TN02 – Response to LLFA Comments on DC/25/1327

Site: Land East of Mousdell Close, Rectory Lane, Ashington, RH20 3GS
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Date: 13th October 2025

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1.0 Introduction

1.1 This technical note has been prepared to discuss and provide the additional information that has been requested by West Sussex County Council (WSCC) as the Lead Local Flood Authority (LLFA) in their holding objection to DC/25/1327.

1.2 WSCC's specific comments are as follows:

"*We object to this planning application in the absence of an acceptable Flood Risk Assessment (FRA) and Drainage Strategy, with specific regard to the following points:*

1.) *The Flood Risk Assessment submitted as part of this application is dated 4th August 2025, which was after the new "National Standards for Sustainable Drainage Systems (SuDS)" were published by Defra (in June 2025). However, the FRA still refers to the superseded "Non-Statutory Technical Standards for SuDS" and the surface water drainage strategy fails to align with the requirements of the new SuDS standards (which put a much greater emphasis on water re-use, interception, source control, and surface-level open SuDS features and the use of multiple SuDS features in series to improve water quality, site amenity and ecology). We are of the view that meeting the new SuDS standards is likely to require significant changes to be made to the layout. (The necessary changes should reduce the reliance on and large scale of 'end of system' attenuation features, particularly subterranean plastic crate storage).*

2.) *The necessary ground investigations required to inform the SuDS design do not appear to have been undertaken (no results appear to have been submitted).*

a.) *BRE 365 percolation testing results are required to definitively determine if on-site infiltration is viable, or not. An off-site discharge of surface water is only acceptable when it has been proven that on-site infiltration is unviable.*

b.) *Winter groundwater monitoring results are required to inform the design or soakage and/or attenuation features. (If peak winter groundwater levels are deep enough, attenuation features should be permeably lined to utilise any limited infiltration potential that exists, but if peak groundwater levels are so shallow that they may be above the base of any attenuation features it will be necessary to impermeably line the features to ensure their capacity is not compromised by groundwater. In that latter scenario the applicant should also provide details showing that any floatation potential has been appropriately mitigated).*

3.) *The surface water drainage layout submitted provides insufficient information about the receiving watercourse's: nature, condition, hard bed levels, and connectivity with the wider network of watercourses.*

a.) *On the drainage plans the ditch stops within the red line boundary, is there connectivity with the wider watercourse network beyond the site boundary?*

b.) *The proposed discharge invert level is at the measured ditch bed levels, that is not acceptable unless those bed levels are prior to any de-silting and regrading. If that is the case what will the levels be post maintenance?*

c.) *Is there a culvert immediately downstream of the discharge point, is this to be retained or removed (is it in an appropriate condition and of a suitable capacity to be retained)?*

4.) *No construction detail drawings for the SuDS components have been submitted.*

5.) *No exceedance flow path plan has been submitted.*

To overcome our objection:

a.) *The applicant needs to update their surface water drainage proposals so that they align with the new SuDS standards. Details of the compliance with each of the new standards should be clearly set out in a supporting technical note.*

b.) *The results of appropriate ground investigations should be submitted to support the SuDS scheme design.*

c.) *Further information about the acceptability of the proposed discharge to the receiving watercourse needs to be submitted.*

d.) *Construction detail drawings for all SuDS features (including sections through any ponds/basins) needs to be submitted.*

e.) *An exceedance flow path plan needs to be submitted.*

We will consider reviewing this objection when the issues highlighted above are adequately addressed and we are formally reconsulted."

Motion respond to these points as follows in Section 2.

2.0 Response

The applicant needs to update their surface water drainage proposals so that they align with the new SuDS standards. Details of the compliance with each of the new standards should be clearly set out in a supporting technical note.

2.1 We note the LLFA comment that the FRA and Drainage Strategy was issued on the 4th August, which is a full five working days after the publishing of the New National Standards for SuDS. Our comments on this are as follows:

1. The New National Standards for SuDS do not fundamentally change the approach to surface water management that was presented and enshrined in the December 2024 update to the NPPF. It maintains the hierarchical approach to drainage should be taken, and promotes the use of interception and source control, and that amenity and biodiversity should be sought wherever possible. This is the premise through which the drainage strategy was developed and the drainage strategy uses multiple SuDS features. It uses permeable paving for source control, and utilises open SuDS features. Therefore, it provides more than "*end of system*" attenuation features and discharges sustainably through gravity at the equivalent greenfield runoff rate. It is noted that geocellular tanks are used in the design, and this is not the LLFA's preference, but the multifactorial technical and geo-environmental constraints of the site means that a large amount of attenuation had to be provided and could not be delivered through surface level SuDS features.
2. Therefore, the drainage design has presented the most sustainable drainage solution when all layout and technical design parameters that have been considered together, and achieves the requirements of the New National Standards for SuDS.

The results of appropriate ground investigations should be submitted to support the SuDS scheme design.

2.2 We would refer the LLFA to the geoenvironmental report in Appendix A of this technical note, particularly Section 7.6 and the information within Appendix D. It confirms the assessment made in the Drainage Strategy that infiltration is not viable on the site, and this has been established through on-site BRE365 soakage testing.

Further information about the acceptability of the proposed discharge to the receiving watercourse needs to be submitted.

2.3 The drainage ditch shown in the topographic survey is not that which is intended for the surface water discharge (hence why we are not addressing the comment that there appears to be a blockage in this ditch). The drainage ditch that is on the topographic survey is a drainage grip dug by the farmer to assist with field drainage. The actual discharge point will be the watercourse that is immediately to the south of the drainage grip on the boundary of the site (and which the landowner has riparian rights to).

2.4 The juxtaposition of the farmland grip and the watercourse can clearly be seen in the below photo taken in January 2025, where the watercourse has water within it.

2.5 With reference to planning application DC/22/0372 for the neighbouring site, the consented drainage strategy utilises a discharge to the same watercourse to which the current site intends to discharge to. The site associated with DC/22/0372 is immediately upstream of the current development, and the discharge to the watercourse was fully accepted by the LLFA. The drainage strategy proposed and accepted for DC/22/0372 is appended to this Technical Note in Appendix B. Therefore, a precedent from the LLFA exists for accepting this watercourse as a suitable outfall for surface water, and from a point upstream of the current development proposals. This watercourse has ongoing connectivity and connection to the wider hydraulic network. To give the LLFA further comfort on this, we have included a LiDAR contour plan that shows the full length of the watercourse and its confluence with another watercourse to the west. This can be seen in Appendix C.

2.6 As can be seen, due to the impervious clay-based geology, there is a well-established and connected hydraulic network.

Construction detail drawings for all SuDS features (including sections through any ponds/basins) needs to be submitted.

2.7 In response to this comment, we would like to reference established RIBA Plan of Work, which organises the process of designing, constructing and operating building projects into eight established stages. It is the definitive model for the design and construction process of buildings and explains the stage outcomes, core tasks and information exchanges required at each project stage.

2.8 The RIBA Plan of Work 2020 has been included in Appendix D of this Technical Note for the LLFA's reference. We have highlighted relevant text in the RIBA Plan of Work to direct the LLFA towards the key processes regarding drainage design in the concept, design and build timeline of development and construction projects.

