

11th December 2025

Site Address: *Land Adjacent to Woodgate nurseries, Lidsey Road, Aldingbourne*

Application: *Discharge of condition 13b – Submission Note*

PP Reference: *PP-14484921*

Application reference: *AL/116/25/DOC*

Following the discovery of elevated levels of Hydrocarbons within a small number of localised areas of this development, as reported within the Ashdown Site Investigation Limited geotechnical report (Appendix A), Lastmile, who are responsible for the water supply of this development under an approved NAV agreement, have approved a scheme of water supply mains pipework that takes account of these findings, (Appendix B).

This approach has been approved based on agreement with BDW Southampton to carry out a topsoil strip in those areas of the site found to have higher levels, along with the installation of PE barrier pipe where subsoil hydrocarbon levels are also elevated. These approved water layouts show on plan where the appropriate PE supply pipes will be installed, (Appendix C).

BDW Southampton's approved installer Connect It Utility Services produce a plot specific verification report following all water supply installations that includes the pipe materials used. Two examples of these can be found within Appendix D, one showing standard supply pipe and a second showing the use of PE barrier pipe, with the relevant information to be found on page 5. A copy of these reports for this development can be provided upon request.

BDW Southampton trust that this design approval by the Ofwat approved water supplier for this development satisfies the requirement for mitigating the risk of elevated hydrocarbons entering the water supply network.

Kieran McGuire

Barratt David Wilson Homes Southampton



Appendix A

**Ashdown Site Investigation Limited Combined Geotechnical & Quantitative
Ground Contamination Risk Assessment ref Woodgate Phase 1 - P15714
R15375 - Issue 2**



**Land Adjacent to Woodgate Nurseries
Lidsey Road
Woodgate
West Sussex**

**Combined Geotechnical and
Quantitative Ground Contamination Risk Assessment**

Report Beneficiary:

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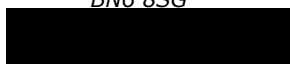
Project Reference: P15714

Report Reference: R15375

Document Control			
Issue No.	Status	Issue Date	Notes
1	Draft	21 st September 2022	Issued in draft as ground gas and groundwater monitoring and sampling are still ongoing at the site.
2	Final	18 th November 2022	Issued in final on completion of the ground gas and groundwater monitoring
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EXECUTIVE SUMMARY

The following presents a summary of the main findings of the report. It is emphasised that no reliance should be placed on any individual point until the whole of the report has been read as other sections of the report may put into context the information contained herein.

The development proposals for the site are understood to comprise the construction of 95 residential houses, with informal and formal public open space, landscaping, drainage and other associated works.

This draft report discusses the ground investigation works completed at the site. At the time of the issue of this report ground gas monitoring is ongoing, and groundwater sampling and laboratory testing has yet to be undertaken.

Reference to geological datasets indicates that the site is expected to be underlain by the River Terrace Deposits overlying the London Clay Formation. The ground investigation confirmed the underlying soils to comprise a shallow thickness of topsoil, overlying River Terrace Deposits.

The River Terrace Deposits are classed as a Secondary A Aquifer. The site does not lie within an Environment Agency Source Protection Zone. Whilst the current phase of monitoring indicates groundwater lies at depths of between 1.27m and 2.83m below ground level, it is noted that groundwater levels at the site have been recorded to rise as high as circa 0.10m below ground level during the winter of 2020/2021.

Precautions against shrinkage and heave for any new foundation system should assume a medium volume change potential for the fine-grained River Terrace Deposits soils. The undisturbed sand and gravel soils of the River Terrace Deposits may be considered to be non-plastic and hence non-shrinkable.

A net allowable bearing capacity of 80kN/m² may be assumed for spread (pad or strip) foundations up to 1.00m across bearing within the River Terrace Deposits of soft to firm consistency or loose relative density. An increased bearing capacity of 150kN/m² maybe assumed for similar sized foundations where they are deepened to bear within the River Terrace Deposits of at least medium dense relative density or stiff consistency. These latter deposits were typically recorded at depths of between 1.70m and 3.00m below ground level.

A DS-1 Design Sulfate Class and an AC-1 ACEC classification should be assumed as a minimum for the design of concrete in contact with the ground.

Considerations for ground floor design are provided in the main body of the report.

Design equilibrium California bearing ratios and moduli of subgrade reaction are presented in the report. The subgrade is not likely to be susceptible to frost heave.

The results from the infiltration tests indicate that the coarse grained River Terrace Deposits soils possess moderate to good infiltration characteristics.

A Preliminary Ground Contamination Risk Assessment Report has previously been prepared for the proposed development works. The report concluded that no viable sources of contamination were present on or in the vicinity of the site, and therefore no complete pollutant linkages were considered to be present. Specifically, the report noted that a historical landfill was present, the boundary of which lay some 324m to the west of the site. Because of the distance from the site and the underlying geology, the likelihood of gases generated within the landfill being able to

migrate onto the site in sufficient quantities as to pose an unacceptable risk is considered to be negligible.

However, the Environmental Health Officer requested the imposition of a contaminated land condition requiring further assessment of the level of risk posed by "migratory contaminants leaching from the Lindsey land fill sites".

Laboratory testing of samples of the topsoil, taken from depths where end users may reasonably be expected to come into direct contact with the soils and where soil derived dust may be generated, recorded very low concentrations of the contaminants screened for, all of which were well below their respective soil screening values for a residential land use.

Testing of samples of groundwater has recorded no evidence of any contaminant migration from the off-site landfill to the west. The shallow groundwater has not resulted in any significant contamination of the shallow soils and the concentrations of contaminants present in the groundwater do not pose an unacceptable risk to end users of the site.

Monitoring of the concentrations of ground gases has been undertaken. Calculated gas screening values put the site in very low risk categories, and the installation of any specific protection measures are not required.

Concentrations of PAH compounds and petroleum hydrocarbons which exceeded the threshold value for the use of PE water supply pipework were recorded in some samples. Portsmouth Water should be consulted as to whether a detailed assessment of the risk to water supply pipework should be undertaken or whether protective pipework should be installed.

It is recommended that this report is submitted to the relevant regulator and/or warrantor with respect to contaminated land. The regulator and/or warrantor may require confirmation of the protection measures required by Portsmouth Water, as well as confirmation that these have been implemented as part of the construction phase.

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FIGURES

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APPENDIX A

- Proposed Development Layout

APPENDIX B

- Environmental Health Officer Comments

APPENDIX C

- Exploratory Hole Notes
- Exploratory Hole Records
- DPSH-B Dynamic Probe Records
- In-situ TRL Cone Penetrometer (CBR) Test Results
- Summary of Borehole Falling Head Soakage Test Results
- Gas Concentration and Groundwater Monitoring Results
- Exploratory Hole Records - P14891
- Groundwater Monitoring Results – P14891

APPENDIX D

- Geotechnical Laboratory Test Results
- Contamination Laboratory Test Results

APPENDIX E

- Summary of In Situ CBR Test Results
- Graph of Subgrade Surface Modulus vs Depth
- Graph of CBR vs Depth

APPENDIX F

- Classification of Probability, Consequence and Risk

APPENDIX G

- Quantitative Conceptual Model
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1. INTRODUCTION

It is proposed to develop the site known as Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex. The development proposals are understood to comprise the construction of 95 residential houses, with informal and formal public open space, landscaping, drainage and other associated works. A copy of the proposed development layout is presented in Appendix A. Outline planning permission, with all matters reserved has been granted for the development by Arun District Council, Application Ref: AL/129/21/OUT.

Ashdown Site Investigation Ltd prepared a Preliminary Ground Contamination Risk Assessment Report¹ for the proposed development works. The report concluded that no viable sources of contamination were present on or in the vicinity of the site, and therefore no complete pollutant linkages were considered to be present. Specifically, the report noted that a historical landfill was present, the boundary of which lay some 324m to the west of the site. Because of the distance from the site and the underlying geology, the likelihood of gases generated within the landfill being able to migrate onto the site in sufficient quantities as to pose an unacceptable risk was considered to be negligible.

However, during the planning application process, concerns were raised by members of the public in regards to the proximity of the landfill and as a result of this the Environmental Health Officer requested the imposition of a contaminated land condition requiring further assessment of the level of risk posed by "migratory contaminants leeching from the Lindsey land fill sites". The condition was incorporated into the decision notice as Condition 13. A copy of the correspondence from the Environmental Health Officer is included as Appendix B.

Ashdown Site Investigation Ltd was requested to undertake a ground investigation to provide a detailed risk assessment required by Condition 13 part 2, together with advice to assist with the structural design of the proposed development.

The specific objectives of the works were to:

- a) Establish the expected geology, hydrogeology and hydrology at the site;
- b) Investigate the shallow ground and groundwater conditions prevailing at the site;
- c) Provide advice to assist others in undertaking design of spread foundations, ground floors, road pavements, and soakaways;
- d) Test for the presence of potential contaminants associated with an off site landfill; and
- e) Develop a quantitative conceptual model of the site.

The scope of the works covered by this report, and the terms and conditions under which they were undertaken, were set out within the offer letter Q11958 Rev 1, dated 21st July 2022. The works were undertaken under the clients purchase order ref: PO 210.

This report should be read in conjunction with the previous report¹ prepared for the site.

Groundwater level monitoring has been undertaken previously across a wider site area by Ashdown Site Investigation Ltd. The exploratory hole logs and groundwater monitoring results (Project Ref: P14891) for the two boreholes which were located on this site are included with the relevant appendices.

This version of the report ("Issue 2") has been produced following the completion of ground gas monitoring and groundwater sampling that was underway at the time of the issue of the draft report.

¹ Project Ref: P15346, Report Ref: R15018, Issue 2, dated 14th October 2021.

2. SITE CONTEXT

2.1 Site Description

The site comprises an irregular shaped plot of land located west of the A29 in Woodgate, West Sussex and is centred on the approximate Ordnance Survey national grid reference 493708, 103861. A site location plan and site plan are presented as Figure 1 and Figure 2, respectively.

The site comprises a series of interconnected agricultural fields, separated by hedgerows. An access road, to be retained as part of the development, runs east to west through the centre of the site. Drainage ditches form the boundaries along the north eastern and south western parts of the site.

The site is bounded by residential properties to the north. The site boundary also wraps around a residential property in the north eastern part of the site. Lidsey Road generally forms the eastern boundary of the site. Agricultural fields extend beyond the southern boundary and a nursery is present to the west of the site.

A commercial estate is located on the eastern side of Lidsey Road, to the north east of the site, which includes a builder's merchant. A cattery is also located on the eastern side of Lidsey Road toward the southern end of the site.

2.2 Geological and Hydrogeological Data

2.2.1 Expected Geology and Aquifer Designation

The stratigraphic succession that may be expected to underlie the site is presented in the following table.

Table 1. Expected Strata and Aquifer Designation

Type	Stratum	Aquifer Designation
Superficial	River Terrace Deposits	Secondary A Aquifer
Bedrock	London Clay Formation	Unproductive Stratum

The River Terrace Deposits generally comprise well graded sandy fine to coarse gravel. Locally sand or gravel strata may predominate. Lenses of clay, silt and localised peat may be present. Gravels normally include a high proportion of subangular flint and chert.

The London Clay Formation comprises a blue grey silty clay, which tends to weather to brown near to the upper surface. With depth, the clay becomes very stiff/hard, is frequently fissured and can contain some inclusions and beds of weak mudstone and siltstone.

2.2.2 Natural Ground Subsidence

Table 2. Natural Ground Subsidence from Groundsure Data

Section	Risk Assessment
Soil Volume Change Potential (Shrink-Swell)	Low: Ground conditions predominantly medium plasticity.
Running Sands	Negligible: Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.
Compressible Deposits	Negligible: Compressible strata are not thought to occur.
Collapsible Deposits	Low: Deposits with potential to collapse when loaded and saturated are possibly present in places.
Landslides	Very Low: Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.
Ground Dissolution of Soluble Rocks	Negligible: Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

It should be noted that the assessment provided within the data represents a generic assessment only. A detailed assessment of the soils is included in Section 5 of this report.

2.2.3 Radon

Table 3. Radon

Section	Risk Assessment
Radon Affected Areas	The site is reported to be within an area where between 1% and 3% of properties are above the action level requiring radon gas protection measures to be installed in new buildings.
Radon Protection Measures	No radon protection measures are reported by the British Geological Survey to be necessary in the construction of new dwellings or extensions.

2.2.4 Groundwater Abstractions

The closest groundwater abstraction licence is recorded to lie 1429m to the south west of the site. The abstraction is recorded to be historical and was for "General Farming & Domestic" use.

The closest active groundwater abstraction licence is recorded to lie 1498m to the south west of the site. The abstraction is recorded to be for "Spray Irrigation – Direct" use.

2.2.5 Surface Water Abstractions

The closest surface water abstraction licence is recorded to lie 524m to the east of the site. The abstraction is recorded to be for "Spray Irrigation – Direct" use.

2.2.6 Potable Abstractions

No potable abstraction licences are indicated within 2km of the site.

2.2.7 Groundwater Source Protection Zones

The site does not lie within an Environment Agency Source Protection Zone.

2.2.8 Surface Water Features

The nearest recorded significant surface water features are the drainage ditches located on site.

3. GROUND INVESTIGATION

3.1 Introduction

The ground investigation comprised the excavation of a series of dynamic sampler boreholes, together with accompanying in-situ geotechnical testing. Gas and groundwater monitoring standpipes were installed in selected exploratory holes and monitored on subsequent site visits. The intrusive work was carried out between 4th August and 10th August 2022.

The exploratory hole locations are shown on Figure 2. The locations of the exploratory holes (denoted WS102 and WS103) from the previous ground investigation are also shown on the site plan (in blue).

Descriptions of the strata encountered and comments on groundwater conditions are shown in the exploratory hole records given in Appendix C, together with notes to assist in their interpretation.

3.2 Exploratory Holes

3.2.1 Dynamic Sampler Boreholes

24 boreholes, designated WS201 to WS224, were drilled to depths of between 2.40m and 3.00m below ground level.

The boreholes were formed by a series of 1.0m long, open ended, hollow steel tubes of up to 100mm diameter, each containing a removable plastic liner. The tubes, progressively reducing in diameter, were driven into the ground by means of a track-mounted drop weight. Each tube was extracted from the ground using a hydraulically operated jack and the enclosed sample was recovered in its plastic liner.

The system enables sub-samples to be taken for detailed examination and laboratory testing.

3.3 Sampling

Disturbed samples of soil were taken at the depths shown in the exploratory hole records and were collected in plastic bags, plastic tubs or amber jars fitted with gas tight lids.

On collection the amber jars were stored in cool boxes with cooling blocks to maintain temperatures below 4°C until transferred to refrigerators upon return to the office and subsequently forwarded to the external accredited chemical testing laboratory.

3.4 In-situ Testing

The depths of in-situ testing, together with the test results, are either given on the exploratory hole records or are summarised separately in Appendix C.

3.4.1 DPSH Dynamic Probe (Super Heavy) Testing

Continuous dynamic probe tests were undertaken adjacent to each of the boreholes. The tests were conducted to depths of between 3.40m and 5.00m below ground level using a super heavy DPSH-B² probing geometry.

The DPSH-B configuration is similar to that of the standard penetration test (SPT); the main differences being that the tip comprises a 90° cone, the driving rods are lighter than those used for SPT testing and the blow counts are recorded over 100mm increments rather than 300mm, as is the case for the SPT.

The blow counts recorded and the calculated dynamic point resistances, which account for inertia of the anvil and driving rods, are presented on the borehole records and separately in Appendix C.

3.4.2 Undrained Shear Strength

Undrained shear strength determinations were made in-situ within the fine-grained soils using a Geonor hand shear vane.

Additionally, undrained shear strength determinations were made within samples of the fine-grained soils held in the dynamic sampler liners using a hand penetrometer.

3.4.3 California Bearing Ratio Tests

Testing to determine the in-situ California Bearing Ratio (CBR) of soils was conducted at shallow depths adjacent to each of the boreholes using a Transport Research Laboratory (TRL) cone penetrometer.

3.4.4 Soakage Testing

Falling head soakage tests were undertaken in accordance with Kent County Council guidance³. in boreholes WS203, WS207, WS211, WS216 and WS223 with the holes at a depth of between 2.40m and 3.00m.

3.5 Installations

Gas and groundwater monitoring standpipes were installed to depths of between 2.70m and 3.00m below ground level in boreholes WS201, WS205, WS206, WS209, WS214, WS215, WS221 and WS224. Descriptions of the installations are shown on the exploratory hole records in Appendix C.

The concentrations of gases and depths to groundwater have been recorded within the standpipes on six occasions between 24th August and 1st November 2022. The readings are presented in Appendix C.

² As defined by BS EN ISO 22476-2:2005.

³ The Soakaway Design Guide published by Kent County Council, 2000.

During the previous phase of ground investigation, data loggers, programmed to collect readings at 15 minute intervals, were installed on the 19th November 2020 and collected on the 19th April 2021. The results of the groundwater monitoring are also included within Appendix C.

3.6 Laboratory Testing

Laboratory testing was scheduled by Ashdown Site Investigation Ltd. Results from the laboratory tests are provided in Appendix D.

3.6.1 Geotechnical Testing

Geotechnical testing was undertaken by Ashdown Site Investigation Ltd in accordance with the methods given in BS1377⁴. Chemical testing to enable classification of the chemical environment of soils in accordance with BRE SD1⁵ was undertaken by an external UKAS accredited laboratory.

3.6.2 Chemical Testing

Chemical (contamination) testing of selected samples was undertaken by a laboratory with recognised (UKAS and MCERTS) accreditation for quality control.

⁴ BS1377:1990 Parts 1 to 8, Methods of test for soils for civil engineering purposes.

⁵ BRE Special Digest 1:2005 Concrete in Aggressive Ground.

4. GROUND CONDITIONS

4.1 Stratigraphy

4.1.1 Surface Covering

Each of the exploratory holes was excavated through a surface cover of topsoil some 100mm to 500mm in thickness. Occasional gravel of ash-like material, glass and brick was noted in the topsoil.

4.1.2 River Terrace Deposits

Underlying the topsoil, the investigation initially encountered generally firm varying stiff and very stiff silty clay soils containing variable quantities of sand and gravel. These soils were typically recorded to depths of between 1.20m and 2.30m, although within borehole WS214 clay soils were also recorded at the base of the borehole below 2.90m to the base of the borehole at 3.00m depth.

Beneath the clay soils, clayey sand deposits were encountered which continued to the full depth of the ground investigation (with the exception of WS214 as discussed above). These soils were recorded to be of loose varying medium dense relative density becoming consistently medium dense below depths of between 1.70m and 3.00m below ground level.

These soils are considered to be representative of the River Terrace Deposits soils indicated on the published geology map.

4.2 Stability

Instability was recorded locally within the coarse-grained soils encountered, particularly exacerbated by the presence of groundwater.

4.3 Groundwater Conditions

Groundwater was recorded at depths of approximately 2.00m and 3.00m during drilling, the exact depth being difficult to determine due to the instability of the coarse grained soils.

During the recent phase of monitoring that has been completed, groundwater was recorded at depths of between 1.27m and 2.83m below ground level.

The previous winter groundwater monitoring results recorded groundwater at depths of between 0.10m and 1.21m for borehole WS102 and between 0.28m and 1.10m for borehole WS103.

5. GEOTECHNICAL ASSESSMENT

The geotechnical assessment has been prepared in connection with the development proposals shown on the drawing included in Appendix A.

In summary the development proposals are understood to comprise the construction of 95 residential dwellings, with informal and formal public open space, landscaping, drainage and other associated works.

At the time of writing, no details were available concerning the specific loads likely to be applied to the foundations.

5.1 Foundations

5.1.1 Soil Shrinkage/Heave Potential

The fine-grained soils of the River Terrace Deposits have been classified as clays and with plasticity indices in the range of 16% to 30%, the soils may be expected to exhibit up to a medium volume change potential.

It is recommended that the design of precautions against shrinkage and heave for any new foundation system (spread footings, ground beams etc.) should assume a medium volume change potential for the fine-grained River Terrace Deposits soils and take into account current guidance such as that given by the Building Research Establishment (BRE)⁶ or the National House Builders Council (NHBC)⁷.

The undisturbed sand and gravel soils of the River Terrace Deposits may be considered to be non-plastic and hence non-shrinkable.

Whilst this report has been prepared to provide advice to assist designers in undertaking detailed design, the report itself does not represent a detailed design statement. It is recommended that an arboricultural survey of the site that identifies the species and maturity of the existing trees in the areas of the proposed new buildings should be provided to engineers responsible for the foundation design. The locations of any felled trees together with information on proposed planting schemes and the findings of this report should also be provided to the structural engineer responsible for the detailed design of foundation systems, to enable their assessment of minimum founding depths required for spread foundations, and requirements for placement of void formers et cetera.

5.1.2 Spread Foundations

5.1.2.1 Foundation Depths for Spread Foundations

Foundations should be constructed to bear below soils that are likely to be affected by significant soil volume changes caused by seasonal changes in moisture content to avoid damage to foundations that could otherwise arise. In addition, all made ground and any soils disturbed by the construction should be regarded as being variable in nature and state of compaction and, as such, unsuitable as a founding medium for shallow footings. New footings should be constructed

⁶ www.bre.co.uk : BRE Digests 240, 241 and 242, Low rise buildings on shrinkable clay soils, parts 1, 2 and 3; and BRE Digest 298 , The influence of trees on house foundations in clay soils and BRE Digest 412, Desiccation in clay soils.

⁷ <http://www.nhbc.co.uk/> : NHBC Standards, Chapter 4.2.

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so as to bear below made ground/disturbed natural soils and soil subject to seasonal soil volume changes, whichever is the deeper, and onto undisturbed, competent, natural deposits.

Summary guidance on suitable minimum foundation depths to protect against the effects of seasonal soil volume changes is presented in the table below but designers undertaking detailed design of foundations should follow the detailed guidance such as that provided within Chapter 4.2 of the NHBC Standards.

Table 4. Indicative Minimum Foundation Depths

Tree Type	Water Demand of Tree	Tree Distance to Tree Height Ratio (D/H)									
		0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.80	1.00	1.25
		Minimum Foundation Depth Required in Medium Volume Change Potential Soils (m)									
Broad Leaf	High	†			2.50	2.35	2.20	2.00	1.70	1.35	0.90*
	Moderate	2.00	1.85	1.70	1.60	1.45	1.30	1.15	0.90*	0.90*	0.90*
	Low	1.50	1.40	1.30	1.15	1.05	0.90*	0.90*	0.90*	0.90*	0.90*
Coniferous	High	†			2.30	1.95	1.60	1.25	0.90*	0.90*	0.90*
	Moderate	2.00	1.70	1.40	1.10	0.90*	0.90*	0.90	0.90*	0.90*	0.90*

* Minimum foundation depth required to protect against soil volume changes.

† Foundations deeper than 2.50m require specialist design to protect against soil volume changes.

Details on the water demand and mature height of common trees is given within Table 3 of Chapter 4.2 of the NHBC standards which should be referred to when assessing minimum foundation depths required for the proposed development. A summary is provided in the table below.

Table 5. Indicative Summary of Water Demand and Mature Height of Common Trees

Tree Type	High Water Demand		Moderate Water Demand		Low Water Demand	
	Tree	Height (m)	Tree	Height (m)	Tree	Height (m)
Broad Leaf	Elm	18 – 24*	Acacia	18	Birch	14
	Oak	16 – 24*	Alder	18	Elder	10
	Poplar	15 – 28*	Apple	10	Fig	8
	Willow	16 – 24*	Ash	11 – 23*	Hazel	8
	Eucalyptus	18	Laurel	10	Holly	12
	Hawthorn	10	Beech	20	Honey Locust	14
			Blackthorn	8	Hornbeam	17
			Cherry	8 – 17*	Laburnum	12
			Chestnut	20 – 24*	Magnolia	9
			Lime	22	Mulberry	9
			Maple	8 – 18*	Tulip Tree	20
			Pear	12		
			Plane	26		
			Plum	10		
			Sycamore	22		

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Tree Type	High Water Demand		Moderate Water Demand		Low Water Demand	
	Tree	Height (m)	Tree	Height (m)	Tree	Height (m)
Coniferous			Tree of Heaven	20		
			Walnut	18		
			Whitebeam	12		
	Cypress	18 – 20*	Cedar	20		
			Douglas Fir	20		
			Larch	20		
			Monkey Puzzle	18		
			Pine	20		
			Spruce	18		
			Wellingtonia	30		
			Yew	12		

* Dependent on particular species.

5.1.2.2 Bearing Capacity for Spread Foundations

For design purposes, a net allowable bearing capacity of 80kN/m² may be assumed for spread (pad or strip) foundations up to 1.00m across bearing within the River Terrace Deposits of soft to firm consistency or loose relative density. An increased bearing capacity of 150kN/m² maybe assumed for similar sized foundations where they are deepened to bear within the River Terrace Deposits of at least medium dense relative density or stiff consistency. These latter deposits were typically recorded at depths of between 1.70m and 3.00m below ground level. The quoted bearing capacities are expected to limit settlement to less than 25mm.

Attention is drawn to the presence of predominantly fine-grained soils overlying coarse-grained soils beneath the site. As there is the potential for mixed soil conditions to be present beneath footings, designers should consider the need for foundations to be reinforced due to the potential for differential cracking to develop as a result of coarse-grained and fine-grained soils settling at different rates under loading.

It is recommended that, where a bearing capacity in excess of 80kN/m² is to be utilised, the foundation formations should be inspected by suitably qualified persons to confirm the consistency and/or relative density of the soils at and below formation level.

5.2 Groundwater

Whilst the current phase of monitoring has recorded groundwater to lie at depths of between 1.27m and 2.83m below ground level, it is noted that the monitoring has been undertaken at the end of a dry summer period. Groundwater levels at the site have been recorded to be as high as circa 0.10m below ground level during the winter of 2020/2021.

Where excavations are proposed to extend below the groundwater, particularly within coarse-grained soils, groundwater control will be required to maintain adequately dry working conditions and excavation stability. Whilst it is expected that pumping from sumps would be sufficient to control groundwater in excavations extending a shallow depth beneath the groundwater table, given the variation in groundwater levels that have been recorded at the site, it is recommended

that trial excavations close to the time of construction are undertaken to establish the groundwater control measures required at the site.

5.3 Stability of Excavations

All coarse-grained natural soils exposed in excavations should be assumed to be unstable, even in the short term. Whilst fine-grained natural soils may remain stable for a short period of time if not subjected to surcharge loads (such as may be imposed by existing foundations, traffic or storage of materials), the stability of these deposits if left unsupported should be assumed to have the potential to deteriorate. Where stable excavations are required, excavations should either be suitably supported or, where space permits, side slopes could be battered back to a safe angle of repose.

All excavations requiring human entry must be shored or battered as necessary to conform to current best practice, as accepted by the Health and Safety Executive (HSE)⁸. Current legislation requires that where personnel access is required into any excavation a competent person must inspect excavation supports or battering of slopes at the start of the working shift and at other specified times. No work should take place until the excavation is safe. Excavations should also be inspected after any event that may have affected their stability, such as a significant weather event, changes in surcharge loadings imposed by temporary storage of materials or changes in site traffic plans or alteration of support systems. Inspections should be formally recorded and any faults that are found should be corrected immediately.

5.4 Aggressivity to Concrete

The aggressivity of the soils to concrete has been assessed in accordance with guidance published by the BRE⁹.

In consideration of the soils encountered beneath the site it is considered that 'natural ground conditions' may be assumed for the purpose of assessing the aggressivity of the chemical environment for concrete classification (ACEC class). Given the noted occurrence of groundwater, 'mobile groundwater' conditions should be assumed.

The soils present beneath the site may be expected to contain sulphides which if exposed to air and water, and potentially bacterial action, may oxidise and convert into sulphates. The sulphides are significantly more likely to oxidise in ground that has been significantly disturbed, for example by cutting and filling as part of earthworks or by excavation and backfilling. Ground that is not disturbed beyond the cut face (e.g. piling operations or excavation without backfill) would not generally be considered by the guidance as being disturbed ground. Where disturbed ground is likely to result from construction activities a Design Sulfate Class based on the total potential sulphate should be adopted.

The following table summarises the characteristic values indicated from the chemical analysis of the soils present beneath the site.

⁸ Relevant guidance is given on the HSE website, www.hse.gov.uk

⁹ BRE Special Digest 1:2005 Concrete in Aggressive Ground.

Table 6. Assessment of the Chemical Analysis of the Soil

	Characteristic Value	Design Sulfate Class	ACEC Classification
pH	7.8	-	-
Water Soluble Sulphate (mg/l as SO₄) *	100	DS-1	AC-1
Total Potential Sulphate (TPS % SO₄)	No Oxidisable Sulphides	N/A	N/A

Notes: * Characteristic value rounded to nearest 100.

In accordance with the guidance, a DS-1 Design Sulfate Class and an AC-1 ACEC classification should be assumed as a minimum for the design of concrete in contact with the ground.

5.5 Ground Floors

In view of the presence of soils of medium volume change potential soils underlying the site, it is recommended that ground floors should be suspended.

Current guidance¹⁰ suggests that ground bearing floor slabs may, however, be considered where made ground soils are not present or are to be removed from beneath building footprints and the depth of foundations required to protect against seasonal soil volume changes close to trees is less than 1.5m. In such circumstances further works should be undertaken to demonstrate, that close to the time of construction, no significant soil desiccation is present. If ground bearing floors are adopted it is recommended that the potential for differential movement, both between the floor slab and walls and across the floor slab itself, should be anticipated. Such floors should be fully debonded from walls.

Formations should be adequately proof rolled and any excessively soft materials excavated and replaced with a suitable, well graded granular fill. The depth of any fill should be limited to a maximum of 600mm unless placed to an engineering specification designed to limit internal settlement of the fill materials to a tolerance to be advised by the designer. The detailing of services through, or under, ground-bearing floors should incorporate flexible connections and, where appropriate, enhanced falls.

5.6 Pavement Design

Current guidance¹¹ suggests that pavement design should be based on the design subgrade surface modulus, determined as being equal to the lower of the short-term subgrade modulus and the long-term subgrade modulus. The subgrade surface modulus can be related to California bearing ratio using the formula, $E = 17.6(\text{CBR})^{0.64}$, where E is the subgrade modulus expressed in MPa.

Cone penetrometer tests undertaken to establish the California bearing ratio (CBR) of the in-situ soils at the time of the investigation. The range of values determined is presented on the test result records and graphs contained within Appendix E. A summary of the in situ test data is presented below. It is noted that in situ CBR values are, in part, dependent on the moisture content of the tested soils and are consequently subject to seasonal variation.

¹⁰ <http://www.nhbc.co.uk/> : NHBC Standards, Chapter 4.2.

¹¹ Highways England Design Manual for Roads and Bridges CD 225 Rev1; Design for new pavement foundations.

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Table 7. In Situ CBR Values (At Time of Ground Investigation Works)

	CBR (%)	Modulus of Subgrade Reaction E (MPa)
Minimum	1.9	26.1
Average	14.0	91.2
Maximum	69.8	266.3
10%ile	5.4	51.8
20%ile	7.0	61.4
50%ile (Median)	11.2	82.8

Equilibrium CBR values can be derived from knowledge of soil classification data (plasticity index for soils exhibiting cohesion (clay type) and particle size distribution for granular soils) and pavement thickness. Historical guidance¹² suggests the following design equilibrium CBR values would be applicable to the fine grained River Terrace Deposits soils for the construction of pavement. The subgrade moduli calculated from these design equilibrium CBR values can be reasonably considered to be representative of long-term subgrade modulus using the formula given above.

Table 8. Long-term CBR Values

Stratum	Design Equilibrium CBR Value (%)			†Modulus of Subgrade Reaction E (MPa)
		Thin Road* Pavement	Thick Road* Pavement	
Fine grained River Terrace Deposits	Minimum	3.0	4.0	35.6
	Average	3.7	4.8	40.9
	Maximum	4.0	5.4	42.7

* Thin pavement being 300mm sub-base, thick pavement being 1200mm sub-base. †Modulus based on average of all calculated moduli based on CBR values for thin sub-base.

Designers will need to select an appropriate design equilibrium CBR value / modulus of subgrade reaction taking account of proposed pavement thickness, expected winter groundwater conditions, the standard to which pavement is to be designed and any local authority or other regulatory/warrantor requirements together with construction conditions likely to prevail at the time of construction.

The subgrade is not likely to be susceptible to frost heave.

If new roads are to be adopted the local highway authority should be consulted with reference to the acceptability of the proposed CBR figures prior to designs being finalised and construction undertaken.

5.7 Stormwater Infiltration Systems

In-situ infiltration testing¹³ was undertaken in boreholes WS203, WS207, WS211, WS216 and WS223 with the holes at a depth of between 2.40m and 3.00m. From the test results, calculations were made to estimate the infiltration rate that could be expected for soakaways constructed to discharge into the underlying soils within the test zone.

¹² Highways England Design Manual for Roads and Bridges Interim Advice Note 73/09 Rev1; now withdrawn.

¹³ Conducted in accordance with The Soakaway Design Guide, published by Kent County Council, July 2000.

The infiltration rates derived from the tests are summarised in the following table.

Table 9. Calculated Infiltration Rates

Exploratory Hole	Test Response Zone Depth (m)		Stratum	Infiltration Rate (f) (m/sec)	Driving Head of Water (m)
	Top	Bottom			
WS203 Test 1	1.75	2.40	River Terrace Deposits	1.3×10^{-4}	1.0
WS207 Test 1	2.00	3.00	River Terrace Deposits	1.2×10^{-4}	1.0
WS207 Test 2	2.00	3.00	River Terrace Deposits	7.7×10^{-5}	1.0
WS207 Test 3	2.00	3.00	River Terrace Deposits	7.0×10^{-5}	1.0
WS211 Test 1	2.00	3.00	River Terrace Deposits	7.9×10^{-5}	1.0
WS211 Test 2	2.00	3.00	River Terrace Deposits	9.6×10^{-5}	1.1
WS216 Test 1	2.00	3.00	River Terrace Deposits	4.5×10^{-5}	1.0
WS216 Test 2	2.00	3.00	River Terrace Deposits	2.4×10^{-5}	1.0
WS216 Test 3	2.00	3.00	River Terrace Deposits	1.4×10^{-5}	1.0
WS223 Test 1	2.00	3.00	River Terrace Deposits	7.2×10^{-5}	1.1
WS223 Test 2	2.00	3.00	River Terrace Deposits	4.1×10^{-5}	1.1
WS223 Test 3	2.00	3.00	River Terrace Deposits	4.2×10^{-5}	1.0

The value 'f' is equivalent to the soil infiltration coefficient 'q' quoted in the Construction Industry Research and Information Association (CIRIA) Report 156.

The results from the infiltration tests indicate that the coarse grained River Terrace Deposits soils possess moderate to good infiltration characteristics. The results from the infiltration tests should be provided to engineers responsible for the design of the drainage system. Attention is drawn to the high groundwater table present at the site which will limit the potential storage of any soakaways.

To comply with building regulations¹⁴, point discharging infiltration systems (conventional ring or trench soakaways) are required to be constructed a minimum of 5.0m away from proposed or existing buildings.

¹⁴ The Building Regulations 2010; Part H; Drainage and Waste Disposal

6. QUANTITATIVE CONTAMINATION ASSESSMENT

6.1 Introduction

As noted in the introduction, no viable pollutant linkages were identified by the preliminary ground contamination risk assessment report. However, the Local Authority has raised concerns regarding the potential for the site to be impacted by migration of contaminants from the distant off-site landfill.

To provide an assessment of these risks, samples of the topsoil, taken from depths where end users may reasonably be expected to come into direct contact with the soils and where soil derived dust may be generated, were tested for a broad range of contaminants comprising heavy metals, polycyclic aromatic hydrocarbon (PAH) compounds, petroleum hydrocarbons and volatile organic compounds (VOC).

Standpipes were installed in locations on both sides of the site to allow the collection of samples of groundwater, the only pathway by which leachable concentrations of contaminants could feasibly reach the site; and to allow ground gas monitoring to be undertaken.

Samples of groundwater were able to be obtained from the standpipes in WS201, WS205, WS206, WS209, WS214 and WS224 on two occasions.

6.2 Analysis of Contamination Test Results

For the assessment of risk to future need users of the site, comparison of the results of the laboratory testing has been made against the 'Suitable For Use Levels' (S4UL)¹⁵ or, in lieu of an S4UL being developed for lead, the Category 4 Screening Level (C4SL)¹⁶. These are collectively referred to as soil screening values (SSV).

In view of the development proposal, the SSV utilised in this assessment are those calculated for the generic "Residential" land use¹⁷. The critical receptor for this land use is considered to be a young female child resident on site from birth to age 6. Exposure routes that are considered include the potential for direct ingestion of the soil, the outdoor and indoor ingestion of dust, the potential inhalation of dust and vapours, ingestion of site grown vegetables and ingestion of soil attached to vegetables.

To provide context to the results of the groundwater testing, these have been compared with Drinking Water Standards (DWS)¹⁸ or with other available standards where DWS do not exist. However, it is noted that the DWS are for measurement at a consumers taps, following water treatment, and non-compliance with a DWS in shallow groundwater does not automatically mean that an unacceptable risk to end users is present.

¹⁵ Nathanail, C.P, et al., The LQM/CIEH S4ULs for Human Health Risk Assessment, 2015, Land Quality Press, Nottingham. Copyright Land Quality Management Limited reproduced with permission; Publication Number S4UL3071.

¹⁶ SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination. Final Project Report, published by DEFRA, 2014.

¹⁷ As defined within Science Report SC050021/SR3, January 2009, with the amendments discussed in the LQM/CIEH report.

¹⁸ The Water Supply (Water Quality) Regulations 2016

6.3 Soil Testing

6.3.1 Heavy Metals & Polycyclic Aromatic Hydrocarbon (PAH) Compounds

The following table summarises the SSV along with the maximum and minimum concentrations of the heavy metals and PAH Compounds tested for.

Table 10. Summary of Test Results for Heavy Metals & PAH Compounds

Contaminant	SSV (mg/kg)	No. of Samples	Minimum Concentration (mg/kg)	Maximum concentration (mg/kg)	Limit of Detection (mg/kg)	No of exceedances
Arsenic	37	15	6.4	13.4	1	0
Cadmium	11	15	<LOD	0.6	0.5	0
Chromium	910	15	20.1	38.2	5	0
Copper	2400	15	12.5	60	5	0
Lead	200	15	13.6	191	5	0
Mercury	40	15	<LOD	<LOD	0.5	0
Nickel	180	15	11.1	20.9	5	0
Selenium	250	15	<LOD	<LOD	1	0
Zinc	3700	15	42.1	204	5	0
Hexavalent Chromium	6	15	<LOD	<LOD	0.8	0
Water Soluble Boron	290	15	<LOD	1.9	0.5	0
Naphthalene	2.3	15	<LOD	<LOD	0.1	0
Acenaphthylene	170	15	<LOD	0.2	0.1	0
Acenaphthene	210	15	<LOD	<LOD	0.1	0
Fluorene	170	15	<LOD	0.1	0.1	0
Phenanthrene	95	15	<LOD	1.5	0.1	0
Anthracene	2400	15	<LOD	0.3	0.1	0
Fluoranthene	280	15	<LOD	3.1	0.1	0
Pyrene	620	15	<LOD	2.4	0.1	0
Benz(a)anthracene	7.2	15	<LOD	1.1	0.1	0
Chrysene	15	15	<LOD	1.1	0.1	0
Benzo(b)fluoranthene	2.6	15	<LOD	1.8	0.1	0
Benzo(k)fluoranthene	77	15	<LOD	1.8	0.1	0
Benzo(a)pyrene	2.2	15	<LOD	1.8	0.1	0
Indeno(123-cd)pyrene	27	15	<LOD	1.3	0.1	0
Dibenz(ah)anthracene	0.24	15	<LOD	0.2	0.1	0
Benzo(ghi)perylene	320	15	<LOD	1.4	0.1	0

Very low concentrations of heavy metals and PAH compounds were recorded in all of the samples of topsoil tested, all of which were significantly lower than their respective SSV.

The concentrations of heavy metals & PAH compounds present within the shallow soils are not considered to pose an unacceptable risk to end users of the site.

6.3.2 Volatile Organic Compounds (VOC)

None of the samples of topsoil tested recorded concentrations of any VOC above the limit of detection for the test. In the absence of any detectable concentrations of VOC, no unacceptable risk to end users of the site is considered to be present.

6.3.3 Petroleum Hydrocarbons and BTEX compounds

The following tables list the screening values for petroleum hydrocarbon equivalent carbon weight fractions and BTEX compounds calculated for 1% organic content.

Table 11. SSV for petroleum hydrocarbon equivalent carbon weight fractions

Petroleum Hydrocarbon Fraction	SSV (mg/kg)	Petroleum Hydrocarbon Fraction	SSV (mg/kg)
Aliphatic EC 5-6	42	Aromatic EC 5-7	70
Aliphatic EC >6-8	100	Aromatic EC >7-8	130
Aliphatic EC >8-10	27	Aromatic EC >8-10	34
Aliphatic EC >10-12	130	Aromatic EC >10-12	74
Aliphatic EC >12-16	1100	Aromatic EC >12-16	140
Aliphatic EC >16-35	65000	Aromatic EC >16-21	260
Aliphatic EC >35-44	65000	Aromatic EC >21-35	1100
		Aromatic EC >35-44	1100

Table 12. Soil Screening Values for BTEX Compounds

Compound	SSV (mg/kg)	Compound	SSV (mg/kg)
Benzene	0.087	Ethylbenzene	47
Toluene	130	<i>p</i> -Xylene ¹	56

¹ Xylene has three structural isomers, the SSV presented is for *p*-Xylene, which has the most conservative SSV.

As with the concentrations of VOC, no detectable concentrations of any BTEX compounds were recorded and no unacceptable risk to end users of the site is considered to be present.

Very low concentrations of petroleum hydrocarbons were recorded in the samples of topsoil tested from across the site. The concentrations of individual weight fractions recorded were all significantly below the SSV in each case.

The concentrations of petroleum hydrocarbons present within the shallow soils are not considered to pose an unacceptable risk to end users of the site.

6.3.4 Risk to Water Supply Pipes

A specific assessment of the risk to water supply pipes was beyond the scope of this assessment, as the testing undertaken does not extend to the depths at which water supply pipes would normally be laid.

However, comparison of the laboratory test results for PAH compounds, petroleum hydrocarbons and VOCs has been undertaken with the Portsmouth Water Screening Criteria for the Use of PE Pipes¹⁹.

The threshold values from the guidance are summarised below, along with whether the concentrations meet the criteria:

¹⁹ <https://www.portsmouthwater.co.uk/wp-content/uploads/2016/02/Portsmouth-Water-Screening-Criteria.pdf>
accessed 16th September 2022

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Table 13. Portsmouth Water Screening Criteria for the Use of PE Pipes

Parameter	PE Threshold (mg/kg)	Pass / Fail	Parameter	PE Threshold (mg/kg)	Pass / Fail
Total VOC	0.5	Pass	Petroleum Hydrocarbons >EC5 to 10	2.0	Pass
Total BTEX / MTBE	0.1	Pass	Petroleum Hydrocarbons >EC10 to 16	10.0	Pass
Total PAH Compounds	10.0	Fail	Petroleum Hydrocarbons >EC16 to 21	10.0	Fail
Individual PAH Compounds	0.5	Fail	Petroleum Hydrocarbons >EC22 to 40	500	Pass

Portsmouth water should be consulted as to whether they require a more detailed assessment to be undertaken (e.g. along the routes and at the depths at which supply pipework is to be laid) or whether protective water supply pipe (e.g. barrier pipe) is required to be laid as part of the development.

6.4 Groundwater Testing

6.4.1 Heavy Metals

The following tables summarise the DWS along with the maximum and minimum concentrations of the heavy metals tested for.

Table 14. Summary of Test Results for Heavy Metals

Contaminant	DWS (µg/l)	No. of Samples	Minimum Concentration (µg/l)	Maximum concentration (µg/l)	Limit of Detection (µg/l)	No of exceedances
Arsenic	10	12	<LOD	<LOD	5	0
Boron	1000	12	31	217	5	0
Cadmium	5	12	<LOD	<LOD	1	0
Chromium	50	12	<LOD	<LOD	5	0
Copper	2000	12	<LOD	<LOD	5	0
Mercury	1	12	<LOD	<LOD	0.1	0
Nickel	20	12	<LOD	<LOD	5	0
Lead	10	12	<LOD	<LOD	1	0
Selenium	10	12	<LOD	<LOD	5	0
Zinc ¹	3000	12	<LOD	7	5	0
Hexavalent Chromium ²	50	12	<LOD	<LOD	2	0

² No Drinking Water Standard is published for zinc, concentration is from "Guidelines for Drinking-water Quality", 4th Edition, World Health Organisation, 2011

¹ No drinking water standard. The DWS for chromium includes hexavalent chromium

None of the samples of groundwater recorded concentrations of heavy metals in excess of the DWS or other relevant standards. The concentrations of heavy metals do not show any evidence that contaminant migration from the landfill has occurred, and there is not considered to be an unacceptable risk to end users from the concentrations present within the shallow groundwater.

6.4.2 PAH Compounds

The following tables summarise the maximum and minimum concentrations of the PAH compounds tested for.

Table 15. Summary of Test Results for PAH Compounds

Contaminant	No. of Samples	Minimum Concentration (µg/l)	Maximum concentration (µg/l)	Limit of Detection (µg/l)
Naphthalene	12	0.01	1.77	0.01
Acenaphthylene	12	<LOD	0.89	0.01
Acenaphthene	12	<LOD	4.02	0.01
Fluorene	12	<LOD	7.41	0.01
Phenanthrene	12	0.02	17	0.01
Anthracene	12	<LOD	4.29	0.01
Fluoranthene	12	0.02	9.72	0.01
Pyrene	12	0.02	9.26	0.01
Benz(a)anthracene	12	<LOD	2.51	0.01
Chrysene	12	0.02	2.31	0.01
Benzo(b)fluoranthene	12	<LOD	1.25	0.01
Benzo(k)fluoranthene	12	0.01	1.25	0.01
Benzo(a)pyrene	12	<LOD	1.16	0.01
Indeno(123-cd)pyrene	12	<LOD	0.35	0.01
Dibenz(ah)anthracene	12	<LOD	0.13	0.01
Benzo(ghi)perylene	12	<LOD	0.43	0.01

There are two DWS for PAH compounds, a standard for benzo(a)pyrene and a standard for the sum of four PAH compounds: benzo(b)fluoranthene; benzo(k)fluoranthene; benzo(ghi)perylene; and indeno(1,2,3-cd)pyrene.

The following table summarises the results of each groundwater sample against the two DWS.

Table 16. Summary of DWS and Test Results for PAH Compounds – Visit 1

Contaminant	DWS (µg/l)	Concentration Recorded in Sample (µg/l)					
		WS201	WS205	WS206	WS209	WS214	WS224
Benzo(a)pyrene	0.010	0.02	<0.01	0.05	0.1	0.04	0.02
Sum of 4 PAH Compounds	0.10	0.07	<LOD	0.16	0.27	0.14	0.05

Table 17. Summary of DWS and Test Results for PAH Compounds– Visit 2

Contaminant	DWS (µg/l)	Concentration Recorded in Sample (µg/l)					
		WS201	WS205	WS206	WS209	WS214	WS224
Benzo(a)pyrene	0.010	1.16	0.69	0.19	0.07	0.08	0.02
Sum of 4 PAH Compounds	0.10	3.28	2.04	0.65	0.25	0.29	0.08

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A number of samples exceed the DWS for PAH compounds. However, the concentrations recorded were broadly similar regardless of the location of the wells in comparison to the off-site landfill to the west.

The concentrations of PAH compounds recorded do not provide any evidence that contaminant migration from the off-site landfill has occurred, the shallow groundwater has demonstrably not caused any significant contamination of the shallow soils and there is not considered to be an unacceptable risk to end users from the concentrations present within the shallow groundwater.

6.4.3 Volatile Organic Compounds (VOC)

None of the samples of groundwater tested recorded concentrations of any VOC above the limit of detection for the test. There is no evidence that any VOC migration from the off-site landfill has occurred and there is not considered to be an unacceptable risk to end users from VOC contamination within the shallow groundwater beneath the site.

6.4.4 Petroleum Hydrocarbons and BTEX compounds

No DWS are provided for petroleum hydrocarbons, and the only standards are produced by the WHO in "Petroleum Products in Drinking-water"²⁰. The document notes that:

"A number of the more soluble aromatic components, particularly the alkyl benzenes, have extremely low taste and odour thresholds in water and can render drinking-water unacceptable to consumers at relatively low levels of contamination...Other components of petroleum products will also be detectable by odour and/or taste in drinking-water at concentrations of a few micrograms per litre."

The following table summarises the WHO guide values for petroleum hydrocarbons in fractions in drinking water.

Table 18. WHO Guidance Values for Petroleum Hydrocarbons Fractions in Drinking Water

Petroleum Hydrocarbon Fraction	Guidance Value (µg/l)	Petroleum Hydrocarbon Fraction	Guidance Value (µg/l)
Aliphatic EC 5-6	15,000	Aromatic EC 5-6 (Benzene)	10
Aliphatic EC >6-8	15,000	Aromatic EC >6-8 (Toluene)	700
Aliphatic EC >8-10	300	Aromatic EC >8-10	300 (ethylbenzene) 500 (xylenes)
Aliphatic EC >10-12	300	Aromatic EC >10-12	90
Aliphatic EC >12-16	300	Aromatic EC >12-16	90
Aliphatic EC >16-35	-	Aromatic EC >16-21	90
Aliphatic EC >35-44	-	Aromatic EC >21-35	90

The concentrations of petroleum hydrocarbons recorded in each sample were significantly lower than the respective WHO guidance values. Critically, the minimal concentrations that were

²⁰ WHO/SDEE/WSH/05.08/123, 2008

recorded showed no significant variation regardless of the borehole location on the site. No detectable concentrations of BTEX compounds were recorded in any of the samples.

The concentrations of petroleum hydrocarbons recorded do not provide any evidence that contaminant migration from the off-site landfill has occurred, the shallow groundwater has demonstrably not caused any significant contamination of the shallow soils and there is not considered to be an unacceptable risk to end users from the concentrations present within the shallow groundwater.

6.5 Ground Gas Risk Assessment

6.5.1 Summary of Monitoring Results

The concentrations of bulk soil gases were recorded within the eight standpipes on six occasions, at approximately fortnightly intervals comprising a total monitoring period of around 3 months. The monitoring carried out is considered to be in accordance with the idealised period and frequency within Table 5.5a and Table 5.5b of the CIRIA guidance²¹.

Atmospheric pressures varied between 1002 and 1028 during the monitoring period. Monitoring was carried out during periods of both rising and falling atmospheric pressure.

No detectable gas flow rates were recorded in any of the standpipes during any of the monitoring visits.

No detectable methane concentrations were recorded in any of the standpipes during any of the monitoring visits.

The maximum concentration of carbon dioxide recorded was 6.2% by volume. This was only recorded in one standpipe (WS201) on one occasion. In the remaining standpipes and during all other visits for WS201, the maximum concentrations of carbon dioxide were less than 5%.

6.5.2 Method of Assessment

The results of the monitoring have been assessed in general accordance with guidance presented in CIRIA C665.

The guidance provides a methodology for assessing the risk from ground gases by way of the calculation of site-specific gas screening values (GSV) for each key asphyxiating or explosive gas (carbon dioxide and methane). These are calculated by multiplying the concentration (percentage/volume) of a gas by a gas flow rate (l/hr).

Where no detectable gas concentrations or flow rates are recorded, the GSV are calculated assuming values equal to the limit of detection of the instrument are present.

6.5.3 Situation Types

CIRIA C665 identifies two types of development "Situation A" and "Situation B". Situation B is low rise housing, with a ventilated underfloor void of a minimum of 150mm. Situation A is for all other housing types that are not Situation B.

²¹ CIRIA document C665, *Assessing risks posed by hazardous ground gases to buildings*, 2007.

6.5.3.1 Situation B - Low Rise Housing

For standard low-rise housing, the NHBC have developed a characterisation system which assigns calculated GSV and typical maximum gas concentrations to four different "traffic light" scenarios.

Elements of Table 8.7 of CIRIA C665, which set out the typical maximum gas concentrations and GSV for the "Traffic Light Classification", are reproduced below.

Table 19. Reproduction of elements of Table 8.7 of C665

Traffic Light Classification	Methane		Carbon Dioxide	
	Typical Maximum Concentration (%)	Gas Screening Value (l/hr)	Typical Maximum Concentration (%)	Gas Screening Value (l/hr)
Green				
	1	0.16	5	0.78
Amber 1				
	5	0.63	10	1.56
Amber 2				
	20	1.56	30	3.10
Red				

6.5.3.2 Situation A – Developments Other than Situation B

For housing types other than Situation B, assessment is undertaken by calculating GSV for both methane and carbon dioxide. The appropriate characteristic situation for the site can then be determined by comparing the highest GSV (for either gas) with the threshold value detailed within Table 8.5 of CIRIA C665, which is partially reproduced below.

Table 20. Reproduction of elements of Table 8.5 of C665

Characteristic Situation (CIRIA R149)	Risk Classification	GSV (CH ₄ or CO ₂) Threshold (l/hr)	Additional Factors	Typical Source of Generation
1	Very low risk	<0.07	Typical methane of 1% and/or carbon dioxide of 5%. Otherwise consider increase to characteristic situation 2.	Natural soils with low organic content. "Typical" made ground
2	Low risk	<0.7	Borehole air flow not to exceed 70l/hr. Otherwise consider increase to characteristic situation 3.	Natural soils with high peat/organic content. "Typical" made ground
3	Moderate risk	<3.5		Old landfill, inert waste, mineworking flooded.

6.5.4 Calculated GSV

The following table summarises the calculated GSV:

Table 21. Calculated GSV for Carbon Dioxide and Methane

Gas	GSV
Carbon Dioxide	$0.062 \times 0.1 = 0.0062$
Methane	$0.001 \times 0.1 = 0.0001$

For the calculated GSV, the development would either be characterised as “Green” in relation to developments in Situation B or “Characteristic Situation 1” for those developments in Situation A.

It is noted that for both characterisations, the guidance suggests the maximum concentration of carbon dioxide should be 5%.

The CIRIA C665 guidance provides examples to assist risk assessors in this situation in Box 8.1 and Box 8.3. Provided that risk assessors consider that the data collected is robust and that maximum gas concentrations and flow rates are unlikely to be exceeded, then the comparison of the GSV is sufficient to make an assessment.

Long term monitoring has been undertaken during a variety of atmospheric conditions for the duration and frequency recommended by the guidance. No flow rates have ever been recorded from any of the standpipes during any monitoring visit, and it is therefore reasonable to assume that gas flows are unlikely to ever be recorded.

In the absence of any flow rates and with the 5% concentration of carbon dioxide only exceeded in one borehole on one occasion, the data obtained is considered to be sufficiently robust and the conclusions drawn are considered to be valid. No further gas monitoring is considered to be necessary.

6.5.5 Assessment of Gas Protection Measures Required

6.5.5.1 Situation B – Low Rise Housing

For Situation B Developments, Box 8.4 of C665 specifies the levels of gas protection required for low rise housing based upon the allocated NHBC Traffic Light. This is partially reproduced below.

Table 22. Reproduction of elements of Box 8.4 of C665

Traffic light classification	Protection Measures Required
Green	Negligible gas regime identified and gas protection measures are not considered necessary.

6.5.5.2 Situation A – Developments Other Than Situation B

For Situation A Developments, Both CIRIA C665 and BS8485²² set out advice on the design of gas protection measures.

Table 8.6 of CIRIA C665 provides the typical scope of gas protective measures, and is partially reproduced below.

Table 23. Reproduction of elements of Table 8.6 of C665

Characteristic Situation	Residential Buildings (not those which belong to Situation B)		Office/commercial/industrial development	
(From Table 8.5)	Number of levels of protection	Typical scope of protective measures	Number of levels of protection	Typical scope of protective measures
1	None	No special precautions	None	No special precautions

Under BS8485, it is also necessary to consider the building type in which buildings in the development fall into. Table 3 of BS8485 defines the building types with a “Type A building” being those buildings in private ownership, which likely applies to this development site (and is the most conservative). Table 4 of BS8485 identifies the score required for different characteristic situations for different “building types”.

Table 24. Reproduction of elements of Table 4 of BS8485

Characteristic Situation	Minimum Gas Protection Score (points)			
	High Risk		Medium Risk	Low Risk
	Type A	Type B	Type C	Type D
1	0	0	0	0

6.5.6 Conclusions

The GSV calculated for the site indicate that the development should be considered as “Green” or “Characteristic Situation 1”, depending on the nature of the proposed development.

Neither CIRIA C665 nor BS8485 recommend any specific gas protection measures for these classifications.

²² BS 8485:2015+A1:2019 Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings

6.6 Quantitative Contamination Risk Assessment

6.6.1 Introduction

The risk assessment for the site considers the sources of contamination identified, the receptors that may be present in view of the development proposals and the contaminant pathways by which these may be linked.

A complete pollutant linkage is only deemed to exist where all three are present and a site is considered suitable for use where no complete pollutant linkages are identified.

Where a complete pollutant linkage is considered to be present, an assessment of the level of risk associated with the pollutant linkage has been carried out in line with published guidance²³.

The level of risk is determined using the risk matrix presented in the following table. Classifications of probability, consequence and risk are presented in Appendix F.

