 241
- BRE Special Digest 1, 2005
- Stroud, M. A. 1974, "The Standard Penetration Test – its application and interpretation", Proc. ICE Conf. on Penetration Testing in the UK, Birmingham. Thomas Telford, London.
- N.E. Simons, B.K. Menzies, "A Short Course in Foundation Engineering"
- NHBC Standards Chapter 4.2, January 2025
- SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination December 2014
- CIRIA C733, Asbestos in soil and made ground: a guide to understanding and managing risks and CAR2012 regulations.
- Google Earth (accessed October 2025)
- British Geological Survey Website & iGeology App (accessed October 2025)

Appendix B Field Work

Appendix B.1 Engineers Logs



Cable Percussion Log

BH1
Sheet 1 of 2

Hole Type CP	Easting 505334.46	Northing 11848.00	Ground Level (m) 35.00	Scale 1:50
Project Name New Care Home, Providence Hill	Project No. 22051	Start Date 2025-08-11	End Date 2025-08-12	

Client Colten Care Ltd	Consultant OK	Contractor
---------------------------	------------------	------------

Inst/ Backfill	Water Levels	Samples and Tests		Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref			Legend	Description	
		0.00	B 0.5				Light brown, gravelly SILT. Gravel is, angular to subangular fine to coarse flint. Frequent fine to medium roots and rootlets. TOPSOIL	
				34.50	0.50		Very stiff, orange mottled light grey, very silty CLAY. Rare fine to medium roots and rootlets. WITTERING FORMATION	0.5
		1.00	D					1.0
		1.00	B 1.5					
		1.50	SPT					1.5
		1.50	D 1.95					
		2.00	D		(3.00)			2.0
		2.50	SPT				Orange and greyish orange mottled, clayey, fine SAND. WITTERING FORMATION	2.5
		2.50	D 2.95					
		3.00	D					3.0
		3.50	D 3.95		31.50			3.5
		4.00	D					4.0
		4.50	SPT				Very soft, grey mottled orange CLAY with occasional pockets and laminations of fine sand. Becoming frequent at 8.00m bgl. WITTERING FORMATION	4.5
		4.50	D 4.95					
		5.00	D		(3.50)			5.0
		6.00	SPT					6.0
		6.00	D					6.5
		6.00	D 6.45					
		7.00	D		28.00			7.0
		7.00	B 7.5					
		7.50	SPT					7.5
		7.50	D 7.95					
		8.00	D		(13.00)			8.0
		9.00	SPT					8.5
		9.00	D					9.0
		9.00	D 9.45					9.5
								10.0

Continued on next page

Remarks Roots and rootlets observed to 2.50m bgl.	Method, Plant, Stability, Dimensions 0.00 - 20.00m Dando 2000-SDA7	Logger OK
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Cable Percussion Log

BH1
Sheet 2 of 2

Hole Type CP	Easting 505334.46	Northing 11848.00	Ground Level (m) 35.00	Scale 1:50
Project Name New Care Home, Providence Hill	Project No. 22051	Start Date 2025-08-11	End Date 2025-08-12	

Client Colten Care Ltd	Consultant OK	Contractor
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Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (thickness) (m)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		10.00	D	N=16 (2,3/3,4,4,5)				As previous page.	
	10.50 10.50	SPT D 10.95							10.5
	11.00	D							11.0
									11.5
	12.00 12.00 12.00	SPT D D 12.45	N=17 (2,3/4,4,5,4)						12.0
									12.5
	13.00	D							13.0
	13.50 13.50	SPT D 13.95	N=17 (3,3/3,4,5,5)						13.5
									14.0
	14.00	D							14.5
									15.0
	15.00 15.00 15.00	SPT D D 15.45	N=16 (3,3/4,3,4,5)						15.5
									16.0
	16.00	D							16.5
	16.50 16.50	SPT D 16.95	N=24 (4,4/5,6,6,7)						17.0
	17.00	D							17.5
				18.0					
18.00 18.00 18.00	SPT D D 18.45	N=28 (4,6/6,8,6,8)		18.5					
				19.0					
19.00	D			19.5					
19.50 19.50	SPT D 19.95	N=31 (3,4/6,7,9,9)		20.0					
	20.00	D		15.00	20.00		End of Borehole at 20.00m		

Remarks Roots and rootlets observed to 2.50m bgl.	Method, Plant, Stability, Dimensions 0.00 - 20.00m Dando 2000-SDA7	Logger OK
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Cable Percussion Log

BH1
SUPPLEMENTARY INFO

Hole Type CP	Easting 505334.46	Northing 11848.00	Ground Level (m) 35.00	Scale 1:50
Project Name New Care Home, Providence Hill		Project No. 22051	Start Date 2025-08-11	End Date 2025-08-12
Client Colten Care Ltd		Consultant OK	Contractor	

Casing Diameter

Base Depth (m)	Casing Diameter (mm)	Remarks
2.50	200	
10.00	150	
20.00	150	

Water Strike - General

Struck (m)	Seal Depth (m)	Casing Depth (m)	Date and Time	Remarks
4.50		2.50	8/11/25	Water inflow.

Water Strike - Details

Struck (m)	Rose To (m)	Time (mins)	Remarks
4.50	4.20	20	

Driller's Descriptions

Top Depth (m)	Base Depth (m)	Description
0.00	7.00	Brownish, slightly clayey SAND.
7.00	20.00	Grey, slightly clayey, fine to coarse SAND.

SPT - Details

Top Depth (m) (Type)	Casing Depth (m)	Water Depth (m)	Hammer Serial No.	Energy Ratio (%)	Results
1.50 (S)			SDA7	73	N=9 (1,1/2,2,2,3)
2.50 (S)			SDA7	73	N=14 (1,1/2,3,4,5)
4.50 (S)			SDA7	73	N=12 (2,3/2,3,3,4)
6.00 (S)			SDA7	73	N=15 (2,3/3,3,4,5)
7.50 (S)			SDA7	73	N=11 (2,2/2,3,2,4)
9.00 (S)			SDA7	73	N=13 (2,2/3,3,3,4)
10.50 (S)			SDA7	73	N=16 (2,3/3,4,4,5)
12.00 (S)			SDA7	73	N=17 (2,3/4,4,5,4)
13.50 (S)			SDA7	73	N=17 (3,3/3,4,5,5)
15.00 (S)			SDA7	73	N=16 (3,3/4,3,4,5)
16.50 (S)			SDA7	73	N=24 (4,4/5,6,6,7)
18.00 (S)			SDA7	73	N=28 (4,6/6,8,6,8)
19.50 (S)			SDA7	73	N=31 (3,4/6,7,9,9)

Continued on next page

Remarks Roots and rootlets observed to 2.50m bgl.	Method, Plant, Stability, Dimensions 0.00 - 20.00m Dando 2000-SDA7	Logger OK
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Cable Percussion Log

BH2
Sheet 1 of 2

Hole Type CP	Easting 505334.43	Northing 11851.33	Ground Level (m) 39.00	Scale 1:50
Project Name New Care Home, Providence Hill	Project No. 22051	Start Date 2025-08-13	End Date 2025-08-14	

Client Colten Care Ltd	Consultant OK	Contractor
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Inst/ Backfill	Water Levels	Samples and Tests		Level (m)	Depth (m) (thickness)	Strata				
		Depth (m)	Type/ Ref			Results	Legend		Description	
		0.00	B 0.5				Very soft, greyish orange mottled orange and grey, silty CLAY. Frequent fine to medium roots and rootlets. TOPSOIL			
					38.50	(0.50)			0.5	
		1.00	D					Very soft, greyish orange mottled orange and grey, silty CLAY. WITTERING FORMATION	1.0	
		1.50 1.50	SPT D 1.95	N=3 (1,1/1,0,1,1)				A pocket of clayey SILT. (1.50 - 2.00m)	1.5	
		2.00	D						2.0	
		2.50 2.50	SPT D 2.95	N=9 (1,2/2,2,2,3)					2.5	
									3.0	
		3.50 3.50	SPT D 3.95	N=9 (1,1/2,2,3,2)					3.5	
		4.00	D						4.0	
		4.50 4.50	SPT D 4.95	N=12 (2,2/2,3,3,4)					4.5	
		5.00	D			(19.50)			5.0	
									5.5	
		6.00 6.00 6.00	SPT D D 6.45	N=15 (2,2/3,4,4,4)					6.0	
									6.5	
		7.00 7.00	D D						7.0	
		7.50 7.50 7.50	SPT D 7.95 B 8	N=14 (2,1/2,3,4,5)					7.5	
									8.0	
									8.5	
		9.00 9.00 9.00	SPT D D 9.45	N=18 (2,3/5,5,4,4)					9.0	
									9.5	
										10.0
		Continued on next page								

Remarks Roots and rootlets observed to 2.20m bgl.	Method, Plant, Stability, Dimensions 0.00 - 20.00m Dando 2000-SDA7	Logger OK
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Cable Percussion Log

BH2
Sheet 2 of 2

Hole Type CP	Easting 505334.43	Northing 11851.33	Ground Level (m) 39.00	Scale 1:50
Project Name New Care Home, Providence Hill	Project No. 22051	Start Date 2025-08-13	End Date 2025-08-14	

Client Colten Care Ltd	Consultant OK	Contractor
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Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		10.00	D				x x x x x x x x x	As previous page.	
		10.50 10.50	SPT D 10.95	N=17 (3,3/4,4,4,5)			x x x x x x x x x		10.5
		11.00	D				x x x x x x x x x		11.0
							x x x x x x x x x		11.5
		12.00 12.00 12.00	SPT D 12.45 D	N=23 (2,3/5,5,7,6)			x x x x x x x x x		12.0
							x x x x x x x x x		12.5
		13.00	D				x x x x x x x x x		13.0
		13.50 13.50	SPT D 13.95	N=20 (3,3/4,5,5,6)			x x x x x x x x x		13.5
		14.00	D				x x x x x x x x x		14.0
							x x x x x x x x x		14.5
		15.00 15.00 15.00	SPT D D 15.45	N=20 (2,4/4,4,6,6)			x x x x x x x x x		15.0
							x x x x x x x x x		15.5
		16.00	D				x x x x x x x x x		16.0
		16.50 16.50	SPT D 16.95	N=23 (3,4/5,5,7,6)			x x x x x x x x x		16.5
		17.00	D				x x x x x x x x x		17.0
							x x x x x x x x x		17.5
		18.00 18.00 18.00	SPT D D 18.45	N=28 (3,4/5,7,8,8)			x x x x x x x x x		18.0
							x x x x x x x x x		18.5
		19.00	D				x x x x x x x x x		19.0
		19.50 19.50	SPT D 19.95	N=35 (4,7/7,9,9,10)			x x x x x x x x x		19.5
		20.00	D		19.00	20.00	x x x	End of Borehole at 20.00m	20.0

Remarks Roots and rootlets observed to 2.20m bgl.	Method, Plant, Stability, Dimensions 0.00 - 20.00m Dando 2000-SDA7	Logger OK
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Cable Percussion Log

BH2
SUPPLEMENTARY INFO

Hole Type CP	Easting 505334.43	Northing 11851.33	Ground Level (m) 39.00	Scale 1:50
Project Name New Care Home, Providence Hill		Project No. 22051	Start Date 2025-08-13	End Date 2025-08-14
Client Colten Care Ltd		Consultant OK	Contractor	

Casing Diameter		
Base Depth (m)	Casing Diameter (mm)	Remarks
2.50	200	
10.00	150	
20.00	150	

Water Strike - General				
Struck (m)	Seal Depth (m)	Casing Depth (m)	Date and Time	Remarks
5.00	7.50	2.50	8/13/25	Water inflow.

Water Strike - Details			
Struck (m)	Rose To (m)	Time (mins)	Remarks
5.00	4.70	10	

Driller's Descriptions		
Top Depth (m)	Base Depth (m)	Description
0.00	7.50	Brownish, slightly clayey SAND.
7.50	20.00	Grey, slightly clayey, silty, fine to coarse SAND.

SPT - Details					
Top Depth (m) (Type)	Casing Depth (m)	Water Depth (m)	Hammer Serial No.	Energy Ratio (%)	Results
1.50 (S)			SDA7	73	N=3 (1,1/1,0,1,1)
2.50 (S)			SDA7	73	N=9 (1,2/2,2,2,3)
3.50 (S)			SDA7	73	N=9 (1,1/2,2,3,2)
4.50 (S)			SDA7	73	N=12 (2,2/2,3,3,4)
6.00 (S)			SDA7	73	N=15 (2,2/3,4,4,4)
7.50 (S)			SDA7	73	N=14 (2,1/2,3,4,5)
9.00 (S)			SDA7	73	N=18 (2,3/5,5,4,4)
10.50 (S)			SDA7	73	N=17 (3,3/4,4,4,5)
12.00 (S)			SDA7	73	N=23 (2,3/5,5,7,6)
13.50 (S)			SDA7	73	N=20 (3,3/4,5,5,6)
15.00 (S)			SDA7	73	N=20 (2,4/4,4,6,6)
16.50 (S)			SDA7	73	N=23 (3,4/5,5,7,6)
18.00 (S)			SDA7	73	N=28 (3,4/5,7,8,8)
19.50 (S)			SDA7	73	N=35 (4,7/7,9,9,10)

Continued on next page

Remarks Roots and rootlets observed to 2.20m bgl.	Method, Plant, Stability, Dimensions 0.00 - 20.00m Dando 2000-SDA7	Logger OK
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Window Sampler

WS1
Sheet 1 of 1

Hole Type WS	Easting 505334.15	Northing 11848.21	Ground Level (m) 36.00	Scale 1:50
Project Name New Care Home, Providence Hill	Project No. 22051	Start Date 2025-08-11	End Date 2025-08-11	

Client Colten Care Ltd	Consultant OK	Contractor
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Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		0.10	ES			(0.40)		Greyish brown, slightly gravelly, clayey SAND. Sand is fine. Gravel is angular to sub-angular, fine to coarse flint with fine clinker and brick. Frequent rootlets. Recovered as compacted and solid. MADE GROUND	
		0.20	ES			0.40		Very stiff, brown mottled yellowish brown and greyish brown, slightly sandy, silty CLAY. Sand is fine. Frequent rootlets. Rare angular fine to medium flint gravel. Moderately bioturbated. WITTERING FORMATION	0.5
		0.50	ES			(0.40)		Very stiff brown mottled yellowish brown, slightly silty very sandy CLAY. Sand is fine. Frequent rootlets. Rare angular fine to medium flint gravel. Occasionally recovered as clayey SAND. WITTERING FORMATION	1.0
		0.60	D			0.80		Occasional angular to sub-angular, fine to medium flint gravel. (1.35 - 1.50m)	1.5
		0.90	ES			(0.70)		Very stiff becoming stiff, light brown laminated brown slightly silty, sandy CLAY. Sand is fine and features in frequent laminations. WITTERING FORMATION	2.0
		0.90	D			1.50		Rare sub-rounded, medium flint gravel. (1.60 - 1.70m)	2.5
		1.40	D			(0.35)		Light brown laminated brown, fine SAND interbedded and interlaminated with silty sandy CLAY. WITTERING FORMATION	3.0
		1.60	D			1.85		Band with predominantly sandy CLAY. (2.20 - 2.25m)	3.5
		1.90	D			(0.65)		Band with predominantly sandy CLAY. (2.30 - 2.35m)	4.0
		2.40	D			2.50		Orange laminated yellowish brown and orangish brown, fine SAND interbedded and interlaminated with silty sandy CLAY. WITTERING FORMATION	4.5
		2.60	D			(0.80)		Yellowish brown laminated orange and orangish brown, fine SAND interbedded and interlaminated with silty sandy CLAY. WITTERING FORMATION	5.0
		3.10	D			3.30			5.5
		3.40	D			(0.70)			6.0
		3.90	D			4.00			6.5
								End of Borehole at 4.00m	7.0

Remarks Rootlets observed to 1.40m bgl.	Method, Plant, Stability, Dimensions 0.00 - 4.00m Premier IV	Logger DW
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Window Sampler

WS1

SUPPLEMENTARY INFO

Hole Type	Easting	Northing	Ground Level (m)	Scale
WS	505334.15	11848.21	36.00	1:50
Project Name	Project No.	Start Date	End Date	
New Care Home, Providence Hill	22051	2025-08-11	2025-08-11	
Client	Consultant	Contractor		
Colten Care Ltd	OK			

Water Strike - General

Struck (m)	Seal Depth (m)	Casing Depth (m)	Date and Time	Remarks
3.20				

Sample Details

Sample ID	Type	Water Level (m)	Remarks
	ES		
	ES		
	ES		
	D		
	ES		
	D		
	D		
	D		
	D		
	D		
	D		
	D		
	D		
	D		
	D		

Remarks	Method, Plant, Stability, Dimensions	Logger
Rootlets observed to 1.40m bgl.	0.00 - 4.00m Premier IV	DW



Window Sampler

WS2
Sheet 1 of 1

Hole Type WS	Easting 505334.68	Northing 11849.82	Ground Level (m) 36.00	Scale 1:50
Project Name New Care Home, Providence Hill	Project No. 22051		Start Date 2025-08-11	End Date 2025-08-11

Client Colten Care Ltd	Consultant OK	Contractor
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Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		0.10	ES		35.70	(0.30)		Very stiff greyish brown, slightly gravelly, sandy CLAY. Sand is predominantly fine. Gravel is angular to well rounded, fine to coarse flint with fine clinker. Frequent rootlets. MADE GROUND	0.5
		0.40	ES			0.30			
		0.50	D			(0.50)			
		0.90	ES		35.20	0.80		Very stiff, brown mottled yellowish brown and greyish brown, slightly sandy, silty CLAY. Sand is fine. Frequent rootlets. Very rare angular fine flint gravel. Moderately bioturbated. WITTERING FORMATION	1.0
		0.90	D			(0.30)			
		1.15	D		34.90	1.10		Very stiff becoming firm to stiff, red, grey and orange mottled, slightly sandy silty CLAY. Sand is fine. Moderately bioturbated. Occasional rootlets.	1.5
		1.35	D			(0.15)			
		1.70	D		34.75	1.25		Firm to stiff orange mottled yellowish brown, slightly sandy, silty fissured CLAY. Sand is fine. Occasional rootlets.	2.0
		2.30	D			(1.35)			
		2.70	D			(0.40)			
		3.20	D		33.00	3.00		Soft, light brownish grey laminated multicoloured, silty sandy CLAY interbedded and interlaminated with fine SAND. WITTERING FORMATION	3.0
		3.70	D			(1.00)			
				32.00	4.00	End of Borehole at 4.00m			4.0
									4.5
									5.0
									5.5
									6.0
									6.5
									7.0
									7.5
									8.0
									8.5
									9.0
									9.5
									10.0

Remarks Rootlets observed to 1.25m bgl.	Method, Plant, Stability, Dimensions 0.00 - 4.00m Premier IV	Logger DW
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Window Sampler

WS2

SUPPLEMENTARY INFO

Hole Type	Easting	Northing	Ground Level (m)	Scale
WS	505334.68	11849.82	36.00	1:50
Project Name	Project No.	Start Date	End Date	
New Care Home, Providence Hill	22051	2025-08-11	2025-08-11	
Client	Consultant	Contractor		
Colten Care Ltd	OK			

Water Strike - General

Struck (m)	Seal Depth (m)	Casing Depth (m)	Date and Time	Remarks
2.70				

Sample Details

Sample ID	Type	Water Level (m)	Remarks
	ES		
	ES		
	D		
	ES		
	D		
	D		
	D		
	D		
	D		
	D		
	D		
	D		
	D		

Remarks	Method, Plant, Stability, Dimensions	Logger
Rootlets observed to 1.25m bgl.	0.00 - 4.00m Premier IV	DW



Window Sampler

WS3
Sheet 1 of 1

Hole Type WS	Easting 505333.96	Northing 11850.85	Ground Level (m) 39.00	Scale 1:50
Project Name New Care Home, Providence Hill		Project No. 22051	Start Date 2025-08-11	End Date 2025-08-11

Client Colten Care Ltd	Consultant OK	Contractor
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Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		0.20	ES		38.70	(0.30)		Very stiff, greyish brown, slightly gravelly, sandy CLAY. Sand is predominantly fine. Gravel is angular to well rounded, fine to coarse flint with very rare concrete and brick. Frequent rootlets. MADE GROUND	
		0.60	ES		38.50	0.30 (0.20)		Very stiff, brown mottled greyish brown, slightly sandy, silty CLAY. Sand is fine. Frequent rootlets. Very rare angular fine flint gravel. Moderately bioturbated. WITTERING FORMATION	0.5
		0.60	D			0.50			
		0.90	ES		38.00	(0.50)		Very stiff, brown mottled yellowish brown and greyish brown, slightly sandy, silty CLAY. Sand is fine. Frequent rootlets and desiccated rootlets. Very rare angular fine flint gravel. Moderately bioturbated. WITTERING FORMATION	1.0
		0.90	D			1.00			
		1.20	D		37.50	(0.50)		Stiff, orange and grey mottled, slightly gravelly sandy CLAY. Sand is fine. Gravel is angular to well rounded fine to medium flint. Occasional rootlets. WITTERING FORMATION	1.5
		1.60	D			1.50			
		2.10	D		37.00	(0.50)		Stiff, grey mottled and laminated orange and reddish brown, slightly sandy, silty CLAY. Sand is fine and features in frequent lenses and inclusions. Occasional desiccated rootlets and rootlets. Very rare sub-angular fine to medium flint gravel. WITTERING FORMATION	2.0
		2.60	D			2.00			
		3.10	D		35.60	(1.40)		Firm, light greyish brown mottled orangish brown and grey, slightly sandy, silty CLAY. Sand is fine and features in frequent fine inclusions and laminations. Rare sub-angular fine to medium ironstone gravel. WITTERING FORMATION	2.5
		3.60	D			3.40		Reddish brown bedded and laminated multicoloured fine SAND. Very frequent fine clay inclusions. Occasional sub-angular fine to medium ironstone gravel in laminations. WITTERING FORMATION	3.0
		3.90	D			(0.60)			3.5
					35.00	4.00		End of Borehole at 4.00m	4.0
									4.5
									5.0
									5.5
									6.0
									6.5
									7.0
									7.5
									8.0
									8.5
									9.0
									9.5
									10.0

Remarks Desiccated rootlets observed to 2.50m bgl.	Method, Plant, Stability, Dimensions 0.00 - 4.00m Premier IV	Logger DW
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Window Sampler

WS3

SUPPLEMENTARY INFO

Hole Type	Easting	Northing	Ground Level (m)	Scale
WS	505333.96	11850.85	39.00	1:50
Project Name	Project No.	Start Date	End Date	
New Care Home, Providence Hill	22051	2025-08-11	2025-08-11	
Client	Consultant	Contractor		
Colten Care Ltd	OK			

Water Strike - General

Struck (m)	Seal Depth (m)	Casing Depth (m)	Date and Time	Remarks
3.00				

Sample Details

Sample ID	Type	Water Level (m)	Remarks
	ES		
	ES		
	D		
	ES		
	D		
	D		
	D		
	D		
	D		
	D		
	D		
	D		
	D		

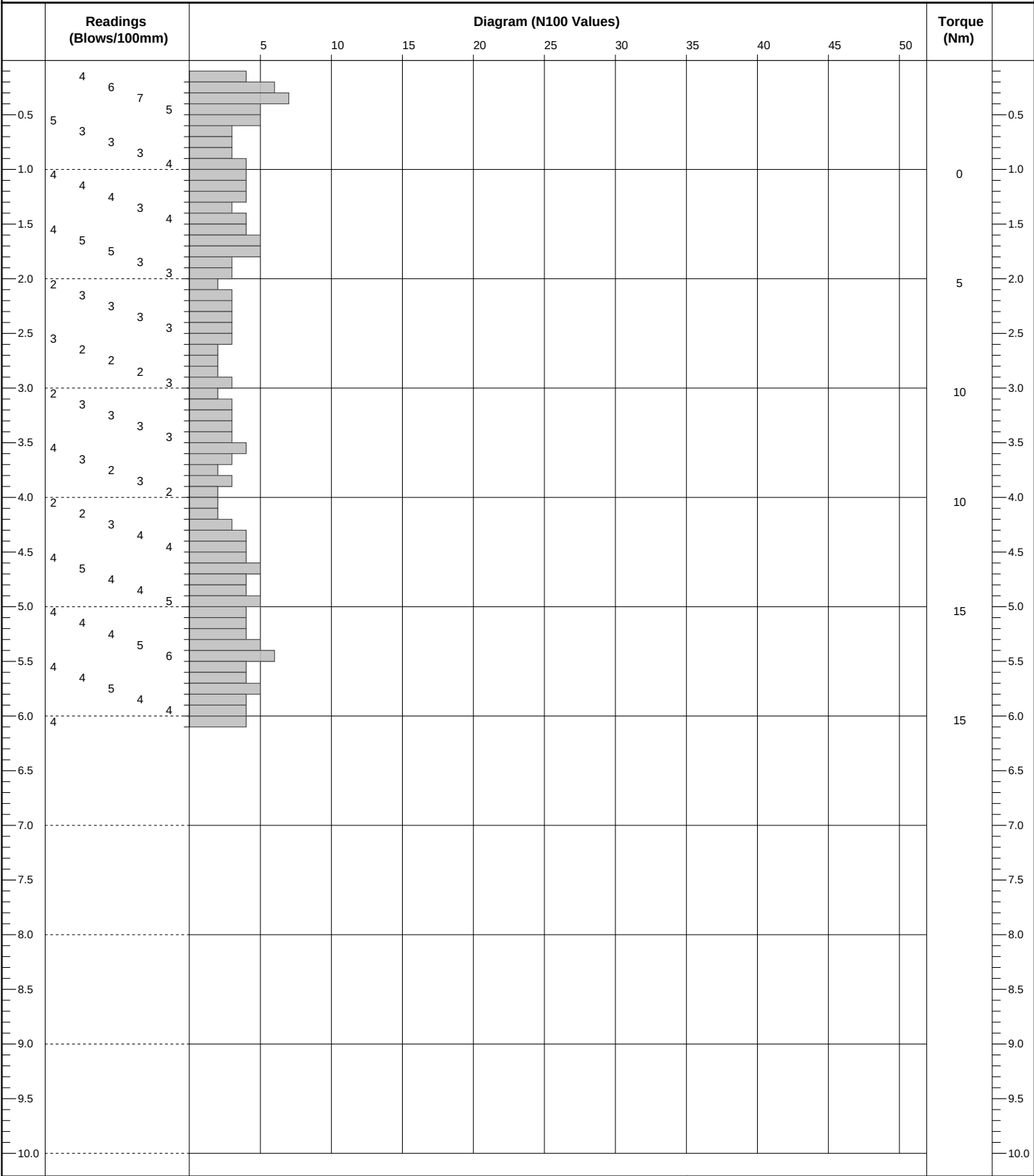
Remarks	Method, Plant, Stability, Dimensions	Logger
Desiccated rootlets observed to 2.50m bgl.	0.00 - 4.00m Premier IV	DW



Dynamic Probe

DP1
Sheet 1 of 1

Probe Type DPSH-B	Easting	Northing	Ground Level (m)	Scale 1:50
Project Name New Care Home, Providence Hill	Project No. 22051	Start Date 2025-08-11	End Date 2025-08-11	
Client Colten Care Ltd	Consultant OK	Contractor		



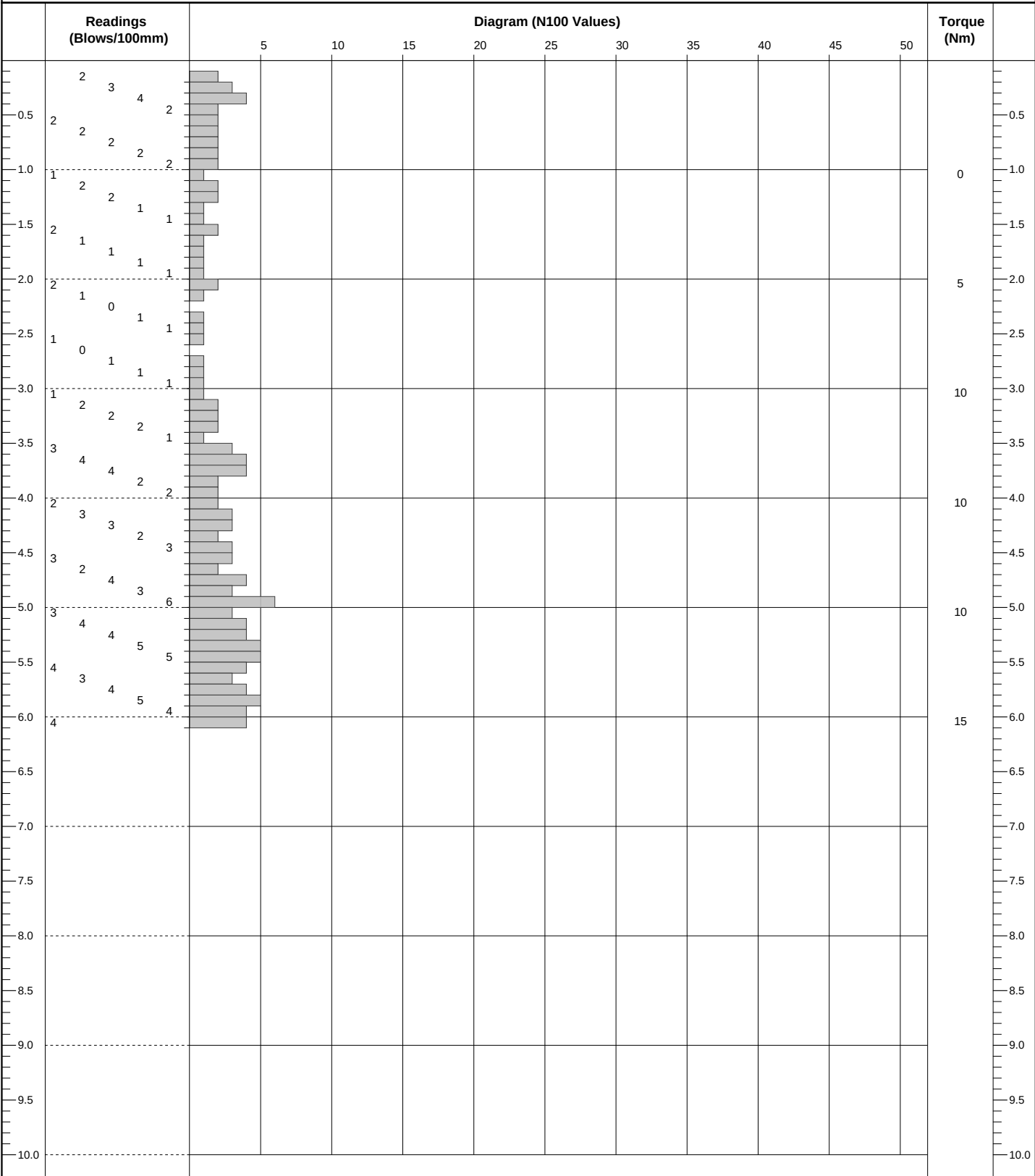
Remarks Energy ratio = 90.85%	Method, Plant 0.00 - 6.00m Premier IV	Logger CF
	Hammer Weight (kg)	65.5
	Hammer Drop (mm)	750
	Cone Diameter (mm)	54
	Cone Angle	
	Rod Diameter (mm)	
	Damper	



Dynamic Probe

DP3
Sheet 1 of 1

Probe Type DPSH-B	Easting	Northing	Ground Level (m)	Scale 1:50
Project Name New Care Home, Providence Hill	Project No. 22051		Start Date 2025-08-11	End Date 2025-08-11
Client Colten Care Ltd	Consultant OK		Contractor	



Remarks Energy ratio = 90.85%	Method, Plant 0.00 - 6.00m Premier IV	Logger CF
Hammer Weight (kg) 65.5 Hammer Drop (mm) 750 Cone Diameter (mm) 54 Cone Angle Rod Diameter (mm) Damper		



Window Sampler

WS4

SUPPLEMENTARY INFO

Hole Type	Easting	Northing	Ground Level (m)	Scale
WS	505334.92	11851.94	40.00	1:50
Project Name	Project No.	Start Date	End Date	
New Care Home, Providence Hill	22051	2025-09-19	2025-09-19	
Client	Consultant	Contractor		
	OK			

Water Strike - General

Struck (m)	Seal Depth (m)	Casing Depth (m)	Date and Time	Remarks
3.20				Groundwater encountered at 3.20m bgl.

Water Strike - Details

Struck (m)	Rose To (m)	Time (mins)	Remarks
3.20	3.50	30	

Sample Details

Sample ID	Type	Water Level (m)	Remarks
	ES		
	ES		
	D		
	ES		
	D		
	D		
	D		
	D		
	D		
	D		
	D		

Remarks	Method, Plant, Stability, Dimensions	Logger
Roots and decayed rootlets observed to 1.90m bgl.	0.00 - 4.00m WS Premier 3	JM



Window Sampler

WS5
Sheet 1 of 1

Hole Type WS	Easting 505335.52	Northing 11853.12	Ground Level (m) 42.00	Scale 1:50
Project Name New Care Home, Providence Hill	Project No. 22051	Start Date 2025-09-19	End Date 2025-09-19	

Client	Consultant OK	Contractor
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Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		0.10	ES			(0.23)		Dark brown, slightly clayey, slightly sandy, slightly gravelly SILT. Gravel is subangular to rounded, fine to medium flint. Sand is fine to medium. Abundant roots and rootlets. TOPSOIL	
		0.30-0.50	ES WAC		41.77	0.23 (0.27)		Stiff, desiccated, greyish brown, slightly silty, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded, fine to coarse flint. Sand is fine to medium. Occasional decayed rootlets. WITTERING FORMATION	0.5
		0.70	D			(0.60)		Very stiff, brown mottled multicoloured, slightly silty, sandy CLAY. Sand is fine to medium. Occasional rootlets and woody fragments. WITTERING FORMATION	1.0
		0.80	ES					Firm, orangish brown mottled grey, slightly silty, slightly gravelly, sandy CLAY. Sand is fine to medium and occasionally occurs in pockets. Gravel is subangular to subrounded fine to medium flint. Rare rootlets. WITTERING FORMATION	1.5
		1.20	D		40.90	1.10		Stiff, light greyish brown mottled orangish brown, slightly silty, slightly sandy CLAY. Sand is fine. Silt and sand occasionally occur in laminations. WITTERING FORMATION	2.0
		1.70	D			(1.40)		Stiff, light greyish brown CLAY with laminated orangish brown silt and sand. Sand is fine. WITTERING FORMATION	2.5
		2.20	D					Stiff, light greyish brown CLAY with laminated orangish brown silt and sand. Sand is fine. WITTERING FORMATION	3.0
		2.70	D		39.50	2.50		Stiff, light greyish brown CLAY with laminated orangish brown silt and sand. Sand is fine. WITTERING FORMATION	3.5
		3.20	D		39.00	3.00		Stiff, light greyish brown CLAY with laminated orangish brown silt and sand. Sand is fine. WITTERING FORMATION	4.0
		3.70	D			(1.00)		Stiff, light greyish brown CLAY with laminated orangish brown silt and sand. Sand is fine. WITTERING FORMATION	4.5
					38.00	4.00		End of Borehole at 4.00m	5.0
									5.5
									6.0
									6.5
									7.0
									7.5
									8.0
									8.5
									9.0
									9.5
									10.0

Remarks Roots and decayed rootlets observed to 2.20m bgl.	Method, Plant, Stability, Dimensions 0.00 - 4.00m WS Premier 3	Logger JM
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Window Sampler

WS5

SUPPLEMENTARY INFO

Hole Type	Easting	Northing	Ground Level (m)	Scale
WS	505335.52	11853.12	42.00	1:50
Project Name	Project No.	Start Date	End Date	
New Care Home, Providence Hill	22051	2025-09-19	2025-09-19	
Client	Consultant	Contractor		
	OK			

Water Strike - General

Struck (m)	Seal Depth (m)	Casing Depth (m)	Date and Time	Remarks
3.30				Groundwater encountered at 3.30m bgl.

Water Strike - Details

Struck (m)	Rose To (m)	Time (mins)	Remarks
3.30	3.80	30	

Sample Details

Sample ID	Type	Water Level (m)	Remarks
	ES		
	ES		
	D		
	ES		
	D		
	D		
	D		
	D		
	D		
	D		

Remarks	Method, Plant, Stability, Dimensions	Logger
Roots and decayed rootlets observed to 2.20m bgl.	0.00 - 4.00m WS Premier 3	JM



Window Sampler

WS6
Sheet 1 of 1

Hole Type WS	Easting 505336.24	Northing 11855.04	Ground Level (m) 43.00	Scale 1:50
Project Name New Care Home, Providence Hill	Project No. 22051	Start Date 2025-09-19	End Date 2025-09-19	

Client	Consultant OK	Contractor
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Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		0.20-0.40	ES WAC		42.95	(0.05)		Dark brown, slightly clayey, slightly sandy SILT. Sand is fine to medium. Abundant roots, rootlets, and woody fragments. TOPSOIL	
					42.80	(0.15)		Recovered as stiff, dessicated, greyish brown, slightly sandy, slightly gravelly, silty CLAY. Gravel is subangular to subrounded, fine flint. Sand is fine to coarse. Frequent rootlets. WITTERING FORMATION	0.5
		0.60	ES		42.45	(0.35)		Recovered as stiff, dessicated, brown, slightly silty, slightly sandy, slightly gravelly CLAY. Gravel is subangular to well rounded, fine to coarse flint. Sand is fine to medium. Frequent rootlets. WITTERING FORMATION	1.0
		0.70	D		42.00	(0.45)		Stiff, brown mottled multicoloured, slightly silty, slightly sandy, slightly gravelly CLAY. Gravel is subangular to well rounded, fine to coarse flint. Sand is fine to medium. Rare rootlets. WITTERING FORMATION	1.5
		0.90	ES		41.10	(0.90)		Stiff, orangish brown mottled grey, slightly silty, slightly sandy, gravelly CLAY. Gravel is subangular to subrounded, fine to coarse flint. Sand is fine to medium. WITTERING FORMATION	2.0
		1.20	D		40.80	(1.00)		Multicoloured, slightly silty, slightly clayey, fine to coarse SAND. WITTERING FORMATION	2.5
		1.70	D		39.80	(3.20)		Stiff becoming soft with depth, greyish brown mottled multicoloured, slightly silty, slightly sandy CLAY. Sand is fine. Silt and sand occasionally occur in laminations. WITTERING FORMATION	3.0
		2.10	D		39.20	(0.60)		Soft, orangish brown CLAY with laminated multicoloured silt and sand. Sand is fine. WITTERING FORMATION	3.5
		2.60	D		39.00	(4.00)		Soft, brownish grey CLAY with laminated grey silt and sand. Sand is fine. WITTERING FORMATION	4.0
		3.10	D					End of Borehole at 4.00m	4.5
		3.60	D						5.0
		3.90	D						5.5

Remarks Roots and decayed rootlets observed to 1.70m bgl.	Method, Plant, Stability, Dimensions 0.00 - 4.00m WS Premier 3	Logger JM
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Window Sampler

WS6

SUPPLEMENTARY INFO

Hole Type	Easting	Northing	Ground Level (m)	Scale
WS	505336.24	11855.04	43.00	1:50
Project Name	Project No.	Start Date	End Date	
New Care Home, Providence Hill	22051	2025-09-19	2025-09-19	
Client	Consultant	Contractor		
	OK			

Water Strike - General

Struck (m)	Seal Depth (m)	Casing Depth (m)	Date and Time	Remarks
2.50				Groundwater encountered at 2.50m bgl.