2.9 Planning submission occurs at RIBA Stages 2 and 3 and detailed design takes place from Stages 4 to 5, and design is refined thereafter alongside site-based work and feedback. As such, it is unusual to provide construction issue designs on any aspect of the development until RIBA stages 4 and 5 are underway. The current project has not yet completed RIBA Stage 3.

2.10 We therefore feel that it would be premature to issue full detailed designs of the SuDS features at planning stage. This is because full details of all SuDS features are included on the drawings, and these details are mirrored and underpinned by the hydraulic modelling of the proposed drainage strategy. Therefore, we do not feel that detailed, construction issue drawings of the SuDS features are required to establish the principle of the drainage strategy.

2.11 We propose that detailed designs be conditioned and provided alongside detailed designs of all other development features and infrastructure, which is needed to properly develop the drainage design to a construction issue stage.

An exceedance flow path plan needs to be submitted.

2.12 This has been produced and is Appendix E. As can be seen, there are no receptors to exceedance flows as the area is rural.

Appendix A

Phase 2 Site Geoenvironmental Report

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LAND EAST OF MOUSDELL CLOSE ASHINGTON

Phase II
Geoenvironmental Assessment

Client
Rocco Homes

Report No. 5993-2

3rd October 2025

CONTENTS

LAND EAST OF MOUSDELL CLOSE ASHINGTON

Phase II Geoenvironmental Assessment

Synopsis

An investigation has been carried out on land east of Mousdell Close, Ashington on the instructions of Rocco Homes. A Phase I Environmental Assessment[1] has been prepared for the site and should be read in conjunction with this report.

The purpose of the investigation was to determine the ground conditions and to provide recommendations in respect of foundation design and other geoenvironmental matters for the proposed residential development.

Three boreholes and twelve continuous open drive (windowless) samplers were carried out, supported by a programme of in situ and laboratory testing.

Conventional spread foundations are envisioned for the new houses and appropriate design data is provided. Chemical analysis revealed insufficient contamination to prejudice the development.

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[1] *Report No. 5993-1; Phase I Environmental Assessment, Land east of Mousdell Close, Ashington; AP Geotechnics Ltd.; 22 August 2025*

1
Site description

The area under investigation is an irregularly shaped, albeit rectilinear plot of land which extends to some 2.2 hectares. The site comprises an open field laid to rough pasture with no permanent structures present (although a horse box was situated on the northern boundary). The current general arrangement is shown on Figure 1 at Appendix A.

A full site description is contained in the Phase I report to which the reader is referred.

2
Development proposals

It is intended to erect 74 dwellings with associated landscaping, open space, parking and creation of a new vehicular access from Rectory Lane. The proposed general arrangement is given at Figure 2 of Appendix A.

Loadings were not available during preparation of this report but they are expected to be light to moderate.

3
Geology

Published records of the British Geological Survey (BGS) indicate the vast majority of the site to lie on material of the Weald Clay Formation. Superficial Head deposits are mapped in the far south of the site and extend to the west, south and south east.

4
Field work

The extent of the field work was agreed with the Client and comprised three boreholes advanced by light percussive techniques to a maximum depth of 16.5 m. In addition, 12 continuous open drive (windowless) samplers were bored to a maximum depth of 4.0 m. The original intention had been to drill the cable percussive boreholes to a depth of 25 m but this proved unachievable in the ground conditions encountered. Five machine excavated trial pits were carried out to give a more detailed description of the near surface soils and to carry out soakaway tests.

The approximate location of all exploratory points is shown on Figure 1 at Appendix A.

Representative soil samples were recovered from the cable percussive boreholes and soakaway trial pits for subsequent laboratory examination and testing whilst a continuous column of soil was recovered from the windowless samplers. Standard Penetration Tests (SPT) were carried out as appropriate. Details of the strata encountered are provided on the Borehole and Trial Pit Records at Appendix B; together with particulars of the samples recovered, groundwater observations and SPT results. The profile of SPT with depth is also presented at Figure 3 of Appendix A.

To aid pavement design, eight in situ California Bearing Ratio (CBR) tests were carried out with the results presented at Appendix C.

Soakaway testing, generally in accordance with BRE Digest 365[2] was carried out in five locations. The results are presented at Appendix D.

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[2] *BRE Digest 365. Soakaway design, Building Research Establishment, September 1991*

Standpipes were installed in WS1, 6 & 9 to allow monitoring of groundwater levels and soil gas concentrations. The results to date are available at Appendix E.

5
Laboratory testing

The following laboratory tests were conducted on soil samples recovered during the field work:-

- Natural moisture content: to assess the in situ condition of the soil.
- Liquid and Plastic Limits: to classify cohesive soil into behavioural groups.
- Unconsolidated undrained triaxial compression: to determine the shear strength of cohesive material under immediate loading and thus to assess its load bearing capacity.
- Soluble sulphate and pH value: for the specification of buried concrete.
- Contamination: chemical analyses to detect the presence of contaminants as indicated by the Environmental Assessment, viz:-

Metals & metalloids:	Total arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium and zinc.
	Water soluble boron.
Organic:	Speciated petroleum hydrocarbons with aliphatic/aromatic split and BTEX & MTBE, speciated polyaromatic hydrocarbons (PAH) and phenols.
Others:	Asbestos screen and waste acceptance criteria (WAC).

Results of these tests are presented at Appendix F and the original chemical laboratory test certificates are available at Appendix G.

6
Ground conditions

6.1
Stratigraphy

The stratigraphy of the site as revealed by the investigation is shown in detail at Appendix B and is described in general terms hereafter.

6.1.1
Superficial material

All locations were advanced through a surface layer of vegetation which was underlain by either topsoil or a brown sandy clay, often containing roots and rootlets. The topsoil / sandy clay was locally underlain by a dark orange brown and grey or mottled brown slightly sandy to sandy clay with black carbonaceous material which was observed to a maximum depth of 0.70 m in SA1.

6.1.2
Weald Clay Formation

Underlying the superficial material were a series of clay layers considered to represent the Weald Clay Formation. The Weald Clay was represented by various coloured clays including orange brown, brown, grey, red brown and grey blue and were noted to be locally slightly sandy to sandy. Some of the deeper horizons contained sandy laminations. The sole exception to the foregoing was a 1.90 m thick layer of grey blue sand recorded in BH3 between 8.2 and 10.1 m depth.

In situ testing and visual assessment indicates the clay to be initially firm, quickly becoming stiff to very stiff with depth. Triaxial testing tended to underestimate the shear strength due to premature failure caused by sand partings and layers. Atterberg Limits performed on samples of the Weald Clay indicate it to have a variable plasticity, ranging from low to high.

6.2
Groundwater

Groundwater was encountered in BH3, WS3, WS5 & WS9 at depths ranging from 2.0 m in WS3 to 8.2 m depth in BH3. In addition, the speed of drilling, addition of water to aid the drilling process and use of casing to support the bore may have masked any small inflows and impinged upon the accuracy of the observations. More onerous conditions may therefore be revealed in construction excavations.

Standpipe readings taken during subsequent monitoring visits have recorded groundwater at less than a metre in WS1 & WS9 whilst WS6 was dry on the first two visits but water levels have slowly risen since.