Table 25. Risk Assessment Matrix

		Probability			
		Very Low	Low	Moderate	High
Consequence	Very Minor	Negligible	Very Low	Low	Low/Moderate
	Minor	Very Low	Low	Low/Moderate	Moderate
	Moderate	Low	Low/Moderate	Moderate	High
	Severe	Low/Moderate	Moderate	High	Very High

6.6.2 Basis of Assessment

The development is to comprise new residential buildings together with areas of private garden where end users can expect to come into contact with the underlying soils, where soil derived dusts may be generated and where the growing of fruit and vegetables may feasibly occur.

The proposed development layout is presented in Appendix A. Should the proposed development plans be altered, a revised risk assessment may be required.

6.6.3 Contamination Sources Identified

The following source of contamination has been identified by the quantitative contamination risk assessment:

- Concentrations of PAH compounds and petroleum hydrocarbons within the shallow soils in excess of the threshold values for the use of PE water supply pipework.

²³ Contaminated Land Risk Assessment: A guide to good practice, CIRIA C552, 2001.

6.6.4 Quantitative Conceptual Model

The quantitative conceptual model for the proposed development is presented in Appendix G.

6.7 Risks to Other Potential Receptors

All construction workers must undertake their own risk assessment, based upon the works to be carried out and the proposed method by which this will be achieved, in accordance with current health and safety legislation. Their assessment should take into account all available information about the site, including that present within this report.

Appropriate working procedures and PPE should be adopted to ensure the health and safety of the site operatives. Instruction should be given in the recognition of potentially hazardous materials. All site personnel should be appropriately briefed on the discovery strategy, presented below, and what actions they must take in the event that further evidence of contamination is identified or suspected.

6.8 Discovery Strategy

In addition to the above, if, during the course of the site clearance and development works, any materials not previously identified by the investigation that are suspected of being 'contaminants' are encountered, then the following procedure should apply:

- All works in that area should cease and the site manager should be informed.
- Advice should be sought from suitably qualified and experienced personnel as to whether any further site inspection, sampling, testing and/or assessment is deemed necessary.
- If required, the conclusions of any assessment and any proposed remedial works (if required) should be agreed by the local authority.
- If necessary, full details of any remedial works should be included in a verification report for the site.

Suspected 'contamination' may take the following form, though it is noted that this list is not exhaustive and site operatives should ask if they are at all unsure of any findings:

- Soil or water looks oily and/or has an oily odour
- Soil or water has a solvent type of odour
- Significant quantities of man-made materials within fill such as paint cans, car parts, glass fragments
- Suspected asbestos containing materials (insulating boards, cement, loose fibres etc.)
- Significant volumes of clinker like or ashy material
- Sand bags, and/or subsurface concrete structures
- Animal carcasses or evidence of animal burial pits

6.9 Regulatory Approval

It is recommended that this report is submitted to the relevant regulator and/or warrantor with respect to contaminated land. It may be prudent to obtain feedback from Portsmouth Water as to what protective measures they consider to be with respect to water supply pipes and provide those to the relevant regulator and/or warrantor as they may require confirmation of the protection measures required by Portsmouth Water, as well as confirmation that these have been implemented as part of the construction phase.

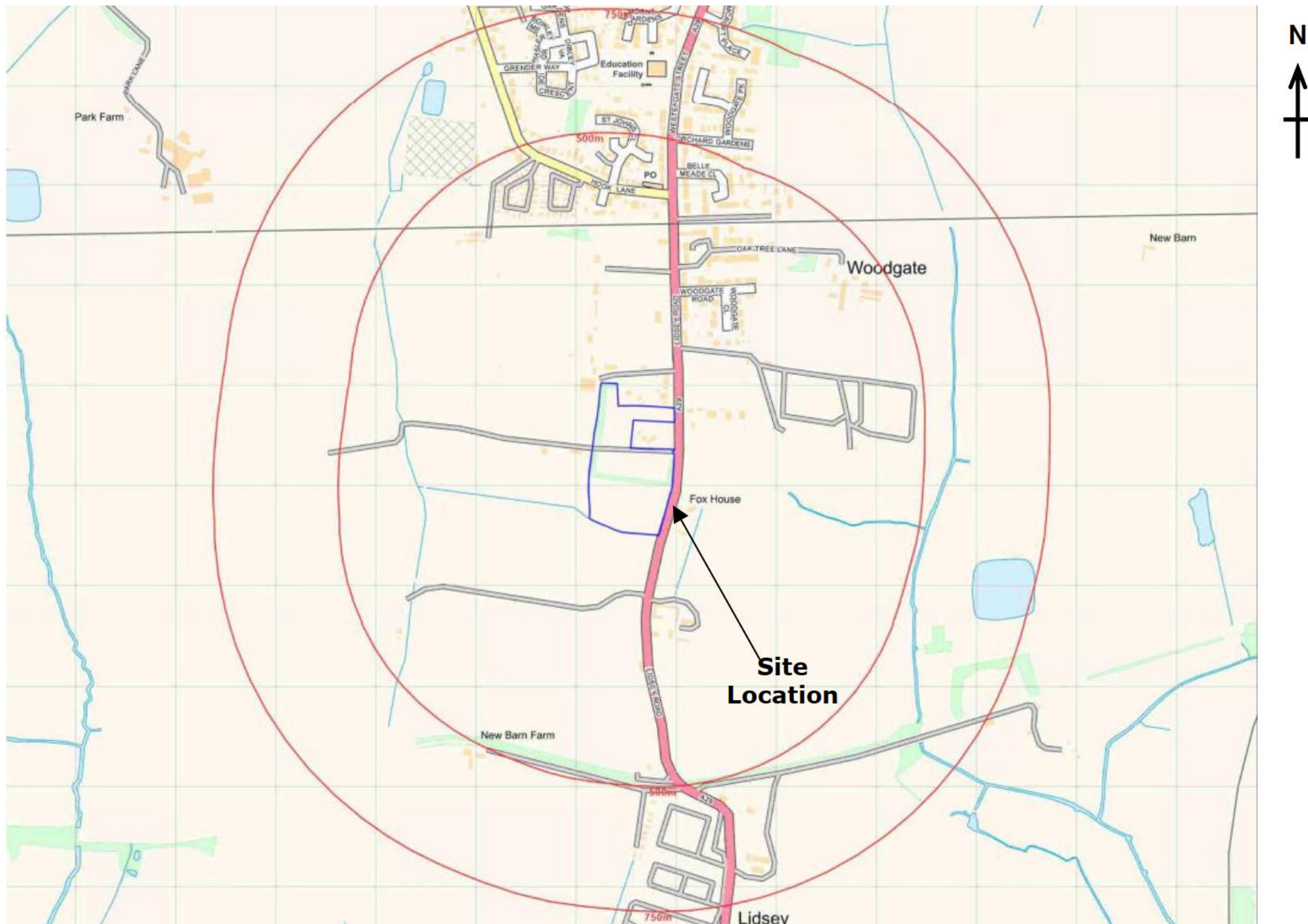
The advice given in this report and the recommendations made should be considered to be provisional until such time as the relevant regulator and/or warrantor have approved this risk assessment.

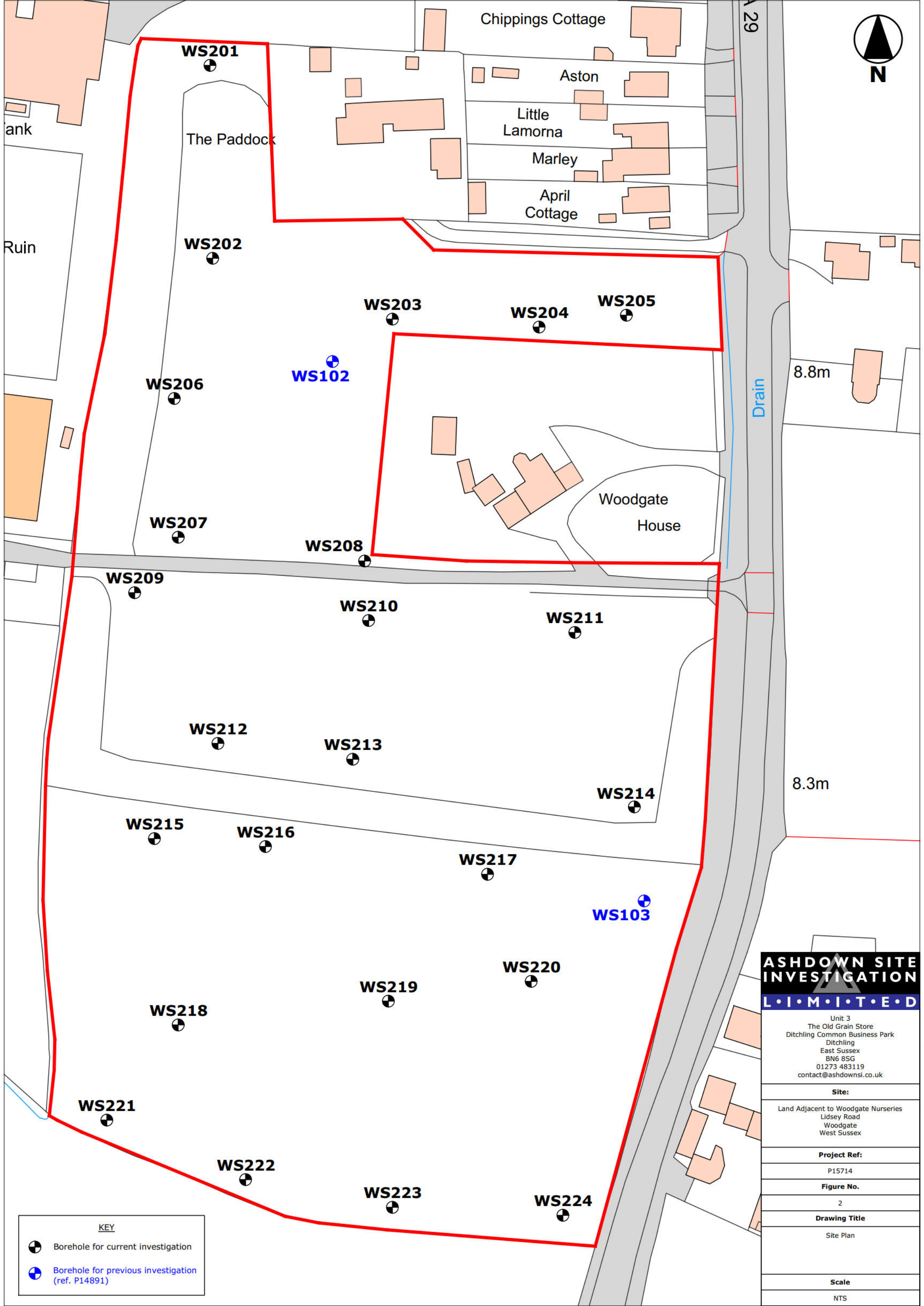
Ashdown Site Investigation Ltd.

FIGURES

Figure 1 Site Location Plan

Figure 2 Site Plan





ASHDOWN SITE INVESTIGATION

L · I · M · I · T · E · D

Unit 3
The Old Grain Store
Ditchling Common Business Park
Ditchling
East Sussex
BN6 8SG
01273 483119
contact@ashdownsi.co.uk

Site:

Land Adjacent to Woodgate Nurseries
Lidsey Road
Woodgate
West Sussex

Project Ref:

P15714

Figure No.

2

Drawing Title

Site Plan

Scale

NTS

KEY



Borehole for current investigation



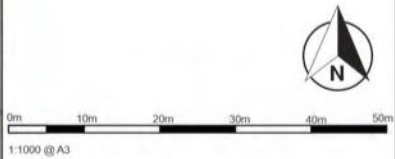
Borehole for previous investigation
(ref. P14891)

APPENDIX A

Proposed Development Layout



- Existing Trees
- Proposed trees
- Hedges
- Garden
- Amenity Open space
- Natural and Semi-Natural Open Space
- SUDS Feature
- Play area
- Car parking
- Permeable surfaces
- Tarmac



On behalf of: Hanbury Properties	
Produced by: DAVIESLANDSCAPE ARCHITECTS Suite F1, Stroud House, Russell Street, Stroud, Gloucestershire, G5 3AN t: 01453 760380 e: info@d-la.co.uk w: www.d-la.co.uk	
PROJECT: Land Adjacent to Woodgate Nurseries	
DRAWING TITLE: Illustrative Masterplan	
DATE: 21.09.21	SCALE: 1:1000
REPORT REFERENCE: DLA.2052.L.26.S09	
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APPENDIX B

Environmental Health Officer Comments

From: Craig Milligan <Craig.Milligan@arun.gov.uk>

Sent: 18 July 2022 13:09

To: Simon Davis <Simon.Davis@arun.gov.uk>

Subject: RE: Land adjacent to Woodgate Nurseries Lidsey Road Aldingbourne PO20 3SU - AL/129/21/OUT

Planning Application Reference: AL/129/21/OUT

Proposal: Outline planning application with all matters reserved (except access) for residential development with up to 95no. dwellings (Use Class C3), informal and formal public open space, landscaping, drainage and other associated works. This application is a Departure from the Development Plan.

Address: Land adjacent to Woodgate Nurseries Lidsey Road Aldingbourne PO20 3SU

Dear Simon,
Please see further comments relating to contamination

Contaminated land

Having reviewed the document entitled 'Preliminary Ground Contamination Risk Assessment Report | Project Reference P15364 | Report Reference R15018' (dated 14th October 2021) [produced by Ashdown Site Investigation Limited], I note that 'Lidsey Land fill' sites have been identified 324m and 364m to the west of the proposed development site. I therefore request the following:

1. A Site Investigation Scheme, to provide information for a detailed assessment of the risk to all receptors that may be affected by migratory contaminants leeching from the Lindsey land fill sites.
2. Based on the Site Investigation Scheme and the detailed risk assessment, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken.
3. A Verification Report providing details of the data that will be collected in order to demonstrate that the works set out in the remediation strategy are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.

Note: Any changes to these components, (1) to (3) require the express written consent of the Local Planning Authority

The scheme shall be implemented as approved above and, prior to commencement of any construction work (or such other date or stage in development as may be agreed in writing with the Local Planning Authority), a Verification Report demonstrating completion of the works set out in the approved remediation

strategy and the effectiveness of that remediation shall be submitted to and approved in writing by the Local Planning Authority. The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met. The report shall also include a long-term monitoring and maintenance plan for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action, as identified in the verification report, and for the reporting of this in writing to the Local Planning Authority.

Reason: To protect the amenity of local residents in accordance with Policy QE DM4 of the Adopted Arun Local Plan 2011 – 2031

Craig Milligan

Environmental Health Officer, Technical Service

T: 01903 737670

E: craig.milligan@arun.gov.uk

Arun District Council, Civic Centre, Maltravers Rd, Littlehampton, West Sussex, BN17 5LF

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From: Simon Davis <Simon.Davis@arun.gov.uk>

Sent: 18 July 2022 12:45

To: Craig Milligan <Craig.Milligan@arun.gov.uk>

Subject: RE: Land adjacent to Woodgate Nurseries Lidsey Road Aldingbourne PO20 3SU - AL/129/21/OUT

Hi Craig,

I have been talking to the applicant and they will accept this condition but wanted it known that they did submit a "Preliminary Ground Contamination Risk Assessment Report" with the application.

On this basis, would it be appropriate to amend the wording of the condition to either remove (1) or amend all of to relate solely to potential pollutants from the nearby land fill site?

Simon.

Simon J Davis MRTPI

Principal Planning Officer, Directorate of Growth

T: 01903 737874

E: simon.davis@arun.gov.uk

Arun District Council, Civic Centre, Maltravers Rd

Littlehampton, West Sussex, BN17 5LF

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From: Craig Milligan <Craig.Milligan@arun.gov.uk>

Sent: 12 July 2022 17:20

To: Simon Davis <Simon.Davis@arun.gov.uk>; Planning.Responses <Planning.Responses@arun.gov.uk>

Subject: Land adjacent to Woodgate Nurseries Lidsey Road Aldingbourne PO20 3SU - AL/129/21/OUT

Planning Application Reference: AL/129/21/OUT

Proposal: Outline planning application with all matters reserved (except access) for residential development with up to 95no. dwellings (Use Class C3), informal and formal public open space, landscaping, drainage and other associated works. This application is a Departure from the Development Plan.

Address: Land adjacent to Woodgate Nurseries Lidsey Road Aldingbourne PO20 3SU

Dear Simon

Please see my further comments below.

Contaminated Land

Prior to commencement of the development hereby approved (or such other date or stage in development as may be agreed in writing with the Local Planning Authority), the following components of a scheme to deal with the risks associated with contamination of the site shall each be submitted to and approved in writing by the Local Planning Authority:

1. A Preliminary Risk Assessment which has identified: all previous (historical) uses; potential contaminants associated with those uses; a conceptual model of the site indicating sources, pathways and receptors; potentially unacceptable risks arising from contamination at the site.
2. A Site Investigation Scheme, based on (1) above to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off site.
3. Based on the Site Investigation Scheme and the detailed risk assessment (2), an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken.
4. A Verification Report providing details of the data that will be collected in order to demonstrate that the works set out in (3) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.

Note: Any changes to these components, (1) to (4) require the express written consent of the Local Planning Authority

The scheme shall be implemented as approved above and, prior to commencement of any construction work (or such other date or stage in development as may be agreed in writing with the Local Planning Authority), a Verification Report demonstrating completion of the works set out in the approved remediation strategy and the effectiveness of that remediation shall be submitted to and approved in writing by the Local Planning Authority. The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met. The report shall also include a long-term monitoring and maintenance plan for longer-term monitoring

of pollutant linkages, maintenance and arrangements for contingency action, as identified in the verification report, and for the reporting of this in writing to the Local Planning Authority.

Reason: To protect the amenity of local residents in accordance with Policy QE DM4 of the Adopted Arun Local Plan 2011 – 2031

Sincerely, Craig

Craig Milligan

Environmental Health Officer, Technical Service

T: 01903 737670

E: craig.milligan@arun.gov.uk

Arun District Council, Civic Centre, Maltravers Rd, Littlehampton, West Sussex, BN17 5LF

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APPENDIX C

Exploratory Hole Notes
Exploratory Hole Records
DPSH-B Dynamic Probe Records
In-situ TRL Cone Penetrometer (CBR) Test Results
Summary of Borehole Falling Head Soakage Test Results
Gas Concentration and Groundwater Monitoring Results
Exploratory Hole Records - P14891
Groundwater Monitoring Results – P14891

NOTES FOR THE INTERPRETATION OF EXPLORATORY HOLE RECORDS

1 Symbols and abbreviations

Samples

U	'Undisturbed' Sample: - 100mm diameter by 450mm long. The number of blows to drive in the sampling tube is shown after the test index letter in the SPT column.
U _o	Sample not obtained
U*	Full penetration of sample not obtained
Pi	Piston Sample: 'Undisturbed' sample 100mm diameter by 600mm long.
D	Disturbed Sample
R	Root Sample
B	Bulk Disturbed Sample
W	Water Sample
J	Jar Sample (sample taken in amber glass jar fitted with gas tight lid)
T	Tub Sample
Vi	Vial Sample

In situ Testing

S	Standard penetration test (SPT): Using the split spoon sampler.
C	Standard Penetration Test (SPT): using a solid cone instead of the sampler - conducted usually in coarse grained soils or weak rocks.
V	Shear Vane Test: Undrained shear strength (cohesion) (kN/m ²) shown within the Vane/Pen Test and N Value column.
H	Hand penetrometer Test: Undrained shear strength (cohesion) (kN/m ²) shown within the Vane/Pen Test and N Value column.
P	Perth Penetrometer Test: Number of blows for 300mm penetration shown under Vane/Pen Test and N Value column.

Excavation Method

CP	Cable Percussion Borehole
WLS	Dynamic Sampler Borehole using windowless sampler tubes
WS	Dynamic Sampler Borehole using window sampler tubes
TP	Trial Pit excavated using mechanic excavator
HDP	Trial Pit excavated using hand tools

2 Soil Description

Description and classification of soils has been carried out using as a general basis the British Standard Geotechnical investigation and testing – Identification and classification of soil, Part 1 Identification and description (BS EN ISO 14688-1) and Part 2 Principles of classification (BS EN 14688-2) as well as the BS5930 code of Practice for Ground Investigations.

3 Rock Description

Description and classification of rocks has been carried out using as a general basis the British Standard Geotechnical investigation and testing – Identification and classification of rock, Part 1 Identification and classification (BS EN ISO 14689-1) as well as the BS5930 code of Practice for Ground Investigations. TCR – Total Core Recovery, SCR – Solid Core Recovery, RQD – Rock Quality Designation, NI – Non Intact, If – indicative fracture spacing (min/ave/max), FI – Fracture Index.

4 Chalk Description

Chalk description is based on BS EN ISO 14688, BS EN ISO 14689 and BS5930. The classification of chalk generally follows the guidance offered by the Construction Industry Research and Information Association (CIRIA) C574, 'Engineering in Chalk'. This is based on assessment of chalk density, discontinuity and aperture spacing, and the proportion of intact chalk to silt of chalk.

Site Name: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

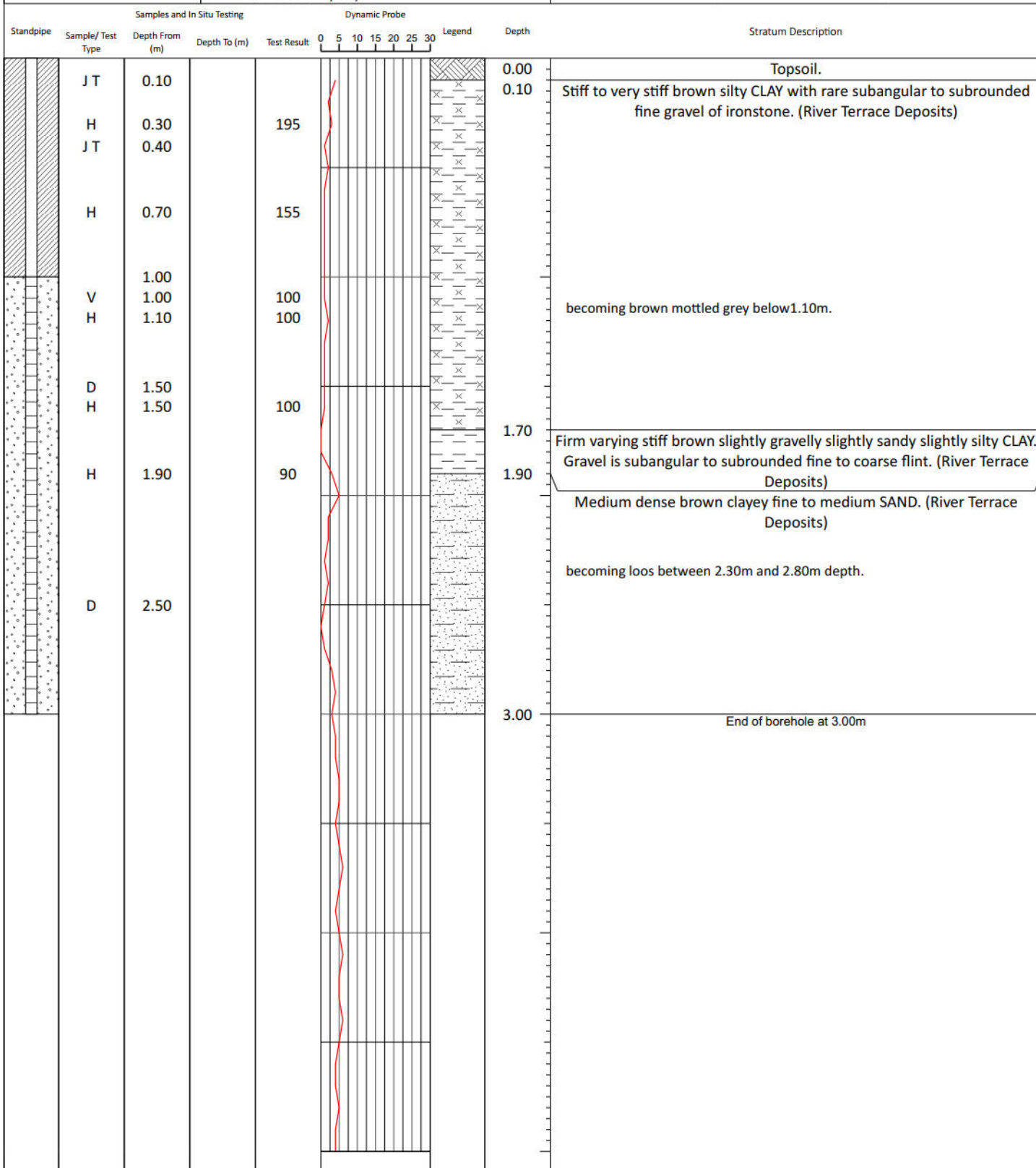
Job Number: P15714

Start Date: 10/08/2022

End Date: 10/08/2022

Borehole Number: **WS201**

Sheet 1 of 1



Remarks

Groundwater: Borehole dry on completion.

Stability: Borehole stable on completion.

Notes: Standpipe installed to 3.00m depth; 3.00m to 1.00m slotted pipe with gravel surround; 1.00m to ground level plain pipe with bentonite seal; completed with gas tap and upstanding security cover.

Excavation Method: WLS

Borehole Diameter: Various

Made By: CS

Samples and In Situ Testing				Dynamic Probe							Legend		Depth	Stratum Description
Standpipe	Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	0	5	10	15	20	25	30			
	J T	0.20											0.00	Topsoil.
													0.30	Stiff orange brown and grey mottled silty CLAY. (River Terrace Deposits)
	J T	0.60		225										
	H	0.60												
	D	0.80		170										
	H	0.90												
	H	1.10		90										
	D	1.30												becoming slightly gravelly (flint) below 1.20m depth.
	H	1.50		90										
	D	1.80												becoming soft to firm below 1.70m depth.
	H	1.90		35										
	D	2.20											2.10	Medium dense orange brown and grey mottled clayey fine to medium SAND with occasional subangular to subrounded fine to medium gravel of flint. (River Terrace Deposits)
	D	2.90											3.00	End of borehole at 3.00m

Remarks	
---------	--

Groundwater: Groundwater at approximately 2.25m depth during drilling of borehole.

Stability: Borehole collapsing to 2.20m depth on completion.

Notes: n/a

Excavation Method: WLS

Borehole Diameter: Various

Made By: TM

ASHDOWN SITE INVESTIGATION L · I · M · I · T · E · D	Site Name: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex									
	Job Number: P15714									
	Start Date: 10/08/2022					Borehole Number: WS203				
	End Date: 10/08/2022									
Sheet 1 of 1										
Standpipe Sample/ Test Type Depth From (m) Depth To (m) Test Result Dynamic Probe Legend Depth Stratum Description										
	J T	0.10							0.00	Topsoil.
	D	0.50							0.10	Stiff to very stiff brown silty CLAY. (River Terrace Deposits)
	H	0.70		185					0.80	Stiff brown mottled grey with black iron staining slightly gravelly silty CLAY. Gravel is subangular to subrounded fine to medium ironstone. (River Terrace Deposits)
	V	1.00		100						
	H	1.10		100						
	H	1.30		130						
	D	1.50		90						subangular to subrounded fine to medium flint from 1.50m. becoming firm varying stiff between 1.50m and 1.80m depth.
	H	1.50								
	H	1.70		40						
	D	1.80								
	D	2.10							2.00	Medium dense brown clayey fine to medium SAND. (River Terrace Deposits)
									2.40	End of borehole at 2.40m
Remarks Groundwater: Borehole dry on completion. Stability: Borehole unstable at base. Notes: n/a										Excavation Method: WLS Borehole Diameter: Various Made By: CS

ASHDOWN SITE INVESTIGATION L · I · M · I · T · E · E · D		Site Name: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex											
		Job Number: P15714											
		Start Date: 10/08/2022					Borehole Number: WS204						
		End Date: 10/08/2022											
Sheet 1 of 1													
Samples and In Situ Testing Dynamic Probe Stratum Description													
Standpipe	Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	0 5 10 15 20 25 30			Legend	Depth				
	J T	0.10							0.00	Topsoil.			
	D	0.50							0.10	Stiff to very stiff brown silty CLAY. (River Terrace Deposits)			
	H	0.70		>250									
	H	0.90		185					0.90	Stiff to very stiff brown mottled dark brown silty CLAY. (River Terrace Deposits)			
	V	1.00		>130									
	H	1.10		155									
	H	1.50		90					1.60	Stiff grey mottled brown slightly gravelly CLAY. Gravel is subangular to subrounded fine to medium flint. (River Terrace Deposits)			
	H	1.70		100									
	D	1.90							2.30	becoming firm to stiff below 2.20m depth. Loose brown clayey fine to medium SAND. (River Terrace Deposits)			
	D	2.70								becoming medium dense below 2.60m depth.			
									3.00	End of borehole at 3.00m			
Remarks Groundwater: Borehole dry on completion. Stability: Borehole stable on completion. Notes: n/a												Excavation Method: WLS Borehole Diameter: Various Made By: CS	

Samples and In Situ Testing			Dynamic Probe		Stratum Description	
Standpipe	Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	Depth	Stratum Description
				0 5 10 15 20 25 30	0.00	Topsoil.
	J T	0.20			0.25	Stiff to very stiff brown mottled light brown slightly sandy silty CLAY with rare gravel of flint and ironstone. (River Terrace Deposits)
	J T	0.50				
	H	0.90		>250		
	D	1.00				
	H	1.10		>250		
	H	1.30		>250		
	D	1.70			1.80	with occasional subangular to subrounded fine to coarse gravel of flint and ironstone below 1.60m depth.
						Medium dense brown clayey fine to medium SAND. (River Terrace Deposits)
						becoming loose between 2.10m and 2.50m depth.
	D	2.50			3.00	End of borehole at 3.00m

Remarks	

Groundwater: Borehole dry on completion.

Stability: Borehole stable on completion.

Notes: Standpipe installed to 3.00m depth; 3.00m to 1.00m slotted pipe with gravel surround; 1.00m to ground level plain pipe with bentonite seal; completed with gas tap and upstanding security cover.

Excavation Method: WLS

Borehole Diameter: Various

Made By: CS

ASHDOWN SITE INVESTIGATION L · I · M · I · T · E · D	Site Name: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex										
	Job Number: P15714										
	Start Date: 10/08/2022					Borehole Number: WS206					
	End Date: 10/08/2022										
										Sheet 1 of 1	
Samples and In Situ Testing Dynamic Probe Standpipe Sample/ Test Type Depth From (m) Depth To (m) Test Result 0 5 10 15 20 25 30 Legend Depth Stratum Description											
	J T	0.10								0.00	Topsoil with occasional subangular to subrounded fine to coarse gravel of brick and chalk.
	J T	0.40								0.50	
	D	0.70									Stiff to very stiff orange brown silty CLAY. (River Terrace Deposits)
	J T	0.80									
	H	0.90	250								
	D	1.20									
	H	1.20	195								becoming slightly gravelly (ironstone and flint) below 1.20m depth.
	H	1.60	140								
	D	1.90									
	H	1.90	90								
D	2.20									2.10	Medium dense orange brown clayey fine to medium SAND. (River Terrace Deposits)
D	2.80										
										3.00	End of borehole at 3.00m
Remarks Groundwater: Groundwater at approximately 2.95m depth during drilling of borehole. Stability: Borehole collapsing to 2.90m depth on completion. Notes: Standpipe installed to 2.90m depth; 2.90m to 0.90m slotted pipe with gravel surround; 0.90m to ground level plain pipe with bentonite seal; completed with gas tap and upstanding security cover.											Excavation Method: WLS Borehole Diameter: Various Made By: TM

ASHDOWN SITE INVESTIGATION L · I · M · I · T · E · D		Site Name: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex																	
		Job Number: P15714																	
		Start Date: 10/08/2022					Borehole Number: WS208												
		End Date: 10/08/2022																	
Sheet 1 of 1																			
Samples and In Situ Testing Dynamic Probe Legend Depth Stratum Description																			
Standpipe	Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	051015202530					Depth	Stratum Description								
	J T	0.20								0.00	Topsoil with occasional subangular to subrounded fine to coarse gravel of brick and glass.								
	D	0.60								0.40	Stiff to very stiff slightly gravelly CLAY. Gravel is rare subangular to subrounded fine flint and ironstone. (River Terrace Deposits) with no gravel content below 0.70m depth.								
	H	0.60	>250																
	J T	0.70																	
	H	0.90	>250																
	D	1.00																	
	V	1.00	>130																
	H	1.20	225																
	H	1.50	140							1.60	Stiff brown slightly gravelly slightly sandy silty CLAY. Gravel is subangular to subrounded fine to coarse flint and ironstone. (River Terrace Deposits)								
	D	1.70																	
	H	1.75	75							1.80	Medium dense brown clayey fine to medium SAND. (River Terrace Deposits) becoming loose between 2.10m and 2.70m depth.								
	D	2.50																	
										3.00	End of borehole at 3.00m								
Remarks Groundwater: Borehole dry on completion. Stability: Borehole collapsing to 2.40m depth on completion. Notes: n/a															Excavation Method: WLS Borehole Diameter: Various Made By: CS				

Site Name: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

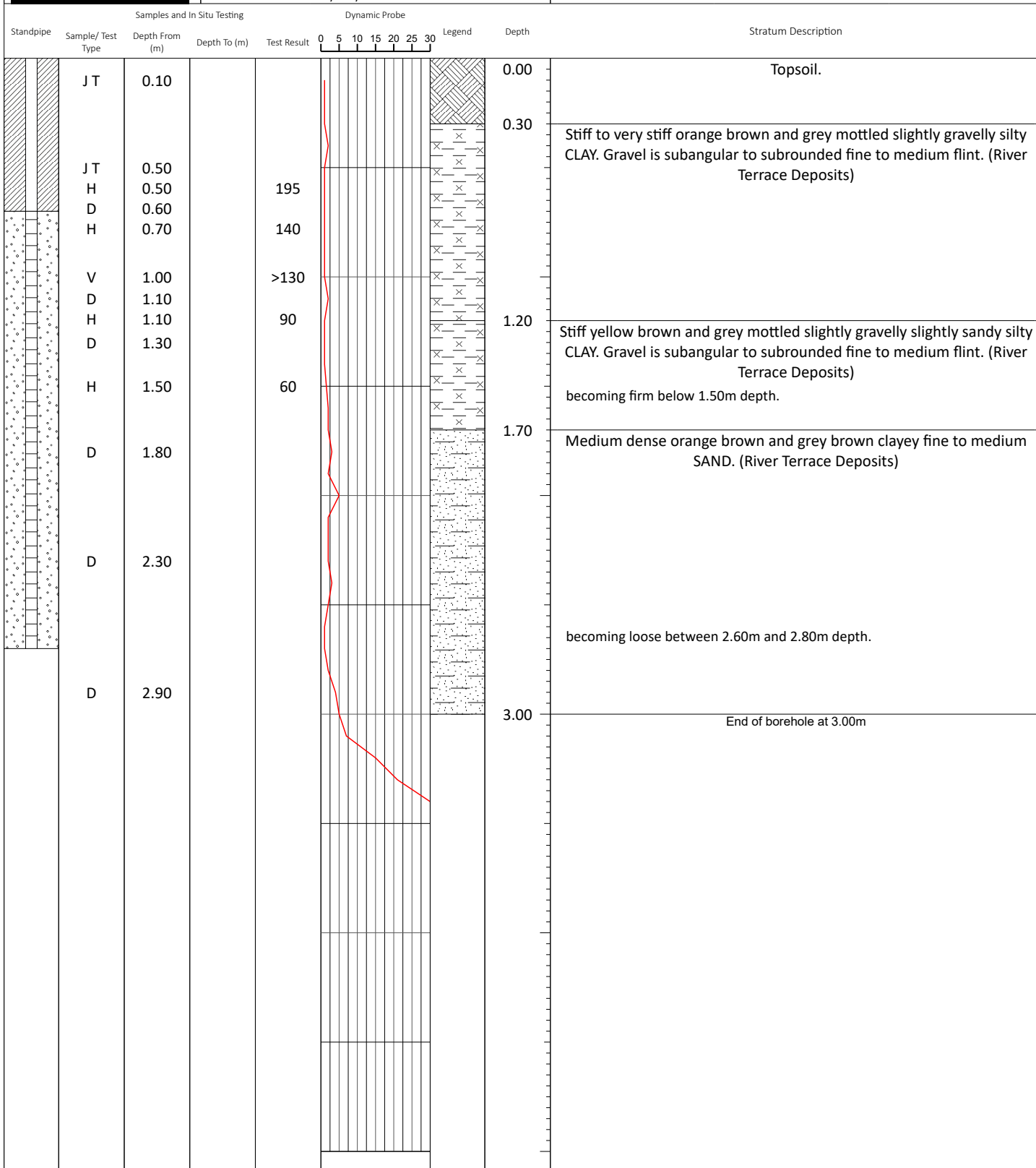
Job Number: P15714

Start Date: 10/08/2022

End Date: 10/08/2022

Borehole Number: **WS209**

Sheet 1 of 1



Remarks	
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Groundwater: Groundwater at 2.30m depth on completion of borehole.

Stability: Borehole collapsing to 2.70m depth on completion.

Notes: Standpipe installed to 2.70m depth; 2.70m to 0.70m slotted pipe with gravel surround; 0.70m to ground level plain pipe with bentonite seal; completed with gas tap and upstanding security cover.

Excavation Method: WLS

Borehole Diameter:	Various
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Made By: TM

Samples and In Situ Testing			Dynamic Probe				Stratum Description	
Standpipe	Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	0 5 10 15 20 25 30	Legend	Depth	
	J T	0.10					0.00	Topsoil.
	J T	0.50					0.30	Stiff to very stiff orange brown and brown mottled slightly sandy silty CLAY. (River Terrace Deposits)
	D	0.60						
	H	0.60	170					
	H	0.90	170					
	D	1.10						becoming slightly gravelly (flint) below 1.10m.
	H	1.10	115					
	H	1.30	50					
	D	1.60						Medium dense orange brown clayey fine to medium SAND with occasional subangular to subrounded fine to medium gravel of flint. (River Terrace Deposits) becoming loose between 2.00m and 2.40m depth.
	D	1.90					1.70	
	D	2.20						
	D	2.90						
							3.00	End of borehole at 3.00m

Remarks	
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Groundwater: Groundwater at approximately 2.00m depth during drilling of borehole.

Stability: Borehole collapsing to 1.95m depth on completion.

Notes: n/a

Excavation Method: WLS

Borehole Diameter: Various

Made By: TM

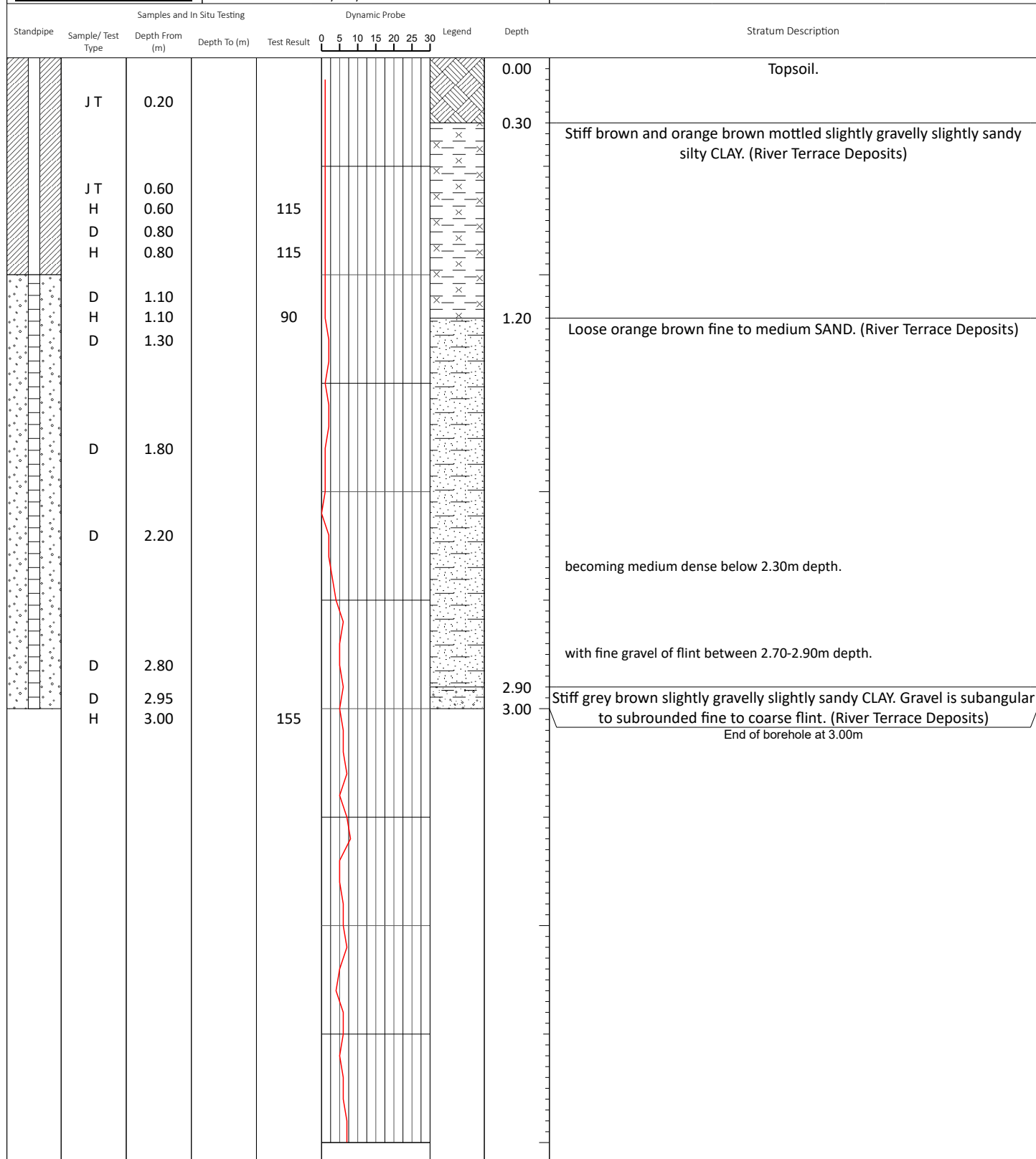
End Date: 05/08/2022

Sheet 1 of 1

Samples and In Situ Testing					Dynamic Probe		Stratum Description	
Standpipe	Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	0 5 10 15 20 25 30	Legend	Depth	
	J T	0.15					0.00	Topsoil.
	J T	0.30					0.40	Stiff orange brown, brown and grey mottled silty CLAY. (River Terrace Deposits)
	J T	0.70						
	D	0.80						
	H	0.80		250				becoming grey with occasional pockets of sand and gravel of flint and ironstone below 1.00m depth.
	D	1.20						
	H	1.20		195				
	H	1.40		90			1.50	Medium dense brown fine to medium SAND. (River Terrace Deposits)
	D	1.60						
	D	2.20						becoming loose between 2.10m and 2.50m depth.
	D	2.90					3.00	End of borehole at 3.00m

Made By: TM

ASHDOWN SITE INVESTIGATION L · I · M · I · T · E · E · D		Site Name: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex									
		Job Number: P15714									
		Start Date: 08/08/2022					Borehole Number: WS213				
		End Date: 08/08/2022									
Sheet 1 of 1											
Standpipe Sample/ Test Type Samples and In Situ Testing Depth From (m) Depth To (m) Test Result Dynamic Probe Legend Depth Stratum Description											
	J T	0.10							0.00	Topsoil.	
	J T	0.35							0.40	Stiff to very stiff orange brown and brown grey mottled slightly sandy silty CLAY with occasional ironstone. (River Terrace Deposits)	
	J T	0.90									
	H	0.90			>250						
	D	1.10									
	H	1.20			115					becoming slightly gravelly (flint) below 1.30m depth.	
	D	1.50									
	H	1.50			60					becoming soft to firm below 1.50m depth.	
	D	1.90							1.80	Medium dense orange grown and grey mottled clayey fine to medium SAND. (River Terrace Deposits)	
	D	2.20									
	D	2.90									
									3.00	End of borehole at 3.00m	
Remarks Groundwater: Groundwater at approximately 2.10m depth during drilling of borehole. Stability: Borehole collapsing to 2.00m depth on completion. Notes: n/a											
										Excavation Method: WLS	
										Borehole Diameter: Various	
										Made By: TM	



Remarks	
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Groundwater: Groundwater at 2.55m depth on completion of borehole.

Stability: Borehole unstable below 2.75m depth on completion.

Notes: Standpipe installed to 3.00m depth; 3.00m to 1.00m slotted pipe with gravel surround; 1.00m to ground level plain pipe with bentonite seal; completed with gas tap and upstanding security cover.

Excavation Method: WLS

Borehole Diameter: Various

Made By: TM

ASHDOWN SITE INVESTIGATION L · I · M · I · T · E · D	Site Name: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex										
	Job Number: P15714										
	Start Date: 08/08/2022					Borehole Number: WS215					
	End Date: 08/08/2022										
										Sheet 1 of 1	
Samples and In Situ Testing Dynamic Probe Standpipe Sample/ Test Type Depth From (m) Depth To (m) Test Result 0 5 10 15 20 25 30 Legend Depth Stratum Description											
	J T	0.10								0.00	Topsoil.
	J T	0.50								0.30	Stiff to very stiff orange brown and grey mottled silty CLAY with occasional ironstone. (River Terrace Deposits)
	D	0.80									
	H	1.10			250						
	D	1.20									becoming slightly gravelly (flint) below 1.20m depth.
	H	1.50			50						
	D	1.70									
	H	1.80			115					1.85	Medium dense yellow brown clayey fine to medium SAND. (River Terrace Deposits)
	D	1.90									
	D	2.20									
	D	2.90									
										3.00	End of borehole at 3.00m
Remarks Groundwater: Groundwater noted at base of borehole. Stability: Borehole unstable below 2.80m depth on completion. Notes: Standpipe installed to 3.00m depth; 3.00m to 1.00m slotted pipe with gravel surround; 1.00m to ground level plain pipe with bentonite seal; completed with gas tap and upstanding security cover.											Excavation Method: WLS Borehole Diameter: Various Made By: TM

End Date: 09/08/2022

Sheet 1 of 1

Remarks Groundwater: Groundwater at approximately 2.50m depth during drilling of borehole. Stability: Borehole collapsing to 2.40m depth on completion. Notes: n/a	Excavation Method: WLS
	Borehole Diameter: Various
	Made By: TM

Samples and In Situ Testing						Dynamic Probe		
Standpipe	Sample / Test Type	Depth From (m)	Depth To (m)	Test Result	0 5 10 15 20 25 30	Legend	Depth	Stratum Description
	J T	0.10					0.00	Topsoil with occasional subangular to subrounded fine to coarse brick.
	J T	0.30					0.40	Stiff orange brown and brown mottled slightly sandy silty CLAY. (River Terrace Deposits)
	J T H D H	0.70 0.70 0.80 0.90		195 155				becoming slightly gravelly (flint and ironstone) below 1.10m depth.
	H D H	1.20 1.30 1.40		140 75				
	D	1.80					1.50	Medium dense orange brown and grey clayey fine to medium SAND with occasional subangular to subrounded fine to medium gravel of flint. (River Terrace Deposits)
	D	2.20						becoming loose at 2.20m and 2.30m depth.
	D	2.80					3.00	End of borehole at 3.00m

Remarks

Groundwater: Groundwater at approximately 2.10m depth during drilling of borehole.

Stability: Borehole collapsing to 2.00m depth on completion.

Notes: n/a

Excavation Method: WLS

Borehole Diameter: Various

Made By: TM

ASHDOWN SITE INVESTIGATION L · I · M · I · T · E · D		Site Name: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex												
		Job Number: P15714												
		Start Date: 09/08/2022					Borehole Number: WS218							
		End Date: 09/08/2022												
Sheet 1 of 1														
Samples and In Situ Testing Dynamic Probe Stratum Description														
Standpipe	Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	0 5 10 15 20 25 30					Legend	Depth			
	J T	0.10									0.00	Topsoil.		
	J T	0.35									0.40	Stiff to very stiff orange brown and grey brown slightly gravelly slightly sandy silty CLAY. Gravel is subangular to subrounded fine to coarse flint and ironstone. (River Terrace Deposits)		
	D	0.60												
	H	0.60		225										
	J T	0.70												
	H	0.90		140										
	H	1.10		140										
	H	1.30		140										
	D	1.50												becoming firm below 1.60m depth.
	D	1.90												
	D	2.30									2.15	Loose orange brown and grey mottled clayey fine to medium SAND with occasional subangular to subrounded fine to coarse gravel of flint. (River Terrace Deposits)		
	D	2.90												becoming medium dense below 2.70m depth.
											3.00	End of borehole at 3.00m		
Remarks Groundwater: Borehole dry on completion. Stability: Borehole stable on completion. Notes: n/a														
												Excavation Method: WLS		
												Borehole Diameter: Various		
												Made By: TM		

End Date: 09/08/2022

Sheet 1 of 1

Remarks Groundwater: Groundwater at approximately 2.30m depth during drilling of borehole. Stability: Borehole collapsing to 2.20m depth on completion. Notes: n/a	Excavation Method: WLS
	Borehole Diameter: Various
	Made By: TM

End Date: 09/08/2022

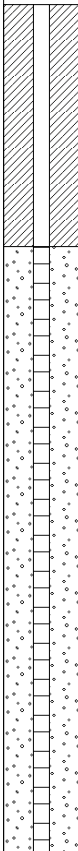
Sheet 1 of 1

Remarks Groundwater: Groundwater at approximately 2.30m depth during drilling of borehole. Stability: Borehole collapsing to 2.25m depth on completion. Notes: n/a	Excavation Method: WLS
	Borehole Diameter: Various
	Made By: TM

ASHDOWN SITE INVESTIGATION L · I · M · I · T · E · D	Site Name: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex											
	Job Number: P15714											
	Start Date: 04/08/2022					Borehole Number: WS221						
	End Date: 04/08/2022											
Sheet 1 of 1												
Samples and In Situ Testing Dynamic Probe Standpipe Sample/ Test Type Depth From (m) Depth To (m) Test Result 0 5 10 15 20 25 30 Legend Depth Stratum Description												
	J T	0.10							0.00	Topsoil.		
	J T	0.40							0.50	Stiff orange brown and brown mottled silty CLAY with occasional subangular to subrounded fine to medium flint. (River Terrace Deposits)		
	D	0.70										
	J T	0.90										
	D	1.20										
	D	1.40							1.30	Stiff orange brown, grey and yellow mottled slightly gravelly slightly sandy silty CLAY. Gravel is subangular to subrounded fine to coarse flint and chalk. (River Terrace Deposits)		
	D	1.80										
	D	2.10										
	D	2.70							2.20			
									3.00	End of borehole at 3.00m		
Remarks Groundwater: Borehole dry on completion. Stability: Borehole stable on completion. Notes: Standpipe installed to 3.00m depth; 3.00m to 1.00m slotted pipe with gravel surround; 1.00m to ground level plain pipe with bentonite seal; completed with gas tap and upstanding security cover.											Excavation Method: WLS Borehole Diameter: Various Made By: TM	

ASHDOWN SITE INVESTIGATION L · I · M · I · T · E · D		Site Name: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex												
		Job Number: P15714												
		Start Date: 04/08/2022					Borehole Number: WS222							
End Date: 04/08/2022					Sheet 1 of 1									
Samples and In Situ Testing														
Standpipe	Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	Dynamic Probe					Legend	Depth	Stratum Description		
	J T	0.10									0.00	Topsoil with occasional subangular to subrounded fine to coarse gravel of brick.		
	D	0.50									0.30	Stiff to very stiff orange brown and brown mottled slightly gravelly silty CLAY. Gravel is subangular to subrounded fine to coarse flint. (River Terrace Deposits)		
	J T	0.60												
	H	0.60		>250										
	H	0.80		>250										
	V	1.00		>130								becoming grey and brown mottled below 1.00m depth.		
	D	1.10												
	H	1.10		170										
	H	1.50		115										
											1.70	Stiff orange brown and grey mottled slightly sandy silty CLAY. (River Terrace Deposits)		
	D	1.90												
	D	2.10									2.00	Loose to medium dense brown silty fine to medium SAND with occasional fine to medium gravel of flint. (River Terrace Deposits)		
												becoming medium dense below 2.70m depth.		
	D	2.90									3.00	End of borehole at 3.00m		
Remarks Groundwater: Groundwater at approximately 2.30m depth during drilling of borehole. Stability: Borehole collapsing to 2.00m depth on completion. Notes: n/a														
										Excavation Method: WLS				
										Borehole Diameter: Various				
										Made By: TM				

ASHDOWN SITE INVESTIGATION L · I · M · I · T · E · E · D	Site Name: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex													
	Job Number: P15714													
	Start Date: 04/08/2022					Borehole Number: WS223								
	End Date: 04/08/2022													
Sheet 1 of 1														
Samples and In Situ Testing Dynamic Probe Stratum Description														
Standpipe	Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	0	5	10	15	20	25	30	Legend	Depth	Stratum Description
	J T	0.05											0.00	Topsoil with occasional subangular to subrounded fine to coarse gravel of brick.
	H	0.35		250									0.30	Stiff to very stiff orange brown and brown mottled slightly gravelly slightly sandy silty CLAY. Gravel is subangular to subrounded fine to medium flint and occasional ironstone. (River Terrace Deposits)
	J T	0.40												
	D	0.60												
	H	0.90		250										Loose orange brown and dark brown mottled gravelly silty clayey SAND. Gravel is subangular to subrounded fine to medium flint and ironstone. (River Terrace Deposits)
	D	1.10												
	H	1.10		100										
	D	1.50											1.30	becoming medium dense below 1.70m depth.
	D	2.10											1.80	Medium dense orange brown clayey fine to medium SAND. (River Terrace Deposits)
	D	2.80											3.00	End of borehole at 3.00m
Remarks Groundwater: Groundwater at approximately 2.25m depth during drilling of borehole. Stability: Borehole collapsing to 2.30m depth on completion. Notes: n/a														
Excavation Method: WLS Borehole Diameter: Various Made By: TM														

Samples and In Situ Testing				Dynamic Probe		Stratum Description		
Standpipe	Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	051015202530	Legend	Depth	
	J T	0.10					0.00	Topsoil.
	J T	0.50					0.40	Stiff to very stiff orange brown mottled slightly gravelly slightly sandy silty CLAY. Gravel is subangular to subrounded fine to medium flint and chalk. (River Terrace Deposits)
	D	0.70						
	V	1.00		>130			1.20	Medium dens orange brown and brown mottled gravelly silty fine to medium SAND. Gravel is subangular to subrounded fine to medium flint (River Terrace Deposits)
	D	1.10						becoming loose below 1.50m depth.
	J T	1.10						
	D	1.40						
							1.90	Loose orange brown clayey fine to medium SAND with occasional subangular to subrounded fine to medium gravel of flint. (River Terrace Deposits)
	D	2.10						becoming medium dense below 2.10m depth.
								
D	2.90						3.00	becoming dense below 2.90m depth.
								End of borehole at 3.00m

Remarks	
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Groundwater: Groundwater at 2.30m depth on completion of borehole.

Stability: Borehole collapsing to 2.40m depth on completion.

Notes: Standpipe installed to 2.80m depth; 2.80m to 0.80m slotted pipe with gravel surround; 0.80m to ground level plain pipe with bentonite seal; completed with gas tap and upstanding security cover.