Water Strike - Details

Struck (m)	Rose To (m)	Time (mins)	Remarks
2.50	2.30	30	

Sample Details

Sample ID	Type	Water Level (m)	Remarks
	ES		
	ES		
	D		
	ES		
	D		
	D		
	D		
	D		
	D		
	D		
	D		

Remarks	Method, Plant, Stability, Dimensions	Logger
Roots and decayed rootlets observed to 1.70m bgl.	0.00 - 4.00m WS Premier 3	JM

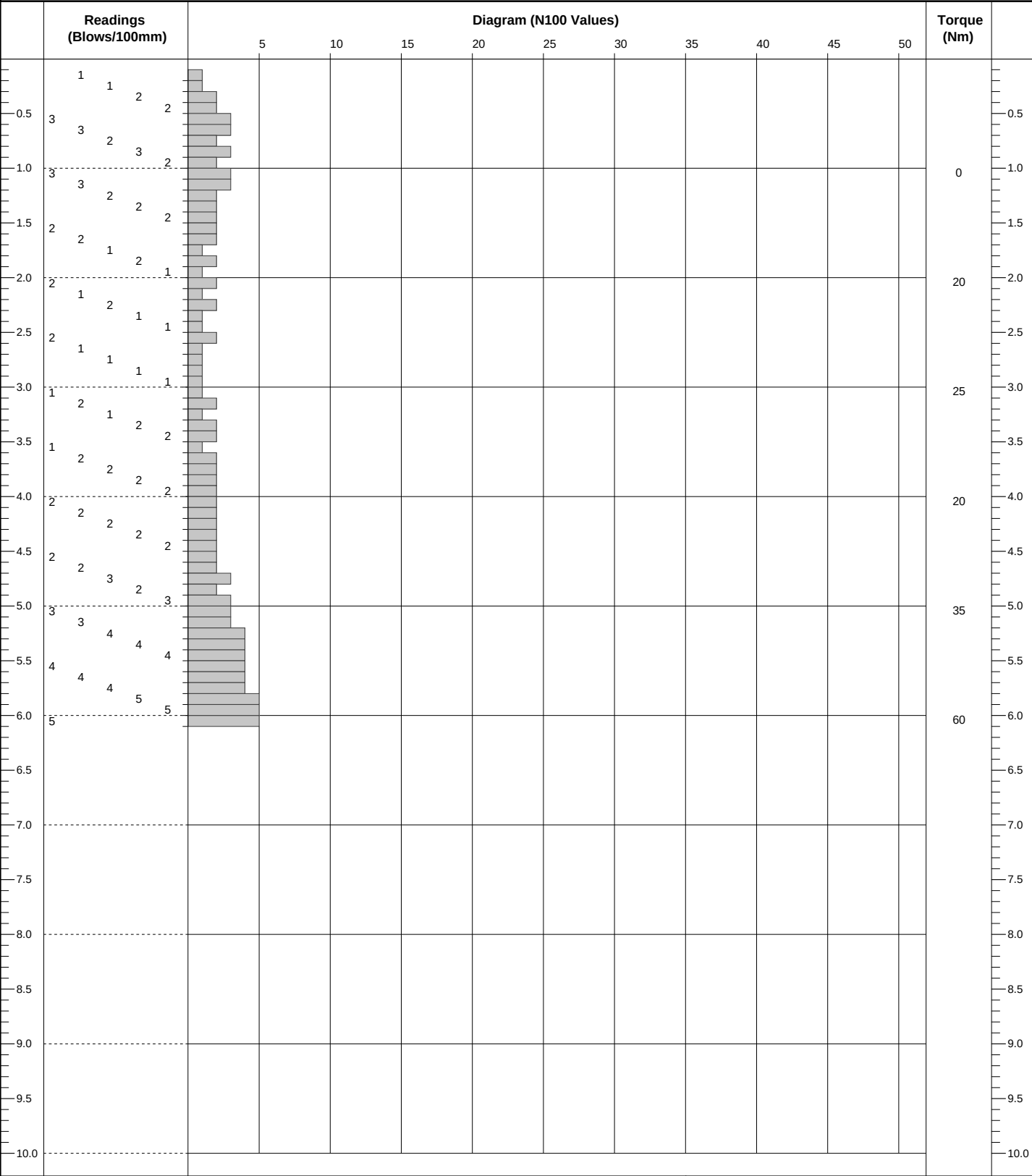


Dynamic Probe

DP4
Sheet 1 of 1

Probe Type DPSH-B	Easting 505334.92	Northing 11851.94	Ground Level (m) 40.00	Scale 1:50
Project Name New Care Home, Providence Hill	Project No. 22051		Start Date 2025-09-19	End Date 2025-09-19

Client	Consultant OK	Contractor
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Remarks Rig efficiency=90.64%.	Method, Plant 0.00 - 6.00m DP Premier 3	Logger GJB
Hammer Weight (kg) 64.5 Hammer Drop (mm) 750 Cone Diameter (mm) 54 Cone Angle Rod Diameter (mm) Damper		

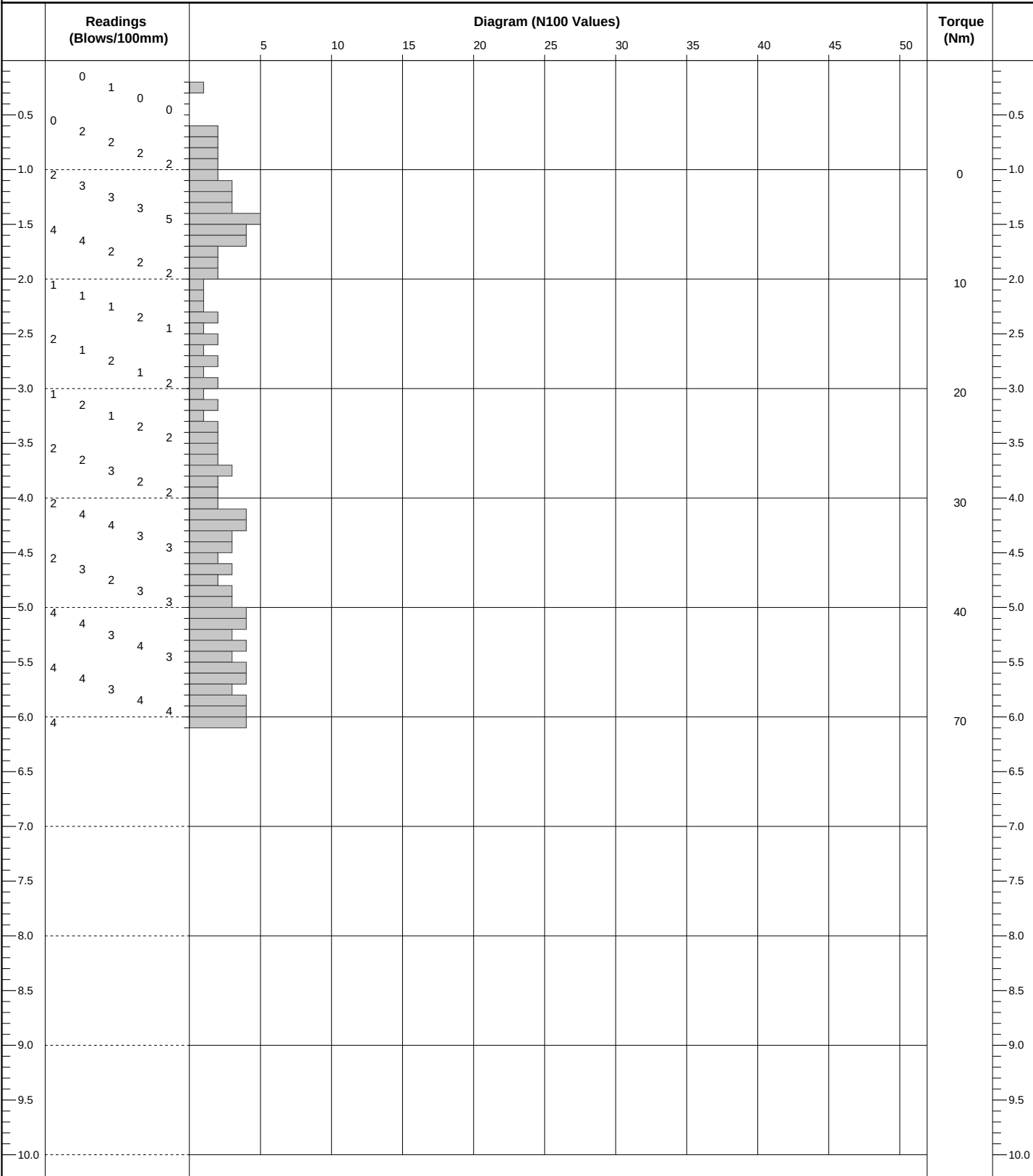


Dynamic Probe

DP5
Sheet 1 of 1

Probe Type DPSH-B	Easting 505335.52	Northing 11853.12	Ground Level (m) 42.00	Scale 1:50
Project Name New Care Home, Providence Hill	Project No. 22051	Start Date 2025-09-19	End Date 2025-09-19	

Client	Consultant OK	Contractor
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Remarks Rig efficiency=90.64%.	Method, Plant 0.00 - 6.00m DP Premier 3	Logger GJB
	Hammer Weight (kg) 64.5 Hammer Drop (mm) 750 Cone Diameter (mm) 54 Cone Angle Rod Diameter (mm) Damper	

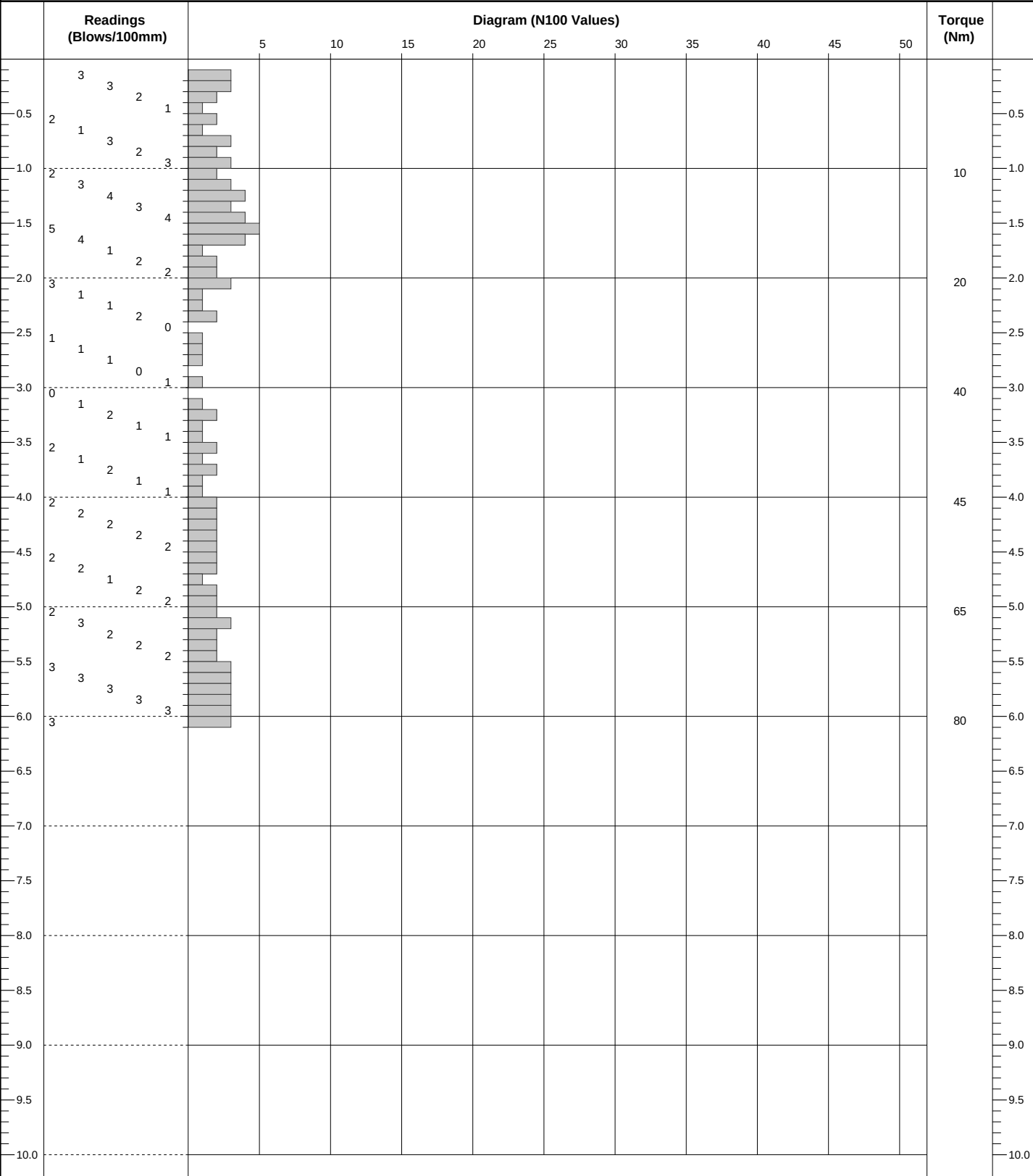


Dynamic Probe

DP6
Sheet 1 of 1

Probe Type DPSH-B	Easting 505336.24	Northing 11855.04	Ground Level (m) 43.00	Scale 1:50
Project Name New Care Home, Providence Hill	Project No. 22051		Start Date 2025-09-19	End Date 2025-09-19

Client	Consultant OK	Contractor
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Remarks Rig efficiency=90.64%.	Method, Plant 0.00 - 6.00m DP Premier 3	Logger GJB
Hammer Weight (kg) 64.5 Hammer Drop (mm) 750 Cone Diameter (mm) 54 Cone Angle Rod Diameter (mm) Damper		



Trial Pit

TPSK1
Sheet 1 of 1

Hole Type TP	Easting 505334.47	Northing 11849.19	Ground Level (m) 36.00	Scale 1:25
Project Name New Care Home, Bursledon, Southampton	Project No. 22051	Start Date 2025-09-17	End Date 2025-09-17	

Client Colten Care Ltd	Consultant OK	Contractor
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Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		0.20	B		35.70	(0.30)		Soft, dark orangish grey and brown, silty CLAY. Rare occasional fine ash, brick fragments and fine to coarse angular to sub-angular flint gravel. Rare fine organic material (bark mulch). Rare fine roots and occasional rootlets. MADE GROUND	
		0.50	B			0.30		Soft, light orangish grey mottled brown, sandy CLAY. Rare fine to coarse angular to sub-angular flint gravel. Occasional intermittent pockets of light orangish brown fine to coarse sand. Occasional rootlets. WITTERING FORMATION	0.5
		1.00	D			(1.10)			1.0
		1.50	D		34.60	1.40		Soft, light orangish grey and brown mottled, very sandy CLAY. Frequent intermittent pockets of light grey fine to coarse sand. WITTERING FORMATION	1.5
		2.00	D			(1.70)			2.0
		2.50	D						2.5
		3.00	D		32.90	3.10			3.0
								End of Trial Pit at 3.10m	3.5
									4.0
									4.5
									5.0

Remarks Roots and rootlets observed to 1.40m bgl.	Method, Plant, Stability, Dimensions 0.00 - 3.10m JCB 3CX L = 2.00m W = 0.55m	Logger GJB
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Trial Pit

TPSK1
SUPPLEMENTARY INFO

Hole Type TP	Easting 505334.47	Northing 11849.19	Ground Level (m) 36.00	Scale 1:25
Project Name New Care Home, Bursledon, Southampton		Project No. 22051	Start Date 2025-09-17	End Date 2025-09-17
Client Colten Care Ltd		Consultant OK	Contractor	

Water Strike - General

Struck (m)	Seal Depth (m)	Casing Depth (m)	Date and Time	Remarks
				No groundwater encountered.

Sample Details

Sample ID	Type	Water Level (m)	Remarks
	B		
	B		
	D		
	D		
	D		
	D		
	D		

Remarks Roots and rootlets observed to 1.40m bgl.	Method, Plant, Stability, Dimensions 0.00 - 3.10m JCB 3CX L = 2.00m W = 0.55m	Logger GJB
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Trial Pit

TPSK2

Sheet 1 of 1

Hole Type TP	Easting 505334.88	Northing 11850.83	Ground Level (m) 37.00	Scale 1:25
Project Name New Care Home, Bursledon, Southampton	Project No. 22051	Start Date 2025-09-17	End Date 2025-09-17	

Client Colten Care Ltd	Consultant OK	Contractor
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Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		0.20	B		36.65	(0.35)		Soft, dark orangish grey mottled brown, silty CLAY. Frequent fine to coarse ash. Occasional fine to coarse brick fragments. Rare fine to coarse angular to sub-angular flint gravel. Rare fine roots and occasional rootlets. MADE GROUND	
		0.50	B			0.35		Soft, light orangish grey mottled brown, sandy CLAY. Rare fine to coarse angular to sub-angular flint gravel. Occasional intermittent pockets of light orange brown fine to coarse sand. Occasional rootlets. WITTERING FORMATION	0.5
		1.00	D		35.40	(1.25)			1.0
		1.50	D			1.60			1.5
		2.00	D			(1.40)		Soft, light orangish grey and brown, very sandy CLAY. Frequent intermittent pockets of light grey, fine to coarse sand. Occasional fine to coarse sandstone gravel. Rare rootlets. WITTERING FORMATION	2.0
		2.50	D		34.00				2.5
		3.00	D			3.00		End of Trial Pit at 3.00m	3.0
									3.5
									4.0
									4.5
									5.0

Remarks Roots and rootlets observed to 1.80m bgl.	Method, Plant, Stability, Dimensions 0.00 - 3.00m JCB 3CX L = 2.10m W = 0.55m	Logger GJB
--	--	---------------



Trial Pit

TPSK2
SUPPLEMENTARY INFO

Hole Type TP	Easting 505334.88	Northing 11850.83	Ground Level (m) 37.00	Scale 1:25
Project Name New Care Home, Bursledon, Southampton		Project No. 22051	Start Date 2025-09-17	End Date 2025-09-17
Client Colten Care Ltd		Consultant OK	Contractor	

Water Strike - General

Struck (m)	Seal Depth (m)	Casing Depth (m)	Date and Time	Remarks
				No groundwater encountered.

Sample Details

Sample ID	Type	Water Level (m)	Remarks
	B		
	B		
	D		
	D		
	D		
	D		
	D		

Remarks Roots and rootlets observed to 1.80m bgl.	Method, Plant, Stability, Dimensions 0.00 - 3.00m JCB 3CX L = 2.10m W = 0.55m	Logger GJB
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Trial Pit

TPSK3
Sheet 1 of 1

Hole Type TP	Easting 505336.04	Northing 11855.12	Ground Level (m) 44.00	Scale 1:25
Project Name New Care Home, Bursledon, Southampton	Project No. 22051	Start Date 2025-09-17	End Date 2025-09-17	

Client Colten Care Ltd	Consultant OK	Contractor
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Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		0.20	B		43.60	(0.40)		Soft, orangish grey and brown mottled, slightly disiccated, silty CLAY. Rare fine to coarse brick fragments. Rare to occasional fine to coarse angular to sub-angular flint gravel. Rare fine roots and occasional rootlets. MADE GROUND	
		0.50	B			0.40		Soft, light orangish grey mottled brown, slightly sandy, very gravelly CLAY. Frequent becoming occasional, fine to coarse angular to sub-rounded flint gravel. Occasional intermittent pockets of light orangish brown, fine to coarse sand. Rare rootlets. WITTERING FORMATION	0.5
		1.00	D		42.70	(0.90)			1.0
		1.50	D			1.30		Soft to firm, light reddish grey, slightly sandy CLAY. Rare fine to coarse angular to sub-angular flint gravel. Rare rootlets. WITTERING FORMATION	1.5
		2.00	D		41.60	(1.10)			2.0
		2.50	D			2.40		Soft, light orangish grey mottled brown, very sandy CLAY. Frequent intermittent pockets of light greyish orange mottled brown fine to coarse sand. WITTERING FORMATION	2.5
		3.00	D		41.00	3.00		End of Trial Pit at 3.00m	3.0
									3.5
									4.0
									4.5
									5.0

Remarks Roots and rootlets observed to 1.50m bgl.	Method, Plant, Stability, Dimensions 0.00 - 3.00m JCB 3CX L = 1.90m W = 0.55m	Logger GJB
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Appendix C Geotechnical In-Situ and Laboratory Testing

Appendix C.1 Classification

Classification based on SPT “N” values:

The inferred undrained strength of the cohesive soils was based on the SPT “N” blow counts, derived from the relationship suggested by Stroud (1974) and classified using Table C.1.1. (Ref: Stroud, M. A. 1974, “The Standard Penetration Test – its application and interpretation”, Proc. ICE Conf. on Penetration Testing in the UK, Birmingham. Thomas Telford, London.).

Table C.1.1 SPT “N” Blow Count Cohesive Classification

Classification	Undrained Cohesive Strength C_u (kPa)
Extremely low	<10
Very low	10 – 20
Low	20 – 40
Medium	40 – 75
High	75 – 150
Very high	150 – 300
Extremely high	> 300

Note(s): (Ref: BS EN ISO 14688-2:2004+A1:2013 Clause 5.3.)

The relative density of granular soils was classified based of the relationship given in Table C.1.2.

The *UK National Annex to Eurocode 7: Geotechnical design – Part 2: Ground investigation and testing*, NA 3.7 SPT test, BS EN 1997-2:2007, Annex F states “Relative density descriptions on borehole records should also be based on uncorrected SPT N values, unless significantly disturbed, using the density classification in BS 5930:2015, Table 7.

Table C.1.2 SPT “N” Blow Count Granular Classification

Classification	SPT “N” blow count (blows/300mm)
Very loose	0 to 4
Loose	4 to 10
Medium dense	10 to 30
Dense	30 to 50
Very dense	Greater than 50

Note(s): (Ref: The Standard Penetration Test (SPT): Methods and Use, CIRIA Report 143, 1995)

Appendix C.2 Interpretation**Table C.2.1 Interpretation of SPT Tests**

BH	Strata	SPT N60 Blow Counts	Inferred Cohesive Strength
BH1	WTT (C) 0.50 – 3.50 & 7.00 – 20.00 CLAY	11 – 38	Medium to Very high ($C_u = 55 - 190\text{kPa}$)
	WTT (G) 3.50 – 7.00 SAND	14 – 18	Medium dense
BH2	WTT (C) 0.50 – 20.00 CLAY	4 – 42	Very low to Very high ($C_u = 20 - 210\text{kPa}$)

Table C.2.2 Interpretation of DPSH Blow Counts

DP	Strata	Equivalent SPT N60 Blow Counts	Inferred Cohesive Strength/Granular Density
DP1	WTT 0.40 – 1.85 CLAY	13 - 21	Medium to high ($C_u = 65 - 105\text{kPa}$)
	WTT ¹ 1.85 – 6.00 SAND	8 - 25	Loose to Medium dense
DP2	WTT 0.30 – 3.00 CLAY	<2 – 13	Extremely low to Medium ($C_u = <10 - 65\text{kPa}$)
	WTT ¹ 3.00 – 6.00 SAND	13 - 21	Medium dense
DP3	WTT 0.30 – 3.40 CLAY	4 – 17	Very low to High ($C_u = 20 - 85\text{kPa}$)
	WTT ¹ 3.40 – 6.00 SAND	8 – 25	Loose to Medium dense
DP4	WTT 0.20 – 4.90 CLAY	4 – 13	Very low to Medium ($C_u = 20 - 65\text{kPa}$)
	WTT ¹ 4.90 – 6.00 SAND	13 - 21	Medium dense
DP5	WTT 0.23 – 4.70 CLAY	<2 – 21	Extremely low to High ($C_u = <10 - 105\text{kPa}$)
	WTT ¹ 4.70 – 6.00 SAND	13 – 17	Medium dense

DP	Strata	Equivalent SPT N60 Blow Counts	Inferred Cohesive Strength/Granular Density
DP6	WTT 0.05 – 5.00 CLAY	<2 – 21	Extremely low to High ($C_u = <10 - 105\text{kPa}$)
	WTT ¹ 5.00 – 6.00 SAND	8 - 13	Loose to Medium dense
Note(s): ¹ Ground conditions inferred past the base of windowless sampler boreholes.			

Table C.2.3 Interpretation of Atterberg Limit Tests

Stratum	M/C (%)	PI (%)	>425µm (%)	Mod PI (%)	Class	VCP BRE	NHBC
WTT	16.3 – 35.6	23 - 43	83 - 100	19 - 43	CI - CV	Low to High	Low to High

Note(s): BRE Volume Change Potential refers to BRE Digest 240 (based on Atterberg results). VCP=Volume Change Potential
 NHBC Volume Change Potential refers to NHBC Standards Chapter 4.2
 Soils Classification based on British Soil Classification System
 The Atterberg Limit Tests were undertaken in accordance with BS 1377: Part 2:1990 Clauses 3.2, 4.3 and 5

Table C.2.4 Interpretation of PSD Tests

Location	Depth (m bgl)	Soil Description	VCP		>63µm Sieve (%)
			BRE	NHBC	
WS1	2.60	Brown slightly gravelly silty/ clayey fine to coarse SAND	Yes	No	33
WS3	3.60	Brown/ orange slightly gravelly silty/ clayey fine to coarse SAND	Yes	No	15
BH1	6.00	Brown slightly gravelly silty/ clayey fine to coarse SAND	Yes	No	28
Note(s): (The Particle Size Distribution Tests were undertaken in accordance with BS 1377: Part 2: 1990 Clause 9). VCP=Volume Change Potential					

Appendix C.3 Geotechnical In-Situ and Laboratory Results

Soakaway Calculations

Trial Pit & Test No.	TPSK1 Test 1
Site Name	New Care Home
Project No.	22051

Field Test

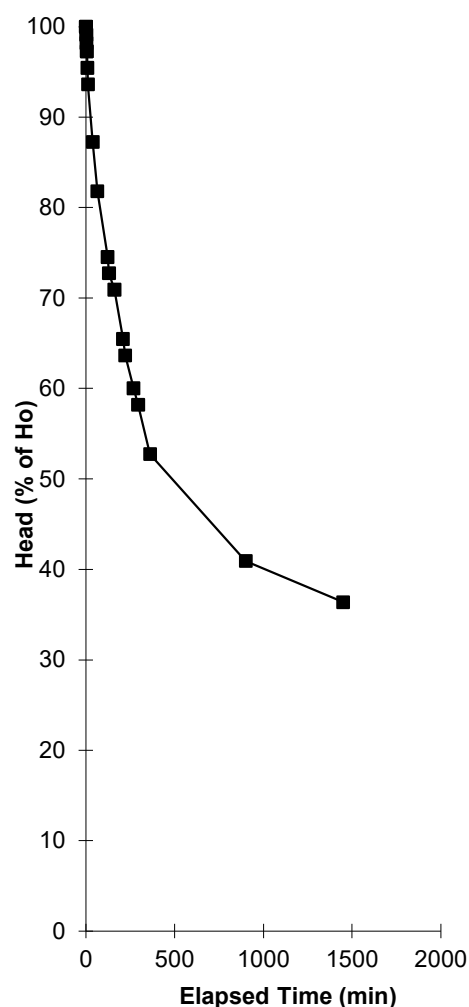
Trial Pit Log (include details of groundwater):

See trial Pit record

Depth of Pit	3.00 m
Width of Pit	0.55 m
Length of Pit	1.20 m
Starting Head of Water	1.10 m
as50	2.585 m2
Vp75-25	0.363 m3
t75-25	n/a min
water used	0.7260 m3
f	n/a m/sec.

Field Data

Depth to	Elapsed	Head of	Head of
Water	Time	Water	Water
(m)	(min)	(% of Ho)	(m)
1.90	0	100	1.1
1.90	1	100	1.10
1.91	1	99	1.09
1.92	3	98	1.08
1.93	4	97	1.07
1.93	6	97	1.07
1.95	8	95	1.05
1.97	11	94	1.03
2.04	39	87	0.96
2.10	65	82	0.90
2.18	123	75	0.82
2.20	131	73	0.80
2.22	161	71	0.78
2.28	209	65	0.72
2.30	222	64	0.70
2.34	269	60	0.66
2.36	294	58	0.64
2.42	361	53	0.58
2.55	900	41	0.45
2.60	1450	36	0.40
T75	119.000	75	
T25	0.000	25	
T75-25	n/a	Derived from Best Fit	



Comments

Infiltration stopped after 24hrs. An infiltration rate could not be determined.

SOILS LIMITED

**Newton House, Cross Road, Tadworth
Surrey, KT20 5SR**

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Soakaway Calculations

Trial Pit & Test No.	TPSK2 Test 1
Site Name	New Care Home
Project No.	22051

Field Test

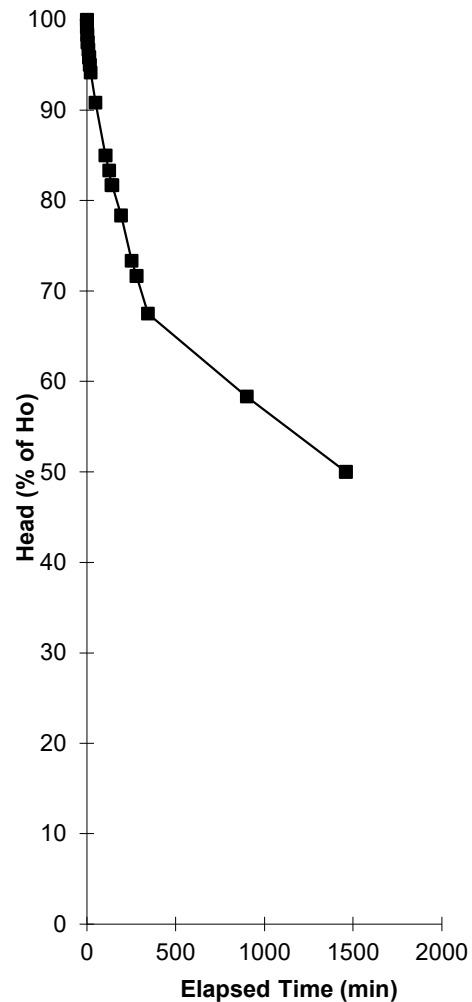
Trial Pit Log (include details of groundwater):

See trial Pit record

Depth of Pit	3.00 m
Width of Pit	0.55 m
Length of Pit	1.20 m
Starting Head of Water	1.20 m
as50	2.76 m2
Vp75-25	0.396 m3
t75-25	n/a min
water used	0.7920 m3
f	n/a m/sec.

Field Data

Depth to Water (m)	Elapsed Time (min)	Head of Water (% of Ho)	Head of Water (m)
1.80	0	100	1.2
1.81	1	99	1.19
1.82	2	98	1.18
1.83	4	98	1.17
1.83	6	98	1.17
1.84	9	97	1.16
1.85	11	96	1.15
1.85	13	96	1.15
1.86	17	95	1.14
1.87	21	94	1.13
1.91	48	91	1.09
1.98	105	85	1.02
2.00	126	83	1.00
2.02	138	82	0.98
2.02	143	82	0.98
2.06	192	78	0.94
2.12	252	73	0.88
2.14	280	72	0.86
2.19	344	68	0.81
2.30	900	58	0.70
2.40	1460	50	0.60



T75	232.483	75
T25	0.000	25
T75-25	n/a	Derived from Best Fit

Comments

Infiltration stopped after 24hrs. An infiltration rate could not be determined.

SOILS LIMITED

Newton House, Cross Road, Tadworth
Surrey, KT20 5SR

Telephone: 01737 814 221
Facsimile: 01737 812 557

Soakaway Calculations

Trial Pit & Test No.	TPSK3 Test 1
Site Name	New Care Home
Project No.	22051

Field Test

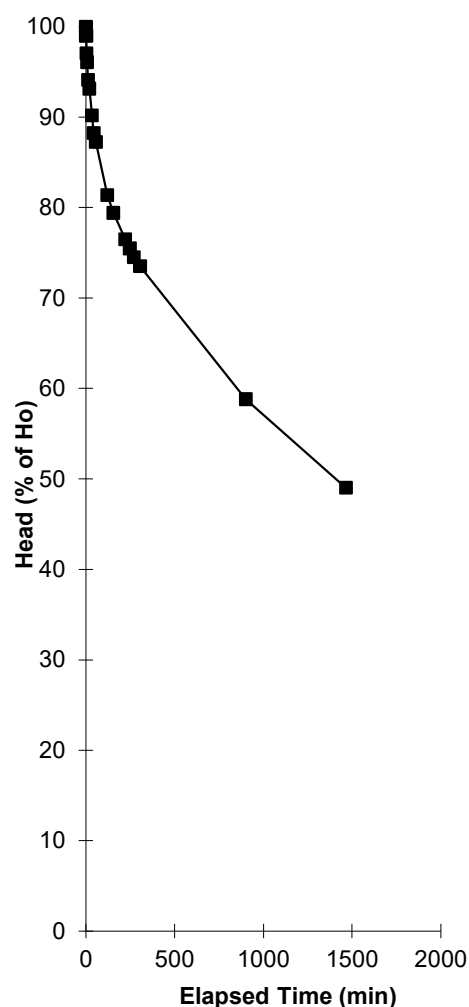
Trial Pit Log (include details of groundwater):

See trial Pit record

Depth of Pit	3.00 m
Width of Pit	0.55 m
Length of Pit	1.90 m
Starting Head of Water	1.02 m
as50	3.544 m2
Vp75-25	0.53295 m3
t75-25	n/a min
water used	1.0659 m3
f	n/a m/sec.

Field Data

Depth to	Elapsed	Head of	Head of
Water	Time	Water	Water
(m)	(min)	(% of Ho)	(m)
1.98	0	100	1.02
1.99	1	99	1.01
1.99	2	99	1.01
2.01	4	97	0.99
2.02	7	96	0.98
2.04	12	94	0.96
2.05	20	93	0.95
2.08	35	90	0.92
2.10	44	88	0.90
2.11	57	87	0.89
2.17	121	81	0.83
2.19	155	79	0.81
2.22	222	76	0.78
2.23	247	75	0.77
2.24	271	75	0.76
2.25	306	74	0.75
2.40	900	59	0.60
2.50	1465	49	0.50



T75	258.983	75
T25	n/a	25
T75-25	n/a	Derived from Best Fit

Comments

Infiltration stopped after 24hrs. An infiltration rate could not be calculated.

SOILS LIMITED

Newton House, Cross Road, Tadworth
Surrey, KT20 5SR

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TEST REPORT PLATE LOADING TEST

Project Client	22051 Provience Hill	Test No:	22051 PLT1
		Lab Ref No:	
		Date Reported	18.09.25
Technician	Carl Fuller	Weather Conditions	Dry
		Air Temperature °C	17
Date Tested	18.09.25	Plate Dia (mm)	450
Location	Bursledon	Depth (m)	0.3
GPS Coord's	W 1° 18' 54.9", N 50° 53' 35.7"	Reaction Type	8tn 3cx
Material Type	Existing ground	App Weight (kg)	55
No Cycles	1		

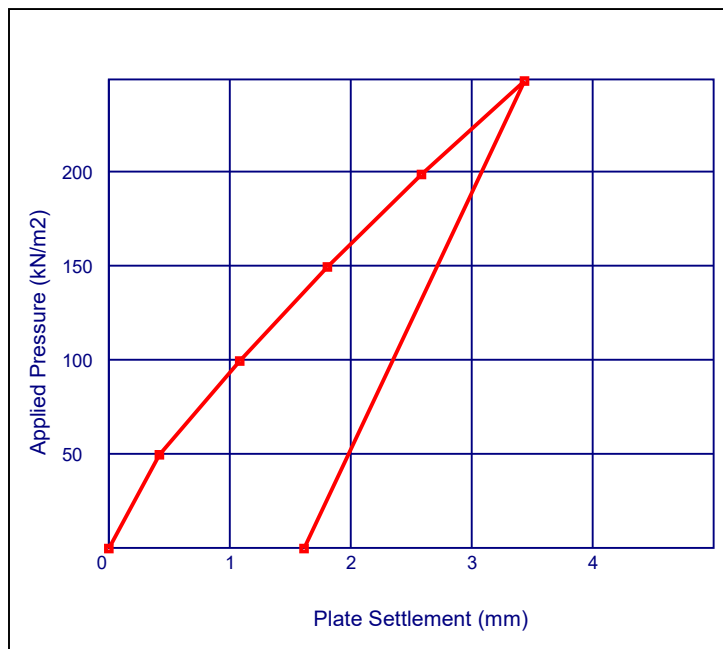


Plate Settlement (mm)	Applied Pressure (kN/m²)
0.00	0.0
0.42	50.0
1.08	100.1
1.81	150.3
2.58	199.6
3.44	249.6
1.61	0.0

Maximum Applied Pressure (kPa):
Maximum deformation (mm):
Modulus of subgrade reaction K (MN/m³):
K762 (MN/m³):
Estimated CBR (%):

Cycle 1
253
3.44
89.4
55.7
10

Comments:

Approved Signature
Soils Limited
 Carl Fuller
 Site Technician

Plate Load - Tested in accordance with BS 1377 : Part 9 Cl.

Opinions and interpolations expressed herein are outside the scope of UKAS accreditation

TEST REPORT PLATE LOADING TEST

Project Client	22051 Provience Hill	Test No:	22051 PLT2
		Lab Ref No:	
		Date Reported	18.09.25
Technician	Carl Fuller	Weather Conditions	Dry
		Air Temperature °C	18
Date Tested	18.09.25	Plate Dia (mm)	450
Location	Bursledon	Depth (m)	0.60
GPS Coord's	W 1° 18' 53.8", N 50° 53' 35.2"	Reaction Type	8tn 3cx
Material Type	Existing ground	App Weight (kg)	55
No Cycles	1		

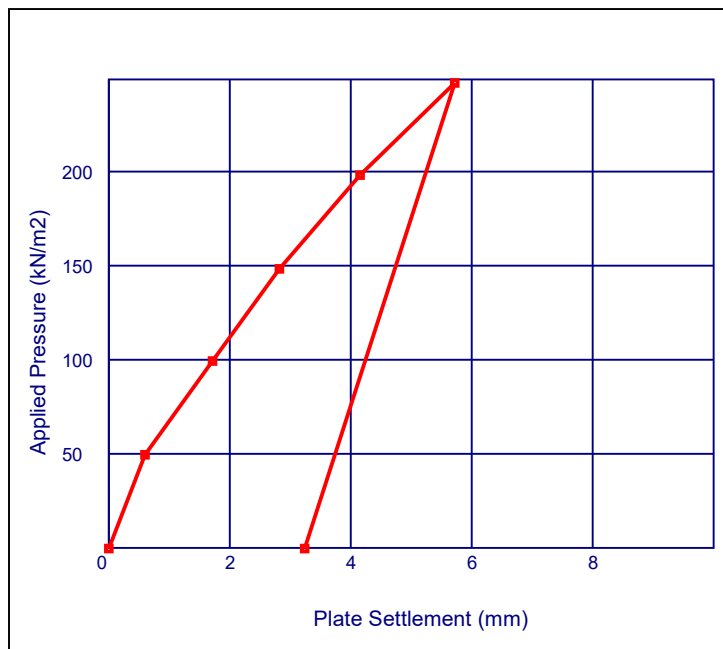


Plate Settlement (mm)	Applied Pressure (kN/m ²)
0.00	0.0
0.59	50.1
1.71	100.1
2.82	149.4
4.15	199.4
5.72	248.6
3.24	0.0

Maximum Applied Pressure (kPa):
Maximum deformation (mm):
Modulus of subgrade reaction K (MN/m³):
K762 (MN/m³):
Estimated CBR (%):

Cycle 1
252
5.72
63.5
39.6
5.7

Comments:

Approved Signature
Soils Limited
 Carl Fuller
 Site Technician

Plate Load - Tested in accordance with BS 1377 : Part 9 Cl.

Opinions and interpolations expressed herein are outside the scope of UKAS accreditation

TEST REPORT PLATE LOADING TEST

Project Client	22051 Provience Hill	Test No:	22051 PLT3
		Lab Ref No:	
		Date Reported	18.09.25
Technician	Carl Fuller	Weather Conditions	Dry
		Air Temperature °C	18
Date Tested	18.09.25	Plate Dia (mm)	450
Location	Bursledon	Depth (m)	0.3
GPS Coord's	W 1° 18' 53.9", N 50° 53' 35.1"	Reaction Type	8tn 3cx
Material Type	Existing ground	App Weight (kg)	55
No Cycles	1		



Plate Settlement (mm)	Applied Pressure (kN/m ²)
0.00	0.0
0.80	49.9
2.32	100.4
5.68	149.2
10.54	199.8
16.27	248.5
5.34	0.0

Maximum Applied Pressure (kPa):
Maximum deformation (mm):
Modulus of subgrade reaction K (MN/m³):
K762 (MN/m³):
Estimated CBR (%):

Cycle 1
252
16.27
51.8
32.3
4.0

Comments:

Approved Signature
Soils Limited
 Carl Fuller
 Site Technician

Plate Load - Tested in accordance with BS 1377 : Part 9 Cl.