7
Discussion

7.1
General

The site remained undeveloped throughout the entirety of the historical mapping history and remains undeveloped to the present day. However, there is still a very low possibility that pockets of Made Ground may be present, even though not detected by this investigation.

7.2
Spread foundations

The superficial material is not considered suitable as a bearing stratum due to it variability in both composition and compaction. In addition, it was laterally impersistent across the site.

Laboratory tests revealed the near surface Weald Clay to have a variable plasticity, ranging from low to high with a corresponding low to medium volume change potential as defined by the NHBC, thus rendering it susceptible to shrinkage and swelling movements associated with changes in moisture content. A minimum depth of 0.75 - 0.90 m is recommended by the NHBC for clays with low to medium volume change potential although experience suggests a depth of at least 1.0 m to be more prudent for foundations to place them below the zone of normal seasonal variations. Tree root action can cause shrinkage and swelling of the subsoil to considerable depth as shown by the NHBC[3] and others. Foundation depths close to trees (removed, existing and proposed) should therefore comply with NHBC guidelines and be below the depth of visible roots and the associated zone of capillary suction.
Based upon the data provided by in situ and laboratory testing, a net allowable bearing capacity of 120 kPa is available for conventional strip foundations up to 1.2 m wide at minimum 1.0 m depth. Total settlement of these foundations is not expected to exceed 25 mm, with approximately one quarter occurring immediately load is applied and the remainder at gradually decreasing rate over the ensuing years.

Differential settlement between footings of similar loading and geometry is not expected to exceed about half of the total value.

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[3] *NHBC Standards Chapter 4.2 Building near trees. National House Building Council, April 2003*

The clay will quickly degrade on exposure, especially if there is water present. Foundations should therefore be cast immediately the excavation is complete unless protected by a layer of blinding concrete.

It may theoretically be possible to use narrow strip footings to carry light structural loads. However, we recommend that a minimum width of 0.45 m be employed for strip foundations, increasing to maintain a minimum aspect ratio (depth/breadth) of 3 for deeper foundations. If trench fill construction is employed, their vertical faces should be cast against a layer of compressible material where within the influence of root action to minimise heave forces should any of the trees die or be otherwise removed. A polythene slip membrane can also be incorporated to minimise uplift.

7.3
Ground floor slabs

The Topsoil and plasticity of the near surface material precludes the use of ground bearing floor slabs and suspended ground floor construction is recommended. A void of 250 mm thickness should be incorporated beneath the suspended slab in accordance with NHBC recommendations, assuming precast concrete or timber flooring.

7.4
Excavations

The Weald Clay will be able to maintain vertical excavated faces of moderate height in the short term although it is surcharged by unstable Topsoil. All excavations should therefore be supported at all times unless battered to a safe angle of repose. In any event, excavations to greater than 1.2 m depth should be supported at all times.

Provision of adequate support is especially important for the safety of personnel when required to work in or close to excavations. Temporary and permanent works should be designed to resist the additional lateral earth pressures arising from any superimposed loads in addition to those generated by the soil itself, without significant deformation.

Groundwater observations during the investigation and on subsequent monitoring visits suggests that general construction excavations should remain above the local groundwater level. However, a perched water table appears to be present (as recorded in the standpipes) in the near surface material, but this is expected to be controlled by conventional pumping from shallow sumps.

7.5
Pavement construction

The results of the eight in situ California Bearing Ratio (CBR) tests are presented at Appendix C and show values ranging from 1.8 % to 4.3 %, depending on the particular composition and moisture content of the material under test.

It is well documented that CBR values decrease as soil moisture content increases. Unless efficient sub - grade drainage is installed and can be guaranteed to perform throughout the life of the proposed pavement, it is likely that the sub - grade moisture content will increase in service, leading to a reduction in the CBR value. Therefore, although the test results may be used as a guide for pavement design, it would be prudent to allow a reduction to reflect the in - service condition beneath the pavement to a value of some 1.5 % for design purposes.

Where low CBR values are anticipated, consideration could be given to the use of a capping layer of compacted granular fill. As a rule of thumb, a 300 mm thick layer of suitable granular fill can double the design CBR.

The formation should be inspected on exposure and any unsuitable material replaced with suitable compacted fill. Proof rolling of the formation will provide a more uniform surface for construction, although this will not improve the properties of the material at depth.

It is recommended that flexible construction techniques such as block paving or wholly bituminous materials are employed due to the possibility of post - construction movement. This type of construction is better able to accommodate movement and can be more easily realigned should deformations become unacceptable.

7.6
Surface water drainage

Soakaway testing, generally in accordance with BRE Digest 365, was carried out at five locations with the results available at Appendix D. The infiltration rates were negligible, despite the length of time allowed for the test (overnight). Shallow, surface water soakaways are not therefore recommended at this site.

7.7
Contaminant analysis

7.7.1
Solid phase

Contaminant testing was undertaken on selected soil samples and the results have been compared with the limited number of CLEA[4] Soil Guideline Values (SGVs) for residential land use with plant uptake that have been published to date. Where not available from that

[4] *The Contaminated Land Exposure Assessment Model, Department for Environment, Food and Rural Affairs, The Environment Agency, R & D Publications SGV 1 et al., March 2002*

source, reference has also been made to the LQM/CIEH S4ULs for Human Health Risk Assessment[5]. Appropriate trigger levels are given with the results at Appendix F and the original analytical laboratory result sheets are presented at Appendix G.

Analysis for metals/metalloids revealed all determinands to be below the triggers for residential land use with plant uptake.

No SGV exists for lead (the old SGV of 450 mg/kg having been withdrawn) and LQM have not calculated one. However, provisional Category 4 Screening Levels (C4SLs) have been published by Defra which suggest a maximum concentration of 210 mg/kg lead for residential land use with plant uptake (a number of different concentrations have been published, dependant on differing exposure scenarios). No lead was recorded above this value in any sample.

No phenols were recorded above the limit of detection for the test of 1 mg/kg.

No TPH was recorded above the limits of detection for the tests.

No BTEX or MTBE was recorded above the limits of detection for the tests.

Analysis for speciated PAH recorded the vast majority of individual PAHs below the limit of detection for the test of 0.05 mg/kg. Of the seven samples analysed, only two recorded any individual PAHs above the limit of detection for the test, but at very low concentrations and far below the relevant S4ULs.

No asbestos fibres were detected in the seven samples tested.

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[5] *The LQM/CIEH S4ULs for Human Health Risk Assessment. Land Quality Press, 2015*

7.7.2
Gas phase

The standpipes installed in WS1, 6 & 9 are being monitored for gas flow rate and concentrations of oxygen, methane, carbon dioxide, carbon monoxide and hydrogen sulphide. A note is also being made of the weather conditions at the time of reading. Results thus far have recorded negligible concentrations of carbon dioxide and no methane present. The results to date are available at Appendix E.

7.7.3
Waste Acceptance Criteria (WAC)

Three samples were subject to the WAC full solid waste suite and the WAC single stage leachate suite. The results have been compared to the criteria contained in the Landfill Regulations 2002 as amended and are presented at Appendix F.

Within the solid waste suite, all results were within the Inert Waste Landfill criteria limits.

Similarly, parameters determined on the compliance leaching test were also within the Inert Waste Landfill criteria limits.