Excavation Method: WLS

Borehole Diameter:	Various
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Made By: TM

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

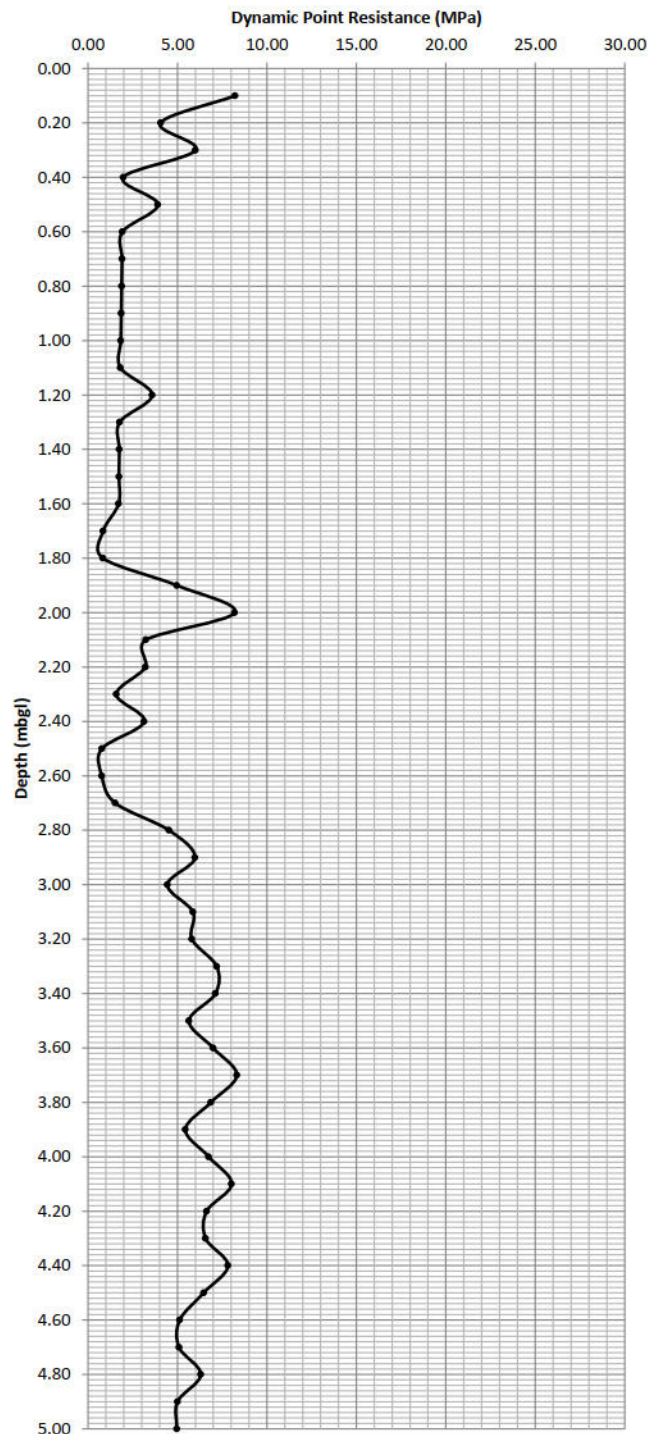
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS01**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	4	0.03	8.47	8.23
0.20	2	0.05	4.24	4.06
0.30	3	0.03	6.35	6.01
0.40	1	0.10	2.12	1.98
0.50	2	0.05	4.24	3.90
0.60	1	0.10	2.12	1.93
0.70	1	0.10	2.12	1.90
0.80	1	0.10	2.12	1.88
0.90	1	0.10	2.12	1.86
1.00	1	0.10	2.12	1.84
1.10	1	0.10	2.12	1.81
1.20	2	0.05	4.24	3.58
1.30	1	0.10	2.12	1.77
1.40	1	0.10	2.12	1.75
1.50	1	0.10	2.12	1.73
1.60	1	0.10	2.12	1.71
1.70	0.5	0.20	1.06	0.85
1.80	0.5	0.20	1.06	0.84
1.90	3	0.03	6.35	4.97
2.00	5	0.02	10.59	8.19
2.10	2	0.05	4.24	3.24
2.20	2	0.05	4.24	3.21
2.30	1	0.10	2.12	1.59
2.40	2	0.05	4.24	3.14
2.50	0.5	0.20	1.06	0.78
2.60	0.5	0.20	1.06	0.77
2.70	1	0.10	2.12	1.52
2.80	3	0.03	6.35	4.53
2.90	4	0.03	8.47	5.98
3.00	3	0.03	6.35	4.44
3.10	4	0.03	8.47	5.86
3.20	4	0.03	8.47	5.81
3.30	5	0.02	10.59	7.19
3.40	5	0.02	10.59	7.13
3.50	4	0.03	8.47	5.65
3.60	5	0.02	10.59	7.00
3.70	6	0.02	12.71	8.32
3.80	5	0.02	10.59	6.87
3.90	4	0.03	8.47	5.45
4.00	5	0.02	10.59	6.75
4.10	6	0.02	12.71	8.03
4.20	5	0.02	10.59	6.63
4.30	5	0.02	10.59	6.57
4.40	6	0.02	12.71	7.82
4.50	5	0.02	10.59	6.46
4.60	4	0.03	8.47	5.13
4.70	4	0.03	8.47	5.09
4.80	5	0.02	10.59	6.30
4.90	4	0.03	8.47	5.00
5.00	4	0.03	8.47	4.96



Notes:

Hammer Mass 63.5 kg
 Fall Height 0.76 m
 Cone Area 0.0019 m²
 E_{theor} 473 J
 Energy Ratio 0.85
 Anvil Mass 1 kg
 Rod Mass 8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

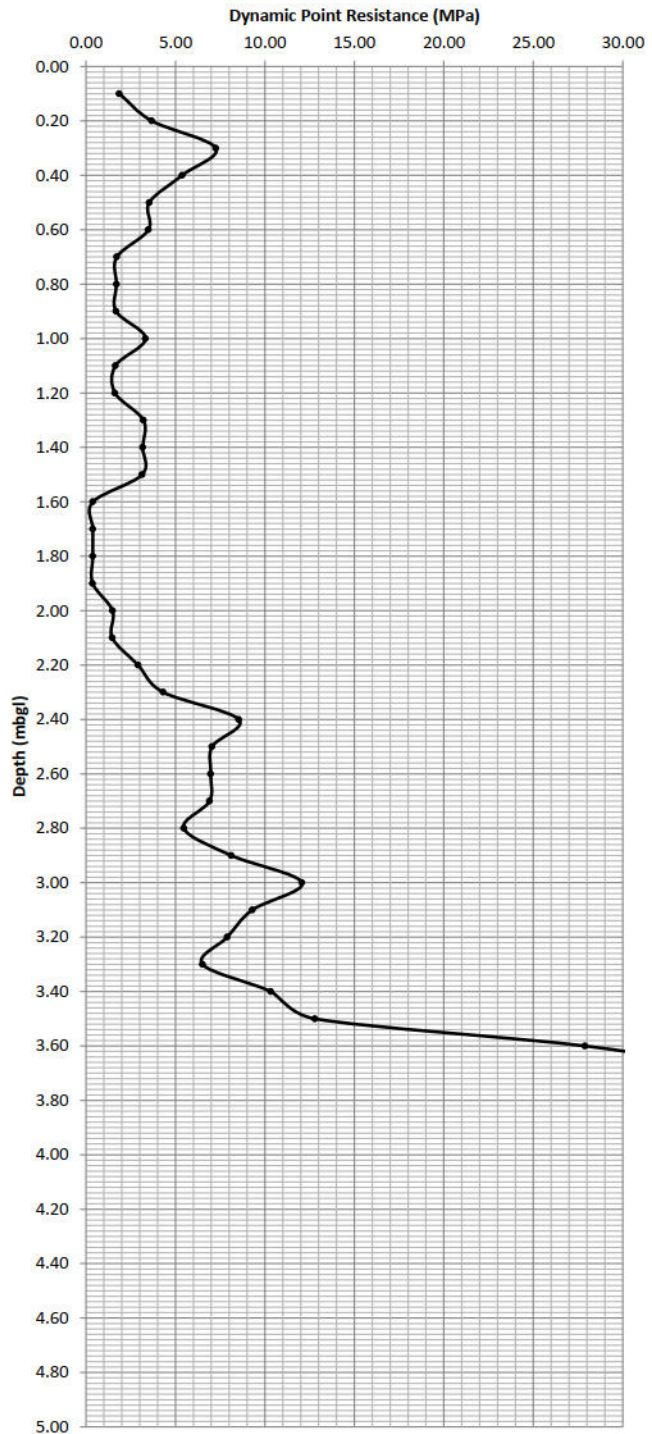
Dynamic Probe Record

SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference		WS202		
Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	1	0.10	1.92	1.86
0.20	2	0.05	3.84	3.68
0.30	4	0.03	7.67	7.26
0.40	3	0.03	5.76	5.37
0.50	2	0.05	3.84	3.54
0.60	2	0.05	3.84	3.49
0.70	1	0.10	1.92	1.72
0.80	1	0.10	1.92	1.70
0.90	1	0.10	1.92	1.68
1.00	2	0.05	3.84	3.32
1.10	1	0.10	1.92	1.64
1.20	1	0.10	1.92	1.62
1.30	2	0.05	3.84	3.21
1.40	2	0.05	3.84	3.17
1.50	2	0.05	3.84	3.14
1.60	0.25	0.40	0.48	0.39
1.70	0.25	0.40	0.48	0.38
1.80	0.25	0.40	0.48	0.38
1.90	0.25	0.40	0.48	0.38
2.00	1	0.10	1.92	1.48
2.10	1	0.10	1.92	1.47
2.20	2	0.05	3.84	2.91
2.30	3	0.03	5.76	4.31
2.40	6	0.02	11.51	8.54
2.50	5	0.02	9.59	7.05
2.60	5	0.02	9.59	6.97
2.70	5	0.02	9.59	6.91
2.80	4	0.03	7.67	5.47
2.90	6	0.02	11.51	8.12
3.00	9	0.01	17.27	12.07
3.10	7	0.01	13.43	9.30
3.20	6	0.02	11.51	7.89
3.30	5	0.02	9.59	6.52
3.40	8	0.01	15.35	10.33
3.50	10	0.01	19.19	12.79
3.60	22	0.00	42.21	27.88
3.70	30	0.00	57.56	37.68
3.80				
3.90				
4.00				
4.10				
4.20				
4.30				
4.40				
4.50				
4.60				
4.70				
4.80				
4.90				
5.00				



Notes:

No further progress below 3.70m depth - Hammer Bouncing

Hammer Mass	63.5 kg
Fall Height	0.76 m
Cone Area	0.0019 m ²
E _{theor}	473 J
Energy Ratio	0.77
Anvil Mass	1 kg
Rod Mass	8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

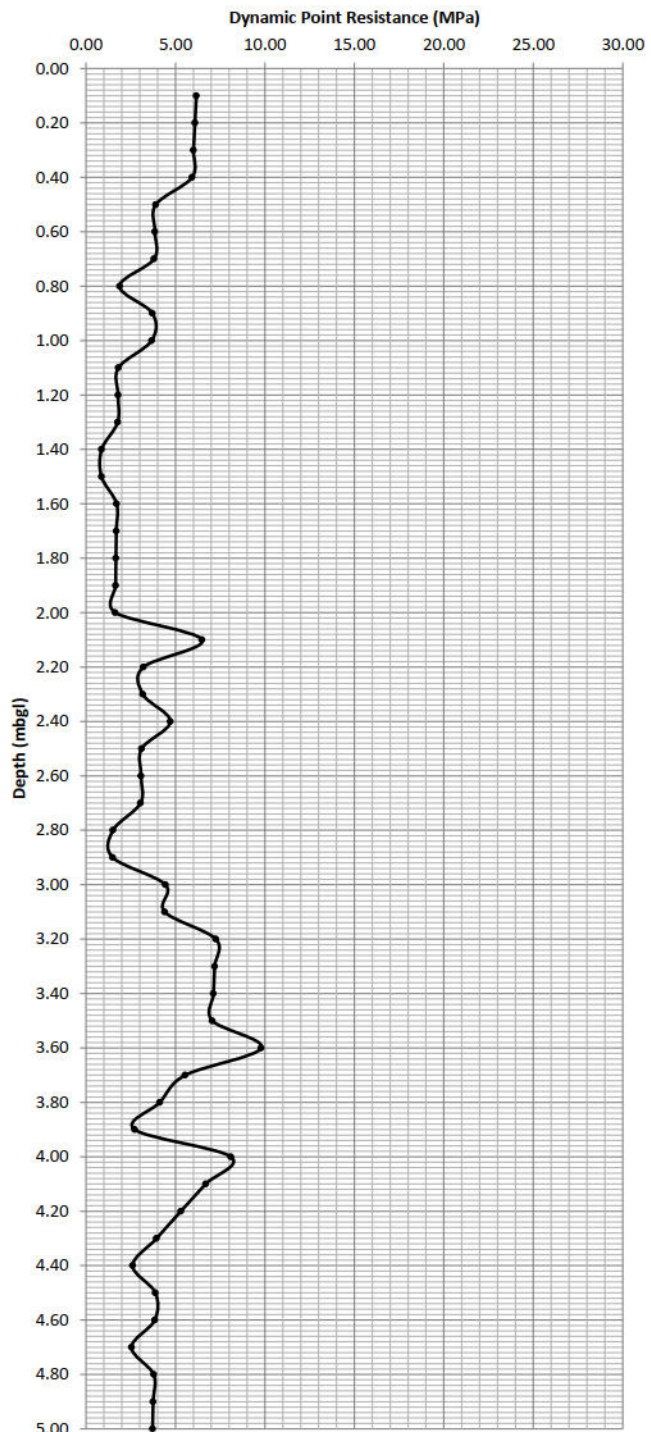
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS203**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	3	0.03	6.35	6.17
0.20	3	0.03	6.35	6.09
0.30	3	0.03	6.35	6.01
0.40	3	0.03	6.35	5.93
0.50	2	0.05	4.24	3.90
0.60	2	0.05	4.24	3.86
0.70	2	0.05	4.24	3.81
0.80	1	0.10	2.12	1.88
0.90	2	0.05	4.24	3.71
1.00	2	0.05	4.24	3.67
1.10	1	0.10	2.12	1.81
1.20	1	0.10	2.12	1.79
1.30	1	0.10	2.12	1.77
1.40	0.5	0.20	1.06	0.88
1.50	0.5	0.20	1.06	0.87
1.60	1	0.10	2.12	1.71
1.70	1	0.10	2.12	1.69
1.80	1	0.10	2.12	1.67
1.90	1	0.10	2.12	1.66
2.00	1	0.10	2.12	1.64
2.10	4	0.03	8.47	6.49
2.20	2	0.05	4.24	3.21
2.30	2	0.05	4.24	3.18
2.40	3	0.03	6.35	4.71
2.50	2	0.05	4.24	3.11
2.60	2	0.05	4.24	3.08
2.70	2	0.05	4.24	3.05
2.80	1	0.10	2.12	1.51
2.90	1	0.10	2.12	1.49
3.00	3	0.03	6.35	4.44
3.10	3	0.03	6.35	4.40
3.20	5	0.02	10.59	7.26
3.30	5	0.02	10.59	7.19
3.40	5	0.02	10.59	7.13
3.50	5	0.02	10.59	7.06
3.60	7	0.01	14.83	9.79
3.70	4	0.03	8.47	5.55
3.80	3	0.03	6.35	4.12
3.90	2	0.05	4.24	2.72
4.00	6	0.02	12.71	8.10
4.10	5	0.02	10.59	6.69
4.20	4	0.03	8.47	5.31
4.30	3	0.03	6.35	3.94
4.40	2	0.05	4.24	2.61
4.50	3	0.03	6.35	3.88
4.60	3	0.03	6.35	3.85
4.70	2	0.05	4.24	2.54
4.80	3	0.03	6.35	3.78
4.90	3	0.03	6.35	3.75
5.00	3	0.03	6.35	3.72



Notes:

Hammer Mass	63.5 kg
Fall Height	0.76 m
Cone Area	0.0019 m ²
E _{theor}	473 J
Energy Ratio	0.85
Anvil Mass	1 kg
Rod Mass	8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

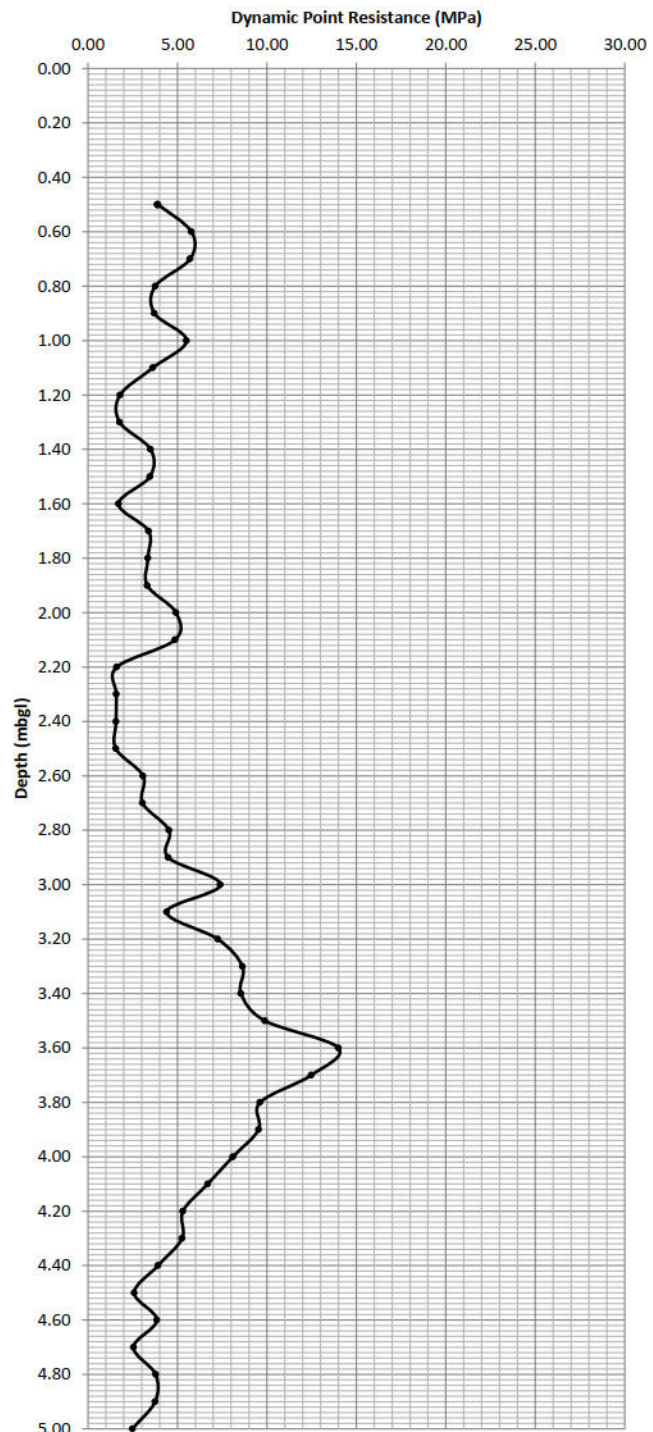
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS204**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10				
0.20				
0.30				
0.40				
0.50	2	0.05	4.24	3.90
0.60	3	0.03	6.35	5.78
0.70	3	0.03	6.35	5.71
0.80	2	0.05	4.24	3.76
0.90	2	0.05	4.24	3.71
1.00	3	0.03	6.35	5.51
1.10	2	0.05	4.24	3.63
1.20	1	0.10	2.12	1.79
1.30	1	0.10	2.12	1.77
1.40	2	0.05	4.24	3.50
1.50	2	0.05	4.24	3.46
1.60	1	0.10	2.12	1.71
1.70	2	0.05	4.24	3.39
1.80	2	0.05	4.24	3.35
1.90	2	0.05	4.24	3.31
2.00	3	0.03	6.35	4.92
2.10	3	0.03	6.35	4.86
2.20	1	0.10	2.12	1.60
2.30	1	0.10	2.12	1.59
2.40	1	0.10	2.12	1.57
2.50	1	0.10	2.12	1.56
2.60	2	0.05	4.24	3.08
2.70	2	0.05	4.24	3.05
2.80	3	0.03	6.35	4.53
2.90	3	0.03	6.35	4.48
3.00	5	0.02	10.59	7.40
3.10	3	0.03	6.35	4.40
3.20	5	0.02	10.59	7.26
3.30	6	0.02	12.71	8.63
3.40	6	0.02	12.71	8.55
3.50	7	0.01	14.83	9.88
3.60	10	0.01	21.18	13.99
3.70	9	0.01	19.06	12.48
3.80	7	0.01	14.83	9.62
3.90	7	0.01	14.83	9.53
4.00	6	0.02	12.71	8.10
4.10	5	0.02	10.59	6.69
4.20	4	0.03	8.47	5.31
4.30	4	0.03	8.47	5.26
4.40	3	0.03	6.35	3.91
4.50	2	0.05	4.24	2.59
4.60	3	0.03	6.35	3.85
4.70	2	0.05	4.24	2.54
4.80	3	0.03	6.35	3.78
4.90	3	0.03	6.35	3.75
5.00	2	0.05	4.24	2.48



Notes:

Hammer Mass 63.5 kg
 Fall Height 0.76 m
 Cone Area 0.0019 m²
 E_{theor} 473 J
 Energy Ratio 0.85
 Anvil Mass 1 kg
 Rod Mass 8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

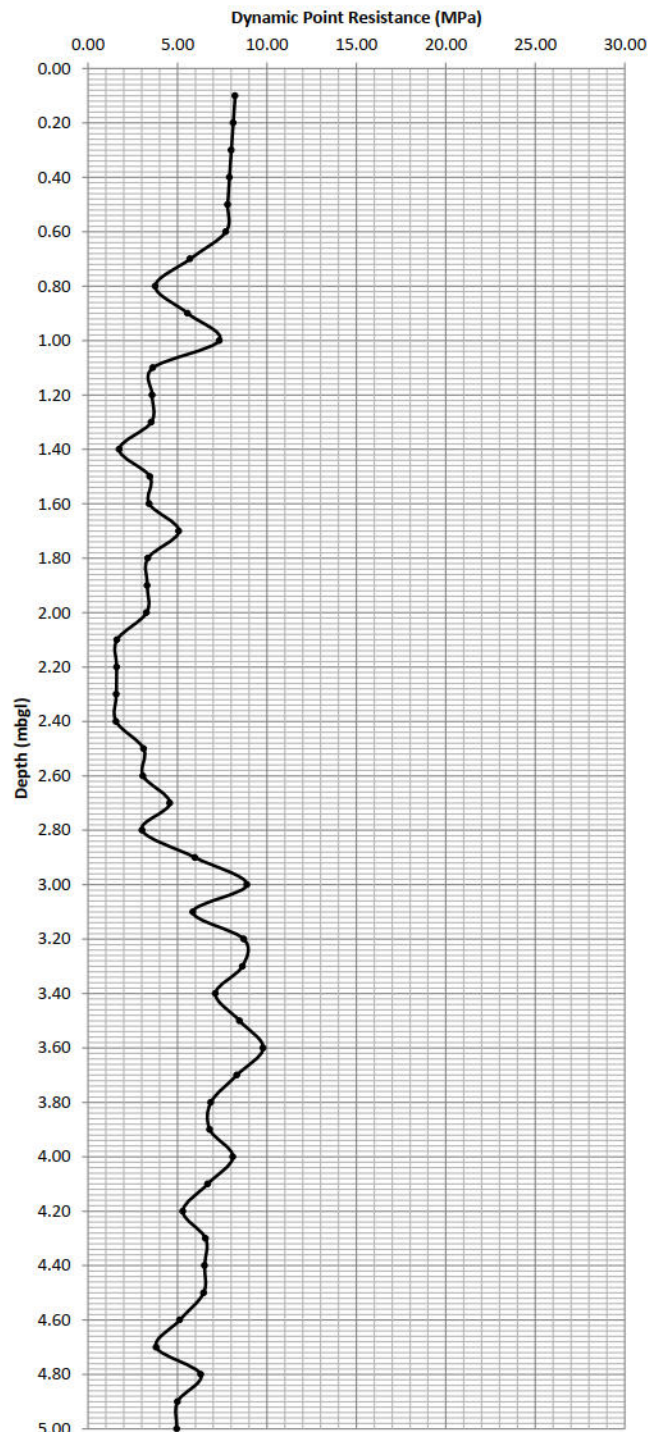
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS05**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	4	0.03	8.47	8.23
0.20	4	0.03	8.47	8.12
0.30	4	0.03	8.47	8.01
0.40	4	0.03	8.47	7.91
0.50	4	0.03	8.47	7.81
0.60	4	0.03	8.47	7.71
0.70	3	0.03	6.35	5.71
0.80	2	0.05	4.24	3.76
0.90	3	0.03	6.35	5.57
1.00	4	0.03	8.47	7.34
1.10	2	0.05	4.24	3.63
1.20	2	0.05	4.24	3.58
1.30	2	0.05	4.24	3.54
1.40	1	0.10	2.12	1.75
1.50	2	0.05	4.24	3.46
1.60	2	0.05	4.24	3.42
1.70	3	0.03	6.35	5.08
1.80	2	0.05	4.24	3.35
1.90	2	0.05	4.24	3.31
2.00	2	0.05	4.24	3.28
2.10	1	0.10	2.12	1.62
2.20	1	0.10	2.12	1.60
2.30	1	0.10	2.12	1.59
2.40	1	0.10	2.12	1.57
2.50	2	0.05	4.24	3.11
2.60	2	0.05	4.24	3.08
2.70	3	0.03	6.35	4.57
2.80	2	0.05	4.24	3.02
2.90	4	0.03	8.47	5.98
3.00	6	0.02	12.71	8.88
3.10	4	0.03	8.47	5.86
3.20	6	0.02	12.71	8.71
3.30	6	0.02	12.71	8.63
3.40	5	0.02	10.59	7.13
3.50	6	0.02	12.71	8.47
3.60	7	0.01	14.83	9.79
3.70	6	0.02	12.71	8.32
3.80	5	0.02	10.59	6.87
3.90	5	0.02	10.59	6.81
4.00	6	0.02	12.71	8.10
4.10	5	0.02	10.59	6.69
4.20	4	0.03	8.47	5.31
4.30	5	0.02	10.59	6.57
4.40	5	0.02	10.59	6.52
4.50	5	0.02	10.59	6.46
4.60	4	0.03	8.47	5.13
4.70	3	0.03	6.35	3.81
4.80	5	0.02	10.59	6.30
4.90	4	0.03	8.47	5.00
5.00	4	0.03	8.47	4.96



Notes:

Hammer Mass	63.5 kg
Fall Height	0.76 m
Cone Area	0.0019 m ²
E _{theor}	473 J
Energy Ratio	0.85
Anvil Mass	1 kg
Rod Mass	8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

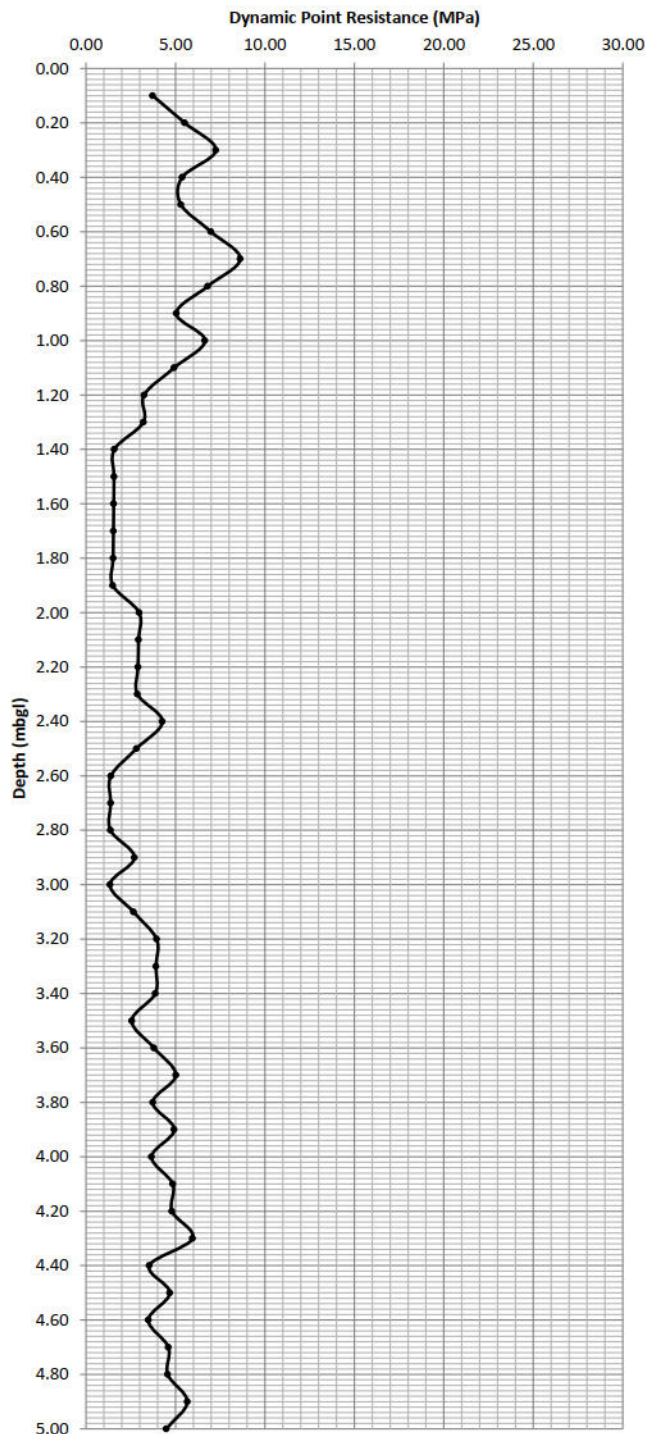
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference WS206

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	2	0.05	3.84	3.73
0.20	3	0.03	5.76	5.52
0.30	4	0.03	7.67	7.26
0.40	3	0.03	5.76	5.37
0.50	3	0.03	5.76	5.31
0.60	4	0.03	7.67	6.98
0.70	5	0.02	9.59	8.62
0.80	4	0.03	7.67	6.81
0.90	3	0.03	5.76	5.05
1.00	4	0.03	7.67	6.65
1.10	3	0.03	5.76	4.93
1.20	2	0.05	3.84	3.25
1.30	2	0.05	3.84	3.21
1.40	1	0.10	1.92	1.59
1.50	1	0.10	1.92	1.57
1.60	1	0.10	1.92	1.55
1.70	1	0.10	1.92	1.53
1.80	1	0.10	1.92	1.52
1.90	1	0.10	1.92	1.50
2.00	2	0.05	3.84	2.97
2.10	2	0.05	3.84	2.94
2.20	2	0.05	3.84	2.91
2.30	2	0.05	3.84	2.88
2.40	3	0.03	5.76	4.27
2.50	2	0.05	3.84	2.82
2.60	1	0.10	1.92	1.39
2.70	1	0.10	1.92	1.38
2.80	1	0.10	1.92	1.37
2.90	2	0.05	3.84	2.71
3.00	1	0.10	1.92	1.34
3.10	2	0.05	3.84	2.66
3.20	3	0.03	5.76	3.95
3.30	3	0.03	5.76	3.91
3.40	3	0.03	5.76	3.87
3.50	2	0.05	3.84	2.56
3.60	3	0.03	5.76	3.80
3.70	4	0.03	7.67	5.02
3.80	3	0.03	5.76	3.73
3.90	4	0.03	7.67	4.93
4.00	3	0.03	5.76	3.67
4.10	4	0.03	7.67	4.85
4.20	4	0.03	7.67	4.81
4.30	5	0.02	9.59	5.96
4.40	3	0.03	5.76	3.54
4.50	4	0.03	7.67	4.68
4.60	3	0.03	5.76	3.48
4.70	4	0.03	7.67	4.61
4.80	4	0.03	7.67	4.57
4.90	5	0.02	9.59	5.66
5.00	4	0.03	7.67	4.49



Notes:

Hammer Mass 63.5 kg
 Fall Height 0.76 m
 Cone Area 0.0019 m²
 E_{theor} 473 J
 Energy Ratio 0.77
 Anvil Mass 1 kg
 Rod Mass 8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

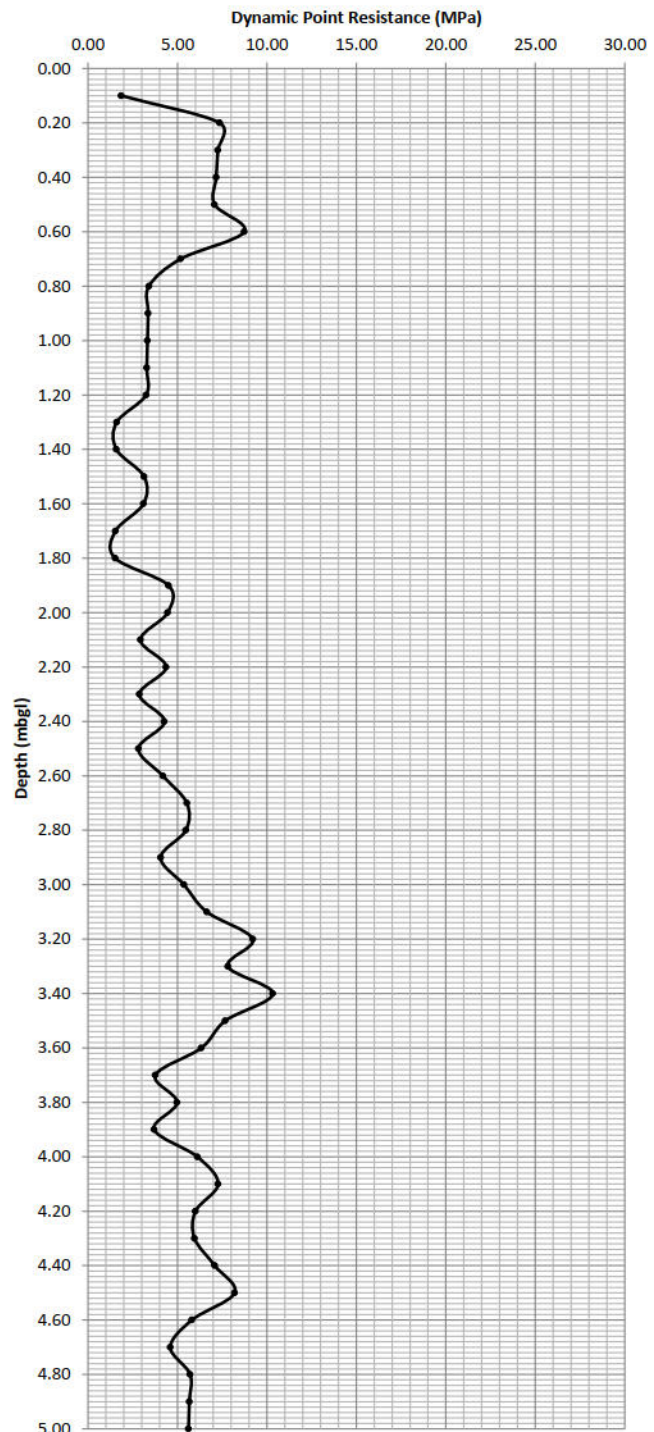
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS207**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	1	0.10	1.92	1.86
0.20	4	0.03	7.67	7.36
0.30	4	0.03	7.67	7.26
0.40	4	0.03	7.67	7.17
0.50	4	0.03	7.67	7.07
0.60	5	0.02	9.59	8.73
0.70	3	0.03	5.76	5.17
0.80	2	0.05	3.84	3.41
0.90	2	0.05	3.84	3.37
1.00	2	0.05	3.84	3.32
1.10	2	0.05	3.84	3.29
1.20	2	0.05	3.84	3.25
1.30	1	0.10	1.92	1.60
1.40	1	0.10	1.92	1.59
1.50	2	0.05	3.84	3.14
1.60	2	0.05	3.84	3.10
1.70	1	0.10	1.92	1.53
1.80	1	0.10	1.92	1.52
1.90	3	0.03	5.76	4.50
2.00	3	0.03	5.76	4.45
2.10	2	0.05	3.84	2.94
2.20	3	0.03	5.76	4.36
2.30	2	0.05	3.84	2.88
2.40	3	0.03	5.76	4.27
2.50	2	0.05	3.84	2.82
2.60	3	0.03	5.76	4.18
2.70	4	0.03	7.67	5.52
2.80	4	0.03	7.67	5.47
2.90	3	0.03	5.76	4.06
3.00	4	0.03	7.67	5.36
3.10	5	0.02	9.59	6.64
3.20	7	0.01	13.43	9.21
3.30	6	0.02	11.51	7.82
3.40	8	0.01	15.35	10.33
3.50	6	0.02	11.51	7.67
3.60	5	0.02	9.59	6.34
3.70	3	0.03	5.76	3.77
3.80	4	0.03	7.67	4.98
3.90	3	0.03	5.76	3.70
4.00	5	0.02	9.59	6.11
4.10	6	0.02	11.51	7.27
4.20	5	0.02	9.59	6.01
4.30	5	0.02	9.59	5.96
4.40	6	0.02	11.51	7.09
4.50	7	0.01	13.43	8.20
4.60	5	0.02	9.59	5.81
4.70	4	0.03	7.67	4.61
4.80	5	0.02	9.59	5.71
4.90	5	0.02	9.59	5.66
5.00	5	0.02	9.59	5.62



Notes:

Hammer Mass 63.5 kg
 Fall Height 0.76 m
 Cone Area 0.0019 m²
 E_{theor} 473 J
 Energy Ratio 0.77
 Anvil Mass 1 kg
 Rod Mass 8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

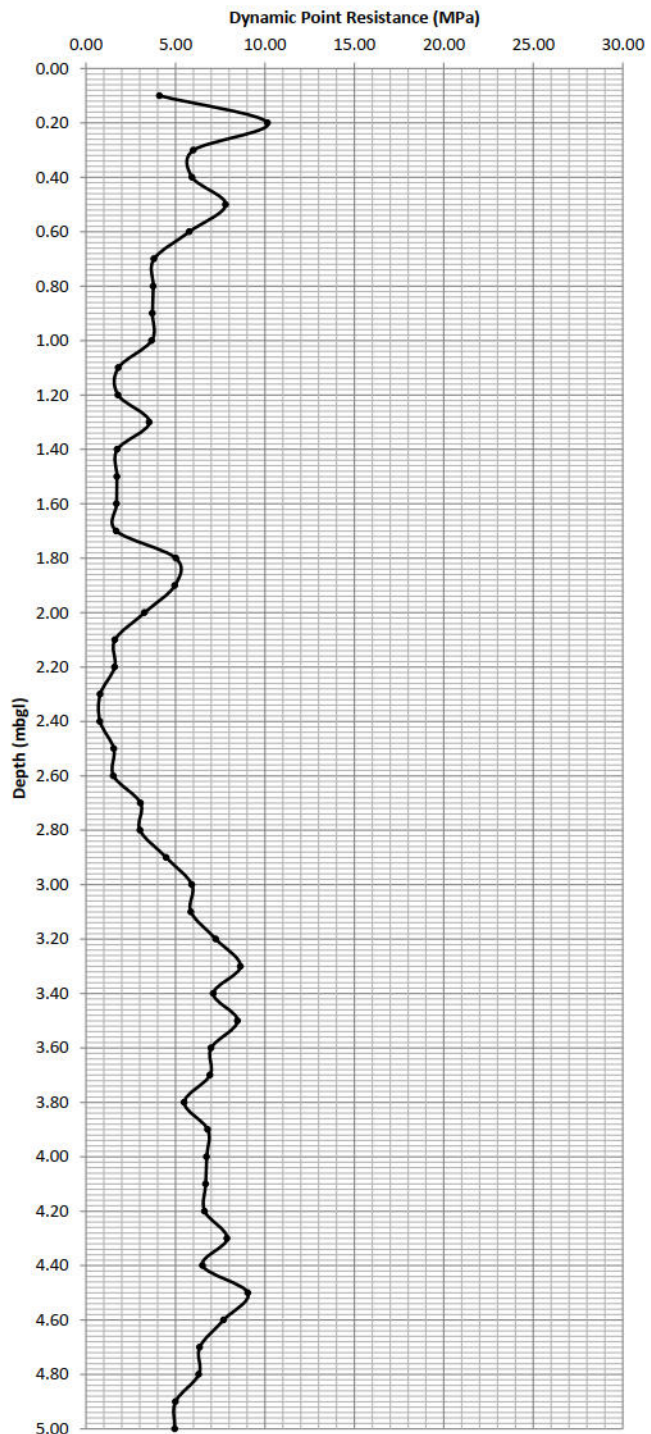
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS208**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	2	0.05	4.24	4.11
0.20	5	0.02	10.59	10.15
0.30	3	0.03	6.35	6.01
0.40	3	0.03	6.35	5.93
0.50	4	0.03	8.47	7.81
0.60	3	0.03	6.35	5.78
0.70	2	0.05	4.24	3.81
0.80	2	0.05	4.24	3.76
0.90	2	0.05	4.24	3.71
1.00	2	0.05	4.24	3.67
1.10	1	0.10	2.12	1.81
1.20	1	0.10	2.12	1.79
1.30	2	0.05	4.24	3.54
1.40	1	0.10	2.12	1.75
1.50	1	0.10	2.12	1.73
1.60	1	0.10	2.12	1.71
1.70	1	0.10	2.12	1.69
1.80	3	0.03	6.35	5.02
1.90	3	0.03	6.35	4.97
2.00	2	0.05	4.24	3.28
2.10	1	0.10	2.12	1.62
2.20	1	0.10	2.12	1.60
2.30	0.5	0.20	1.06	0.79
2.40	0.5	0.20	1.06	0.79
2.50	1	0.10	2.12	1.56
2.60	1	0.10	2.12	1.54
2.70	2	0.05	4.24	3.05
2.80	2	0.05	4.24	3.02
2.90	3	0.03	6.35	4.48
3.00	4	0.03	8.47	5.92
3.10	4	0.03	8.47	5.86
3.20	5	0.02	10.59	7.26
3.30	6	0.02	12.71	8.63
3.40	5	0.02	10.59	7.13
3.50	6	0.02	12.71	8.47
3.60	5	0.02	10.59	7.00
3.70	5	0.02	10.59	6.93
3.80	4	0.03	8.47	5.50
3.90	5	0.02	10.59	6.81
4.00	5	0.02	10.59	6.75
4.10	5	0.02	10.59	6.69
4.20	5	0.02	10.59	6.63
4.30	6	0.02	12.71	7.89
4.40	5	0.02	10.59	6.52
4.50	7	0.01	14.83	9.05
4.60	6	0.02	12.71	7.69
4.70	5	0.02	10.59	6.36
4.80	5	0.02	10.59	6.30
4.90	4	0.03	8.47	5.00
5.00	4	0.03	8.47	4.96



Notes:

Hammer Mass 63.5 kg
 Fall Height 0.76 m
 Cone Area 0.0019 m²
 E_{theor} 473 J
 Energy Ratio 0.85
 Anvil Mass 1 kg
 Rod Mass 8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

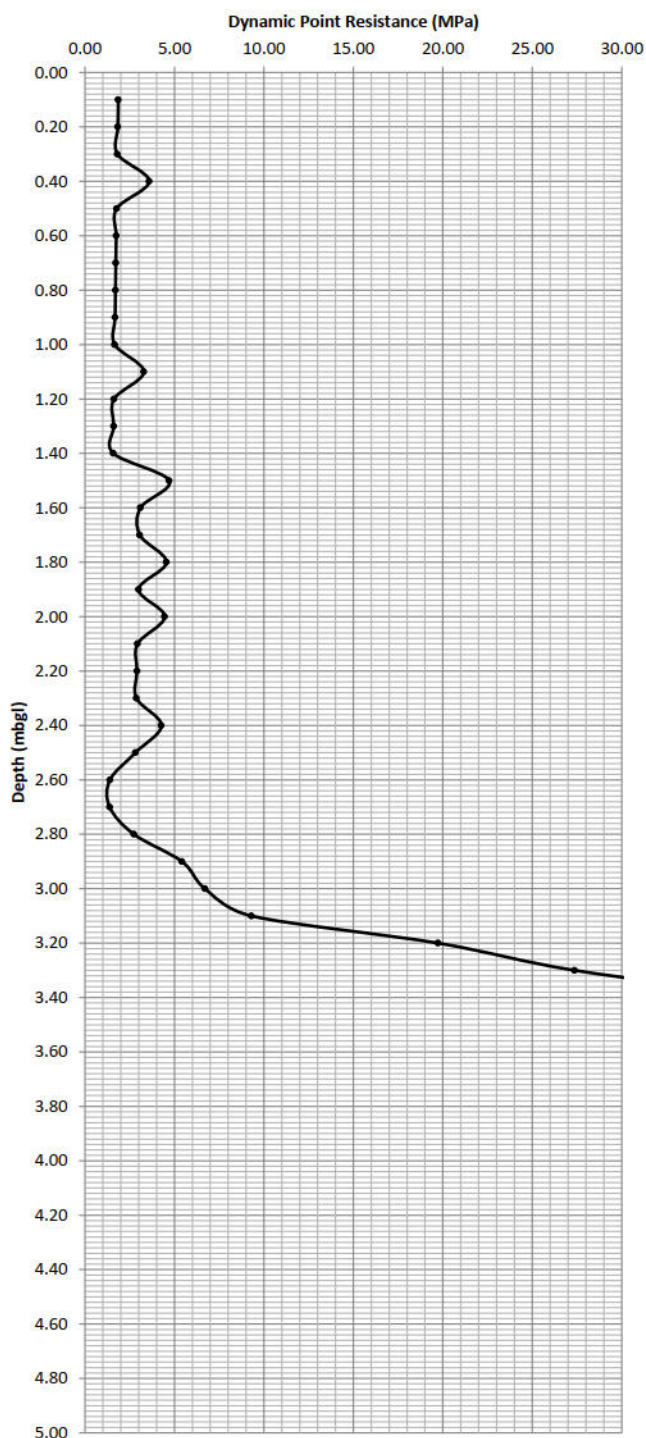
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference WS209

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	1	0.10	1.92	1.86
0.20	1	0.10	1.92	1.84
0.30	1	0.10	1.92	1.81
0.40	2	0.05	3.84	3.58
0.50	1	0.10	1.92	1.77
0.60	1	0.10	1.92	1.75
0.70	1	0.10	1.92	1.72
0.80	1	0.10	1.92	1.70
0.90	1	0.10	1.92	1.68
1.00	1	0.10	1.92	1.66
1.10	2	0.05	3.84	3.29
1.20	1	0.10	1.92	1.62
1.30	1	0.10	1.92	1.60
1.40	1	0.10	1.92	1.59
1.50	3	0.03	5.76	4.71
1.60	2	0.05	3.84	3.10
1.70	2	0.05	3.84	3.07
1.80	3	0.03	5.76	4.55
1.90	2	0.05	3.84	3.00
2.00	3	0.03	5.76	4.45
2.10	2	0.05	3.84	2.94
2.20	2	0.05	3.84	2.91
2.30	2	0.05	3.84	2.88
2.40	3	0.03	5.76	4.27
2.50	2	0.05	3.84	2.82
2.60	1	0.10	1.92	1.39
2.70	1	0.10	1.92	1.38
2.80	2	0.05	3.84	2.73
2.90	4	0.03	7.67	5.42
3.00	5	0.02	9.59	6.70
3.10	7	0.01	13.43	9.30
3.20	15	0.01	28.78	19.73
3.30	21	0.00	40.29	27.37
3.40	30	0.00	57.56	38.73
3.50				
3.60				
3.70				
3.80				
3.90				
4.00				
4.10				
4.20				
4.30				
4.40				
4.50				
4.60				
4.70				
4.80				
4.90				
5.00				



Notes:

No further progress below 3.40m depth - Hammer Bouncing

Hammer Mass	63.5 kg
Fall Height	0.76 m
Cone Area	0.0019 m ²
E _{theor}	473 J
Energy Ratio	0.77
Anvil Mass	1 kg
Rod Mass	8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

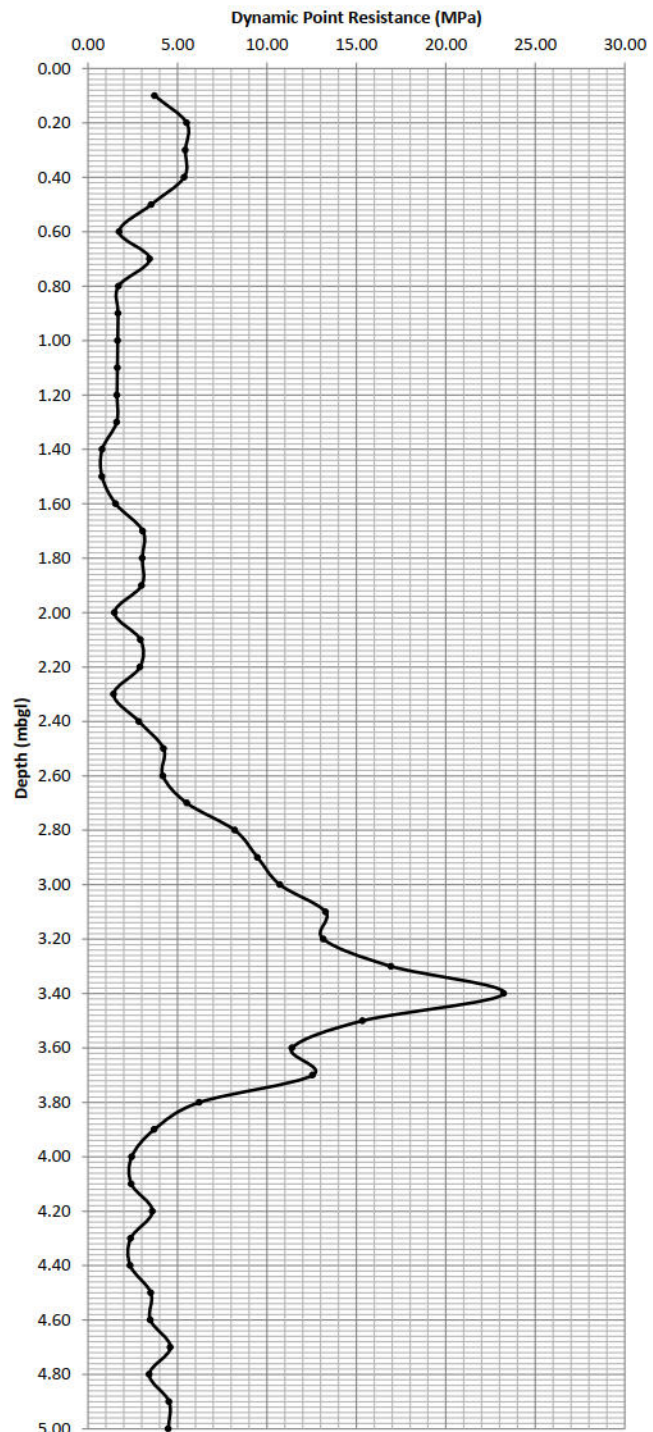
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS210**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	2	0.05	3.84	3.73
0.20	3	0.03	5.76	5.52
0.30	3	0.03	5.76	5.44
0.40	3	0.03	5.76	5.37
0.50	2	0.05	3.84	3.54
0.60	1	0.10	1.92	1.75
0.70	2	0.05	3.84	3.45
0.80	1	0.10	1.92	1.70
0.90	1	0.10	1.92	1.68
1.00	1	0.10	1.92	1.66
1.10	1	0.10	1.92	1.64
1.20	1	0.10	1.92	1.62
1.30	1	0.10	1.92	1.60
1.40	0.5	0.20	0.96	0.79
1.50	0.5	0.20	0.96	0.78
1.60	1	0.10	1.92	1.55
1.70	2	0.05	3.84	3.07
1.80	2	0.05	3.84	3.03
1.90	2	0.05	3.84	3.00
2.00	1	0.10	1.92	1.48
2.10	2	0.05	3.84	2.94
2.20	2	0.05	3.84	2.91
2.30	1	0.10	1.92	1.44
2.40	2	0.05	3.84	2.85
2.50	3	0.03	5.76	4.23
2.60	3	0.03	5.76	4.18
2.70	4	0.03	7.67	5.52
2.80	6	0.02	11.51	8.20
2.90	7	0.01	13.43	9.48
3.00	8	0.01	15.35	10.73
3.10	10	0.01	19.19	13.28
3.20	10	0.01	19.19	13.16
3.30	13	0.01	24.94	16.94
3.40	18	0.01	34.54	23.24
3.50	12	0.01	23.02	15.35
3.60	9	0.01	17.27	11.41
3.70	10	0.01	19.19	12.56
3.80	5	0.02	9.59	6.22
3.90	3	0.03	5.76	3.70
4.00	2	0.05	3.84	2.45
4.10	2	0.05	3.84	2.42
4.20	3	0.03	5.76	3.60
4.30	2	0.05	3.84	2.38
4.40	2	0.05	3.84	2.36
4.50	3	0.03	5.76	3.51
4.60	3	0.03	5.76	3.48
4.70	4	0.03	7.67	4.61
4.80	3	0.03	5.76	3.43
4.90	4	0.03	7.67	4.53
5.00	4	0.03	7.67	4.49



Notes:

Hammer Mass 63.5 kg
 Fall Height 0.76 m
 Cone Area 0.0019 m²
 E_{theor} 473 J
 Energy Ratio 0.77
 Anvil Mass 1 kg
 Rod Mass 8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

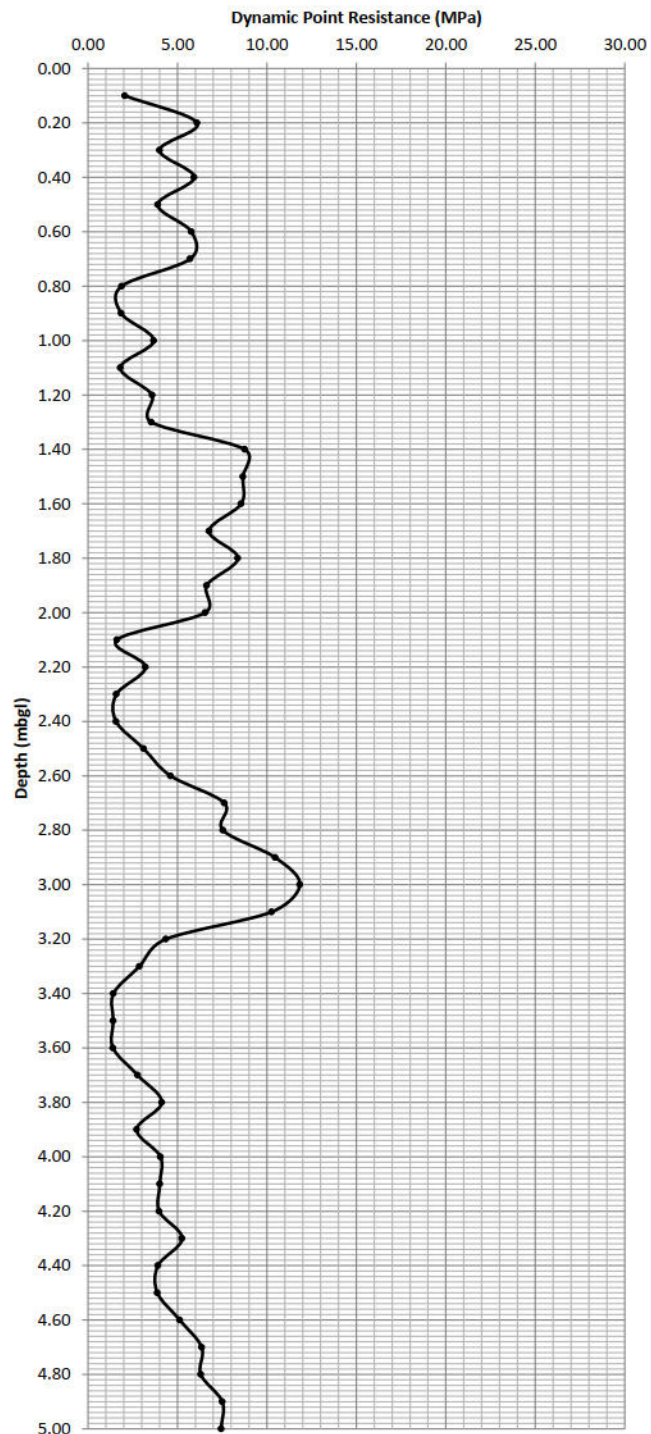
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS211**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	1	0.10	2.12	2.06
0.20	3	0.03	6.35	6.09
0.30	2	0.05	4.24	4.01
0.40	3	0.03	6.35	5.93
0.50	2	0.05	4.24	3.90
0.60	3	0.03	6.35	5.78
0.70	3	0.03	6.35	5.71
0.80	1	0.10	2.12	1.88
0.90	1	0.10	2.12	1.86
1.00	2	0.05	4.24	3.67
1.10	1	0.10	2.12	1.81
1.20	2	0.05	4.24	3.58
1.30	2	0.05	4.24	3.54
1.40	5	0.02	10.59	8.76
1.50	5	0.02	10.59	8.66
1.60	5	0.02	10.59	8.56
1.70	4	0.03	8.47	6.77
1.80	5	0.02	10.59	8.37
1.90	4	0.03	8.47	6.63
2.00	4	0.03	8.47	6.55
2.10	1	0.10	2.12	1.62
2.20	2	0.05	4.24	3.21
2.30	1	0.10	2.12	1.59
2.40	1	0.10	2.12	1.57
2.50	2	0.05	4.24	3.11
2.60	3	0.03	6.35	4.62
2.70	5	0.02	10.59	7.62
2.80	5	0.02	10.59	7.55
2.90	7	0.01	14.83	10.46
3.00	8	0.01	16.94	11.84
3.10	7	0.01	14.83	10.26
3.20	3	0.03	6.35	4.36
3.30	2	0.05	4.24	2.88
3.40	1	0.10	2.12	1.43
3.50	1	0.10	2.12	1.41
3.60	1	0.10	2.12	1.40
3.70	2	0.05	4.24	2.77
3.80	3	0.03	6.35	4.12
3.90	2	0.05	4.24	2.72
4.00	3	0.03	6.35	4.05
4.10	3	0.03	6.35	4.01
4.20	3	0.03	6.35	3.98
4.30	4	0.03	8.47	5.26
4.40	3	0.03	6.35	3.91
4.50	3	0.03	6.35	3.88
4.60	4	0.03	8.47	5.13
4.70	5	0.02	10.59	6.36
4.80	5	0.02	10.59	6.30
4.90	6	0.02	12.71	7.50
5.00	6	0.02	12.71	7.44



Notes:

Hammer Mass 63.5 kg
 Fall Height 0.76 m
 Cone Area 0.0019 m²
 E_{theor} 473 J
 Energy Ratio 0.85
 Anvil Mass 1 kg
 Rod Mass 8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