Opinions and interpolations expressed herein are outside the scope of UKAS accreditation

TEST REPORT PLATE LOADING TEST

Project Client	22051 Provience Hill	Test No:	22051 PLT4
		Lab Ref No:	
		Date Reported	18.09.25
Technician	Carl Fuller	Weather Conditions	Dry
		Air Temperature °C	18
Date Tested	18.09.25	Plate Dia (mm)	450
Location	Bursledon	Depth (m)	0.3
GPS Coord's	W 1° 18' 52.4", N 50° 53' 35.0"	Reaction Type	8tn 3cx
Material Type	Existing ground	App Weight (kg)	55
No Cycles	1		

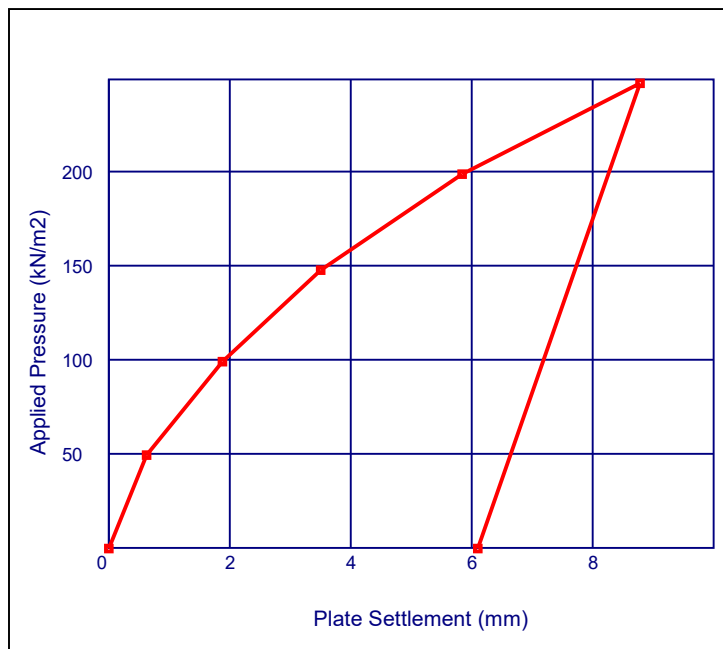


Plate Settlement (mm)	Applied Pressure (kN/m²)
0.00	0.0
0.62	49.9
1.88	99.9
3.50	148.6
5.84	199.8
8.78	248.3
6.10	0.0

Maximum Applied Pressure (kPa):
Maximum deformation (mm):
Modulus of subgrade reaction K (MN/m³):
K762 (MN/m³):
Estimated CBR (%):

Cycle 1
252
8.78
59.9
37.3
5.1

Comments:

Approved Signature
Soils Limited
 Carl Fuller
 Site Technician

Plate Load - Tested in accordance with BS 1377 : Part 9 Cl.

Opinions and interpolations expressed herein are outside the scope of UKAS accreditation

TEST REPORT PLATE LOADING TEST

Project Client	22051 Province Hill	Test No:	22051 PLT5
		Lab Ref No:	
		Date Reported	18.09.25
Technician	Carl Fuller	Weather Conditions	Dry
		Air Temperature °C	18
Date Tested	18.09.25	Plate Dia (mm)	450
Location	Bursledon	Depth (m)	0.3
GPS Coord's	W 1° 18' 52.5", N 50° 53' 35.4"	Reaction Type	8tn 3cx
Material Type	Existing ground	App Weight (kg)	55
No Cycles	1		



Plate Settlement (mm)	Applied Pressure (kN/m²)
0.00	0.0
0.95	50.0
5.08	100.2
12.58	148.6
20.81	199.8
20.81	199.7
17.85	0.0

Maximum Applied Pressure (kPa):
Maximum deformation (mm):
Modulus of subgrade reaction K (MN/m³):
K762 (MN/m³):
Estimated CBR (%):

Cycle 1
203
20.81
43.0
26.8
2.9

Comments:

Approved Signature
Soils Limited
 Carl Fuller
 Site Technician

Plate Load - Tested in accordance with BS 1377 : Part 9 Cl.

Opinions and interpolations expressed herein are outside the scope of UKAS accreditation



Laboratory Report



Contract Number: 80345

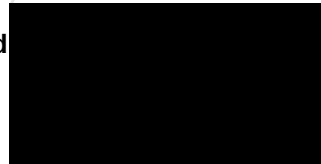
Client Ref: **22051**
Client PO: **22051/OK**

Date Received: **20-08-2025**
Date Completed: **10-09-2025**
Report Date: **10-09-2025**

Client: **Soils Limited**

This report has been checked and approved by:

Contract Title: **New Care Home, Providence Hill, Bursled**
For the attention of: **Olia Kontogianni**



Paul Evans
Director

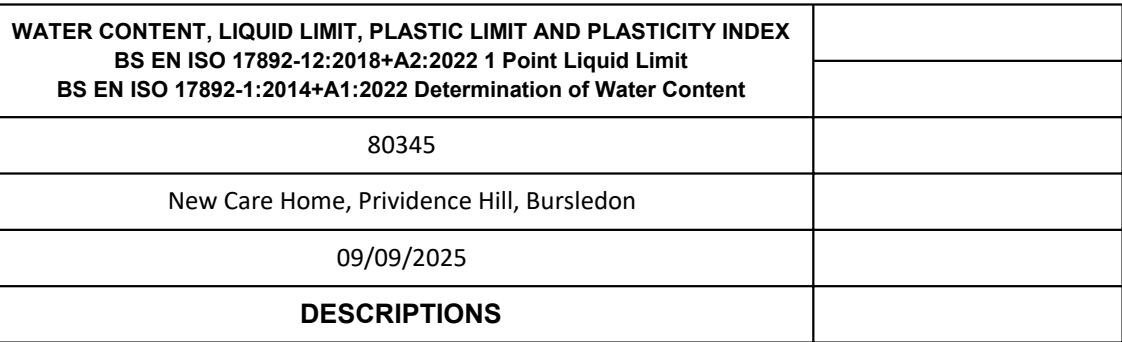
Description	Qty
Determination of water content BS EN ISO 17892-1:2014 - @ Non Accredited Test	2
1 point Liquid & Plastic Limit.. BS EN ISO 17892-12 - * UKAS	2
Particle Size Distribution BS EN ISO 17892-4 : 5.1 - * UKAS	2

Notes: Observations and Interpretations are outside the UKAS Accreditation
* - denotes test included in laboratory scope of accreditation
- denotes test carried out by approved contractor
@ - denotes non accredited tests

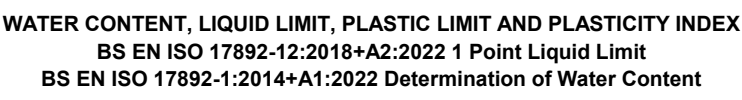
This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This test report/certificate shall not be reproduced except in full, without the approval of GEO Site & Testing Services Ltd. Any opinions or interpretations stated - within this report/certificate are excluded from the laboratories UKAS accreditation.

Approved Signatories:

Brendan Evans (Senior Office Administrator) - Brendan Evans (Business Support Co-ordinator) - Darren Bourne (Quality Senior Technician)
Luke Williams (Laboratory Technician) - Paul Evans (Director) - Richard John (Quality/Technical Manager)
Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager) - Wayne Honey (HR & HSE Manager)

[illegible]

Operator
Darcy. E



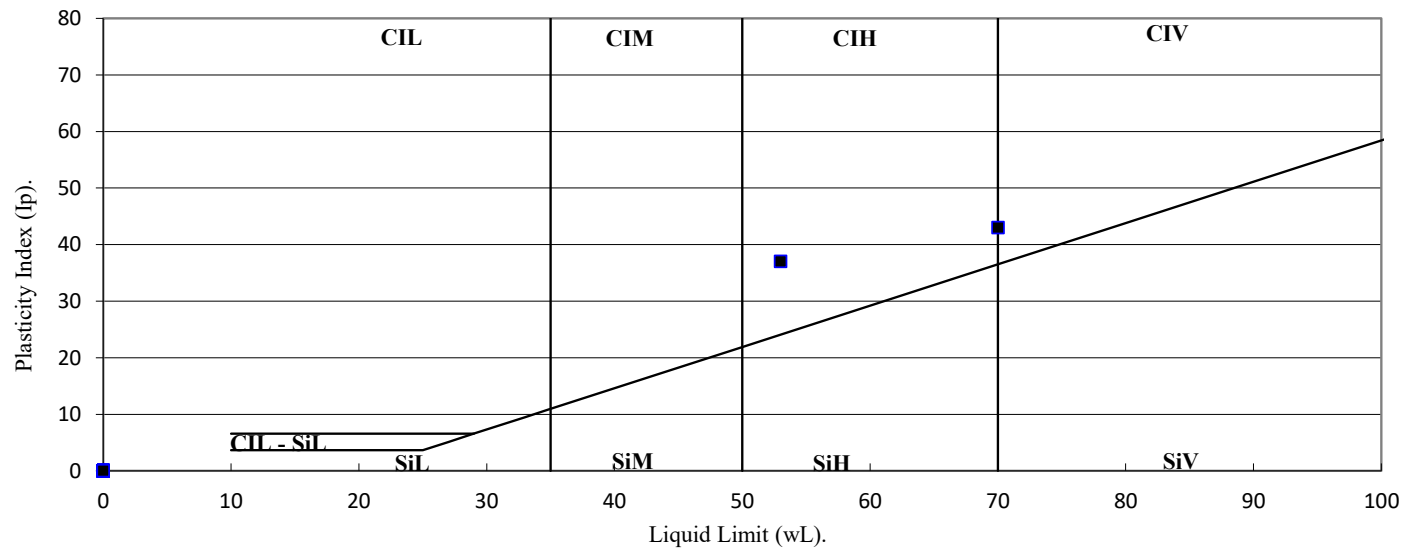
Contract Number	80345	
Project Name	New Care Home, Providence Hill, Bursledon	
Date Tested	09/09/2025	
Test Comments	80g/30° Fall cone used	

[illegible]

SYMBOLS : NP = Non Plastic

PLASTICITY CHART

BS EN ISO 14688-2:2018 Clause 4.4



***For sample descriptions please see sample descriptions sheet**

Operator
Darcy. E

**PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2**

Contract Number

80345

Borehole/Pit No.

WS1

Project Name

New Care Home, Providence Hill, Bursledon

Sample No.

Sample Description

Brown slightly gravelly silty/ clayey fine to coarse SAND

Depth Top

2.60

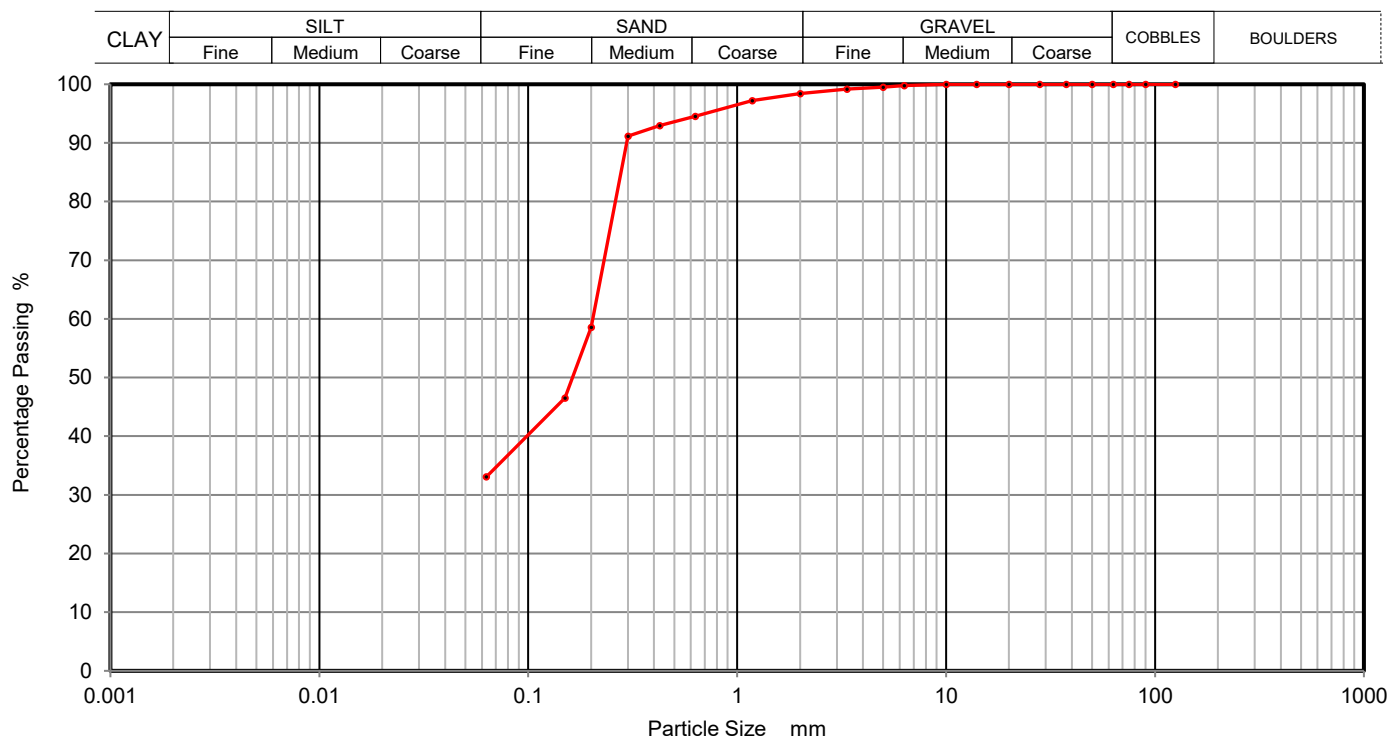
Depth Base

Date Tested

04/09/2025

Sample Type

D



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	99		
2	98		
1.18	97		
0.63	95		
0.425	93		
0.30	91		
0.20	59		
0.15	47		
0.063	33		

Sample Proportions	% dry mass
Cobbles	0
Gravel	2
Sand	65
Silt and Clay	33

Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator

Jordan. W

**PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2**

Contract Number

80345

Borehole/Pit No.

WS3

Project Name

New Care Home, Providence Hill, Bursledon

Sample No.

Sample Description

Brown/ orange slightly gravelly silty/ clayey fine to coarse SAND

Depth Top

3.60

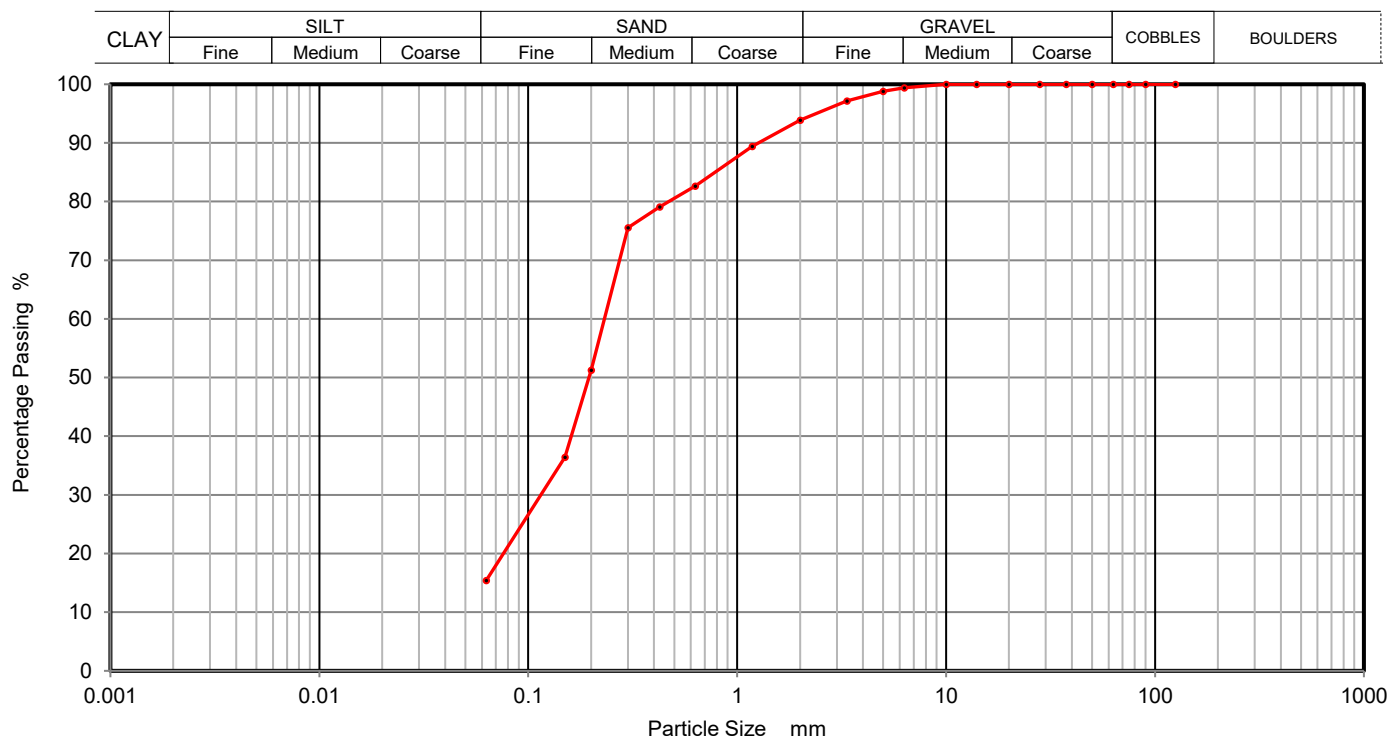
Depth Base

Date Tested

04/09/2025

Sample Type

D



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	99		
5	99		
3.35	97		
2	94		
1.18	89		
0.63	83		
0.425	79		
0.30	76		
0.20	51		
0.15	36		
0.063	15		

Sample Proportions	% dry mass
Cobbles	0
Gravel	6
Sand	79
Silt and Clay	15

Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator

Jordan. W



Laboratory Report



Contract Number: 81331

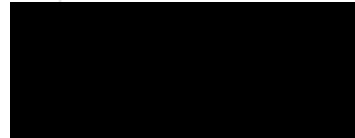
Client Ref: **22051**
Client PO: **22051/OK**

Date Received: **30-09-2025**
Date Completed: **13-10-2025**
Report Date: **13-10-2025**

Client: **Soils Limited**

Contract Title: **New Care Home, Bursledon**
For the attention of: **Olia Kontogianni**

This report has been checked and approved by:



Brendan Evans
Business Support Co-ordinator

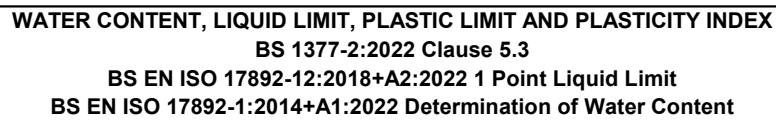
Description	Qty
Determination of water content BS EN ISO 17892-1:2014 - @ Non Accredited Test	4
1 point Liquid & Plastic Limit.. BS EN ISO 17892-12 - * UKAS	4
Particle Size Distribution BS EN ISO 17892-4 : 5.1 - * UKAS	1

Notes: Observations and Interpretations are outside the UKAS Accreditation
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- denotes test carried out by approved contractor
@ - denotes non accredited tests

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Approved Signatories:

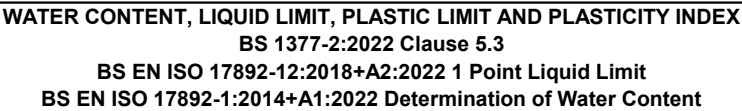
Brendan Evans (Business Support Co-ordinator) - Brendan Evans (Business Support Co-ordinator) - Darren Bourne (Quality Senior Technician)
Luke Williams (Laboratory Technician) - Paul Evans (Director) - Richard John (Quality/Technical Manager)
Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager) - Wayne Honey (HR & HSE Manager)



Contract Number	81331	
Project Name	New Care Home, Bursledon	
Date Tested	10/10/2025	
	DESCRIPTIONS	

[illegible]

Operator
Aaron Hodge



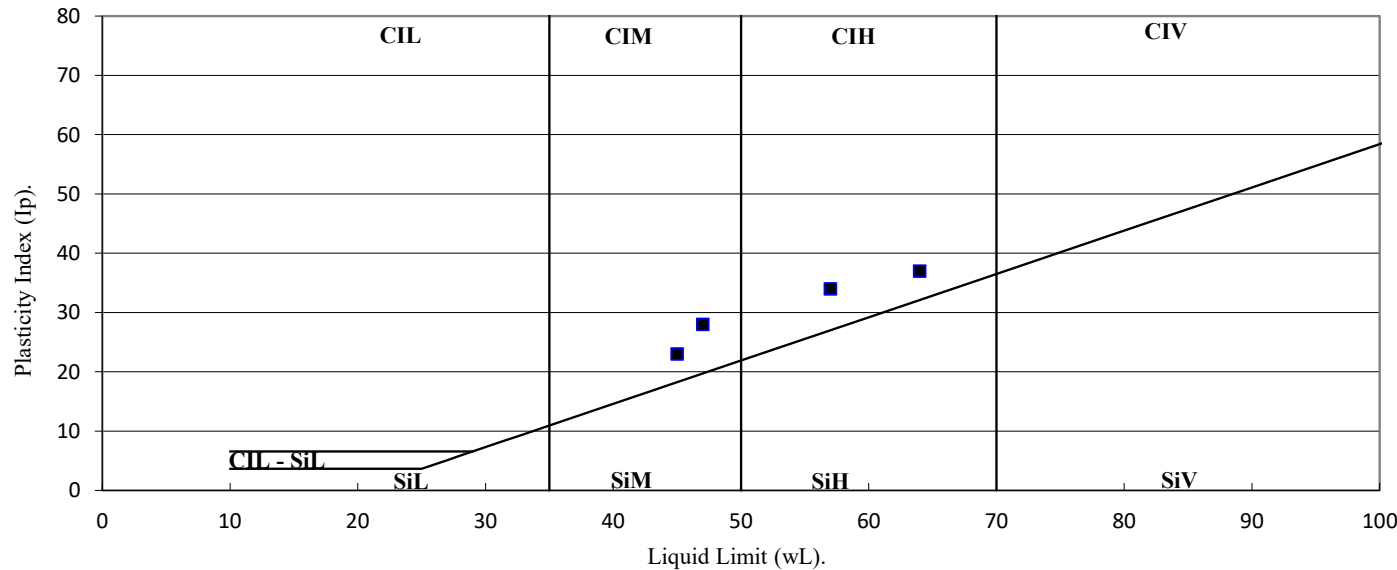
Contract Number	81331	
Project Name	New Care Home, Bursledon	
Date Tested	10/10/2025	
Test Comments	80g/30° Fall cone used	

[illegible]

SYMBOLS : NP = Non Plastic

PLASTICITY CHART

BS EN ISO 14688-2:2018 Clause 4.4



***For sample descriptions please see sample descriptions sheet**

Operator
Aaron Hodge



PARTICLE SIZE DISTRIBUTION
BS 1377-2:2022 Clause 10 &
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2

Contract Number **81331**

Borehole/Pit No. **BH01**

Project Name **New Care Home, Bursledon**

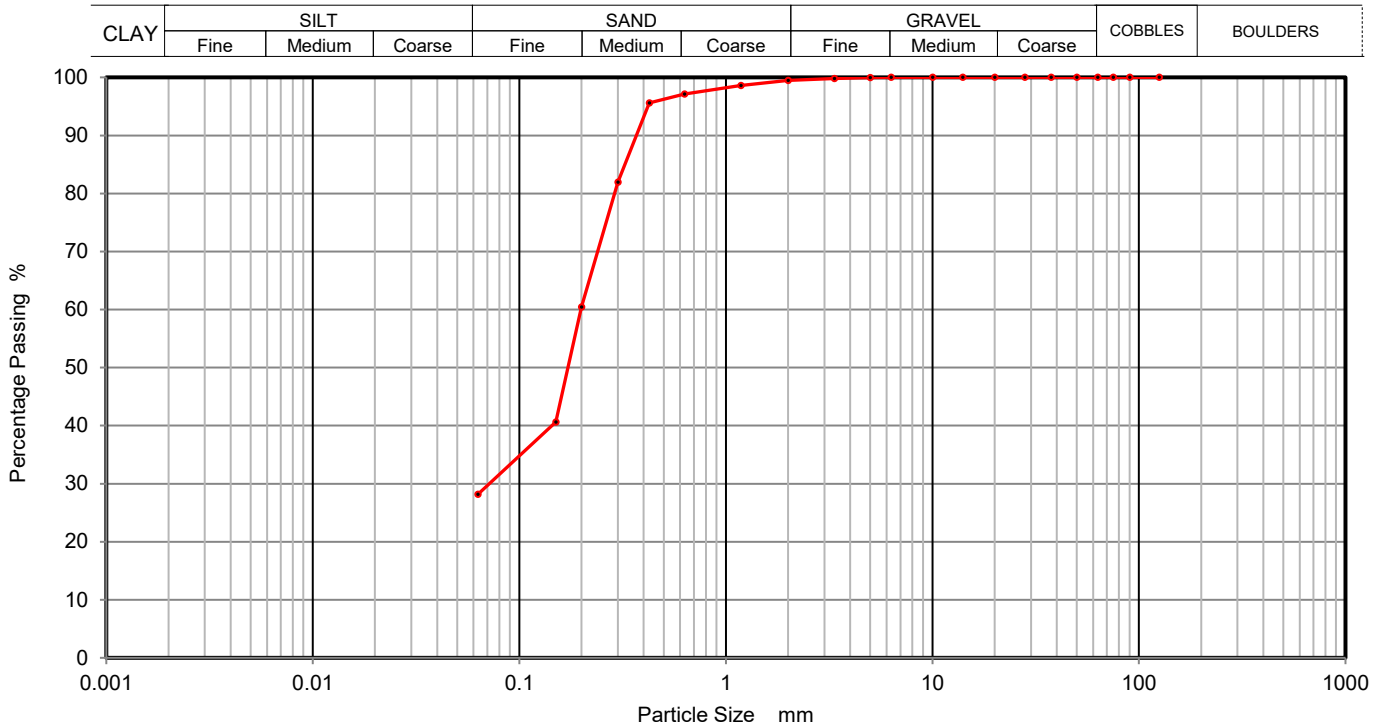
Sample No.

Depth Top **6.00**

Depth Base

Date Tested **07/10/2025**

Sample Type **D**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.63	97		
0.425	96		
0.30	82		
0.20	60		
0.15	41		
0.063	28		

Sample Proportions	% dry mass
Cobbles	0
Gravel	1
Sand	71
Silt and Clay	28

Grading Analysis	
Uniformity Coefficient	N/A

Remarks
Preparation and testing in accordance with BS17892 unless noted below

Operator

Jordan. W

Soakaway Calculations

Trial Pit & Test No.	TPSK2 Test 1
Site Name	New Care Home
Project No.	22051

Field Test

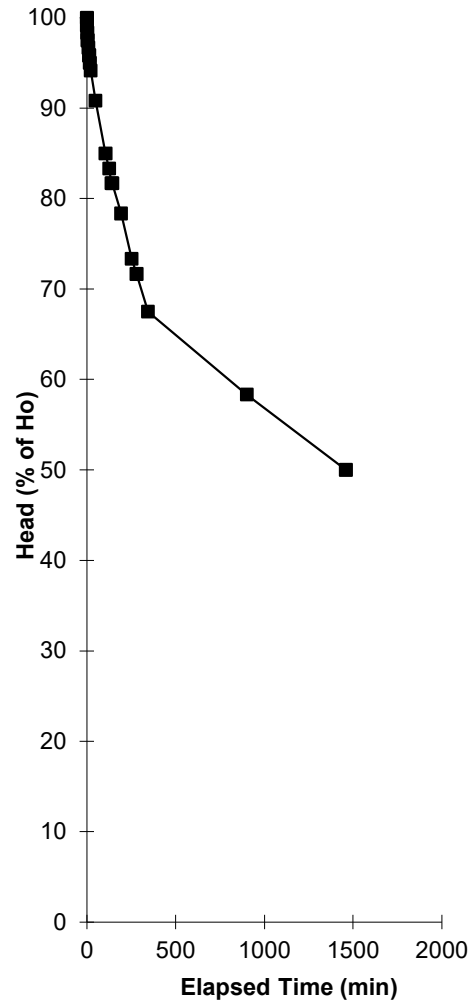
Trial Pit Log (include details of groundwater):

See trial Pit record

Depth of Pit	3.00 m
Width of Pit	0.55 m
Length of Pit	1.20 m
Starting Head of Water	1.20 m
as50	2.76 m2
Vp75-25	0.396 m3
t75-25	n/a min
water used	0.7920 m3
f	n/a m/sec.

Field Data

Depth to Water (m)	Elapsed Time (min)	Head of Water (% of Ho)	Head of Water (m)
1.80	0	100	1.2
1.81	1	99	1.19
1.82	2	98	1.18
1.83	4	98	1.17
1.83	6	98	1.17
1.84	9	97	1.16
1.85	11	96	1.15
1.85	13	96	1.15
1.86	17	95	1.14
1.87	21	94	1.13
1.91	48	91	1.09
1.98	105	85	1.02
2.00	126	83	1.00
2.02	138	82	0.98
2.02	143	82	0.98
2.06	192	78	0.94
2.12	252	73	0.88
2.14	280	72	0.86
2.19	344	68	0.81
2.30	900	58	0.70
2.40	1460	50	0.60



T75	232.483	75
T25	0.000	25
T75-25	n/a	Derived from Best Fit

Comments

Infiltration stopped after 24hrs. An infiltration rate could not be determined.

SOILS LIMITED

Newton House, Cross Road, Tadworth
Surrey, KT20 5SR

Telephone: 01737 814 221
Facsimile: 01737 812 557

Soakaway Calculations

Trial Pit & Test No.	TPSK3 Test 1
Site Name	New Care Home
Project No.	22051

Field Test

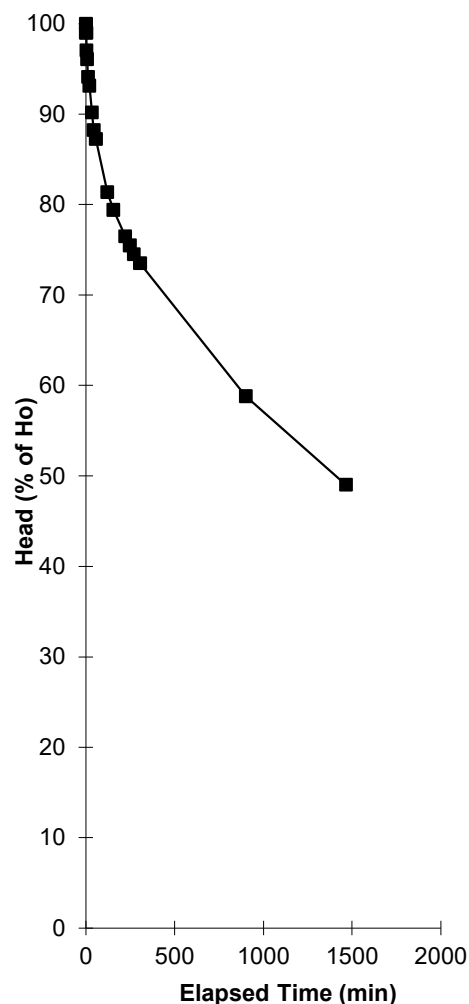
Trial Pit Log (include details of groundwater):

See trial Pit record

Depth of Pit	3.00 m
Width of Pit	0.55 m
Length of Pit	1.90 m
Starting Head of Water	1.02 m
as50	3.544 m2
Vp75-25	0.53295 m3
t75-25	n/a min
water used	1.0659 m3
f	n/a m/sec.

Field Data

Depth to	Elapsed	Head of	Head of
Water	Time	Water	Water
(m)	(min)	(% of Ho)	(m)
1.98	0	100	1.02
1.99	1	99	1.01
1.99	2	99	1.01
2.01	4	97	0.99
2.02	7	96	0.98
2.04	12	94	0.96
2.05	20	93	0.95
2.08	35	90	0.92
2.10	44	88	0.90
2.11	57	87	0.89
2.17	121	81	0.83
2.19	155	79	0.81
2.22	222	76	0.78
2.23	247	75	0.77
2.24	271	75	0.76
2.25	306	74	0.75
2.40	900	59	0.60
2.50	1465	49	0.50



T75	258.983	75
T25	n/a	25
T75-25	n/a	Derived from Best Fit

Comments

Infiltration stopped after 24hrs. An infiltration rate could not be calculated.

SOILS LIMITED

Newton House, Cross Road, Tadworth
Surrey, KT20 5SR

Telephone: 01737 814 221
Facsimile: 01737 812 557

TEST REPORT PLATE LOADING TEST

Project Client	22051 Provience Hill	Test No:	22051 PLT1
		Lab Ref No:	
		Date Reported	18.09.25
Technician	Carl Fuller	Weather Conditions	Dry
		Air Temperature °C	17
Date Tested	18.09.25	Plate Dia (mm)	450
Location	Bursledon	Depth (m)	0.3
GPS Coord's	W 1° 18' 54.9", N 50° 53' 35.7"	Reaction Type	8tn 3cx
Material Type	Existing ground	App Weight (kg)	55
No Cycles	1		

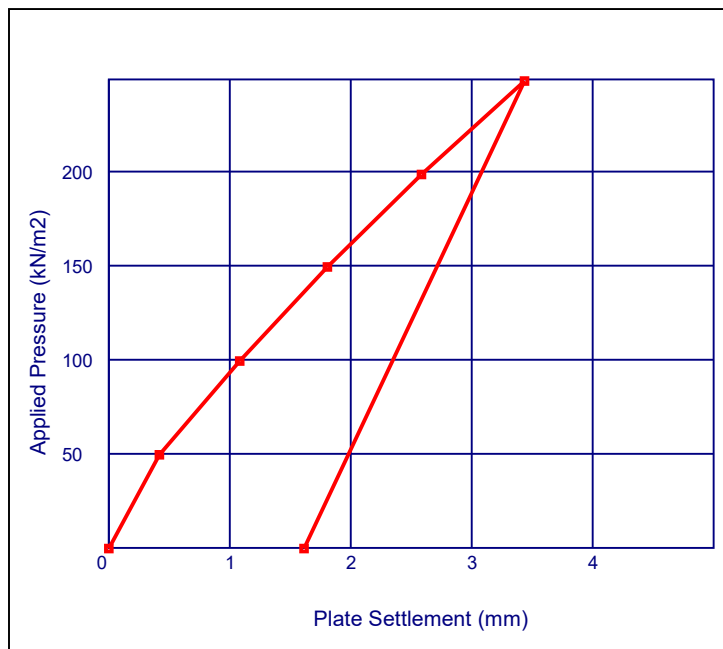


Plate Settlement (mm)	Applied Pressure (kN/m ²)
0.00	0.0
0.42	50.0
1.08	100.1
1.81	150.3
2.58	199.6
3.44	249.6
1.61	0.0

Maximum Applied Pressure (kPa):
Maximum deformation (mm):
Modulus of subgrade reaction K (MN/m³):
K762 (MN/m³):
Estimated CBR (%):

Cycle 1
253
3.44
89.4
55.7
10

Comments:

Approved Signature
Soils Limited
 Carl Fuller
 Site Technician

Plate Load - Tested in accordance with BS 1377 : Part 9 Cl.

Opinions and interpolations expressed herein are outside the scope of UKAS accreditation

TEST REPORT PLATE LOADING TEST

Project Client	22051 Provience Hill	Test No:	22051 PLT2
		Lab Ref No:	
		Date Reported	18.09.25
Technician	Carl Fuller	Weather Conditions	Dry
		Air Temperature °C	18
Date Tested	18.09.25	Plate Dia (mm)	450
Location	Bursledon	Depth (m)	0.60
GPS Coord's	W 1° 18' 53.8", N 50° 53' 35.2"	Reaction Type	8tn 3cx
Material Type	Existing ground	App Weight (kg)	55
No Cycles	1		

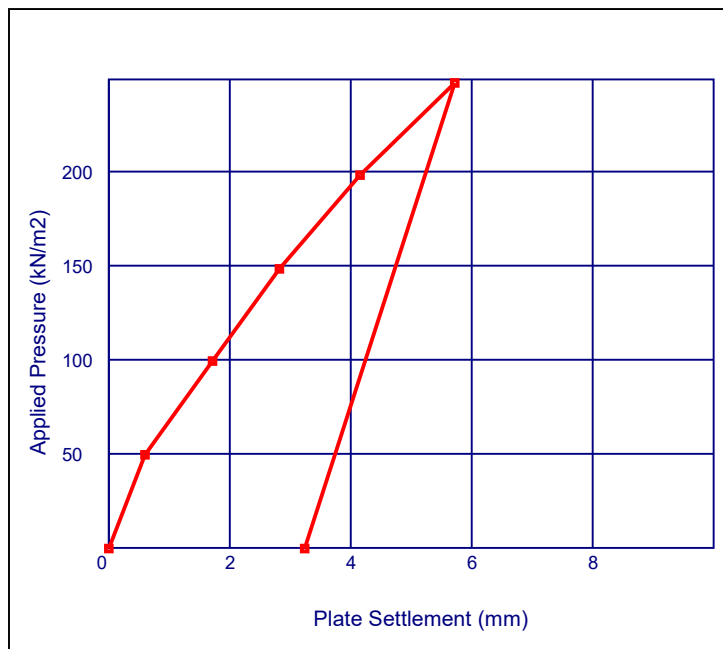


Plate Settlement (mm)	Applied Pressure (kN/m ²)
0.00	0.0
0.59	50.1
1.71	100.1
2.82	149.4
4.15	199.4
5.72	248.6
3.24	0.0

Maximum Applied Pressure (kPa):
Maximum deformation (mm):
Modulus of subgrade reaction K (MN/m³):
K762 (MN/m³):
Estimated CBR (%):

Cycle 1
252
5.72
63.5
39.6
5.7

Comments:

Approved Signature
Soils Limited
 Carl Fuller
 Site Technician

Plate Load - Tested in accordance with BS 1377 : Part 9 Cl.

Opinions and interpolations expressed herein are outside the scope of UKAS accreditation

TEST REPORT PLATE LOADING TEST

Project Client	22051 Provience Hill	Test No:	22051 PLT3
		Lab Ref No:	
		Date Reported	18.09.25
Technician	Carl Fuller	Weather Conditions	Dry
		Air Temperature °C	18
Date Tested	18.09.25	Plate Dia (mm)	450
Location	Bursledon	Depth (m)	0.3
GPS Coord's	W 1° 18' 53.9", N 50° 53' 35.1"	Reaction Type	8tn 3cx
Material Type	Existing ground	App Weight (kg)	55
No Cycles	1		



Plate Settlement (mm)	Applied Pressure (kN/m²)
0.00	0.0
0.80	49.9
2.32	100.4
5.68	149.2
10.54	199.8
16.27	248.5
5.34	0.0

Maximum Applied Pressure (kPa):
Maximum deformation (mm):
Modulus of subgrade reaction K (MN/m³):
K762 (MN/m³):
Estimated CBR (%):

Cycle 1
252
16.27
51.8
32.3
4.0

Comments:

Approved Signature
Soils Limited
 Carl Fuller
 Site Technician

Plate Load - Tested in accordance with BS 1377 : Part 9 Cl.