The contamination test results and the WAC results should be forwarded to the contractor appointed to remove arisings from site. Transfer notes and chain of custody sheets should be retained for all spoil removed from site.

7.8
Conclusion

The Phase I Environmental Assessment concluded there to be a low risk of contamination arising from past or present site usage and activities in the surrounding area also constitute a low risk of significant contamination migrating to the subject site. The potential for ground gas, principally methane and carbon dioxide migrating to the subject site or emanating thereon was assessed as low to negligible.

Laboratory analysis of soil samples recovered during the intrusive investigation have not revealed any significant concentrations of either organic or inorganic contamination. Similarly, gas monitoring undertaken to date has not recorded any significantly elevated carbon dioxide or methane.

Although not anticipated to be present, as with any site, areas of Made Ground not identified during the intrusive investigation may come to light during the redevelopment phase. Should any Made Ground, discoloured or odorous soils be encountered then AP Geotechnics should be informed and work stopped in that area.

7.9
Buried concrete

Laboratory tests on soil samples yielded a maximum soluble sulphate concentration of 0.40 g/l which results in a Design Sulphate Class[6] of DS-1.

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[6] *Concrete in aggressive ground. BRE Special Digest 1. Building Research Establishment, 2005*

The groundwater is considered to be mobile and all pH determinations were greater than 5.5.

Therefore the Aggressive Chemical Environment for Concrete, ACEC, is classed as AC-1.

R G Chapman
AP GEOTECHNICS LTD.
3rd October 2025

PROCEDURAL NOTES for GROUND INVESTIGATIONS

General

This report has been prepared generally in accordance with CLR 11: Model Procedures for the Management of Land Contamination (Defra & Environment Agency 2004).

This report is based upon data obtained from field descriptions of the strata and examination of the samples by an engineer, together with the results of in situ and laboratory tests as appropriate. Responsibility cannot be accepted for variations in ground conditions between and around any of the exploratory points that is not revealed by the data. Whilst the report may offer an opinion on the ground conditions between exploratory points and below the depth of investigation, this is for guidance only and no liability is accepted for its accuracy. Unless specifically included in the report, it should be assumed that no testing has been carried out in respect of asbestos or Japanese Knotweed and no liability will is inferred or accepted.

Drilling procedure

Boring by light cable percussion drilling allows the ground conditions to be reasonably well established. However, a certain amount of disturbance is inevitable and some mixing of soils can occur.

Sampling procedure

"Undisturbed" samples of predominantly cohesive soils are taken with a 100mm diameter open tube sampler, generally in accordance with BS 5930: 1999.

Where appropriate, or where an undisturbed sample is unsuccessful, disturbed samples are recovered and sealed into polythene bags.

Groundwater samples are taken when water is encountered in sufficient quantity.

Standard penetration tests

The test is conducted generally in accordance with BS 1377: Part 9: 1990. The sampler tube is subject to a seating drive of 150mm into the soil at the base of the borehole. Results are given on the Borehole Records as the number of blows required to drive the sampler tube a further 300mm and this is known as the "N" value. Where the driving resistance is such that full penetration is not achieved, the test is generally terminated after 50 blows and the actual distance penetrated is recorded.

Groundwater

Groundwater observations necessarily reflect the conditions encountered at the time of the exploratory work. Long term monitoring of standpipes is usually required to establish an equilibrium water level since the normal rate of boring is too fast to permit steady state conditions to be achieved.

Groundwater levels are subject to variations caused by changes in drainage conditions and seasonal climatic changes.

Water may necessarily be added to advance the bore whilst casing may be required to maintain an open hole. These can both mask subsequent groundwater observations and are therefore noted on the individual Borehole Record.

APPENDICES

A Figures

Figure 1: Approximate Exploratory Hole Locations
Figure 2: Proposed Development
Figure 3: SPT Profile

B Borehole and Trial Pit Records

Symbols and Abbreviations
Borehole Records
Trial Pit Records

C California Bearing Ratio Test Results

California Bearing Ratio

D Soakaway Test Results

BRE DIGEST 365 - Soil Infiltration Rate

E Standpipe Records

Gas Emissions and Water Levels

F Laboratory Test Results

Summary of Geotechnics Test
Contaminants in Soil
Waste Acceptance Criteria (WAC)

G Original Testing House Certificates

Analytical Reports

APPENDIX A

FIGURES

N

Land East of Mousdell Close,
Ashington, West Sussex,
RH20 3GS

Approximate Exploratory Hole Locations

Scale: as shown

Scale
1:250 @ A3
metres 2 4 6 8 10

Figure 1

Land East of Mousdell Close,
Ashington, West Sussex,
RH20 3GS

Proposed Development

Scale: as shown

Accommodation Schedule

Affordable Dwellings		**(26no. - 35.1%)**		
Affordable Rent				
4no.	1-Bedroom Flats	Up to 2.5 Storeys	Blocks A and B	540sqft
4no.	1-Bedroom Flats - M4(3)	Up to 2.5 Storeys	Blocks A and B	560sqft
8no.	2-Bedroom Flats	Up to 2.5 Storeys	Blocks A and B	660sqft
1no.	3-Bedroom Townhouses	2.5 Storeys	Semi / Terraced	1145sqft
1no.	3-Bedroom Townhouses	2.5 Storeys	Semi / Terraced	1271sqft
Shared Ownership				
1no.	1-Bedroom Flats	2 Storeys	Block C	540sqft
1no.	1-Bedroom Flats	2 Storeys	Block C	592sqft
2no.	2-Bedroom Houses	2 Storeys	Semi-Detached	855sqft
2no.	3-Bedroom Houses	2 Storeys	Semi-Detached	1003sqft
2no.	3-Bedroom Townhouses	2.5 Storeys	Semi / Terraced	1145sqft
Open Market Dwellings		**(48no. - 64.9%)**		
2no.	1-Bedroom Flats	2 Storeys	Block D/E	540sqft
2no.	1-Bedroom Flats	2 Storeys	Block D/E	592sqft
8no.	2-Bedroom Houses	2 Storeys	Semi-Detached	855sqft
13no.	3-Bedroom Houses	2 Storeys	Semi- Detached	1003sqft
8no.	3-Bedroom Houses	2.5 Storeys	Semi-Detached	1145sqft
5no.	4-Bedroom Houses	2 Storeys	Detached	1240sqft
1no.	4-Bedroom Houses	2 Storeys	Detached	1261sqft
2no.	3-Bedroom Houses	2.5 Storeys	Semi-Detached	1271sqft
1no.	4-Bedroom Houses	2 Storeys	Detached	1285sqft
2no.	4-Bedroom Houses	2.5 Storeys	Semi-Detached	1340sqft
2no.	4-Bedroom Houses	2 Storeys	Detached	1425sqft
2no.	4-Bedroom Houses	2 Storeys	Detached	1933sqft

Total: **74 Dwellings [2.19 Ha approx. to Overall Ownership Line - 33.78 Dw/Ha]**

Car Parking Generally:
1 space per 1-Bedroom Flat
1.5 spaces per 2-Bedroom Flat
2-3 spaces per 2 and 3-Bedroom House (incl. open car bays)
3 spaces per 4-Bedroom House (incl. garages)
23 visitor spaces (1 per 3.26 dwellings)