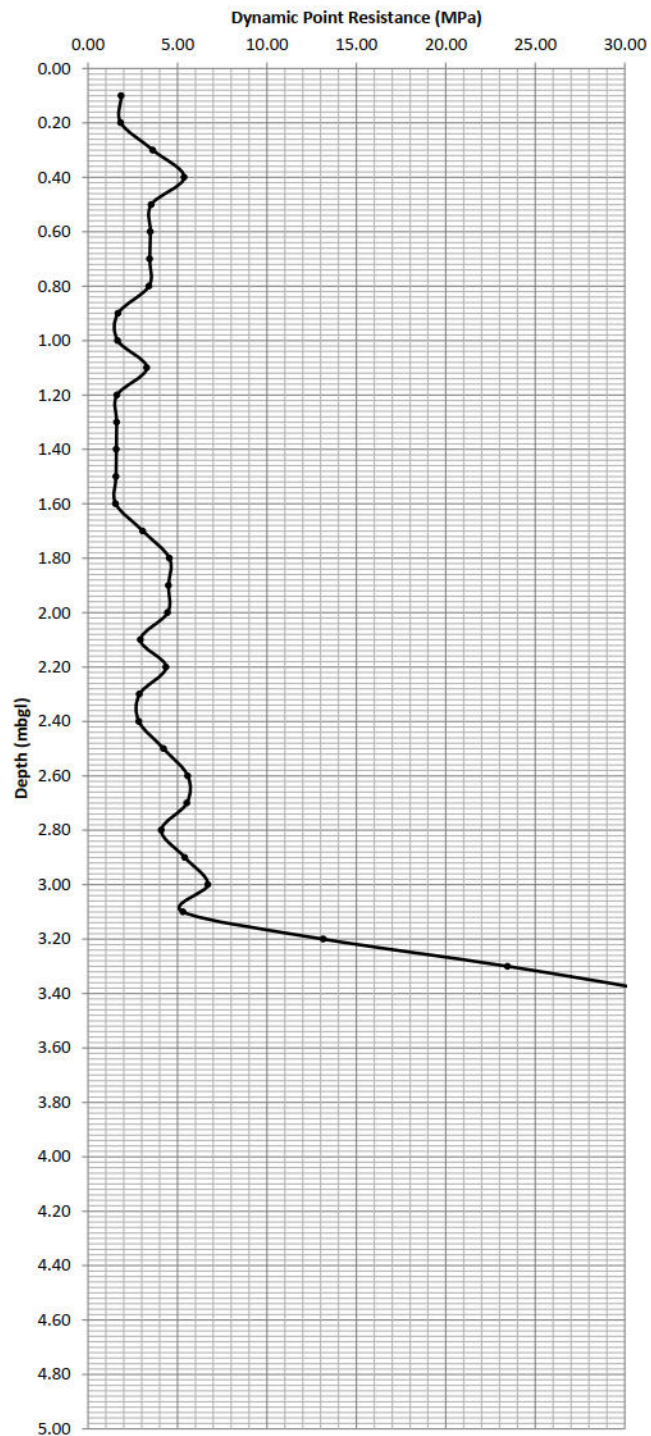
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS212**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	1	0.10	1.92	1.86
0.20	1	0.10	1.92	1.84
0.30	2	0.05	3.84	3.63
0.40	3	0.03	5.76	5.37
0.50	2	0.05	3.84	3.54
0.60	2	0.05	3.84	3.49
0.70	2	0.05	3.84	3.45
0.80	2	0.05	3.84	3.41
0.90	1	0.10	1.92	1.68
1.00	1	0.10	1.92	1.66
1.10	2	0.05	3.84	3.29
1.20	1	0.10	1.92	1.62
1.30	1	0.10	1.92	1.60
1.40	1	0.10	1.92	1.59
1.50	1	0.10	1.92	1.57
1.60	1	0.10	1.92	1.55
1.70	2	0.05	3.84	3.07
1.80	3	0.03	5.76	4.55
1.90	3	0.03	5.76	4.50
2.00	3	0.03	5.76	4.45
2.10	2	0.05	3.84	2.94
2.20	3	0.03	5.76	4.36
2.30	2	0.05	3.84	2.88
2.40	2	0.05	3.84	2.85
2.50	3	0.03	5.76	4.23
2.60	4	0.03	7.67	5.58
2.70	4	0.03	7.67	5.52
2.80	3	0.03	5.76	4.10
2.90	4	0.03	7.67	5.42
3.00	5	0.02	9.59	6.70
3.10	4	0.03	7.67	5.31
3.20	10	0.01	19.19	13.16
3.30	18	0.01	34.54	23.46
3.40	25	0.00	47.97	32.28
3.50	30	0.00	57.56	38.37
3.60				
3.70				
3.80				
3.90				
4.00				
4.10				
4.20				
4.30				
4.40				
4.50				
4.60				
4.70				
4.80				
4.90				
5.00				



Notes:

No further progress below 3.50m - Hammer Bouncing

Hammer Mass	63.5 kg
Fall Height	0.76 m
Cone Area	0.0019 m ²
E _{theor}	473 J
Energy Ratio	0.77
Anvil Mass	1 kg
Rod Mass	8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

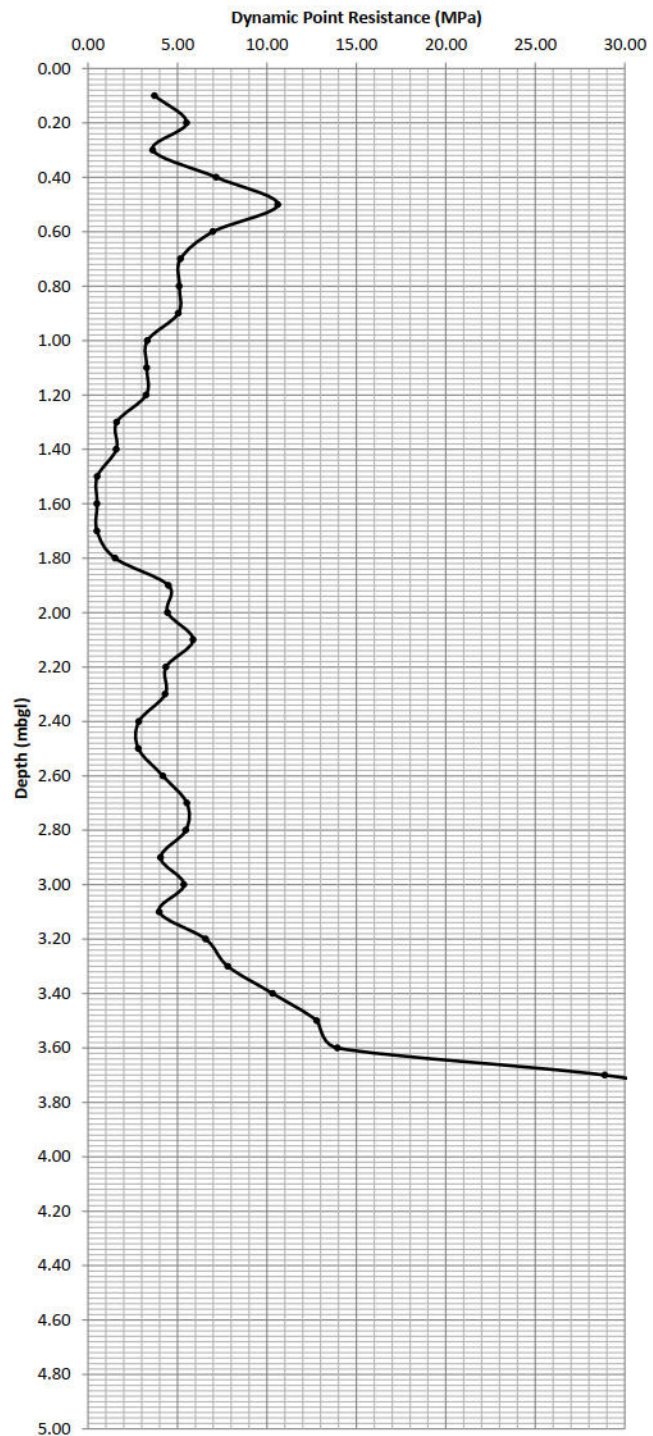
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS213**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	2	0.05	3.84	3.73
0.20	3	0.03	5.76	5.52
0.30	2	0.05	3.84	3.63
0.40	4	0.03	7.67	7.17
0.50	6	0.02	11.51	10.61
0.60	4	0.03	7.67	6.98
0.70	3	0.03	5.76	5.17
0.80	3	0.03	5.76	5.11
0.90	3	0.03	5.76	5.05
1.00	2	0.05	3.84	3.32
1.10	2	0.05	3.84	3.29
1.20	2	0.05	3.84	3.25
1.30	1	0.10	1.92	1.60
1.40	1	0.10	1.92	1.59
1.50	0.33	0.30	0.63	0.52
1.60	0.33	0.30	0.63	0.51
1.70	0.33	0.30	0.63	0.51
1.80	1	0.10	1.92	1.52
1.90	3	0.03	5.76	4.50
2.00	3	0.03	5.76	4.45
2.10	4	0.03	7.67	5.88
2.20	3	0.03	5.76	4.36
2.30	3	0.03	5.76	4.31
2.40	2	0.05	3.84	2.85
2.50	2	0.05	3.84	2.82
2.60	3	0.03	5.76	4.18
2.70	4	0.03	7.67	5.52
2.80	4	0.03	7.67	5.47
2.90	3	0.03	5.76	4.06
3.00	4	0.03	7.67	5.36
3.10	3	0.03	5.76	3.98
3.20	5	0.02	9.59	6.58
3.30	6	0.02	11.51	7.82
3.40	8	0.01	15.35	10.33
3.50	10	0.01	19.19	12.79
3.60	11	0.01	21.11	13.94
3.70	23	0.00	44.13	28.89
3.80	30	0.00	57.56	37.34
3.90				
4.00				
4.10				
4.20				
4.30				
4.40				
4.50				
4.60				
4.70				
4.80				
4.90				
5.00				



Notes:

No further progress below 3.80m depth - Hammer Bouncing

Hammer Mass	63.5 kg
Fall Height	0.76 m
Cone Area	0.0019 m ²
E _{theor}	473 J
Energy Ratio	0.77
Anvil Mass	1 kg
Rod Mass	8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

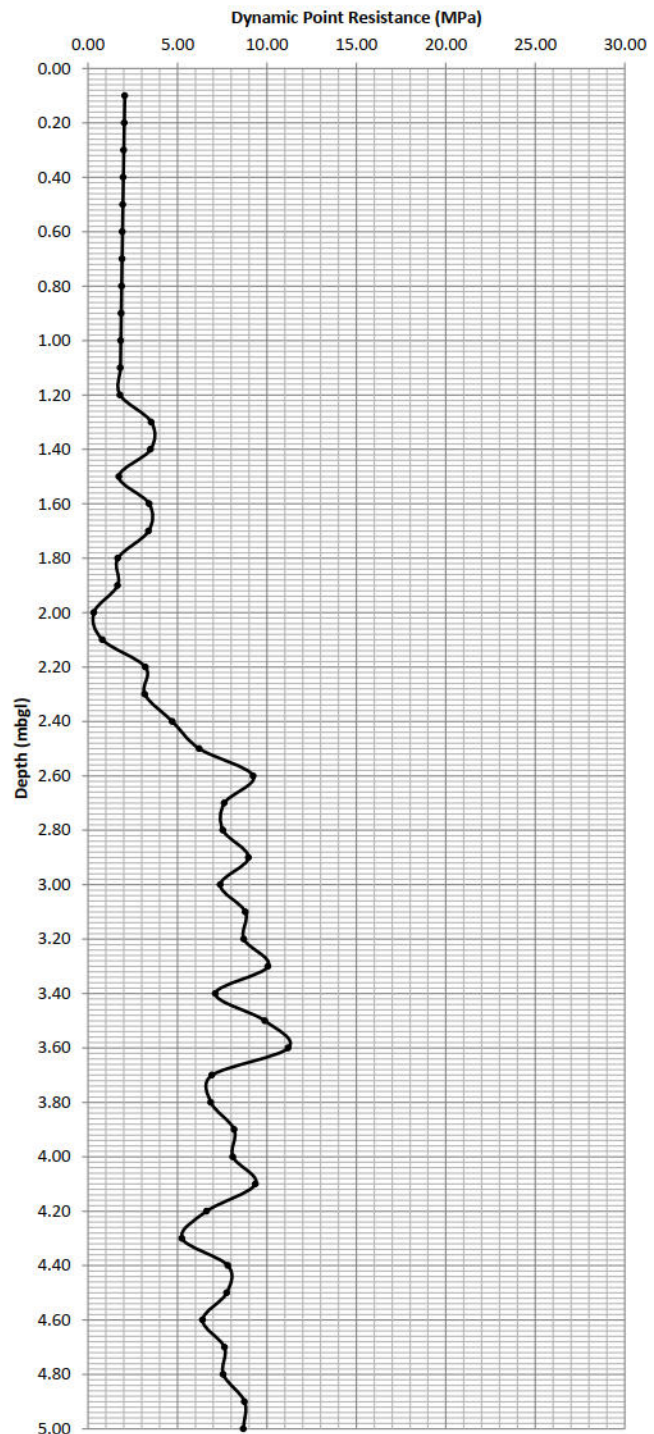
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS214**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	1	0.10	2.12	2.06
0.20	1	0.10	2.12	2.03
0.30	1	0.10	2.12	2.00
0.40	1	0.10	2.12	1.98
0.50	1	0.10	2.12	1.95
0.60	1	0.10	2.12	1.93
0.70	1	0.10	2.12	1.90
0.80	1	0.10	2.12	1.88
0.90	1	0.10	2.12	1.86
1.00	1	0.10	2.12	1.84
1.10	1	0.10	2.12	1.81
1.20	1	0.10	2.12	1.79
1.30	2	0.05	4.24	3.54
1.40	2	0.05	4.24	3.50
1.50	1	0.10	2.12	1.73
1.60	2	0.05	4.24	3.42
1.70	2	0.05	4.24	3.39
1.80	1	0.10	2.12	1.67
1.90	1	0.10	2.12	1.66
2.00	0.2	0.50	0.42	0.33
2.10	0.5	0.20	1.06	0.81
2.20	2	0.05	4.24	3.21
2.30	2	0.05	4.24	3.18
2.40	3	0.03	6.35	4.71
2.50	4	0.03	8.47	6.22
2.60	6	0.02	12.71	9.24
2.70	5	0.02	10.59	7.62
2.80	5	0.02	10.59	7.55
2.90	6	0.02	12.71	8.97
3.00	5	0.02	10.59	7.40
3.10	6	0.02	12.71	8.80
3.20	6	0.02	12.71	8.71
3.30	7	0.01	14.83	10.07
3.40	5	0.02	10.59	7.13
3.50	7	0.01	14.83	9.88
3.60	8	0.01	16.94	11.19
3.70	5	0.02	10.59	6.93
3.80	5	0.02	10.59	6.87
3.90	6	0.02	12.71	8.17
4.00	6	0.02	12.71	8.10
4.10	7	0.01	14.83	9.37
4.20	5	0.02	10.59	6.63
4.30	4	0.03	8.47	5.26
4.40	6	0.02	12.71	7.82
4.50	6	0.02	12.71	7.76
4.60	5	0.02	10.59	6.41
4.70	6	0.02	12.71	7.63
4.80	6	0.02	12.71	7.57
4.90	7	0.01	14.83	8.75
5.00	7	0.01	14.83	8.68



Notes:

Hammer Mass	63.5 kg
Fall Height	0.76 m
Cone Area	0.0019 m ²
E _{theor}	473 J
Energy Ratio	0.85
Anvil Mass	1 kg
Rod Mass	8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

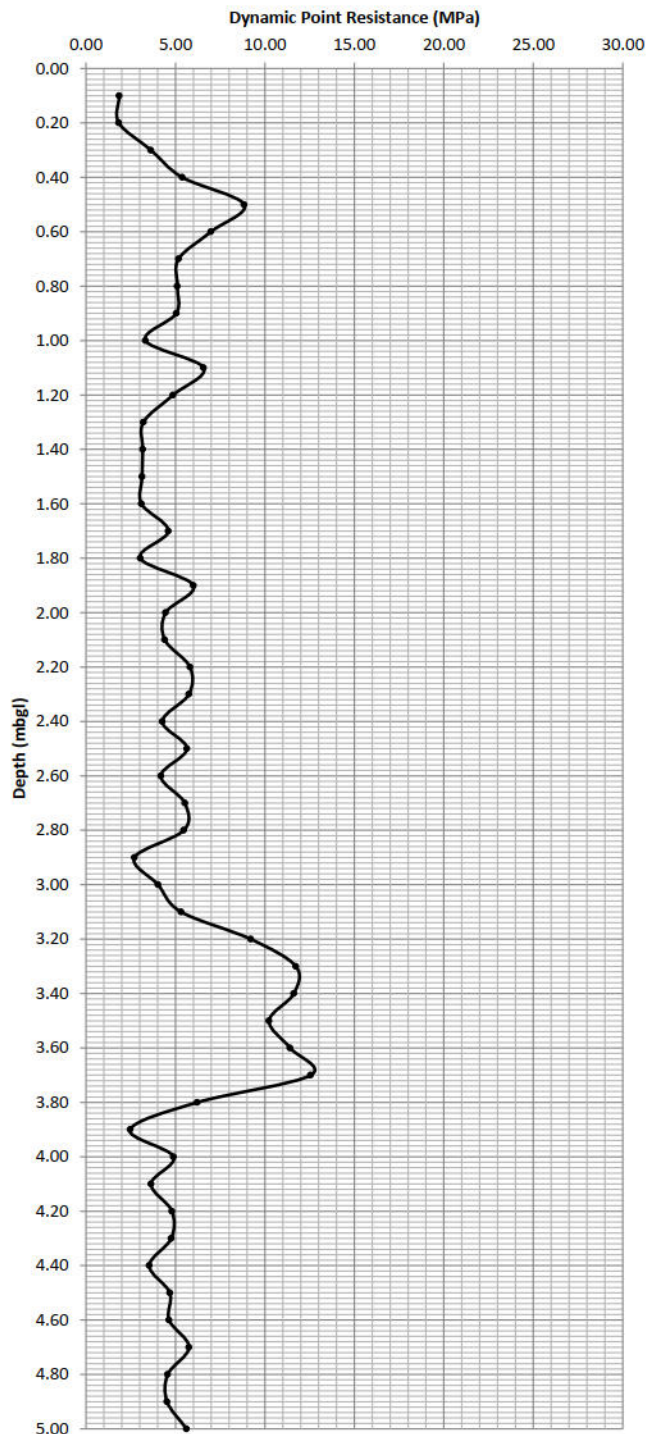
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS215**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	1	0.10	1.92	1.86
0.20	1	0.10	1.92	1.84
0.30	2	0.05	3.84	3.63
0.40	3	0.03	5.76	5.37
0.50	5	0.02	9.59	8.84
0.60	4	0.03	7.67	6.98
0.70	3	0.03	5.76	5.17
0.80	3	0.03	5.76	5.11
0.90	3	0.03	5.76	5.05
1.00	2	0.05	3.84	3.32
1.10	4	0.03	7.67	6.57
1.20	3	0.03	5.76	4.87
1.30	2	0.05	3.84	3.21
1.40	2	0.05	3.84	3.17
1.50	2	0.05	3.84	3.14
1.60	2	0.05	3.84	3.10
1.70	3	0.03	5.76	4.60
1.80	2	0.05	3.84	3.03
1.90	4	0.03	7.67	6.00
2.00	3	0.03	5.76	4.45
2.10	3	0.03	5.76	4.41
2.20	4	0.03	7.67	5.81
2.30	4	0.03	7.67	5.75
2.40	3	0.03	5.76	4.27
2.50	4	0.03	7.67	5.64
2.60	3	0.03	5.76	4.18
2.70	4	0.03	7.67	5.52
2.80	4	0.03	7.67	5.47
2.90	2	0.05	3.84	2.71
3.00	3	0.03	5.76	4.02
3.10	4	0.03	7.67	5.31
3.20	7	0.01	13.43	9.21
3.30	9	0.01	17.27	11.73
3.40	9	0.01	17.27	11.62
3.50	8	0.01	15.35	10.23
3.60	9	0.01	17.27	11.41
3.70	10	0.01	19.19	12.56
3.80	5	0.02	9.59	6.22
3.90	2	0.05	3.84	2.47
4.00	4	0.03	7.67	4.89
4.10	3	0.03	5.76	3.64
4.20	4	0.03	7.67	4.81
4.30	4	0.03	7.67	4.76
4.40	3	0.03	5.76	3.54
4.50	4	0.03	7.67	4.68
4.60	4	0.03	7.67	4.65
4.70	5	0.02	9.59	5.76
4.80	4	0.03	7.67	4.57
4.90	4	0.03	7.67	4.53
5.00	5	0.02	9.59	5.62



Notes:

Hammer Mass 63.5 kg
 Fall Height 0.76 m
 Cone Area 0.0019 m²
 E_{theor} 473 J
 Energy Ratio 0.77
 Anvil Mass 1 kg
 Rod Mass 8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

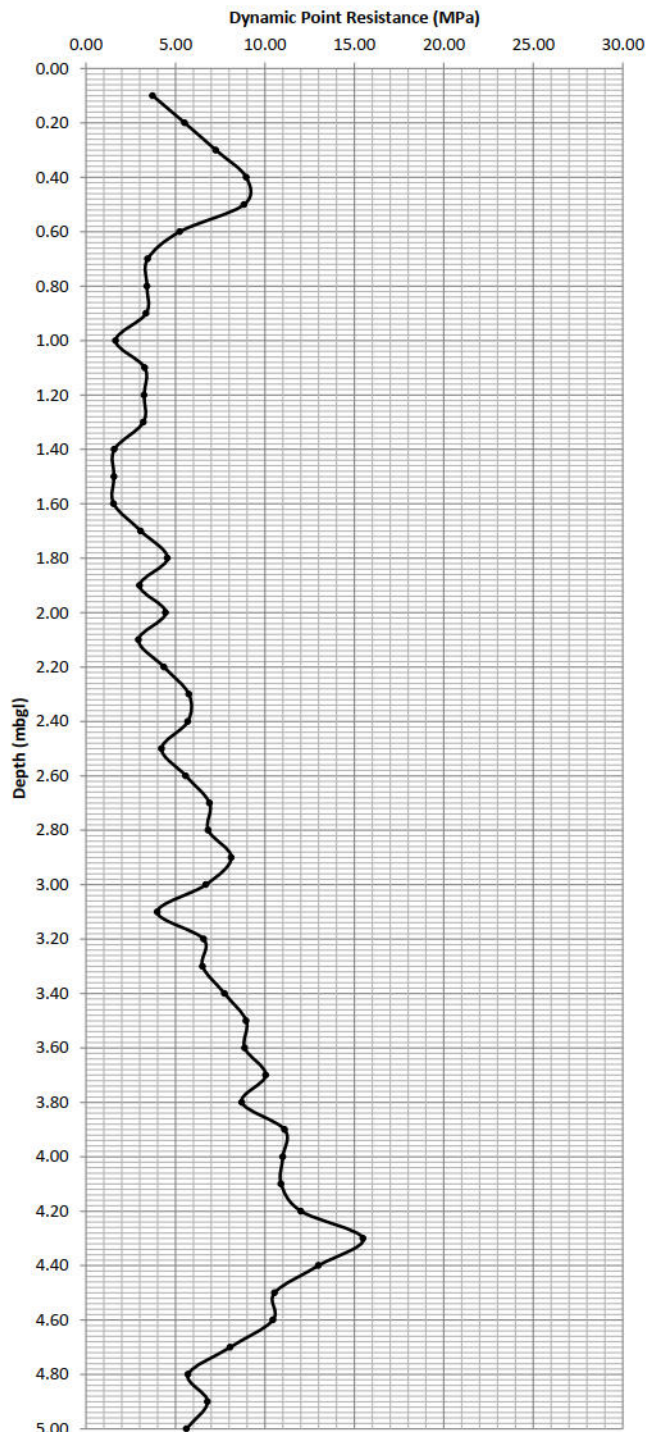
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS216**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	2	0.05	3.84	3.73
0.20	3	0.03	5.76	5.52
0.30	4	0.03	7.67	7.26
0.40	5	0.02	9.59	8.96
0.50	5	0.02	9.59	8.84
0.60	3	0.03	5.76	5.24
0.70	2	0.05	3.84	3.45
0.80	2	0.05	3.84	3.41
0.90	2	0.05	3.84	3.37
1.00	1	0.10	1.92	1.66
1.10	2	0.05	3.84	3.29
1.20	2	0.05	3.84	3.25
1.30	2	0.05	3.84	3.21
1.40	1	0.10	1.92	1.59
1.50	1	0.10	1.92	1.57
1.60	1	0.10	1.92	1.55
1.70	2	0.05	3.84	3.07
1.80	3	0.03	5.76	4.55
1.90	2	0.05	3.84	3.00
2.00	3	0.03	5.76	4.45
2.10	2	0.05	3.84	2.94
2.20	3	0.03	5.76	4.36
2.30	4	0.03	7.67	5.75
2.40	4	0.03	7.67	5.69
2.50	3	0.03	5.76	4.23
2.60	4	0.03	7.67	5.58
2.70	5	0.02	9.59	6.91
2.80	5	0.02	9.59	6.84
2.90	6	0.02	11.51	8.12
3.00	5	0.02	9.59	6.70
3.10	3	0.03	5.76	3.98
3.20	5	0.02	9.59	6.58
3.30	5	0.02	9.59	6.52
3.40	6	0.02	11.51	7.75
3.50	7	0.01	13.43	8.95
3.60	7	0.01	13.43	8.87
3.70	8	0.01	15.35	10.05
3.80	7	0.01	13.43	8.71
3.90	9	0.01	17.27	11.10
4.00	9	0.01	17.27	11.00
4.10	9	0.01	17.27	10.91
4.20	10	0.01	19.19	12.02
4.30	13	0.01	24.94	15.49
4.40	11	0.01	21.11	12.99
4.50	9	0.01	17.27	10.54
4.60	9	0.01	17.27	10.45
4.70	7	0.01	13.43	8.06
4.80	5	0.02	9.59	5.71
4.90	6	0.02	11.51	6.80
5.00	5	0.02	9.59	5.62



Notes:

Hammer Mass 63.5 kg
 Fall Height 0.76 m
 Cone Area 0.0019 m²
 E_{theor} 473 J
 Energy Ratio 0.77
 Anvil Mass 1 kg
 Rod Mass 8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

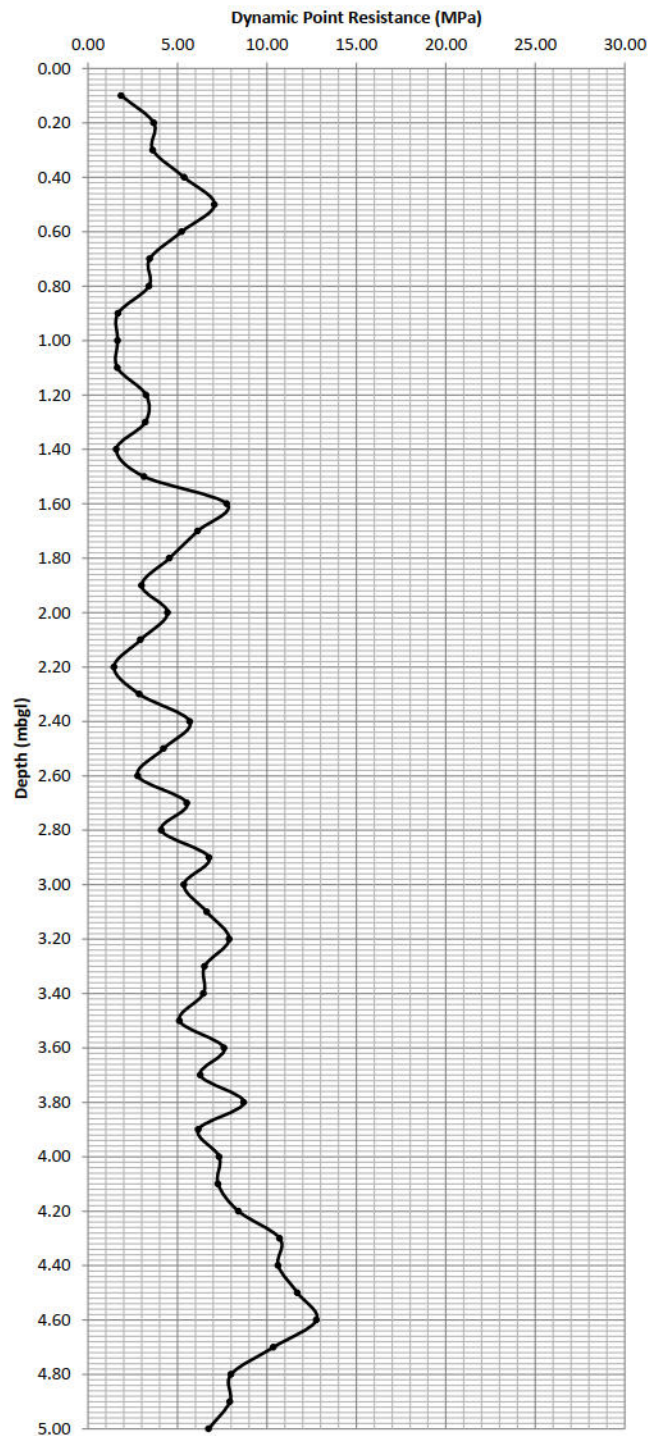
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS04**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	1	0.10	1.92	1.86
0.20	2	0.05	3.84	3.68
0.30	2	0.05	3.84	3.63
0.40	3	0.03	5.76	5.37
0.50	4	0.03	7.67	7.07
0.60	3	0.03	5.76	5.24
0.70	2	0.05	3.84	3.45
0.80	2	0.05	3.84	3.41
0.90	1	0.10	1.92	1.68
1.00	1	0.10	1.92	1.66
1.10	1	0.10	1.92	1.64
1.20	2	0.05	3.84	3.25
1.30	2	0.05	3.84	3.21
1.40	1	0.10	1.92	1.59
1.50	2	0.05	3.84	3.14
1.60	5	0.02	9.59	7.75
1.70	4	0.03	7.67	6.14
1.80	3	0.03	5.76	4.55
1.90	2	0.05	3.84	3.00
2.00	3	0.03	5.76	4.45
2.10	2	0.05	3.84	2.94
2.20	1	0.10	1.92	1.45
2.30	2	0.05	3.84	2.88
2.40	4	0.03	7.67	5.69
2.50	3	0.03	5.76	4.23
2.60	2	0.05	3.84	2.79
2.70	4	0.03	7.67	5.52
2.80	3	0.03	5.76	4.10
2.90	5	0.02	9.59	6.77
3.00	4	0.03	7.67	5.36
3.10	5	0.02	9.59	6.64
3.20	6	0.02	11.51	7.89
3.30	5	0.02	9.59	6.52
3.40	5	0.02	9.59	6.46
3.50	4	0.03	7.67	5.12
3.60	6	0.02	11.51	7.60
3.70	5	0.02	9.59	6.28
3.80	7	0.01	13.43	8.71
3.90	5	0.02	9.59	6.17
4.00	6	0.02	11.51	7.34
4.10	6	0.02	11.51	7.27
4.20	7	0.01	13.43	8.41
4.30	9	0.01	17.27	10.72
4.40	9	0.01	17.27	10.63
4.50	10	0.01	19.19	11.71
4.60	11	0.01	21.11	12.77
4.70	9	0.01	17.27	10.36
4.80	7	0.01	13.43	8.00
4.90	7	0.01	13.43	7.93
5.00	6	0.02	11.51	6.74



Notes:

Hammer Mass 63.5 kg
 Fall Height 0.76 m
 Cone Area 0.0019 m²
 E_{theor} 473 J
 Energy Ratio 0.77
 Anvil Mass 1 kg
 Rod Mass 8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

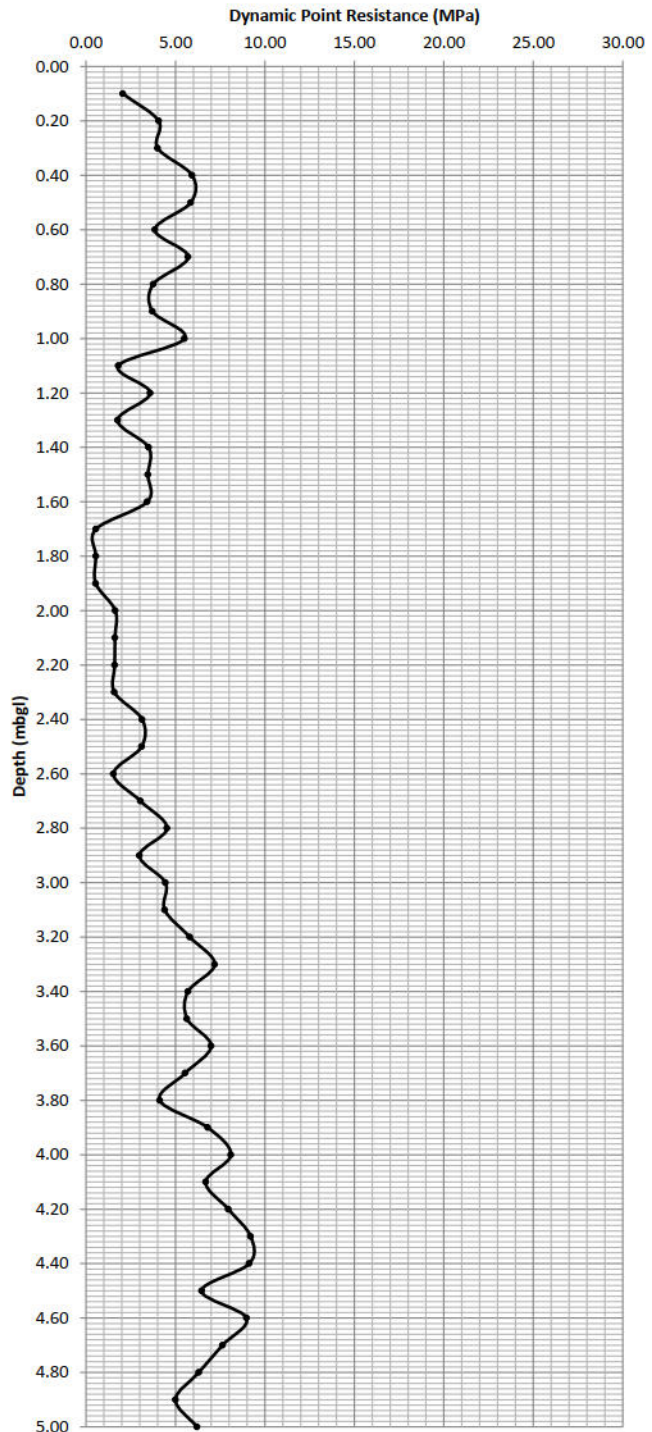
Dynamic Probe Record

SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference		WS218		
Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	1	0.10	2.12	2.06
0.20	2	0.05	4.24	4.06
0.30	2	0.05	4.24	4.01
0.40	3	0.03	6.35	5.93
0.50	3	0.03	6.35	5.86
0.60	2	0.05	4.24	3.86
0.70	3	0.03	6.35	5.71
0.80	2	0.05	4.24	3.76
0.90	2	0.05	4.24	3.71
1.00	3	0.03	6.35	5.51
1.10	1	0.10	2.12	1.81
1.20	2	0.05	4.24	3.58
1.30	1	0.10	2.12	1.77
1.40	2	0.05	4.24	3.50
1.50	2	0.05	4.24	3.46
1.60	2	0.05	4.24	3.42
1.70	0.33	0.30	0.70	0.56
1.80	0.33	0.30	0.70	0.55
1.90	0.33	0.30	0.70	0.55
2.00	1	0.10	2.12	1.64
2.10	1	0.10	2.12	1.62
2.20	1	0.10	2.12	1.60
2.30	1	0.10	2.12	1.59
2.40	2	0.05	4.24	3.14
2.50	2	0.05	4.24	3.11
2.60	1	0.10	2.12	1.54
2.70	2	0.05	4.24	3.05
2.80	3	0.03	6.35	4.53
2.90	2	0.05	4.24	2.99
3.00	3	0.03	6.35	4.44
3.10	3	0.03	6.35	4.40
3.20	4	0.03	8.47	5.81
3.30	5	0.02	10.59	7.19
3.40	4	0.03	8.47	5.70
3.50	4	0.03	8.47	5.65
3.60	5	0.02	10.59	7.00
3.70	4	0.03	8.47	5.55
3.80	3	0.03	6.35	4.12
3.90	5	0.02	10.59	6.81
4.00	6	0.02	12.71	8.10
4.10	5	0.02	10.59	6.69
4.20	6	0.02	12.71	7.96
4.30	7	0.01	14.83	9.20
4.40	7	0.01	14.83	9.13
4.50	5	0.02	10.59	6.46
4.60	7	0.01	14.83	8.97
4.70	6	0.02	12.71	7.63
4.80	5	0.02	10.59	6.30
4.90	4	0.03	8.47	5.00
5.00	5	0.02	10.59	6.20



Notes:

Hammer Mass 63.5 kg
 Fall Height 0.76 m
 Cone Area 0.0019 m²
 E_{theor} 473 J
 Energy Ratio 0.85
 Anvil Mass 1 kg
 Rod Mass 8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

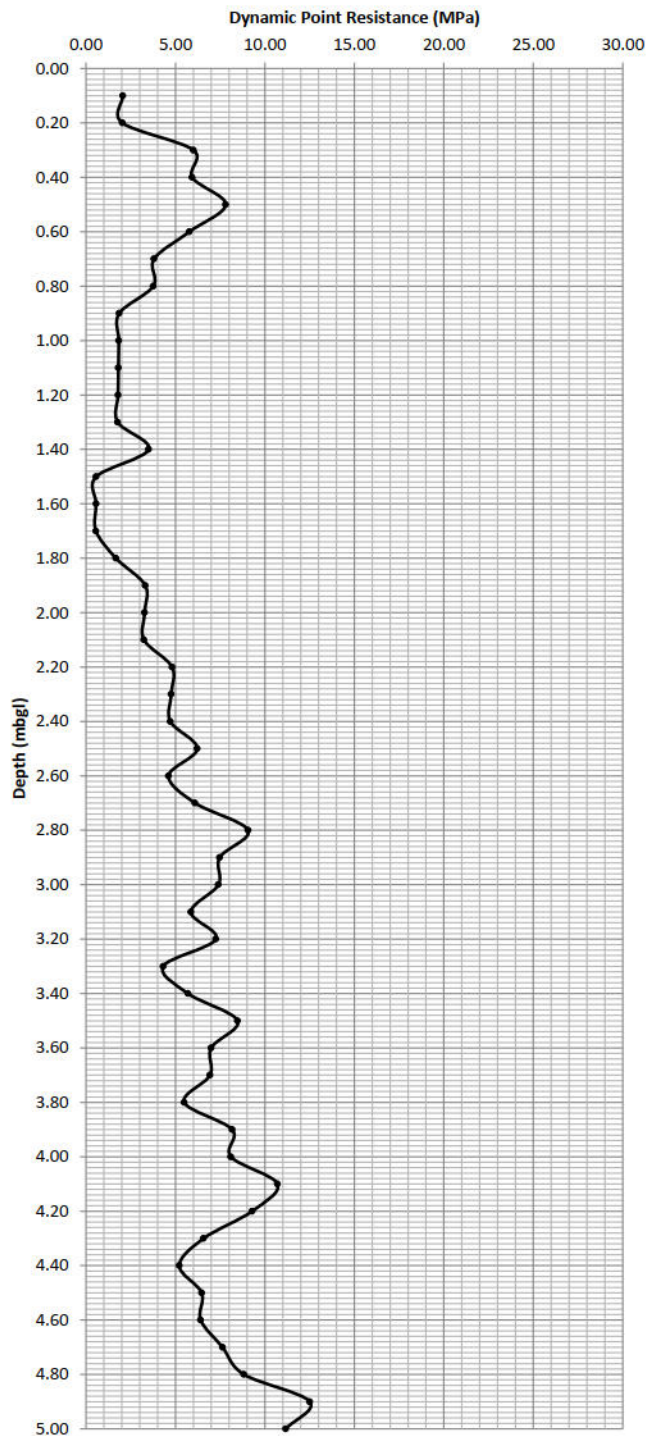
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS219**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	1	0.10	2.12	2.06
0.20	1	0.10	2.12	2.03
0.30	3	0.03	6.35	6.01
0.40	3	0.03	6.35	5.93
0.50	4	0.03	8.47	7.81
0.60	3	0.03	6.35	5.78
0.70	2	0.05	4.24	3.81
0.80	2	0.05	4.24	3.76
0.90	1	0.10	2.12	1.86
1.00	1	0.10	2.12	1.84
1.10	1	0.10	2.12	1.81
1.20	1	0.10	2.12	1.79
1.30	1	0.10	2.12	1.77
1.40	2	0.05	4.24	3.50
1.50	0.33	0.30	0.70	0.57
1.60	0.33	0.30	0.70	0.56
1.70	0.33	0.30	0.70	0.56
1.80	1	0.10	2.12	1.67
1.90	2	0.05	4.24	3.31
2.00	2	0.05	4.24	3.28
2.10	2	0.05	4.24	3.24
2.20	3	0.03	6.35	4.81
2.30	3	0.03	6.35	4.76
2.40	3	0.03	6.35	4.71
2.50	4	0.03	8.47	6.22
2.60	3	0.03	6.35	4.62
2.70	4	0.03	8.47	6.10
2.80	6	0.02	12.71	9.06
2.90	5	0.02	10.59	7.47
3.00	5	0.02	10.59	7.40
3.10	4	0.03	8.47	5.86
3.20	5	0.02	10.59	7.26
3.30	3	0.03	6.35	4.32
3.40	4	0.03	8.47	5.70
3.50	6	0.02	12.71	8.47
3.60	5	0.02	10.59	7.00
3.70	5	0.02	10.59	6.93
3.80	4	0.03	8.47	5.50
3.90	6	0.02	12.71	8.17
4.00	6	0.02	12.71	8.10
4.10	8	0.01	16.94	10.70
4.20	7	0.01	14.83	9.28
4.30	5	0.02	10.59	6.57
4.40	4	0.03	8.47	5.22
4.50	5	0.02	10.59	6.46
4.60	5	0.02	10.59	6.41
4.70	6	0.02	12.71	7.63
4.80	7	0.01	14.83	8.83
4.90	10	0.01	21.18	12.51
5.00	9	0.01	19.06	11.16



Notes:

Hammer Mass 63.5 kg
 Fall Height 0.76 m
 Cone Area 0.0019 m²
 E_{theor} 473 J
 Energy Ratio 0.85
 Anvil Mass 1 kg
 Rod Mass 8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

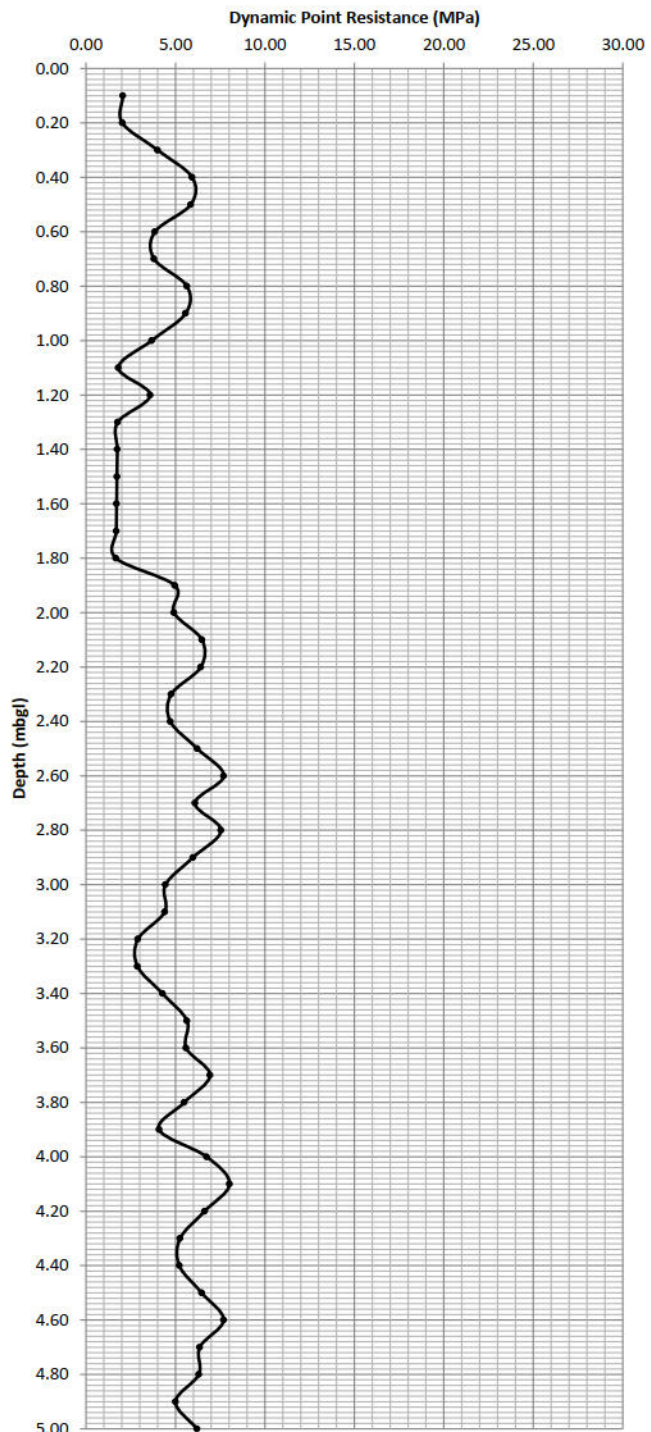
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS220**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	1	0.10	2.12	2.06
0.20	1	0.10	2.12	2.03
0.30	2	0.05	4.24	4.01
0.40	3	0.03	6.35	5.93
0.50	3	0.03	6.35	5.86
0.60	2	0.05	4.24	3.86
0.70	2	0.05	4.24	3.81
0.80	3	0.03	6.35	5.64
0.90	3	0.03	6.35	5.57
1.00	2	0.05	4.24	3.67
1.10	1	0.10	2.12	1.81
1.20	2	0.05	4.24	3.58
1.30	1	0.10	2.12	1.77
1.40	1	0.10	2.12	1.75
1.50	1	0.10	2.12	1.73
1.60	1	0.10	2.12	1.71
1.70	1	0.10	2.12	1.69
1.80	1	0.10	2.12	1.67
1.90	3	0.03	6.35	4.97
2.00	3	0.03	6.35	4.92
2.10	4	0.03	8.47	6.49
2.20	4	0.03	8.47	6.42
2.30	3	0.03	6.35	4.76
2.40	3	0.03	6.35	4.71
2.50	4	0.03	8.47	6.22
2.60	5	0.02	10.59	7.70
2.70	4	0.03	8.47	6.10
2.80	5	0.02	10.59	7.55
2.90	4	0.03	8.47	5.98
3.00	3	0.03	6.35	4.44
3.10	3	0.03	6.35	4.40
3.20	2	0.05	4.24	2.90
3.30	2	0.05	4.24	2.88
3.40	3	0.03	6.35	4.28
3.50	4	0.03	8.47	5.65
3.60	4	0.03	8.47	5.60
3.70	5	0.02	10.59	6.93
3.80	4	0.03	8.47	5.50
3.90	3	0.03	6.35	4.09
4.00	5	0.02	10.59	6.75
4.10	6	0.02	12.71	8.03
4.20	5	0.02	10.59	6.63
4.30	4	0.03	8.47	5.26
4.40	4	0.03	8.47	5.22
4.50	5	0.02	10.59	6.46
4.60	6	0.02	12.71	7.69
4.70	5	0.02	10.59	6.36
4.80	5	0.02	10.59	6.30
4.90	4	0.03	8.47	5.00
5.00	5	0.02	10.59	6.20



Notes:

Hammer Mass 63.5 kg
 Fall Height 0.76 m
 Cone Area 0.0019 m²
 E_{theor} 473 J
 Energy Ratio 0.85
 Anvil Mass 1 kg
 Rod Mass 8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

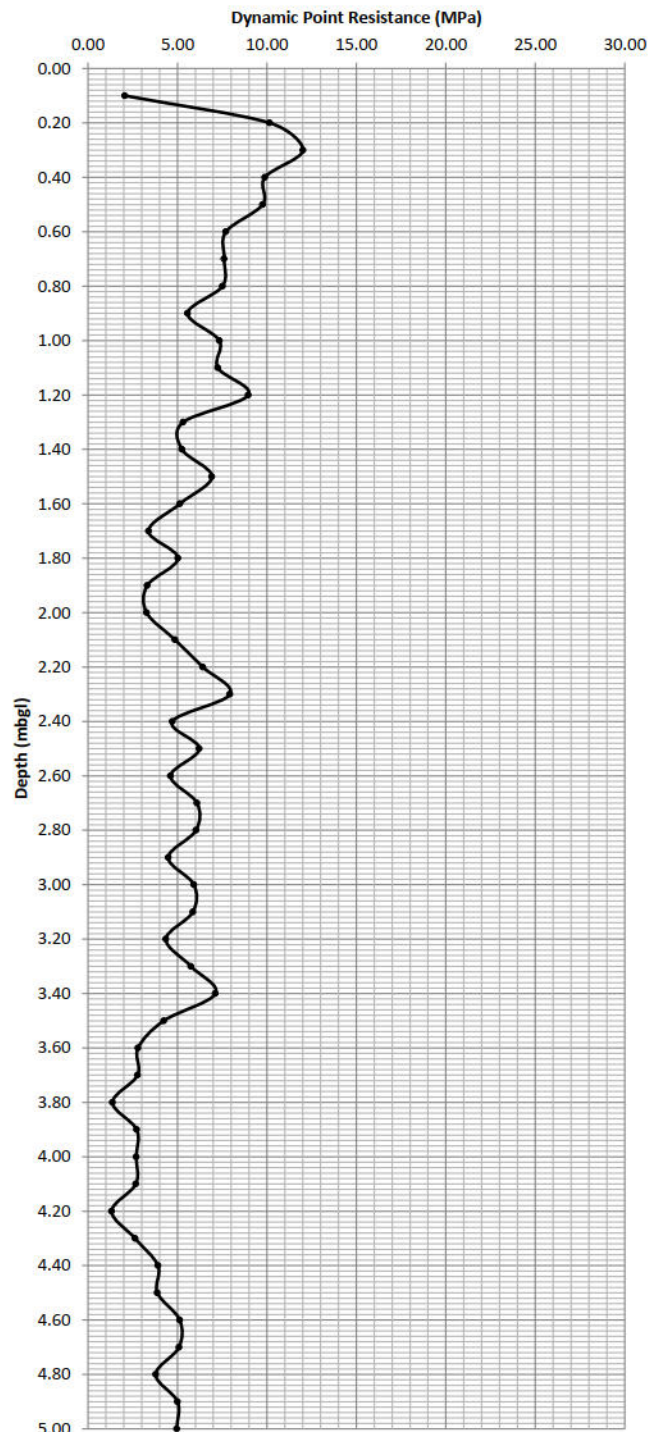
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS221**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	1	0.10	2.12	2.06
0.20	5	0.02	10.59	10.15
0.30	6	0.02	12.71	12.02
0.40	5	0.02	10.59	9.89
0.50	5	0.02	10.59	9.76
0.60	4	0.03	8.47	7.71
0.70	4	0.03	8.47	7.61
0.80	4	0.03	8.47	7.52
0.90	3	0.03	6.35	5.57
1.00	4	0.03	8.47	7.34
1.10	4	0.03	8.47	7.25
1.20	5	0.02	10.59	8.96
1.30	3	0.03	6.35	5.31
1.40	3	0.03	6.35	5.25
1.50	4	0.03	8.47	6.93
1.60	3	0.03	6.35	5.14
1.70	2	0.05	4.24	3.39
1.80	3	0.03	6.35	5.02
1.90	2	0.05	4.24	3.31
2.00	2	0.05	4.24	3.28
2.10	3	0.03	6.35	4.86
2.20	4	0.03	8.47	6.42
2.30	5	0.02	10.59	7.94
2.40	3	0.03	6.35	4.71
2.50	4	0.03	8.47	6.22
2.60	3	0.03	6.35	4.62
2.70	4	0.03	8.47	6.10
2.80	4	0.03	8.47	6.04
2.90	3	0.03	6.35	4.48
3.00	4	0.03	8.47	5.92
3.10	4	0.03	8.47	5.86
3.20	3	0.03	6.35	4.36
3.30	4	0.03	8.47	5.75
3.40	5	0.02	10.59	7.13
3.50	3	0.03	6.35	4.24
3.60	2	0.05	4.24	2.80
3.70	2	0.05	4.24	2.77
3.80	1	0.10	2.12	1.37
3.90	2	0.05	4.24	2.72
4.00	2	0.05	4.24	2.70
4.10	2	0.05	4.24	2.68
4.20	1	0.10	2.12	1.33
4.30	2	0.05	4.24	2.63
4.40	3	0.03	6.35	3.91
4.50	3	0.03	6.35	3.88
4.60	4	0.03	8.47	5.13
4.70	4	0.03	8.47	5.09
4.80	3	0.03	6.35	3.78
4.90	4	0.03	8.47	5.00
5.00	4	0.03	8.47	4.96



Notes:

Hammer Mass	63.5 kg
Fall Height	0.76 m
Cone Area	0.0019 m ²
E _{theor}	473 J
Energy Ratio	0.85
Anvil Mass	1 kg
Rod Mass	8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

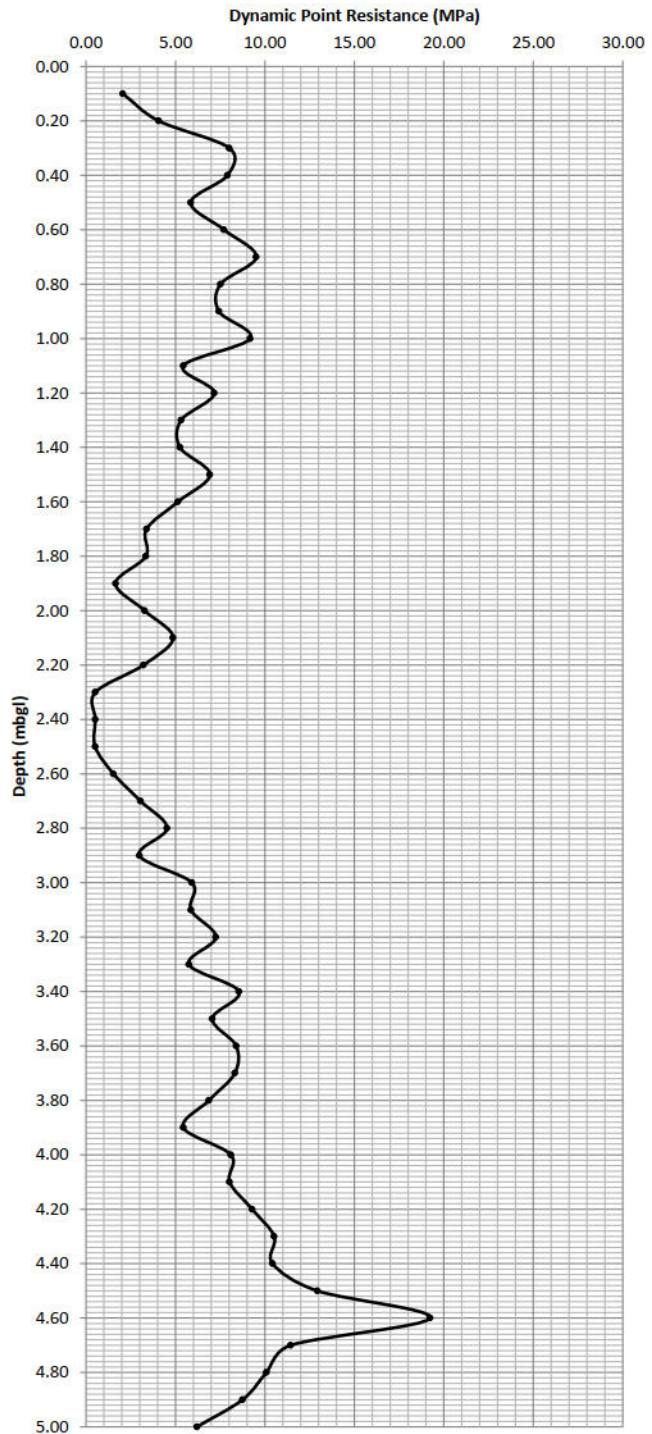
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS222**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	1	0.10	2.12	2.06
0.20	2	0.05	4.24	4.06
0.30	4	0.03	8.47	8.01
0.40	4	0.03	8.47	7.91
0.50	3	0.03	6.35	5.86
0.60	4	0.03	8.47	7.71
0.70	5	0.02	10.59	9.52
0.80	4	0.03	8.47	7.52
0.90	4	0.03	8.47	7.43
1.00	5	0.02	10.59	9.18
1.10	3	0.03	6.35	5.44
1.20	4	0.03	8.47	7.17
1.30	3	0.03	6.35	5.31
1.40	3	0.03	6.35	5.25
1.50	4	0.03	8.47	6.93
1.60	3	0.03	6.35	5.14
1.70	2	0.05	4.24	3.39
1.80	2	0.05	4.24	3.35
1.90	1	0.10	2.12	1.66
2.00	2	0.05	4.24	3.28
2.10	3	0.03	6.35	4.86
2.20	2	0.05	4.24	3.21
2.30	0.33	0.30	0.70	0.52
2.40	0.33	0.30	0.70	0.52
2.50	0.33	0.30	0.70	0.51
2.60	1	0.10	2.12	1.54
2.70	2	0.05	4.24	3.05
2.80	3	0.03	6.35	4.53
2.90	2	0.05	4.24	2.99
3.00	4	0.03	8.47	5.92
3.10	4	0.03	8.47	5.86
3.20	5	0.02	10.59	7.26
3.30	4	0.03	8.47	5.75
3.40	6	0.02	12.71	8.55
3.50	5	0.02	10.59	7.06
3.60	6	0.02	12.71	8.39
3.70	6	0.02	12.71	8.32
3.80	5	0.02	10.59	6.87
3.90	4	0.03	8.47	5.45
4.00	6	0.02	12.71	8.10
4.10	6	0.02	12.71	8.03
4.20	7	0.01	14.83	9.28
4.30	8	0.01	16.94	10.52
4.40	8	0.01	16.94	10.43
4.50	10	0.01	21.18	12.93
4.60	15	0.01	31.77	19.23
4.70	9	0.01	19.06	11.44
4.80	8	0.01	16.94	10.09
4.90	7	0.01	14.83	8.75
5.00	5	0.02	10.59	6.20