Opinions and interpolations expressed herein are outside the scope of UKAS accreditation

TEST REPORT PLATE LOADING TEST

Project Client	22051 Provience Hill	Test No:	22051 PLT4
		Lab Ref No:	
		Date Reported	18.09.25
Technician	Carl Fuller	Weather Conditions	Dry
		Air Temperature °C	18
Date Tested	18.09.25	Plate Dia (mm)	450
Location	Bursledon	Depth (m)	0.3
GPS Coord's	W 1° 18' 52.4", N 50° 53' 35.0"	Reaction Type	8tn 3cx
Material Type	Existing ground	App Weight (kg)	55
No Cycles	1		

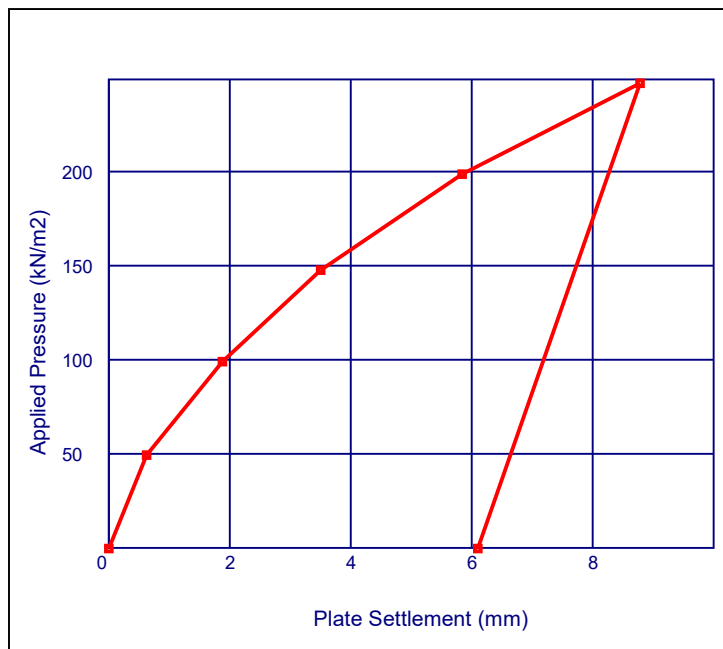


Plate Settlement (mm)	Applied Pressure (kN/m²)
0.00	0.0
0.62	49.9
1.88	99.9
3.50	148.6
5.84	199.8
8.78	248.3
6.10	0.0

Maximum Applied Pressure (kPa):
Maximum deformation (mm):
Modulus of subgrade reaction K (MN/m³):
K762 (MN/m³):
Estimated CBR (%):

Cycle 1
252
8.78
59.9
37.3
5.1

Comments:

Approved Signature
Soils Limited
 Carl Fuller
 Site Technician

Plate Load - Tested in accordance with BS 1377 : Part 9 Cl.

Opinions and interpolations expressed herein are outside the scope of UKAS accreditation

TEST REPORT PLATE LOADING TEST

Project Client	22051 Provience Hill	Test No:	22051 PLT5
		Lab Ref No:	
		Date Reported	18.09.25
Technician	Carl Fuller	Weather Conditions	Dry
		Air Temperature °C	18
Date Tested	18.09.25	Plate Dia (mm)	450
Location	Bursledon	Depth (m)	0.3
GPS Coord's	W 1° 18' 52.5", N 50° 53' 35.4"	Reaction Type	8tn 3cx
Material Type	Existing ground	App Weight (kg)	55
No Cycles	1		

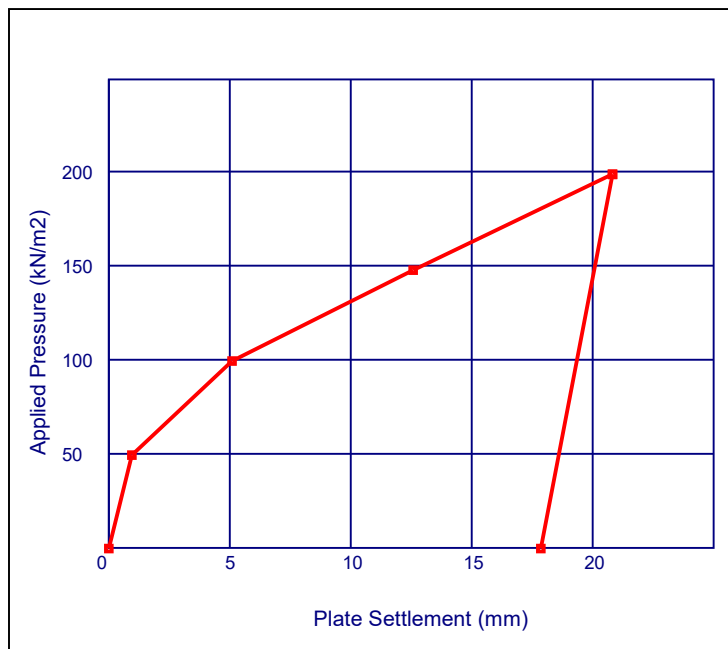


Plate Settlement (mm)	Applied Pressure (kN/m²)
0.00	0.0
0.95	50.0
5.08	100.2
12.58	148.6
20.81	199.8
20.81	199.7
17.85	0.0

Maximum Applied Pressure (kPa):
Maximum deformation (mm):
Modulus of subgrade reaction K (MN/m³):
K762 (MN/m³):
Estimated CBR (%):

Cycle 1
203
20.81
43.0
26.8
2.9

Comments:

Approved Signature
Soils Limited
 Carl Fuller
 Site Technician

Plate Load - Tested in accordance with BS 1377 : Part 9 Cl.

Opinions and interpolations expressed herein are outside the scope of UKAS accreditation



Laboratory Report



Contract Number: 80345

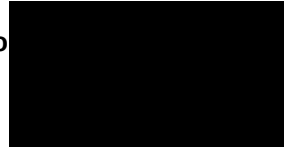
Client Ref: **22051**
Client PO: **22051/OK**

Date Received: **20-08-2025**
Date Completed: **10-09-2025**
Report Date: **10-09-2025**

Client: **Soils Limited**

This report has been checked and approved by:

Contract Title: **New Care Home, Providence Hill, Bursledon**
For the attention of: **Olia Kontogianni**



Paul Evans
Director

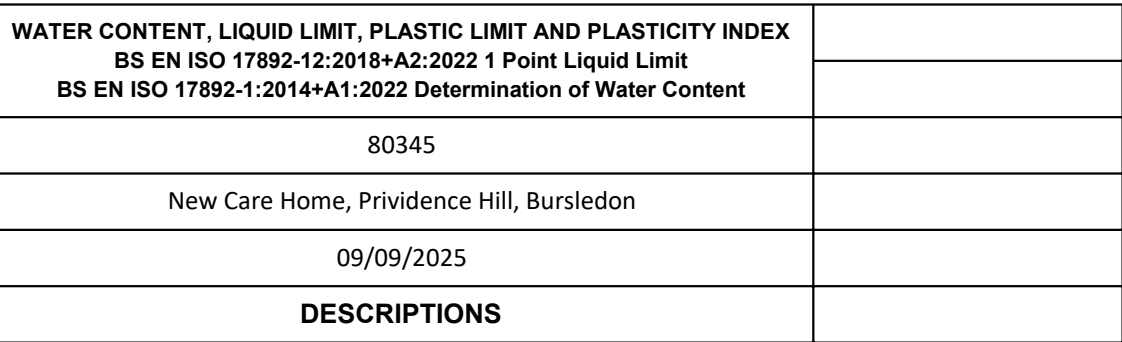
Description	Qty
Determination of water content BS EN ISO 17892-1:2014 - @ Non Accredited Test	2
1 point Liquid & Plastic Limit.. BS EN ISO 17892-12 - * UKAS	2
Particle Size Distribution BS EN ISO 17892-4 : 5.1 - * UKAS	2

Notes: Observations and Interpretations are outside the UKAS Accreditation
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- denotes test carried out by approved contractor
@ - denotes non accredited tests

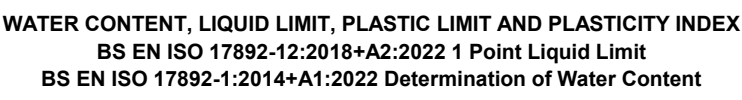
This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This test report/certificate shall not be reproduced except in full, without the approval of GEO Site & Testing Services Ltd. Any opinions or interpretations stated - within this report/certificate are excluded from the laboratories UKAS accreditation.

Approved Signatories:

Brendan Evans (Senior Office Administrator) - Brendan Evans (Business Support Co-ordinator) - Darren Bourne (Quality Senior Technician)
Luke Williams (Laboratory Technician) - Paul Evans (Director) - Richard John (Quality/Technical Manager)
Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager) - Wayne Honey (HR & HSE Manager)

[illegible]

Operator
Darcy. E



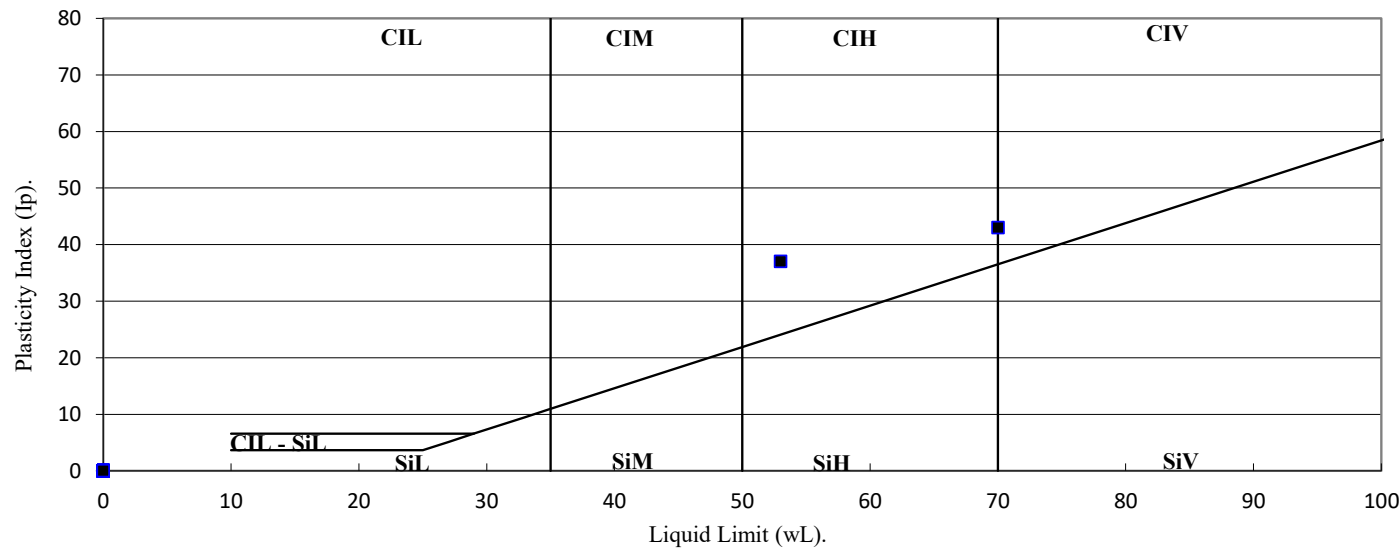
Contract Number	80345	
Project Name	New Care Home, Providence Hill, Bursledon	
Date Tested	09/09/2025	
Test Comments	80g/30° Fall cone used	

[illegible]

SYMBOLS : NP = Non Plastic

PLASTICITY CHART

BS EN ISO 14688-2:2018 Clause 4.4



***For sample descriptions please see sample descriptions sheet**

Operator
Darcy. E

**PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2**

Contract Number

80345

Borehole/Pit No.

WS1

Project Name

New Care Home, Providence Hill, Bursledon

Sample No.

Sample Description

Brown slightly gravelly silty/ clayey fine to coarse SAND

Depth Top

2.60

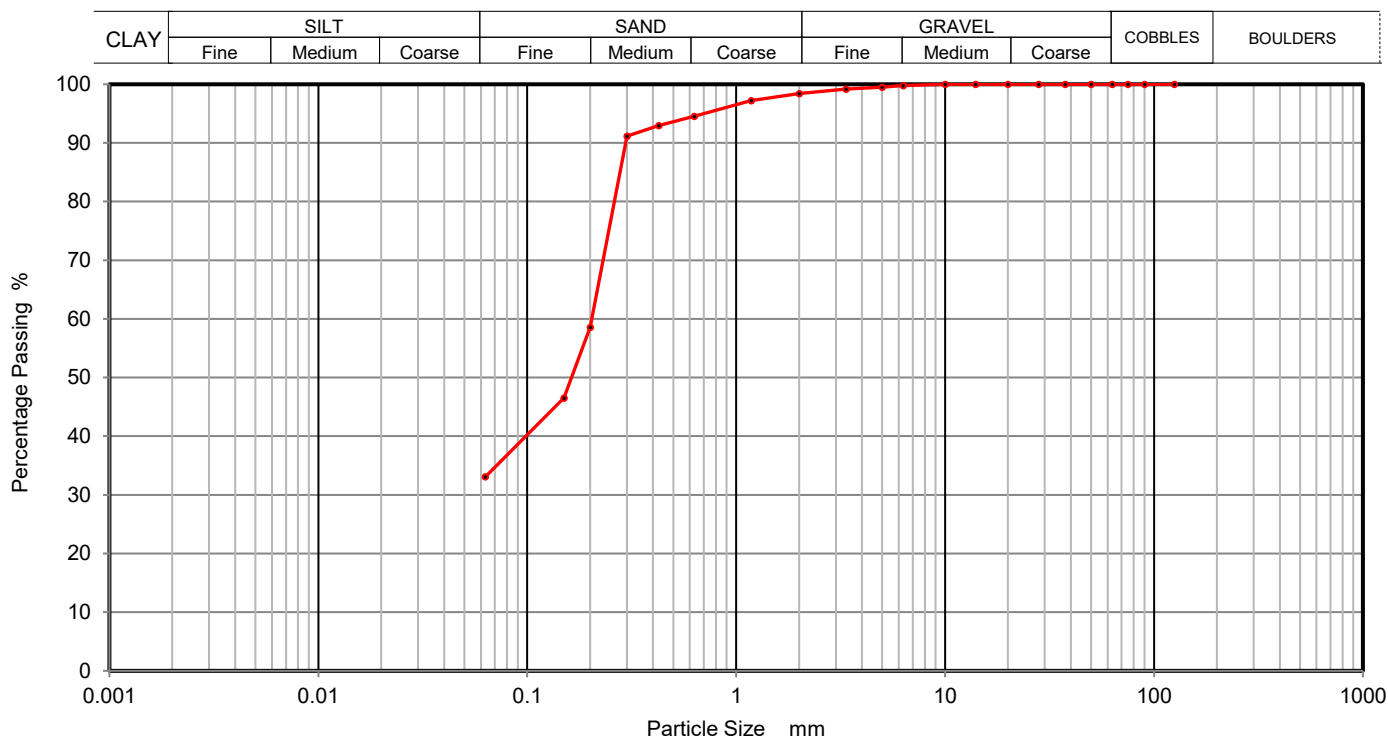
Depth Base

Date Tested

04/09/2025

Sample Type

D



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	99		
2	98		
1.18	97		
0.63	95		
0.425	93		
0.30	91		
0.20	59		
0.15	47		
0.063	33		

Sample Proportions	% dry mass
Cobbles	0
Gravel	2
Sand	65
Silt and Clay	33

Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator

Jordan. W

**PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2**

Contract Number

80345

Borehole/Pit No.

WS3

Project Name

New Care Home, Providence Hill, Bursledon

Sample No.

Sample Description

Brown/ orange slightly gravelly silty/ clayey fine to coarse SAND

Depth Top

3.60

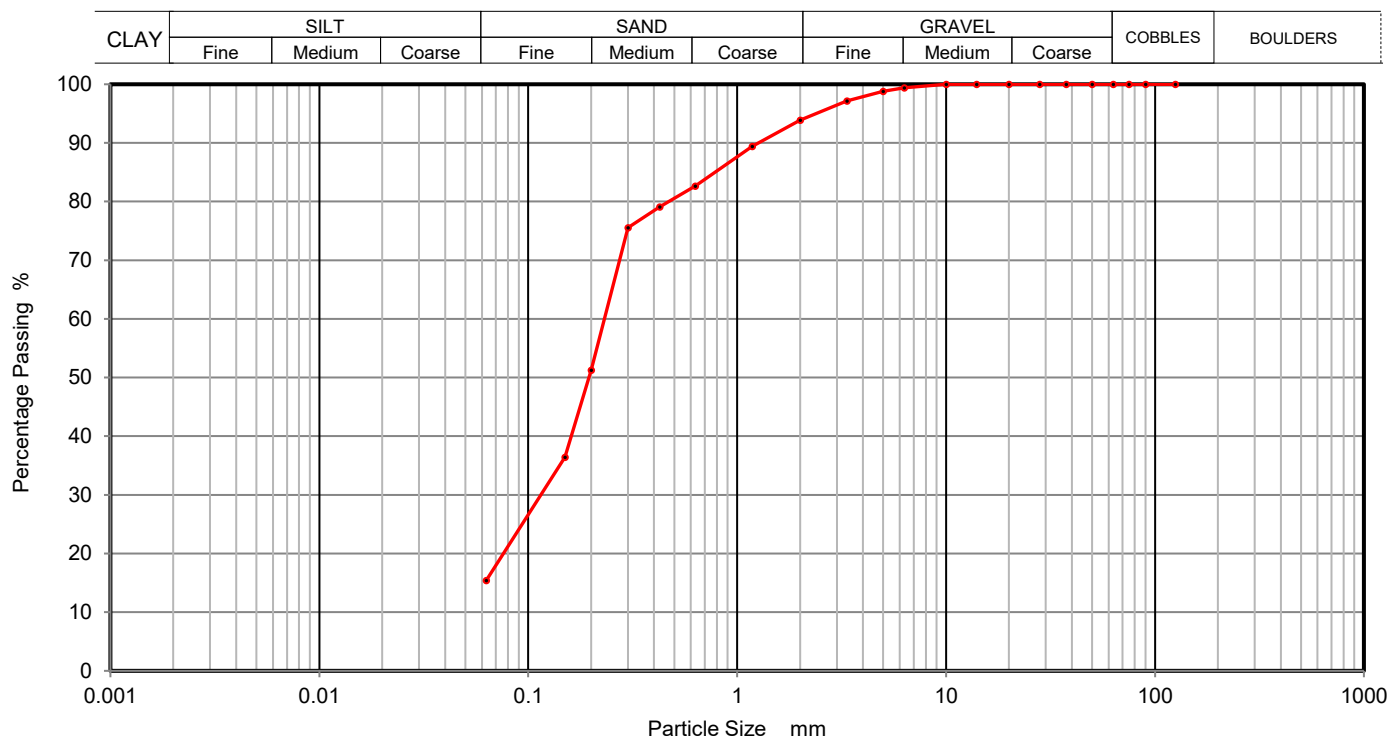
Depth Base

Date Tested

04/09/2025

Sample Type

D



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	99		
5	99		
3.35	97		
2	94		
1.18	89		
0.63	83		
0.425	79		
0.30	76		
0.20	51		
0.15	36		
0.063	15		

Sample Proportions	% dry mass
Cobbles	0
Gravel	6
Sand	79
Silt and Clay	15

Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator

Jordan. W



Laboratory Report



Contract Number: 81331

Client Ref: **22051**
Client PO: **22051/OK**

Date Received: **30-09-2025**
Date Completed: **13-10-2025**
Report Date: **13-10-2025**

Client: **Soils Limited**

This report has been checked and approved by:

Contract Title: **New Care Home, Bursledon**
For the attention of: **Olia Kontogianni**

Brendan Evans
Business Support Co-ordinator

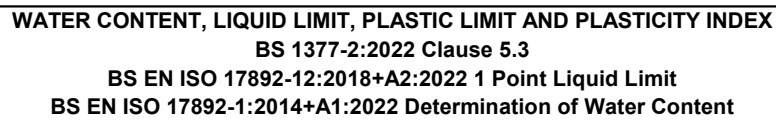
Description	Qty
Determination of water content BS EN ISO 17892-1:2014 - @ Non Accredited Test	4
1 point Liquid & Plastic Limit.. BS EN ISO 17892-12 - * UKAS	4
Particle Size Distribution BS EN ISO 17892-4 : 5.1 - * UKAS	1

Notes: Observations and Interpretations are outside the UKAS Accreditation
* - denotes test included in laboratory scope of accreditation
- denotes test carried out by approved contractor
@ - denotes non accredited tests

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 test report/certificate shall not be reproduced except in full, without the approval of GEO Site & Testing Services Ltd. Any opinions or interpretations stated - within this report/certificate are excluded from the laboratories UKAS accreditation.

Approved Signatories:

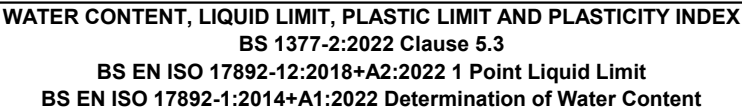
Brendan Evans (Business Support Co-ordinator) - Brendan Evans (Business Support Co-ordinator) - Darren Bourne (Quality Senior Technician)
Luke Williams (Laboratory Technician) - Paul Evans (Director) - Richard John (Quality/Technical Manager)
Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager) - Wayne Honey (HR & HSE Manager)



Contract Number	81331	
Project Name	New Care Home, Bursledon	
Date Tested	10/10/2025	
	DESCRIPTIONS	

[illegible]

Operator
Aaron Hodge



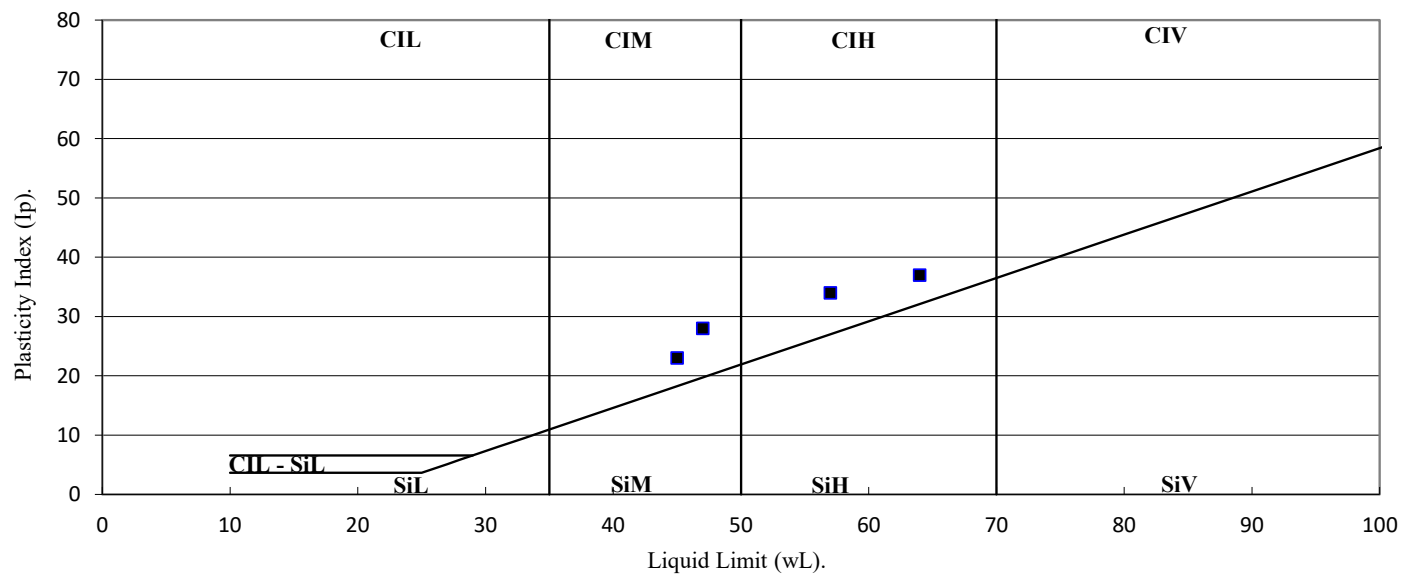
Contract Number	81331	
Project Name	New Care Home, Bursledon	
Date Tested	10/10/2025	
Test Comments	80g/30° Fall cone used	

[illegible]

SYMBOLS : NP = Non Plastic

PLASTICITY CHART

BS EN ISO 14688-2:2018 Clause 4.4



***For sample descriptions please see sample descriptions sheet**

Operator
Aaron Hodge



PARTICLE SIZE DISTRIBUTION
BS 1377-2:2022 Clause 10 &
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2

Contract Number **81331**

Borehole/Pit No. **BH01**

Project Name **New Care Home, Bursledon**

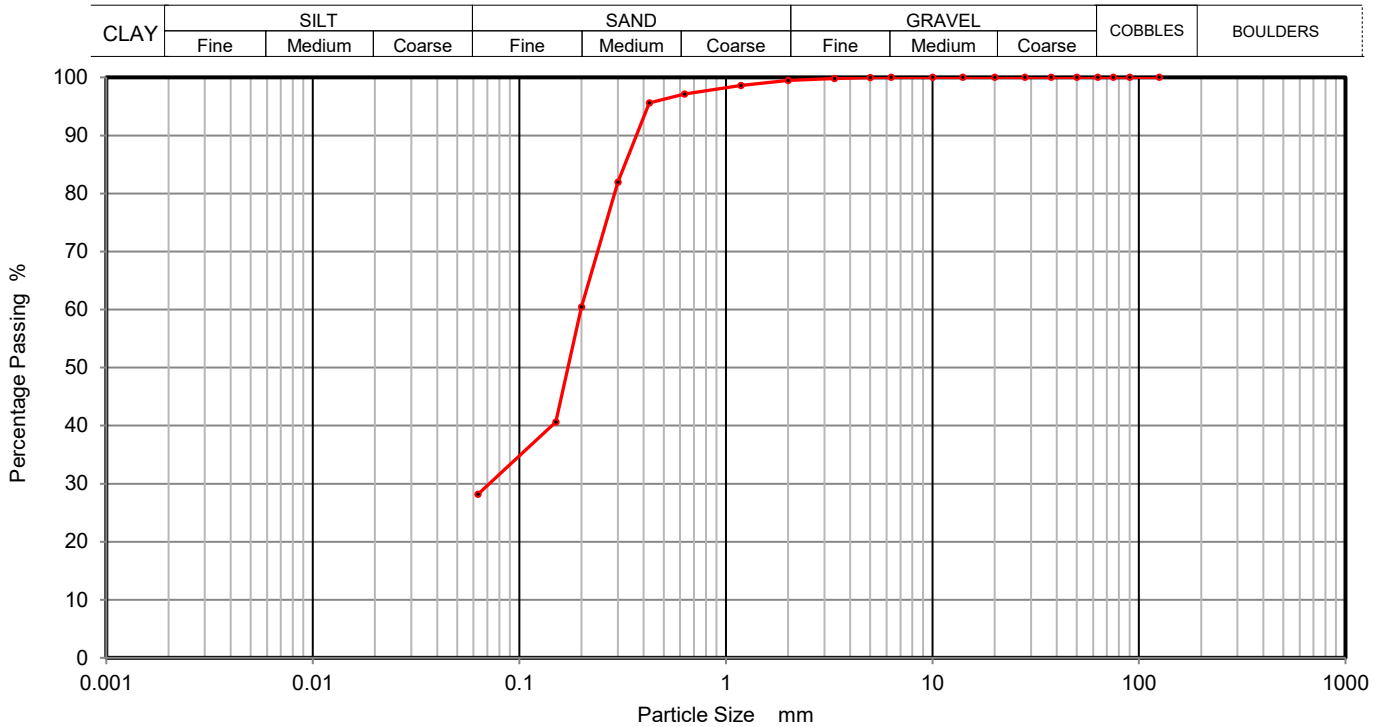
Sample No.

Depth Top **6.00**

Depth Base

Date Tested **07/10/2025**

Sample Type **D**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.63	97		
0.425	96		
0.30	82		
0.20	60		
0.15	41		
0.063	28		

Sample Proportions	% dry mass
Cobbles	0
Gravel	1
Sand	71
Silt and Clay	28

Grading Analysis	
Uniformity Coefficient	N/A

Remarks
Preparation and testing in accordance with BS17892 unless noted below

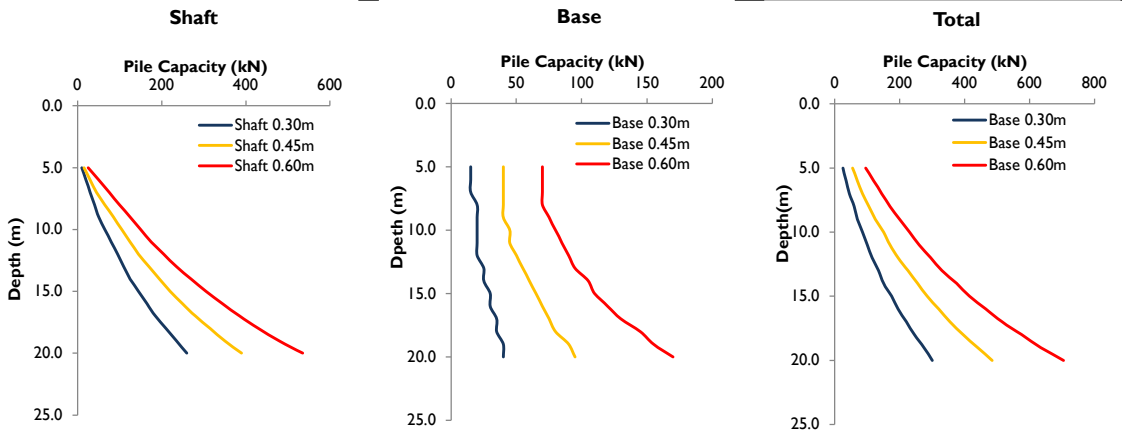
Operator

Jordan. W

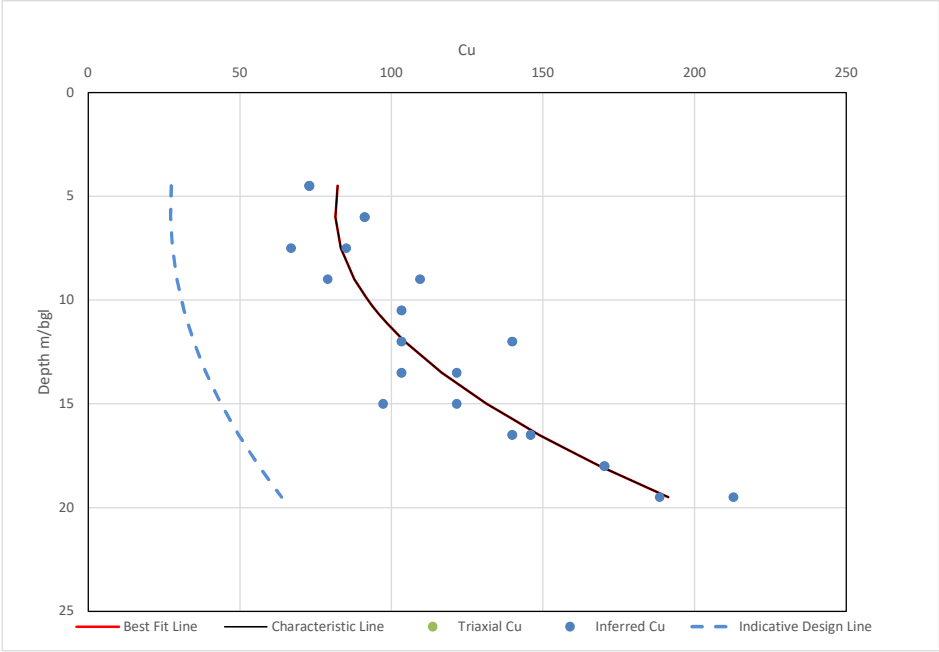
Appendix D Foundation Design

Appendix D.1 Preliminary Pile Design

Preliminary Pile Working Loads									
Single Vertically Loaded Pile (kN)									
Name:	OK	N _c value	9	Pile Start Depth:	4	FOS			
Job No:	22051	α value:	0.45	Pile Final Depth:	20	Shaft	Base		
Date:	26.9.25	Pile Increment:			1	3	3		



Pile Diameter (m):										
Pile Depths		0.30			0.45			0.60		
(m bgl)	Shaft	Base	Total	Shaft	Base	Total	Shaft	Base	Total	
4.0										
5.0	10	15	25	15	40	55	25	70	95	
6.0	20	15	35	30	40	70	50	70	120	
7.0	30	15	45	45	40	85	75	70	145	
8.0	40	20	60	65	40	105	100	70	170	
9.0	50	20	70	85	40	125	125	75	200	
10.0	65	20	85	105	45	150	150	80	230	
11.0	80	20	100	125	45	170	175	85	260	
12.0	95	20	115	145	50	195	205	90	295	
13.0	110	25	135	170	55	225	235	95	330	
14.0	125	25	150	195	60	255	270	105	375	
15.0	145	30	175	220	65	285	305	110	415	
16.0	165	30	195	250	70	320	345	120	465	
17.0	185	35	220	280	75	355	385	130	515	
18.0	210	35	245	315	80	395	430	145	575	
19.0	235	40	275	350	90	440	480	155	635	
20.0	260	40	300	390	95	485	535	170	705	



Appendix E Chemical Laboratory Analyses

Appendix E.1 Conceptual Site Model

Table E.1.1 CSM of Preliminary Risk Assessment Report (ref: 70122557-PRA-R04, by WSP), dated April 2025

Table 6-2 – SPRLs Based on Proposed End Use

SPRL	Potential Source	Pathway	Receptor	Probability	Consequence	Preliminary Risk Rating	Comments
Onsite							
SPRL1	Contaminants within soils underlying the Site arising from: - Made Ground - Agricultural land use and operations - Former bonfire activities - localised fly tipping	Direct contact with soil and inhalation of dusts from Made Ground.	Human Health – Future Site users and third-party neighbours	Low Likelihood	Medium	Low Moderate Risk	- Based on the former/current uses of the Site, there is the potential for contaminants to be present within shallow soils. Localised contamination in soils has also been established from the previous ground investigation undertaken on the Site. Though the exposure will be limited due to presence of hardstanding and buildings, there is the potential for a pathway between contaminants in shallow soils in the proposed landscaped areas and human health receptors. The risk is considered to be Low-Moderate .
			Human Health – Construction and Maintenance workers	Low Likelihood	Medium	Low Moderate Risk	- Risks to construction and maintenance workers should be managed via health and safety protocols during works.
		Inhalation of airborne fibres derived from asbestos in Made Ground.	Human Health – Future Site users and Third Party Neighbours	Low Likelihood	Severe	Moderate Risk	Potential asbestos has previously been observed within outbuilding structures on the Site. Though the presence of asbestos containing materials were not established in the previous investigation, the potential presence within the previously investigated areas cannot be discounted. The proposed development comprises residential properties (care homes) and public open space. Based on
SPRL2			Human Health – Construction and	Low Likelihood	Severe	Moderate Risk	

SPRL	Potential Source	Pathway	Receptor	Probability	Consequence	Preliminary Risk Rating	Comments
		leading to accumulation and potential asphyxiation / risk of explosion.					dioxide. The risk is considered to be Low to Moderate .
SRPL5		Direct contact of contaminants in soil	Foundations and underground structures	Low Likelihood	Mild	Low Risk	There is the potential for aggressive contaminants and hydrocarbons to be present at the Site which have the potential to impact below ground structures or services (including potable water pipes). The risk is considered to be Low .
SRPL5		Direct contact of contaminants in soil	Plant Life	Low Likelihood	Mild	Low Risk	There is the potential for contaminants to be present in shallow soils which may impact plant life in gardens and areas of soft landscaping (in areas of public open space). The risk is considered to be Low .
SPRL6		Leaching of contaminants in soil to groundwater followed by lateral migration of impacted groundwater.	Groundwater - Secondary A bedrock aquifer Surface water to the northern boundary and pond to the 75m north	Low Likelihood	Medium	Low Moderate Risk	- Based on the proposed development comprising areas of public open space and gardens, there is the potential for the infiltration of rainfall within areas of soft landscaping and subsequently leaching of contaminants from shallow soils to the underlying aquifers. However, the sensitivity of the groundwater beneath the Site is considered to be low due to the absence of any abstractions, source protection zones within 1km and the quality being classified as 'Poor' by EA in 2019.

SPRL	Potential Source	Pathway	Receptor	Probability	Consequence	Preliminary Risk Rating	Comments
			Maintenance workers				this, there is considered to be a pathway between human health receptors and potential asbestos fibres within shallow soils in areas of soft landscaping (including gardens and areas of public open space). Based on this, the risk to future Site users and third-party neighbours is considered to be Moderate . Risks to construction and maintenance workers should be managed via health and safety protocols during works.
SPRL3		Volatilisation from VOC impacted soils, migration through the unsaturated zone and subsequent vapour inhalation	Human Health – Future Site users and Third-party neighbours.	Low	Medium	Low Moderate Risk	- Based on the uses of the Site as an extended landfill and bonfire activities, there is the potential for volatile contaminants and ground gas to be generated which could subsequently be inhaled by future Site users and third-party neighbours.
			Human Health – Construction and Maintenance workers	Low	Medium	Low Moderate Risk	- The risk from ground gases and vapours is considered to be Low to Moderate . Risks to construction and maintenance workers should be managed via health and safety protocols during works.
SPRL4		Migration of ground gases through unsaturated ground and into services / underground structures / buildings	Future building structures.	Low	Medium	Low Moderate Risk	- There is the potential for the accumulation of potentially hazardous gases within confined spaces (such as below ground services, basements etc). Under extreme weather conditions, such as low and falling atmospheric conditions, the accumulation of ground gases could lead to the increase in the risk of explosion of methane, and asphyxiation by carbon

SPRL	Potential Source	Pathway	Receptor	Probability	Consequence	Preliminary Risk Rating	Comments
							The risk to aquifers underlying the Site is considered to be Low to Moderate . Groundwater underlying the Site is considered likely to flow in the south-southeast direction towards the River Hamble. As such, the surface water receptors to the north are in the upgradient. Therefore, a significant risk is not anticipated. However, due to the close proximity to the Site, a Low to Moderate risk is considered conservatively.
Offsite							
SPRL7	Contaminants associated with land uses including: - Made Ground - Historical and current land uses including smithy, electrical subelations, works, telephone exchange.	Dermal contact, ingestion, inhalation of windblown soil and dust Migration of ground gas.	Future Site users and construction and maintenance workers	Low Likelihood	Medium	Low Moderate Risk	- A few potential contaminative land uses have been identified with the surroundings of the Site, therefore a Low to Moderate Risk is anticipated with the migration of contaminants and vapours to the Site.
SPRL8		Lateral migration of contaminants within groundwater	Groundwater - Secondary A bedrock aquifer Surface water to the northern boundary and pond to the 75m north	Low Likelihood	Medium	Low Moderate Risk	- A few potential contaminative land uses have been identified with the surroundings of the Site. Therefore, the risk of contaminants migrating to the Site within groundwater and significantly impacting controlled waters receptors is considered to be Low to Moderate .

SPRL	Potential Source	Pathway	Receptor	Probability	Consequence	Preliminary Risk Rating	Comments
SPRL9	- Gasoline tanks - Historical landfill	Lateral migration of contaminants within groundwater	Foundations and underground structures	Unlikely	Medium	Low Risk	The risk of contaminants migrating to the Site and impacting foundations and underground services is considered to be Low .
SPRL10		Lateral migration of contaminants within groundwater	Plant Life	Unlikely	Medium	Low Risk	The risk to plant life in areas of soft landscaping from offsite sources is considered to be Low .