Scale
1:500 @ A1 / 1:1000 @ A3
metres 10 20 30 40 50

Figure 2

APPENDIX B

BOREHOLE AND TRIAL PIT RECORDS

SYMBOLS and ABBREVIATIONS

Samples

Undisturbed

U	Standard open drive "undisturbed" 102mm dia. in boreholes 38mm dia. in trial pits, window sampler and hand auger
T	Thin wall open drive
P	Piston
CBR	CBR mould
L	Windowless sampler liner

Disturbed

D	Small
B	Bulk
W	Water
C	Contaminants: plastic tub
J	Contaminants: brown glass jar

In situ tests

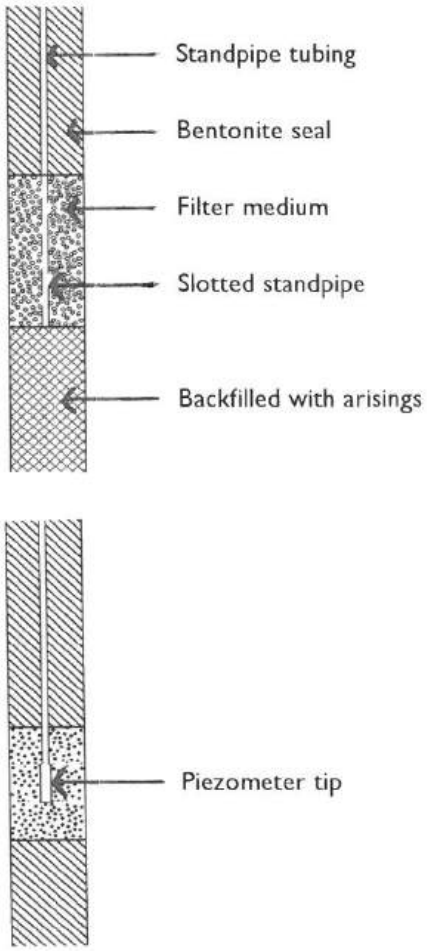
SPT CPT	Standard Penetration Test, open shoe solid cone N value is number of blows for 300mm penetration. Blow count also given as seating drive followed by four increments of 75mm.
V ( )	Vane test (c_u kPa)
P ( )	Hand penetrometer (c_u kg/cm^2)
M ( )	Mexe probe (CBR %)

Water records

$\blacktriangledown_2$	Standing level
$\triangledown_2$	Depth encountered

suffix identifies separate strikes

Standpipes



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Site	Borehole Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	BH1

Boring Method	Casing Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion	150mm cased to 2.50m		Rocco Homes	5993
	Location	**Dates**	**Engineer**	**Sheet**
	See site plan	23/06/2025-24/06/2025		1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						(0.30)	Vegetation over brown sandy TOPSOIL		
						0.30	Soft to firm mottled brown slightly sandy CLAY with black carbonaceous material		
0.50	D1					(0.60)			
						0.90	Firm orange brown and brown mottled sandy CLAY		
1.00	D2					(0.50)			
						1.40	Firm orange brown, broan and grey mottled slightly sandy CLAY		
1.50-1.95	SPT N=14		DRY	2,3/3,4,3,4		(0.70)			
2.00	D3					2.10	Stiff to very stiff red brown and grey CLAY		
2.50-2.95	SPT N=28		DRY	2,3/5,7,8,8					
2.50-3.00	B1								
3.50-3.95	SPT N=23	2.50	DRY	3,3/5,6,6,6		(2.80)			
3.50-4.00	B2								
4.50-4.95	SPT N=29	2.50	DRY	3,4/6,7,8,8					
						4.90	Firm to stiff grey blue and red brown mottled slightly sandy CLAY		
6.00-6.40	SPT 50/245	2.50	DRY	6,8/11,13,17,9		(2.20)			
6.00-6.50	B3								
						7.10	Very stiff red brown and grey mottled CLAY		
7.50-7.85	U1	2.50	DRY	100 blows					
7.90	D4					(1.50)			
						8.60	Very stiff grey CLAY with sandy laminations		
9.00-9.39	SPT 50/235	2.50	DRY	11,12/13,14,14,9					

Remarks
No further progress
Water added to aid drilling
Slow progress from 11.0 to 11.4 m depth
Waiting for gate code and flattening high vegetation - 1.25 hrs
Borehole backfilled with arisings
Excavating from 0.00m to 1.20m for 1.0 hour.

Scale (approx)	Logged By
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Figure No. 5993.BH1

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Site	Borehole Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	BH1

Boring Method	Casing Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion	150mm cased to 2.50m		Rocco Homes	5993
	Location	**Dates**	**Engineer**	**Sheet**
	See site plan	23/06/2025-24/06/2025		2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							Very stiff grey CLAY with sandy laminations		
10.50-10.65	U2	2.50	DRY	100 blows		(4.10)			
10.70	D5								
12.00-12.37	SPT 25*/145 50/225	2.50	DRY	13,12/15,17,18					
12.00-12.50	B4								
				23/06/2025:DRY		12.70			
				24/06/2025:DRY			Very stiff red brown and grey CLAY		
13.50-13.81	SPT 50/155	2.50	DRY	7,15/19,23,8					
						(3.80)			
15.00-15.30	SPT 25*/145 50/155	2.50	DRY	10,15/18,26,6					
15.00-15.50	B5								
				24/06/2025:DRY		16.50			
							Terminated at 16.50m		
16.50-16.80	SPT 25*/145 50/155	2.50	DRY	11,14/19,25,6					

Remarks
No further progress
Water added to aid drilling
Slow progress from 11.0 to 11.4 m depth
Waiting for gate code and flattening high vegetation - 1.25 hrs
Borehole backfilled with arisings

Scale (approx)	Logged By
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Figure No. 5993.BH1

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Site	Borehole Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	BH2

Boring Method	Casing Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion	150mm cased to 2.50m		Rocco Homes	5993
	Location	**Dates**	**Engineer**	**Sheet**
	See site plan	24/06/2025-25/06/2025		1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						(0.40)	Vegetation over brown sandy CLAY with roots		
0.20	D1					0.40			
0.50	D2						Firm to stiff orange brown, brown and grey mottled slightly sandy CLAY with rootlets observed to 1 m depth		
1.00	D3								
1.50-1.95	SPT N=25		DRY	3,4/5,6,7,7		(2.20)			
2.50-0.70	U1		DRY	100 blows		2.60			
2.75	D4						Very stiff yellow, orange brown, brown and blue grey CLAY		
						(0.90)			
3.50-3.88	SPT 50/230	2.50	DRY	7,13/14,14,15,7		3.50	Stiff grey blue and brown sandy CLAY		
3.50-4.00	B1								
						(1.20)			
4.50-4.95	U2	2.50	DRY	100 blows		4.70			
5.00	D5						Very stiff grey blue and brown CLAY with sandy laminations		
6.00-6.45	SPT 50/295	2.50	DRY	7,8/12,13,13,12					
6.00-6.50	B2								
7.50-7.93	SPT 50/275	2.50	DRY	6,11/13,14,15,8					
						(6.50)			
9.00-9.32	SPT 50/165	2.50	DRY	11,14/18,23,9					
9.00-9.50	B3								

Remarks
Borehole backfilled with arisings
Water added to aid drilling
Slow progress between 8.2 and 8.5 m depth - 1 hr
Slow progress between 14.1 and 14.7 m depth - 1 hr
Chiselling from 8.20m to 8.50m for 1.0 hour. Excavating from 0.00m to 1.20m for 1.0 hour.