Notes:

Hammer Mass 63.5 kg
 Fall Height 0.76 m
 Cone Area 0.0019 m²
 E_{theor} 473 J
 Energy Ratio 0.85
 Anvil Mass 1 kg
 Rod Mass 8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

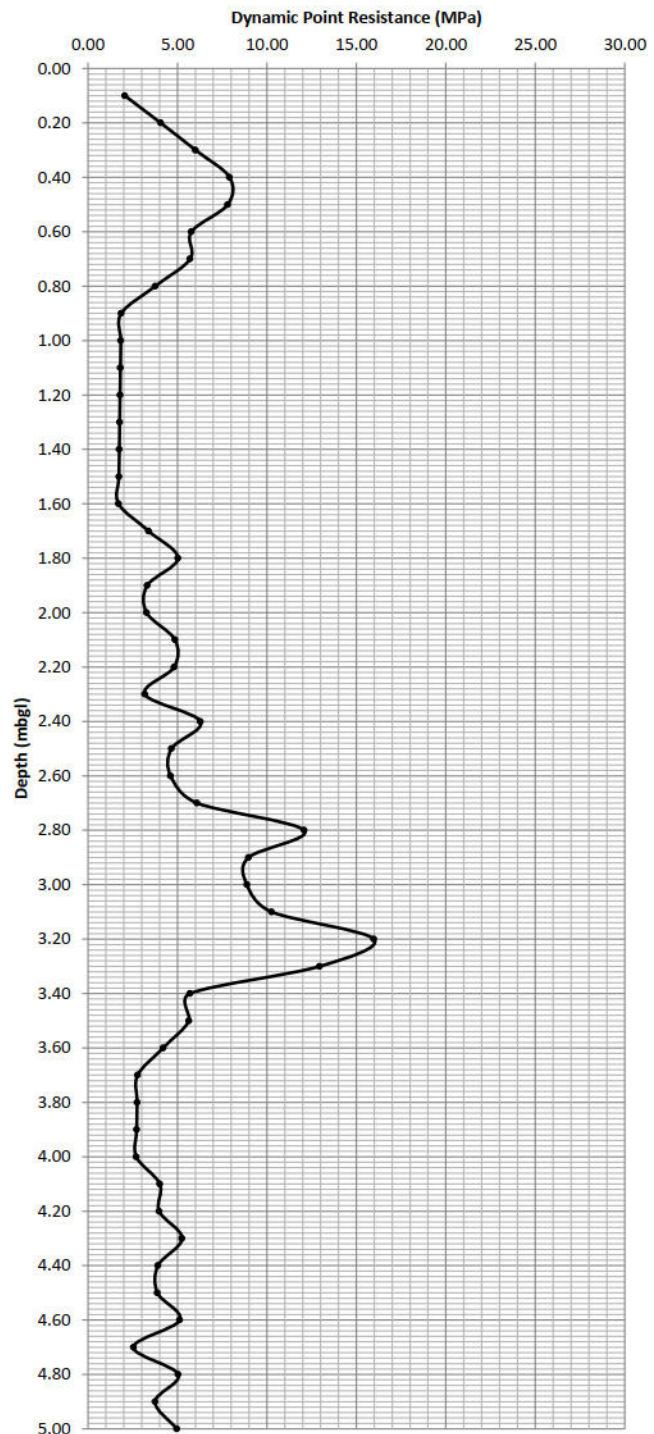
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS223**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	1	0.10	2.12	2.06
0.20	2	0.05	4.24	4.06
0.30	3	0.03	6.35	6.01
0.40	4	0.03	8.47	7.91
0.50	4	0.03	8.47	7.81
0.60	3	0.03	6.35	5.78
0.70	3	0.03	6.35	5.71
0.80	2	0.05	4.24	3.76
0.90	1	0.10	2.12	1.86
1.00	1	0.10	2.12	1.84
1.10	1	0.10	2.12	1.81
1.20	1	0.10	2.12	1.79
1.30	1	0.10	2.12	1.77
1.40	1	0.10	2.12	1.75
1.50	1	0.10	2.12	1.73
1.60	1	0.10	2.12	1.71
1.70	2	0.05	4.24	3.39
1.80	3	0.03	6.35	5.02
1.90	2	0.05	4.24	3.31
2.00	2	0.05	4.24	3.28
2.10	3	0.03	6.35	4.86
2.20	3	0.03	6.35	4.81
2.30	2	0.05	4.24	3.18
2.40	4	0.03	8.47	6.29
2.50	3	0.03	6.35	4.67
2.60	3	0.03	6.35	4.62
2.70	4	0.03	8.47	6.10
2.80	8	0.01	16.94	12.08
2.90	6	0.02	12.71	8.97
3.00	6	0.02	12.71	8.88
3.10	7	0.01	14.83	10.26
3.20	11	0.01	23.30	15.97
3.30	9	0.01	19.06	12.95
3.40	4	0.03	8.47	5.70
3.50	4	0.03	8.47	5.65
3.60	3	0.03	6.35	4.20
3.70	2	0.05	4.24	2.77
3.80	2	0.05	4.24	2.75
3.90	2	0.05	4.24	2.72
4.00	2	0.05	4.24	2.70
4.10	3	0.03	6.35	4.01
4.20	3	0.03	6.35	3.98
4.30	4	0.03	8.47	5.26
4.40	3	0.03	6.35	3.91
4.50	3	0.03	6.35	3.88
4.60	4	0.03	8.47	5.13
4.70	2	0.05	4.24	2.54
4.80	4	0.03	8.47	5.04
4.90	3	0.03	6.35	3.75
5.00	4	0.03	8.47	4.96



Notes:

Hammer Mass	63.5 kg
Fall Height	0.76 m
Cone Area	0.0019 m ²
E _{theor}	473 J
Energy Ratio	0.85
Anvil Mass	1 kg
Rod Mass	8.79 kg/m

ASHDOWN SITE INVESTIGATION LTD

Dynamic Probe Record

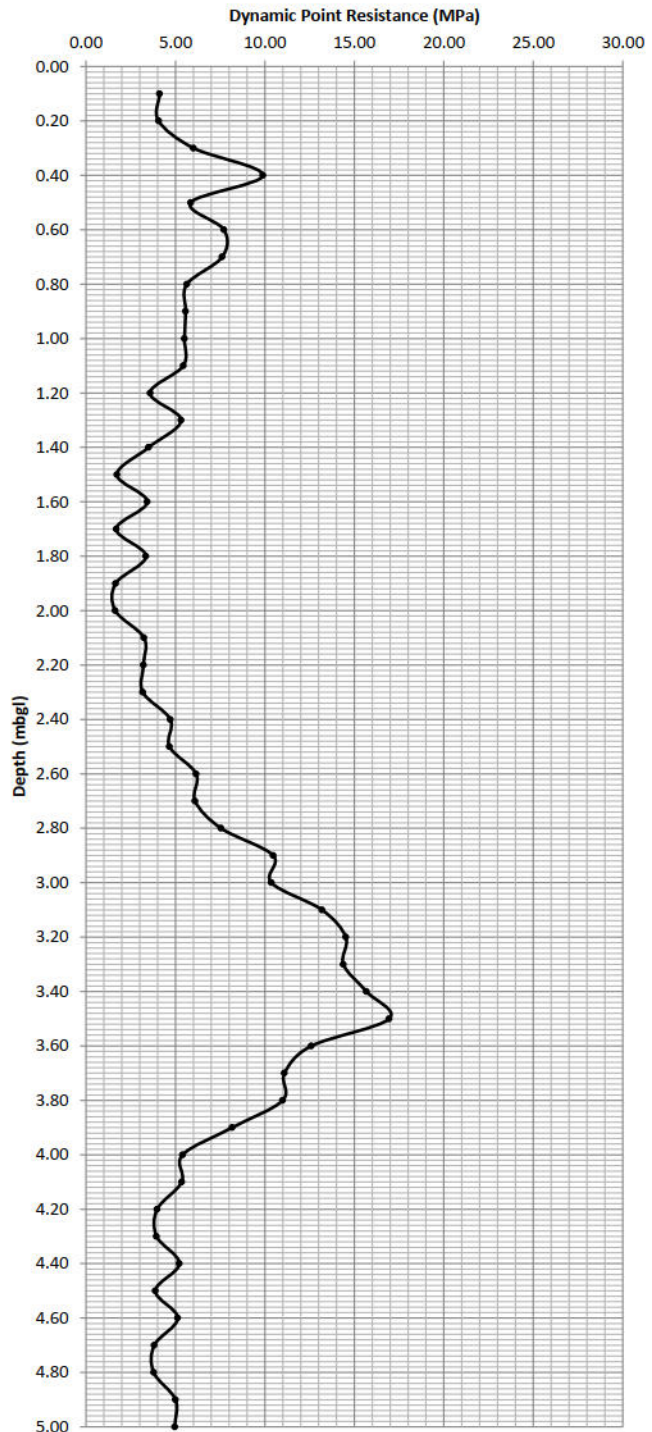
SITE Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex

Report Ref.

P15714

Test Location Reference **WS01**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	2	0.05	4.24	4.11
0.20	2	0.05	4.24	4.06
0.30	3	0.03	6.35	6.01
0.40	5	0.02	10.59	9.89
0.50	3	0.03	6.35	5.86
0.60	4	0.03	8.47	7.71
0.70	4	0.03	8.47	7.61
0.80	3	0.03	6.35	5.64
0.90	3	0.03	6.35	5.57
1.00	3	0.03	6.35	5.51
1.10	3	0.03	6.35	5.44
1.20	2	0.05	4.24	3.58
1.30	3	0.03	6.35	5.31
1.40	2	0.05	4.24	3.50
1.50	1	0.10	2.12	1.73
1.60	2	0.05	4.24	3.42
1.70	1	0.10	2.12	1.69
1.80	2	0.05	4.24	3.35
1.90	1	0.10	2.12	1.66
2.00	1	0.10	2.12	1.64
2.10	2	0.05	4.24	3.24
2.20	2	0.05	4.24	3.21
2.30	2	0.05	4.24	3.18
2.40	3	0.03	6.35	4.71
2.50	3	0.03	6.35	4.67
2.60	4	0.03	8.47	6.16
2.70	4	0.03	8.47	6.10
2.80	5	0.02	10.59	7.55
2.90	7	0.01	14.83	10.46
3.00	7	0.01	14.83	10.36
3.10	9	0.01	19.06	13.20
3.20	10	0.01	21.18	14.52
3.30	10	0.01	21.18	14.39
3.40	11	0.01	23.30	15.68
3.50	12	0.01	25.42	16.94
3.60	9	0.01	19.06	12.59
3.70	8	0.01	16.94	11.09
3.80	8	0.01	16.94	10.99
3.90	6	0.02	12.71	8.17
4.00	4	0.03	8.47	5.40
4.10	4	0.03	8.47	5.35
4.20	3	0.03	6.35	3.98
4.30	3	0.03	6.35	3.94
4.40	4	0.03	8.47	5.22
4.50	3	0.03	6.35	3.88
4.60	4	0.03	8.47	5.13
4.70	3	0.03	6.35	3.81
4.80	3	0.03	6.35	3.78
4.90	4	0.03	8.47	5.00
5.00	4	0.03	8.47	4.96

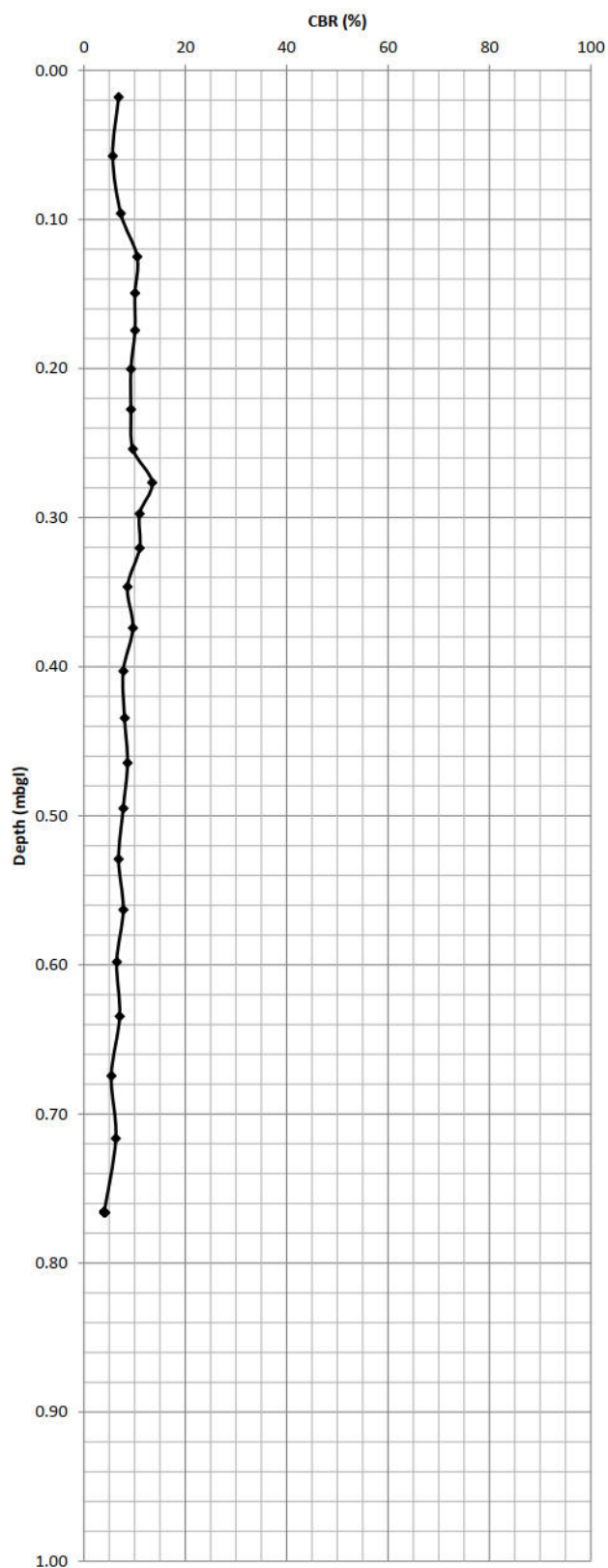


Notes:

Hammer Mass	63.5 kg
Fall Height	0.76 m
Cone Area	0.0019 m ²
E _{theor}	473 J
Energy Ratio	0.85
Anvil Mass	1 kg
Rod Mass	8.79 kg/m

TRL Dynamic Cone Penetrometer Record

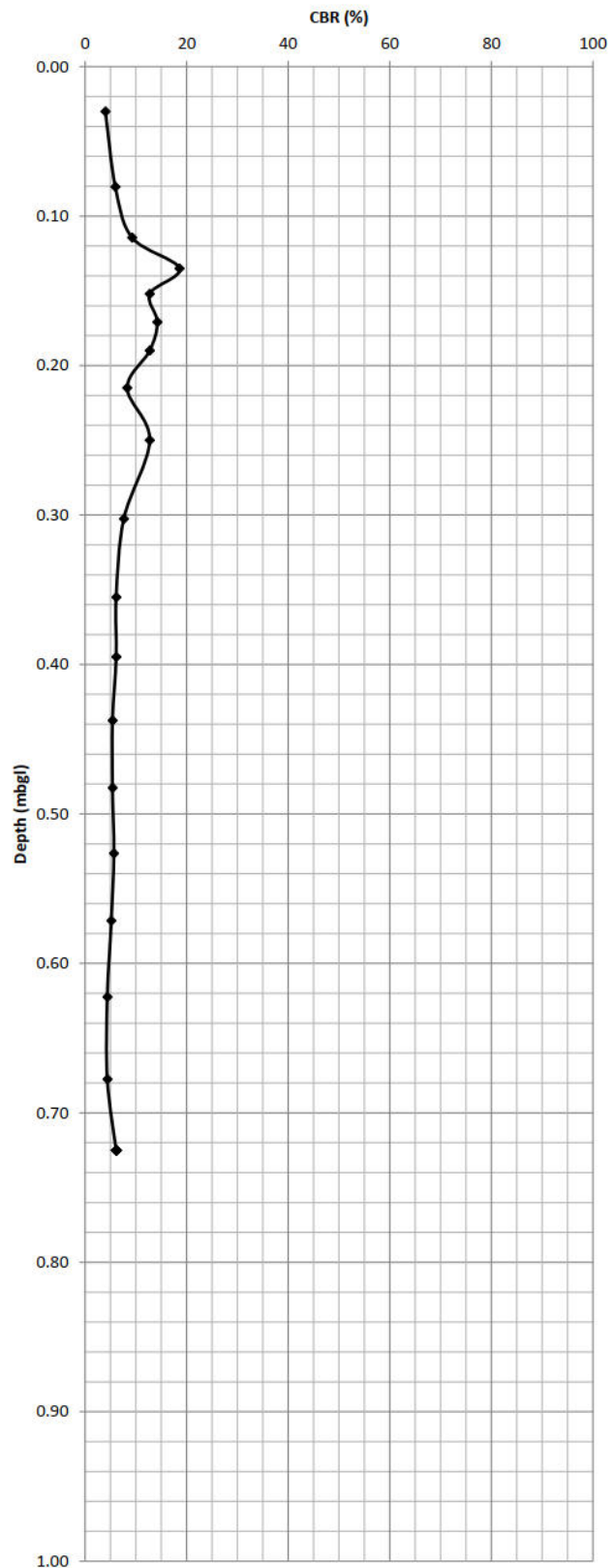
P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

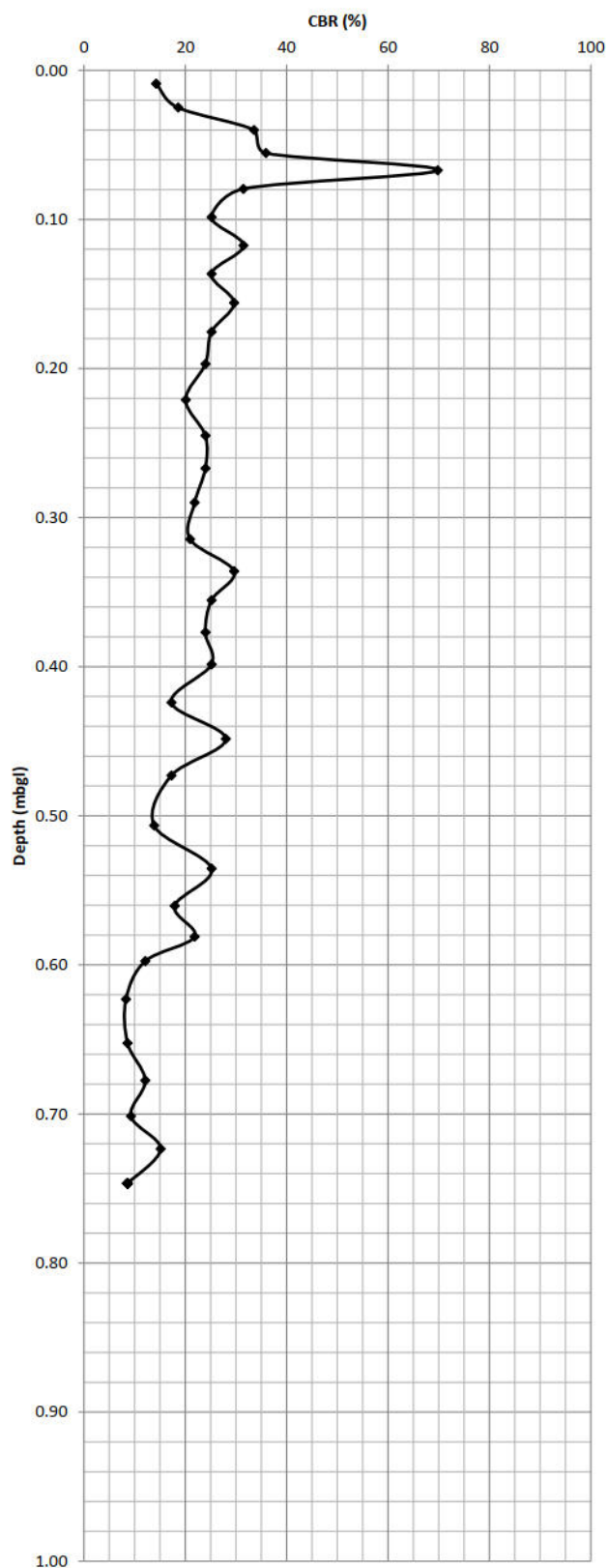
Project Ref.

Test Location Reference	WS203
Depth of Start of Test (mbgl)	0.00

Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

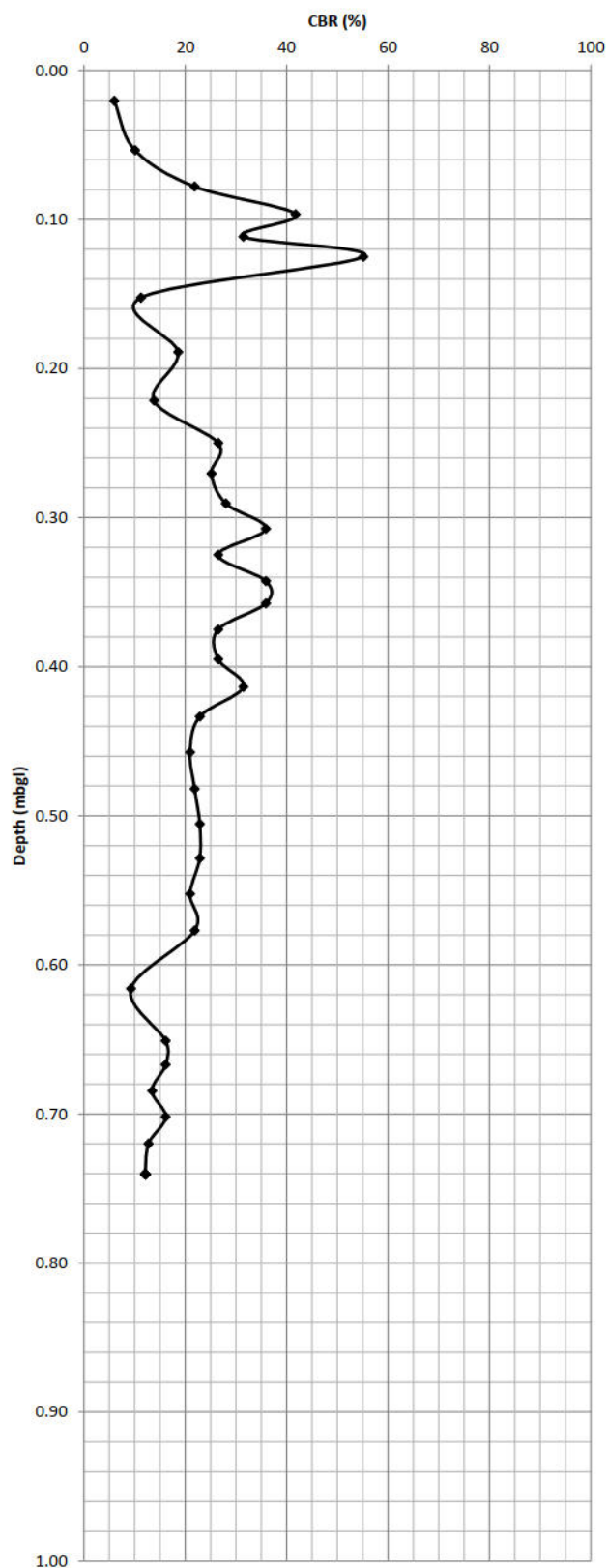
P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

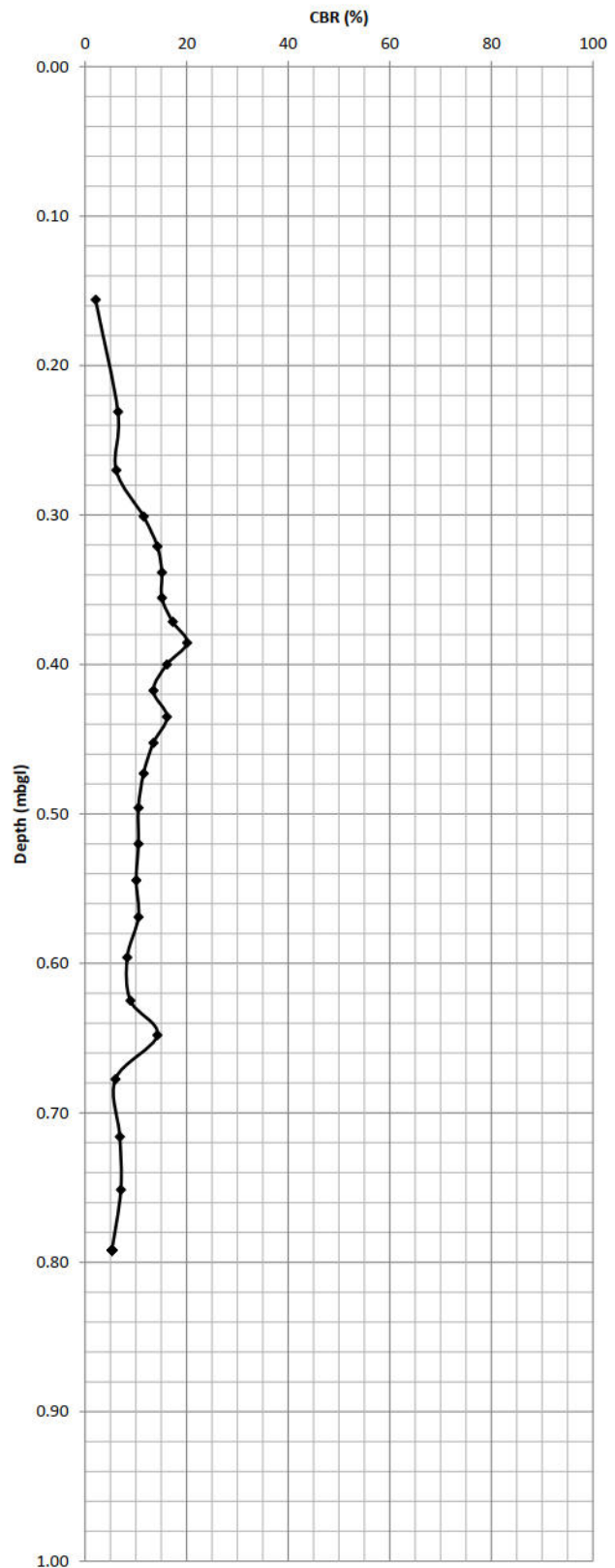
P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

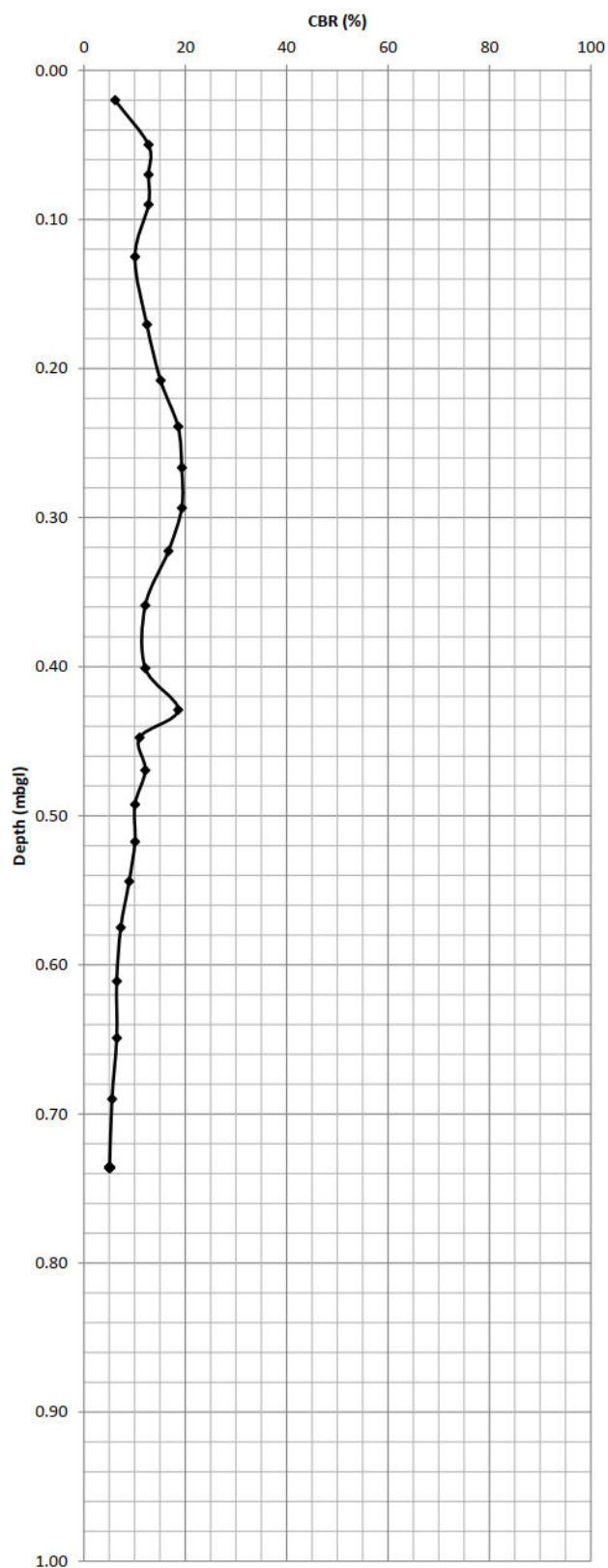
P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

P15714

Depth (mbgl)	CBR (%)
0.00	15
0.01	18
0.02	20
0.03	22
0.04	25
0.05	28
0.06	30
0.07	32
0.08	35
0.09	32
0.10	30
0.11	28
0.12	25
0.13	22
0.14	20
0.15	18
0.16	15
0.17	15
0.18	15
0.19	15
0.20	15
0.21	15
0.22	15
0.23	15
0.24	15
0.25	15
0.26	15
0.27	15
0.28	15
0.29	15
0.30	15
0.31	15
0.32	15
0.33	15
0.34	15
0.35	15
0.36	15
0.37	15
0.38	15
0.39	15
0.40	15
0.41	15
0.42	15
0.43	15
0.44	15
0.45	15
0.46	10
0.47	8
0.48	5
0.49	5
0.50	5
0.51	5
0.52	5
0.53	5
0.54	5
0.55	5
0.56	5
0.57	5
0.58	5
0.59	5
0.60	5
0.61	5
0.62	5
0.63	5
0.64	5
0.65	5
0.66	5
0.67	5
0.68	5
0.69	5
0.70	5
0.71	5
0.72	5
0.73	5
0.74	5
0.75	5
0.76	5
0.77	5
0.78	5
0.79	5
0.80	5
0.81	5
0.82	5
0.83	5
0.84	5
0.85	10

Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

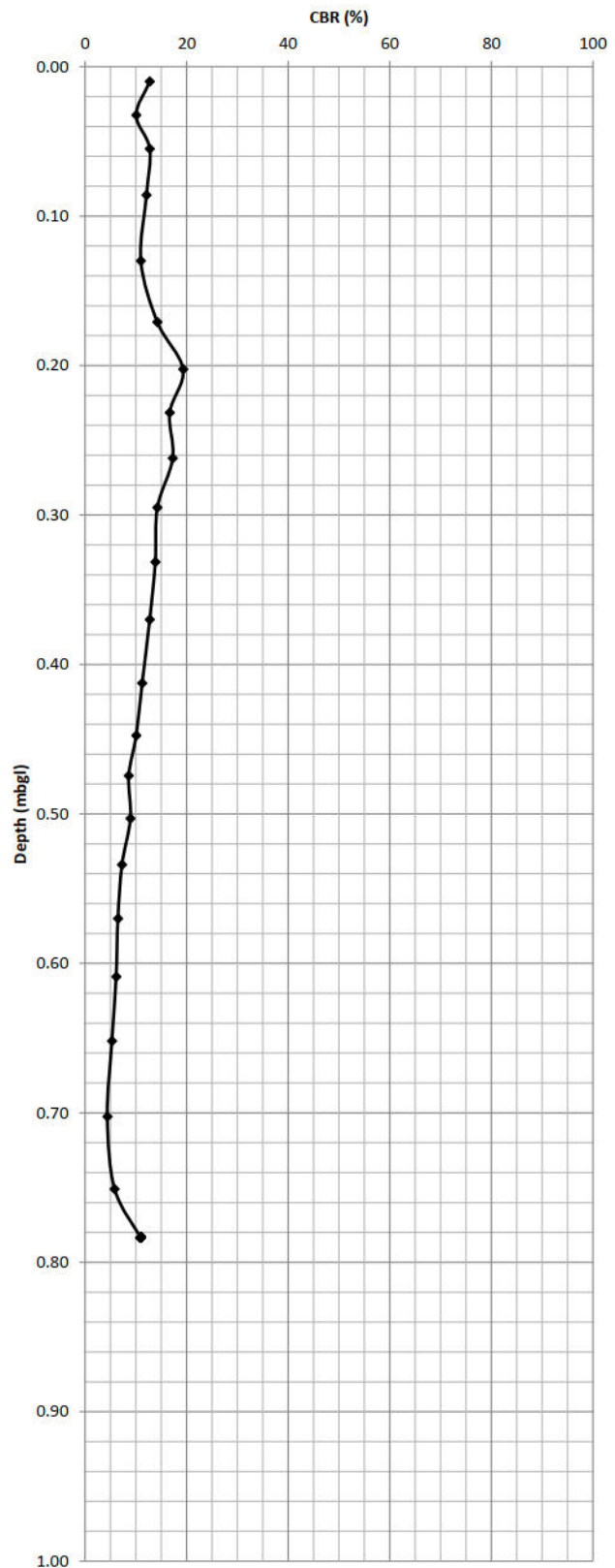
P15714

Depth (mbgl)	CBR (%)
0.00	15
0.01	15
0.02	10
0.03	10
0.04	10
0.05	10
0.06	10
0.07	10
0.08	10
0.09	10
0.10	10
0.11	10
0.12	10
0.13	10
0.14	10
0.15	10
0.16	10
0.17	10
0.18	10
0.19	10
0.20	10
0.21	10
0.22	10
0.23	10
0.24	10
0.25	10
0.26	10
0.27	10
0.28	10
0.29	10
0.30	10
0.31	10
0.32	10
0.33	10
0.34	10
0.35	10
0.36	10
0.37	10
0.38	10
0.39	10
0.40	10
0.41	10
0.42	10
0.43	10
0.44	10
0.45	10
0.46	10
0.47	10
0.48	10
0.49	10
0.50	10
0.51	10
0.52	10
0.53	10
0.54	10
0.55	10
0.56	10
0.57	10
0.58	10
0.59	10
0.60	10
0.61	10
0.62	10
0.63	10
0.64	10
0.65	10
0.66	10
0.67	10
0.68	10
0.69	10
0.70	10
0.71	10
0.72	10
0.73	10
0.74	10
0.75	10
0.76	10
0.77	10
0.78	10
0.79	10
0.80	10
0.81	10
0.82	10
0.83	10
0.84	10
0.85	10
0.86	10
0.87	10
0.88	10
0.89	10
0.90	10
0.91	10
0.92	10
0.93	10
0.94	10
0.95	10
0.96	10
0.97	10
0.98	10
0.99	10
1.00	10

Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

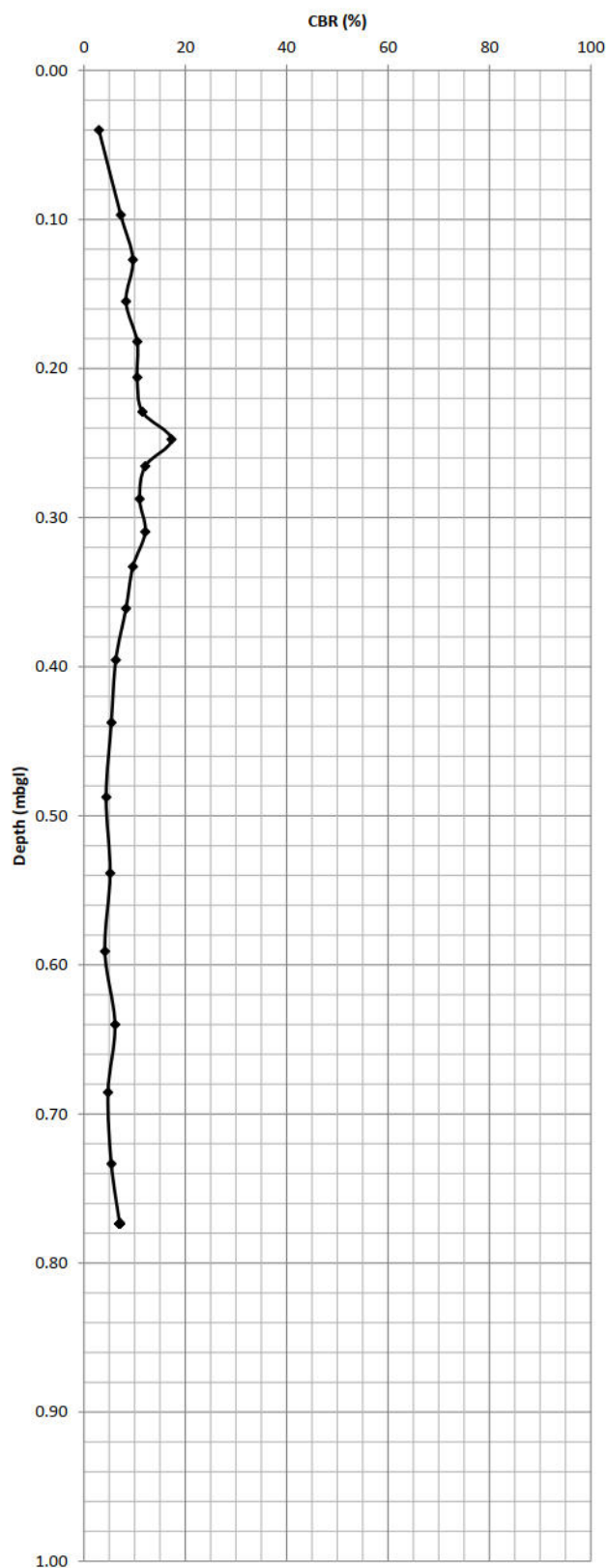
P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

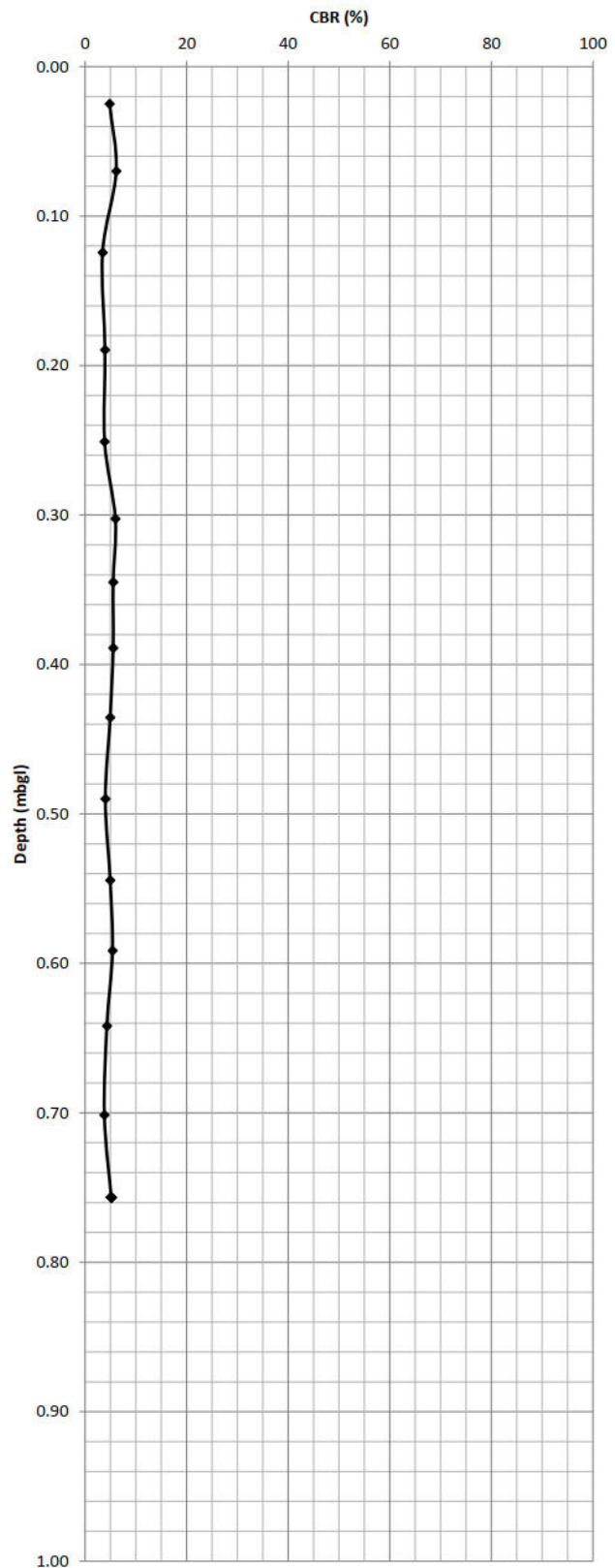
P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

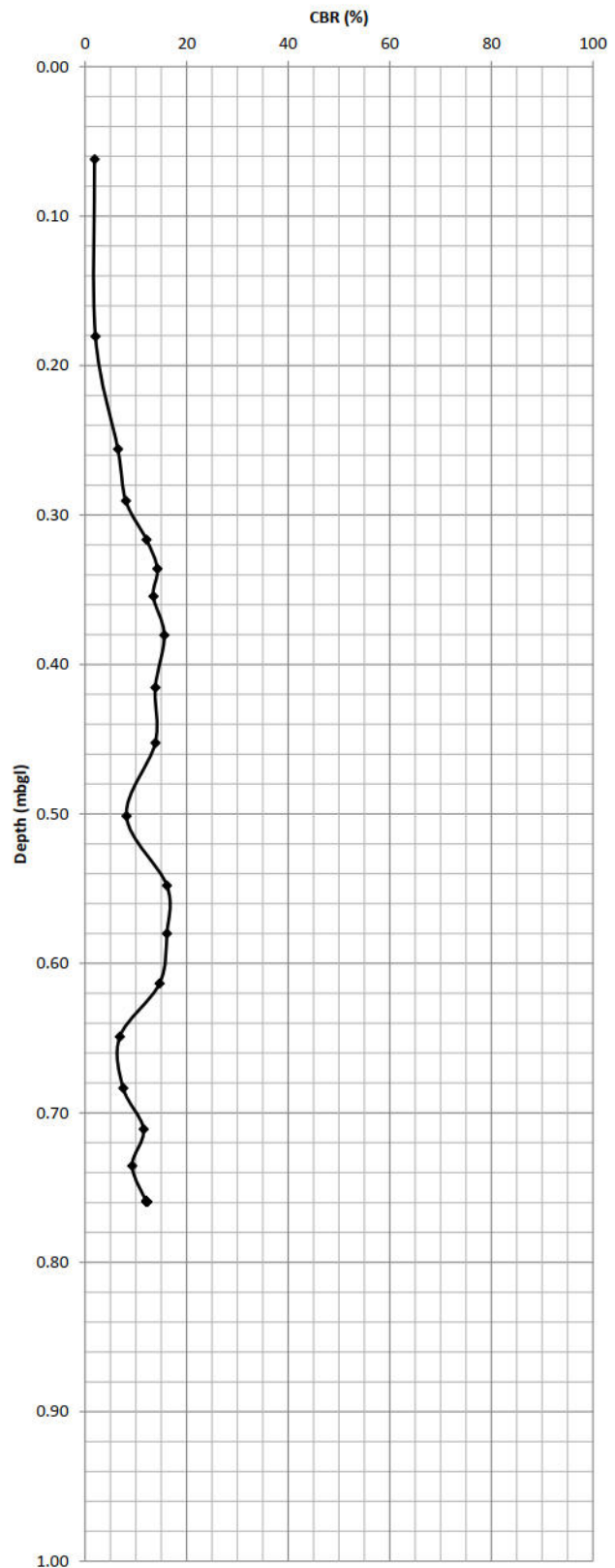
P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

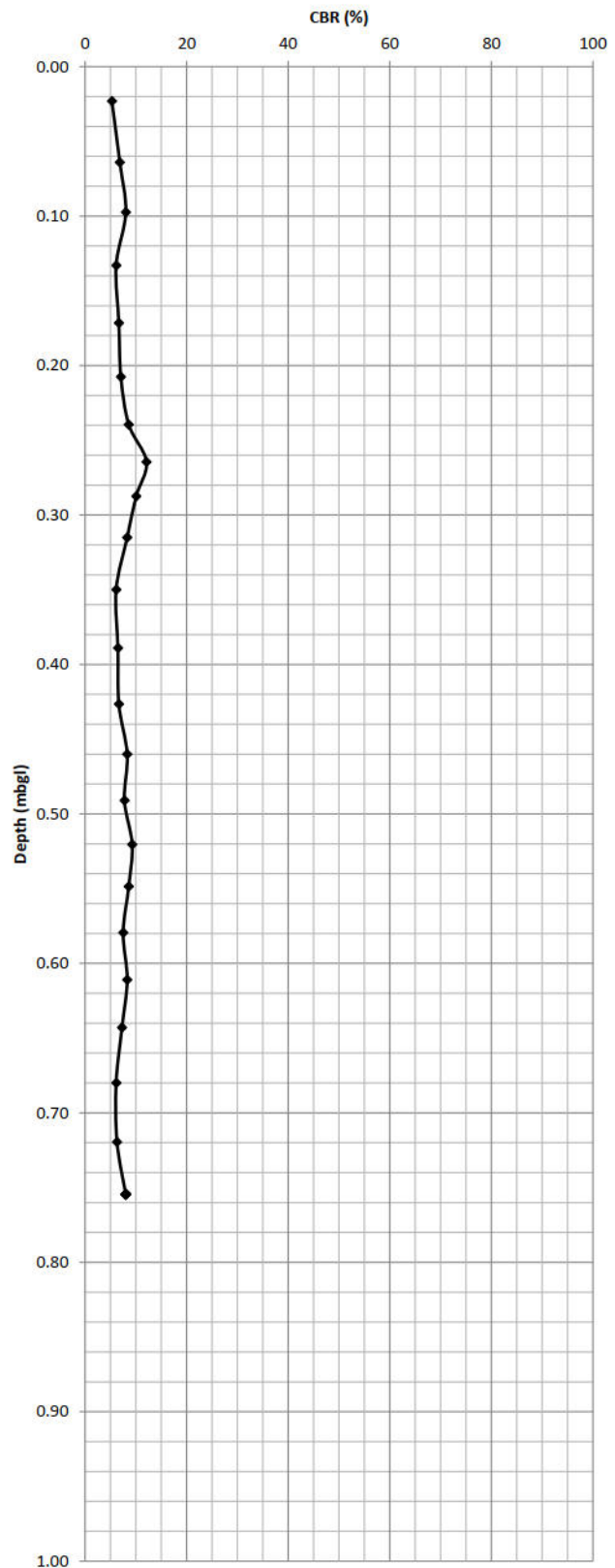
P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

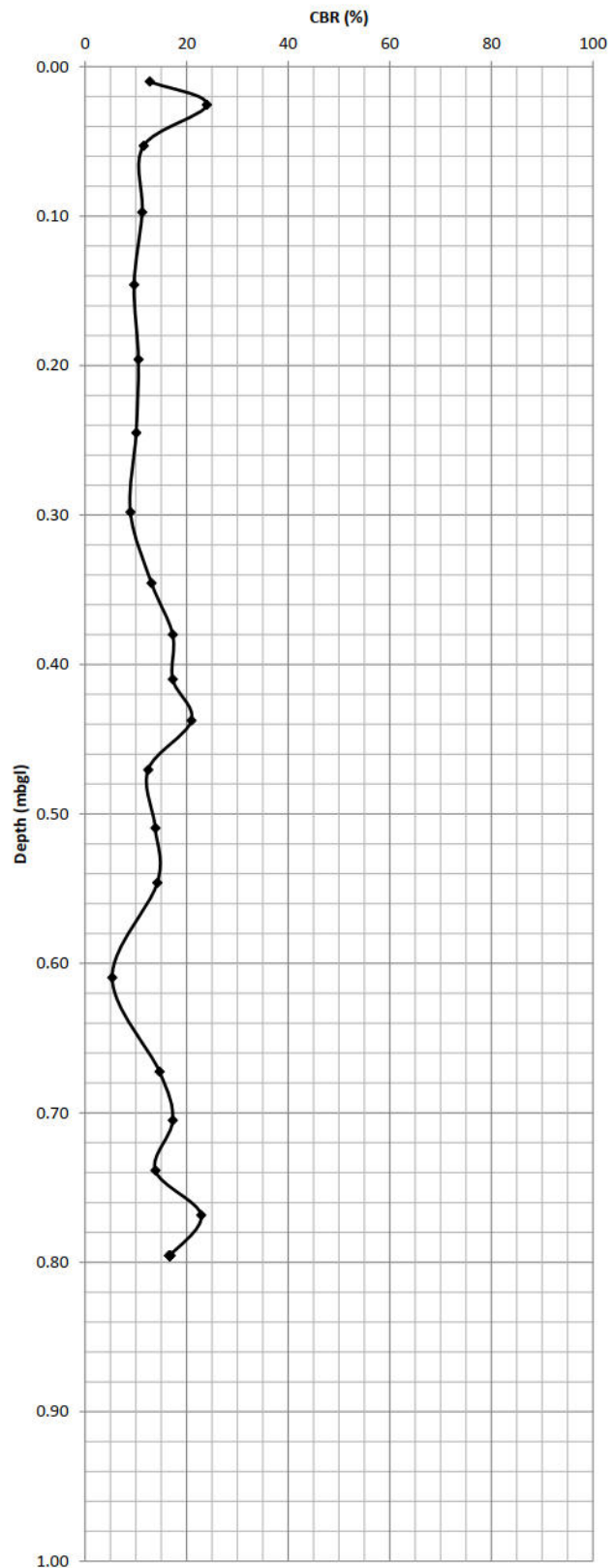
P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

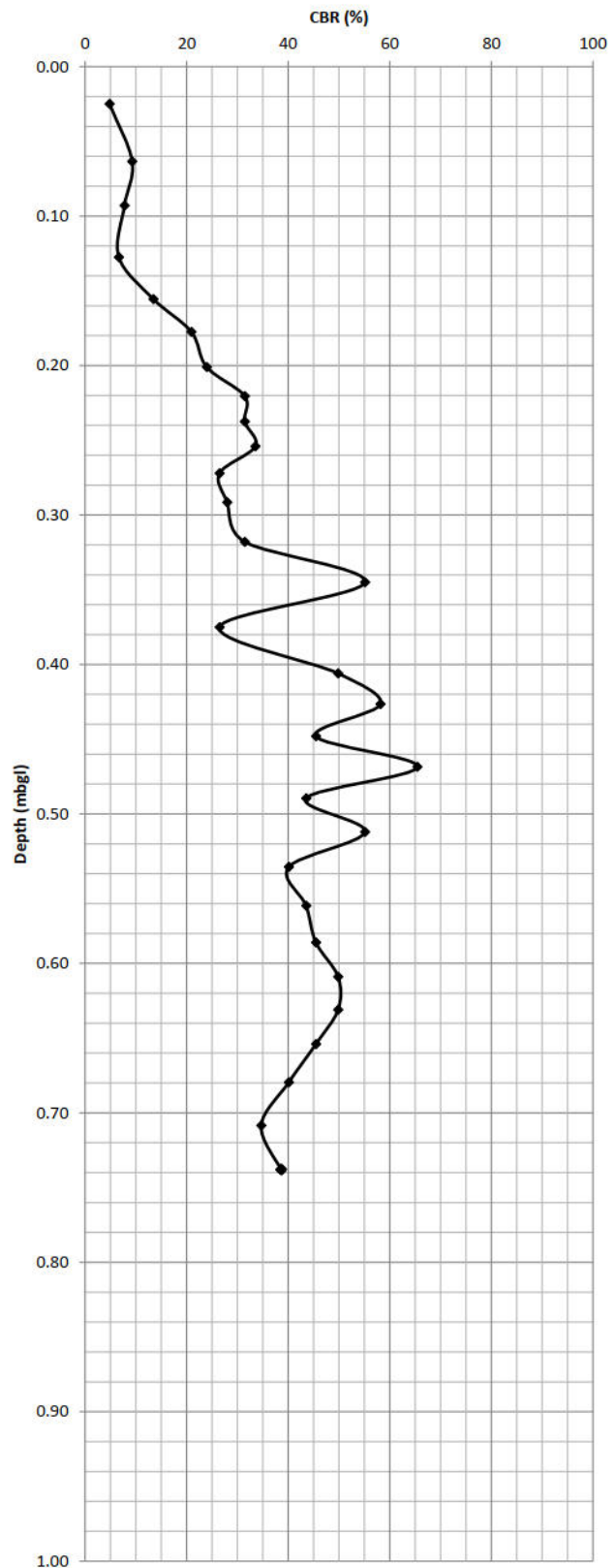
P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

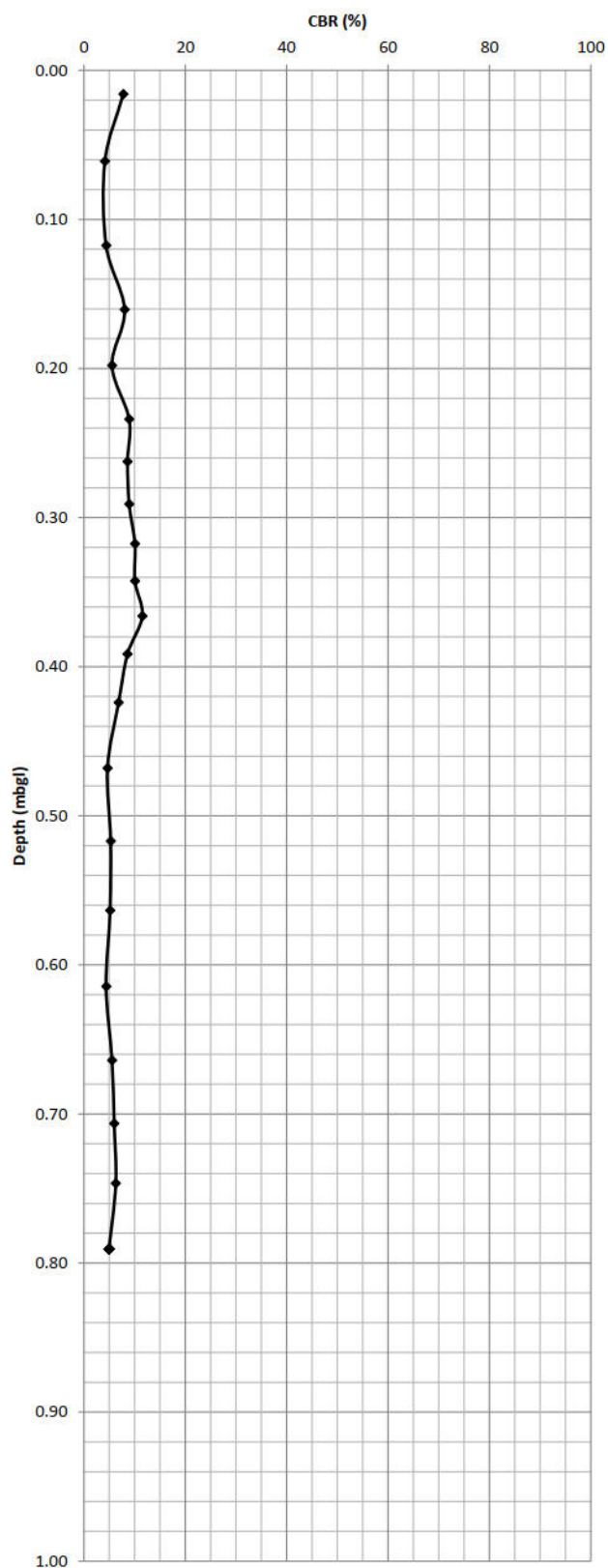
P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

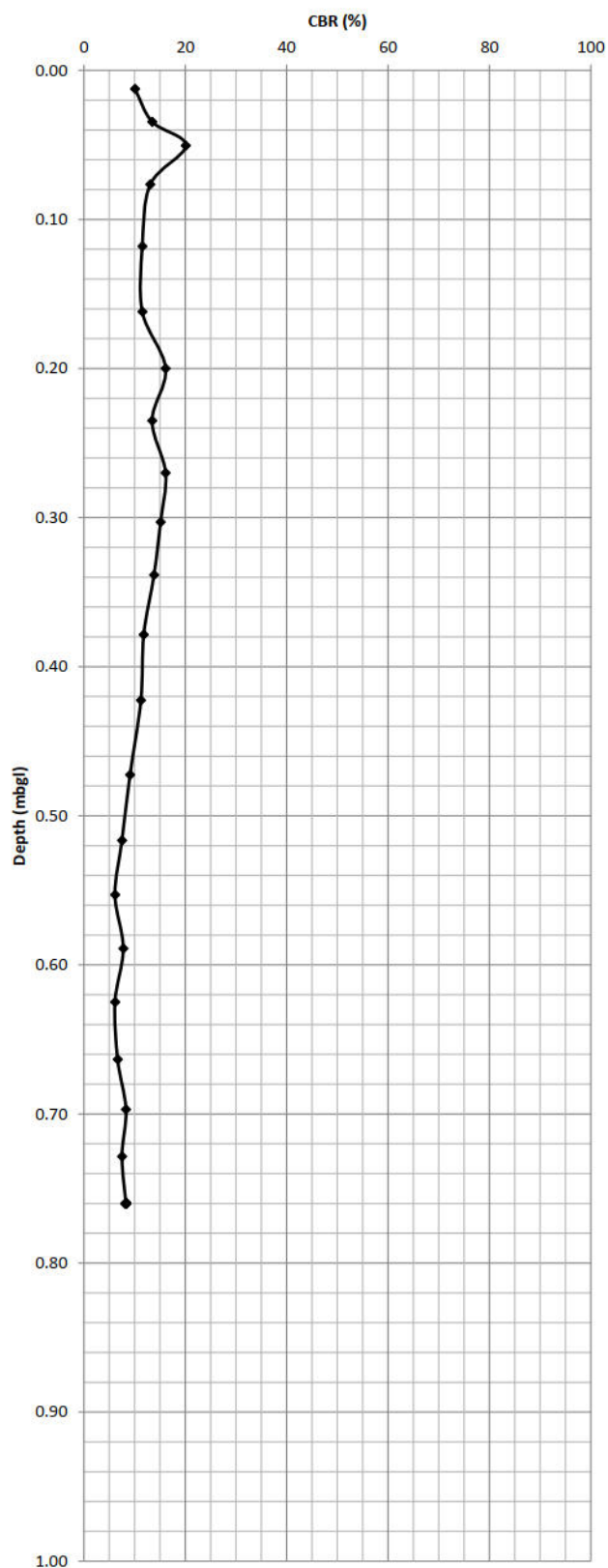
P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

Project Ref.