Table E.1.2 CSM Revised Post-Chemical Analyses

Source	Potential Contaminant	Exposure Pathway	Receptor	Initial Assessment from Desk Study and Main Investigation Report Information			Comments	Further Works
				Severity	Probability	Risk		
Made Ground (On-site historic contaminative processes)	Ground-gas PAHs, TPHs	Inhalation of dust	Site Workers/Site Maintenance	Medium	Likely	Moderate	No chemical contaminants of concern have been identified in excess of generic guidance values and therefore no chemical remediation is either indicated or required. However, this finding is subject to agreement from the regulator.	Discovery strategy in place.
			End Users					
Agricultural Land Use and Operations (On-site historic contaminative processes)	Ground-gas PAHs, TPHs	Inhalation of Vapour/gases	Site Workers/Site Maintenance	Medium	Likely	Moderate	On the basis of the ground gas monitoring undertaken to date, the site technically falls into a Characteristic Gas Situation 2 (or CS2) and gas protection measures should be emplaced in accordance with BS 8485:2015.	Based on CIRIA C665, Planners may require a full 6No. or 9no. visits over a period of 6no. months, for a full Ground Gas Investigation.
			End Users					
Former Bonfire Activities (On-site historic and current contaminative processes)		Ingestion and absorption via direct contact	Site Workers/Site Maintenance	Medium	Likely	Moderate	The site was predominantly underlain by cohesive soils; however, granular beds of the Wittering Formation, inferred to a depth of approximately 6.00m bgl, may represent a sensitive receptor and a potential pathway for ground or gas migration.	
			End Users					
Localised Fly-tipping (On-site historic and current contaminative processes)	Ground-gas PAHs, TPHs	Migration via surface runoff	Surface Water	Mild	Unlikely	Very low		
		Migration in solution via groundwater	Surface Water					
			Shallow Aquifer	Mild	Unlikely	Very low		
			Deep Aquifer					
		Direct contact with construction material	Buried structures	Mild	Unlikely	Very low		
			Buried Services					
		Migration of gases via permeable soils	Site Workers/Site Maintenance	Mild	Unlikely	Very low		
			End Users					
			Off-site Users	Mild	Unlikely	Very low		
			Building and confined spaces					

Appendix E.2 Chemical Laboratory Results



Olia Kontogianni
Soils Ltd
Newton House
Cross Road
Tadworth
Surrey
KT20 5SR

Normec DETS Limited
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 25-07444

Site Reference: New Care Home, Providence Hill, Bursledon

Project / Job Ref: 22051

Order No: 22051/BRE/OK

Sample Receipt Date: 18/08/2025

Sample Scheduled Date: 18/08/2025

Report Issue Number: 1

Reporting Date: 22/08/2025

[Redacted Signature]
Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Soil Analysis Certificate						
DETS Report No: 25-07444	~Date Sampled	13/08/25	13/08/25			
Soils Ltd	~Time Sampled	None Supplied	None Supplied			
~Site Reference: New Care Home, Providence Hill, Bursledon	~TP / BH No	WS1	WS3			
~Project / Job Ref: 22051	~Additional Refs	None Supplied	None Supplied			
~Order No: 22051/BRE/OK	~Depth (m)	0.90	1.60			
Reporting Date: 22/08/2025	DETS Sample No	786617	786618			

Determinand	Unit	RL	Accreditation				
pH	pH Units	N/a	MCERTS	6.5	5.3		
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS	< 200	< 200		
Total Sulphate as SO ₄	%	< 0.02	MCERTS	< 0.02	< 0.02		
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	< 10	12		
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	< 0.01	0.01		
Total Sulphur	%	< 0.02	NONE	< 0.02	< 0.02		
Ammonium as NH ₄	mg/kg	< 0.5	MCERTS	< 0.5	< 0.5		
Ammonium as NH ₄	mg/l	< 0.05	MCERTS	< 0.05	< 0.05		
W/S Chloride (2:1)	mg/kg	< 1	MCERTS	8	15		
W/S Chloride (2:1)	mg/l	< 0.5	MCERTS	3.9	7.5		
Water Soluble Nitrate (2:1) as NO ₃	mg/kg	< 3	MCERTS	< 3	< 3		
Water Soluble Nitrate (2:1) as NO ₃	mg/l	< 1.5	MCERTS	< 1.5	< 1.5		
W/S Magnesium	mg/l	< 0.1	NONE	0.2	0.4		

Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 25-07444	
Soils Ltd	
~Site Reference: New Care Home, Providence Hill, Bursledon	
~Project / Job Ref: 22051	
~Order No: 22051/BRE/OK	
Reporting Date: 22/08/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
786617	WS1	None Supplied	0.90	9.9	Light brown sandy clay
786618	WS3	None Supplied	1.60	19.1	Light brown clay

Moisture content is part of procedure E003 & is not an accredited test

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-07444
Soils Ltd
~Site Reference: New Care Home, Providence Hill, Bursledon
~Project / Job Ref: 22051
~Order No: 22051/BRE/OK
Reporting Date: 22/08/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphénylcarbazine followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of FOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

List of HWOL Acronyms and Operators	
DETS Report No: 25-07444	
Soils Ltd	
~Site Reference: New Care Home, Providence Hill, Bursledon	
~Project / Job Ref: 22051	
~Order No: 22051/BRE/OK	
Reporting Date: 22/08/2025	

Acronym	Description
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
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

Det - Acronym

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
*	The Dutch 10 PAH compounds consist of Naphthalene, Anthracene, Phenanthrene, Fluoranthene, Benz(a)anthracene, Chrysene, Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, and Indeno(1,2,3-cd)pyrene
**	Total EPA-16 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, and Benzo(ghi)perylene.
***	Total WAC-17 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene and Coronene.
^	No sampling date provided; unable to confirm if samples are within acceptable holding times
M	MCERTS accredited test
U	UKAS accredited test



Olia Kontogianni
Soils Ltd
Thomas Telford House - Unit 11
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Normec DETS Limited
Unit 1
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Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 25-08342

Site Reference: New Care Home, Bursledon

Project / Job Ref: 22051

Order No: 22051/BRE/OK

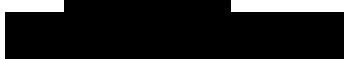
Sample Receipt Date: 25/09/2025

Sample Scheduled Date: 25/09/2025

Report Issue Number: 1

Reporting Date: 01/10/2025

Authorised by:



Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Soil Analysis Certificate						
DETS Report No: 25-08342	~Date Sampled	22/09/25	22/09/25			
Soils Ltd	~Time Sampled	None Supplied	None Supplied			
~Site Reference: New Care Home, Bursledon	~TP / BH No	WS6	BH1			
~Project / Job Ref: 22051	~Additional Refs	None Supplied	None Supplied			
~Order No: 22051/BRE/OK	~Depth (m)	2.10	8.00			
Reporting Date: 01/10/2025	DETS Sample No	790679	790680			

Determinand	Unit	RL	Accreditation				
pH	pH Units	N/a	MCERTS	4.5	5.1		
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS	< 200	1292		
Total Sulphate as SO ₄	%	< 0.02	MCERTS	< 0.02	0.13		
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	28	608		
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.03	0.61		
Total Sulphur	%	< 0.02	NONE	< 0.02	0.21		
Ammonium as NH ₄	mg/kg	< 0.5	MCERTS	< 0.5	4.3		
Ammonium as NH ₄	mg/l	< 0.05	MCERTS	< 0.05	0.43		
W/S Chloride (2:1)	mg/kg	< 1	MCERTS	14	12		
W/S Chloride (2:1)	mg/l	< 0.5	MCERTS	7.2	6.1		
Water Soluble Nitrate (2:1) as NO ₃	mg/kg	< 3	MCERTS	< 3	< 3		
Water Soluble Nitrate (2:1) as NO ₃	mg/l	< 1.5	MCERTS	< 1.5	< 1.5		
W/S Magnesium	mg/l	< 0.1	NONE	0.6	18		

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Analysis carried out on the dried sample is corrected for the stone content

Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 25-08342	
Soils Ltd	
~Site Reference: New Care Home, Bursledon	
~Project / Job Ref: 22051	
~Order No: 22051/BRE/OK	
Reporting Date: 01/10/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
790679	WS6	None Supplied	2.10	13.3	Light brown clayey sand
790680	BH1	None Supplied	8.00	18.8	Light grey sandy clay

Moisture content is part of procedure E003 & is not an accredited test

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-08342
Soils Ltd
~Site Reference: New Care Home, Bursledon
~Project / Job Ref: 22051
~Order No: 22051/BRE/OK
Reporting Date: 01/10/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of FOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

List of HWOL Acronyms and Operators	
DETS Report No: 25-08342	
Soils Ltd	
~Site Reference: New Care Home, Bursledon	
~Project / Job Ref: 22051	
~Order No: 22051/BRE/OK	
Reporting Date: 01/10/2025	

Acronym	Description
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
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

Det - Acronym

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
*	The Dutch 10 PAH compounds consist of Naphthalene, Anthracene, Phenanthrene, Fluoranthene, Benz(a)anthracene, Chrysene, Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, and Indeno(1,2,3-cd)pyrene
**	Total EPA-16 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, and Benzo(ghi)perylene.
***	Total WAC-17 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene and Coronene.
^	No sampling date provided; unable to confirm if samples are within acceptable holding times
\$	Samples exceeded their recommended holding times
M	MCERTS accredited test
U	UKAS accredited test



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DETS Report No: 25-07443

Site Reference: New Care Home, Providence Hill, Bursledon

Project / Job Ref: 22051

Order No: 22051/S/OK

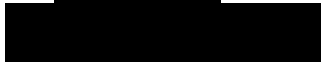
Sample Receipt Date: 18/08/2025

Sample Scheduled Date: 18/08/2025

Report Issue Number: 1

Reporting Date: 22/08/2025

Authorised by:



Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

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Soil Analysis Certificate						
DETS Report No: 25-07443	~Date Sampled	13/08/25	13/08/25	13/08/25		
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied		
~Site Reference: New Care Home, Providence Hill, Bursledon	~TP / BH No	WS1	WS2	WS3		
~Project / Job Ref: 22051	~Additional Refs	None Supplied	None Supplied	None Supplied		
~Order No: 22051/S/OK	~Depth (m)	0.20	0.10	0.20		
Reporting Date: 22/08/2025	DETS Sample No	786614	786615	786616		

Determinand	Unit	RL	Accreditation					
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected		
pH	pH Units	N/a	MCERTS	6.2	6.3	6.8		
Total Cyanide	mg/kg	< 1	NONE	< 1				
Free Cyanide	mg/kg	< 1	NONE	< 1				
Organic Matter (SOM)	%	< 0.1	MCERTS	2.5	3	3.4		
Arsenic (As)	mg/kg	< 2	MCERTS	6	8	9		
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1		
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	0.2	0.2		
Chromium (Cr)	mg/kg	< 2	MCERTS	12	23	17		
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2		
Copper (Cu)	mg/kg	< 4	MCERTS	9	225	23		
Lead (Pb)	mg/kg	< 3	MCERTS	58	82	81		
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1		
Nickel (Ni)	mg/kg	< 3	MCERTS	6	14	8		
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2		
Vanadium (V)	mg/kg	< 1	MCERTS	21	26	29		
Zinc (Zn)	mg/kg	< 3	MCERTS	33	146	112		
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2		

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-07443	~Date Sampled	13/08/25	13/08/25	13/08/25		
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied		
~Site Reference: New Care Home, Providence Hill, Bursledon	~TP / BH No	WS1	WS2	WS3		
~Project / Job Ref: 22051	~Additional Refs	None Supplied	None Supplied	None Supplied		
~Order No: 22051/S/OK	~Depth (m)	0.20	0.10	0.20		
Reporting Date: 22/08/2025	DETS Sample No	786614	786615	786616		

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	0.14	< 0.1		
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	0.13	< 0.1		
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	0.11	< 0.1		
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	0.11	< 0.1		
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
**Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6		

Soil Analysis Certificate - EPH Texas Banded

DETS Report No: 25-07443	~Date Sampled	13/08/25	13/08/25	13/08/25		
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied		
~Site Reference: New Care Home, Providence Hill, Bursledon	~TP / BH No	WS1	WS2	WS3		
~Project / Job Ref: 22051	~Additional Refs	None Supplied	None Supplied	None Supplied		
~Order No: 22051/S/OK	~Depth (m)	0.20	0.10	0.20		
Reporting Date: 22/08/2025	DETS Sample No	786614	786615	786616		

Determinand	Unit	RL	Accreditation				
EPH Texas (C6 - C8) : HS 1D MS Total	mg/kg	< 0.05	NONE		< 0.05	< 0.05	
EPH Texas (>C8 - C10) : EH 1D Total	mg/kg	< 1	MCERTS		< 1	< 1	
EPH Texas (>C10 - C12) : EH 1D Total	mg/kg	< 1	MCERTS		< 1	< 1	
EPH Texas (>C12 - C16) : EH 1D Total	mg/kg	< 1	MCERTS		< 1	< 1	
EPH Texas (>C16 - C21) : EH 1D Total	mg/kg	< 1	MCERTS		< 1	< 1	
EPH Texas (>C21 - C40) : EH 1D Total	mg/kg	< 6	MCERTS		< 6	< 6	
EPH Texas (C6 - C40) : HS 1D MS+EH 1D Total	mg/kg	< 6	NONE		< 6	< 6	

Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 25-07443	~Date Sampled	13/08/25				
Soils Ltd	~Time Sampled	None Supplied				
~Site Reference: New Care Home, Providence Hill, Bursledon	~TP / BH No	WS1				
~Project / Job Ref: 22051	~Additional Refs	None Supplied				
~Order No: 22051/S/OK	~Depth (m)	0.20				
Reporting Date: 22/08/2025	DETS Sample No	786614				

Determinand	Unit	RL	Accreditation				
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01			
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05			
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	< 10			
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21			
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01			
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05			
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	< 3			
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	< 10			
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21			
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Tot al	mg/kg	< 42	NONE	< 42			

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 25-07443	~Date Sampled	13/08/25				
Soils Ltd	~Time Sampled	None Supplied				
~Site Reference: New Care Home, Providence Hill, Bursledon	~TP / BH No	WS1				
~Project / Job Ref: 22051	~Additional Refs	None Supplied				
~Order No: 22051/S/OK	~Depth (m)	0.20				
Reporting Date: 22/08/2025	DETS Sample No	786614				

Determinand	Unit	RL	Accreditation				
Benzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
Toluene : HS_1D_MS	µg/kg	< 5	MCERTS	< 5			
Ethylbenzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
p & m-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
o-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
MTBE : HS_1D_MS	µg/kg	< 5	MCERTS	< 5			

Soil Analysis Certificate - PCB (7 Congeners)							
DETS Report No: 25-07443	~Date Sampled	13/08/25					
Soils Ltd	~Time Sampled	None Supplied					
~Site Reference: New Care Home, Providence Hill, Bursledon	~TP / BH No	WS1					
~Project / Job Ref: 22051	~Additional Refs	None Supplied					
~Order No: 22051/S/OK	~Depth (m)	0.20					
Reporting Date: 22/08/2025	DETS Sample No	786614					

Determinand	Unit	RL	Accreditation				
PCB Congener 28	mg/kg	0.008	NONE	< 0.008			
PCB Congener 52	mg/kg	0.008	NONE	< 0.008			
PCB Congener 101	mg/kg	0.008	NONE	< 0.008			
PCB Congener 118	mg/kg	0.008	NONE	< 0.008			
PCB Congener 138	mg/kg	0.008	NONE	< 0.008			
PCB Congener 153	mg/kg	0.008	NONE	< 0.008			
PCB Congener 180	mg/kg	0.008	NONE	< 0.008			
Total PCB (7 Congeners)	mg/kg	< 0.1	NONE	< 0.1			

Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 25-07443	
Soils Ltd	
~Site Reference: New Care Home, Providence Hill, Bursledon	
~Project / Job Ref: 22051	
~Order No: 22051/S/OK	
Reporting Date: 22/08/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
786614	WS1	None Supplied	0.20	7.8	Brown sandy clay with stones and vegetation
786615	WS2	None Supplied	0.10	9.3	Brown sandy clay with vegetation
786616	WS3	None Supplied	0.20	10.3	Brown sandy clay with stones and vegetation

Moisture content is part of procedure E003 & is not an accredited test

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-07443
Soils Ltd
~Site Reference: New Care Home, Providence Hill, Bursledon
~Project / Job Ref: 22051
~Order No: 22051/S/OK
Reporting Date: 22/08/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphénylcarbazine followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of FOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

List of HWOL Acronyms and Operators
DETS Report No: 25-07443
Soils Ltd
~Site Reference: New Care Home, Providence Hill, Bursledon
~Project / Job Ref: 22051
~Order No: 22051/S/OK
Reporting Date: 22/08/2025

Acronym	Description
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
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

Benzene - HS_1D_MS
EPH Texas (C10 - C12) - EH_1D_Total
EPH Texas (C12 - C16) - EH_1D_Total
EPH Texas (C16 - C21) - EH_1D_Total
EPH Texas (C21 - C40) - EH_1D_Total
EPH Texas (C6 - C40) - HS_1D_MS+EH_1D_Total
EPH Texas (C6 - C8) - HS_1D_MS_Total
EPH Texas (C8 - C10) - EH_1D_Total
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
TPH CWG - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH CWG - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH CWG - Aliphatic >C16 - C21 - EH_CU_1D_AL
TPH CWG - Aliphatic >C21 - C34 - EH_CU_1D_AL
TPH CWG - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH CWG - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH CWG - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH CWG - Aliphatic C5 - C34 - HS_1D_MS+EH_CU_1D_AL
TPH CWG - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH CWG - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH CWG - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH CWG - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C35 - HS_1D_MS+EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH CWG - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH CWG - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH CWG - Total >C5 - C35 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
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Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
*	The Dutch 10 PAH compounds consist of Naphthalene, Anthracene, Phenanthrene, Fluoranthene, Benz(a)anthracene, Chrysene, Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, and Indeno(1,2,3-cd)pyrene
**	Total EPA-16 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, and Benzo(ghi)perylene.
***	Total WAC-17 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene and Coronene.
^	No sampling date provided; unable to confirm if samples are within acceptable holding times
S	Subcontracted analysis
M	MCERTS accredited test
U	UKAS accredited test



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DETS Report No: 25-08343

Site Reference: New Care Home, Bursledon
Project / Job Ref: 22051
Order No: 22051/S/OK
Sample Receipt Date: 25/09/2025
Sample Scheduled Date: 25/09/2025
Report Issue Number: 1
Reporting Date: 01/10/2025



Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Soil Analysis Certificate						
DETS Report No: 25-08343	~Date Sampled	22/09/25	22/09/25	22/09/25		
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied		
~Site Reference: New Care Home, Bursledon	~TP / BH No	WS6	WS6	TPSK1		
~Project / Job Ref: 22051	~Additional Refs	None Supplied	None Supplied	None Supplied		
~Order No: 22051/S/OK	~Depth (m)	0.20	0.60	0.20		
Reporting Date: 01/10/2025	DETS Sample No	790681	790682	790683		

Determinand	Unit	RL	Accreditation					
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected		
pH	pH Units	N/a	MCERTS	5.3	5.0	5.9		
Total Cyanide	mg/kg	< 1	NONE			< 1		
Free Cyanide	mg/kg	< 1	NONE			< 1		
Organic Matter (SOM)	%	< 0.1	MCERTS	1.2	0.8	2.4		
Arsenic (As)	mg/kg	< 2	MCERTS	13	12	7		
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1		
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	< 0.2	< 0.2		
Chromium (Cr)	mg/kg	< 2	MCERTS	28	41	12		
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2		
Copper (Cu)	mg/kg	< 4	MCERTS	7	8	17		
Lead (Pb)	mg/kg	< 3	MCERTS	14	12	43		
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1		
Nickel (Ni)	mg/kg	< 3	MCERTS	14	14	6		
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2		
Vanadium (V)	mg/kg	< 1	MCERTS	41	43	21		
Zinc (Zn)	mg/kg	< 3	MCERTS	33	27	58		
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2		

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Analysis carried out on the dried sample is corrected for the stone content

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-08343	~Date Sampled	22/09/25	22/09/25	22/09/25		
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied		
~Site Reference: New Care Home, Bursledon	~TP / BH No	WS6	WS6	TPSK1		
~Project / Job Ref: 22051	~Additional Refs	None Supplied	None Supplied	None Supplied		
~Order No: 22051/S/OK	~Depth (m)	0.20	0.60	0.20		
Reporting Date: 01/10/2025	DETS Sample No	790681	790682	790683		

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
**Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6		

Soil Analysis Certificate - EPH Texas Banded

DETS Report No: 25-08343	~Date Sampled	22/09/25	22/09/25	22/09/25		
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied		
~Site Reference: New Care Home, Bursledon	~TP / BH No	WS6	WS6	TPSK1		
~Project / Job Ref: 22051	~Additional Refs	None Supplied	None Supplied	None Supplied		
~Order No: 22051/S/OK	~Depth (m)	0.20	0.60	0.20		
Reporting Date: 01/10/2025	DETS Sample No	790681	790682	790683		

Determinand	Unit	RL	Accreditation					
EPH Texas (C6 - C8) : HS 1D MS Total	mg/kg	< 0.05	NONE	< 0.05	< 0.05			
EPH Texas (>C8 - C10) : EH 1D Total	mg/kg	< 1	MCERTS	< 1	< 1			
EPH Texas (>C10 - C12) : EH 1D Total	mg/kg	< 1	MCERTS	< 1	< 1			
EPH Texas (>C12 - C16) : EH 1D Total	mg/kg	< 1	MCERTS	< 1	< 1			
EPH Texas (>C16 - C21) : EH 1D Total	mg/kg	< 1	MCERTS	< 1	< 1			
EPH Texas (>C21 - C40) : EH 1D Total	mg/kg	< 6	MCERTS	< 6	< 6			
EPH Texas (C6 - C40) : HS 1D MS+EH 1D Total	mg/kg	< 6	NONE	< 6	< 6			

Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 25-08343	~Date Sampled	22/09/25				
Soils Ltd	~Time Sampled	None Supplied				
~Site Reference: New Care Home, Bursledon	~TP / BH No	TPSK1				
~Project / Job Ref: 22051	~Additional Refs	None Supplied				
~Order No: 22051/S/OK	~Depth (m)	0.20				
Reporting Date: 01/10/2025	DETS Sample No	790683				

Determinand	Unit	RL	Accreditation				
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01			
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05			
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	< 10			
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21			
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01			
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05			
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	< 3			
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	< 10			
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21			
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Tot al	mg/kg	< 42	NONE	< 42			

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 25-08343	~Date Sampled	22/09/25				
Soils Ltd	~Time Sampled	None Supplied				
~Site Reference: New Care Home, Bursledon	~TP / BH No	TPSK1				
~Project / Job Ref: 22051	~Additional Refs	None Supplied				
~Order No: 22051/S/OK	~Depth (m)	0.20				
Reporting Date: 01/10/2025	DETS Sample No	790683				

Determinand	Unit	RL	Accreditation				
Benzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
Toluene : HS_1D_MS	µg/kg	< 5	MCERTS	< 5			
Ethylbenzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
p & m-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
o-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
MTBE : HS_1D_MS	µg/kg	< 5	MCERTS	< 5			

Soil Analysis Certificate - PCB (7 Congeners)							
DETS Report No: 25-08343		~Date Sampled	22/09/25				
Soils Ltd		~Time Sampled	None Supplied				
~Site Reference: New Care Home, Bursledon		~TP / BH No	TPSK1				
~Project / Job Ref: 22051		~Additional Refs	None Supplied				
~Order No: 22051/S/OK		~Depth (m)	0.20				
Reporting Date: 01/10/2025		DETS Sample No	790683				

Determinand	Unit	RL	Accreditation				
PCB Congener 28	mg/kg	0.008	NONE	< 0.008			
PCB Congener 52	mg/kg	0.008	NONE	< 0.008			
PCB Congener 101	mg/kg	0.008	NONE	< 0.008			
PCB Congener 118	mg/kg	0.008	NONE	< 0.008			
PCB Congener 138	mg/kg	0.008	NONE	< 0.008			
PCB Congener 153	mg/kg	0.008	NONE	< 0.008			
PCB Congener 180	mg/kg	0.008	NONE	< 0.008			
Total PCB (7 Congeners)	mg/kg	< 0.1	NONE	< 0.1			

Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 25-08343	
Soils Ltd	
~Site Reference: New Care Home, Bursledon	
~Project / Job Ref: 22051	
~Order No: 22051/S/OK	
Reporting Date: 01/10/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
790681	WS6	None Supplied	0.20	10.8	Light brown sandy clay with vegetation
790682	WS6	None Supplied	0.60	11.4	Light brown sandy clay with stones
790683	TPSK1	None Supplied	0.20	14.5	Brown sandy clay with vegetation and stones

Moisture content is part of procedure E003 & is not an accredited test

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-08343
Soils Ltd
~Site Reference: New Care Home, Bursledon
~Project / Job Ref: 22051
~Order No: 22051/S/OK
Reporting Date: 01/10/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphénylcarbazine followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of FOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

List of HWOL Acronyms and Operators
DETS Report No: 25-08343
Soils Ltd
~Site Reference: New Care Home, Bursledon
~Project / Job Ref: 22051
~Order No: 22051/S/OK
Reporting Date: 01/10/2025

Acronym	Description
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
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

Benzene - HS_1D_MS
EPH Texas (C10 - C12) - EH_1D_Total
EPH Texas (C12 - C16) - EH_1D_Total
EPH Texas (C16 - C21) - EH_1D_Total
EPH Texas (C21 - C40) - EH_1D_Total
EPH Texas (C6 - C40) - HS_1D_MS+EH_1D_Total
EPH Texas (C6 - C8) - HS_1D_MS_Total
EPH Texas (C8 - C10) - EH_1D_Total
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
TPH CWG - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH CWG - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH CWG - Aliphatic >C16 - C21 - EH_CU_1D_AL
TPH CWG - Aliphatic >C21 - C34 - EH_CU_1D_AL
TPH CWG - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH CWG - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH CWG - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH CWG - Aliphatic C5 - C34 - HS_1D_MS+EH_CU_1D_AL
TPH CWG - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH CWG - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH CWG - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH CWG - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C35 - HS_1D_MS+EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH CWG - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH CWG - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH CWG - Total >C5 - C35 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

Normec DETS Limited
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Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
*	The Dutch 10 PAH compounds consist of Naphthalene, Anthracene, Phenanthrene, Fluoranthene, Benz(a)anthracene, Chrysene, Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, and Indeno(1,2,3-cd)pyrene
**	Total EPA-16 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, and Benzo(ghi)perylene.
***	Total WAC-17 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene and Coronene.
^	No sampling date provided; unable to confirm if samples are within acceptable holding times
\$	Samples exceeded their recommended holding times
S	Subcontracted analysis
M	MCERTS accredited test
U	UKAS accredited test



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ME17 2JN
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DETS Report No: 25-07507

Site Reference: New Care Home, Providence Hill, Burlesdon

Project / Job Ref: 22051

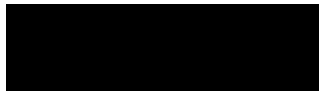
Order No: 22051/S/OK

Sample Receipt Date: 20/08/2025

Sample Scheduled Date: 20/08/2025

Report Issue Number: 1

Reporting Date: 27/08/2025



Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

For Topsoil and WAC analysis the expanded uncertainty measurement should be considered while evaluating results against compliance values.

Soil Analysis Certificate						
DETS Report No: 25-07507	~Date Sampled	14/08/25				
Soils Ltd	~Time Sampled	None Supplied				
~Site Reference: New Care Home, Providence Hill, Burlesdon	~TP / BH No	BH2				
~Project / Job Ref: 22051	~Additional Refs	None Supplied				
~Order No: 22051/S/OK	~Depth (m)	0.00 - 0.50				
Reporting Date: 27/08/2025	DETS Sample No	786927				

Determinand	Unit	RL	Accreditation				
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected			
pH	pH Units	N/a	MCERTS	4.3			
Organic Matter (SOM)	%	< 0.1	MCERTS	0.9			
Arsenic (As)	mg/kg	< 2	MCERTS	9			
W/S Boron	mg/kg	< 1	NONE	< 1			
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.7			
Chromium (Cr)	mg/kg	< 2	MCERTS	11			
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2			
Copper (Cu)	mg/kg	< 4	MCERTS	15			
Lead (Pb)	mg/kg	< 3	MCERTS	15			
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1			
Nickel (Ni)	mg/kg	< 3	MCERTS	5			
Selenium (Se)	mg/kg	< 2	MCERTS	< 2			
Vanadium (V)	mg/kg	< 1	MCERTS	17			
Zinc (Zn)	mg/kg	< 3	MCERTS	38			
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Analysis carried out on the dried sample is corrected for the stone content

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-07507	~Date Sampled	14/08/25				
Soils Ltd	~Time Sampled	None Supplied				
~Site Reference: New Care Home, Providence Hill, Burlesdon	~TP / BH No	BH2				
~Project / Job Ref: 22051	~Additional Refs	None Supplied				
~Order No: 22051/S/OK	~Depth (m)	0.00 - 0.50				
Reporting Date: 27/08/2025	DETS Sample No	786927				

Determinand	Unit	RL	Accreditation				
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1			
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1			
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1			
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1			
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1			
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1			
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1			
**Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6			

Soil Analysis Certificate - EPH Texas Banded

DETS Report No: 25-07507	~Date Sampled	14/08/25				
Soils Ltd	~Time Sampled	None Supplied				
~Site Reference: New Care Home, Providence Hill, Burlesdon	~TP / BH No	BH2				
~Project / Job Ref: 22051	~Additional Refs	None Supplied				
~Order No: 22051/S/OK	~Depth (m)	0.00 - 0.50				
Reporting Date: 27/08/2025	DETS Sample No	786927				

Determinand	Unit	RL	Accreditation				
EPH Texas (C6 - C8) : HS 1D MS Total	mg/kg	< 0.05	NONE	< 0.05			
EPH Texas (>C8 - C10) : EH 1D Total	mg/kg	< 1	MCERTS	< 1			
EPH Texas (>C10 - C12) : EH 1D Total	mg/kg	< 1	MCERTS	< 1			
EPH Texas (>C12 - C16) : EH 1D Total	mg/kg	< 1	MCERTS	< 1			
EPH Texas (>C16 - C21) : EH 1D Total	mg/kg	< 1	MCERTS	< 1			
EPH Texas (>C21 - C40) : EH 1D Total	mg/kg	< 6	MCERTS	< 6			
EPH Texas (C6 - C40) : HS 1D MS+EH 1D Total	mg/kg	< 6	NONE	< 6			

Waste Acceptance Criteria Analytical Certificate									
DETS Report No: 25-07507		~Date Sampled	14/08/25		Landfill Waste Acceptance Criteria Limits				
Soils Ltd		~Time Sampled	None Supplied						
~Site Reference: New Care Home, Providence Hill, Buresdon		~TP / BH No	BH2						
~Project / Job Ref: 22051		~Additional Refs	None Supplied						
~Order No: 22051/S/OK		~Depth (m)	0.00 - 0.50						
Reporting Date: 27/08/2025		DETS Sample No	786927						
Determinand	Unit	MDL			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill		
TOC ^{MU}	%	< 0.1	0.6		3%	5%	6%		
Loss on Ignition ^{MU}	%	< 0.01	8.26		--	--	10%		
BTEX ^{MU}	mg/kg	< 0.05	< 0.05		6	--	--		
Sum of PCBs	mg/kg	< 0.1	< 0.1		1	--	--		
Mineral Oil ^{MU}	mg/kg	< 10	< 10		500	--	--		
Total PAH ^{MU}	mg/kg	< 1.7	< 1.7		100	--	--		
pH ^{MU}	pH Units	N/a	4.3		--	>6	--		
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	< 1		--	To be evaluated	To be evaluated		
Eluate Analysis			10:1 mg/l		Cumulative 10:1 * mg/kg	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)			
Arsenic		< 0.0002			< 0.002	0.5	2	25	
Barium		0.0028			0.028	20	100	300	
Cadmium		< 0.0002			< 0.002	0.04	1	5	
Chromium		< 0.0002			< 0.002	0.5	10	70	
Copper		0.0015			0.015	2	50	100	
Mercury		< 0.00004			< 0.0004	0.01	0.2	2	
Molybdenum		< 0.0002			< 0.002	0.5	10	30	
Nickel		0.0005			0.005	0.4	10	40	
Lead		< 0.0002			< 0.002	0.5	10	50	
Antimony		< 0.0002			< 0.002	0.06	0.7	5	
Selenium		< 0.0002			< 0.002	0.1	0.5	7	
Zinc		0.005			0.05	4	50	200	
Chloride		3.0			30	800	15000	25000	
Fluoride		< 0.5			< 5	10	150	500	
Sulphate		5.0			50	1000	20000	50000	
TDS		23			230	4000	60000	100000	
Phenol Index		< 0.01			< 0.1	1	-	-	
DOC		5.1			50.6	500	800	1000	
Leach Test Information									
Sample Mass (kg)		0.11							
Dry Matter (%)		79.4							
Moisture (%)		26							
Stage 1									
Volume Eluate L10 (litres)		0.88							
Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion Stated limits are for guidance only and Normec DETS Limited cannot be held responsible for any discrepancies with current legislation									

Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 25-07507	
Soils Ltd	
~Site Reference: New Care Home, Providence Hill, Burlesdon	
~Project / Job Ref: 22051	
~Order No: 22051/S/OK	
Reporting Date: 27/08/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
786927	BH2	None Supplied	0.00 - 0.50	20.6	Light brown sandy clay

Moisture content is part of procedure E003 & is not an accredited test

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-07507
Soils Ltd
~Site Reference: New Care Home, Providence Hill, Buresdon
~Project / Job Ref: 22051
~Order No: 22051/S/OK
Reporting Date: 27/08/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of FOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

Water Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-07507
Soils Ltd
~Site Reference: New Care Home, Providence Hill, Bursledon
~Project / Job Ref: 22051
~Order No: 22051/S/OK
Reporting Date: 27/08/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Water	UF	Alkalinity	Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point	E103
Water	F	Ammoniacal Nitrogen	Determination of ammoniacal nitrogen by discrete analyser.	E126
Water	UF	BTEX	Determination of BTEX by headspace GC-MS	E101
Water	F	Cations	Determination of cations by filtration followed by ICP-MS	E102
Water	F	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	UF	Biological Oxygen Demand (BOD)	Determination using BOD sensors measuring the change of pressure	E133
Water	F	Chloride	Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F	Chromium - Hexavalent	Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by	E116
Water	F	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E115
Water	F	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E115
Water	F	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E115
Water	UF	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through liquid:liquid extraction with cyclohexane	E111
Water	F	Diesel Range Organics (C10 - C24)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Dissolved Organic Content (DOC)	Determination of DOC by filtration followed by low heat with persulphate addition followed by IR detection	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F	EPH (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E104
Water	F	Fluoride	Determination of Fluoride by filtration & analysed by ion chromatography	E109
Water	F	Hardness	Determination of Ca and Mg by ICP-MS followed by calculation	E102
Leachate	F	Leachate Preparation - NRA	Based on National Rivers Authority leaching test 1994	E301
Leachate	F	Leachate Preparation - WAC	Based on BS EN 12457 Pt1, 2, 3	E302
Water	F	Metals	Determination of metals by filtration followed by ICP-MS	E102
Water	F	Mineral Oil (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Nitrate	Determination of nitrate by filtration & analysed by ion chromatography	E109
Water	F	Monohydric Phenol	Determination of phenols by distillation followed by colorimetry	E115
Water	F	PAH - Speciated (EPA 16)	Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E105
Water	F	PCB - 7 Congeners	Determination of PCB compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E108
Water	UF	Petroleum Ether Extract (PEE)	Gravimetrically determined through liquid:liquid extraction with petroleum ether	E111
Water	UF	pH	Determination of pH by electrometric measurement	E107
Water	F	Phosphate	Determination of phosphate by filtration & analysed by ion chromatography	E109
Water	UF	Redox Potential	Determination of redox potential by electrometric measurement	E113
Water	F	Sulphate (as SO4)	Determination of sulphate by filtration & analysed by ion chromatography	E109
Water	UF	Sulphide	Determination of sulphide by distillation followed by colorimetry	E118
Water	F	SVOC	Determination of semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E106
Water	UF	Toluene Extractable Matter (TEM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF	Total Organic Carbon (TOC)	Acidification, followed by high-temperature oxidation and IR detection.	E110
Water	F	TPH CWG (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C35. C5 to C8 by headspace GC-MS	E104
Water	F	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C44. C5 to C8 by headspace GC-MS	E104
Water	UF	VOCs	Determination of volatile organic compounds by headspace GC-MS	E101
Water	UF	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E101

List of HWOL Acronyms and Operators
DETS Report No: 25-07507
Soils Ltd
~Site Reference: New Care Home, Providence Hill, Buresdon
~Project / Job Ref: 22051
~Order No: 22051/S/OK
Reporting Date: 27/08/2025

Acronym	Description
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
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

EPH Texas (C10 - C12) - EH_1D_Total
EPH Texas (C12 - C16) - EH_1D_Total
EPH Texas (C16 - C21) - EH_1D_Total
EPH Texas (C21 - C40) - EH_1D_Total
EPH Texas (C6 - C40) - HS_1D_MS+EH_1D_Total
EPH Texas (C6 - C8) - HS_1D_MS_Total
EPH Texas (C8 - C10) - EH_1D_Total
Mineral Oil (C10 - C40) (BS EN 12457-2) - EH_CU_1D_AL
Total BTEX (BS EN 12457-2) - HS_1D_MS_Total

Parameter	Matrix Type	Expanded Uncertainty Measurement	Unit
TOC	Soil	11	%
Loss on Ignition	Soil	24	%
BTEX	Soil	11	%
Sum of PCBs	Soil	30	%
Mineral Oil	Soil	9	%
Total PAH	Soil	17	%
pH	Soil	0.2	Units
Acid Neutralisation Capacity	Soil	18	%
Clay Content	Soil	15	%
Silt Content	Soil	14	%
Sand Content	Soil	13	%
Loss on Ignition	Soil	24	%
pH	Soil	0.2	Units
Carbonate	Soil	12	%
Total Nitrogen	Soil	12	%
Phosphorus (Extractable)	Soil	24	%
Potassium (Extractable)	Soil	20	%
Magnesium (Extractable)	Soil	26	%
Zinc	Soil	26	%
Copper	Soil	24	%
Nickel	Soil	29	%
Available Sodium	Soil	23	%
Available Calcium	Soil	23	%
Electrical Conductivity	Soil	10	%

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
*	The Dutch 10 PAH compounds consist of Naphthalene, Anthracene, Phenanthrene, Fluoranthene, Benz(a)anthracene, Chrysene, Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, and Indeno(1,2,3-cd)pyrene
**	Total EPA-16 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, and Benzo(ghi)perylene.
***	Total WAC-17 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene and Coronene.
^	No sampling date provided; unable to confirm if samples are within acceptable holding times
n	Please note that we are MCERTS soil accredited (UK soils only) for sand, loam, and clay, and UKAS accredited for groundwater, tap water, surface water, and generated leachates. Other matrices are outside our scope of accreditation.
S	Subcontracted analysis
M	MCERTS accredited test
U	UKAS accredited test

Certificate of Analysis

Certificate Number 25-22312

Issued: 06-Oct-25

Client DETS South
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone, Kent
ME17 2JN

Our Reference 25-22312

Client Reference ~ 22051

Order No ~ 22051/S/OK

Contract Title ~ New Care Home, Bursledon

Description 1 Soil sample, 1 Leachate prepared by DETS sample.

Date Received 26-Sep-25

Date Started 26-Sep-25

Date Completed 06-Oct-25

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Reyhan Irfan
Operations Manager



Sample Deviations present. See Deviation Table Section for details.