Scale (approx)	Logged By
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Figure No. 5993.BH2

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Site	Borehole Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	BH2

Boring Method	Casing Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion	150mm cased to 2.50m		Rocco Homes	5993
	Location	**Dates**	**Engineer**	**Sheet**
	See site plan	24/06/2025-25/06/2025		2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							Very stiff grey blue and brown CLAY with sandy laminations		
10.50-11.00	B4			24/06/2025:DRY					
10.50-10.84	SPT 50/185	2.50	DRY	25/06/2025:DRY 9,14/17,20,13		11.20			
							Stiff to very stiff red brown and blue grey CLAY		
12.00-12.35 12.00-12.50	SPT 49/195 B5	2.50	DRY	11,13/16,21,12					
13.50-13.65	SPT 85*/60 17/85	2.50	DRY	25,60/17		(5.30)			
14.50-15.00	B6								
15.00-15.27	SPT 25*/110 50/155	2.50	DRY	16,9/18,26,6					
				25/06/2025:DRY		16.50	Complete at 16.50m		
16.50-16.81	SPT 47/155	2.50	DRY	11,13/19,24,4					

Remarks
Borehole backfilled with arisings
Water added to aid drilling
Slow progress between 8.2 and 8.5 m depth - 1 hr
Slow progress between 14.1 and 14.7 m depth - 1 hr
Chiselling from 14.10m to 14.70m for 1.0 hour.

Scale (approx)	Logged By
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Figure No. 5993.BH2

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Site	Borehole Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	BH3

Boring Method	Casing Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion	150mm cased to 10.00m		Rocco Homes	5993

Location	Dates	Engineer	Sheet
See site plan	25/06/2025-26/06/2025		1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10	D1					(0.30) 0.30	Vegetation over brown sandy TOPSOIL		
0.50	D2						Firm brown grey sandy CLAY		
1.00	D3					(1.10) 1.40			
1.50-1.95	U1		DRY	60 blows			Firm to siff orange brown, brown and grey blue slightly sandy CLAY		
2.00	D4								
2.50-2.95 2.50-3.00	SPT N=33 B1	2.50	DRY	4,5/6,8,8,11		(2.70)			
3.50-3.95	U2	2.50	DRY	70 blows					
4.00	D5					4.10	Very stiff blue grey and brown mottled slightly sandy to sandy CLAY		
4.50-4.95 4.50-5.00	SPT N=49 B2	2.50	DRY	5,9/11,12,12,14					
6.00-6.45	U3	2.50	DRY	100 blows		(4.10)			
6.50	D6								
7.50-7.89 7.50-8.00	SPT 50/235 B3	2.50	DRY	6,10/12,12,19,7					1
				fast(1) at 8.20m, rose to 7.30m in 20 mins.		8.20	Very dense grey blue SAND		1
9.00-9.44 9.00-9.50	SPT 50/290 B4	2.50	DRY	5,8/11,13,14,12		(1.90)			

Remarks
Water added to aid drilling
Borehole was backfilled with arisings
Excavating from 0.00m to 1.20m for 1.0 hour.

Scale (approx)	Logged By
1:50	ljs

Figure No. 5993.BH3

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Site	Borehole Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	BH3

Boring Method	Casing Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion	150mm cased to 10.00m		Rocco Homes	5993

Location	Dates	Engineer	Sheet
See site plan	25/06/2025-26/06/2025		2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						10.10	Stiff grey blue and brown sandy CLAY		
10.50-10.94 10.50-11.00	SPT 50/290 B5	2.50	DRY	6,10/12,12,15,11		(2.90)			
12.00-12.30 12.00-12.50	SPT 50/150 B6	2.50	DRY	7,15/21,29					
				26/06/2025:DRY		13.00	Complete at 13.00m		

Remarks
Water added to aid drilling
Borehole was backfilled with arisings
Chiselling from 12.60m to 13.00m for 1.0 hour.

Scale (approx)	Logged By
1:50	ljs

Figure No. 5993.BH3

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Site	Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	WS1

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 26/06/2025	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		90% recovery			Vegetation over brown sandy TOPSOIL		
0.20	C1				(0.50)			
					0.50	Firm to stiff brown grey mottled CLAY		
1.00	D1		100% recovery					
1.00-1.45	SPT(C) N=12	DRY	3/2,3,4,4,3					
1.00-2.00	L2							
2.00-3.00	L3		90% recovery					
2.00-2.45	SPT(C) N=17	DRY	6/3,5,4,5					
					(3.50)			
3.00-4.00	L4		80% recovery					
3.00-3.45	SPT(C) N=17	DRY	5/3,4,5,5					
4.00-4.45	SPT(C) N=44	DRY	12/8,9,12,15		4.00	Complete at 4.00m		

Remarks
Borehole was dry
Strata depths approximate where recovery <100%

Scale (approx)	Logged By
1:25	ljs

Figure No. 5993.WS1

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Site	Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	WS2

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 26/06/2025	**Engineer**	**Sheet** 2/9

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		70% recovery		(0.30)	Brown silty TOPSOIL		
					0.30	Firm to stiff orange brown and grey mottled CLAY		
0.40	C1							
1.00-2.00 1.00-1.45	L2 SPT(C) N=9	DRY	90% recovery 3/2,2,3,2					
1.50	D1							
2.00-3.00 2.00-2.45	L3 SPT(C) N=7	DRY	90% recovery 3/1,2,2,2		(3.70)			
3.00-4.00 3.00-3.45	L4 SPT(C) N=16	DRY	100% recovery 5/3,4,4,5					
4.00-4.45	SPT(C) N=42	DRY	9/7,8,10,17		4.00	Complete at 4.00m		

Remarks
Strata depths approximate where recovery <100%
Borehole was dry

Scale (approx)	Logged By
1:25	ljs

Figure No. 5993.WS2

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Site	Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	WS3

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 26/06/2025	**Engineer**	**Sheet** 3/9

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		90% recovery		(0.50)	Brown silty TOPSOIL		
0.50-1.00	C1				0.50	Firm to stiff orange brown and grey mottled CLAY		
1.00-2.00	L2		100% recovery					
1.00-1.45	SPT(C) N=7	DRY	3/1,2,2,2		(1.50)			
			Water strike(1) at 2.00m. 26/06/2025:2.00m		2.00	Terminated at 2.00m		▽1
2.00-2.45	SPT(C) N=56	DRY	12/16,11,12,17					

Remarks
Strata depths approximate where recovery <100%
Refused @ 2.00 m, terminated

Scale (approx)	Logged By
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Figure No. 5993.WS3

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Site	Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	WS4

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 26/06/2025	**Engineer**	**Sheet** 4/9

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		100% recovery			Brown silty TOPSOIL		
0.30	C1				(0.60)			
					0.60	Firm to stiff orange brown and grey mottled CLAY		
1.00	D1		100% recovery					
1.00-1.45	SPT(C) N=11	DRY	3/1,3,3,4					
1.00-2.00	L2							
					(2.40)			
2.00-3.00	L3		80% recovery					
2.00-2.45	SPT(C) N=26	DRY	8/4,7,7,8					
					3.00			
3.00-3.30	SPT(C) 56/150	DRY	27/24,32			Complete at 3.00m		