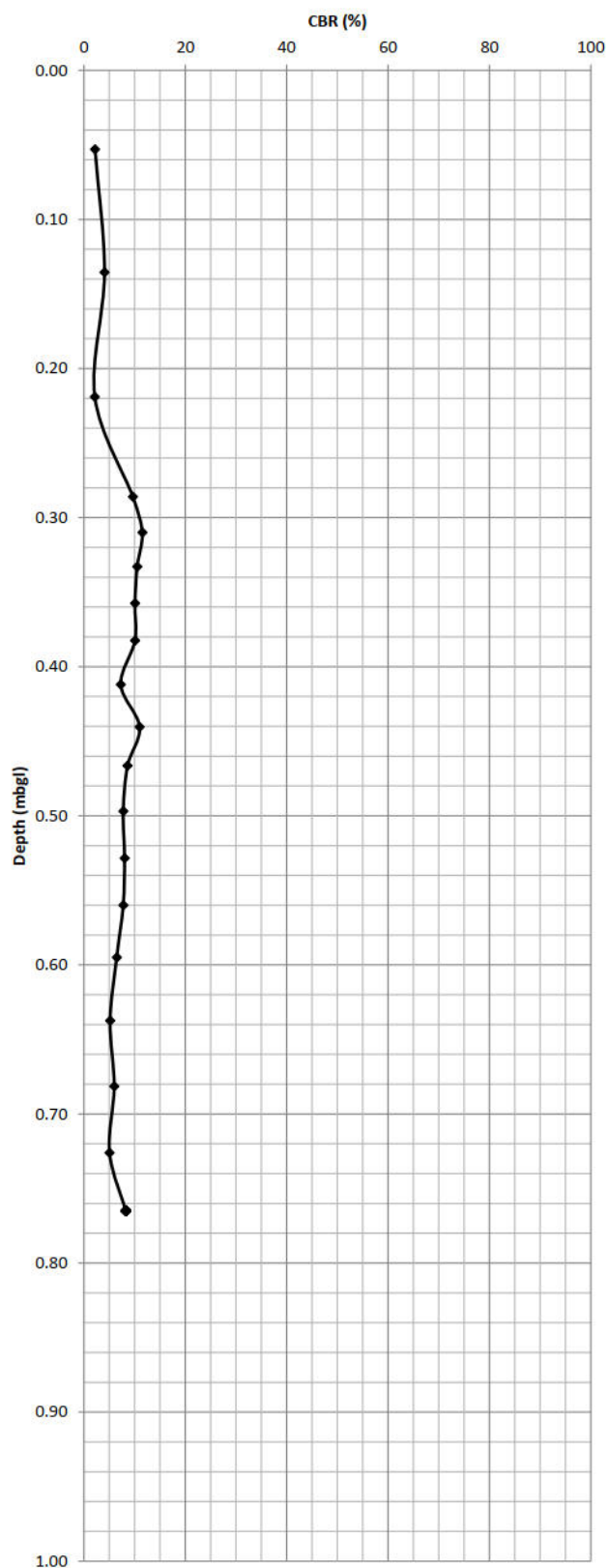
Test Location Reference	WS219
Depth of Start of Test (mbgl)	0.00

Figure 1 is a line graph showing the relationship between Depth (mbgl) and CBR (%). The Y-axis represents Depth (mbgl) from 0.00 to 1.00. The X-axis represents CBR (%) from 0 to 100. The graph shows a curve that starts at approximately (0.00, 5) and decreases to approximately (0.75, 10).

Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

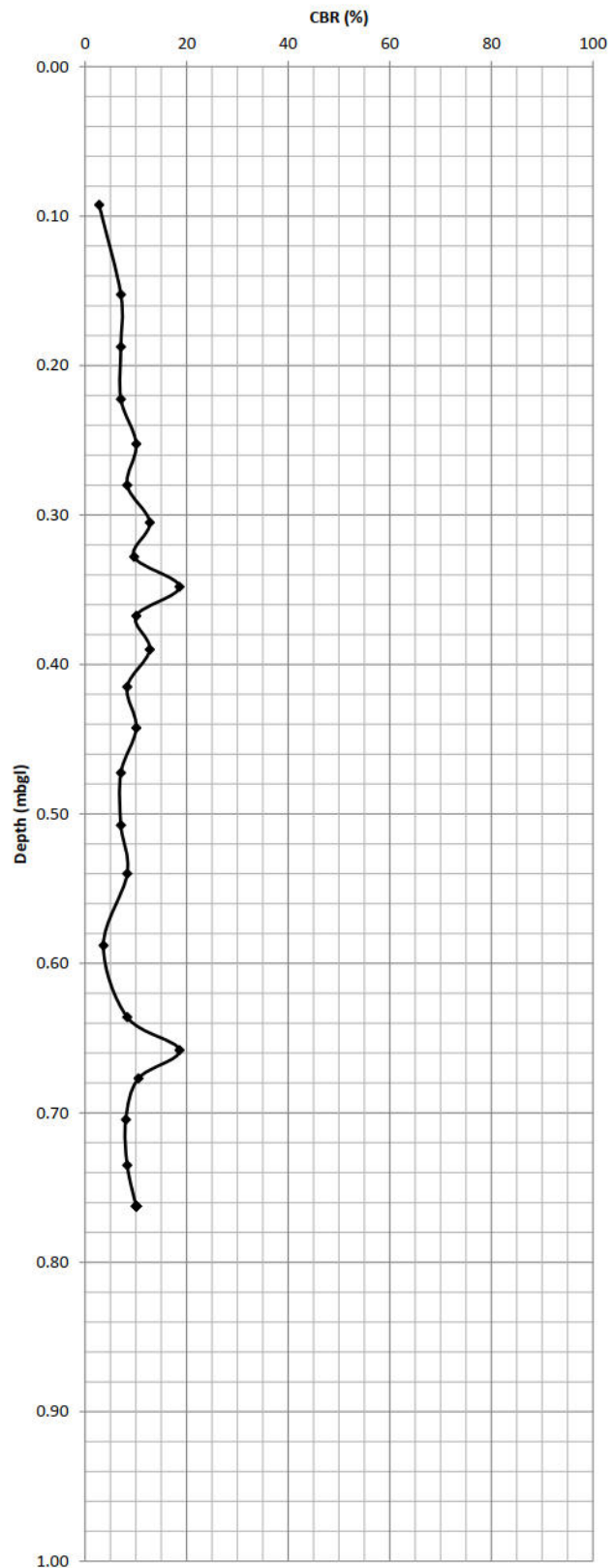
P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

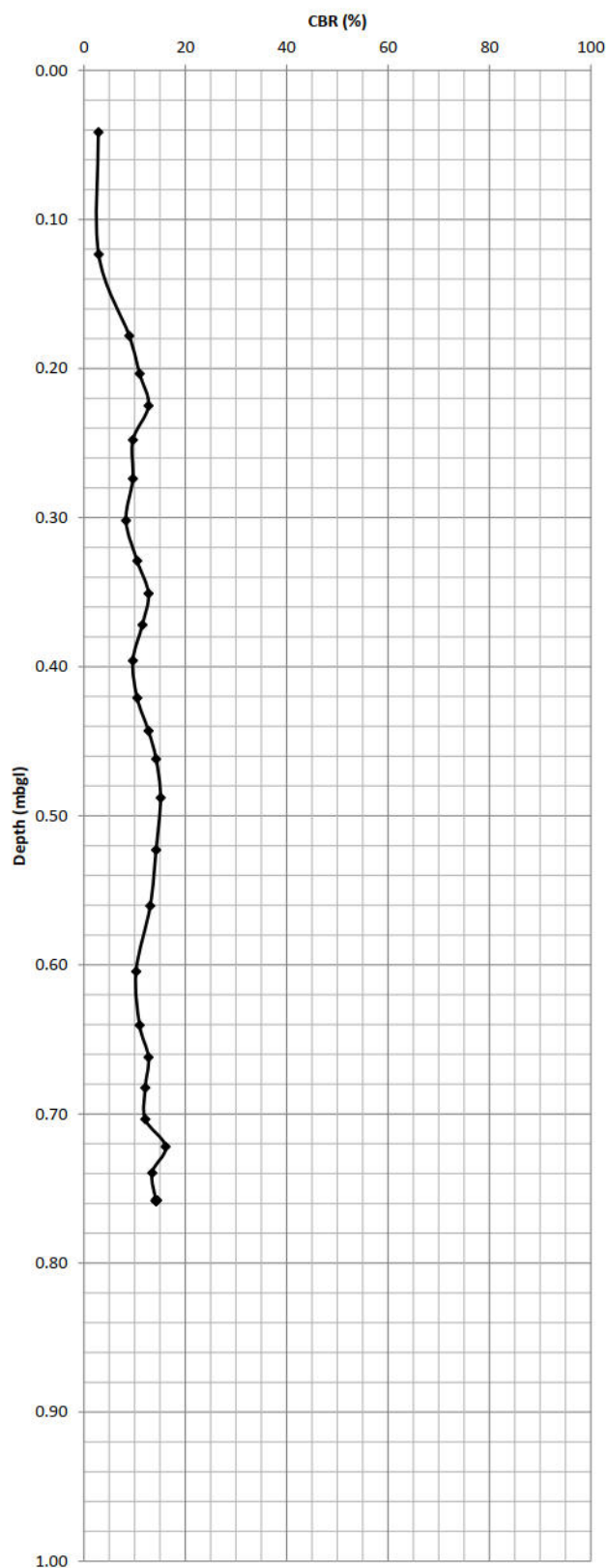
P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

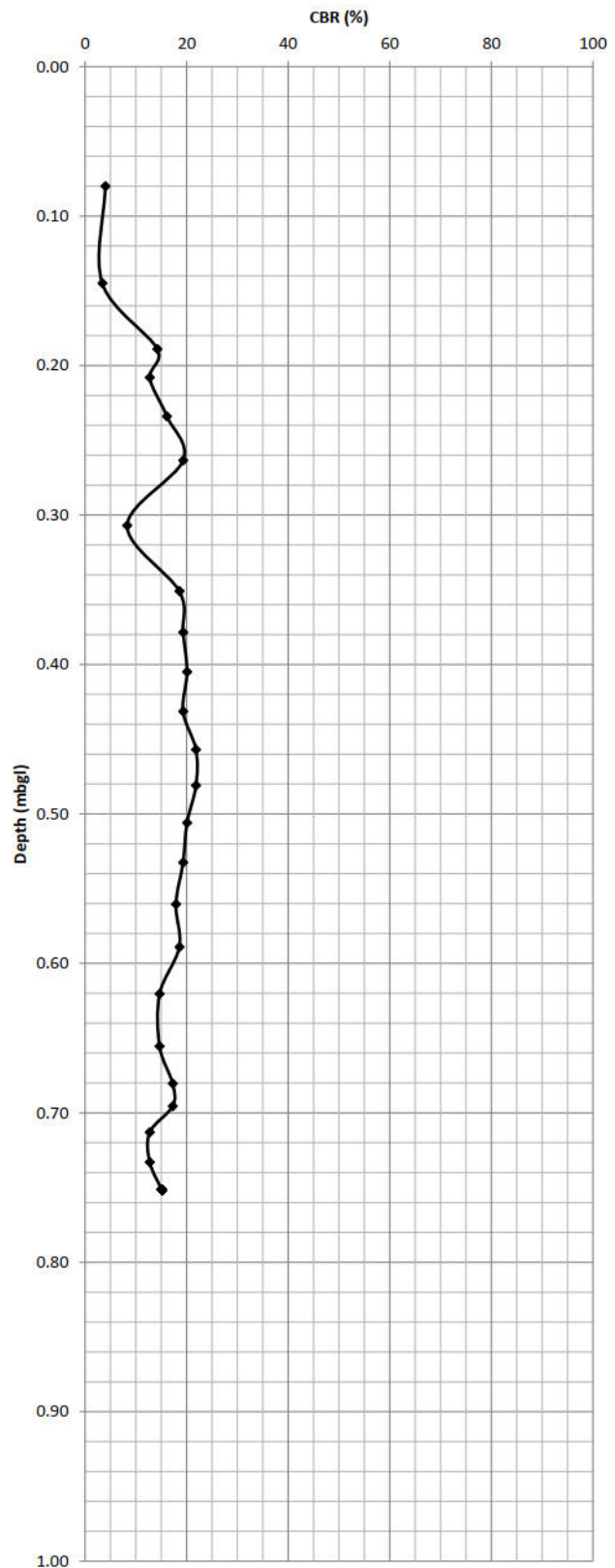
P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

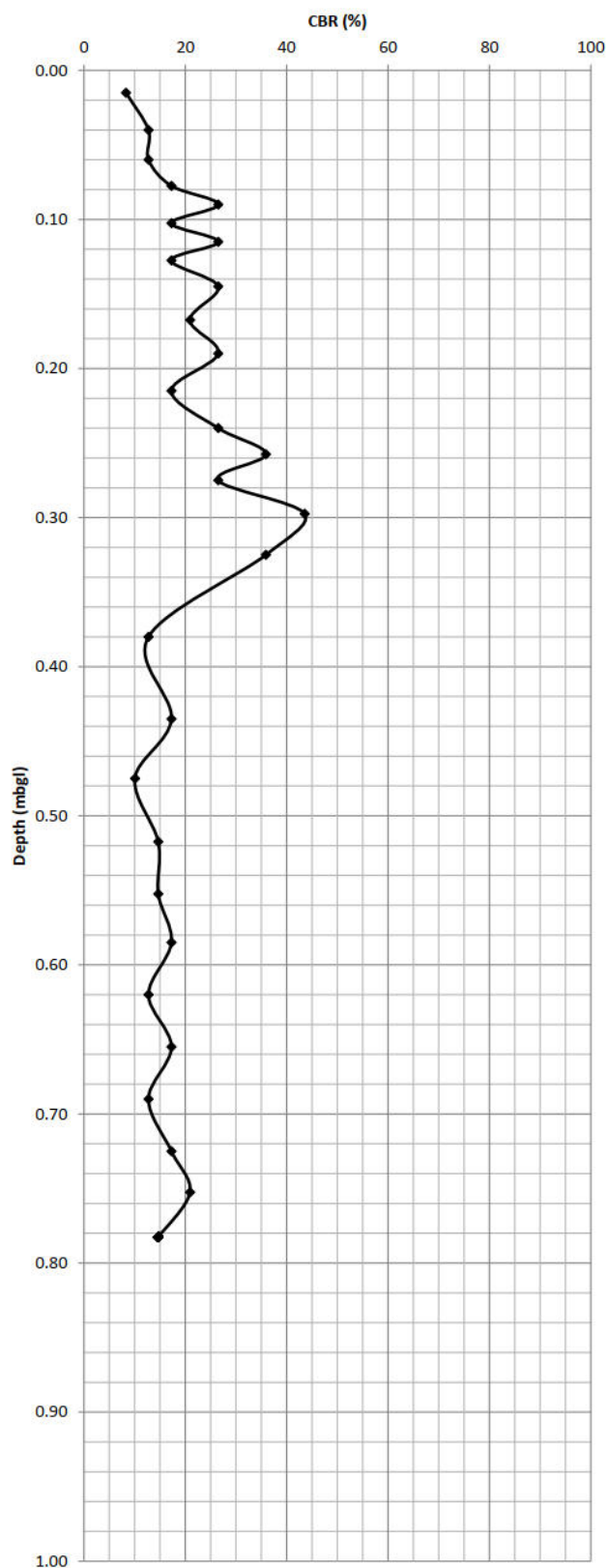
P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

TRL Dynamic Cone Penetrometer Record

P15714



Notes: CBR Value calculated in accordance with the TRRL equation given in TRL Road Note 8.

ASHDOWN SITE INVESTIGATION LIMITED

Site: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex	Project No.: P15714 Sheet No.: 1 of 5
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SUMMARY OF BOREHOLE FALLING HEAD SOAKAGE TEST RESULTS

WS203 (Test 1)	
Time (mins)	Depth to water (m bgl)
0	0.30
1	0.47
2	0.72
3	0.93
4	1.12
5	1.26
10	1.80
Borehole Depth (m bgl)	2.40
Casing Depth (m bgl)	1.75
Borehole Diameter (mm)	92.00
Casing Diameter (mm)	105.00

Notes: bgl – below ground level.
Borehole dry to 2.40m depth on completion of drilling.

ASHDOWN SITE INVESTIGATION LIMITED

Site: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex	Project No.: P15714 Sheet No.: 2 of 5
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SUMMARY OF BOREHOLE FALLING HEAD SOAKAGE TEST RESULTS

WS207 (Test 1)		WS207 (Test 2)		WS207 (Test 3)	
Time (mins)	Depth to water (m bgl)	Time (mins)	Depth to water (m bgl)	Time (mins)	Depth to water (m bgl)
0.0	0.15	0.0	0.15	0.0	0.13
0.5	0.58	0.5	0.36	0.5	0.34
1.0	0.97	1.0	0.53	1.0	0.49
2.0	1.19	2.0	0.78	2.0	0.74
3.0	1.46	3.0	1.00	3.0	0.93
4.0	1.66	4.0	1.14	4.0	1.06
5.0	1.82	5.0	1.31	5.0	1.21
6.0	1.90	6.0	1.45	6.0	1.35
9.5	2.13	8.0	1.67	8.0	1.55
		10.0	1.84	10.0	1.70
		16.0	2.13	17.0	1.99
Borehole Depth (m bgl)	3.00	Borehole Depth (m bgl)	3.00	Borehole Depth (m bgl)	3.00
Casing Depth (m bgl)	2.00	Casing Depth (m bgl)	2.00	Casing Depth (m bgl)	2.00
Borehole Diameter (mm)	92.00	Borehole Diameter (mm)	92.00	Borehole Diameter (mm)	92.00
Casing Diameter (mm)	105.00	Casing Diameter (mm)	105.00	Casing Diameter (mm)	105.00

Notes: bgl – below ground level.
Groundwater at approximately 2.15m depth on completion of drilling.

ASHDOWN SITE INVESTIGATION LIMITED

Site: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex	Project No.: P15714 Sheet No.: 3 of 5
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SUMMARY OF BOREHOLE FALLING HEAD SOAKAGE TEST RESULTS

WS211 (Test 1)		WS211 (Test 2)	
Time (mins)	Depth to water (m bgl)	Time (mins)	Depth to water (m bgl)
0.0	0.00	0.0	0.00
0.5	0.23	0.5	0.22
1.0	0.33	1.0	0.38
2.0	0.54	2.0	0.66
3.0	0.73	5.5	1.33
5.0	1.10	9.0	1.70
7.0	1.36	12.0	1.93
10.0	1.66		
13.0	1.86		
20.0	2.11		
Borehole Depth (m bgl)	3.00	Borehole Depth (m bgl)	3.00
Casing Depth (m bgl)	2.00	Casing Depth (m bgl)	2.00
Borehole Diameter (mm)	92.00	Borehole Diameter (mm)	92.00
Casing Diameter (mm)	105.00	Casing Diameter (mm)	105.00

Notes: bgl – below ground level.
Groundwater at approximately 2.10m depth of completion of drilling.

ASHDOWN SITE INVESTIGATION LIMITED

Site: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex	Project No.: P15714 Sheet No.: 4 of 5
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SUMMARY OF BOREHOLE FALLING HEAD SOAKAGE TEST RESULTS

WS216 (Test 1)		WS216 (Test 2)		WS216 (Test 3)	
Time (mins)	Depth to water (m bgl)	Time (mins)	Depth to water (m bgl)	Time (mins)	Depth to water (m bgl)
0.0	0.10	0.0	0.11	0.0	0.06
0.5	0.34	0.5	0.29	0.5	0.24
1.0	0.50	1.0	0.46	1.0	0.39
2.0	0.73	3.0	0.70	2.0	0.67
4.0	1.04	6.0	1.03	6.0	1.00
6.0	1.29	11.0	1.32	8.0	1.19
8.0	1.49	15.0	1.53	13.0	1.44
10.0	1.65	19.0	1.71	19.0	1.61
16.0	1.95	24.0	1.89	23.0	1.76
19.0	2.05	29.0	2.03	32.0	2.00
Borehole Depth (m bgl)	3.00	Borehole Depth (m bgl)	3.00	Borehole Depth (m bgl)	3.00
Casing Depth (m bgl)	2.00	Casing Depth (m bgl)	2.00	Casing Depth (m bgl)	2.00
Borehole Diameter (mm)	92.00	Borehole Diameter (mm)	92.00	Borehole Diameter (mm)	92.00
Casing Diameter (mm)	105.00	Casing Diameter (mm)	105.00	Casing Diameter (mm)	105.00

Notes: bgl – below ground level.
Groundwater at approximately 2.50m depth of completion of drilling.

ASHDOWN SITE INVESTIGATION LIMITED

Site: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex	Project No.: P15714 Sheet No.: 5 of 5
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SUMMARY OF BOREHOLE FALLING HEAD SOAKAGE TEST RESULTS

WS223 (Test 1)		WS223 (Test 2)		WS223 (Test 3)	
Time (mins)	Depth to water (m bgl)	Time (mins)	Depth to water (m bgl)	Time (mins)	Depth to water (m bgl)
0.0	0.20	0.0	0.21	0.0	0.14
0.5	0.42	0.5	0.28	1.0	0.39
1.0	0.69	1.0	0.39	2.0	0.55
2.0	0.89	2.0	0.57	4.0	0.79
3.0	1.05	4.0	0.85	8.0	1.08
5.0	1.34	8.0	1.15	13.0	1.50
8.0	1.63	12.0	1.51	18.0	1.81
		16.0	1.83	22.0	2.04
		20.0	2.09		
Borehole Depth (m bgl)	3.00	Borehole Depth (m bgl)	3.00	Borehole Depth (m bgl)	3.00
Casing Depth (m bgl)	2.00	Casing Depth (m bgl)	2.00	Casing Depth (m bgl)	2.00
Borehole Diameter (mm)	92.00	Borehole Diameter (mm)	92.00	Borehole Diameter (mm)	92.00
Casing Diameter (mm)	105.00	Casing Diameter (mm)	105.00	Casing Diameter (mm)	105.00

Notes: bgl – below ground level.
Groundwater at approximately 2.25m depth of completion of drilling.

Gas Concentrations and Groundwater Monitoring Results

Site Name:				Land adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex																				
Project Ref:				P15714																				
Position	Date	Time	Dynamic Pressure (pa)	Atmospheric Pressure (mbar)	Atmospheric Trend	Standing Water Depth (m bgl)	Flow Rate (l/hr)				Methane (%)				Carbon Dioxide (%)				Oxygen (%)				CO (ppm)	H2S (ppm)
							Seconds				Seconds				Seconds				Seconds					
							15	30	45	60	15	30	45	60	15	30	45	60	15	30	45	60		
WS201	24/08/2022	09:58	0	1016	Falling	2.39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.8	1.9	2.0	19.9	19.2	19.0	18.9	0	0
WS205	24/08/2022	10:54	0	1016	Falling	2.74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	20.6	20.5	20.4	20.3	0	0
WS206	24/08/2022	11:01	0	1015	Falling	2.70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	21.0	20.7	20.6	20.5	0	0
WS209	24/08/2022	10:17	0	1017	Falling	2.32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.9	1.9	1.9	19.6	19.5	19.4	19.3	0	0
WS214	24/08/2022	10:27	0	1016	Falling	2.29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.3	3.3	3.3	18.3	18.1	18.1	18.1	0	0
WS215	24/08/2022	10:32	0	1018	Falling	2.83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.7	0.7	20.2	20.1	20.0	20.0	0	0
WS221	24/08/2022	10:40	0	1017	Falling	2.83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8	3.8	18.2	18.1	18.0	18.0	0	0
WS224	24/08/2022	10:46	0	1016	Falling	2.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	3.0	3.1	3.1	18.7	18.5	18.4	18.3	0	0
WS201	08/09/2022	10:44	0	1004	Falling	1.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.6	2.7	2.7	18.5	18.1	18.0	18.0	0	0
WS205	08/09/2022	10:36	0	1004	Falling	2.51	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.2	2.2	2.2	18.9	18.7	18.7	18.7	0	0
WS206	08/09/2022	10:50	0	1002	Falling	2.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	19.4	19.3	19.3	19.3	0	0
WS209	08/09/2022	11:04	0	1002	Falling	n/r	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.1	1.0	1.0	19.7	19.7	19.7	19.7	0	0
WS214	08/09/2022	11:20	0	1002	Falling	n/r	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.7	2.7	2.7	18.9	18.3	18.2	18.1	0	0
WS215	08/09/2022	12:05	0	1003	Falling	n/r	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.6	0.5	0.5	19.5	20.0	20.1	20.2	0	0
WS221	08/09/2022	12:00	0	1004	Falling	n/r	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	3.3	3.3	3.3	18.6	18.4	18.3	18.2	0	0
WS224	08/09/2022	11:55	0	1004	Falling	n/r	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.2	3.3	3.3	17.8	17.7	17.5	17.5	0	0
WS201	20/09/2022	09:24	0	1028	Rising	1.94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.8	1.3	20.7	20.3	19.9	19.4	0	0
WS205	20/09/2022	09:05	0	1028	Rising	2.39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.5	2.5	2.5	17.8	17.2	17.1	17.0	0	0
WS206	20/09/2022	09:35	0	1028	Rising	2.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.7	19.1	18.9	18.7	18.7	0	0
WS209	20/09/2022	09:43	0	1028	Rising	2.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.7	2.7	2.7	16.5	16.1	16.0	16.0	0	0
WS214	20/09/2022	10:30	0	1028	Rising	1.95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.5	0.6	20.3	20.3	20.2	20.1	0	0
WS215	20/09/2022	10:05	0	1028	Rising	2.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.8	0.7	0.7	19.5	19.9	19.9	19.9	0	0
WS221	20/09/2022	10:15	0	1028	Rising	2.77	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	3.0	3.1	3.1	18.3	17.7	17.6	17.5	0	0
WS224	20/09/2022	10:25	0	1028	Rising	2.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.2	2.4	2.6	18.9	18.7	18.4	18.2	0	0

Gas Concentrations and Groundwater Monitoring Results

Site Name:				Land adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex																				
Project Ref:				P15714																				
Position	Date	Time	Dynamic Pressure (pa)	Atmospheric Pressure (mbar)	Atmospheric Trend	Standing Water Depth (m bgl)	Flow Rate (l/hr)				Methane (%)				Carbon Dioxide (%)				Oxygen (%)				CO (ppm)	H2S (ppm)
							Seconds				Seconds				Seconds				Seconds					
							15	30	45	60	15	30	45	60	15	30	45	60	15	30	45	60		
WS201	05/10/2022	09:48	0	1012	Falling	2.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.6	3.6	3.6	16.8	16.3	16.1	16.0	0	0
WS205	05/10/2022	09:35	0	1012	Falling	2.61	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.6	2.6	2.6	18.6	17.9	17.8	17.8	0	0
WS206	05/10/2022	10:13	0	1011	Falling	2.39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.8	1.8	1.8	18.7	18.6	18.5	18.5	0	0
WS209	05/10/2022	10:22	0	1011	Falling	2.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.7	2.7	2.7	16.9	15.8	15.6	15.6	0	0
WS214	05/10/2022	10:30	0	1012	Falling	2.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	2.0	2.1	17.9	17.9	17.7	17.6	0	0
WS215	05/10/2022	10:37	0	1011	Falling	2.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.4	0.3	0.3	19.7	20.1	20.3	20.3	0	0
WS221	05/10/2022	10:43	0	1011	Falling	2.72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.4	3.4	3.4	18.8	18.1	18.0	17.9	0	0
WS224	05/10/2022	10:50	0	1011	Falling	2.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.1	3.3	3.3	17.9	17.4	17.2	17.0	0	0
WS201	19/10/2022	10:26	0	1020	Falling	1.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	4.4	4.4	4.4	14.4	13.7	13.5	13.4	0	0
WS205	19/10/2022	10:29	0	1020	Falling	2.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.8	2.8	2.8	17.6	17.0	16.9	16.9	0	0
WS206	19/10/2022	10:36	0	1020	Falling	2.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	18.0	18.3	18.3	18.3	0	0
WS209	19/10/2022	10:42	0	1020	Falling	1.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.4	2.5	2.5	15.9	15.0	14.8	14.8	0	0
WS214	19/10/2022	10:51	0	1020	Falling	1.92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	3.0	3.0	3.0	15.4	15.0	14.9	14.9	0	0
WS215	19/10/2022	10:57	0	1020	Falling	2.66	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.2	2.3	2.3	18.1	18.3	18.3	18.2	0	0
WS221	19/10/2022	11:05	0	1020	Falling	2.74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.1	3.1	3.1	18.5	18.1	18.0	18.0	0	0
WS224	19/10/2022	11:10	0	1020	Falling	1.86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.6	3.7	3.8	16.9	16.3	16.2	16.0	0	0
WS201	01/11/2022	11:43	0	1009	Falling	1.54	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	6.1	6.2	6.2	10.5	9.2	9.0	9.0	0	0
WS205	01/11/2022	11:20	0	1010	Falling	1.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.7	3.7	3.7	15.3	14.6	14.4	14.3	0	0
WS206	01/11/2022	11:56	0	1009	Falling	1.67	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.1	2.1	2.1	17.1	17.5	17.5	17.4	0	0
WS209	01/11/2022	12:01	0	1008	Falling	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.2	1.5	1.7	18.7	17.4	16.5	15.8	0	0
WS214	01/11/2022	12:11	0	1009	Falling	1.48	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	3.1	3.1	3.1	14.3	13.6	13.4	13.4	0	0
WS215	01/11/2022	12:17	0	1009	Falling	2.51	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.1	0.0	19.5	20.3	20.4	20.4	0	0
WS221	01/11/2022	12:24	0	1009	Falling	2.55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	3.0	3.1	3.1	18.6	18.1	18.0	18.0	0	0
WS224	01/11/2022	12:29	0	1009	Falling	1.61	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	4.1	4.2	4.3	15.8	15.0	14.7	14.5	0	0

ASHDOWN SITE INVESTIGATION L · I · M · I · T · E · D	Site Name: Woodgate, West Sussex						
	Job Number: P14891						
	Start Date: 19/11/2020			Borehole Number: WS102			
	End Date: 19/11/2020						
						Sheet 1 of 1	
Samples and In Situ Testing							
Standpipe	Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	Legend	Depth	Stratum Description
	D	0.30					

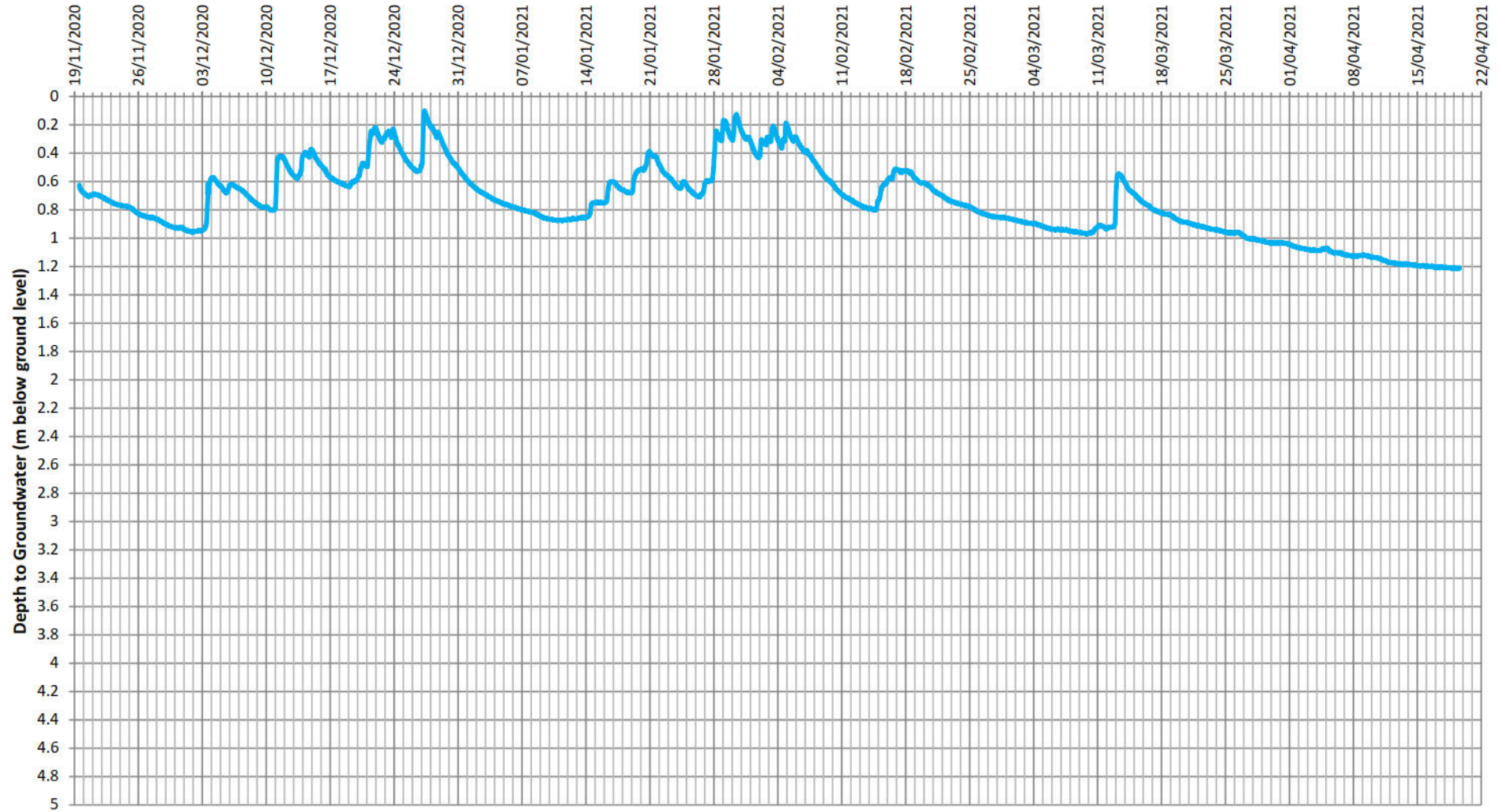
ASHDOWN SITE INVESTIGATION L · I · M · I · T · E · D	Site Name: Woodgate, West Sussex							
	Job Number: P14891							
	Start Date: 19/11/2020			Borehole Number: WS103				
	End Date: 19/11/2020							
						Sheet 1 of 1		
Samples and In Situ Testing								
Standpipe	Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	Legend	Depth	Stratum Description	
	D	0.20				0.00	REWORKED: Brown gravelly sandy clay. Gravel is angular to subrounded fine to coarse flint.	
	D	0.70				0.35	Orange brown and brown gravelly sandy CLAY. Gravel is angular to subrounded fine to coarse flint. (River Terrace Deposits)	
	D	1.30						
	D	1.90				1.70	Orange brown and brown clayey silty fine to coarse SAND. (River Terrace Deposits)	
	D	2.60						
	D	3.60				3.00	Orange brown very gravelly fine to coarse SAND. Gravel is angular to subrounded fine to coarse flint. (River Terrace Deposits)	
D	4.20							
						4.60	End of borehole at 4.60m	
Remarks Groundwater: Groundwater at 0.56m depth on completion. Stability: Borehole cased to 3.00m depth. Borehole collapsed to 3.40m depth on completion. Notes: No further progress below 4.60m depth. Standpipe installed to 3.40m depth; 3.40m to 0.40m slotted pipe with gravel surround; 0.40m to ground level plain pipe with bentonite seal; completed with end cap and upstanding cover.							Excavation Method: WLS Borehole Diameter: Various Made By: RJ	

Ashdown Site Investigation Limited

Site: Woodgate, West Sussex

Report No. P14891

Groundwater Monitoring Results - WS102

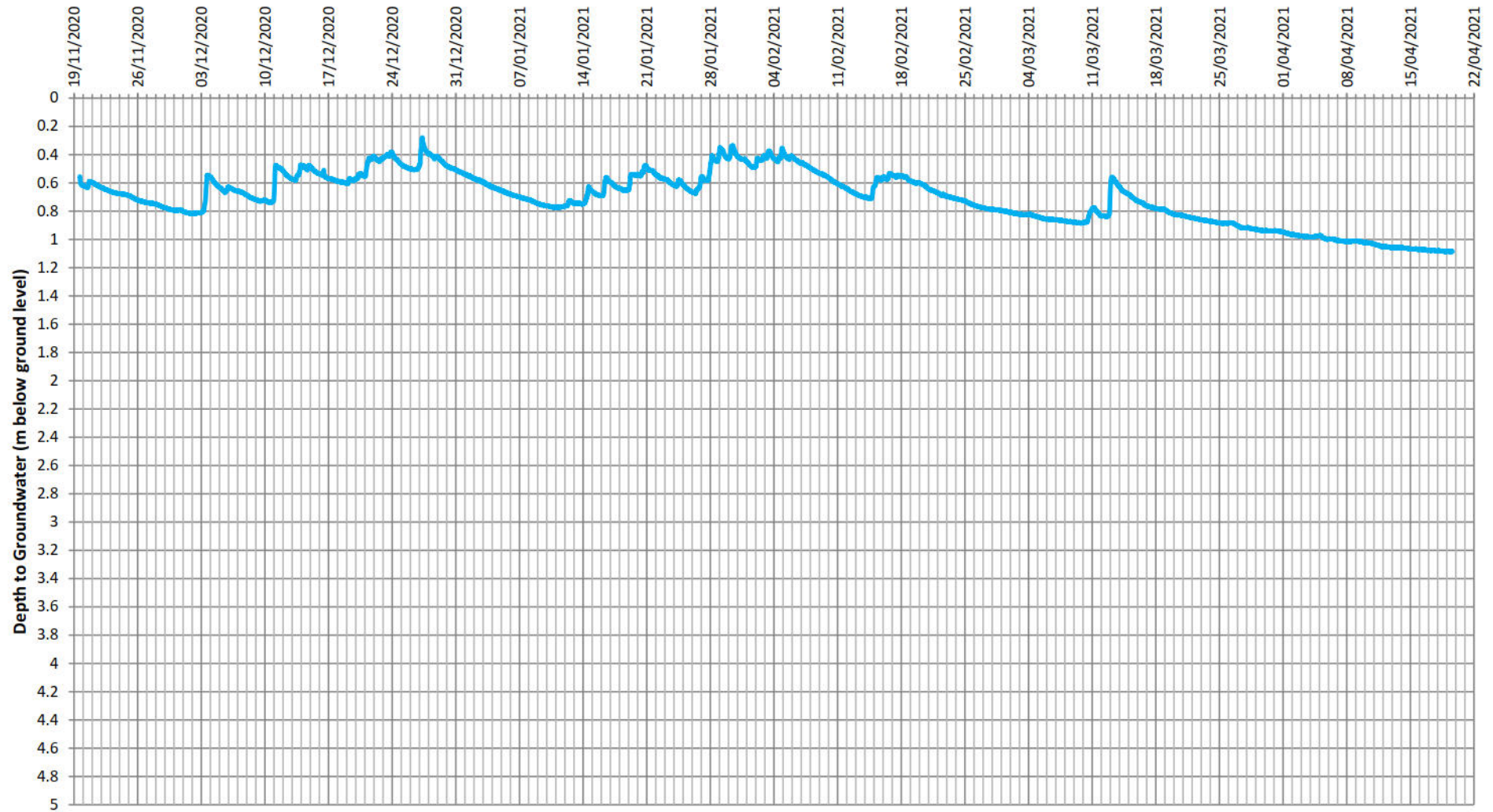


Ashdown Site Investigation Limited

Site: Woodgate, West Sussex

Report No. P14891

Groundwater Monitoring Results - WS103



APPENDIX D

Geotechnical Laboratory Test Results
Contamination Laboratory Test Results

ASHDOWN SITE INVESTIGATION LIMITED

Soil Classification Summary

Site Name:	Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex	Job No:	P15714
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BH/TP No.	Depth (m)	Nat. Moist. Cont. (w %)	Equiv. Moist. Cont. (w _a %)	Atterberg Limits			Class'n	Cons. Index (I _c)	% passing 425 µm sieve	Visual Description of Sample
				W _L %	W _p %	I _p %				
WS201	1.00	22		40	20	20	CIM	0.90*	98	Stiff brown slightly gravelly CLAY. Gravel is fine to medium flint.
WS202	1.30	18		39	17	22	CIM	0.95*	90	Stiff brown mottled orange slightly gravelly slightly sandy CLAY. Gravel is fine to medium flint.
WS203	1.80	21		37	16	21	CIM	0.76*	69	Stiff brown slightly gravelly CLAY. Gravel is fine to medium flint.
WS205	1.00	16		42	19	23	CIM	1.13*	98	Very stiff brown slightly gravelly slightly sandy CLAY. Gravel is fine flint and sandstone.
WS207	0.70	21		48	18	30	CIM	0.90*	98	Stiff brown slightly gravelly slightly sandy CLAY. Gravel is fine flint.
WS208	1.00	19		50	20	30	CIH/M	1.03*	95	Very stiff brown slightly gravelly slightly sandy CLAY. Gravel is fine flint with fine roots.
WS210	1.60	22		37	16	21	CIM	0.71*	78	Firm brown slightly gravelly slightly sandy CLAY. Gravel is fine to medium flint.
WS212	1.10	22		40	20	20	CIM	0.90*	95	Stiff brown slightly gravelly slightly sandy CLAY. Gravel is fine flint.
WS213	1.50	18		35	16	19	CIM/L	0.89*	62	Stiff brown orange gravelly slightly sandy CLAY. Gravel is fine to coarse flint
WS214	1.10	20		32	16	16	CIL	0.75*	71	Stiff brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium flint.

Test Method: Classification Tests BS1377: Part 2: 1990: Method 4.4, 5.3 and 5.4

* Consistency index based on natural moisture content and not the equivalent moisture content.

Sheet No. 1

ASHDOWN SITE INVESTIGATION LIMITED

Soil Classification Summary

Site Name:	Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex	Job No:	P15714
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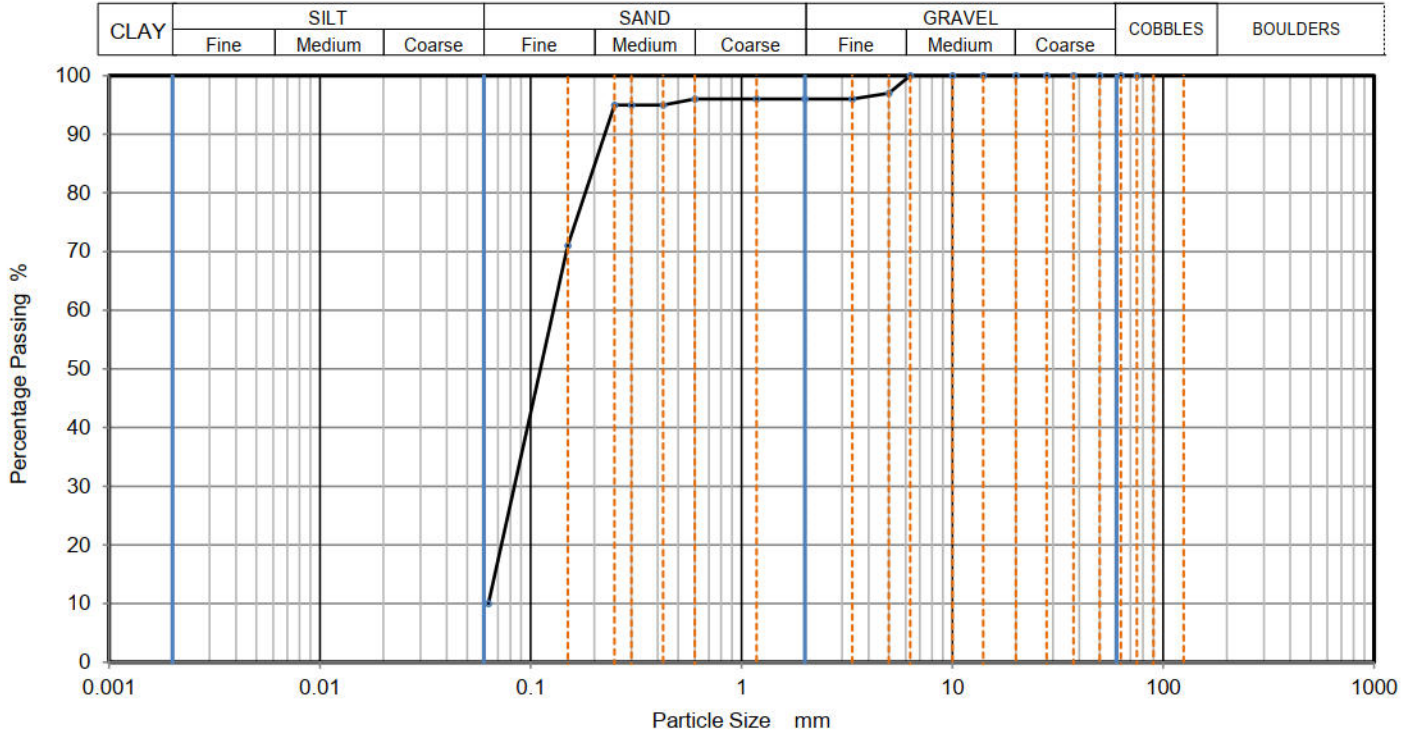
BH/TP No.	Depth (m)	Nat. Moist. Cont. (w %)	Equiv. Moist. Cont. (w _a %)	Atterberg Limits			Class'n	Cons. Index (I _c)	% passing 425 µm sieve	Visual Description of Sample
				W _L %	W _p %	I _p %				
WS215	0.80	17		45	19	26	CIM	1.08*	99	Very stiff brown slightly gravelly slightly sandy CLAY. Gravel is fine flint.
WS216	1.20	19		40	18	22	CIM	0.95*	98	Stiff brown slightly gravelly slightly sandy CLAY. Gravel is fine flint.
WS217	1.30	19		37	16	21	CIM	0.86*	77	Stiff brown slightly gravelly slightly sandy CLAY. Gravel is fine to medium flint.
WS219	1.30	25		36	16	20	CIM	0.55*	90	Firm brown slightly gravelly slightly sandy CLAY. Gravel is fine to medium flint.
WS220	1.10	20		38	18	20	CIM	0.90*	87	Stiff brown slightly gravelly CLAY. Gravel is fine to medium flint.
WS222	1.90	17		31	14	17	CIL	0.82*	49	Stiff brown gravelly slightly sandy CLAY. Gravel is fine to medium flint.
WS224	0.70	12		39	18	21	CIM	1.29*	98	Very stiff orange mottled brown slightly gravelly slightly sandy CLAY. Gravel is fine flint.

Test Method: Classification Tests BS1377: Part 2: 1990: Method 4.4, 5.3 and 5.4	Sheet No. 1
* Consistency index based on natural moisture content and not the equivalent moisture content.	

ASHDOWN SITE INVESTIGATION LIMITED

Particle Size Distribution

Site Name:	Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex	Job No.:	P15714
Soil Description:	Slightly graveely silty SAND.	Borehole/Pit No.	WS206
Test Method	BS1377:Part2:1990, Clause 9.2	Depth (m)	2.20



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	97		
3.35	96		
2	96		
1.18	96		
0.6	96		
0.425	95		
0.3	95		
0.25	95		
0.15	71		
0.063	10		

Dry Mass of sample (g)

657

Sample Proportions	% dry mass
Very coarse	0
Gravel	4
Sand	86
Fines <0.063mm	10

Grading Analysis	
D ₁₀₀	mm 6.300
D ₆₀	mm 0.128
D ₃₀	mm 0.084
D ₁₀	mm 0.063
Uniformity Coefficient	2
Curvature Coefficient	0.9

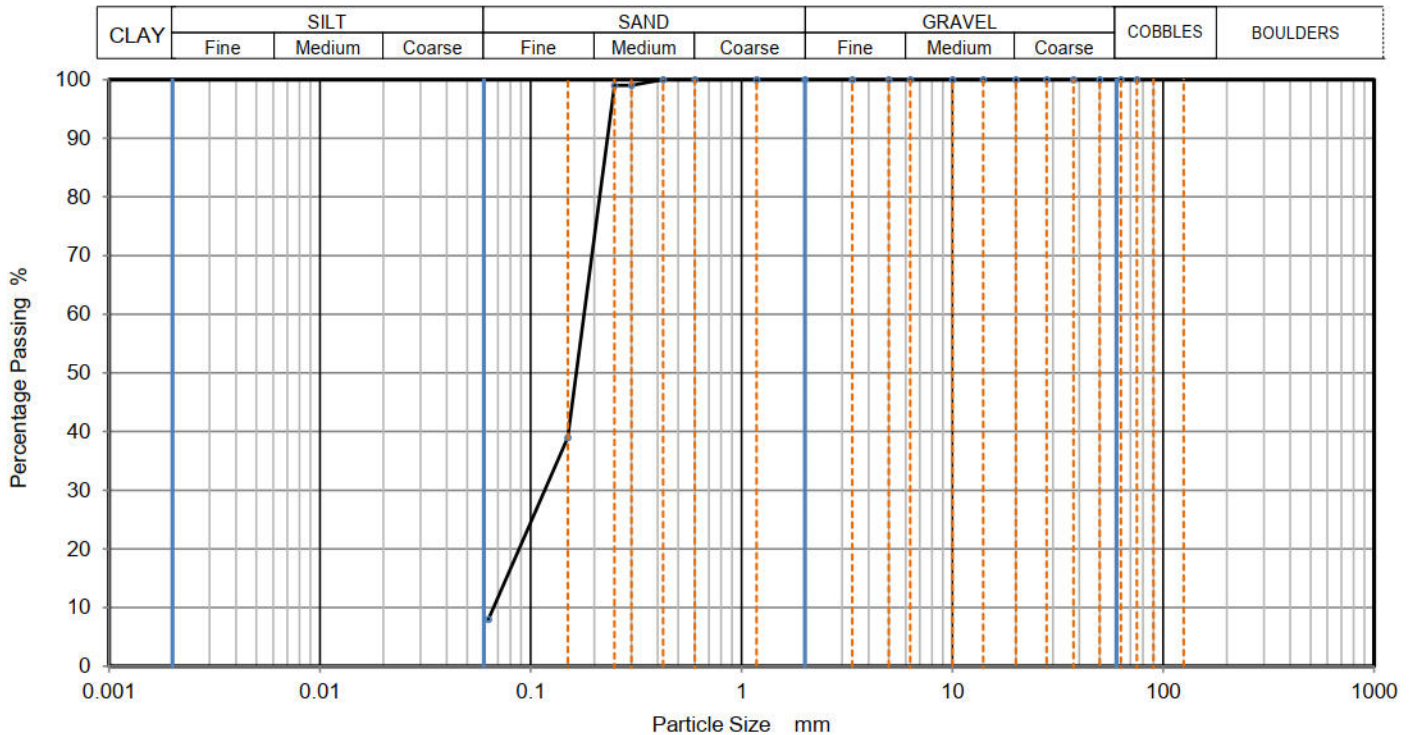
Remarks
Preparation and testing in accordance with BS1377 unless noted below

Sheet No.: 1

ASHDOWN SITE INVESTIGATION LIMITED

Particle Size Distribution

Site Name:	Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex	Job No.:	P15714
Soil Description:	Silty SAND.	Borehole/Pit No.	WS211
Test Method		Depth (m)	2.90



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.0200	
63	100	0.0060	
50	100	0.0020	
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.25	99		
0.15	39		
0.063	8		

Dry Mass of sample (g) 830

Sample Proportions	% dry mass
Very coarse	0
Gravel	0
Sand	92
Fines <0.063mm	8

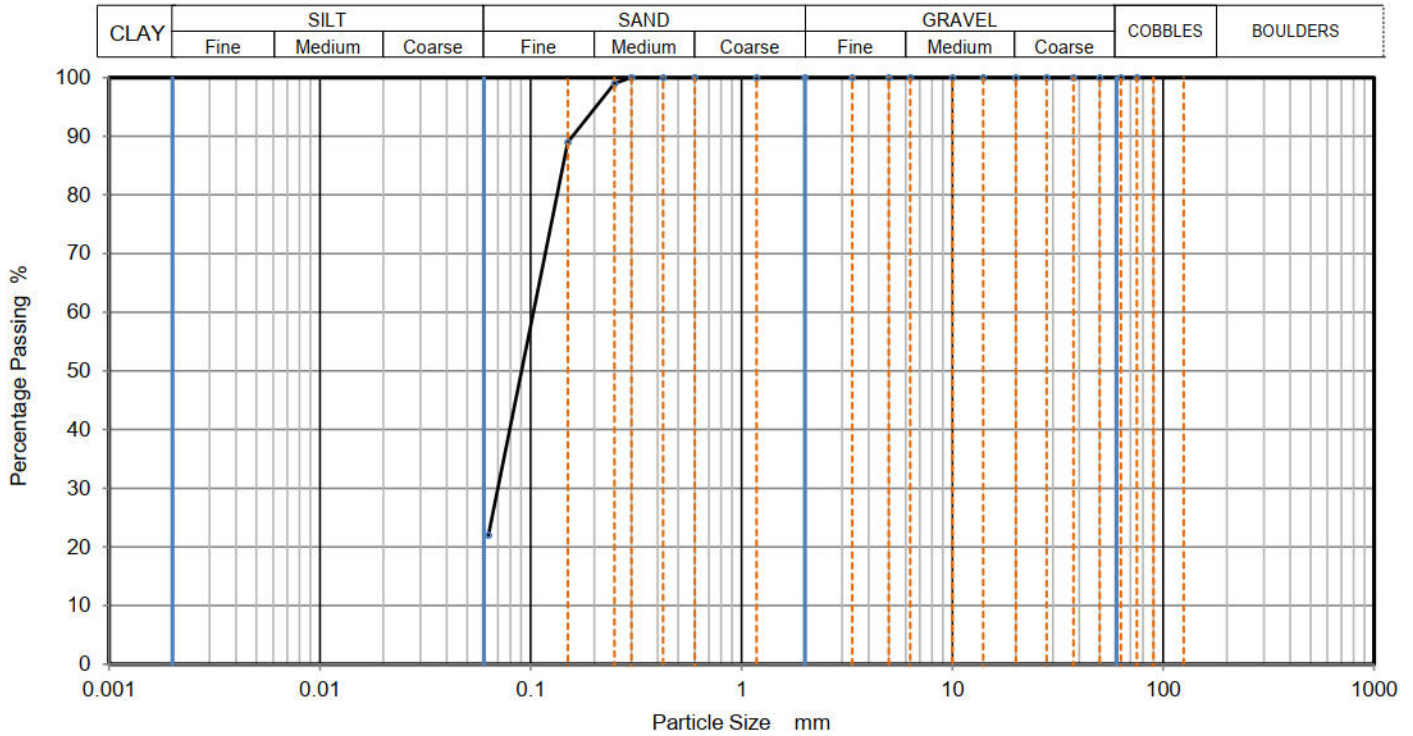
Grading Analysis	
D ₁₀₀	mm 0.425
D ₆₀	mm 0.179
D ₃₀	mm 0.117
D ₁₀	mm 0.067
Uniformity Coefficient	2.7
Curvature Coefficient	1.1

Remarks
Preparation and testing in accordance with BS1377 unless noted below

ASHDOWN SITE INVESTIGATION LIMITED

Particle Size Distribution

Site Name:	Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex	Job No.:	P15714
Soil Description:	Very clayey SAND.	Borehole/Pit No.	WS221
Test Method	BS1377:Part2:1990, Clause 9.2	Depth (m)	2.70



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
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	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.25	99		
0.15	89		
0.063	22		

Dry Mass of sample (g)

860

Sample Proportions	% dry mass
Very coarse	0
Gravel	0
Sand	78
Fines <0.063mm	22

Grading Analysis	
D ₁₀₀	mm 0.300
D ₆₀	mm 0.103
D ₃₀	mm 0.070
D ₁₀	mm
Uniformity Coefficient	
Curvature Coefficient	

Remarks
Preparation and testing in accordance with BS1377 unless noted below



Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY



THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 22-42535

Issue: 1

Date of Issue: 12/08/2022

Contact: Lab Results

Customer Details: Ashdown Site Investigation Ltd
Unit 3 The Grain Store
Ditchling Common Business Park
Ditchling Common
West Sussex BN6 8SG