Normec DETS Limited

Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY

Tel: [Redacted] • normecdets.com

Summary of Chemical Analysis

Soil Samples

Our Ref 25-22312

Client Ref ~ 22051

Contract Title ~ New Care Home, Bursledon

Lab No	2574235
Sample ID ~	TPSK2
Depth ~	0.20
Other ID ~	790684
Sample Type ~	SOIL
Sampling Date ~	22/09/2025
Sampling Time ~	n/s

Test	Method	LOD	Units	
Preparation				
Moisture Content	DETSC 1004	0.1	%	16
Metals				
Arsenic	DETSC 2301#	0.2	mg/kg	7.3
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.5
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1
Chromium	DETSC 2301#	0.15	mg/kg	17
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	14
Lead	DETSC 2301#	0.3	mg/kg	21
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05
Nickel	DETSC 2301#	1	mg/kg	9.1
Selenium	DETSC 2301#	0.5	mg/kg	0.9
Vanadium	DETSC 2301#	0.8	mg/kg	26
Zinc	DETSC 2301#	1	mg/kg	55
Inorganics				
pH	DETSC 2008#		pH	7.4
Organic matter	DETSC 2002#	0.1	%	0.7
Petroleum Hydrocarbons				
EPH >C10-C12: EH_2D_Total	DETSC 3521#	10	mg/kg	< 10.00
EPH >C12-C16: EH_2D_Total	DETSC 3521#	10	mg/kg	< 10.00
EPH >C16-C21: EH_2D_Total	DETSC 3521#	10	mg/kg	< 10.00
EPH >C21-C35: EH_2D_Total	DETSC 3521#	10	mg/kg	< 10.00
EPH >C35-C40: EH_2D_Total	DETSC 3521#	10	mg/kg	< 10.00
VPH (C6-C10): HS_1D_Total	DETSC 3321*	0.1	mg/kg	< 0.1
EPH >C10-C40: EH_2D_Total	DETSC 3521#	10	mg/kg	< 10.00
PAHs				
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03

Summary of Chemical Analysis

Soil Samples

Our Ref 25-22312

Client Ref ~ 22051

Contract Title ~ New Care Home, Bursledon

Lab No	2574235
Sample ID ~	TPSK2
Depth ~	0.20
Other ID ~	790684
Sample Type ~	SOIL
Sampling Date ~	22/09/2025
Sampling Time ~	n/s

Test	Method	LOD	Units	
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10
Phenols				
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	3.1

Summary of Asbestos Analysis

Soil Samples

Our Ref 25-22312

Client Ref ~ 22051

Contract Title ~ New Care Home, Bursledon

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2574235	TPSK2 790684 0.20	SOIL	NAD	none	Lee Kerridge

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

WASTE ACCEPTANCE CRITERIA TESTING v20.25.02.03

Our Ref 25-22312

Client Ref 22051

Contract Title New Care Home, Bursledon

Sample Id TPSK2 790684 0.20

Sample Numbers 2574235 2574236

Date Analysed 06/10/2025

Test Results On Waste			WAC Limit Values		
Determinand and Method Reference	Units	Result	Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	0.9	3	5	6
DETSC 2003# Loss On Ignition	%	5.1	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3521* Mineral Oil >C10-C40 + Clean Up	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC 2008# pH	pH Units	7.4	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate			WAC Limit Values		
Determinand and Method Reference	Conc in Eluate ug/l	Amount Leached mg/kg	Limit values for LS10 Leachate		
	10:1	LS10	Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	5.8	0.06	0.5	2	25
DETSC 2306 Barium as Ba	16	0.2	20	100	300
DETSC 2306 Cadmium as Cd	0.043	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	11	0.1	0.5	10	70
DETSC 2306 Copper as Cu	12	0.12	2	50	100
DETSC 2306 Mercury as Hg	0.036	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	3.7	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	6.5	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	6	0.06	0.5	10	50
DETSC 2306 Antimony as Sb	58	0.58	0.06	0.7	5
DETSC 2306 Selenium as Se	2.2	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	26	0.26	4	50	200
DETSC 2055 Chloride as Cl	1400	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	120	1.2	10	150	500
DETSC 2055 Sulphate as SO4	4200	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	81000	810	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	18000	180	500	800	1000

Additional Information	
DETSC 2008 pH	7.5
DETSC 2009 Conductivity uS/cm	116.0
* Temperature*	19.0

Mass of Sample Kg	0.108
Mass of dry Sample Kg	0.090

Stage 1	
Volume of Leachant L2	0.882
Volume of Eluate VE1	0.815

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive
Hazardous Waste

Disclaimer: The WAC limit values are provided for guidance only. Normec DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.

Information in Support of the Analytical Results

Our Ref 25-22312
 Client Ref ~ 22051
 Contract ~ New Care Home, Bursledon

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2574235	TPSK2 0.20 SOIL	22/09/25	PG		BTEX / C5-C10, EPH/Aliphatic/Aromatic, Naphthalene, PAH FID, PAH MS, PCB
2574236	TPSK2 0.20 LEACHATE	22/09/25	PG		

Lab No	Sample ID	Comments
2574236	TPSK2 0.20 LEACHATE	Insufficient sample 1656g (<2kg) Sample received
Key: P-Plastic G-Bag Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.		

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve
 Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
 The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
 Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Information in Support of the Analytical Results

List of HWOL Acronyms and Operators

Acronym	Description
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
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total

Det	Acronym
EPH >C10-C12	EH_2D_Total
EPH >C12-C16	EH_2D_Total
EPH >C16-C21	EH_2D_Total
EPH >C21-C35	EH_2D_Total
EPH >C35-C40	EH_2D_Total
VPH (C6-C10)	HS_1D_Total
EPH >C10-C40	EH_2D_Total
Mineral Oil >C10-C40 + Clean Up	EH_CU_2D_Total

Key:

~ Sample details are provided by the client and can affect the validity of the results

* -not accredited.

-MCERTS (accreditation only applies if report carries the MCERTS logo).

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report Ver 25.09.29

Soil Analysis Certificate						
DETS Report No: 25-07444	~Date Sampled	13/08/25	13/08/25			
Soils Ltd	~Time Sampled	None Supplied	None Supplied			
~Site Reference: New Care Home, Providence Hill, Bursledon	~TP / BH No	WS1	WS3			
~Project / Job Ref: 22051	~Additional Refs	None Supplied	None Supplied			
~Order No: 22051/BRE/OK	~Depth (m)	0.90	1.60			
Reporting Date: 22/08/2025	DETS Sample No	786617	786618			

Determinand	Unit	RL	Accreditation				
pH	pH Units	N/a	MCERTS	6.5	5.3		
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS	< 200	< 200		
Total Sulphate as SO ₄	%	< 0.02	MCERTS	< 0.02	< 0.02		
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	< 10	12		
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	< 0.01	0.01		
Total Sulphur	%	< 0.02	NONE	< 0.02	< 0.02		
Ammonium as NH ₄	mg/kg	< 0.5	MCERTS	< 0.5	< 0.5		
Ammonium as NH ₄	mg/l	< 0.05	MCERTS	< 0.05	< 0.05		
W/S Chloride (2:1)	mg/kg	< 1	MCERTS	8	15		
W/S Chloride (2:1)	mg/l	< 0.5	MCERTS	3.9	7.5		
Water Soluble Nitrate (2:1) as NO ₃	mg/kg	< 3	MCERTS	< 3	< 3		
Water Soluble Nitrate (2:1) as NO ₃	mg/l	< 1.5	MCERTS	< 1.5	< 1.5		
W/S Magnesium	mg/l	< 0.1	NONE	0.2	0.4		

Soil Analysis Certificate - Sample Descriptions

DETS Report No: 25-07444	
Soils Ltd	
~Site Reference: New Care Home, Providence Hill, Bursledon	
~Project / Job Ref: 22051	
~Order No: 22051/BRE/OK	
Reporting Date: 22/08/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
786617	WS1	None Supplied	0.90	9.9	Light brown sandy clay
786618	WS3	None Supplied	1.60	19.1	Light brown clay

Moisture content is part of procedure E003 & is not an accredited test

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-07444
Soils Ltd
~Site Reference: New Care Home, Providence Hill, Bursledon
~Project / Job Ref: 22051
~Order No: 22051/BRE/OK
Reporting Date: 22/08/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of FOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

List of HWOL Acronyms and Operators
DETS Report No: 25-07444
Soils Ltd
~Site Reference: New Care Home, Providence Hill, Bursledon
~Project / Job Ref: 22051
~Order No: 22051/BRE/OK
Reporting Date: 22/08/2025

Acronym	Description
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
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

Det - Acronym

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
*	The Dutch 10 PAH compounds consist of Naphthalene, Anthracene, Phenanthrene, Fluoranthene, Benz(a)anthracene, Chrysene, Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, and Indeno(1,2,3-cd)pyrene
**	Total EPA-16 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, and Benzo(ghi)perylene.
***	Total WAC-17 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene and Coronene.
^	No sampling date provided; unable to confirm if samples are within acceptable holding times
M	MCERTS accredited test
U	UKAS accredited test



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DETS Report No: 25-08342

Site Reference: New Care Home, Bursledon

Project / Job Ref: 22051

Order No: 22051/BRE/OK

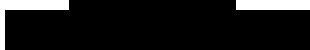
Sample Receipt Date: 25/09/2025

Sample Scheduled Date: 25/09/2025

Report Issue Number: 1

Reporting Date: 01/10/2025

Authorised by:



Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Soil Analysis Certificate						
DETS Report No: 25-08342	~Date Sampled	22/09/25	22/09/25			
Soils Ltd	~Time Sampled	None Supplied	None Supplied			
~Site Reference: New Care Home, Bursledon	~TP / BH No	WS6	BH1			
~Project / Job Ref: 22051	~Additional Refs	None Supplied	None Supplied			
~Order No: 22051/BRE/OK	~Depth (m)	2.10	8.00			
Reporting Date: 01/10/2025	DETS Sample No	790679	790680			

Determinand	Unit	RL	Accreditation				
pH	pH Units	N/a	MCERTS	4.5	5.1		
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS	< 200	1292		
Total Sulphate as SO ₄	%	< 0.02	MCERTS	< 0.02	0.13		
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	28	608		
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.03	0.61		
Total Sulphur	%	< 0.02	NONE	< 0.02	0.21		
Ammonium as NH ₄	mg/kg	< 0.5	MCERTS	< 0.5	4.3		
Ammonium as NH ₄	mg/l	< 0.05	MCERTS	< 0.05	0.43		
W/S Chloride (2:1)	mg/kg	< 1	MCERTS	14	12		
W/S Chloride (2:1)	mg/l	< 0.5	MCERTS	7.2	6.1		
Water Soluble Nitrate (2:1) as NO ₃	mg/kg	< 3	MCERTS	< 3	< 3		
Water Soluble Nitrate (2:1) as NO ₃	mg/l	< 1.5	MCERTS	< 1.5	< 1.5		
W/S Magnesium	mg/l	< 0.1	NONE	0.6	18		

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Analysis carried out on the dried sample is corrected for the stone content

Soil Analysis Certificate - Sample Descriptions

DETS Report No: 25-08342	
Soils Ltd	
~Site Reference: New Care Home, Bursledon	
~Project / Job Ref: 22051	
~Order No: 22051/BRE/OK	
Reporting Date: 01/10/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
790679	WS6	None Supplied	2.10	13.3	Light brown clayey sand
790680	BH1	None Supplied	8.00	18.8	Light grey sandy clay

Moisture content is part of procedure E003 & is not an accredited test

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-08342
Soils Ltd
~Site Reference: New Care Home, Bursledon
~Project / Job Ref: 22051
~Order No: 22051/BRE/OK
Reporting Date: 01/10/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

List of HWOL Acronyms and Operators	
DETS Report No: 25-08342	
Soils Ltd	
~Site Reference: New Care Home, Bursledon	
~Project / Job Ref: 22051	
~Order No: 22051/BRE/OK	
Reporting Date: 01/10/2025	

Acronym	Description
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
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

Det - Acronym

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN

Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
*	The Dutch 10 PAH compounds consist of Naphthalene, Anthracene, Phenanthrene, Fluoranthene, Benz(a)anthracene, Chrysene, Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, and Indeno(1,2,3-cd)pyrene
**	Total EPA-16 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, and Benzo(ghi)perylene.
***	Total WAC-17 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene and Coronene.
^	No sampling date provided; unable to confirm if samples are within acceptable holding times
\$	Samples exceeded their recommended holding times
M	MCERTS accredited test
U	UKAS accredited test



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DETS Report No: 25-07443

Site Reference: New Care Home, Providence Hill, Bursledon

Project / Job Ref: 22051

Order No: 22051/S/OK

Sample Receipt Date: 18/08/2025

Sample Scheduled Date: 18/08/2025

Report Issue Number: 1

Reporting Date: 22/08/2025

Authorised by:

Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Soil Analysis Certificate						
DETS Report No: 25-07443	~Date Sampled	13/08/25	13/08/25	13/08/25		
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied		
~Site Reference: New Care Home, Providence Hill, Bursledon	~TP / BH No	WS1	WS2	WS3		
~Project / Job Ref: 22051	~Additional Refs	None Supplied	None Supplied	None Supplied		
~Order No: 22051/S/OK	~Depth (m)	0.20	0.10	0.20		
Reporting Date: 22/08/2025	DETS Sample No	786614	786615	786616		

Determinand	Unit	RL	Accreditation					
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected		
pH	pH Units	N/a	MCERTS	6.2	6.3	6.8		
Total Cyanide	mg/kg	< 1	NONE	< 1				
Free Cyanide	mg/kg	< 1	NONE	< 1				
Organic Matter (SOM)	%	< 0.1	MCERTS	2.5	3	3.4		
Arsenic (As)	mg/kg	< 2	MCERTS	6	8	9		
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1		
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	0.2	0.2		
Chromium (Cr)	mg/kg	< 2	MCERTS	12	23	17		
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2		
Copper (Cu)	mg/kg	< 4	MCERTS	9	225	23		
Lead (Pb)	mg/kg	< 3	MCERTS	58	82	81		
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1		
Nickel (Ni)	mg/kg	< 3	MCERTS	6	14	8		
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2		
Vanadium (V)	mg/kg	< 1	MCERTS	21	26	29		
Zinc (Zn)	mg/kg	< 3	MCERTS	33	146	112		
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2		

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-07443	~Date Sampled	13/08/25	13/08/25	13/08/25		
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied		
~Site Reference: New Care Home, Providence Hill, Bursledon	~TP / BH No	WS1	WS2	WS3		
~Project / Job Ref: 22051	~Additional Refs	None Supplied	None Supplied	None Supplied		
~Order No: 22051/S/OK	~Depth (m)	0.20	0.10	0.20		
Reporting Date: 22/08/2025	DETS Sample No	786614	786615	786616		

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	0.14	< 0.1		
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	0.13	< 0.1		
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	0.11	< 0.1		
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	0.11	< 0.1		
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
**Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6		

Soil Analysis Certificate - EPH Texas Banded

DETS Report No: 25-07443	~Date Sampled	13/08/25	13/08/25	13/08/25		
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied		
~Site Reference: New Care Home, Providence Hill, Bursledon	~TP / BH No	WS1	WS2	WS3		
~Project / Job Ref: 22051	~Additional Refs	None Supplied	None Supplied	None Supplied		
~Order No: 22051/S/OK	~Depth (m)	0.20	0.10	0.20		
Reporting Date: 22/08/2025	DETS Sample No	786614	786615	786616		

Determinand	Unit	RL	Accreditation				
EPH Texas (C6 - C8) : HS 1D MS Total	mg/kg	< 0.05	NONE		< 0.05	< 0.05	
EPH Texas (>C8 - C10) : EH 1D Total	mg/kg	< 1	MCERTS		< 1	< 1	
EPH Texas (>C10 - C12) : EH 1D Total	mg/kg	< 1	MCERTS		< 1	< 1	
EPH Texas (>C12 - C16) : EH 1D Total	mg/kg	< 1	MCERTS		< 1	< 1	
EPH Texas (>C16 - C21) : EH 1D Total	mg/kg	< 1	MCERTS		< 1	< 1	
EPH Texas (>C21 - C40) : EH 1D Total	mg/kg	< 6	MCERTS		< 6	< 6	
EPH Texas (C6 - C40) : HS 1D MS+EH 1D Total	mg/kg	< 6	NONE		< 6	< 6	

Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 25-07443	~Date Sampled	13/08/25				
Soils Ltd	~Time Sampled	None Supplied				
~Site Reference: New Care Home, Providence Hill, Bursledon	~TP / BH No	WS1				
~Project / Job Ref: 22051	~Additional Refs	None Supplied				
~Order No: 22051/S/OK	~Depth (m)	0.20				
Reporting Date: 22/08/2025	DETS Sample No	786614				

Determinand	Unit	RL	Accreditation				
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01			
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05			
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	< 10			
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21			
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01			
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05			
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	< 3			
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	< 10			
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21			
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Tot al	mg/kg	< 42	NONE	< 42			

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 25-07443	~Date Sampled	13/08/25				
Soils Ltd	~Time Sampled	None Supplied				
~Site Reference: New Care Home, Providence Hill, Bursledon	~TP / BH No	WS1				
~Project / Job Ref: 22051	~Additional Refs	None Supplied				
~Order No: 22051/S/OK	~Depth (m)	0.20				
Reporting Date: 22/08/2025	DETS Sample No	786614				

Determinand	Unit	RL	Accreditation				
Benzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
Toluene : HS_1D_MS	µg/kg	< 5	MCERTS	< 5			
Ethylbenzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
p & m-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
o-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
MTBE : HS_1D_MS	µg/kg	< 5	MCERTS	< 5			

Soil Analysis Certificate - PCB (7 Congeners)							
DETS Report No: 25-07443	~Date Sampled	13/08/25					
Soils Ltd	~Time Sampled	None Supplied					
~Site Reference: New Care Home, Providence Hill, Bursledon	~TP / BH No	WS1					
~Project / Job Ref: 22051	~Additional Refs	None Supplied					
~Order No: 22051/S/OK	~Depth (m)	0.20					
Reporting Date: 22/08/2025	DETS Sample No	786614					

Determinand	Unit	RL	Accreditation				
PCB Congener 28	mg/kg	0.008	NONE	< 0.008			
PCB Congener 52	mg/kg	0.008	NONE	< 0.008			
PCB Congener 101	mg/kg	0.008	NONE	< 0.008			
PCB Congener 118	mg/kg	0.008	NONE	< 0.008			
PCB Congener 138	mg/kg	0.008	NONE	< 0.008			
PCB Congener 153	mg/kg	0.008	NONE	< 0.008			
PCB Congener 180	mg/kg	0.008	NONE	< 0.008			
Total PCB (7 Congeners)	mg/kg	< 0.1	NONE	< 0.1			

Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 25-07443	
Soils Ltd	
~Site Reference: New Care Home, Providence Hill, Bursledon	
~Project / Job Ref: 22051	
~Order No: 22051/S/OK	
Reporting Date: 22/08/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
786614	WS1	None Supplied	0.20	7.8	Brown sandy clay with stones and vegetation
786615	WS2	None Supplied	0.10	9.3	Brown sandy clay with vegetation
786616	WS3	None Supplied	0.20	10.3	Brown sandy clay with stones and vegetation

Moisture content is part of procedure E003 & is not an accredited test

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-07443
Soils Ltd
~Site Reference: New Care Home, Providence Hill, Bursledon
~Project / Job Ref: 22051
~Order No: 22051/S/OK
Reporting Date: 22/08/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphénylcarbazine followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of FOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

List of HWOL Acronyms and Operators

DETS Report No: 25-07443

Soils Ltd

~Site Reference: New Care Home, Providence Hill, Bursledon

~Project / Job Ref: 22051

~Order No: 22051/S/OK

Reporting Date: 22/08/2025

Acronym	Description
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
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

Benzene - HS_1D_MS
EPH Texas (C10 - C12) - EH_1D_Total
EPH Texas (C12 - C16) - EH_1D_Total
EPH Texas (C16 - C21) - EH_1D_Total
EPH Texas (C21 - C40) - EH_1D_Total
EPH Texas (C6 - C40) - HS_1D_MS+EH_1D_Total
EPH Texas (C6 - C8) - HS_1D_MS_Total
EPH Texas (C8 - C10) - EH_1D_Total
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
TPH CWG - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH CWG - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH CWG - Aliphatic >C16 - C21 - EH_CU_1D_AL
TPH CWG - Aliphatic >C21 - C34 - EH_CU_1D_AL
TPH CWG - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH CWG - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH CWG - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH CWG - Aliphatic C5 - C34 - HS_1D_MS+EH_CU_1D_AL
TPH CWG - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH CWG - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH CWG - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH CWG - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C35 - HS_1D_MS+EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH CWG - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH CWG - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH CWG - Total >C5 - C35 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
*	The Dutch 10 PAH compounds consist of Naphthalene, Anthracene, Phenanthrene, Fluoranthene, Benz(a)anthracene, Chrysene, Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, and Indeno(1,2,3-cd)pyrene
**	Total EPA-16 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, and Benzo(ghi)perylene.
***	Total WAC-17 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene and Coronene.
^	No sampling date provided; unable to confirm if samples are within acceptable holding times
S	Subcontracted analysis
M	MCERTS accredited test
U	UKAS accredited test



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Normec DETS Limited
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ME17 2JN
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DETS Report No: 25-08343

Site Reference: New Care Home, Bursledon

Project / Job Ref: 22051

Order No: 22051/S/OK

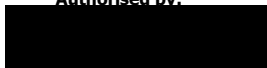
Sample Receipt Date: 25/09/2025

Sample Scheduled Date: 25/09/2025

Report Issue Number: 1

Reporting Date: 01/10/2025

Authorised by:



Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Soil Analysis Certificate						
DETS Report No: 25-08343	~Date Sampled	22/09/25	22/09/25	22/09/25		
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied		
~Site Reference: New Care Home, Bursledon	~TP / BH No	WS6	WS6	TPSK1		
~Project / Job Ref: 22051	~Additional Refs	None Supplied	None Supplied	None Supplied		
~Order No: 22051/S/OK	~Depth (m)	0.20	0.60	0.20		
Reporting Date: 01/10/2025	DETS Sample No	790681	790682	790683		

Determinand	Unit	RL	Accreditation					
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected		
pH	pH Units	N/a	MCERTS	5.3	5.0	5.9		
Total Cyanide	mg/kg	< 1	NONE			< 1		
Free Cyanide	mg/kg	< 1	NONE			< 1		
Organic Matter (SOM)	%	< 0.1	MCERTS	1.2	0.8	2.4		
Arsenic (As)	mg/kg	< 2	MCERTS	13	12	7		
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1		
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	< 0.2	< 0.2		
Chromium (Cr)	mg/kg	< 2	MCERTS	28	41	12		
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2		
Copper (Cu)	mg/kg	< 4	MCERTS	7	8	17		
Lead (Pb)	mg/kg	< 3	MCERTS	14	12	43		
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1		
Nickel (Ni)	mg/kg	< 3	MCERTS	14	14	6		
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2		
Vanadium (V)	mg/kg	< 1	MCERTS	41	43	21		
Zinc (Zn)	mg/kg	< 3	MCERTS	33	27	58		
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2		

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Analysis carried out on the dried sample is corrected for the stone content

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-08343	~Date Sampled	22/09/25	22/09/25	22/09/25		
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied		
~Site Reference: New Care Home, Bursledon	~TP / BH No	WS6	WS6	TPSK1		
~Project / Job Ref: 22051	~Additional Refs	None Supplied	None Supplied	None Supplied		
~Order No: 22051/S/OK	~Depth (m)	0.20	0.60	0.20		
Reporting Date: 01/10/2025	DETS Sample No	790681	790682	790683		

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
**Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6		

Soil Analysis Certificate - EPH Texas Banded

DETS Report No: 25-08343	~Date Sampled	22/09/25	22/09/25	22/09/25		
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied		
~Site Reference: New Care Home, Bursledon	~TP / BH No	WS6	WS6	TPSK1		
~Project / Job Ref: 22051	~Additional Refs	None Supplied	None Supplied	None Supplied		
~Order No: 22051/S/OK	~Depth (m)	0.20	0.60	0.20		
Reporting Date: 01/10/2025	DETS Sample No	790681	790682	790683		

Determinand	Unit	RL	Accreditation					
EPH Texas (C6 - C8) : HS 1D MS Total	mg/kg	< 0.05	NONE	< 0.05	< 0.05			
EPH Texas (>C8 - C10) : EH 1D Total	mg/kg	< 1	MCERTS	< 1	< 1			
EPH Texas (>C10 - C12) : EH 1D Total	mg/kg	< 1	MCERTS	< 1	< 1			
EPH Texas (>C12 - C16) : EH 1D Total	mg/kg	< 1	MCERTS	< 1	< 1			
EPH Texas (>C16 - C21) : EH 1D Total	mg/kg	< 1	MCERTS	< 1	< 1			
EPH Texas (>C21 - C40) : EH 1D Total	mg/kg	< 6	MCERTS	< 6	< 6			
EPH Texas (C6 - C40) : HS 1D MS+EH 1D Total	mg/kg	< 6	NONE	< 6	< 6			

Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 25-08343	~Date Sampled	22/09/25				
Soils Ltd	~Time Sampled	None Supplied				
~Site Reference: New Care Home, Bursledon	~TP / BH No	TPSK1				
~Project / Job Ref: 22051	~Additional Refs	None Supplied				
~Order No: 22051/S/OK	~Depth (m)	0.20				
Reporting Date: 01/10/2025	DETS Sample No	790683				

Determinand	Unit	RL	Accreditation				
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01			
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05			
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	< 10			
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21			
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01			
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05			
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	< 3			
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	< 10			
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21			
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Tot al	mg/kg	< 42	NONE	< 42			

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 25-08343	~Date Sampled	22/09/25				
Soils Ltd	~Time Sampled	None Supplied				
~Site Reference: New Care Home, Bursledon	~TP / BH No	TPSK1				
~Project / Job Ref: 22051	~Additional Refs	None Supplied				
~Order No: 22051/S/OK	~Depth (m)	0.20				
Reporting Date: 01/10/2025	DETS Sample No	790683				

Determinand	Unit	RL	Accreditation				
Benzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
Toluene : HS_1D_MS	µg/kg	< 5	MCERTS	< 5			
Ethylbenzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
p & m-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
o-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
MTBE : HS_1D_MS	µg/kg	< 5	MCERTS	< 5			

Soil Analysis Certificate - PCB (7 Congeners)							
DETS Report No: 25-08343		~Date Sampled	22/09/25				
Soils Ltd		~Time Sampled	None Supplied				
~Site Reference: New Care Home, Bursledon		~TP / BH No	TPSK1				
~Project / Job Ref: 22051		~Additional Refs	None Supplied				
~Order No: 22051/S/OK		~Depth (m)	0.20				
Reporting Date: 01/10/2025		DETS Sample No	790683				

Determinand	Unit	RL	Accreditation				
PCB Congener 28	mg/kg	0.008	NONE	< 0.008			
PCB Congener 52	mg/kg	0.008	NONE	< 0.008			
PCB Congener 101	mg/kg	0.008	NONE	< 0.008			
PCB Congener 118	mg/kg	0.008	NONE	< 0.008			
PCB Congener 138	mg/kg	0.008	NONE	< 0.008			
PCB Congener 153	mg/kg	0.008	NONE	< 0.008			
PCB Congener 180	mg/kg	0.008	NONE	< 0.008			
Total PCB (7 Congeners)	mg/kg	< 0.1	NONE	< 0.1			

Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 25-08343	
Soils Ltd	
~Site Reference: New Care Home, Bursledon	
~Project / Job Ref: 22051	
~Order No: 22051/S/OK	
Reporting Date: 01/10/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
790681	WS6	None Supplied	0.20	10.8	Light brown sandy clay with vegetation
790682	WS6	None Supplied	0.60	11.4	Light brown sandy clay with stones
790683	TPSK1	None Supplied	0.20	14.5	Brown sandy clay with vegetation and stones

Moisture content is part of procedure E003 & is not an accredited test

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-08343
Soils Ltd
~Site Reference: New Care Home, Bursledon
~Project / Job Ref: 22051
~Order No: 22051/S/OK
Reporting Date: 01/10/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphénylcarbazine followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of FOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

List of HWOL Acronyms and Operators
DETS Report No: 25-08343
Soils Ltd
~Site Reference: New Care Home, Bursledon
~Project / Job Ref: 22051
~Order No: 22051/S/OK
Reporting Date: 01/10/2025

Acronym	Description
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
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

Benzene - HS_1D_MS
EPH Texas (C10 - C12) - EH_1D_Total
EPH Texas (C12 - C16) - EH_1D_Total
EPH Texas (C16 - C21) - EH_1D_Total
EPH Texas (C21 - C40) - EH_1D_Total
EPH Texas (C6 - C40) - HS_1D_MS+EH_1D_Total
EPH Texas (C6 - C8) - HS_1D_MS_Total
EPH Texas (C8 - C10) - EH_1D_Total
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
TPH CWG - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH CWG - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH CWG - Aliphatic >C16 - C21 - EH_CU_1D_AL
TPH CWG - Aliphatic >C21 - C34 - EH_CU_1D_AL
TPH CWG - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH CWG - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH CWG - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH CWG - Aliphatic C5 - C34 - HS_1D_MS+EH_CU_1D_AL
TPH CWG - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH CWG - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH CWG - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH CWG - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C35 - HS_1D_MS+EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH CWG - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH CWG - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH CWG - Total >C5 - C35 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
*	The Dutch 10 PAH compounds consist of Naphthalene, Anthracene, Phenanthrene, Fluoranthene, Benz(a)anthracene, Chrysene, Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, and Indeno(1,2,3-cd)pyrene
**	Total EPA-16 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, and Benzo(ghi)perylene.
***	Total WAC-17 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene and Coronene.
^	No sampling date provided; unable to confirm if samples are within acceptable holding times
\$	Samples exceeded their recommended holding times
S	Subcontracted analysis
M	MCERTS accredited test
U	UKAS accredited test



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Cross Road
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Surrey
KT20 5SR

Normec DETS Limited
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
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ME17 2JN
t: 01622 850410

DETS Report No: 25-07507

Site Reference: New Care Home, Providence Hill, Burlesdon

Project / Job Ref: 22051

Order No: 22051/S/OK

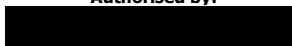
Sample Receipt Date: 20/08/2025

Sample Scheduled Date: 20/08/2025

Report Issue Number: 1

Reporting Date: 27/08/2025

Authorised by:



Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

For Topsoil and WAC analysis the expanded uncertainty measurement should be considered while evaluating results against compliance values.

Soil Analysis Certificate						
DETS Report No: 25-07507	~Date Sampled	14/08/25				
Soils Ltd	~Time Sampled	None Supplied				
~Site Reference: New Care Home, Providence Hill, Burlesdon	~TP / BH No	BH2				
~Project / Job Ref: 22051	~Additional Refs	None Supplied				
~Order No: 22051/S/OK	~Depth (m)	0.00 - 0.50				
Reporting Date: 27/08/2025	DETS Sample No	786927				

Determinand	Unit	RL	Accreditation				
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected			
pH	pH Units	N/a	MCERTS	4.3			
Organic Matter (SOM)	%	< 0.1	MCERTS	0.9			
Arsenic (As)	mg/kg	< 2	MCERTS	9			
W/S Boron	mg/kg	< 1	NONE	< 1			
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.7			
Chromium (Cr)	mg/kg	< 2	MCERTS	11			
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2			
Copper (Cu)	mg/kg	< 4	MCERTS	15			
Lead (Pb)	mg/kg	< 3	MCERTS	15			
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1			
Nickel (Ni)	mg/kg	< 3	MCERTS	5			
Selenium (Se)	mg/kg	< 2	MCERTS	< 2			
Vanadium (V)	mg/kg	< 1	MCERTS	17			
Zinc (Zn)	mg/kg	< 3	MCERTS	38			
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Analysis carried out on the dried sample is corrected for the stone content

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-07507	~Date Sampled	14/08/25				
Soils Ltd	~Time Sampled	None Supplied				
~Site Reference: New Care Home, Providence Hill, Burlesdon	~TP / BH No	BH2				
~Project / Job Ref: 22051	~Additional Refs	None Supplied				
~Order No: 22051/S/OK	~Depth (m)	0.00 - 0.50				
Reporting Date: 27/08/2025	DETS Sample No	786927				

Determinand	Unit	RL	Accreditation				
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1			
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1			
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1			
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1			
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1			
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1			
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1			
**Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6			

Soil Analysis Certificate - EPH Texas Banded

DETS Report No: 25-07507	~Date Sampled	14/08/25				
Soils Ltd	~Time Sampled	None Supplied				
~Site Reference: New Care Home, Providence Hill, Burlesdon	~TP / BH No	BH2				
~Project / Job Ref: 22051	~Additional Refs	None Supplied				
~Order No: 22051/S/OK	~Depth (m)	0.00 - 0.50				
Reporting Date: 27/08/2025	DETS Sample No	786927				

Determinand	Unit	RL	Accreditation				
EPH Texas (C6 - C8) : HS 1D MS Total	mg/kg	< 0.05	NONE	< 0.05			
EPH Texas (>C8 - C10) : EH 1D Total	mg/kg	< 1	MCERTS	< 1			
EPH Texas (>C10 - C12) : EH 1D Total	mg/kg	< 1	MCERTS	< 1			
EPH Texas (>C12 - C16) : EH 1D Total	mg/kg	< 1	MCERTS	< 1			
EPH Texas (>C16 - C21) : EH 1D Total	mg/kg	< 1	MCERTS	< 1			
EPH Texas (>C21 - C40) : EH 1D Total	mg/kg	< 6	MCERTS	< 6			
EPH Texas (C6 - C40) : HS 1D MS+EH 1D Total	mg/kg	< 6	NONE	< 6			

Waste Acceptance Criteria Analytical Certificate									
DETS Report No: 25-07507		~Date Sampled	14/08/25		Landfill Waste Acceptance Criteria Limits				
Soils Ltd		~Time Sampled	None Supplied						
~Site Reference: New Care Home, Providence Hill, Buresdon		~TP / BH No	BH2						
~Project / Job Ref: 22051		~Additional Refs	None Supplied						
~Order No: 22051/S/OK		~Depth (m)	0.00 - 0.50						
Reporting Date: 27/08/2025		DETS Sample No	786927						
Determinand	Unit	MDL			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill		
TOC ^{MU}	%	< 0.1	0.6		3%	5%	6%		
Loss on Ignition ^{MU}	%	< 0.01	8.26		--	--	10%		
BTEX ^{MU}	mg/kg	< 0.05	< 0.05		6	--	--		
Sum of PCBs	mg/kg	< 0.1	< 0.1		1	--	--		
Mineral Oil ^{MU}	mg/kg	< 10	< 10		500	--	--		
Total PAH ^{MU}	mg/kg	< 1.7	< 1.7		100	--	--		
pH ^{MU}	pH Units	N/a	4.3		--	>6	--		
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	< 1		--	To be evaluated	To be evaluated		
Eluate Analysis			10:1			Cumulative 10:1 * mg/kg	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic		< 0.0002				< 0.002	0.5	2	25
Barium		0.0028				0.028	20	100	300
Cadmium		< 0.0002				< 0.002	0.04	1	5
Chromium		< 0.0002				< 0.002	0.5	10	70
Copper		0.0015				0.015	2	50	100
Mercury		< 0.00004				< 0.0004	0.01	0.2	2
Molybdenum		< 0.0002				< 0.002	0.5	10	30
Nickel		0.0005				0.005	0.4	10	40
Lead		< 0.0002				< 0.002	0.5	10	50
Antimony		< 0.0002				< 0.002	0.06	0.7	5
Selenium		< 0.0002				< 0.002	0.1	0.5	7
Zinc		0.005				0.05	4	50	200
Chloride		3.0				30	800	15000	25000
Fluoride		< 0.5				< 5	10	150	500
Sulphate		5.0				50	1000	20000	50000
TDS		23				230	4000	60000	100000
Phenol Index		< 0.01				< 0.1	1	-	-
DOC		5.1				50.6	500	800	1000
Leach Test Information									
Sample Mass (kg)		0.11							
Dry Matter (%)		79.4							
Moisture (%)		26							
Stage 1									
Volume Eluate L10 (litres)		0.88							
Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion Stated limits are for guidance only and Normec DETS Limited cannot be held responsible for any discrepancies with current legislation									

Soil Analysis Certificate - Sample Descriptions

DETS Report No: 25-07507	
Soils Ltd	
~Site Reference: New Care Home, Providence Hill, Burlesdon	
~Project / Job Ref: 22051	
~Order No: 22051/S/OK	
Reporting Date: 27/08/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
786927	BH2	None Supplied	0.00 - 0.50	20.6	Light brown sandy clay

Moisture content is part of procedure E003 & is not an accredited test

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-07507
Soils Ltd
~Site Reference: New Care Home, Providence Hill, Buresdon
~Project / Job Ref: 22051
~Order No: 22051/S/OK
Reporting Date: 27/08/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of FOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

Water Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-07507
Soils Ltd
~Site Reference: New Care Home, Providence Hill, Bursledon
~Project / Job Ref: 22051
~Order No: 22051/S/OK
Reporting Date: 27/08/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Water	UF	Alkalinity	Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point	E103
Water	F	Ammoniacal Nitrogen	Determination of ammoniacal nitrogen by discrete analyser.	E126
Water	UF	BTEX	Determination of BTEX by headspace GC-MS	E101
Water	F	Cations	Determination of cations by filtration followed by ICP-MS	E102
Water	F	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	UF	Biological Oxygen Demand (BOD)	Determination using BOD sensors measuring the change of pressure	E133
Water	F	Chloride	Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F	Chromium - Hexavalent	Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by	E116
Water	F	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E115
Water	F	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E115
Water	F	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E115
Water	UF	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through liquid:liquid extraction with cyclohexane	E111
Water	F	Diesel Range Organics (C10 - C24)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Dissolved Organic Content (DOC)	Determination of DOC by filtration followed by low heat with persulphate addition followed by IR detection	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F	EPH (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E104
Water	F	Fluoride	Determination of Fluoride by filtration & analysed by ion chromatography	E109
Water	F	Hardness	Determination of Ca and Mg by ICP-MS followed by calculation	E102
Leachate	F	Leachate Preparation - NRA	Based on National Rivers Authority leaching test 1994	E301
Leachate	F	Leachate Preparation - WAC	Based on BS EN 12457 Pt1, 2, 3	E302
Water	F	Metals	Determination of metals by filtration followed by ICP-MS	E102
Water	F	Mineral Oil (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Nitrate	Determination of nitrate by filtration & analysed by ion chromatography	E109
Water	F	Monohydric Phenol	Determination of phenols by distillation followed by colorimetry	E115
Water	F	PAH - Speciated (EPA 16)	Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E105
Water	F	PCB - 7 Congeners	Determination of PCB compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E108
Water	UF	Petroleum Ether Extract (PEE)	Gravimetrically determined through liquid:liquid extraction with petroleum ether	E111
Water	UF	pH	Determination of pH by electrometric measurement	E107
Water	F	Phosphate	Determination of phosphate by filtration & analysed by ion chromatography	E109
Water	UF	Redox Potential	Determination of redox potential by electrometric measurement	E113
Water	F	Sulphate (as SO4)	Determination of sulphate by filtration & analysed by ion chromatography	E109
Water	UF	Sulphide	Determination of sulphide by distillation followed by colorimetry	E118
Water	F	SVOC	Determination of semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E106
Water	UF	Toluene Extractable Matter (TEM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF	Total Organic Carbon (TOC)	Acidification, followed by high-temperature oxidation and IR detection.	E110
Water	F	TPH CWG (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C35. C5 to C8 by headspace GC-MS	E104
Water	F	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C44. C5 to C8 by headspace GC-MS	E104
Water	UF	VOCs	Determination of volatile organic compounds by headspace GC-MS	E101
Water	UF	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E101

List of HWOL Acronyms and Operators

DETS Report No: 25-07507

Soils Ltd

~Site Reference: New Care Home, Providence Hill, Buresdon

~Project / Job Ref: 22051

~Order No: 22051/S/OK

Reporting Date: 27/08/2025

Acronym	Description
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
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

EPH Texas (C10 - C12) - EH_1D_Total
EPH Texas (C12 - C16) - EH_1D_Total
EPH Texas (C16 - C21) - EH_1D_Total
EPH Texas (C21 - C40) - EH_1D_Total
EPH Texas (C6 - C40) - HS_1D_MS+EH_1D_Total
EPH Texas (C6 - C8) - HS_1D_MS_Total
EPH Texas (C8 - C10) - EH_1D_Total
Mineral Oil (C10 - C40) (BS EN 12457-2) - EH_CU_1D_AL
Total BTEX (BS EN 12457-2) - HS_1D_MS_Total

Parameter	Matrix Type	Expanded Uncertainty Measurement	Unit
TOC	Soil	11	%
Loss on Ignition	Soil	24	%
BTEX	Soil	11	%
Sum of PCBs	Soil	30	%
Mineral Oil	Soil	9	%
Total PAH	Soil	17	%
pH	Soil	0.2	Units
Acid Neutralisation Capacity	Soil	18	%
Clay Content	Soil	15	%
Silt Content	Soil	14	%
Sand Content	Soil	13	%
Loss on Ignition	Soil	24	%
pH	Soil	0.2	Units
Carbonate	Soil	12	%
Total Nitrogen	Soil	12	%
Phosphorus (Extractable)	Soil	24	%
Potassium (Extractable)	Soil	20	%
Magnesium (Extractable)	Soil	26	%
Zinc	Soil	26	%
Copper	Soil	24	%
Nickel	Soil	29	%
Available Sodium	Soil	23	%
Available Calcium	Soil	23	%
Electrical Conductivity	Soil	10	%

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
*	The Dutch 10 PAH compounds consist of Naphthalene, Anthracene, Phenanthrene, Fluoranthene, Benz(a)anthracene, Chrysene, Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, and Indeno(1,2,3-cd)pyrene
**	Total EPA-16 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, and Benzo(ghi)perylene.
***	Total WAC-17 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene and Coronene.
^	No sampling date provided; unable to confirm if samples are within acceptable holding times
n	Please note that we are MCERTS soil accredited (UK soils only) for sand, loam, and clay, and UKAS accredited for groundwater, tap water, surface water, and generated leachates. Other matrices are outside our scope of accreditation.
S	Subcontracted analysis
M	MCERTS accredited test
U	UKAS accredited test

Certificate of Analysis

Certificate Number 25-22312

Issued: 06-Oct-25

Client DETS South
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone, Kent
ME17 2JN

Our Reference 25-22312

Client Reference ~ 22051

Order No ~ 22051/S/OK

Contract Title ~ New Care Home, Bursledon

Description 1 Soil sample, 1 Leachate prepared by DETS sample.