Remarks
Strata depths approximate where recovery <100%
Borehole was dry

Scale (approx)	Logged By
1:25	ljs

Figure No. 5993.WS4

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Site
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON

Number
WS5

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 26/06/2025	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		100% recovery		(0.40)	Brown silty TOPSOIL		
0.50	C1				0.40	Firm to stiff orange brown and grey mottled CLAY		
1.00-2.00 1.00-1.45	L2 SPT(C) N=13	DRY	90% recovery 3/2,3,4,4		(2.40)			
2.00-2.80 2.00-2.45	L3 SPT(C) N=21	DRY	80% recovery 7/5,5,5,6					
			Water strike(1) at 2.80m. 26/06/2025:1.79m		2.80	Terminated at 2.80m		▽1
2.80-3.25	SPT(C) N=53	2.80	31/10,13,15,15					

Remarks
Strata depths approximate where recovery <100%
Refused @ 2.80 m, terminated

Scale (approx)	Logged By
1:25	ljs

Figure No.
5993.WS5

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Site	Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	WS6

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 26/06/2025	**Engineer**	**Sheet** 6/9

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		100% recovery		(0.30)	Brown silty TOPSOIL		
					0.30	Firm to stiff orange brown and grey mottled CLAY		
1.00-2.00 1.00-1.45	L2 SPT(C) N=15	DRY	100% recovery 4/3,4,4,4		(2.70)			
2.00-3.00 2.00-2.45	L3 SPT(C) N=37	DRY	80% recovery 8/7,10,10,10					
3.00-3.30	SPT(C) 57/150	DRY	32/27,30		3.00	Terminated at 3.00m		

Remarks
Refused @ 3.00 m, terminated
Strata depths approximate where recovery <100%
Borehole was dry

Scale (approx)	Logged By
1:25	ljs

Figure No. 5993.WS6

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Site	Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	WS7

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 27/06/2025	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		100% recovery		(0.30)	Brown silty TOPSOIL		
					0.30	Firm to stiff orange brown and grey mottled CLAY		
1.00-1.50 1.00-1.45 1.00-2.00	C1 SPT(C) N=19 L2	DRY	90% recovery 4/3,5,5,6					
1.50	D1				(2.40)			
2.00-2.70 2.00-2.45	L3 SPT(C) N=31	DRY	70% recovery 7/5,7,10,9					
2.70-3.08	SPT(C) 66/225	DRY	31/20,22,24		2.70	Terminated at 2.70m		

Remarks
Borehole was dry
Refused @ 2.70 m, terminated
Strata depths approximate where recovery <100%

Scale (approx)	Logged By
1:25	ljs

Figure No. 5993.WS7

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Site	Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	WS8

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 27/06/2025	**Engineer**	**Sheet** 8/9

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		90% recovery		(0.20)	Brown silty TOPSOIL		
					0.20	Firm to stiff orange brown and grey mottled CLAY		
0.30	C1							
1.00-2.00	L2		80% recovery					
1.00-1.45	SPT(C) N=19	DRY	6/3,5,5,6		(1.80)			
					2.00			
2.00-2.45	SPT(C) N=56	DRY	14/7,12,17,20			Terminated at 2.00m		

Remarks
Refused @ 2.00 m, terminated
Strata depths approximate where recovery <100%
Borehole was dry

Scale (approx)	Logged By
1:25	ljs

Figure No. 5993.WS8

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Site	Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	WS9

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 27/06/2025	**Engineer**	**Sheet** 9/9

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		100% recovery			Brown silty TOPSOIL		
0.10	C1				(0.40)			
					0.40	Firm to stiff orange brown and grey mottled CLAY		
1.00-2.00	L2		100% recovery					
1.00-1.45	SPT(C) N=9	DRY	3/2,2,2,3		(1.60)			
					2.00	Firm to stiff orange brown sandy CLAY with a little gravel		
2.00-3.00	L3		70% recovery					
2.00-2.45	SPT(C) N=29	DRY	9/7,9,6,7					
			Water strike(1) at 2.50m.		(1.00)			▽1
			27/06/2025:1.80m		3.00	Terminated at 3.00m		
3.00-3.68	SPT(C) 72/525	2.42	32/21,24,27					

Remarks
Refused @ 3.00 m, terminated
Strata depths approximate where recovery <100%

Scale (approx)	Logged By
1:25	ljs

Figure No. 5993.WS9

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Site	Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	WS2

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 26/06/2025	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		70% recovery		(0.30)	Brown silty TOPSOIL		
					0.30	Firm to stiff orange brown and grey mottled CLAY		
0.40	C1							
1.00-2.00	L2		90% recovery					
1.00-1.45	SPT(C) N=9	DRY	3/2,2,3,2					
1.50	D1							
2.00-3.00	L3		90% recovery					
2.00-2.45	SPT(C) N=7	DRY	3/1,2,2,2		(3.70)			
3.00-4.00	L4		100% recovery					
3.00-3.45	SPT(C) N=16	DRY	5/3,4,4,5					
4.00-4.45	SPT(C) N=42	DRY	9/7,8,10,17		4.00	Complete at 4.00m		

Remarks
Strata depths approximate where recovery <100%
Borehole was dry

Scale (approx)	Logged By
1:25	ljs

Figure No. 5993.WS2

AP GEOTECHNICS
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Site	Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	WS3

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 26/06/2025	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		90% recovery		(0.50)	Brown silty TOPSOIL		
0.50-1.00	C1				0.50	Firm to stiff orange brown and grey mottled CLAY		
1.00-2.00	L2		100% recovery					
1.00-1.45	SPT(C) N=7	DRY	3/1,2,2,2		(1.50)			
			Water strike(1) at 2.00m. 26/06/2025:2.00m		2.00	Terminated at 2.00m		▽1
2.00-2.45	SPT(C) N=56	DRY	12/16,11,12,17					

Remarks
Strata depths approximate where recovery <100%
Refused @ 2.00 m, terminated

Scale (approx)	Logged By
1:25	ljs

Figure No. 5993.WS3

AP GEOTECHNICS
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Site	Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	WS4

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 26/06/2025	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		100% recovery			Brown silty TOPSOIL		
0.30	C1				(0.60)			
					0.60	Firm to stiff orange brown and grey mottled CLAY		
1.00	D1		100% recovery					
1.00-1.45	SPT(C) N=11	DRY	3/1,3,3,4					
1.00-2.00	L2							
					(2.40)			
2.00-3.00	L3		80% recovery					
2.00-2.45	SPT(C) N=26	DRY	8/4,7,7,8					
3.00-3.30	SPT(C) 56/150	DRY	27/24,32		3.00	Complete at 3.00m		

Remarks
Strata depths approximate where recovery <100%
Borehole was dry

Scale (approx)	Logged By
1:25	ljs

Figure No. 5993.WS4

AP GEOTECHNICS
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Site	Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	WS5