Quotation No: Q22-02645

Order No: 10510

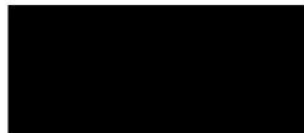
Customer Reference: P15714_1034

Date Received: 08/08/2022

Date Approved: 12/08/2022

Details: L/a to Woodgate Nurseries, Lidsey Road, Woodgate, West Suss

Approved by:



Tim Reeve, Quality Officer

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Sample Summary

Report No.: 22-42535, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
289427	WS211 0.30	04/08/2022	08/08/2022	Silty loam	
289428	WS221 0.40	04/08/2022	08/08/2022	Silty loam	
289429	WS223 0.05	04/08/2022	08/08/2022	Silty loam	

Results Summary

Report No.: 22-42535, issue number 1

ELAB Reference	289427	289428	289429
Customer Reference			
Sample ID			
Sample Type	SOIL	SOIL	SOIL
Sample Location	WS211	WS221	WS223
Sample Depth (m)	0.30	0.40	0.05
Sampling Date	04/08/2022	04/08/2022	04/08/2022

Determinand	Codes	Units	LOD			
Soil sample preparation parameters						
Moisture Content	N	%	0.1	12.4	12.1	11.4
Material removed	N	%	0.1	< 0.1	< 0.1	< 0.1
Description of Inert material removed	N		0	None	None	None
Metals						
Arsenic	M	mg/kg	1	10.2	12.0	9.3
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5
Chromium	M	mg/kg	5	31.9	30.9	28.9
Copper	M	mg/kg	5	14.5	13.2	13.3
Lead	M	mg/kg	5	16.7	14.2	15.2
Mercury	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	19.6	14.9	16.6
Selenium	M	mg/kg	1	< 1.0	< 1.0	< 1.0
Zinc	M	mg/kg	5	53.3	49.4	50.1
Inorganics						
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8
Water Soluble Boron	N	mg/kg	0.5	0.8	< 0.5	0.7
Miscellaneous						
pH	M	pH units	0.1	7.3	7.1	6.8
Soil Organic Matter	U	%	0.1	1.6	1.2	1.9
Polyaromatic hydrocarbons						
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4	< 0.4	< 0.4

Results Summary

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Report No.: 22-42535, issue number 1

ELAB Reference	289427	289428	289429
Customer Reference			
Sample ID			
Sample Type	SOIL	SOIL	SOIL
Sample Location	WS211	WS221	WS223
Sample Depth (m)	0.30	0.40	0.05
Sampling Date	04/08/2022	04/08/2022	04/08/2022

Determinand	Codes	Units	LOD			
BTEX						
Benzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Toluene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Xylenes	M	ug/kg	10	< 10.0	< 10.0	< 10.0
MTBE	U	ug/kg	10	< 10.0	< 10.0	< 10.0
TPH CWG						
>C5-C6 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C6-C8 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aliphatic (HS_1D_MS+EH_2D_AL)	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C10-C12 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C12-C16 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C16-C21 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C21-C35 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C35-C40 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
Total aliphatic hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_AL)	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C5-C7 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C7-C8 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aromatic (HS_1D_MS+EH_2D_AR)	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C10-C12 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C12-C16 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C16-C21 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C21-C35 Aromatic (EH_2D_AR)	M	mg/kg	1	1.0	< 1.0	< 1.0
>C35-C40 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
Total aromatic hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_AR)	N	mg/kg	1	1.6	< 1.0	< 1.0
Total petroleum hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_Total)	N	mg/kg	1	2.0	< 1.0	< 1.0

Results Summary

2683

Report No.: 22-42535, issue number 1

ELAB Reference	289427	289428	289429
Customer Reference			
Sample ID			
Sample Type	SOIL	SOIL	SOIL
Sample Location	WS211	WS221	WS223
Sample Depth (m)	0.30	0.40	0.05
Sampling Date	04/08/2022	04/08/2022	04/08/2022

Determinand	Codes	Units	LOD			
VOC						
Heptane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Octane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Nonane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Benzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Toluene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
m+p-xylene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
o-xylene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
cis-1,2-dichloroethane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,1-Dichloroethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Chloroform	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Tetrachloromethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0
1,1,1-Trichloroethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Trichloroethylene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Tetrachloroethylene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
1,1,1,2-Tetrachloroethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0
1,1,2,2-Tetrachloroetha	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Chlorobenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Bromobenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Bromodichloromethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Methylethylbenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
1,1-Dichloro-1-propene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Trans - 1-2 -dichloroethylene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
2,2-Dichloropropane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Bromochloromethane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,2-Dichloroethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Dibromomethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0
1,2-Dichloropropane	M	ug/kg	10	< 10.0	< 10.0	< 10.0
cis-1,3-Dichloro-1-propene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
trans-1,3-Dichloro-1-propene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
1,1,2-Trichloroethane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Dibromochloromethane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,3-Dichloropropane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,2-dibromoethane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Styrene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Propylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
2-Chlorotoluene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,2,4-Trimethylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
4-Chlorotoluene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
t-butylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,3,5-Trimethylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1-methylpropylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
p-cymene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,3-Dichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Butylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,2-Dibromo-3-chloropropane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Hexachlorobutadiene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1-2-3 - Trichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Naphthalene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1-2-4 - Trichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,4-Dichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,2-Dichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Bromoform	N	ug/kg	10	< 10.0	< 10.0	< 10.0

Method Summary

Report No.: 22-42535, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Hexavalent chromium	N	As submitted sample	10/08/2022	110	Colorimetry
pH	M	Air dried sample	12/08/2022	113	Electromeric
Aqua regia extractable metals	M	Air dried sample	10/08/2022	118	ICPMS
PAH (GC-FID)	M	As submitted sample	09/08/2022	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	11/08/2022	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	11/08/2022	181	GC-MS
VOC in solids	M	As submitted sample	11/08/2022	181	GC-MS
BTEX in solids	M	As submitted sample	11/08/2022	181A	GC-MS
Water soluble boron	N	Air dried sample	10/08/2022	202	Colorimetry
TPH CWG soil by gc-gc	M	As submitted sample	09/08/2022	271	
Soil organic matter	U	Air dried sample	11/08/2022	BS1377:P3	Titrimetry

Tests marked N are not UKAS accredited

Report Information

Report No.: 22-42535, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month
 All water samples will be retained for 7 days following the date of the test report
 Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
2D	GC-GC - Double coil gas chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry



Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY



THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 22-42574

Issue: 1

Date of Issue: 16/08/2022

Contact: Lab Results

Customer Details: Ashdown Site Investigation Ltd
Unit 3 The Grain Store
Ditchling Common Business Park
Ditchling Common
West Sussex BN6 8SG

Quotation No: Q22-02645

Order No: 10513

Customer Reference: P15714_1040

Date Received: 10/08/2022

Date Approved: 16/08/2022

Details: L/a to Woodgate Nurseries, Lidsey Road, Woodgate, West Suss

Approved by:



Tim Reeve, Quality Officer

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)

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Sample Summary

Report No.: 22-42574, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
289673	WS213 0.35	08/08/2022	10/08/2022	Silty loam	
289674	WS215 0.10	08/08/2022	10/08/2022	Silty clayey loam	
289675	WS217 0.30	09/08/2022	10/08/2022	Silty loam	
289676	WS220 0.10	09/08/2022	10/08/2022	Silty loam	

Results Summary

2683

Report No.: 22-42574, issue number 1

ELAB Reference	289673	289674	289675	289676
Customer Reference				
Sample ID				
Sample Type	SOIL	SOIL	SOIL	SOIL
Sample Location	WS213	WS215	WS217	WS220
Sample Depth (m)	0.35	0.10	0.30	0.10
Sampling Date	08/08/2022	08/08/2022	09/08/2022	09/08/2022

Determinand	Codes	Units	LOD				
Soil sample preparation parameters							
Moisture Content	N	%	0.1	10.0	13.9	12.5	8.2
Material removed	N	%	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Description of Inert material removed	N		0	None	None	None	None
Metals							
Arsenic	M	mg/kg	1	7.3	13.4	9.4	8.6
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	M	mg/kg	5	27.4	38.2	28.5	26.4
Copper	M	mg/kg	5	16.7	22.1	20.2	15.7
Lead	M	mg/kg	5	23.6	18.8	20.7	20.0
Mercury	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	12.1	20.1	13.7	12.7
Selenium	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
Zinc	M	mg/kg	5	47.5	54.1	48.6	42.1
Inorganics							
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8	< 0.8
Water Soluble Boron	N	mg/kg	0.5	1.3	0.6	< 0.5	0.9
Miscellaneous							
pH	M	pH units	0.1	7.4	7.4	7.3	6.9
Soil Organic Matter	U	%	0.1	2.6	1.0	2.3	3.2
Polyaromatic hydrocarbons							
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	0.2
Pyrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	0.2
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1	0.2	< 0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1	0.3	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4	0.7	< 0.4	0.4

Results Summary

2683

Report No.: 22-42574, issue number 1

ELAB Reference	289673	289674	289675	289676
Customer Reference				
Sample ID				
Sample Type	SOIL	SOIL	SOIL	SOIL
Sample Location	WS213	WS215	WS217	WS220
Sample Depth (m)	0.35	0.10	0.30	0.10
Sampling Date	08/08/2022	08/08/2022	09/08/2022	09/08/2022

Determinand	Codes	Units	LOD				
BTEX							
Benzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Toluene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Xylenes	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
MTBE	U	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
TPH CWG							
>C5-C6 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C6-C8 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aliphatic (HS_1D_MS+EH_2D_AL)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C10-C12 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C12-C16 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C16-C21 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C21-C35 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C35-C40 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
Total aliphatic hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_AL)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C5-C7 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C7-C8 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aromatic (HS_1D_MS+EH_2D_AR)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C10-C12 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C12-C16 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C16-C21 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C21-C35 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C35-C40 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
Total aromatic hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_AR)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
Total petroleum hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_Total)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0

Results Summary

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Report No.: 22-42574, issue number 1

ELAB Reference	289673	289674	289675	289676
Customer Reference				
Sample ID				
Sample Type	SOIL	SOIL	SOIL	SOIL
Sample Location	WS213	WS215	WS217	WS220
Sample Depth (m)	0.35	0.10	0.30	0.10
Sampling Date	08/08/2022	08/08/2022	09/08/2022	09/08/2022

Determinand	Codes	Units	LOD				
VOC							
Heptane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Octane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Nonane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Benzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Toluene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
m+p-xylene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
o-xylene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
cis-1,2-dichloroethene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
1,1-Dichloroethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Chloroform	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Tetrachloromethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
1,1,1-Trichloroethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Trichloroethylene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Tetrachloroethylene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
1,1,1,2-Tetrachloroethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
1,1,2,2-Tetrachloroetha	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Chlorobenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Bromobenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Bromodichloromethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Methylethylbenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
1,1-Dichloro-1-propene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Trans - 1-2 -dichloroethylene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
2,2-Dichloropropane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Bromochloromethane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
1,2-Dichloroethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Dibromomethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
1,2-Dichloropropane	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
cis-1,3-Dichloro-1-propene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
trans-1,3-Dichloro-1-propene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
1,1,2-Trichloroethane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Dibromochloromethane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
1,3-Dichloropropane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
1,2-dibromoethane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Styrene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Propylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
2-Chlorotoluene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
1,2,4-Trimethylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
4-Chlorotoluene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
t-butylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
1,3,5-Trimethylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
1-methylpropylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
p-cymene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
1,3-Dichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Butylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
1,2-Dibromo-3-chloropropane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Hexachlorobutadiene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
1-2-3 - Trichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Naphthalene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
1-2-4 - Trichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
1,4-Dichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
1,2-Dichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Bromoform	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0

Tests marked N are not UKAS accredited.

Method Summary

Report No.: 22-42574, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Hexavalent chromium	N	As submitted sample	12/08/2022	110	Colorimetry
pH	M	Air dried sample	15/08/2022	113	Electromeric
Aqua regia extractable metals	M	Air dried sample	12/08/2022	118	ICPMS
PAH (GC-FID)	M	As submitted sample	12/08/2022	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	12/08/2022	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	12/08/2022	181	GC-MS
VOC in solids	M	As submitted sample	12/08/2022	181	GC-MS
BTEX in solids	M	As submitted sample	12/08/2022	181A	GC-MS
Water soluble boron	N	Air dried sample	12/08/2022	202	Colorimetry
TPH CWG soil by gc-gc	M	As submitted sample	11/08/2022	271	
Soil organic matter	U	Air dried sample	16/08/2022	BS1377:P3	Titrimetry

Tests marked N are not UKAS accredited

Report Information

Report No.: 22-42574, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month
 All water samples will be retained for 7 days following the date of the test report
 Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
2D	GC-GC - Double coil gas chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry



Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 22-42646

Issue: 2. Replaces Analytical Report number 22-42646; issue no.1

Date of Issue: 21/09/2022

Contact: Lab Results

Customer Details: Ashdown Site Investigation Ltd
Unit 3 The Grain Store
Ditchling Common Business Park
Ditchling Common
West Sussex BN6 8SG

Quotation No: Q22-02645

Order No: 10526

Customer Reference: P15714_1047

Date Received: 12/08/2022

Date Approved: 21/09/2022

Details: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate,

Approved by:



Mike Varley, General Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)

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Sample Summary

Report No.: 22-42646, issue number 2

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
289973	WS201 0.10	10/08/2022	12/08/2022	Loamy sand	
289974	WS203 0.10	10/08/2022	12/08/2022	Silty loam	
289975	WS205 0.20	10/08/2022	12/08/2022	Silty loam	
289976	WS206 0.40	10/08/2022	12/08/2022	Silty loam	
289977	WS207 0.10	10/08/2022	12/08/2022	Silty loam	
289978	WS208 0.20	10/08/2022	12/08/2022	Silty loam	
289979	WS209 0.10	10/08/2022	12/08/2022	Silty loam	
289980	WS219 0.40	10/08/2022	12/08/2022	Silty loam	



Results Summary

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Report No.: 22-42646, issue number 2

ELAB Reference	289973	289974	289975	289976	289977	289978	289979	289980
Customer Reference								
Sample ID								
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	WS201	WS203	WS205	WS206	WS207	WS208	WS209	WS219
Sample Depth (m)	0.10	0.10	0.20	0.40	0.10	0.20	0.10	0.40
Sampling Date	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022

Determinand	Codes	Units	LOD								
Soil sample preparation parameters											
Moisture Content	N	%	0.1	14.2	7.5	8.6	10.0	9.3	8.2	13.1	10.1
Material removed	N	%	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Description of Inert material removed	N		0	None	None	None	None	None	None	None	None
Metals											
Arsenic	M	mg/kg	1	7.7	6.4	7.2	6.9	6.8	12.8	6.8	7.4
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.6	< 0.5	< 0.5
Chromium	M	mg/kg	5	20.1	22.5	26.7	23.8	23.8	28.4	22.7	22.4
Copper	M	mg/kg	5	30.1	14.8	15.7	13.2	14.3	60.0	14.1	12.5
Lead	M	mg/kg	5	30.9	26.8	29.6	16.9	23.3	191	22.9	13.6
Mercury	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	13.4	11.1	12.8	14.2	12.2	20.9	13.3	12.7
Selenium	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc	M	mg/kg	5	60.4	46.5	51.1	42.7	50.8	204	47.5	44.0
Inorganics											
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Water Soluble Boron	N	mg/kg	0.5	1.0	0.7	0.9	< 0.5	< 0.5	1.9	< 0.5	< 0.5



Results Summary

2683

Report No.: 22-42646, issue number 2

ELAB Reference	289973	289974	289975	289976	289977	289978	289979	289980
Customer Reference								
Sample ID								
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	WS201	WS203	WS205	WS206	WS207	WS208	WS209	WS219
Sample Depth (m)	0.10	0.10	0.20	0.40	0.10	0.20	0.10	0.40
Sampling Date	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022

Determinand	Codes	Units	LOD								
Miscellaneous											
pH	M	pH units	0.1	7.0	6.9	6.9	7.3	7.0	8.5	7.4	7.5
Soil Organic Matter	U	%	0.1	3.8	2.7	2.9	1.7	9.5	2.5	2.6	0.2
Polyaromatic hydrocarbons											
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1	0.2	< 0.1	< 0.1	0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1	< 0.1	1.5	< 0.1	0.2	0.7	0.2	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1	0.3	< 0.1	< 0.1	0.2	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	0.2	0.2	3.1	0.2	0.7	2.4	0.7	< 0.1
Pyrene	M	mg/kg	0.1	0.1	0.1	2.4	0.1	0.6	2.2	0.6	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	1.0	< 0.1	0.2	1.1	0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1	< 0.1	1.1	< 0.1	0.2	1.1	0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	1.5	< 0.1	0.3	1.8	0.5	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	1.6	< 0.1	0.3	1.8	0.3	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1	< 0.1	1.6	< 0.1	0.3	1.8	0.4	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1	< 0.1	0.9	< 0.1	0.3	1.3	0.3	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	0.2	< 0.1	< 0.1	0.2	< 0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1	< 0.1	0.9	< 0.1	0.3	1.4	0.3	< 0.1
Total PAH(16)	M	mg/kg	0.4	0.5	0.5	16.4	< 0.4	3.7	16.1	3.8	< 0.4



Results Summary

2683

Report No.: 22-42646, issue number 2

ELAB Reference	289973	289974	289975	289976	289977	289978	289979	289980
Customer Reference								
Sample ID								
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	WS201	WS203	WS205	WS206	WS207	WS208	WS209	WS219
Sample Depth (m)	0.10	0.10	0.20	0.40	0.10	0.20	0.10	0.40
Sampling Date	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022

Determinand	Codes	Units	LOD								
BTEX											
Benzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Toluene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Xylenes	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
MTBE	U	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
TPH CWG											
>C5-C6 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C6-C8 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aliphatic (HS_1D_MS+EH_2D_AL)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C10-C12 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C12-C16 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.3	< 1.0	< 1.0
>C16-C21 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	9.1	< 1.0	< 1.0
>C21-C35 Aliphatic (EH_2D_AL)	M	mg/kg	1	8.7	5.8	4.3	3.7	5.3	39.0	9.7	2.6
>C35-C40 Aliphatic (EH_2D_AL)	M	mg/kg	1	1.1	1.1	< 1.0	< 1.0	< 1.0	7.3	1.5	< 1.0
Total aliphatic hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_AL)	N	mg/kg	1	11.1	7.4	5.1	4.7	7.0	60.2	12.8	3.6
>C5-C7 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C7-C8 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aromatic (HS_1D_MS+EH_2D_AR)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C10-C12 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C12-C16 Aromatic (EH_2D_AR)	M	mg/kg	1	2.0	< 1.0	< 1.0	1.0	1.2	3.2	2.2	1.2
>C16-C21 Aromatic (EH_2D_AR)	M	mg/kg	1	2.2	1.4	1.2	1.1	2.3	12.6	4.2	< 1.0
>C21-C35 Aromatic (EH_2D_AR)	M	mg/kg	1	24.5	34.8	27.1	19.2	27.7	147	53.0	17.7
>C35-C40 Aromatic (EH_2D_AR)	M	mg/kg	1	6.5	4.3	2.9	2.0	2.3	53.1	7.1	1.4
Total aromatic hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_AR)	N	mg/kg	1	36.4	41.9	32.6	23.8	34.0	217	67.6	21.6
Total petroleum hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_Total)	N	mg/kg	1	47.5	49.3	37.7	28.4	41.0	277	80.4	25.2

Results Summary

Report No.: 22-42646, issue number 2

ELAB Reference	289973	289974	289975	289976	289977	289978	289979	289980
Customer Reference								
Sample ID								
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	WS201	WS203	WS205	WS206	WS207	WS208	WS209	WS219
Sample Depth (m)	0.10	0.10	0.20	0.40	0.10	0.20	0.10	0.40
Sampling Date	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022
Determinand	Codes	Units	LOD					
VOC								
Heptane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Octane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Nonane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Benzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Toluene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
m+p-xylene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
o-xylene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
cis-1,2-dichloroethene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
1,1-Dichloroethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Chloroform	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Tetrachloromethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
1,1,1-Trichloroethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Trichloroethylene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Tetrachloroethylene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
1,1,1,2-Tetrachloroethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
1,1,2,2-Tetrachloroethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Chlorobenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Bromobenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Bromodichloromethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Methylethylbenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
1,1-Dichloro-1-propene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Trans - 1-2 -dichloroethylene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
2,2-Dichloropropane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Bromochloromethane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
1,2-Dichloroethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Dibromomethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
1,2-Dichloropropane	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
cis-1,3-Dichloro-1-propene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
trans-1,3-Dichloro-1-propene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
1,1,2-Trichloroethane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Dibromochloromethane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
1,3-Dichloropropane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
1,2-dibromoethane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Styrene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Propylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
2-Chlorotoluene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0

Tests marked N are not UKAS accredited.

The Environmental Laboratory Ltd. Reg. No. 3882193

Results Summary

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Report No.: 22-42646, issue number 2

ELAB Reference	289973	289974	289975	289976	289977	289978	289979	289980
Customer Reference								
Sample ID								
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	WS201	WS203	WS205	WS206	WS207	WS208	WS209	WS219
Sample Depth (m)	0.10	0.10	0.20	0.40	0.10	0.20	0.10	0.40
Sampling Date	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022	10/08/2022

Determinand	Codes	Units	LOD								
VOC											
1,2,4-Trimethylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
4-Chlorotoluene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
t-butylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
1,3,5-Trimethylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
1-methylpropylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
p-cymene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
1,3-Dichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Butylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
1,2-Dibromo-3-chloropropane	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Hexachlorobutadiene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
1-2-3 - Trichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Naphthalene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
1-2-4 - Trichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
1,4-Dichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
1,2-Dichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Bromoform	N	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0

Method Summary

Report No.: 22-42646, issue number 2

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Hexavalent chromium	N	As submitted sample	16/08/2022	110	Colorimetry
pH	M	Air dried sample	17/08/2022	113	Electromeric
Aqua regia extractable metals	M	Air dried sample	16/08/2022	118	ICPMS
PAH (GC-FID)	M	As submitted sample	16/08/2022	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	17/08/2022	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	17/08/2022	181	GC-MS
VOC in solids	M	As submitted sample	17/08/2022	181	GC-MS
BTEX in solids	M	As submitted sample	17/08/2022	181A	GC-MS
Water soluble boron	N	Air dried sample	16/08/2022	202	Colorimetry
TPH CWG soil by gc-gc	M	As submitted sample	15/08/2022	271	
Soil organic matter	U	Air dried sample	17/08/2022	BS1377:P3	Titrimetry

Tests marked N are not UKAS accredited

Report Information

Report No.: 22-42646, issue number 2

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month
 All water samples will be retained for 7 days following the date of the test report
 Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
2D	GC-GC - Double coil gas chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry

Ashdown Site Investigations

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

e: [REDACTED]



Analytical Report Number : 22-79121

Project / Site name:	Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate	Samples received on:	22/08/2022
Your job number:	P15714_1049	Samples instructed on/ Analysis started on:	22/08/2022
Your order number:	10527	Analysis completed by:	26/08/2022
Report Issue Number:	1	Report issued on:	26/08/2022
Samples Analysed:	10 soil samples		

Signed:



Dominika Warjan
Junior Reporting Specialist
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

Analytical Report Number: 22-79121

Project / Site name: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate

Your Order No: 10527

Lab Sample Number				2395772	2395773	2395774	2395775	2395776
Sample Reference				WS202	WS204	WS208	WS210	WS212
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	1.90	1.70	1.90	0.60
Date Sampled				10/08/2022	10/08/2022	10/08/2022	08/08/2022	08/08/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	14	14	12	19	14
Total mass of sample received	kg	0.001	NONE	0.6	0.6	0.6	0.6	0.6

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.3	8.4	7.9	8.3	7.7
Total Sulphate as SO ₄	%	0.005	MCERTS	0.008	0.007	0.024	< 0.005	0.013
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0035	0.0051	0.089	0.0023	0.051
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	3.5	5.1	89.4	2.3	51
Total Sulphur	%	0.005	MCERTS	0.01	0.007	0.012	< 0.005	0.008

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

Analytical Report Number: 22-79121

Project / Site name: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate

Your Order No: 10527

Lab Sample Number				2395777	2395778	2395779	2395780	2395781
Sample Reference				WS214	WS216	WS218	WS220	WS223
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.80	1.70	1.50	1.40	1.10
Date Sampled				05/08/2022	09/08/2022	09/08/2022	09/08/2022	04/08/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	10	15	12	13	14
Total mass of sample received	kg	0.001	NONE	0.6	0.6	0.6	0.6	0.6

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.4	8	8.1	7.8	8.2
Total Sulphate as SO ₄	%	0.005	MCERTS	0.021	0.011	0.008	0.007	0.015
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0087	0.0073	0.0036	0.0089	0.0097
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	8.7	7.3	3.6	8.9	9.7
Total Sulphur	%	0.005	MCERTS	0.01	< 0.005	< 0.005	< 0.005	0.008

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

Analytical Report Number : 22-79121

Project / Site name: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2395772	WS202	None Supplied	0.8	Light brown clay and sand with gravel.
2395773	WS204	None Supplied	1.9	Light brown clay and sand with gravel.
2395774	WS208	None Supplied	1.7	Light brown clay and sand with gravel.
2395775	WS210	None Supplied	1.9	Light brown clay and sand with gravel.
2395776	WS212	None Supplied	0.6	Light brown clay and sand with gravel.
2395777	WS214	None Supplied	2.8	Light brown gravelly sand.
2395778	WS216	None Supplied	1.7	Light brown clay and sand with gravel.
2395779	WS218	None Supplied	1.5	Brown clay and sand with gravel.
2395780	WS220	None Supplied	1.4	Light brown clay and sand with gravel.
2395781	WS223	None Supplied	1.1	Light brown clay and sand with gravel.

Analytical Report Number : 22-79121

Project / Site name: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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



Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 22-44114

Issue: 1

Date of Issue: 26/10/2022

Contact: Lab Results

Customer Details: Ashdown Site Investigation Ltd
Unit 3 The Grain Store
Ditchling Common Business Park
Ditchling Common
West Sussex BN6 8SG

Quotation No: Q22-02645

Order No: 10704

Customer Reference: P15714_1199

Date Received: 20/10/2022

Date Approved: 26/10/2022

Details: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate

Approved by:



Tim Reeve, Quality Officer

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)

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Sample Summary

Report No.: 22-44114, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
298564	WS201	19/10/2022	20/10/2022		
298565	WS205	19/10/2022	20/10/2022		
298566	WS206	19/10/2022	20/10/2022		
298567	WS209	19/10/2022	20/10/2022		
298568	WS214	19/10/2022	20/10/2022		
298569	WS224	19/10/2022	20/10/2022		



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Results Summary

Report No.: 22-44114, issue number 1

ELAB Reference	298564	298565	298566	298567	298568	298569
Customer Reference						
Sample ID						
Sample Type	WATER	WATER	WATER	WATER	WATER	WATER
Sample Location	WS201	WS205	WS206	WS209	WS214	WS224
Sample Depth (m)						
Sampling Date	19/10/2022	19/10/2022	19/10/2022	19/10/2022	19/10/2022	19/10/2022

Determinand	Codes	Units	LOD						
Dissolved Metals									
Arsenic	U	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5
Boron	N	ug/l	5	56	49	40	109	217	67
Cadmium	U	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Chromium	U	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5
Copper	U	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Mercury	U	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	U	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5
Lead	U	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Selenium	U	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5
Zinc	U	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5
Inorganics									
Hexavalent Chromium	U	ug/l	100	< 100	< 100	< 100	< 100	< 100	< 100
Miscellaneous									
pH	U	pH units	0.1	7.0	7.2	7.0	7.2	7.2	7.1



2683

Results Summary

Report No.: 22-44114, issue number 1

ELAB Reference	298564	298565	298566	298567	298568	298569
Customer Reference						
Sample ID						
Sample Type	WATER	WATER	WATER	WATER	WATER	WATER
Sample Location	WS201	WS205	WS206	WS209	WS214	WS224
Sample Depth (m)						
Sampling Date	19/10/2022	19/10/2022	19/10/2022	19/10/2022	19/10/2022	19/10/2022

Determinand	Codes	Units	LOD						
Polyaromatic hydrocarbons									
Naphthalene GCMS	N	ug/l	0.01	0.01	0.02	0.02	0.16	0.06	0.10
Acenaphthylene GCMS	N	ug/l	0.01	< 0.01	< 0.01	0.01	0.02	0.02	< 0.01
Acenaphthene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01
Fluorene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.04	0.02	0.03
Phenanthrene GCMS	N	ug/l	0.01	0.03	0.02	0.05	0.10	0.05	0.09
Anthracene GCMS	N	ug/l	0.01	< 0.01	< 0.01	0.01	0.02	0.02	0.01
Fluoranthene GCMS	N	ug/l	0.01	0.04	0.02	0.10	0.14	0.07	0.06
Pyrene GCMS	N	ug/l	0.01	0.04	0.02	0.09	0.15	0.06	0.05
Benzo (a) anthracene GCMS	N	ug/l	0.01	0.02	< 0.01	0.05	0.08	0.03	0.03
Chrysene GCMS	N	ug/l	0.01	0.03	0.02	0.06	0.11	0.06	0.04
Benzo (b) fluoranthene GCMS	N	ug/l	0.01	0.02	< 0.01	0.04	0.09	0.05	0.02
Benzo (k) fluoranthene GCMS	N	ug/l	0.01	0.03	0.01	0.06	0.08	0.04	0.02
Benzo (a) pyrene GCMS	N	ug/l	0.01	0.02	< 0.01	0.05	0.10	0.04	0.02
Indeno (1,2,3-cd) pyrene GCMS	N	ug/l	0.01	0.01	< 0.01	0.03	0.04	0.02	< 0.01
Dibenzo(a,h)anthracene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01
Benzo(ghi)perylene GCMS	N	ug/l	0.01	0.01	< 0.01	0.03	0.06	0.03	0.01
Total PAH(16) GCMS	N	ug/l	0.01	0.29	0.16	0.60	1.20	0.58	0.54



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Results Summary

Report No.: 22-44114, issue number 1

ELAB Reference	298564	298565	298566	298567	298568	298569
Customer Reference						
Sample ID						
Sample Type	WATER	WATER	WATER	WATER	WATER	WATER
Sample Location	WS201	WS205	WS206	WS209	WS214	WS224
Sample Depth (m)						
Sampling Date	19/10/2022	19/10/2022	19/10/2022	19/10/2022	19/10/2022	19/10/2022

Determinand	Codes	Units	LOD						
BTEX									
Benzene	U	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Toluene	U	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Ethylbenzene	U	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Xylenes	U	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
MTBE	U	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
TPH CWG									
>C5-C6 Aliphatic (HS_1D_MS)	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C6-C8 Aliphatic (HS_1D_MS)	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C8-C10 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C10-C12 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C12-C16 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C16-C21 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C21-C35 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0	< 5.0	< 5.0	5.9	< 5.0	< 5.0
>C35-C40 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total (>C5-C40) Aliphatic (HS_1D_MS+EH_CU_1D_AL)	N	ug/l	5	< 5.0	< 5.0	< 5.0	5.9	< 5.0	< 5.0
>C5-C7 Aromatic (HS_1D_MS)	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C7-C8 Aromatic (HS_1D_MS)	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C8-C10 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C10-C12 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C12-C16 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0	5.3	< 5.0	< 5.0	< 5.0	< 5.0
>C16-C21 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C21-C35 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C35-C40 Aromatic (EH_CU_1D_AR)	N	ug/l	5	5.8	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total (>C5-C40) Aromatic (HS_1D_MS+EH_CU_1D_AR)	N	ug/l	5	5.8	5.3	< 5.0	< 5.0	< 5.0	< 5.0
Total (>C5-C40) Ali/Aro (HS_1D_MS+EH_CU_1D_Total)	N	ug/l	5	5.8	5.3	< 5.0	5.9	< 5.0	< 5.0

Results Summary

Report No.: 22-44114, issue number 1

ELAB Reference				298564	298565	298566	298567	298568	298569
Customer Reference									
Sample ID									
Sample Type				WATER	WATER	WATER	WATER	WATER	WATER
Sample Location				WS201	WS205	WS206	WS209	WS214	WS224
Sample Depth (m)									
Sampling Date				19/10/2022	19/10/2022	19/10/2022	19/10/2022	19/10/2022	19/10/2022
Determinand	Codes	Units	LOD						
VOC									
MTBE	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Heptane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Octane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Nonane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Benzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Toluene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
m+p-xylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
o-xylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,2-dichloroethene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroform	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Tetrachloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Tetrachloroethylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1,2-Tetrachloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Bromobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Methylethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloro-1-propene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Trans - 1-2 - dichloroethylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
2,2-Dichloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Bromochloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,3-Dichloro-1-propene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,3-Dichloro-1-propene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromochloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,3-Dichloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromoethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Styrene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Propylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
2-Chlorotoluene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,4-Trimethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
4-Chlorotoluene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
t-butylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,3,5-Trimethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1-methylpropylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
p-cymene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,3-Dichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Butylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromo-3-chloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorobutadiene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1-2-3 - Trichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Naphthalene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1-2-4 - Trichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Bromoform	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1

Method Summary

Report No.: 22-44114, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Water					
Aliphatic/Aromatic hydrocarbons in water	N		26/10/2022		GC-FID
Dissolved metals by ICP in waters	U		24/10/2022	101	ICPMS
pH of waters	U		24/10/2022	113	Electromeric
Chromium Hexavalent in waters	U		21/10/2022	123	Colorimetry
PAHs and/or PCBs in waters	N		21/10/2022	135	GC-MS
BTEX in waters	U		24/10/2022	200	GC-MS
Low range Aliphatic hydrocarbons water	N		24/10/2022	200	GC-MS
Low range Aromatic hydrocarbons water	N		24/10/2022	200	GC-MS
VOC in waters	N		21/10/2022	200	GC-MS
Aliphatic hydrocarbons in water	N		21/10/2022	215	GC-FID
Aromatic hydrocarbons in water	N		21/10/2022	215	GC-FID

Tests marked N are not UKAS accredited

Report Information

Report No.: 22-44114, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month
 All water samples will be retained for 7 days following the date of the test report
 Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
2D	GC-GC - Double coil gas chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry



Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 22-44405

Issue: 1

Date of Issue: 08/11/2022

Contact: Lab Results

Customer Details: Ashdown Site Investigation Ltd
Unit 3 The Grain Store
Ditchling Common Business Park
Ditchling Common
West Sussex BN6 8SG

Quotation No: Q22-02645

Order No: 10738

Customer Reference: P15714_1230

Date Received: 02/11/2022

Date Approved: 08/11/2022

Details: Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate

Approved by:



Tim Reeve, Quality Officer

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)

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Sample Summary

Report No.: 22-44405, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
300392	WS201	01/11/2022	03/11/2022		
300393	WS205	01/11/2022	03/11/2022		
300394	WS206	01/11/2022	03/11/2022		
300395	WS209	01/11/2022	03/11/2022		
300396	WS214	01/11/2022	03/11/2022		
300397	WS224	01/11/2022	03/11/2022		



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Results Summary

Report No.: 22-44405, issue number 1

ELAB Reference	300392	300393	300394	300395	300396	300397
Customer Reference						
Sample ID						
Sample Type	WATER	WATER	WATER	WATER	WATER	WATER
Sample Location	WS201	WS205	WS206	WS209	WS214	WS224
Sample Depth (m)						
Sampling Date	01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022

Determinand	Codes	Units	LOD						
Dissolved Metals									
Arsenic	U	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5
Boron	N	ug/l	5	47	44	31	32	102	88
Cadmium	U	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Chromium	U	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5
Copper	U	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Mercury	U	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	U	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5
Lead	U	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Selenium	U	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5
Zinc	U	ug/l	5	7	< 5	< 5	< 5	< 5	< 5
Inorganics									
Hexavalent Chromium	U	ug/l	100	< 100	< 100	< 100	< 100	< 100	< 100
Miscellaneous									
pH	U	pH units	0.1	6.9	7.2	7.2	7.4	7.3	7.2



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Results Summary

Report No.: 22-44405, issue number 1

ELAB Reference	300392	300393	300394	300395	300396	300397
Customer Reference						
Sample ID						
Sample Type	WATER	WATER	WATER	WATER	WATER	WATER
Sample Location	WS201	WS205	WS206	WS209	WS214	WS224
Sample Depth (m)						
Sampling Date	01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022

Determinand	Codes	Units	LOD						
Polyaromatic hydrocarbons									
Naphthalene GCMS	N	ug/l	0.01	1.77	1.01	0.36	0.09	0.08	0.03
Acenaphthylene GCMS	N	ug/l	0.01	0.89	0.53	0.19	0.05	0.05	0.03
Acenaphthene GCMS	N	ug/l	0.01	4.02	1.77	0.53	0.15	0.21	0.11
Fluorene GCMS	N	ug/l	0.01	7.41	4.38	1.55	0.37	0.40	0.29
Phenanthrene GCMS	N	ug/l	0.01	17.0	10.6	3.35	0.78	0.77	0.59
Anthracene GCMS	N	ug/l	0.01	4.29	2.30	0.61	0.16	0.16	0.13
Fluoranthene GCMS	N	ug/l	0.01	9.72	6.14	2.07	0.51	0.45	0.27
Pyrene GCMS	N	ug/l	0.01	9.26	5.75	2.11	0.52	0.45	0.27
Benzo (a) anthracene GCMS	N	ug/l	0.01	2.51	1.49	0.40	0.10	0.09	0.03
Chrysene GCMS	N	ug/l	0.01	2.31	1.49	0.51	0.14	0.16	0.07
Benzo (b) fluoranthene GCMS	N	ug/l	0.01	1.25	0.76	0.20	0.09	0.08	0.03
Benzo (k) fluoranthene GCMS	N	ug/l	0.01	1.25	0.81	0.27	0.09	0.11	0.03
Benzo (a) pyrene GCMS	N	ug/l	0.01	1.16	0.69	0.19	0.07	0.08	0.02
Indeno (1,2,3-cd) pyrene GCMS	N	ug/l	0.01	0.35	0.21	0.09	0.03	0.05	0.01
Dibenzo(a,h)anthracene GCMS	N	ug/l	0.01	0.13	0.08	0.03	< 0.01	0.01	< 0.01
Benzo(ghi)perylene GCMS	N	ug/l	0.01	0.43	0.26	0.09	0.04	0.05	0.01
Total PAH(16) GCMS	N	ug/l	0.01	63.7	38.3	12.6	3.17	3.21	1.91

Results Summary

Report No.: 22-44405, issue number 1

ELAB Reference	300392	300393	300394	300395	300396	300397
Customer Reference						
Sample ID						
Sample Type	WATER	WATER	WATER	WATER	WATER	WATER
Sample Location	WS201	WS205	WS206	WS209	WS214	WS224
Sample Depth (m)						
Sampling Date	01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022

Determinand	Codes	Units	LOD						
BTEX									
Benzene	U	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Toluene	U	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Ethylbenzene	U	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Xylenes	U	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
MTBE	U	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
TPH CWG									
>C5-C6 Aliphatic (HS_1D_MS)	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C6-C8 Aliphatic (HS_1D_MS)	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C8-C10 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0	< 5.0	< 5.0	8.4	18.6	11.1
>C10-C12 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	11.1	8.7
>C12-C16 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	8.9	15.3
>C16-C21 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C21-C35 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	29.2	< 5.0
>C35-C40 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total (>C5-C40) Aliphatic (HS_1D_MS+EH_CU_1D_AL)	N	ug/l	5	< 5.0	< 5.0	< 5.0	8.4	67.8	35.0
>C5-C7 Aromatic (HS_1D_MS)	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C7-C8 Aromatic (HS_1D_MS)	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C8-C10 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C10-C12 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C12-C16 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C16-C21 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C21-C35 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C35-C40 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total (>C5-C40) Aromatic (HS_1D_MS+EH_CU_1D_AR)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total (>C5-C40) Ali/Aro (HS_1D_MS+EH_CU_1D_Total)	N	ug/l	5	< 5.0	< 5.0	< 5.0	8.4	67.8	35.0

Results Summary

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ELAB Reference				300392	300393	300394	300395	300396	300397
Customer Reference									
Sample ID									
Sample Type				WATER	WATER	WATER	WATER	WATER	WATER
Sample Location				WS201	WS205	WS206	WS209	WS214	WS224
Sample Depth (m)									
Sampling Date				01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022
Determinand	Codes	Units	LOD						
VOC									
MTBE	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Heptane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Octane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Nonane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Benzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Toluene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
m+p-xylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
o-xylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,2-dichloroethene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroform	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Tetrachloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Tetrachloroethylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1,2-Tetrachloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroetha	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Bromobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Methylethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloro-1-propene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Trans - 1-2 -dichloroethylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
2,2-Dichloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Bromochloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,3-Dichloro-1-propene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,3-Dichloro-1-propene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromochloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,3-Dichloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromoethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Styrene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Propylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
2-Chlorotoluene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,4-Trimethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
4-Chlorotoluene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
t-butylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,3,5-Trimethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1-methylpropylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
p-cymene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,3-Dichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Butylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromo-3-chloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorobutadiene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1-2-3 - Trichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Naphthalene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1-2-4 - Trichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Bromoform	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1



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Method Summary

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Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Water					
Aliphatic/Aromatic hydrocarbons in water	N		08/11/2022		GC-FID
Dissolved metals by ICP in waters	U		04/11/2022	101	ICPMS
pH of waters	U		04/11/2022	113	Electromeric
Chromium Hexavalent in waters	U		08/11/2022	123	Colorimetry
PAHs and/or PCBs in waters	N		04/11/2022	135	GC-MS
BTEX in waters	U		08/11/2022	200	GC-MS
Low range Aliphatic hydrocarbons water	N		08/11/2022	200	GC-MS
Low range Aromatic hydrocarbons water	N		08/11/2022	200	GC-MS
VOC in waters	N		04/11/2022	200	GC-MS
Aliphatic hydrocarbons in water	N		04/11/2022	215	GC-FID
Aromatic hydrocarbons in water	N		04/11/2022	215	GC-FID

Tests marked N are not UKAS accredited

Report Information

Report No.: 22-44405, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month
 All water samples will be retained for 7 days following the date of the test report
 Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
2D	GC-GC - Double coil gas chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry

APPENDIX E

Summary of In Situ CBR Test Results
Graph of Subgrade Surface Modulus vs Depth
Graph of CBR vs Depth

BH	Depth (m)	CBR (%)	Ks (Mpa)
WS201	0.04	7	60
WS201	0.08	6	53
WS201	0.11	7	63
WS201	0.14	10	79
WS201	0.16	10	77
WS201	0.19	10	77
WS201	0.21	9	73
WS201	0.24	9	73
WS201	0.27	10	75
WS201	0.29	13	93
WS201	0.31	11	82
WS201	0.33	11	82
WS201	0.36	9	70
WS201	0.39	10	75
WS201	0.42	8	65
WS201	0.45	8	67
WS201	0.48	9	70
WS201	0.51	8	65
WS201	0.55	7	60
WS201	0.58	8	65
WS201	0.62	6	58
WS201	0.65	7	61
WS201	0.70	5	52
WS201	0.74	6	57
WS201	0.80	4	43
WS202	0.06	4	43
WS202	0.10	6	55
WS202	0.13	9	73
WS202	0.14	19	114
WS202	0.16	13	90
WS202	0.18	14	96
WS202	0.20	13	90
WS202	0.23	8	68
WS202	0.27	13	90
WS202	0.34	8	65
WS202	0.38	6	56
WS202	0.42	6	56
WS202	0.46	5	52
WS202	0.51	5	52
WS202	0.55	6	53
WS202	0.60	5	50
WS202	0.65	4	45
WS202	0.71	4	45
WS202	0.75	6	56
WS203	0.02	17	109
WS203	0.04	26	143
WS203	0.06	25	139
WS203	0.09	18	111
WS203	0.11	19	114

BH	Depth (m)	CBR (%)	Ks (Mpa)
WS203	0.14	19	114
WS203	0.17	17	107
WS203	0.20	21	123
WS203	0.23	19	114
WS203	0.25	21	123
WS203	0.27	25	139
WS203	0.29	25	139
WS203	0.31	28	148
WS203	0.34	22	127
WS203	0.36	19	117
WS203	0.39	17	109
WS203	0.43	16	102
WS203	0.46	14	96
WS203	0.51	12	84
WS203	0.53	9	73
WS203	0.56	10	77
WS203	0.58	10	75
WS203	0.61	9	73
WS203	0.64	8	67
WS203	0.67	8	68
WS203	0.71	7	63
WS203	0.74	7	63
WS203	0.77	7	64
WS204	0.02	14	96
WS204	0.03	19	114
WS204	0.05	34	167
WS204	0.06	36	174
WS204	0.07	70	266
WS204	0.09	31	160
WS204	0.11	25	139
WS204	0.13	31	160
WS204	0.15	25	139
WS204	0.17	30	154
WS204	0.19	25	139
WS204	0.21	24	134
WS204	0.23	20	120
WS204	0.26	24	134
WS204	0.28	24	134
WS204	0.30	22	127
WS204	0.33	21	123
WS204	0.35	30	154
WS204	0.37	25	139
WS204	0.39	24	134
WS204	0.41	25	139
WS204	0.44	17	109
WS204	0.46	28	148
WS204	0.49	17	109
WS204	0.53	14	95
WS204	0.55	25	139

BH	Depth (m)	CBR (%)	Ks (Mpa)
WS204	0.58	18	111
WS204	0.59	22	127
WS204	0.61	12	87
WS204	0.64	8	68
WS204	0.67	9	70
WS204	0.69	12	87
WS204	0.72	9	73
WS204	0.73	15	100
WS204	0.76	9	70
WS205	0.04	6	55
WS205	0.07	10	77
WS205	0.09	22	127
WS205	0.10	42	192
WS205	0.12	31	160
WS205	0.13	55	229
WS205	0.18	11	83
WS205	0.20	19	114
WS205	0.24	14	95
WS205	0.26	26	143
WS205	0.28	25	139
WS205	0.30	28	148
WS205	0.32	36	174
WS205	0.34	26	143
WS205	0.35	36	174
WS205	0.37	36	174
WS205	0.39	26	143
WS205	0.41	26	143
WS205	0.42	31	160
WS205	0.45	23	130
WS205	0.47	21	123
WS205	0.49	22	127
WS205	0.52	23	130
WS205	0.54	23	130
WS205	0.57	21	123
WS205	0.59	22	127
WS205	0.64	9	73
WS205	0.66	16	104
WS205	0.68	16	104
WS205	0.69	13	93
WS205	0.71	16	104
WS205	0.73	13	90
WS205	0.75	12	87
WS206	0.21	2	28
WS206	0.25	6	58
WS206	0.29	6	56
WS206	0.31	12	84
WS206	0.33	14	96
WS206	0.35	15	100
WS206	0.36	15	100

BH	Depth (m)	CBR (%)	Ks (Mpa)
WS206	0.38	17	109
WS206	0.39	20	120
WS206	0.41	16	104
WS206	0.43	13	93
WS206	0.44	16	104
WS206	0.46	13	93
WS206	0.48	12	84
WS206	0.51	10	79
WS206	0.53	10	79
WS206	0.56	10	77
WS206	0.58	10	79
WS206	0.61	8	68
WS206	0.64	9	71
WS206	0.66	14	96
WS206	0.70	6	55
WS206	0.73	7	60
WS206	0.77	7	61
WS206	0.82	5	51
WS207	0.04	6	56
WS207	0.06	13	90
WS207	0.08	13	90
WS207	0.10	13	90
WS207	0.15	10	77
WS207	0.19	12	88
WS207	0.23	15	100
WS207	0.25	19	114
WS207	0.28	19	117
WS207	0.31	19	117
WS207	0.34	17	107
WS207	0.38	12	87
WS207	0.42	12	87
WS207	0.44	19	114
WS207	0.46	11	82
WS207	0.48	12	87
WS207	0.51	10	77
WS207	0.53	10	77
WS207	0.56	9	71
WS207	0.59	7	63
WS207	0.63	6	58
WS207	0.67	6	58
WS207	0.71	6	53
WS207	0.76	5	50
WS208	0.02	16	104
WS208	0.04	19	114
WS208	0.07	25	139
WS208	0.08	28	148
WS208	0.10	34	167
WS208	0.12	30	154
WS208	0.14	26	143

BH	Depth (m)	CBR (%)	Ks (Mpa)
WS208	0.16	26	143
WS208	0.18	23	130
WS208	0.20	25	139
WS208	0.22	24	134
WS208	0.25	23	130
WS208	0.27	20	120
WS208	0.30	22	127
WS208	0.33	19	114
WS208	0.35	21	123
WS208	0.38	21	123
WS208	0.40	23	130
WS208	0.42	24	134
WS208	0.44	22	127
WS208	0.46	26	143
WS208	0.49	25	139
WS208	0.51	9	71
WS208	0.54	8	68
WS208	0.59	5	48
WS208	0.62	9	70
WS208	0.65	9	71
WS208	0.68	7	64
WS208	0.71	8	68
WS208	0.74	8	68
WS208	0.76	15	100
WS209	0.03	10	75
WS209	0.05	12	87
WS209	0.06	15	100
WS209	0.08	19	114
WS209	0.10	14	96
WS209	0.12	12	87
WS209	0.14	12	87
WS209	0.16	12	87
WS209	0.18	10	77
WS209	0.21	9	70
WS209	0.25	7	64
WS209	0.29	6	56
WS209	0.33	6	55
WS209	0.37	6	58
WS209	0.40	6	58
WS209	0.44	7	61
WS209	0.46	10	75
WS209	0.52	5	47
WS209	0.56	5	52
WS209	0.61	5	52
WS209	0.65	5	52
WS209	0.68	8	68
WS209	0.72	6	58
WS209	0.75	8	67
WS209	0.78	9	71

BH	Depth (m)	CBR (%)	Ks (Mpa)
WS210	0.02	13	90
WS210	0.05	10	77
WS210	0.07	13	90
WS210	0.11	12	87
WS210	0.15	11	82
WS210	0.19	14	96
WS210	0.22	19	117
WS210	0.25	17	107
WS210	0.28	17	109
WS210	0.31	14	96
WS210	0.35	14	95
WS210	0.39	13	90
WS210	0.44	11	83
WS210	0.46	10	77
WS210	0.49	9	70
WS210	0.52	9	71
WS210	0.55	7	63
WS210	0.59	6	58
WS210	0.63	6	56
WS210	0.68	5	51
WS210	0.73	4	45
WS210	0.77	6	54
WS210	0.80	11	82
WS211	0.08	3	35
WS211	0.11	7	63
WS211	0.14	10	75
WS211	0.17	8	68
WS211	0.19	10	79
WS211	0.22	10	79
WS211	0.24	12	84
WS211	0.26	17	109
WS211	0.28	12	87
WS211	0.30	11	82
WS211	0.32	12	87
WS211	0.35	10	75
WS211	0.38	8	68
WS211	0.42	6	57
WS211	0.46	5	52
WS211	0.52	4	45
WS211	0.56	5	50
WS211	0.62	4	44
WS211	0.66	6	56
WS211	0.71	5	48
WS211	0.76	5	52
WS211	0.79	7	61
WS212	0.05	5	48
WS212	0.09	6	56
WS212	0.16	3	39
WS212	0.22	4	42

BH	Depth (m)	CBR (%)	Ks (Mpa)
WS212	0.28	4	42
WS212	0.32	6	55
WS212	0.37	6	53
WS212	0.41	6	53
WS212	0.46	5	49
WS212	0.52	4	43
WS212	0.57	5	49
WS212	0.61	5	52
WS212	0.67	4	45
WS212	0.73	4	41
WS212	0.78	5	50
WS213	0.12	2	26
WS213	0.24	2	28
WS213	0.28	6	58
WS213	0.31	8	67
WS213	0.33	12	87
WS213	0.35	14	96
WS213	0.36	13	93
WS213	0.40	16	102
WS213	0.43	14	95
WS213	0.47	14	95
WS213	0.53	8	67
WS213	0.56	16	104
WS213	0.60	16	104
WS213	0.63	15	98
WS213	0.67	7	60
WS213	0.70	7	64
WS213	0.72	12	84
WS213	0.75	9	73
WS213	0.77	12	87
WS214	0.05	5	51
WS214	0.08	7	60
WS214	0.11	8	67
WS214	0.15	6	56
WS214	0.19	7	59
WS214	0.23	7	61
WS214	0.25	9	70
WS214	0.28	12	87
WS214	0.30	10	77
WS214	0.33	8	68
WS214	0.37	6	56
WS214	0.41	6	58
WS214	0.45	7	59
WS214	0.48	8	68
WS214	0.51	8	65
WS214	0.53	9	73
WS214	0.56	9	70
WS214	0.60	7	64
WS214	0.63	8	68

BH	Depth (m)	CBR (%)	Ks (Mpa)
WS214	0.66	7	63
WS214	0.70	6	56
WS214	0.74	6	57
WS214	0.77	8	67
WS215	0.02	13	90
WS215	0.03	24	134
WS215	0.08	12	84
WS215	0.12	11	83
WS215	0.17	10	75
WS215	0.22	10	79
WS215	0.27	10	77
WS215	0.33	9	71
WS215	0.37	13	91
WS215	0.40	17	109
WS215	0.43	17	109
WS215	0.45	21	123
WS215	0.49	12	88
WS215	0.53	14	95
WS215	0.56	14	96
WS215	0.66	5	51
WS215	0.69	15	98
WS215	0.72	17	109
WS215	0.76	14	95
WS215	0.78	23	130
WS215	0.81	17	107
WS216	0.05	5	48
WS216	0.08	9	73
WS216	0.11	8	65
WS216	0.15	7	59
WS216	0.17	13	93
WS216	0.19	21	123
WS216	0.21	24	134
WS216	0.23	31	160
WS216	0.25	31	160
WS216	0.26	34	167
WS216	0.28	26	143
WS216	0.30	28	148
WS216	0.34	31	160
WS216	0.36	55	229
WS216	0.40	26	143
WS216	0.42	50	215
WS216	0.44	58	237
WS216	0.46	45	202
WS216	0.48	65	256
WS216	0.50	44	197
WS216	0.52	55	229
WS216	0.55	40	187
WS216	0.57	44	197
WS216	0.60	45	202

BH	Depth (m)	CBR (%)	Ks (Mpa)
WS216	0.62	50	215
WS216	0.64	50	215
WS216	0.67	45	202
WS216	0.69	40	187
WS216	0.72	35	170
WS216	0.75	39	182
WS217	0.03	8	65
WS217	0.09	4	44
WS217	0.15	4	45
WS217	0.18	8	67
WS217	0.22	6	53
WS217	0.25	9	71
WS217	0.28	9	70
WS217	0.31	9	71
WS217	0.33	10	77
WS217	0.36	10	77
WS217	0.38	12	84
WS217	0.41	9	70
WS217	0.44	7	60
WS217	0.49	5	47
WS217	0.54	5	51
WS217	0.59	5	50
WS217	0.64	4	45
WS217	0.69	6	53
WS217	0.73	6	55
WS217	0.77	6	57
WS217	0.82	5	49
WS218	0.03	10	77
WS218	0.04	13	93
WS218	0.06	20	120
WS218	0.10	13	91
WS218	0.14	12	84
WS218	0.18	12	84
WS218	0.22	16	104
WS218	0.25	13	93
WS218	0.29	16	104
WS218	0.32	15	100
WS218	0.36	14	95
WS218	0.40	12	85
WS218	0.45	11	83
WS218	0.50	9	72
WS218	0.53	7	64
WS218	0.57	6	56
WS218	0.61	8	65
WS218	0.65	6	56
WS218	0.68	7	59
WS218	0.71	8	68
WS218	0.75	7	64
WS218	0.78	8	68