Date Received 26-Sep-25

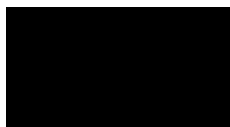
Date Started 26-Sep-25

Date Completed 06-Oct-25

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Reyhan Irfan
Operations Manager



Sample Deviations present. See Deviation Table Section for details.

Normec DETS Limited

Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY

Tel: [REDACTED] • normecdets.com

Summary of Chemical Analysis

Soil Samples

Our Ref 25-22312

Client Ref ~ 22051

Contract Title ~ New Care Home, Bursledon

Lab No	2574235
Sample ID ~	TPSK2
Depth ~	0.20
Other ID ~	790684
Sample Type ~	SOIL
Sampling Date ~	22/09/2025
Sampling Time ~	n/s

Test	Method	LOD	Units	
Preparation				
Moisture Content	DETSC 1004	0.1	%	16
Metals				
Arsenic	DETSC 2301#	0.2	mg/kg	7.3
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.5
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1
Chromium	DETSC 2301#	0.15	mg/kg	17
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	14
Lead	DETSC 2301#	0.3	mg/kg	21
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05
Nickel	DETSC 2301#	1	mg/kg	9.1
Selenium	DETSC 2301#	0.5	mg/kg	0.9
Vanadium	DETSC 2301#	0.8	mg/kg	26
Zinc	DETSC 2301#	1	mg/kg	55
Inorganics				
pH	DETSC 2008#		pH	7.4
Organic matter	DETSC 2002#	0.1	%	0.7
Petroleum Hydrocarbons				
EPH >C10-C12: EH_2D_Total	DETSC 3521#	10	mg/kg	< 10.00
EPH >C12-C16: EH_2D_Total	DETSC 3521#	10	mg/kg	< 10.00
EPH >C16-C21: EH_2D_Total	DETSC 3521#	10	mg/kg	< 10.00
EPH >C21-C35: EH_2D_Total	DETSC 3521#	10	mg/kg	< 10.00
EPH >C35-C40: EH_2D_Total	DETSC 3521#	10	mg/kg	< 10.00
VPH (C6-C10): HS_1D_Total	DETSC 3321*	0.1	mg/kg	< 0.1
EPH >C10-C40: EH_2D_Total	DETSC 3521#	10	mg/kg	< 10.00
PAHs				
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03

Summary of Chemical Analysis

Soil Samples

Our Ref 25-22312

Client Ref ~ 22051

Contract Title ~ New Care Home, Bursledon

Lab No	2574235
Sample ID ~	TPSK2
Depth ~	0.20
Other ID ~	790684
Sample Type ~	SOIL
Sampling Date ~	22/09/2025
Sampling Time ~	n/s

Test	Method	LOD	Units	
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10
Phenols				
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	3.1

Summary of Asbestos Analysis

Soil Samples

Our Ref 25-22312

Client Ref ~ 22051

Contract Title ~ New Care Home, Bursledon

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2574235	TPSK2 790684 0.20	SOIL	NAD	none	Lee Kerridge

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

WASTE ACCEPTANCE CRITERIA TESTING

v20.25.02.03

Our Ref 25-22312

Client Ref 22051

Contract Title New Care Home, Bursledon

Sample Id TPSK2 790684 0.20

Sample Numbers 2574235 2574236

Date Analysed 06/10/2025

Test Results On Waste			WAC Limit Values		
Determinand and Method Reference	Units	Result	Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	0.9	3	5	6
DETSC 2003# Loss On Ignition	%	5.1	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3521* Mineral Oil >C10-C40 + Clean Up	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC 2008# pH	pH Units	7.4	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate			WAC Limit Values		
Determinand and Method Reference	Conc in Eluate ug/l	Amount Leached mg/kg	Limit values for LS10 Leachate		
	10:1	LS10	Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	5.8	0.06	0.5	2	25
DETSC 2306 Barium as Ba	16	0.2	20	100	300
DETSC 2306 Cadmium as Cd	0.043	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	11	0.1	0.5	10	70
DETSC 2306 Copper as Cu	12	0.12	2	50	100
DETSC 2306 Mercury as Hg	0.036	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	3.7	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	6.5	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	6	0.06	0.5	10	50
DETSC 2306 Antimony as Sb	58	0.58	0.06	0.7	5
DETSC 2306 Selenium as Se	2.2	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	26	0.26	4	50	200
DETSC 2055 Chloride as Cl	1400	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	120	1.2	10	150	500
DETSC 2055 Sulphate as SO4	4200	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	81000	810	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	18000	180	500	800	1000

Additional Information	
DETSC 2008 pH	7.5
DETSC 2009 Conductivity uS/cm	116.0
* Temperature*	19.0
Mass of Sample Kg	0.108
Mass of dry Sample Kg	0.090
Stage 1	
Volume of Leachant L2	0.882
Volume of Eluate VE1	0.815

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive
Hazardous Waste

Disclaimer: The WAC limit values are provided for guidance only. Normec DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.

Information in Support of the Analytical Results

Our Ref 25-22312
 Client Ref ~ 22051
 Contract ~ New Care Home, Bursledon

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2574235	TPSK2 0.20 SOIL	22/09/25	PG		BTEX / C5-C10, EPH/Aliphatic/Aromatic, Naphthalene, PAH FID, PAH MS, PCB
2574236	TPSK2 0.20 LEACHATE	22/09/25	PG		

Lab No	Sample ID	Comments
2574236	TPSK2 0.20 LEACHATE	Insufficient sample 1656g (<2kg) Sample received
Key: P-Plastic G-Bag Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.		

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve
 Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
 The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
 Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Information in Support of the Analytical Results

List of HWOL Acronyms and Operators

Acronym	Description
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
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total

Det	Acronym
EPH >C10-C12	EH_2D_Total
EPH >C12-C16	EH_2D_Total
EPH >C16-C21	EH_2D_Total
EPH >C21-C35	EH_2D_Total
EPH >C35-C40	EH_2D_Total
VPH (C6-C10)	HS_1D_Total
EPH >C10-C40	EH_2D_Total
Mineral Oil >C10-C40 + Clean Up	EH_CU_2D_Total

Key:

~ Sample details are provided by the client and can affect the validity of the results

* -not accredited.

-MCERTS (accreditation only applies if report carries the MCERTS logo).

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report Ver 25.09.29

Appendix E.3 General Assessment Criteria

HUMAN HEALTH RISK ASSESSMENT

Introduction

The statutory definition of contaminated land was initially defined in the Environmental Protection Act 1990, ref. 1.1, which was introduced by the Environment Act 1995, ref. 1.2, and retained in the Environment Act 2021, ref 1.3, as;

‘Land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that –

- (a) significant harm is being caused or there is a significant possibility of such harm being caused; or
- (b) pollution of controlled waters is being, or is likely to be, caused.’

The UK guidance on the assessment of contaminated land has developed as a direct result of the introduction of these Acts. The technical guidance supporting the original legislation was summarised in a number of key documents collectively known as the Contaminated Land Reports (CLRs). These have since been replaced or superseded by Land Contamination Risk Management (LCRM) 2021, ref 1.4 produced and administrated by the Environment Agency online through the .GOV.uk website <https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm> .

However, the basic definitions, methodology and guidance remain essentially the same utilizing the UK Contaminated Land Exposure Assessment Models (CLEA) as within the original CLR and planning guidance it replaces or supersedes.

In establishing whether a site fulfils the statutory definition of ‘contaminated land’ it remains necessary to identify, whether a pollutant linkage exists in respect of the land in question and whether the pollutant linkage:

- is resulting in significant harm being caused to the identified receptor in the pollutant linkage,
- presents a significant possibility of significant harm being caused to that receptor,
- is resulting in the pollution of the controlled waters which constitute the receptor, or
- is likely to result in such pollution.

A ‘pollutant linkage’ may therefore be defined as the confirmation of a link between a contaminant ‘source’ and a vulnerable at risk ‘receptor’ by means of a ‘pathway’ and that the risk is potentially significant. If there is no complete linkage, risk defaults to low to negligible and can never be potentially significant.

Assessment Methodology

A four-stage assessment process is followed for identifying potential pollutant linkages on a site. These stages are summarised in the table below:

No.	Process	Description
1	Hazard Identification	Establishing contaminant sources, pathways and receptors (the conceptual model).
2	Hazard Assessment	Analysing the potential for unacceptable risks (what linkages could be present, what could be the effects).
3	Risk Estimation	Trying to establish the magnitude and probability of the possible consequences (what degree of harm might result and to what receptors, and how likely is it).
4	Risk Evaluation	Deciding whether the risk is unacceptable in the context of existing and future proposals.

Stages 1 and 2 develop an initial '*conceptual model*' based upon information collated from desk-based available and existing site information and a walkover of the site as recommended in BS10175 and LCRM. The formation of any conceptual model is an iterative process and as such it should be updated and refined throughout each phase of the project to reflect any additional information obtained and unknowns being resolved and identify the potential contaminants of concern at the site, i.e. those with the potential to cause significant harm to identified receptors.

The extent of the desk studies and enquiries to be conducted should be in general accordance with BS10175 and other UK guidance to produce an initial conceptual model highlighting the known potential risks, remaining unknowns and contaminants of concern. The information from these enquiries is presented in a desk study or preliminary report with recommendations, if necessary, for further work based upon the conceptual model findings and any identified or unresolved unknowns.

If potential pollutant linkages or potentially significant unknowns are identified within the initial conceptual model, further site investigation and report will be recommended and usually required under planning. Such investigation should be based on and driven by the findings of the initial conceptual model and planned in general accordance with BS10175, LCRM and other current UK guidance where relevant. The number of exploratory holes and samples collected for analysis should be consistent with the size, extent and nature of the site, the identified contaminants of concern and the level of initial risk identified in the initial conceptual model. This will enable a contamination risk assessment to be conducted in accordance with current UK requirements, at which point the conceptual model can be updated and any relevant pollutant linkages can be further quantified and any remaining unknowns resolved. As previously this is an iterative process that may highlight or require additional investigation to resolve to the satisfaction of the regulator.

A two-stage investigation process may therefore be more appropriate where time constraints are less of an issue with the first intrusive investigation being conducted as an initial or screening assessment to confirm or validate the presence of potential sources on site identified in the initial conceptual model and to investigate if additional unknown sources not previously identified are present. This helps to define the scope, extent and requirements of a second more refined and targeted investigation to delineate wherever possible the extent of the identified contamination, contaminants of concern and/or remaining unknowns.

All site works should be undertaken in general accordance with the British Standards BS 10175, ref. 5, for environmental only investigations and BS 5930:2015, ref. 1.6, in the case of combined Geoenvironmental and/or Geotechnical investigations.

The results of analysis are compared initially against generic guidance values which are dependent on the proposed end-use of the development and which must ultimately be based on traceable, scientifically valid and justified exposure and chemical data using the UKCLEA methodology.

The end-use and therefore potential exposure pathways may be defined as one of the following under current UK guidance;

- Residential with homegrown produce i.e. typical low rise and low-density housing with gardens where vegetables and fruits may be grown for home consumption.
- Residential without homegrown produce i.e. low-density housing where no gardens are present where vegetables and fruits could be grown for home consumption.
- Allotments – i.e. areas where vegetables and fruits are grown for home consumption but are not specifically associated with a residential property.
- Public open space residential – i.e. grassed areas adjacent and/or directly related to high density housing and other common or communal open areas on which underlying soils could be exposed but on which vegetables and fruits are not grown for consumption.
- Public open space – i.e. areas such as parks, playing fields and other recreational areas to which public access is possible but otherwise to which there is no direct residential linkage.
- Commercial – i.e. industrial premises where there is limited exposure to soil and residents are not present on site.

Standard Land-use Scenarios

The standard land-use scenarios used to develop exposure models are further detailed in the following sections:

Residential with homegrown produce

Generic scenario assumes a house built on a ground bearing slab with a private garden having a lawn, flowerbeds and a small fruit and vegetable patch.

-
- Critical receptor is assumed to be a young female child (zero to six years old)
-

-
- Exposure pathways include direct soil and indoor dust ingestion, consumption of home-grown produce and any adhering soil, skin contact with soils and indoor dust and inhalation of indoor and outdoor dust and vapours.
-

A sub-set of the Residential land-use is **Residential without Homegrown produce**. The generic scenario assumes low density housing with communal landscaped gardens where the consumption of homegrown vegetables will not occur and the pathways of direct ingestion and produce inputs are suitably moderated.

Allotments

Areas of open space commonly made available to local users but remote from residential properties, but on which tenants may grow fruit and vegetables for their own consumption. Typically, there are a number of plots to a site which may have a total area of up to 1 hectare. The tenants are assumed to be adults and that young children make only occasional accompanied visits.

Although some allotment holders may choose to keep animals on allotments, potential exposure to animal products is not currently considered within the CLEA model.

-
- Critical receptor is a young female child (zero to six years old)
 - Exposure pathways include direct soil ingestion, consumption of homegrown produce and any adhering soil, skin contact with soils and inhalation of outdoor dust and vapours but at reduced exposure levels reflecting non-residential status.
-

Commercial

This generic scenario assumes a typical commercial or light industrial property at which employees spend most time indoors and are involved in office-based or relatively light physical work.

-
- Critical receptor is a working female adult (aged 16 to 65 years old).
 - Exposure duration is over working lifetime
 - Exposure pathways include direct soil and indoor dust ingestion, skin contact with soils and dusts and inhalation of dust and vapours but exposure reduced to reflect non-residential nature and general lack of open spaces.
-

Public Open Space within Residential Area

This generic scenario refers to any grassed area up to 0.05 ha that is associated with residential properties but is not for their exclusive use and on which no fruit or vegetables are grown for home consumption.

-
- Grassed area of up to 0.05 ha and a considerable proportion of this (up to 50%) may be bare soil which can be interacted with directly
 - Predominantly used by children for play and/or access
 - Sufficiently close proximity to home for tracking back of soil to occur, thus indoor exposure pathways apply
 - older children chosen as the critical receptor on basis that they will use site most frequently (age class 4-9 years)
-

-
- ingestion rate assumed to be 75 mg.day⁻¹
-

Public Open Space Park

This generic scenario refers to any public park or grassed space that is more than 0.5ha in area:

-
- Public park (>0.5 ha), predominantly grassed and may also contain children's play equipment and border areas of soil containing flowers or shrubs (75% assumed cover)
-
- Female child age classes 1-6
-
- Soil ingestion rate of 50 mg.day⁻¹
-
- Occupancy period outdoors = 2 hours.day⁻¹
-
- Exposure frequency of 170 days.year⁻¹ for age classes 2-18 and 85 days.year⁻¹ for age class 1
-
- Outdoor exposure pathways only (no tracking back of soils).
-

Human Health Generic Quantitative Risk Assessment (GQRA) involves the comparison of contaminant concentrations measured in soil at the site with Generic Assessment Criteria (GAC) generated using the CLEA model based on the exposure and land use scenario assumptions noted above.

GAC's are deliberately conservative values adopted to ensure that they are applicable to the majority of possible contaminated sites and below which there is considered a low to negligible risk to identified human health receptors, i.e. there can be no harm. These values may be published Contaminated Land Exposure Assessment Model (CLEA) derived GAC's derived by a competent third party or the Environment Agency / DEFRA. It is imperative to the risk assessor to understand the uncertainties and limitations associated with these GAC's to ensure that they are used appropriately.

Where the adoption of a GAC is not appropriate, for instance when the intended land-use is at variance the CLEA standard land-uses or the contaminant is susceptible to wide variation depending on factors such as form and bioavailability, then a Detailed Quantitative Risk Assessment (DQRA) may be undertaken to develop site specific or remediation values for relevant soil contaminants based on site and contaminant specific conditions.

In 2014, the publication of Category 4 Screening Levels (C4SL), refs 1.8 and 1.9, as part of the Defra-funded research project SP1010, included modifications to certain exposure assumptions documented within EA Science Report SC050221/SR3 (herein after referred to as SR3) ref 1.7 used in the generation of SGVs. C4SL were published for six substances (cadmium, arsenic, benzene, benzo(a)pyrene, chromium VI and lead) for a sandy loam soil type with 6% soil organic matter, based on a low level of toxicological concern. Where a C4SL has been published, Soils Limited has adopted them as GAC for these six substances.

For all other substances the soils will be compared to Suitable For Use Levels (S4ULs) published by LQM, ref. 1.10, which were developed for around 85 substances and are intended to enable a screening assessment of the risks posed by soil quality on

development sites. The updated LQM/CIEH GAC publication was developed to accommodate recent developments in the understanding of chemical, toxicological and routine exposure to soil-based contaminants.

Where no S4UL or C4SL is available, assessment criteria may be generated using the Contaminated Land Exposure Assessment (CLEA) Software Version 1.07, ref. 1.11, Toxicological and physico-chemical/fate and transport data used to generate the criteria has been derived from a hierarchy of data sources as follows:

1. Environment Agency or Department of Environment Food and Rural Affairs (DEFRA) documents;
2. Other documents produced by UK Government or state organisations;
3. European institution documents;
4. International organisation documents;
5. Foreign government institutions.

In the case of the majority of contaminants considered, the toxicological data has been drawn originally from the relevant CLR 9 TOX report, or updated toxicological data published by the Environment Agency (2009), where available. Where no TOX report is available reference has been made to appropriately determined health criteria values, derived from the above-noted hierarchy, as this is considered to represent appropriate peer reviewed data sources. Similarly, fate and transport data should also be determined by reference to appropriate sources and the CLEA model assumptions.

Chemical laboratory test results are processed as follows. A statistical analysis of the results is conducted, as detailed in CIEH and CL:AIRE 'Guidance on Comparing Soil Contamination Data with a Critical Concentration', ref. 1.12. Individual concentrations are then compared to the selected guideline values to identify and isolate concentrations of contaminants that are in excess of the selected screening low or no risk criteria.

Where the risk estimation identifies significant concentrations of one or more contaminants, further risk evaluation needs to be undertaken often as a site specific DQRA in line with current guidance to determine and confirm if the identified exceedances are significant in the context of the proposed development or activity.

References

- 1.1 The Environmental Protection Act, Part IIA, Section 78, DoE 1990.
- 1.2 Environment Act 1995, Section 57, DoE 1995.
- 1.3 Environment Act 2021 OEP 2021.
- 1.4 Land Contamination Risk Management Gov.UK (EA) 2021
- 1.5 BS 10175: 2011+A2:2017 '*Investigation of potentially contaminated sites. Code of practice*', British Standards Institute, 2017
- 1.6 BS 5930: 2015+A1:2020 '*Code of practice for ground investigations*', British Standards Institute, 2015
- 1.7 Science Report SC050021/SR3 '*Updated technical background to the CLEA model*', Environment Agency, 2008
- 1.8 DEFRA SP1010: Development of Category 4 Screening Levels for the Assessment of Land Affected by Contamination, published March 2014.
- 1.9 Contaminated Land: Applications in Real Environment (CL:AIRE) (2014). '*Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination*', Revision 2, DEFRA research project SP1010.
- 1.10 The LQM/S4ULs for Human Health Risk Assessment, Nathanail P, McCaffery C, Gillett A, Ogden R, and Nathanail J, Land Quality Press, Nottingham, published 2015.
- 1.11 CLEA '*Software Version 1.071*' (downloaded from the CL:AIRE website , <https://www.claire.co.uk/home/news/44-risk-assessment/178-soil-guideline-values>)
- 1.12 CIEH '*Guidance on Comparing Soil Contamination Data with a Critical Concentration*', Chartered Institute of Environmental Health (CIEH) and Contaminated Land: Applications in Real Environments (CL:AIRE), May 2008.

Land Use			Residential With or Without Plant Uptake									Public Open Space (POS)									Name	Authority	Date	
			With			Without			Allotments			Commercial			Residential			Park						
			SOM	1.0	2.5	6	1	2.5							6	1	2.5	6	1	2.5				6
Type	Contaminants	Species	Year																					
Metals	Antimony		2010					550						7500							EIC/AGS/ CL:AIRE	EIC/AGS/ CL:AIRE	2010	
	Arsenic		2014		37			40			49			640		79		168			C4SL	DEFRA	2014	
			2015		37			40			40			640		79		170			S4UL	LQM/CIEH	2015	
	Barium		2010					1300						22000							EIC/AGS/ CL:AIRE	EIC/AGS/ CL:AIRE	2010	
	Beryllium		2015		1.7			1.7			35			12		2.2		63			S4UL	LQM/CIEH	2015	
	Boron		2015		290			11000			45			240000		21000		46000			S4UL	LQM/CIEH	2015	
	Cadmium		2015		11			85			1.9			190		120		532			S4UL	LQM/CIEH	2015	
			2014		26			149			4.9			410		220		880			C4SL	DEFRA	2014	
	Chromium	III	2015		910			910			18000			8600		1500		33000			S4UL	LQM/CIEH	2015	
		VI	2014		21			21			170			49		23		250			C4SL	DEFRA	2014	
		VI	2015		6			6			1.8			33		7.7		220			S4UL	LQM/CIEH	2015	
	Copper		2015		2400			7100			520			68000		12000		44000			S4UL	LQM/CIEH	2015	
	Lead		2014*			82-210			130-310			30-84			1100-6000			270-760		580-1400	C4SL	DEFRA	2014	
	Mercury	Elemental	2012		1.0			1.0			26			26							210	DEFRA	2012	
			2015		1.2			1.2			21			58		16		30			S4UL	LQM/CIEH	2015	
		Inorganic	2012		170			170			80			36000							SGV	DEFRA	2012	
			2015		40			56			19			1100		120		240			S4UL	LQM/CIEH	2015	
		Methyl	2012		11			11			8			410							SGV	DEFRA	2012	
			2015		11			15			6			320		40		68			S4UL	LQM/CIEH	2015	
	Molybdenum		2010						670						17000						EIC/AGS/ CL:AIRE	EIC/AGS/ CL:AIRE	2010	
	Nickel		2012		130			130			230			1800							SGV	DEFRA	2012	
			2015		130			180			53			980		230		800			S4UL	LQM/CIEH	2015	
Selenium		2012		350			595			120			13000							SGV	DEFRA	2012		
		2015		250			430			88			12000		1100		1800			S4UL	LQM/CIEH	2015		
Vanadium		2015		410			1200			91			9000		2000		5000			S4UL	LQM/CIEH	2015		
Zinc		2015		3700			40000			620			730000		81000		170000			S4UL	LQM/CIEH	2015		
BTEX & MTBE	Benzene		2012		0.33			0.33			0.07			95							SGV	DEFRA	2012	
			2014		0.87			3.3			0.18			98		140		230			C4SL	DEFRA	2014	
			2015	0.087	0.17	0.37	0.38	0.7	1.4	0.017	0.034	0.075	27	47	90	72	72	73	90	100	110	S4UL	LQM/CIEH	2015
	Toluene		2012		610			610			120			4400							SGV	DEFRA	2012	
			2015	130	290	660	880	1900	3900	22	51	120	56000	110000	180000	56000	56000	56000	87000	95000	100000	S4UL	LQM/CIEH	2015
	Ethylbenzene		2012		350			350			90			2800							SGV	DEFRA	2012	
			2015	47	110	260	83	190	440	16	39	91	5700	13000	27000	24000	24000	25000	17000	22000	27000	S4UL	LQM/CIEH	2015
	Xylenes	o-xylene	2012		250			250			160			2600							SGV	DEFRA	2012	
			2015	60	140	330	88	210	480	28	67	160	6600	15000	33000	41000	42000	43000	17000	24000	33000	S4UL	LQM/CIEH	2015
		m-xylene	2012		240			240			180			3500							SGV	DEFRA	2012	
		2015	59	140	320	82	190	450	31	74	170	6200	14000	31000	41000	42000	43000	17000	24000	32000	S4UL	LQM/CIEH	2015	
	p-xylene	2012		230			230			160			3200							SGV	DEFRA	2012		
		2015	56	130	310	79	180	430	29	69	160	5900	14000	30000	41000	42000	43000	17000	23000	31000	S4UL	LQM/CIEH	2015	
Petroleum Hydrocarbons Fractions	Aliphatic >C5 - C6		2015	42	78	160	42	78	160	730	1700	3900	3200	5900	12000	570000	590000	600000	95000	5900	12000	S4UL	LQM/CIEH	2015
	Aliphatic >C6 - C8		2015	100	230	530	100	230	530	2300	5600	13000	7800	17000	40000	600000	610000	620000	150000	17000	40000	S4UL	LQM/CIEH	2015
	Aliphatic >C8 - C10		2015	27	65	150	27	65	150	320	770	1700	2000	4800	11000	13000	13000	13000	14000	4800	11000	S4UL	LQM/CIEH	2015
	Aliphatic >C10 - C12		2015	130	330	760	130	330	770	2200	4400	7300	9700	23000	47000	13000	13000	13000	21000	23000	47000	S4UL	LQM/CIEH	2015
	Aliphatic >C12 - C16		2015	1100	2400	4300	1100	2400	4400	11000	13000	13000	59000	82000	90000	13000	13000	13000	25000	82000	90000	S4UL	LQM/CIEH	2015
	Aliphatic >C16 - C35		2015	65000	92000	110000	65000	92000	110000	260000	270000	270000	1600000	1700000	1800000	250000	250000	250000	450000	170000	180000	S4UL	LQM/CIEH	2015
	Aliphatic >C35 - C44		2015	65000	92000	140000	65000	92000	110000	260000	270000	270000	1600000	1700000	1800000	250000	250000	250000	450000	170000	180000	S4UL	LQM/CIEH	2015
	Aromatic >C5 - C7		2015	70	140	300	370	690	1400	13	27	57	26000	46000	86000	56000	56000	56000	76000	84000	92000	S4UL	LQM/CIEH	2015
	Aromatic >C7 - C8		2015	130	290	660	860	1800	3900	22	51	120	56000	110000	180000	56000	56000	56000	87000	95000	100000	S4UL	LQM/CIEH	2015

Land Use			Residential With or Without Plant Uptake									Public Open Space (POS)									Name	Authority	Date	
			Allotments						Commercial			Residential						Park						
			With home-grown produce			Without home-grown produce																		
Type	Contaminants	Species	SOM	1.0	2.5	6	1	2.5	6	1	2.5	6	1	2.5	6	1	2.5	6	1	2.5	6			
	Aromatic >C8 - C10		2015	34	83	190	47	110	270	8.6	21	51	3500	8100	17000	5000	5000	5000	7200	8500	9200	S4UL	LQM/CIEH	2015
	Aromatic >C10 - C12		2015	74	180	380	250	590	1200	13	31	74	16000	28000	34000	5000	5000	5000	9200	9700	10000	S4UL	LQM/CIEH	2015
	Aromatic >C12 - C16		2015	140	330	660	1800	2300	2500	23	57	130	36000	37000	38000	5100	5100	5000	10000	10000	10000	S4UL	LQM/CIEH	2015
	Aromatic >C16 - C21		2015	260	540	930	1900	1900	1900	46	110	260	28000	28000	28000	3800	3800	3800	7600	7700	7800	S4UL	LQM/CIEH	2015
	Aromatic >C21 - C35		2015	1100	1500	1700	1900	1900	1900	370	820	1600	28000	28000	28000	3800	3800	3800	7800	7800	7900	S4UL	LQM/CIEH	2015
	Aromatic >C34 - C44		2015	1100	1500	1700	1900	1900	1900	370	820	1600	28000	28000	28000	3800	3800	3800	7800	7800	7900	S4UL	LQM/CIEH	2015
	Aliphatic + Aromatic >C44 - C70			1600	1800	1900	1900	1900	1900	1200	2100	3000	28000	28000	28000	3800	28000	28000	7800	7800	7900	S4UL	LQM/CIEH	2015
Polycyclic Aromatic Hydrocarbons (PAH' s) (mg/kg)	Acenaphthene		2015	210	510	1100	3000	4700	6000	34	85	200	84000	97000	100000	15000	15000	15000	29000	29000	29000	S4UL	LQM/CIEH	2015
	Acenaphthylene		2015	170	420	920	2900	4600	6000	28	69	160	83000	97000	100000	15000	15000	15000	29000	29000	29000	S4UL	LQM/CIEH	2015
	Anthracene		2015	2400	5400	11000	31000	35000	37000	380	950	2200	520000	54000	540000	74000	74000	74000	150000	150000	150000	S4UL	LQM/CIEH	2015
	Benzo(a)anthracene		2015	7.2	11	13	11	14	15	2.9	6.5	13	170	170	180	29	29	29	49	56	62	S4UL	LQM/CIEH	2015
	Benzo(a)pyrene		2014			5			5.3			5.7			76			10		21	C4SL	DEFRA	2014	
			2015	2.2	2.7	3	3.2	3.2	3.2	0.79	2	3.5	35	35	36	5.7	5.7	5.7	11	12	13	S4UL	LQM/CIEH	2015
	Benzo(b)fluoranthene		2015	2.6	3.3	3.7	3.9	4.0	4.0	0.99	2.1	3.9	44	44	45	7.1	7.2	7.2	13	15	16	S4UL	LQM/CIEH	2015
	Benzo(ghi)perylene		2015	320	340	350	360	360	360	290	470	640	3900	4000	4000	640	640	640	1400	1500	1600	S4UL	LQM/CIEH	2015
	Benzo(k)fluoranthene		2015	77	93	100	110	110	110	37	75	130	1200	1200	1200	190	190	190	370	410	440	S4UL	LQM/CIEH	2015
	Chrysene		2015	15	22	27	30	31	32	4.1	9.4	19	350	350	350	57	57	57	93	110	120	S4UL	LQM/CIEH	2015
	Dibenz(a,h)anthracene		2015	0.24	0.28	0.3	0.31	0.32	0.32	0.14	0.27	0.43	3.5	3.6	3.6	0.57	0.57	0.58	1.1	1.3	1.4	S4UL	LQM/CIEH	2015
	Fluoranthene		2015	280	560	890	1500	1600	1600	52	130	290	23000	23000	23000	3100	3100	3100	6300	6300	6400	S4UL	LQM/CIEH	2015
	Fluorene		2015	170	400	860	2800	3800	4500	27	67	160	63000	68000	71000	9900	9900	9900	20000	20000	20000	S4UL	LQM/CIEH	2015
	Indeno(1,2,3-cd)pyrene		2015	27	36	41	45	46	46	9.5	21	39	500	510	510	82	82	82	150	170	180	S4UL	LQM/CIEH	2015
	Naphthalene		2015	2.3	5.6	13	2.3	5.6	13	4.1	10	24	190	460	1100	4900	4900	4900	1200	1900	3000	S4UL	LQM/CIEH	2015
	Phenanthrene		2015	95	220	440	1300	1500	1500	15	38	90	22000	22000	23000	3100	3100	3100	6200	6200	6300	S4UL	LQM/CIEH	2015
	Pyrene		2015	620	1200	2000	3700	3800	3800	110	270	620	54000	54000	54000	7400	7400	7400	15000	15000	15000	S4UL	LQM/CIEH	2015
	Coal Tar (Bap as surrogate matter)		2015	0.79	0.98	1.1	1.2	1.2	1.2	0.32	0.67	1.2	15	15	15	2.2	2.2	2.2	4.4	4.7	4.8	S4UL	LQM/CIEH	2015
Chloroalkanes & alkenes	1,2 Dichloroethane		2015	0.0071	0.011	0.019	0.0092	0.013	0.023	0.0046	0.0083	0.016	0.67	0.97	1.7	29	29	29	21	24	28	S4UL	LQM/CIEH	2015
	1,1,1 Trichloroethane		2015	8.8	18	39	9	18	40	48	110	240	660	1300	3000	140000	140000	140000	57000	76000	100000	S4UL	LQM/CIEH	2015
	1,1,2,2 Tetrachloroethane		2015	1.6	3.4	7.5	3.9	8	17	0.41	0.89	2	270	550	1100	1400	1400	1400	1800	2100	2300	S4UL	LQM/CIEH	2015
	1,1,1,2 Tetrachloroethane		2015	1.2	2.8	6.4	1.5	3.5	8.2	0.79	1.9	4.4	110	250	560	1400	1400	1400	1500	1800	2100	S4UL	LQM/CIEH	2015
	Tetrachloroethene (PCE)		2015	0.18	0.39	0.9	0.18	0.4	0.92	0.65	1.5	3.6	19	42	95	1400	1400	1400	810	1100	1500	S4UL	LQM/CIEH	2015
			2021	0.31	0.7	1.6	0.32	0.71	1.6	2	4.8	11	24	55	130	3200	3300	3400	1400	1900	2500	C4SL	CLAIRE	2021
	Tetrachloromethane (Carbon Tetrachloride)		2015	0.026	0.056	0.13	0.026	0.056	0.13	0.45	1	2.4	2.9	6.3	14	890	920	950	190	270	400	S4UL	LQM/CIEH	2015
	Trichloroethene (TCE)		2015	0.016	0.034	0.075	0.017	0.036	0.08	0.041	0.091	0.21	1.2	2.6	5.7	120	120	120	70	91	120	S4UL	LQM/CIEH	2015
			2021	0.0093	0.02	0.043	0.0097	0.02	0.045	0.032	0.072	0.16	0.73	1.5	3.4	76	78	79	41	54	69	C4SL	CLAIRE	2021
	Trichloromethane (Chloroform)		2015	0.91	1.7	3.4	1.2	2.1	4.2	0.42	0.83	1.7	99	170	350	2500	2500	2500	2600	2800	3100	S4UL	LQM/CIEH	2015
	Vinyl Chloride (Cloroethene)		2015	0.00064	0.00087	0.0014	0.00077	0.001	0.0015	0.00055	0.001	0.0018	0.059	0.077	0.12	3.5	3.5	3.5	4.8	5	5.4	S4UL	LQM/CIEH	2015
			2021	0.0064	0.01	0.017	0.015	0.019	0.029	0.0017	0.0031	0.0058	1.1	1.4	2.2	7.8	7.8	7.8	18	19	19	C4SL	CLAIRE	2021
Explosives	2,4,6 Trinitrotoluene		2015	1.6	3.7	8.1	65	66	66	0.24	0.58	1.4	1000	1000	1000	130	130	130	260	270	270	S4UL	LQM/CIEH	2015
	RDX (Hexogen/Cyclonite/1,3,5-trinitro-1,3,5-triazacyclohexane)		2015	120	250	540	13000	13000	13000	17	38	85	210000	210000	210000	26000	26000	27000	49000	51000	53000	S4UL	LQM/CIEH	2015
	HMX (Octogen/1,3,5,7-tetrenitro-1,3,5,7-tetrazacyclo-octane)		2015	5.7	13	26	6700	6700	6700	0.86	1.9	3.9	110000	110000	110000	13000	13000	13000	23000	23000	24000	S4UL	LQM/CIEH	2015
Pesticides	Aldrin		2015	5.7	6.6	7.1	7.3	7.4	7.5	3.2	6.1	9.6	170	170	170	18	18	18	30	31	31	S4UL	LQM/CIEH	2015
	Dieldrin		2015	0.97	2	3.5	7	7.3	7.4	0.17	0.41	0.96	170	170	170	18	18	18	30	30	31	S4UL	LQM/CIEH	

Land Use			Residential With or Without Plant Uptake									Public Open Space (POS)											Name	Authority	Date	
			With			Without			Allotments			Commercial			Residential						Park					
			SOM	1.0	2.5	6	1	2.5							6	1	2.5	6	1	2.5	6	1				2.5
Type	Contaminants	Species	Year																							
Chlorobenzenes	Chlorobenzene		2015	0.46	1	2.4	0.46	1	2.4	5.9	14	32	56	130	290	11000	13000	14000	1300	2000	2900	S4UL	LQM/CIEH	2015		
	1,2-Dichlorobenzene		2015	23	55	130	24	57	130	94	230	540	2000	4800	11000	90000	95000	98000	24000	36000	51000	S4UL	LQM/CIEH	2015		
	1,3-Dichlorobenzene		2015	0.4	1	2.3	0.44	1.1	2.5	0.25	0.6	1.5	30	73	170	300	300	300	390	440	470	S4UL	LQM/CIEH	2015		
	1,4-Dichlorobenzene		2015	61	150	350	61	150	350	15	37	88	4400	10000	25000	17000	17000	1700	36000	36000	36000	S4UL	LQM/CIEH	2015		
	1,2,3,-Trichlorobenzene		2015	1.5	3.6	8.6	1.5	3.7	8.8	4.7	12	28	102	250	590	1800	1800	1800	770	1100	1600	S4UL	LQM/CIEH	2015		
	1,2,4,-Trichlorobenzene		2015	2.6	6.4	15	2.6	6.4	15	55	140	320	220	530	1300	15000	17000	19000	1700	2600	4000	S4UL	LQM/CIEH	2015		
	1,3,5,-Trichlorobenzene		2015	0.33	0.81	1.9	0.33	0.81	1.9	4.7	12	28	23	55	130	1700	1700	1800	380	580	860	S4UL	LQM/CIEH	2015		
	1,2,3,4,-Tetrachlorobenzene		2015	15	36	78	24	56	120	4.4	11	26	1700	3080	4400	830	830	830	1500	1600	1600	S4UL	LQM/CIEH	2015		
	1,2,3,5,- Tetrachlobenzene		2015	0.66	1.6	3.7	0.75	1.9	4.3	0.38	0.9	2.2	49	120	240	78	79	79	110	120	130	S4UL	LQM/CIEH	2015		
	1,2,4, 5,- Tetrachlobenzene		2015	0.33	0.77	1.6	0.73	1.7	3.5	0.06	0.16	0.37	42	72	96	13	13	13	25	26	26	S4UL	LQM/CIEH	2015		
	Pentachlrobenzene		2015	5.8	12	22	19	30	38	1.2	3.1	7	640	770	830	100	100	100	190	190	190	S4UL	LQM/CIEH	2015		
	Hexachlorobenzene		2015	1.8	3.3	4.9	4.1	5.7	6.7	0.47	1.1	2.5	110	120	120	16	16	16	30	30	30	S4UL	LQM/CIEH	2015		
Phenols & Chlorophenols																										
	Phenols		2012			420			420			280			3200							SGV	DEFRA	2012		
			2015	120	200	380	440	690	1200	23	42	83	440	690	1300	440	690	1300	440	690	1300	S4UL	LQM/CIEH	2015		
	Chlorophenols (4 Congeners)		2015	0.87	2	4.5	94	150	210	0.13	0.3	0.7	3500	4000	4300	620	620	620	1100	1100	1100	S4UL	LQM/CIEH	2015		
	Pentachlorophenols		2015	0.22	0.52	1.2	27	29	31	0.03	0.08	0.19	400	400	400	60	60	60	110	120	120	S4UL	LQM/CIEH	2015		
Others																										
	Carbon Disulphide		2015	0.14	0.29	0.62	0.14	0.29	0.62	4.8	10	23	11	22	47	11000	11000	12000	1300	1900	2700	S4UL	LQM/CIEH	2015		
	Hexachloro-1,3-Butadiene		2015	0.29	0.7	1.6	0.32	0.78	1.8	0.25	0.61	1.4	31	66	120	25	25	25	48	50	51	S4UL	LQM/CIEH	2015		
	Sum of PCDDs, PCDFs and dioxin-like PCB's.		2012			8			8			8			240							SGV	DEFRA	2012		

NOTE	
Priority	Guideline (mg kg ⁻¹)
1	Site Specific Assessment Criteria (SSAC) (Soils Limited)
2	2014: Category 4 Screening Level (C4SL) (Contaminated Land: Application in Real Environment (CL:ARE), 2014 and 2021) * Use upper range value for Lead unless otherwise indicated
3	2012: Soil Guideline Value (SGV) (Environment Agency, 2009)
4	2015: Suitable 4 Use Level (S4UL) (Nathanail <i>et al</i> , 2015)
For Generic Risk Assessment, the values in Bold should have priority unless site specific, Client or regulatory requirements dictate otherwise – which must be justified	
Table reviewed January 2024	

Appendix F Gas Monitoring

Job Number:	22051				Weather		* Delete as appropriate						
Site Name:	New Care Home				Wind			Light					
BH/WS ID:	WS1				Cloud Cover					Overcast			
Date:	03/10/2025				Precipitation				Moderate				
Start Time:	2:48:00 PM				Ground Conditions				Wet				
Gas Monitor:*	Gas Data GFM 435 11555	or			Step 3								
PID:*		or	watch gas poli		Depth to Water (m bgl)		Base of Hole (m bgl)						
Dip meter:*		or	Single Phase		dry		3.95						
Step 1			Step 2										
Monitoring interval		Flow L/hr	DP Pa	Monitoring interval	CH ₄ % v/v	LEL CH ₄ %	CO ₂ % v/v	O ₂ % v/v	H ₂ S ppm	Co ppm	aP mb	VOC (PPM)	Temp (°C)
Atmosphere		0.0	0	Atmosphere	0.0	0	0.1	20.0	0	0	1003		13
mea	00:00:05	0.0	0	mea	00:00:05	0.0	0	3.0	19.5	0	2		
	00:00:30	0.0	0		00:00:30	0.0	0	5.3	17.7	0	2		
	00:01:00	0.0	0		00:01:00	0.0	0	5.4	17.0	0	2		
	00:02:00				00:02:00	0.0	0	5.4	16.9	0	2		
	00:03:00				00:03:00								
	00:04:00				00:04:00								
	00:05:00				00:05:00								
	00:06:00				00:06:00								
	00:07:00				00:07:00								
	00:08:00				00:08:00								
00:09:00			00:09:00										
00:10:00			00:10:00										
Samples				Notes;									
1 Litre Plastic				ONE HOLE PER SHEET. PLEASE RECORD GAS CONCENTRATIONS AT INTERVALS INDICATED ON THE SHEET OR UNTIL THE READINGS STABILISE.									
1 Litre Glass													
40ml Vial													
Gas sample (Tedlar bag etc													

Job Number:	22051			Weather	* Delete as appropriate		
Site Name:	New Care Home			Wind		Light	
BH/WS ID:	WS4			Cloud Cover			Overcast
Date:	03/10/2025			Precipitation		Moderate	
Start Time:				Ground Conditions		Wet	

Gas Monitor:*	Gas Data GFM 435 11555	or		Step 3	
PID:*		or	watchgas Poli	Depth to Water (m bgl)	Base of Hole (m bgl)
Dip meter:*		or	Single Phase	2.93	3.94

Step 1			Step 2									
Monitoring interval	Flow L/hr	DP Pa	Monitoring interval	CH ₄ % v/v	LEL CH ₄ %	CO ₂ % v/v	O ₂ % v/v	H ₂ S ppm	Co ppm	aP mb	VOC (PPM)	Temp (°C)
Atmosphere	0.0	0	Atmosphere	0.0	0	0.0	20.0	0	1	1003		13
mea	00:00:05	0.0	mea	00:00:05	0.0	0	3.2	19.7	0	2		
	00:00:30	0.0		0	4.9	18.8	0	2				
	00:01:00	0.0		0	5.0	17.7	0	1				
	00:02:00			0	5.2	17.6	0	1				
	00:03:00			0	5.2	17.6	0	1				
	00:04:00											
	00:05:00											
	00:06:00											
	00:07:00											
	00:08:00											
00:09:00												
00:10:00			00:10:00									

Samples		Notes;
1 Litre Plastic		ONE HOLE PER SHEET. PLEASE RECORD GAS CONCENTRATIONS AT INTERVALS INDICATED ON THE SHEET OR UNTIL THE READINGS STABILISE.
1 Litre Glass		
40ml Vial		
Gas sample (Tedlar bag etc)		

Job Number:	22051			Weather	* Delete as appropriate		
Site Name:	New Care Home			Wind		Light	
BH/WS ID:	WS6			Cloud Cover			Overcast
Date:	03/10/2025			Precipitation		Moderate	
Start Time:				Ground Conditions		Wet	

Gas Monitor:*	Gas Data GFM 435 11555	or		Step 3	
PID:*		or	watchgas Poli	Depth to Water (m bgl)	Base of Hole (m bgl)
Dip meter:*		or	Single Phase	1.88	3.66

Step 1			Step 2									
Monitoring interval	Flow L/hr	DP Pa	Monitoring interval	CH ₄ % v/v	LEL CH ₄ %	CO ₂ % v/v	O ₂ % v/v	H ₂ S ppm	Co ppm	aP mb	VOC (PPM)	Temp (°C)
Atmosphere	0.0	0	Atmosphere	0.0	0	0.0	20.0	0	0	1003		13
mea	00:00:05	0.0	mea	00:00:05	0.0	0	1.2	19.8	0	1		
	00:00:30	0.0		0	0	3.7	19.2	0	2			
	00:01:00	0.0		0	0	3.7	18.5	0	1			
	00:02:00			0	0	3.7	18.4	0	1			
	00:03:00											
	00:04:00											
	00:05:00											
	00:06:00											
	00:07:00											
	00:08:00											
00:09:00												
00:10:00												

Samples		Notes;
1 Litre Plastic		ONE HOLE PER SHEET. PLEASE RECORD GAS CONCENTRATIONS AT INTERVALS INDICATED ON THE SHEET OR UNTIL THE READINGS STABILISE.
1 Litre Glass		
40ml Vial		
Gas sample (Tedlar bag etc)		

Job Number:	22051			Weather	* Delete as appropriate		
Site Name:	New Care Home			Wind		Light	
BH/WS ID:	WS4			Cloud Cover			Overcast
Date:	03/10/2025			Precipitation		Moderate	
Start Time:				Ground Conditions		Wet	

Gas Monitor:*	Gas Data GFM 435 11555	or		Step 3	
PID:*		or	watchgas Poli	Depth to Water (m bgl)	Base of Hole (m bgl)
Dip meter:*		or	Single Phase	2.93	3.94

Step 1			Step 2										
Monitoring interval	Flow L/hr	DP Pa	Monitoring interval	CH ₄ % v/v	LEL CH ₄ %	CO ₂ % v/v	O ₂ % v/v	H ₂ S ppm	Co ppm	aP mb	VOC (PPM)	Temp (°C)	
Atmosphere	0.0	0	Atmosphere	0.0	0	0.0	20.0	0	1	1003		13	
mea	00:00:05	0.0	0	mea	00:00:05	0.0	0	3.2	19.7	0	2		
	00:00:30	0.0	0		00:00:30	0.0	0	4.9	18.8	0	2		
	00:01:00	0.0	0		00:01:00	0.0	0	5.0	17.7	0	1		
	00:02:00				00:02:00	0.0	0	5.2	17.6	0	1		
	00:03:00				00:03:00	0.0	0	5.2	17.6	0	1		
	00:04:00				00:04:00								
	00:05:00				00:05:00								
	00:06:00				00:06:00								
	00:07:00				00:07:00								
	00:08:00				00:08:00								
00:09:00			00:09:00										
00:10:00			00:10:00										

Samples		Notes;
1 Litre Plastic		ONE HOLE PER SHEET. PLEASE RECORD GAS CONCENTRATIONS AT INTERVALS INDICATED ON THE SHEET OR UNTIL THE READINGS STABILISE.
1 Litre Glass		
40ml Vial		
Gas sample (Tedlar bag etc)		

Job Number:	22051			Weather	* Delete as appropriate		
Site Name:	New Care Home			Wind		Light	
BH/WS ID:	WS6			Cloud Cover			Overcast
Date:	03/10/2025			Precipitation		Moderate	
Start Time:				Ground Conditions		Wet	

Gas Monitor:*	Gas Data GFM 435 11555	or		Step 3	
PID:*		or	watchgas Poli	Depth to Water (m bgl)	Base of Hole (m bgl)
Dip meter:*		or	Single Phase	1.88	3.66

Step 1			Step 2									
Monitoring interval	Flow L/hr	DP Pa	Monitoring interval	CH ₄ % v/v	LEL CH ₄ %	CO ₂ % v/v	O ₂ % v/v	H ₂ S ppm	Co ppm	aP mb	VOC (PPM)	Temp (°C)
Atmosphere	0.0	0	Atmosphere	0.0	0	0.0	20.0	0	0	1003		13
mea	00:00:05	0.0	mea	00:00:05	0.0	0	1.2	19.8	0	1		
	00:00:30	0.0		0	0	3.7	19.2	0	2			
	00:01:00	0.0		0	0	3.7	18.5	0	1			
	00:02:00			0	0	3.7	18.4	0	1			
	00:03:00											
	00:04:00											
	00:05:00											
	00:06:00											
	00:07:00											
	00:08:00											
00:09:00												
00:10:00												

Samples		Notes;
1 Litre Plastic		ONE HOLE PER SHEET. PLEASE RECORD GAS CONCENTRATIONS AT INTERVALS INDICATED ON THE SHEET OR UNTIL THE READINGS STABILISE.
1 Litre Glass		
40ml Vial		
Gas sample (Tedlar bag etc)		

Job Number:	22051				Weather		* Delete as appropriate							
Site Name:	New Care Home				Wind				Moderate					
BH/WS ID:	WS1				Cloud Cover					Overcast				
Date:	23/10/2025				Precipitation			Slight						
Start Time:	3:43:00 PM				Ground Conditions				Wet					
Gas Monitor:*	Gas Data GFM 435 11555	or			Step 3									
PID:*		or	watchgas Poli		Depth to Water (m bgl)		Base of Hole (m bgl)							
Dip meter:*		or	Single Phase		dry		3.96							
Step 1			Step 2											
Monitoring interval		Flow L/hr	DP Pa	Monitoring interval		CH ₄ % v/v	LEL CH ₄ %	CO ₂ % v/v	O ₂ % v/v	H2S ppm	Co ppm	aP mb	VOC (PPM)	Temp (°C)
Atmosphere		0.0	0	Atmosphere		0.0	0	0.0	19.6	0	1	989	0	12
mea	00:00:05	0.0	0	mea	00:00:05	0.0	0	1.3	19.5	0	0		0	
	00:00:30	0.0	0		00:00:30	0.0	0	5.2	17.6	0	0		0	
	00:01:00	0.0	0		00:01:00	0.0	0	5.4	17.5	0	0		0	
	00:02:00				00:02:00	0.0	0	5.4	17.5	0	0		0	
	00:03:00				00:03:00									
	00:04:00				00:04:00									
	00:05:00				00:05:00									
	00:06:00				00:06:00									
	00:07:00				00:07:00									
	00:08:00				00:08:00									
00:09:00			00:09:00											
00:10:00			00:10:00											
Samples				Notes;										
1 Litre Plastic				ONE HOLE PER SHEET. PLEASE RECORD GAS CONCENTRATIONS AT INTERVALS INDICATED ON THE SHEET OR UNTIL THE READINGS STABILISE.										
1 Litre Glass														
40ml Vial														
Gas sample (Tedlar bag etc														

Job Number:	22051			Weather	* Delete as appropriate			
Site Name:	New Care Home			Wind			Moderate	
BH/WS ID:	WS4			Cloud Cover				Overcast
Date:	23/10/2025			Precipitation		Slight		
Start Time:				Ground Conditions			Wet	

Gas Monitor:*	Gas Data GFM 435 11555	or		Step 3	
PID:*		or	watchgas Poli	Depth to Water (m bgl)	Base of Hole (m bgl)
Dip meter:*		or	Single Phase	2.79	3.93

Step 1			Step 2									
Monitoring interval	Flow L/hr	DP Pa	Monitoring interval	CH ₄ % v/v	LEL CH ₄ %	CO ₂ % v/v	O ₂ % v/v	H ₂ S ppm	Co ppm	aP mb	VOC (PPM)	Temp (°C)
Atmosphere	0.0	0	Atmosphere	0.0	0	0.0	19.6	0	1	989	0	12
mea	00:00:05	0.0	mea	00:00:05	0.0	0	0.5	19.5	0	0	0	
	00:00:30	0.0		0	0	5.4	18.2	0	0	0		
	00:01:00	0.0		0	0	5.7	16.9	0	0	0		
	00:02:00			0	0	5.7	16.2	0	0	0		
	00:03:00											
	00:04:00											
	00:05:00											
	00:06:00											
	00:07:00											
	00:08:00											
00:09:00												
00:10:00												

Samples		Notes;
1 Litre Plastic		ONE HOLE PER SHEET. PLEASE RECORD GAS CONCENTRATIONS AT INTERVALS INDICATED ON THE SHEET OR UNTIL THE READINGS STABILISE.
1 Litre Glass		
40ml Vial		
Gas sample (Tedlar bag etc)		

Job Number:	22051			Weather	* Delete as appropriate			
Site Name:	New Care Home			Wind			Moderate	
BH/WS ID:	WS6			Cloud Cover				Overcast
Date:	23/10/2025			Precipitation		Slight		
Start Time:				Ground Conditions			Wet	

Gas Monitor:*	Gas Data GFM 435 11555	or		Step 3	
PID:*		or	watchgas Poli	Depth to Water (m bgl)	Base of Hole (m bgl)
Dip meter:*		or	Single Phase	1.54	3.63

Step 1			Step 2									
Monitoring interval	Flow L/hr	DP Pa	Monitoring interval	CH ₄ % v/v	LEL CH ₄ %	CO ₂ % v/v	O ₂ % v/v	H ₂ S ppm	Co ppm	aP mb	VOC (PPM)	Temp (°C)
Atmosphere	0.0	0	Atmosphere	0.0	0	0.0	19.6	0	1	989	0	12
mea	00:00:05	0.0	mea	00:00:05	0.0	0	0.6	19.4	0	0	0	
	00:00:30	0.0		0	0	4.1	18.7	0	0	0		
	00:01:00	0.0		0	0	4.3	17.4	0	0	0		
	00:02:00			0	4.3	17.4	0	0	0			
	00:03:00											
	00:04:00					£						
	00:05:00											
	00:06:00											
	00:07:00											
	00:08:00											
00:09:00												
00:10:00			00:10:00									

Samples		Notes;
1 Litre Plastic		ONE HOLE PER SHEET. PLEASE RECORD GAS CONCENTRATIONS AT INTERVALS INDICATED ON THE SHEET OR UNTIL THE READINGS STABILISE.
1 Litre Glass		
40ml Vial		
Gas sample (Tedlar bag etc)		

Job Number:	22051			Weather	* Delete as appropriate			
Site Name:	New Care Home			Wind			Moderate	
BH/WS ID:	WS4			Cloud Cover				Overcast
Date:	23/10/2025			Precipitation		Slight		
Start Time:				Ground Conditions			Wet	

Gas Monitor:*	Gas Data GFM 435 11555	or		Step 3	
PID:*		or	watchgas Poli	Depth to Water (m bgl)	Base of Hole (m bgl)
Dip meter:*		or	Single Phase	2.79	3.93

Step 1			Step 2									
Monitoring interval	Flow L/hr	DP Pa	Monitoring interval	CH ₄ % v/v	LEL CH ₄ %	CO ₂ % v/v	O ₂ % v/v	H ₂ S ppm	Co ppm	aP mb	VOC (PPM)	Temp (°C)
Atmosphere	0.0	0	Atmosphere	0.0	0	0.0	19.6	0	1	989	0	12
mea	00:00:05	0.0	mea	00:00:05	0.0	0	0.5	19.5	0	0	0	
	00:00:30	0.0		0	0	5.4	18.2	0	0	0		
	00:01:00	0.0		0	0	5.7	16.9	0	0	0		
	00:02:00			0	0	5.7	16.2	0	0	0		
	00:03:00											
	00:04:00											
	00:05:00											
	00:06:00											
	00:07:00											
	00:08:00											
00:09:00												
00:10:00												

Samples		Notes;
1 Litre Plastic		ONE HOLE PER SHEET. PLEASE RECORD GAS CONCENTRATIONS AT INTERVALS INDICATED ON THE SHEET OR UNTIL THE READINGS STABILISE.
1 Litre Glass		
40ml Vial		
Gas sample (Tedlar bag etc)		

Job Number:	22051			Weather	* Delete as appropriate			
Site Name:	New Care Home			Wind			Moderate	
BH/WS ID:	WS6			Cloud Cover				Overcast
Date:	23/10/2025			Precipitation		Slight		
Start Time:				Ground Conditions			Wet	

Gas Monitor:*	Gas Data GFM 435 11555	or		Step 3	
PID:*		or	watchgas Poli	Depth to Water (m bgl)	Base of Hole (m bgl)
Dip meter:*		or	Single Phase	1.54	3.63

Step 1			Step 2									
Monitoring interval	Flow L/hr	DP Pa	Monitoring interval	CH ₄ % v/v	LEL CH ₄ %	CO ₂ % v/v	O ₂ % v/v	H ₂ S ppm	Co ppm	aP mb	VOC (PPM)	Temp (°C)
Atmosphere	0.0	0	Atmosphere	0.0	0	0.0	19.6	0	1	989	0	12
mea	00:00:05	0.0	mea	00:00:05	0.0	0	0.6	19.4	0	0	0	
	00:00:30	0.0		0	0	4.1	18.7	0	0	0		
	00:01:00	0.0		0	0	4.3	17.4	0	0	0		
	00:02:00			0	4.3	17.4	0	0	0	0		
	00:03:00											
	00:04:00					£						
	00:05:00											
	00:06:00											
	00:07:00											
	00:08:00											
00:09:00												
00:10:00			00:10:00									

Samples		Notes;
1 Litre Plastic		ONE HOLE PER SHEET. PLEASE RECORD GAS CONCENTRATIONS AT INTERVALS INDICATED ON THE SHEET OR UNTIL THE READINGS STABILISE.
1 Litre Glass		
40ml Vial		
Gas sample (Tedlar bag etc)		

Job Number:	22051				Weather		* Delete as appropriate					
Site Name:	New Care Home				Wind		Still	Light	Moderate	Strong		
BH/WS ID:					Cloud Cover		None	Slight	Cloudy	Overcast		
Date:	20/11/2025				Precipitation		Dry	Slight	Moderate	Heavy		
Start Time:	1:24:00 PM				Ground Conditions		Dry	Moist	Wet	Flooded		
Gas Monitor:*	Gas Data GFM 435 11555	or	LMS 1912		Step 3							
PID:*	Multirae M01C011991	or	Procheck Tiger T111179		Depth to Water (m bgl)		Base of Hole (m bgl)					
Dip meter:*	Dual Phase	or	Single Phase		dry		3.87					
Step 1			Step 2									
Monitoring interval	Flow L/hr	DP Pa	Monitoring interval	CH ₄ % v/v	LEL CH ₄ %	CO ₂ % v/v	O ₂ % v/v	H ₂ S ppm	Co ppm	aP mb	VOC (PPM)	Temp (°C)
Atmosphere	0.0	0	Atmosphere	0	0	0.0	19.4	0	0	1010	0	
mea	00:00:05	0.0	mea	00:00:05	0	0	1.1	19.4	0	0	1009	0
	00:00:30	0.0		0	0	6.2	16.0	0	0	1009	0	
	00:01:00	0.0		0	0	6.2	14.6	0	0	1009	0	
	00:02:00	0.0		0	0	6.2	13.9	0	0	1009	0	
	00:03:00	0.0		0	0	6.2	13.5	0	0	1009	0	
	00:04:00	0.0		0	0	6.3	13.4	0	0	1009	0	
	00:05:00	0.0		0	0	6.3	13.3	0	0	1009	0	
	00:06:00	0.0		0	0	6.3	13.3	0	0	1009	0	
	00:07:00	0.0		0	0					0		
	00:08:00											
00:09:00												
00:10:00			00:10:00									
Samples			Notes;									
1 Litre Plastic			ONE HOLE PER SHEET. PLEASE RECORD GAS CONCENTRATIONS AT INTERVALS INDICATED ON THE SHEET OR UNTIL THE READINGS STABILISE.									
1 Litre Glass												
40ml Vial												
Gas sample (Tedlar bag etc												

Job Number:	22051			Weather	* Delete as appropriate			
Site Name:	New Care Home			Wind	Still	Light	Moderate	Strong
BH/WS ID:				Cloud Cover	None	Slight	Cloudy	Overcast
Date:	20/11/2025			Precipitation	Dry	Slight	Moderate	Heavy
Start Time:	1:07:00 PM			Ground Conditions	Dry	Moist	Wet	Flooded

Gas Monitor:*	Gas Data GFM 435 11555	or	LMS 1912	Step 3	
PID:*	Multirae M01C011991	or	Procheck Tiger T111179	Depth to Water (m bgl)	Base of Hole (m bgl)
Dip meter:*	Dual Phase	or	Single Phase	2.15	3.90

Step 1			Step 2										
Monitoring interval	Flow L/hr	DP Pa	Monitoring interval	CH ₄ % v/v	LEL CH ₄ %	CO ₂ % v/v	O ₂ % v/v	H ₂ S ppm	Co ppm	aP mb	VOC (PPM)	Temp (°C)	
Atmosphere	0.0	0	Atmosphere	0.0	0	0.0	19.0	0	0	1010	0		
mea	00:00:05	0.0	mea	00:00:05	0.0	0	4.6	18.9	0	0	1009	0	
	00:00:30	0.0		00:00:30	0.0	0	5.7	17.5	0	0	1009	0	
	00:01:00	0.0		00:01:00	0.0	0	5.7	17.1	0	0	1009	0	
	00:02:00	0.0		00:02:00	0.0	0	5.7	17.1	0	0	1009	0	
	00:03:00	0.0		00:03:00	0.0	0	5.5	16.9	0	0	1009	0	
	00:04:00	0.0		00:04:00	0.0	0	5.5	16.9	0	0	1009	0	
	00:05:00	0.0		00:05:00	0.0	0	5.5	16.9	0	0	1009	0	
	00:06:00	0.0		00:06:00									
	00:07:00			00:07:00									
	00:08:00			00:08:00									
00:09:00		00:09:00											
00:10:00		00:10:00											

Samples		Notes;
1 Litre Plastic		ONE HOLE PER SHEET. PLEASE RECORD GAS CONCENTRATIONS AT INTERVALS INDICATED ON THE SHEET OR UNTIL THE READINGS STABILISE.
1 Litre Glass		
40ml Vial		
Gas sample (Tedlar bag etc)		

Job Number:	22051			Weather	* Delete as appropriate			
Site Name:	New Care Home			Wind	Still	Light	Moderate	Strong
BH/WS ID:				Cloud Cover	None	Slight	Cloudy	Overcast
Date:	20/11/2025			Precipitation	Dry	Slight	Moderate	Heavy
Start Time:	1:07:00 PM			Ground Conditions	Dry	Moist	Wet	Flooded

Gas Monitor:*	Gas Data GFM 435 11555	or	LMS 1912	Step 3	
PID:*	Multirae M01C011991	or	Procheck Tiger T111179	Depth to Water (m bgl)	Base of Hole (m bgl)
Dip meter:*	Dual Phase	or	Single Phase	2.15	3.90

Step 1			Step 2										
Monitoring interval	Flow L/hr	DP Pa	Monitoring interval	CH ₄ % v/v	LEL CH ₄ %	CO ₂ % v/v	O ₂ % v/v	H ₂ S ppm	Co ppm	aP mb	VOC (PPM)	Temp (°C)	
Atmosphere	0.0	0	Atmosphere	0.0	0	0.0	19.0	0	0	1010	0		
mea	00:00:05	0.0	mea	00:00:05	0.0	0	4.6	18.9	0	0	1009	0	
	00:00:30	0.0		0	0	5.7	17.5	0	0	1009	0		
	00:01:00	0.0		0	0	5.7	17.1	0	0	1009	0		
	00:02:00	0.0		0	0	5.7	17.1	0	0	1009	0		
	00:03:00	0.0		0	0	5.5	16.9	0	0	1009	0		
	00:04:00	0.0		0	0	5.5	16.9	0	0	1009	0		
	00:05:00	0.0		0	0	5.5	16.9	0	0	1009	0		
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	00:07:00												
	00:08:00												
00:09:00													
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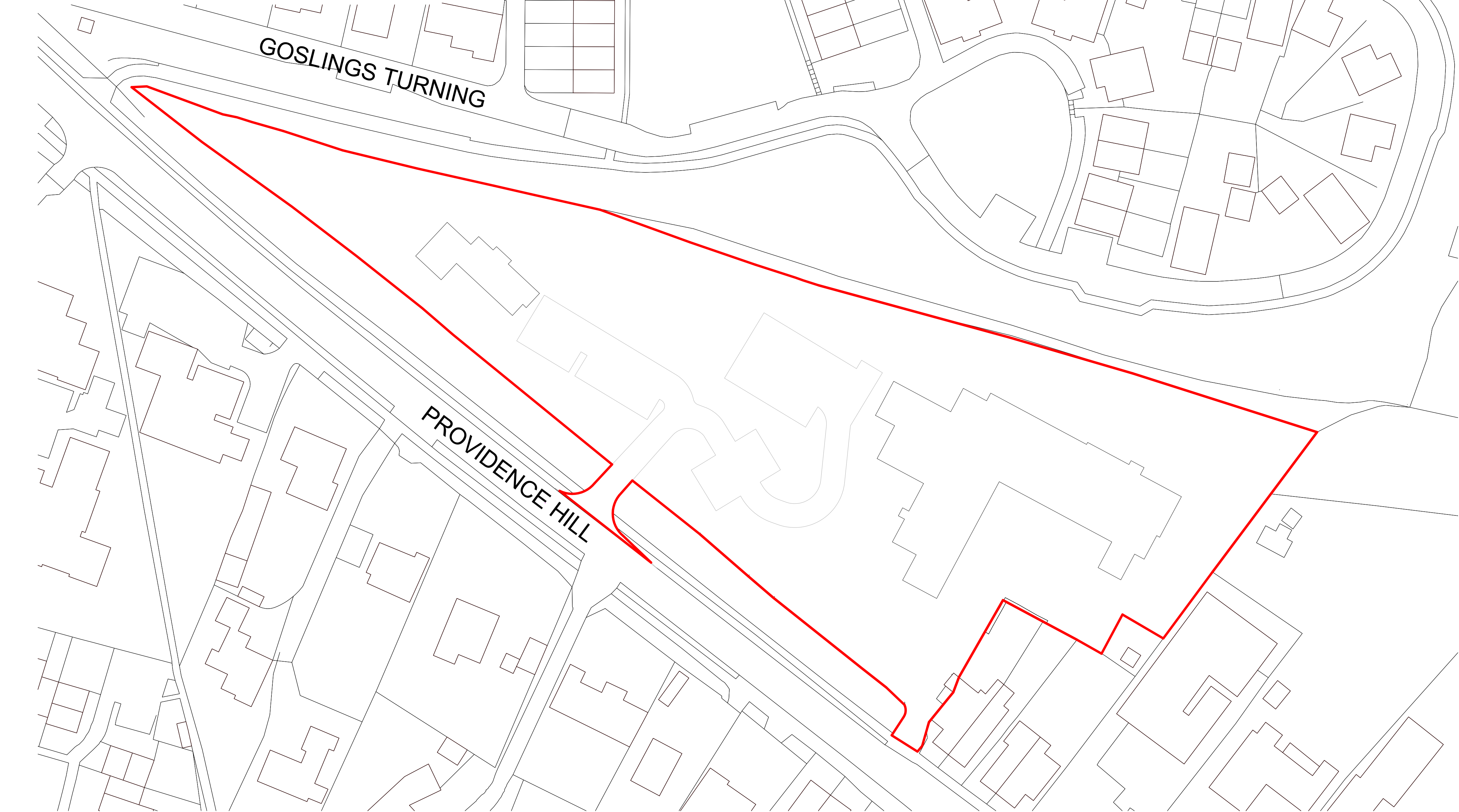
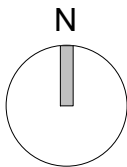
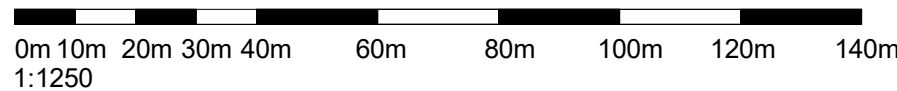
Samples		Notes;
1 Litre Plastic		ONE HOLE PER SHEET. PLEASE RECORD GAS CONCENTRATIONS AT INTERVALS INDICATED ON THE SHEET OR UNTIL THE READINGS STABILISE.
1 Litre Glass		
40ml Vial		
Gas sample (Tedlar bag etc)		

Appendix G Information Provided by the Client

REVISION NOTES

Rev	Date	Description	Drw	Chk
A	15/04/2024	Red Line amended to include Highways changes	LS	LS
B	25/03/2025	Updated to revised design	LS	LS

1 Location Plan
1 : 1250



2 Block Plan
1 : 500



WLAWilliamsLester.

1 Star Lane, Ringwood, BH24 1AL
www.williamslester.com 01425 485234 mail@williamslester.com

Client

Project
Providence Hill
Bursledon

Title
Location and Block Plan

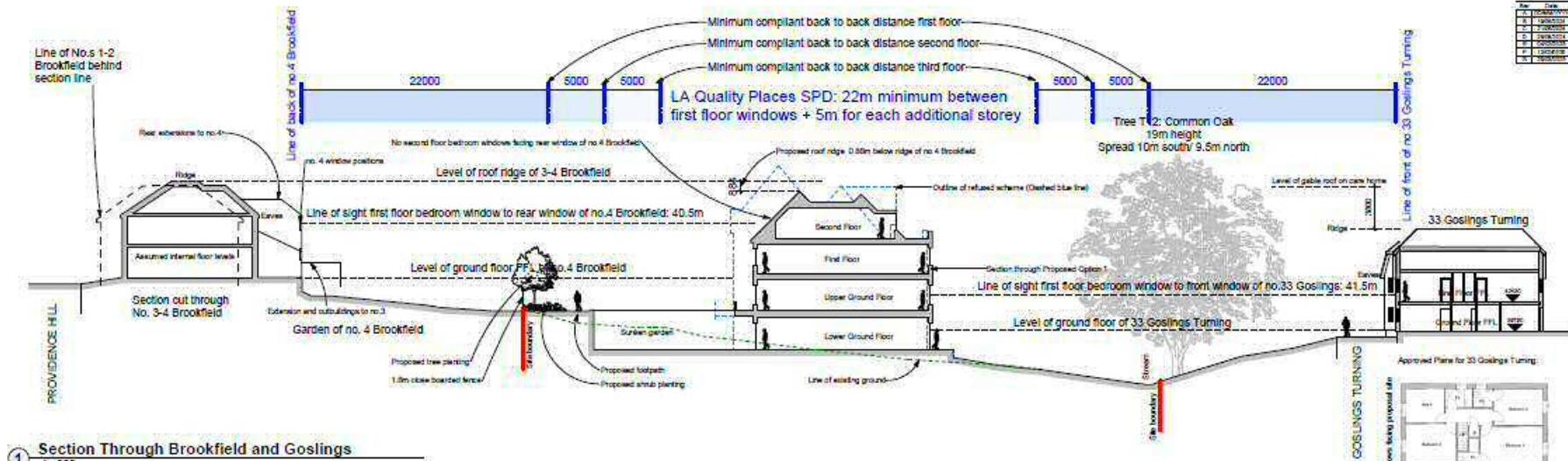
Scale A1 @ As indicated
Revision Drawing Status
B Spatial Coordination
Suitability Suitability Description

Drawing No.
6185-WLA-ZZ-XX-DR-A-0005

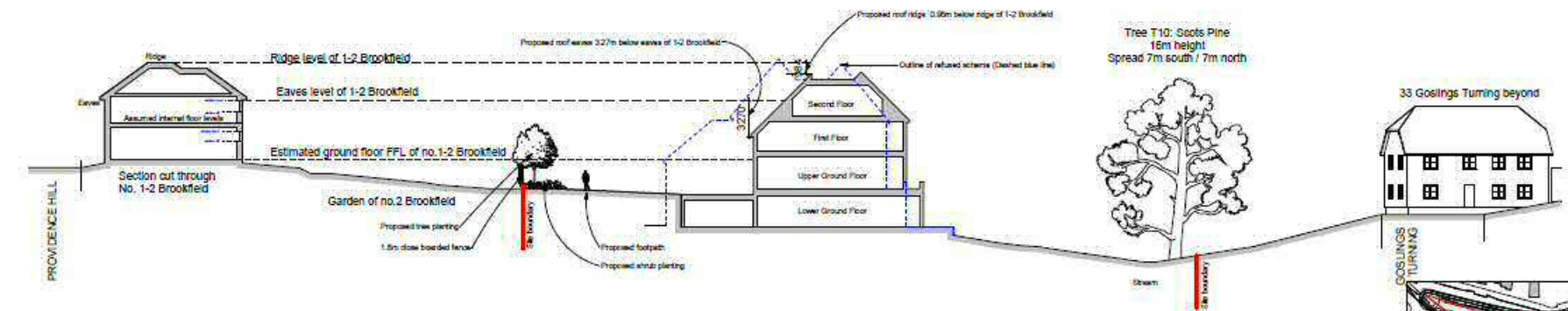




REVISION NOTES			
No.	Date	Description	By
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2	14/05/2024	Issue for Review	WLA
3	14/05/2024	Issue for Review	WLA
4	14/05/2024	Issue for Review	WLA
5	14/05/2024	Issue for Review	WLA
6	14/05/2024	Issue for Review	WLA
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100	14/05/2024	Issue for Review	WLA

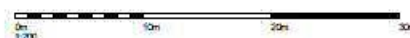


① Section Through Brookfield and Goslings
1:200



② Section Through Single Storey Wing
1:200

③ Site Sections Key
1:2000



Project: Providence Hill
Bursledon

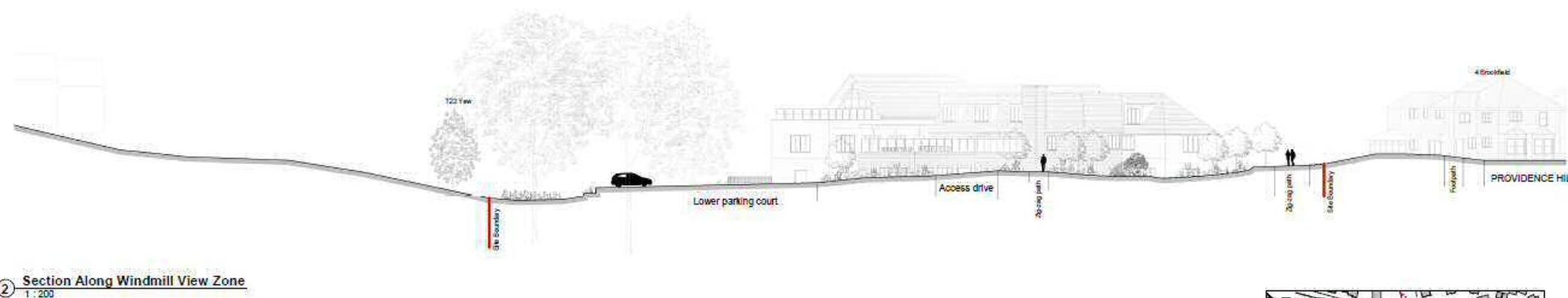
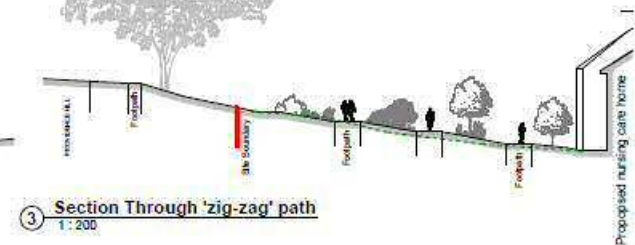
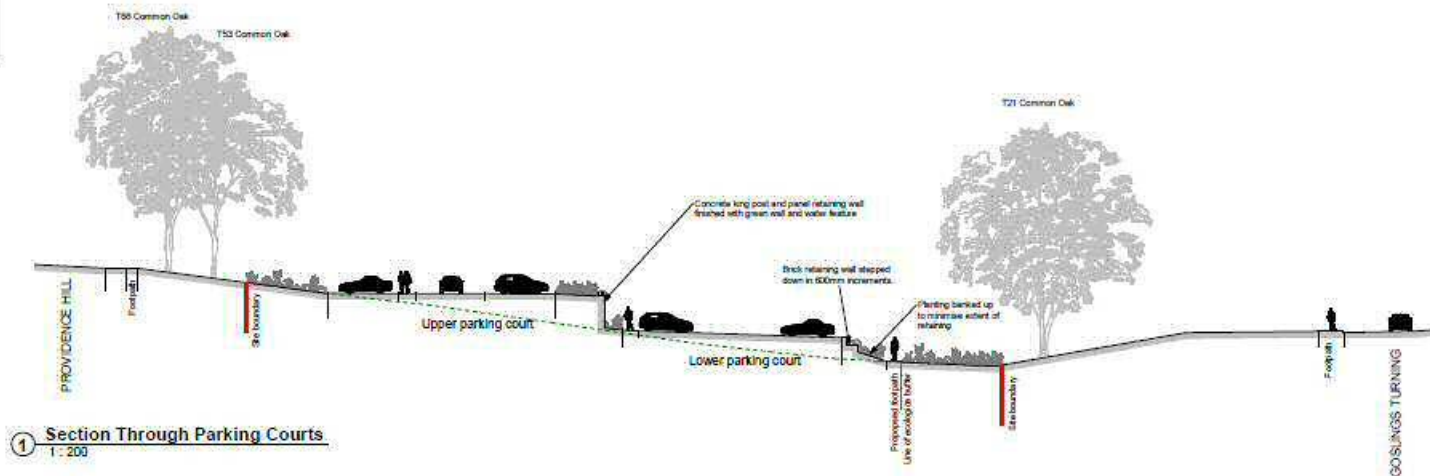


Site Sections Sheet 1

Scale: A1 @ As indicated
Drawing No: 6185-WLA-ZZ-XX-DR-A-0050
Revision: 1
G Spatial Coordination
S2 For Information

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REVISION NOTES				
Rev	Date	Description	Rev	Date
1	10/05/2023	Site plan	101	10/05/2023
2	10/05/2023	Site plan	102	10/05/2023
3	10/05/2023	Site plan	103	10/05/2023
4	10/05/2023	Site plan	104	10/05/2023
5	10/05/2023	Site plan	105	10/05/2023



REVISION NOTES

No.	Date	Description	Rev.
1	12/01/2024	Initial design	1.0
2	12/01/2024	Revised design	2.0
3	12/01/2024	Revised design	3.0
4	12/01/2024	Revised design	4.0
5	12/01/2024	Revised design	5.0
6	12/01/2024	Revised design	6.0
7	12/01/2024	Revised design	7.0
8	12/01/2024	Revised design	8.0
9	12/01/2024	Revised design	9.0
10	12/01/2024	Revised design	10.0
11	12/01/2024	Revised design	11.0
12	12/01/2024	Revised design	12.0

Area Schedule (GIA)

68 bed C2 Residential Care Home 4210m²

Open Market Cottages @ 90m² x 3 270m²

Total: 4480m²

Car Parking 40 spaces o/a

Care Home 33 spaces

Residential Cottages 4 spaces

Spaces licensed to 1-3 Brookfield 3 spaces

- 1 68 Bed C2 Residential Care Home
- 2 3 no. Residential Cottages
- 3 Parking
- 4 Existing informal parking retained
- 5 Service Access
- 6 Main entrance to Care Home
- 7 Residents sunken garden
- 8 Residents woodland garden
- 9 Residents roof garden
- 10 New vehicular access
- 11 Pedestrian accessible route - under 1 in 20 slope
- 12 Defined edge of view to Bursledon Windmill

- Refused building
- Proposed trees
- Existing trees to be retained
- Line of ecological buffer zone based upon 10m offset from top of stream bank
- Site Boundary
- Root Protection Zone
- SSEN No Build Zone



1 Proposed Site Plan 500
1:500



0m 10m 20m 30m 40m 50m
1:500

Project
Providence Hill
Bursledon

Client
COLTEN CARE

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Title
Proposed Site Plan
Scale: A1 @ 1:500
Drawing No: **P**
Drawing Title: **Spatial Coordination**
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