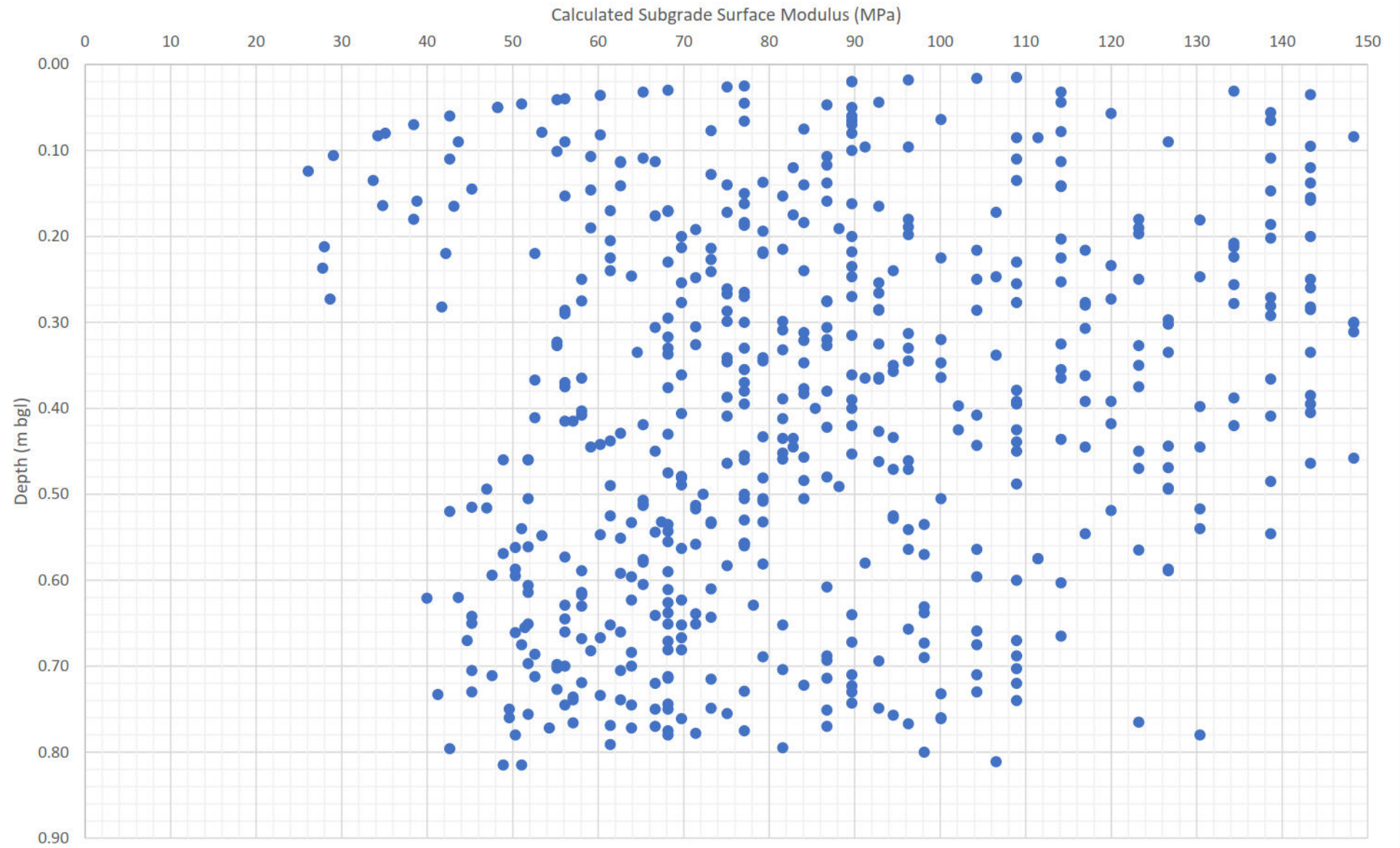
BH	Depth (m)	CBR (%)	Ks (Mpa)
WS219	0.07	3	38
WS219	0.11	7	59
WS219	0.14	7	63
WS219	0.17	8	68
WS219	0.20	9	70
WS219	0.23	9	73
WS219	0.25	13	90
WS219	0.27	13	93
WS219	0.29	13	93
WS219	0.31	12	87
WS219	0.33	13	93
WS219	0.35	12	84
WS219	0.37	13	93
WS219	0.39	11	82
WS219	0.41	11	82
WS219	0.44	11	82
WS219	0.46	12	84
WS219	0.48	10	79
WS219	0.51	10	79
WS219	0.54	8	68
WS219	0.56	10	77
WS219	0.59	8	68
WS219	0.62	7	64
WS219	0.65	9	70
WS219	0.68	9	70
WS219	0.70	11	82
WS219	0.73	10	77
WS219	0.76	10	75
WS220	0.11	2	29
WS220	0.17	4	43
WS220	0.27	2	29
WS220	0.30	10	75
WS220	0.32	12	84
WS220	0.35	10	79
WS220	0.37	10	77
WS220	0.40	10	77
WS220	0.43	7	63
WS220	0.45	11	82
WS220	0.48	9	70
WS220	0.51	8	65
WS220	0.54	8	67
WS220	0.58	8	65
WS220	0.61	6	58
WS220	0.66	5	50
WS220	0.70	6	55
WS220	0.75	5	50
WS220	0.78	8	68
WS221	0.14	3	34
WS221	0.17	7	61

BH	Depth (m)	CBR (%)	Ks (Mpa)
WS221	0.21	7	61
WS221	0.24	7	61
WS221	0.27	10	77
WS221	0.30	8	68
WS221	0.32	13	90
WS221	0.34	10	75
WS221	0.36	19	114
WS221	0.38	10	77
WS221	0.40	13	90
WS221	0.43	8	68
WS221	0.46	10	77
WS221	0.49	7	61
WS221	0.53	7	61
WS221	0.56	8	68
WS221	0.62	4	40
WS221	0.65	8	68
WS221	0.67	19	114
WS221	0.69	10	79
WS221	0.72	8	67
WS221	0.75	8	68
WS221	0.78	10	77
WS222	0.08	3	34
WS222	0.16	3	35
WS222	0.19	9	71
WS222	0.22	11	82
WS222	0.24	13	90
WS222	0.26	10	75
WS222	0.29	10	75
WS222	0.32	8	68
WS222	0.34	10	79
WS222	0.36	13	90
WS222	0.38	12	84
WS222	0.41	10	75
WS222	0.43	10	79
WS222	0.45	13	90
WS222	0.47	14	96
WS222	0.51	15	100
WS222	0.54	14	96
WS222	0.58	13	91
WS222	0.63	10	78
WS222	0.65	11	82
WS222	0.67	13	90
WS222	0.69	12	87
WS222	0.71	12	87
WS222	0.73	16	104
WS222	0.75	13	93
WS222	0.77	14	96
WS223	0.11	4	43
WS223	0.18	3	38

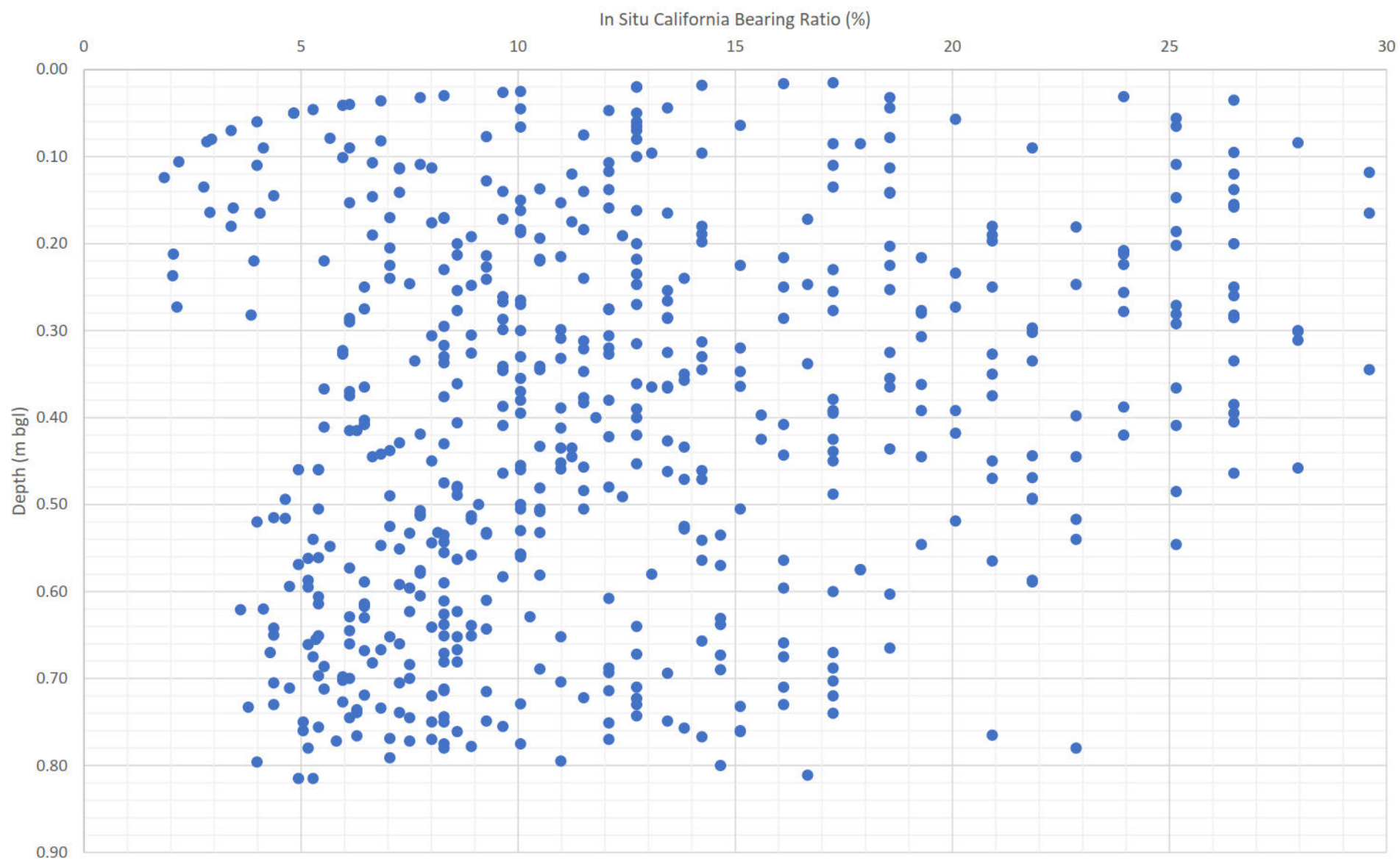
BH	Depth (m)	CBR (%)	Ks (Mpa)
WS223	0.20	14	96
WS223	0.22	13	90
WS223	0.25	16	104
WS223	0.28	19	117
WS223	0.34	8	68
WS223	0.37	19	114
WS223	0.39	19	117
WS223	0.42	20	120
WS223	0.45	19	117
WS223	0.47	22	127
WS223	0.49	22	127
WS223	0.52	20	120
WS223	0.55	19	117
WS223	0.58	18	111
WS223	0.60	19	114
WS223	0.64	15	98
WS223	0.67	15	98
WS223	0.69	17	109
WS223	0.70	17	109
WS223	0.72	13	90
WS223	0.74	13	90
WS223	0.76	15	100
WS224	0.03	8	68
WS224	0.05	13	90
WS224	0.07	13	90
WS224	0.09	17	109
WS224	0.10	26	143
WS224	0.11	17	109
WS224	0.12	26	143
WS224	0.14	17	109
WS224	0.16	26	143
WS224	0.18	21	123
WS224	0.20	26	143
WS224	0.23	17	109
WS224	0.25	26	143
WS224	0.27	36	174
WS224	0.29	26	143
WS224	0.31	44	197
WS224	0.34	36	174
WS224	0.42	13	90
WS224	0.45	17	109
WS224	0.50	10	77
WS224	0.54	15	98
WS224	0.57	15	98
WS224	0.60	17	109
WS224	0.64	13	90
WS224	0.67	17	109
WS224	0.71	13	90
WS224	0.74	17	109

BH	Depth (m)	CBR (%)	Ks (Mpa)
WS224	0.77	21	123
WS224	0.80	15	98

Calculated Subgrade Surface Modulus (MPa)



In Situ California Bearing Ratio (%)



APPENDIX F

Classification of Probability, Consequence and Risk

Probability of risk being realised	
Classification	Definition
High	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptor of harm or pollution.
Moderate	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place and is less likely in the shorter term.
Very Low	There is a pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

Consequence of risk being realised		
Classification	Category	Definition
Severe	Human Health	Short term (acute) risk to human health likely to result in "significant harm" as defined by the Environment Protection Act 1990, Part IIA.
	Controlled Waters	Short term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource.
	Property	Catastrophic damage to buildings/property.
	Ecological Systems	A short term risk to a particular ecosystem or organisation forming part of such ecosystem.
Moderate	Human Health	Chronic damage to Human Health.
	Controlled Waters	Pollution of sensitive water resources (note: Water Resources Act contains no scope for considering significance of pollution).
	Ecological System	A significant change in a particular ecosystem or organism forming part of such ecosystem.
Minor	Controlled Waters	Pollution of non-sensitive water resources.
	Property	Significant damage to crops, buildings, structures and services.
	Ecological Systems	Damage to sensitive buildings/structures/services or the environment.
Very Minor	Human Health	Non-permanent health effects to human health (easily prevented by means such as personal protective clothing, etc).
	Property	Easily repairable effects of damage to buildings, structures and services.
	Project	Harm, although not necessarily significant harm, which may result in a financial loss or expenditure to resolve.

Risk classification definitions	
Very High	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required.
High	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the long term.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.
Low	It is possible that harm could arise to a designated receptor from an identified hazard, but there is a low likelihood of this hazard occurring and if realised, harm would at worst normally be mild.
Very Low	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised, it is not likely to be severe.

APPENDIX G

Quantitative Conceptual Model

Land Adjacent to Woodgate Nurseries, Lidsey Road, Woodgate, West Sussex				Quantitative Conceptual Model		P15714	
Source	Receptor	Contaminants	Pathway	Complete Linkage Present?	Probability	Consequence	Risk
Concentrations of PAH compounds and petroleum hydrocarbons within the shallow soils in excess of the threshold values for the use of PE water supply pipework	End Users		Dermal contact with soil and dust (indoor & outdoor)	No contaminants present above SSVs			N/A
			Ingestion of soil and indoor dust	No contaminants present above SSVs			N/A
			Consumption of home-grown produce and attached soil	No contaminants present above SSVs			N/A
			Inhalation of soil dust (indoor and outdoor)	No contaminants present above SSVs			N/A
			Inhalation of soil vapours	No contaminants present above SSVs			N/A
			Inhalation of soil gases/ Risk of explosion	No gases present above GSVs			N/A
	End Users (via Water Supply Pipework)	PAH Compounds and Petroleum Hydrocarbons	Contamination of incoming services	Yes	P2: Low	C3: Moderate	Low/Moderate
	Groundwater		Migration to groundwater	No contaminants present at concentrations posing risk to groundwater			N/A

Appendix B

Confirmation of Lastmile design approval

McGuire, Kieran

From: Design Acceptance <[REDACTED]>
Sent: 27 October 2025 13:55
To: Design Acceptance; technical; Enrique Garcia
Cc: Micaela Castellarin
Subject: RE: MU4544 - Lidsey Road - Water design submission - Ref: ASSET074953
Attachments: ASSET074953_WDP-000923_AC_20251027.pdf

Good afternoon, Enrique,

Apologies for this delay.

LMAM accepts your design proposal. See attached letter for your records.

Drawing:

MU4544-W001-REV05

MU4544-W002-REV05

Can you confirm that 248 is the total number of connections after the TBS got removed?

Please submit your plot to postal at your earliest convenience in order for us to create supply points and issue your meter template ready for construction

Kind Regards,
Topo Regoeng



Design Acceptance

,

t: [REDACTED]

www.lastmile-uk.com

a: Fenick House, Lister Way, Hamilton International
Technology Park, Glasgow, G72 0FT

Dealing with power cuts: www.lastmile-uk.com/dealing-with-power-cuts

Priority Services Register for vulnerable customers: www.lastmile-uk.com/priority-services-register

Smell Gas? Call [REDACTED]

Disclaimer

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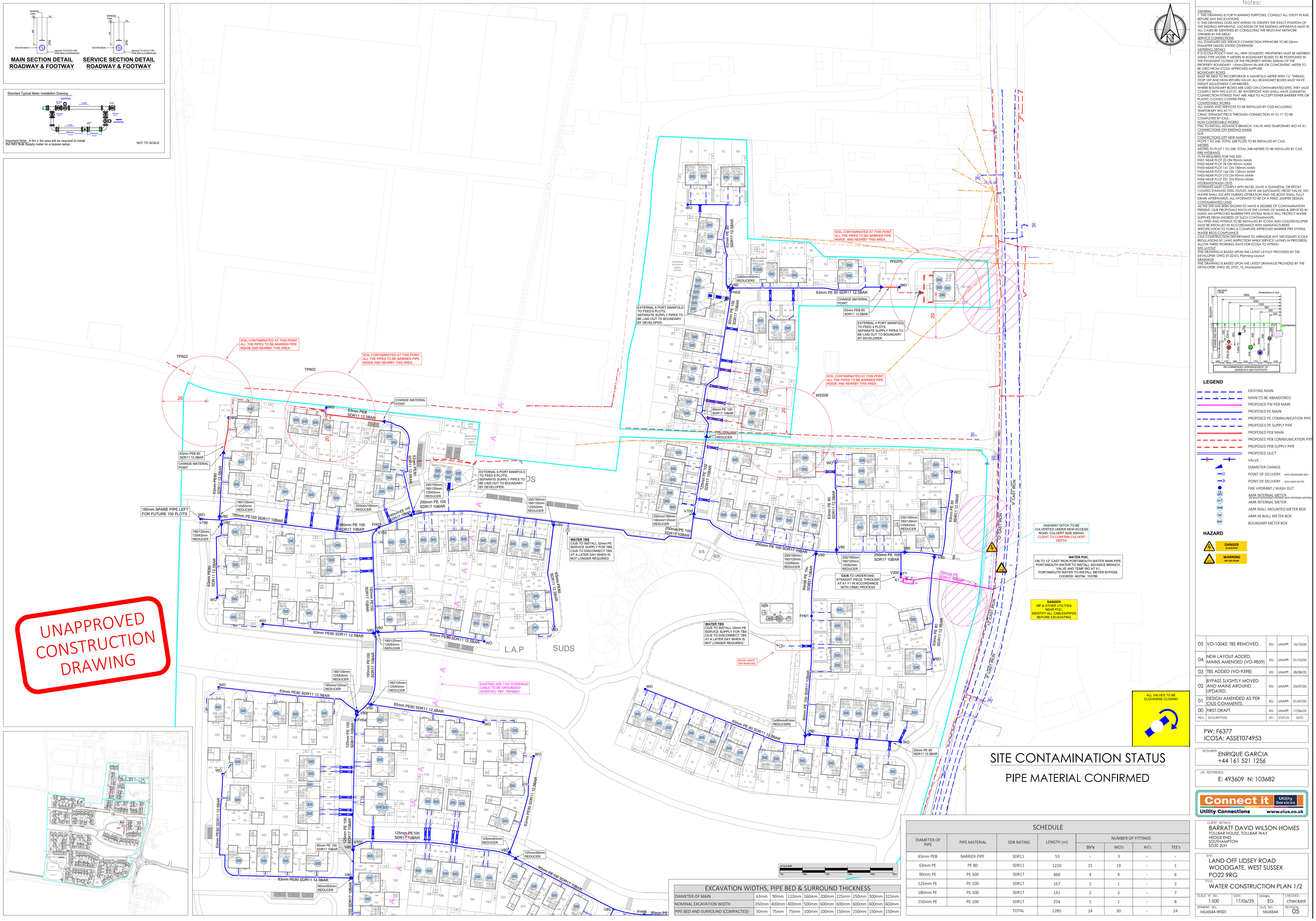
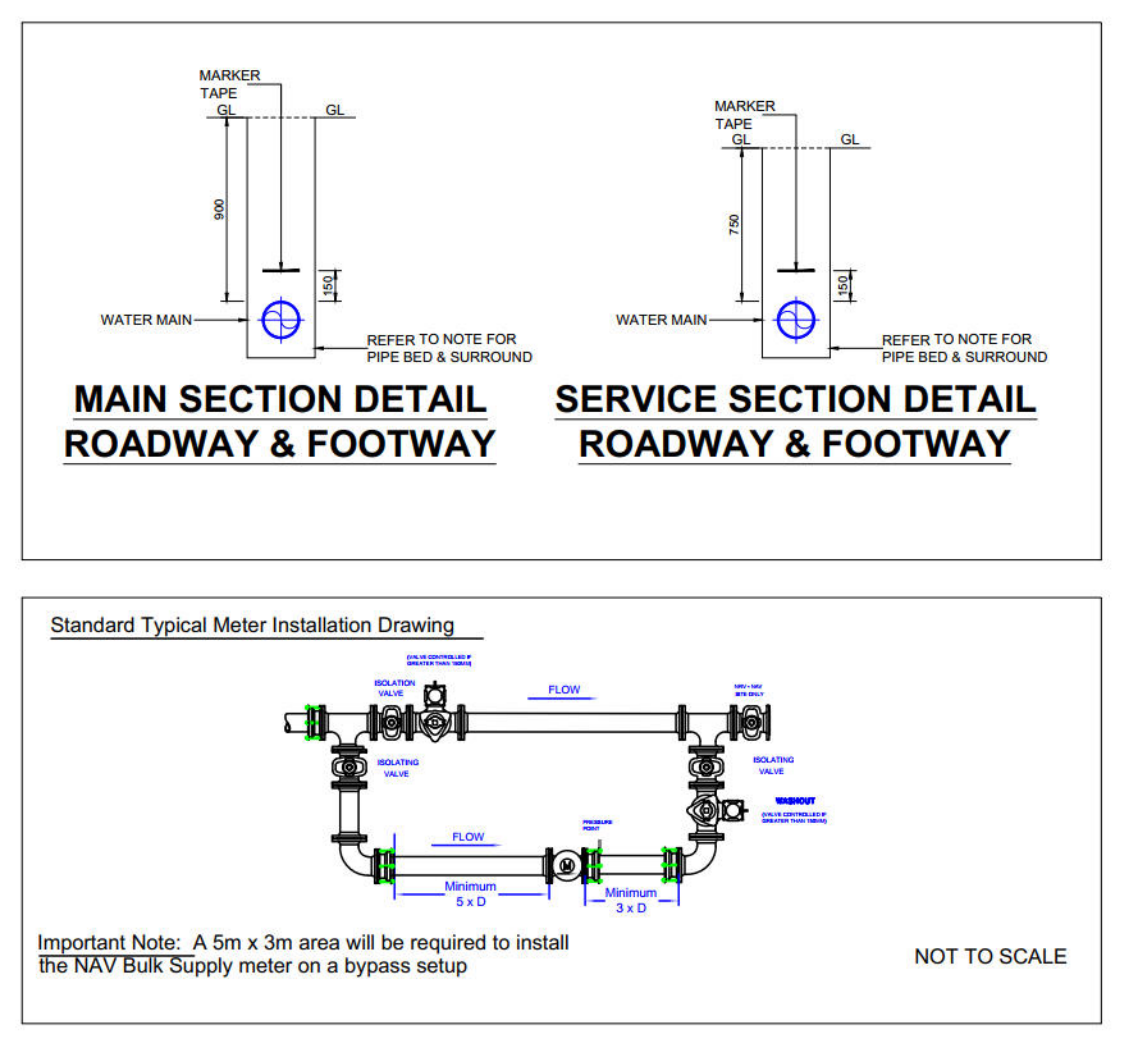
This email has been scanned for viruses and malware

From: Design Acceptance <[REDACTED]>
Sent: 24 October 2025 09:22
To: CIUS Technical Team <[REDACTED]>; Enrique Garcia <[REDACTED]>
Cc: Micaela Castellarin <[REDACTED]>
Subject: RE: MU4544 - Lidsey Road - Water design submission - Ref: ASSET074953

Hi Christine,

Appendix C

Approved water main designs



UNAPPROVED
CONSTRUCTION
DRAWING



Notes:

GENERAL

1. THIS DRAWING IS FOR PLANNING PURPOSES. CONSULT ALL UTILITY PLANS BEFORE ANY EXCAVATIONS.

2. THIS DRAWING DOES NOT INTEND TO IDENTIFY THE EXACT POSITION OF THE EXISTING APPARATUS. LOCATION OF THE EXISTING APPARATUS MUST IN ALL CASES BE DETERMINED BY CONSULTING THE RELEVANT NETWORK OWNERS IN THE AREA.

SERVICE CONNECTIONS

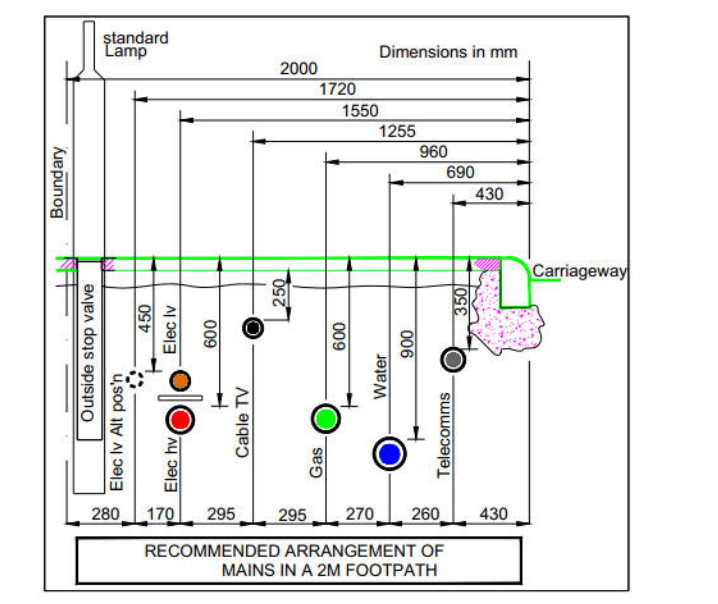
ALL STANDARD SIZE SERVICE CONNECTION PIPEWORK TO BE 25mm DIAMETER UNLESS STATED OTHERWISE.

METERING DETAILS

IT IS ICOSA POLICY THAT ALL NEW DOMESTIC PROPERTIES MUST BE METERED USING TYPE MODEL P METERS IN BOUNDARY BOXES TO BE POSITIONED IN THE PERMANENT OUTSIDE OF THE PROPERTY WITHIN 500MM OF THE PROPERTY BOUNDARY. 150mm/200mm IN OR CONCERNING METER TO BE USED FROM ICOSA APPROVED SUPPLIER.

BOUNDARY BOXES

MUST BE ABLE TO INCORPORATE A MANHOLE METER WITH 1 1/2\"/>



- LEGEND
- EXISTING MAIN
 - MAIN TO BE ABANDONED
 - PROPOSED PW PEB MAIN
 - PROPOSED PE MAIN
 - PROPOSED PE COMMUNICATION PIPE
 - PROPOSED PE SUPPLY PIPE
 - PROPOSED PEB MAIN
 - PROPOSED PEB COMMUNICATION PIPE
 - PROPOSED PE SUPPLY PIPE
 - PROPOSED DUCT
 - VALVE
 - DIAMETER CHANGE
 - POINT OF DELIVERY WITH ASSESSMENT
 - POINT OF DELIVERY WITH ASSESSMENT
 - FIRE HYDRANT / WASH OUT
 - AMR INTERNAL METER
 - AMR INTERNAL METER
 - AMR INTERNAL METER
 - AMR WALL MOUNTED METER BOX
 - AMR IN WALL METER BOX
 - BOUNDARY METER BOX

- HAZARD
- WARNING
 - WARNING

05	VO-10042: TBS REMOVED.	EG	UNAPP.	16/10/25
04	NEW LAYOUT ADDED, MAINS AMENDED (VO-9398)	EG	UNAPP.	01/10/25
03	TBS ADDED (VO-9398)	EG	UNAPP.	28/08/25
02	BYPASS SLIGHTLY MOVED AND MAINS AROUND UPDATED.	EG	UNAPP.	23/07/25
01	DESIGN AMENDED AS PER CIUS COMMENTS.	EG	UNAPP.	01/07/25
00	FIRST DRAFT	EG	UNAPP.	17/04/25
REV:	DESCRIPTION:	EG	UNAPP.	STATUS: DATE:

PW: F6377
ICOSA: ASSET074953

DESIGNER: ENRIQUE GARCIA
+44 161 521 1256

OS REFERENCE: E: 493609 N: 103682

Connect it Utility Services
Utility Connections www.cius.co.uk

CLIENT DETAILS:
BARRATT DAVID WILSON HOMES
TOLLBAR HOUSE, TOLLBAR WAY
HEDGE END, SOUTHAMPTON
SO30 2JH

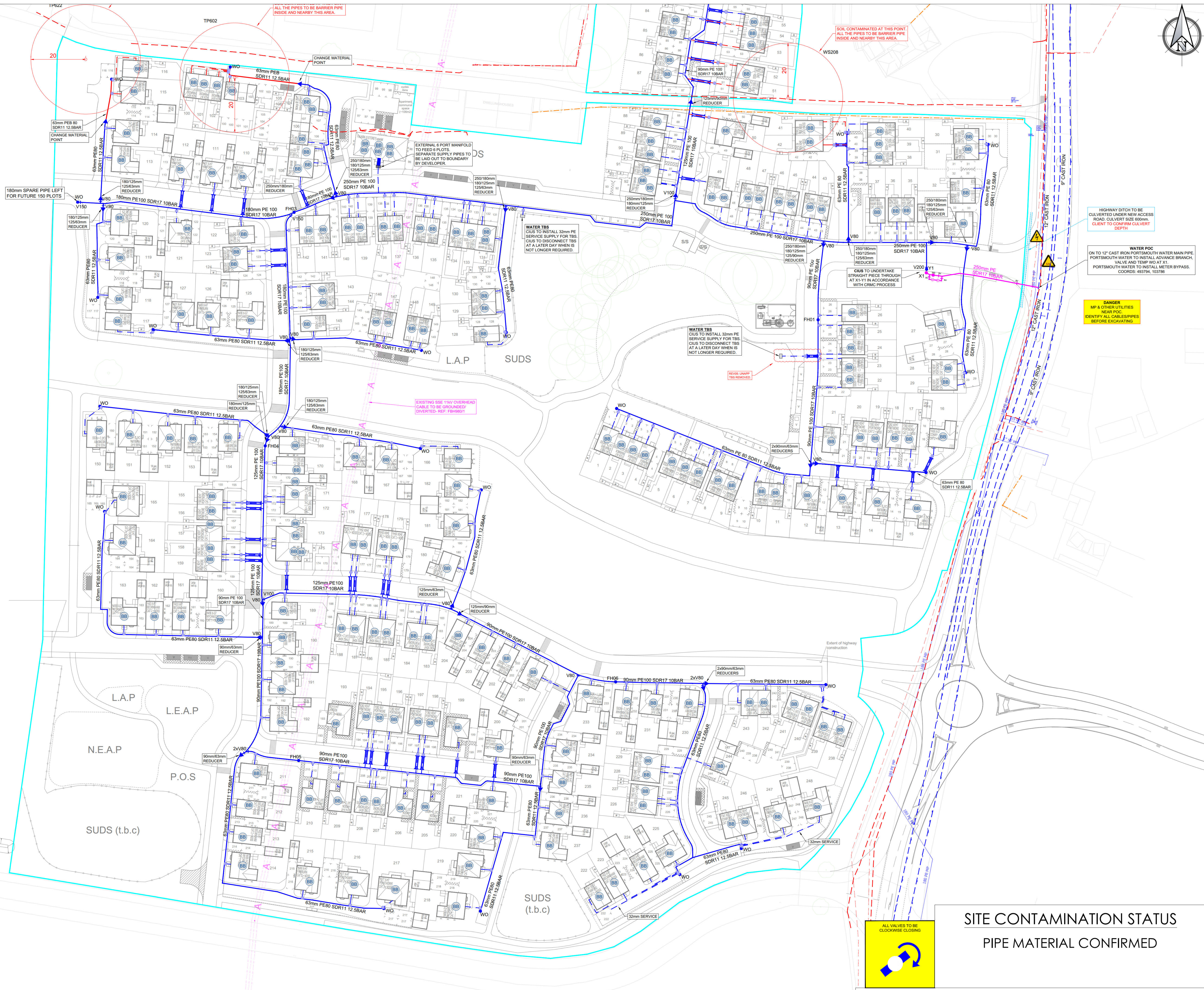
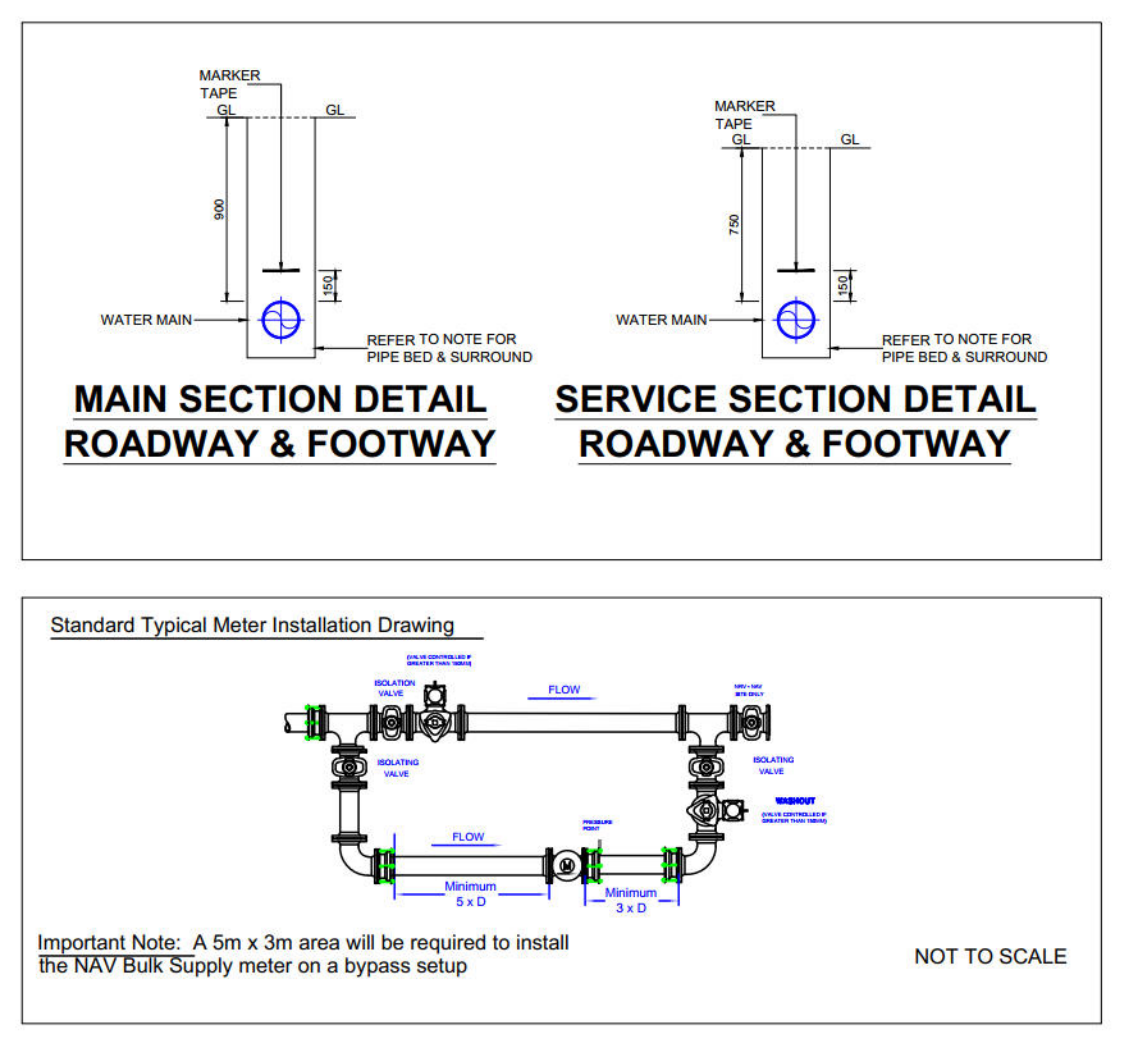
SITE:
LAND OFF LIDSEY ROAD
WOODGATE, WEST SUSSEX
PO22 9RG

WATER CONSTRUCTION PLAN 1/2

SCALE 1:500 DATE: 17/06/25 DRAWN: ECG CHECKED: MU4544-001

SCHEDULE							
DIAMETER OF PIPE	PIPE MATERIAL	SDR RATING	LENGTH (m)	NUMBER OF FITTINGS			
				SV's	WO's	AV's	TEE's
63mm PEB	BARRIER PIPE	SDR11	53	-	3	-	-
63mm PE	PE 80	SDR11	1210	15	19	-	1
90mm PE	PE 100	SDR17	460	4	4	-	6
125mm PE	PE 100	SDR17	167	2	1	-	2
180mm PE	PE 100	SDR17	141	2	2	-	7
250mm PE	PE 100	SDR17	254	1	1	-	8
			TOTAL	2285	24	30	24

EXCAVATION WIDTHS, PIPE BED & SURROUND THICKNESS									
DIAMETER OF MAIN	63mm	90mm	110mm	160mm	200mm	225mm	250mm	300mm	315mm
NOMINAL EXCAVATION WIDTH	350mm	400mm	400mm	500mm	600mm	600mm	600mm	600mm	600mm
PIPE BED AND SURROUND (COMPACTED)	50mm	75mm	75mm	100mm	100mm	150mm	150mm	150mm	150mm



UNAPPROVED
CONSTRUCTION
DRAWING



Notes:

GENERAL

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SERVICE CONNECTIONS

ALL STANDARD SIZE SERVICE CONNECTION PIPEWORK TO BE 25mm DIAMETER UNLESS OTHERWISE SPECIFIED.

METERING DETAILS

IT IS ICOSA POLICY THAT ALL NEW DOMESTIC PROPERTIES MUST BE METERED USING TYPE MODEL M METERS IN BOUNDARY BOXES TO BE POSITIONED IN THE PERMANENT OUTSIDE OF THE PROPERTY WITHIN 500MM OF THE PROPERTY BOUNDARY. 150mm/20mm IN LINE OR CONCERNING METER TO BE USED FROM ICOSA APPROVED SUPPLIER.

BOUNDARY BOXES

MUST BE ABLE TO INCORPORATE A MANHOLE METER WITH 1/2" THREAD, STOP VALVE AND NON-RETURN VALVE. ALL BOUNDARY BOXES MUST HAVE HEIGHT ADJUSTMENT CAPABILITIES.

WHERE BOUNDARY BOXES ARE USED ON CONTAMINATED SITES, THEY MUST COMPLY WITH WS 4.37 (1), BE WATER TIGHT AND SHALL HAVE GUNMETAL CONNECTION FITTINGS THAT ARE ABLE TO ACCEPT EITHER BARRIER PIPE OR PLASTIC COATED COPPER PIPES.

CONTESTABLE WORKS

ALL MAINS AND SERVICES TO BE INSTALLED BY CIUS INCLUDING TEMPORARY WO AT X1.

CRMC STRAIGHT PIECE THROUGH CONNECTION AT X1-Y1 TO BE COMPLETED BY CIUS.

NON-CONTESTABLE WORKS

PW TO INSTALL ADVANCE BRANCH, VALVE AND TEMPORARY WO AT X1.

CONNECTIONS OFF EXISTING MAINS

N/A.

CONNECTIONS OFF NEW MAINS

PLOTS 1 TO 248, TOTAL 248 PLOTS TO BE INSTALLED BY CIUS.

METERS

METERS TO PLOT 1 TO 248, TOTAL 248 METERS TO BE INSTALLED BY CIUS.

7/4/18 REQUIRED FOR THIS SITE:

FH01 NEAR PLOT 25 ON 90mm MAIN

FH02 NEAR PLOT 78 ON 90mm MAIN

FH03 NEAR PLOT 141 ON 180mm MAIN

FH04 NEAR PLOT 166 ON 125mm MAIN

FH05 NEAR PLOT 210 ON 100mm MAIN

FH06 NEAR PLOT 231 ON 100mm MAIN

HYDRAULICALLY

HYDRAULICS MUST COMPLY WITH BS7330, HAVE A GUNMETAL OR EPOXY COATED STAINLESS STEEL OUTLET, HAVE AN AUTOMATIC PROOF VALVE, NO WATER SHALL ESCAPE DURING OPERATION AND THE BODY SHALL FULLY DRAIN AFTERWARDS. ALL HYDRAULICS TO BE OF A FIXED JERK DESIGN.

CONTESTABLE LAND

AS THE SITE HAS BEEN SHOWN TO HAVE A DEGREE OF CONTAMINATION, PRESENT, OUR PROPOSALS INVOLVE THE LAYING OF MAINS & SERVICES IN USING AN APPROVED BARRIER PIPE SYSTEM WHICH WILL PROTECT WATER SUPPLY FROM INGRESS OF SUCH CONTAMINANTS.

ALL PIPES AND FITTINGS TO BE INSTALLED BY ICOSA AND CIUS/DEVELOPER MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' SPECIFICATION TO FORM A COMPLETE APPROVED BARRIER PIPE SYSTEM.

WATER BOD COMPLIANCE

CIUS CONSTRUCTION DEPARTMENT TO ARRANGE ANY NECESSARY ICOSA REGULATIONS IN LANS INFLECTION WHILE SERVICE LAYING IN PROGRESS. ALLOW THREE WORKING DAYS FOR ICOSA TO ATTEND.

THE LAYOUT

THIS DRAWING IS BASED UPON THE LATEST LAYOUT PROVIDED BY THE DEVELOPER: DWG ST-22-01: Planning Layout

DRAINAGE

THIS DRAWING IS BASED UPON THE LATEST DRAINAGE PROVIDED BY THE DEVELOPER: DWG DS-1007-15: Main Drainage

LEGEND

EXISTING MAIN

MAIN TO BE ABANDONED

PROPOSED PW BP MAIN

PROPOSED PE MAIN

PROPOSED PE COMMUNICATION PIPE

PROPOSED PE SUPPLY PIPE

PROPOSED BP MAIN

PROPOSED BP COMMUNICATION PIPE

PROPOSED BP SUPPLY PIPE

PROPOSED DUCT

VALVE

DIAMETER CHANGE

POINT OF DELIVERY WITH BOUNDARY BOX

POINT OF DELIVERY WITH AMR METER

FIRE HYDRANT / WASH OUT

AMR INTERNAL METER WITH WALL MOUNTED METER BOX

AMR INTERNAL METER

AMR WALL MOUNTED METER BOX

AMR IN WALL METER BOX

BOUNDARY METER BOX

HAZARD

DANGER

WARNING

05 VO-10042: TBS REMOVED. EG UNAPP. 16/10/25

04 NEW LAYOUT ADDED, MAINS AMENDED (VO-9859) EG UNAPP. 01/10/25

03 TBS ADDED (VO-9398) EG UNAPP. 28/08/25

02 BYPASS SLIGHTLY MOVED AND MAINS AROUND UPDATED. EG UNAPP. 23/07/25

01 DESIGN AMENDED AS PER CIUS COMMENTS. EG UNAPP. 01/07/25

00 FIRST DRAFT EG UNAPP. 17/06/25

REV: DESCRIPTION: BY: STATUS: DATE:

PW: F6377
ICOSA: ASSET074953

DESIGNER: ENRIQUE GARCIA
+44 161 521 1256

OS REFERENCE: E: 493609 N: 103682

Connect it Utility Services
Utility Connections www.cius.co.uk

CLIENT DETAILS:
BARRATT DAVID WILSON HOMES
TOLLBAR HOUSE, TOLLBAR WAY
HEDGE END
SOUTHAMPTON
SO30 2UH

SITE:
LAND OFF LIDSEY ROAD
WOODGATE, WEST SUSSEX
PO22 9RG

TITLE:
WATER CONSTRUCTION PLAN 2/2

SCALE: 1:500
DATE: 17/06/25
DRAWN: EG
CHECKED: JS

DRAWING NO: MU4544-WOOD
CIUS NO: MU4544
REVISION: 05

SCHEDULE

DIAMETER OF PIPE	PIPE MATERIAL	SDR RATING	LENGTH (m)	NUMBER OF FITTINGS			
				SV's	WO's	AV's	TEE's
63mm PEB	BARRIER PIPE	SDR11	53	-	3	-	-
63mm PE	PE 80	SDR11	1263	15	22	-	1
90mm PE	PE 100	SDR17	460	4	4	-	6
125mm PE	PE 100	SDR17	167	2	1	-	2
180mm PE	PE 100	SDR17	141	2	2	-	7
250mm PE	PE 100	SDR17	254	1	1	-	8
		TOTAL	2271	24	30	-	24

EXCAVATION WIDTHS, PIPE BED & SURROUND THICKNESS

DIAMETER OF MAIN	63mm	90mm	110mm	160mm	200mm	225mm	250mm	300mm	315mm
NOMINAL EXCAVATION WIDTH	350mm	400mm	400mm	500mm	600mm	600mm	600mm	600mm	600mm
PIPE BED AND SURROUND (COMPACTED)	50mm	75mm	75mm	100mm	100mm	150mm	150mm	150mm	150mm

Appendix D

Water supply verification report examples

**BARRATT DAVID WILSON SOUTHAMPTON LIMITED - QUARTER JACK PARK, PHASE 2,
WIMBOURNE, BH21 2AN
3 WORKSHEET - WATER SPT - WORKSHEET - 23 JUNE 2025 (RHYS (O) FEARNHEAD)**

RAMS

Have you read the RAMs
and do you understand the
Risks and Control
Measures associated with
this task? (If No, DO NOT
PROCEED and call your
Manager).

Yes

INSTALLATION DETAILS

Job number	1
Network Reference Number	1
Water Company:	ICOSA
House / Plot / Flat	Bin Store
Additional Plot Non Standard Information (eg Block No, TBS, A etc)	
Postal Address	N/A
Quantity	1.00
Task Ref	012 - Water Service Complete Inc SPT Per Plot
Comment	BIN STORES TO PLOTS 133-138

PRE CONNECTION CHECKS

Stop Cock Fitted	No
Photo to confirm Stop Cock Fitted	1
Tracer Wire Connected	N/A
Service Connection	Yes
Flushed Through	



TEST DETAILS

For service tee connections to PE mains, a two-minute hydraulic pressure test at 1.5 times the nominal pressure rating of the pipe or fitting which ever is the lower shall be applied to the fused fitting prior to tapping in accordance with our WIRs procedure.

Test Pass or Fail

Pass

MAIN CONNECTION DETAILS

Photo Confirming Service	1
Pipe at Correct Depth and Insulated where required	
Photo of Connection Onto Main	1
Photo of Water Meter Box / Boundary Box	1





NEW METER DETAILS

Meter Serial Number 70B3D5A9F010C396

AMR Number (If Affinity
Water):

RFID Number (South East
Water Only):

Please scan barcode

As Installed Meter Reading 022

Photo of meter 1

Distance to LHS of front
door (metres): 0

Distance to RHS of front
door (metres): 0

Distance to back of kerb
(metres): 1.7



NEW METER LOCATION DETAILS

Ground Type Made Footpath

Service Pipe Length 7M

Service Pipe Size 25MM

Service Pipe Material PEB

Main Size 90mm

SIGN OFF

I confirm the above information is correct

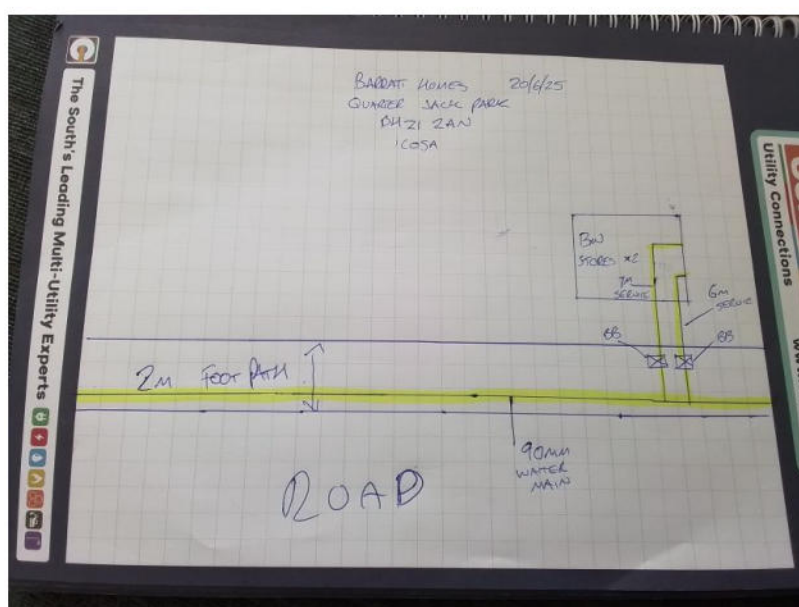
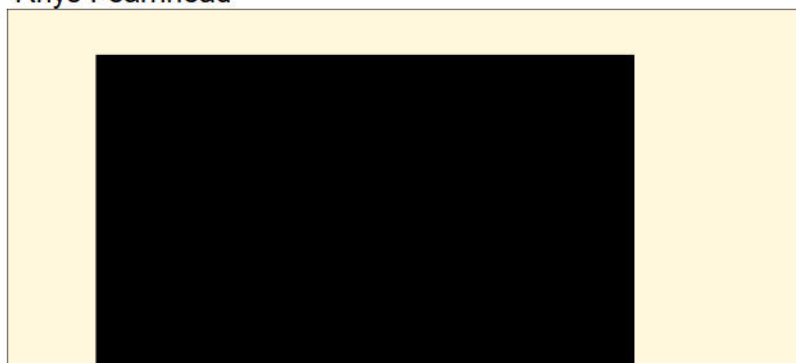
Photo of Sketch

1

Name

Rhys Fearnhead

Signature



INSTALLATION DETAILS

Inspector Phone Number: 07803282959

WRAS Membership No: GW9961

Comment

SUPPLY DETAILS (SELF LAY)

Brief Description of Works: 1X 25MM CONNECTION TO SELF LAID MAIN. SERVICE PIPE HAS BEEN LAID TO A DEPTH OF 750 ON A BED OF SAND. A BS1010 TAP INSTALLED WITHIN THE PROPERTY. THE DUCT IS FOAMED AND LAGGED AND RUN IN A STRAIGHT LINE FROM THE PROPERTY TO THE CONNECTION POINT.

Internal or External Meter: External
 New or Replacement: New Supply
 Service

PHOTOS

Photo of Foam Filled	1
External Ducting around Pipe:	
Evidence of Capped Pipe:	1
Photo of WRAS Certificate:	1





OWIAPS CERTIFICATE OF COMPLIANCE

White copy: Customer Blue copy: Water Company Green copy: retain for records

NEW SUPPLY Yes ☒ No ☐ Internal ☐ External ☒

Water Company Application/Reference Number: **ICOSA**

Members Name: **OLY'S FENNHEAD** Membership No: **649961**

Company Name: **CONNECT IT** Membership Expiry Date: **6/6/26**

Telephone Number: **07803 282 959** Email address: **D.WILSON@CONNECT-IT.CO.UK**

Address where work carried out (please include plot numbers where applicable):

QUARTER JACK PARK
BARTON HOMES (1500) **BH21 2AN**

Plot No: **BS** Plot No: **BS** Plot No: Plot No: Plot No: Plot No:

Name and address of the person who commissioned the work (the customer):

PAT REED — **QUARTER JACK PARK**
WIMBOURNE

Telephone Number: **07715236429** Email address: **PATREED@QUARTERJACKPARK.CO.UK**

Please give a brief description of the work completed and its location within the premises:

INSTALL 2x 25mm PEB SERVICES TO TWO BIN STORES

I confirm that the work carried out complies with the Water Supply (Water Fittings) Regulations 1999, Water Supply (Water Fittings) (Scotland) Byelaws 2014 or Water Supply (Water Fittings) Regulations (Northern Ireland) 2009.

Signed: Date: **20/6/25**

Print: **OLY'S FENNHEAD** Certificate No: **P 585061**

SUTTON AND EAST SURREY SPECIFIC

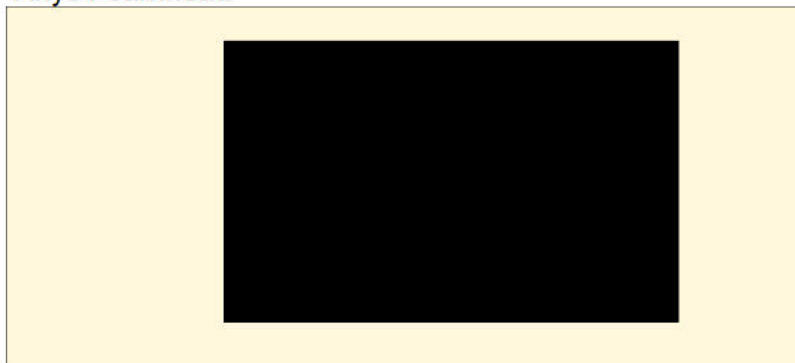
Photo of Trench Depth with Tape Measure
 Photo of Building Entry Depth with Tape Measure
 Photo of of the Duct Sealed at Both Ends (either cap ends or non-oil based foam but not in direct contact with the pipe)
 Photo of Insulation in the Duct (to SES Standard).

SIGN OFF

I confirm that the work carried out complies with the Water Supply (Water Fittings) Regulations 1999, Water Supply (Water Fittings)(Scotland) Byelaws 2014 or Water Supply (Water Fittings) Regulations (Northern Ireland) 2009.

Name
Signature

Rhys Fearnhead



Date: 22 Jun 2025

Water Service SPT

Barratt David Wilson Southampton Limited
Tars Farm, Marshall Close, Barnham, PO22 0DQ
Job Number: MU3602



Developed and implemented by:

Connect it Utility Services Ltd
Foundation House, Hamilton Business Park
Hedge End, SO30 2JR
[REDACTED]
www.cius.co.uk

WATER SERVICE SPT

RAMS

I have read the RAMs and completed a POWRA Yes

INSTALLATION DETAILS

Job number	MU3602
Worksheet Name	Water Service SPT
Nav Reference	.
Water Company	IWNL
House / Plot / Flat	Plot
Plot Number	3
Additional Plot Non Standard Information	
Postal Address	Gospond Road Barnham, Bognor Regis, PO22 0EU
Quantity	1
Task reference	012 - Water Service Complete Inc SPT Per Plot
Comment	.

PRE CONNECTION CHECKS

Stop Cock Fitted Yes

Photo of Stop Cock Fitted



Tracer Wire Connected	N/A
Service Connection Flushed Through	Yes

TEST DETAILS

For service tee connections to PE mains, a two-minute hydraulic pressure test at 1.5 times the nominal pressure rating of the pipe or fitting which ever is the lower shall be applied to the fused fitting prior to tapping in accordance with our WIRs procedure.

Test Pass or Fail

Pass

MAIN CONNECTION DETAILS

Photo Confirming service pipe at correct depth and insulated



Photo of connection onto Main



Photo of Water Meter box / Boundary Box



NEW METER DETAILS

Meter Serial Number	H25yu341409
As Installed Meter Reading	00000
Distance to LHS of front door (metres):	2.5
Distance to RHS of front door (metres):	
Distance to back of kerb (metres):	1.6

NEW METER LOCATION DETAILS

Location Ground Type	Unmade Ground
Service Pipe Length (m)	9.6
Service Pipe Size (mm)	25mm
Service Pipe Material	PE
Main Size	63mm

SIGN OFF

I confirm the above information is correct

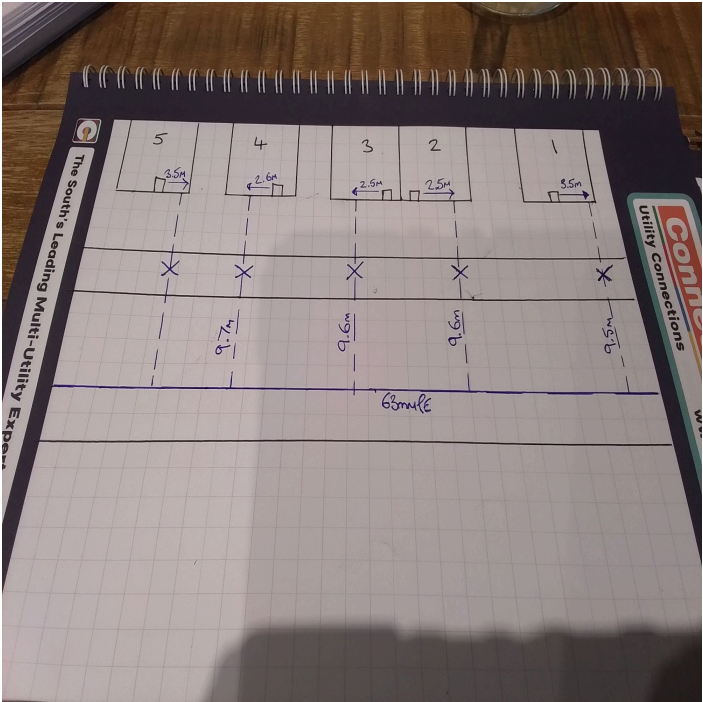
Name	Kenny Clark
Signed Date	Fri Oct 03 2025 14:55 GMT



Photo of New Meter



Photo of Sketch



INSTALLATION DETAILS

Inspector Phone Number	██████████
WRAS Membership No:	GW9507
Comments	.

SUPPLY DETAILS (SELF LAY)

Brief Description of Works	1x 25mm connection to self laid main. Service pipe has been laid to a depth of 750 on a bed of sand. A BS1010 tap installed within the property. The duct is foamed and lagged and run in a straight line from the property to the connection point.
Internal or External Meter	External
New or Replacement Service	New Supply

PHOTOS

Evidence Of Capped Pipe



Photo of WRAS Certificate

COMPLIANCE
Customer Name: [Redacted] Address: [Redacted] (Postcode only)

Water Company: [Redacted] Application Reference Number: [Redacted]

Member's Name: KENNY CLARK Membership No: GW9507

Company Name: C.I.O.S. Membership No: 616126

Telephone Number: [Redacted] Email Address: [Redacted]

Address (where work carried out - please include plot numbers where applicable):
BARRETT DAVID WILSON,
TARS FARM,
BARNHAM,
GOSPOD ROAD, PO22 0EU

Plot No: 1 2 3 4 5

Name and address of the person who commissioned the work (the customer):
BARRETT DAVID WILSON,
TARS FARM,
BARNHAM,
GOSPOD ROAD, PO22 0EU

Please give a brief description of the work completed and its location within the premises:
5 x NEW 25MM PE SERVICES - ON
TO 63MM MAIN.
AS PER DESIGN.

Signature: [Redacted] Date: 8/10/25

Print: K. CLARK Certificate or reference No: 23

SIGN OFF

I confirm that the work carried out complies with the Water Supply (Water Fittings) Regulations 1999, Water Supply (Water Fittings)(Scotland) Byelaws 2014 or Water Supply (Water Fittings) Regulations (Northern Ireland) 2009.

Name

Kenny Clark

Signed Date

Fri Oct 03 2025 16:01 GMT