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 26/06/2025	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		100% recovery		(0.40)	Brown silty TOPSOIL		
					0.40	Firm to stiff orange brown and grey mottled CLAY		
0.50	C1							
1.00-2.00	L2		90% recovery					
1.00-1.45	SPT(C) N=13	DRY	3/2,3,4,4		(2.40)			
2.00-2.80	L3		80% recovery					
2.00-2.45	SPT(C) N=21	DRY	7/5,5,5,6					
			Water strike(1) at 2.80m. 26/06/2025:1.79m		2.80	Terminated at 2.80m		▽1
2.80-3.25	SPT(C) N=53	2.80	31/10,13,15,15					

Remarks
Strata depths approximate where recovery <100%
Refused @ 2.80 m, terminated

Scale (approx)	Logged By
1:25	ljs

Figure No. 5993.WS5

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Site	Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	WS6

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 26/06/2025	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		100% recovery		(0.30) 0.30	Brown silty TOPSOIL		
1.00-2.00 1.00-1.45	L2 SPT(C) N=15	DRY	100% recovery 4/3,4,4,4		(2.70)	Firm to stiff orange brown and grey mottled CLAY		
2.00-3.00 2.00-2.45	L3 SPT(C) N=37	DRY	80% recovery 8/7,10,10,10					
3.00-3.30	SPT(C) 57/150	DRY	32/27,30		3.00	Terminated at 3.00m		

Remarks
Refused @ 3.00 m, terminated
Strata depths approximate where recovery <100%
Borehole was dry

Scale (approx)	Logged By
1:25	ljs

Figure No. 5993.WS6

AP GEOTECHNICS
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Site	Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	WS7

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 27/06/2025	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		100% recovery		(0.30)	Brown silty TOPSOIL		
					0.30	Firm to stiff orange brown and grey mottled CLAY		
1.00-1.50 1.00-1.45 1.00-2.00	C1 SPT(C) N=19 L2	DRY	90% recovery 4/3,5,5,6					
1.50	D1				(2.40)			
2.00-2.70 2.00-2.45	L3 SPT(C) N=31	DRY	70% recovery 7/5,7,10,9					
2.70-3.08	SPT(C) 66/225	DRY	31/20,22,24		2.70	Terminated at 2.70m		

Remarks
Borehole was dry
Refused @ 2.70 m, terminated
Strata depths approximate where recovery <100%

Scale (approx)	Logged By
1:25	ljs

Figure No. 5993.WS7

AP GEOTECHNICS
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Site	Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	WS8

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 27/06/2025	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		90% recovery		(0.20)	Brown silty TOPSOIL		
					0.20	Firm to stiff orange brown and grey mottled CLAY		
0.30	C1							
1.00-2.00	L2		80% recovery					
1.00-1.45	SPT(C) N=19	DRY	6/3,5,5,6		(1.80)			
					2.00	Terminated at 2.00m		
2.00-2.45	SPT(C) N=56	DRY	14/7,12,17,20					

Remarks
Refused @ 2.00 m, terminated
Strata depths approximate where recovery <100%
Borehole was dry

Scale (approx)	Logged By
1:25	ljs

Figure No. 5993.WS8

AP GEOTECHNICS
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Site
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON

Number
WS9

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 27/06/2025	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		100% recovery			Brown silty TOPSOIL		
0.10	C1				(0.40)			
					0.40	Firm to stiff orange brown and grey mottled CLAY		
1.00-2.00	L2		100% recovery					
1.00-1.45	SPT(C) N=9	DRY	3/2,2,2,3		(1.60)			
					2.00	Firm to stiff orange brown sandy CLAY with a little gravel		
2.00-3.00	L3		70% recovery					
2.00-2.45	SPT(C) N=29	DRY	9/7,9,6,7		(1.00)			▽1
			Water strike(1) at 2.50m.					
			27/06/2025:1.80m		3.00	Terminated at 3.00m		
3.00-3.68	SPT(C) 72/525	2.42	32/21,24,27					

Remarks
Refused @ 3.00 m, terminated
Strata depths approximate where recovery <100%

Scale (approx)	Logged By
1:25	ljs

Figure No.
5993.WS9

AP GEOTECHNICS
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Site	Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	WS10

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 27/06/2025	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		90% recovery		(0.40)	Brown silty TOPSOIL		
					0.40	Firm to stiff orange brown and grey mottled CLAY		
1.00-2.00 1.00-1.45	L2 SPT(C) N=14	DRY	80% recovery 3/2,3,4,5					
					(2.60)			
2.00 2.00-2.45 2.00-3.00	D1 SPT(C) N=37 L3	DRY	90% recovery 7/5,8,10,14					
					3.00			
3.00-3.38	SPT(C) 60/225	DRY	25/18,20,22			Terminated at 3.00m		

Remarks
Strata depths approximate where recovery <100%
Refused @ 3.00 m, terminated
Borehole was dry

Scale (approx)	Logged By
1:25	ljs

Figure No. 5993.WS10

AP GEOTECHNICS
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Site	Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	WS11

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 27/06/2025	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		60% recovery		(0.30)	Brown silty TOPSOIL		
					0.30	Firm to stiff orange brown and grey mottled CLAY		
0.40	C1							
1.00-2.00 1.00-1.45	L2 SPT(C) N=9	DRY	100% recovery 2/1,2,3,3					
2.00-3.00 2.00-2.45	L3 SPT(C) N=25	DRY	100% recovery 6/4,6,7,8		(3.70)			
3.00-4.00 3.00-3.45	L4 SPT(C) N=29	DRY	80% recovery 9/5,8,7,9					
4.00-4.38	SPT(C) 67/225	DRY	17/17,23,27		4.00	Complete at 4.00m		

Remarks
Borehole was dry
Strata depths approximate where recovery <100%

Scale (approx)	Logged By
1:25	ljs

Figure No. 5993.WS11

AP GEOTECHNICS
T 01932 848460
F 01932 851255
E mail@apgeotechnics.co.uk

Site	Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	WS12

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler	115mm to 1.00m		Rocco Homes	5993
	Location See site plan	**Dates** 27/06/2025	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	L1		90% recovery		(0.40)	Vegetation over brown sandy TOPSOIL		
0.50-1.00	C1				0.40	Firm to stiff orange brown and grey mottled CLAY		
1.00-2.00 1.00-1.45	L2 SPT(C) N=12	DRY	100% recovery 2/2,2,4,4		(2.60)			
2.00-3.00 2.00-2.45	L3 SPT(C) N=12	DRY	100% recovery 5/3,2,3,4					
3.00-3.45	SPT(C) N=62	DRY	17/12,14,17,17,19		3.00	Terminated at 3.00m		

Remarks
Borehole was dry
Refused @ 3.00 m, terminated
Strata depths approximate where recovery <100%

Scale (approx)	Logged By
1:25	ljs

Figure No. 5993.WS12

AP GEOTECHNICS
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Site	Trial Pit Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	SA-1

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Trial Pit			Rocco Homes	5993
	Location	**Dates**	**Engineer**	**Sheet**
	See site plan	23/06/2025		1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.25)	Vegetation over TOPSOIL		
					0.25	...roots @ 0.20 m		
						Firm dark orange brown and grey sandy CLAY with some black carbonaceous material		
0.50	D1				(0.45)			
					0.70	Very stiff grey CLAY with local orange brown mottling		
1.00	D2							
					(1.30)			
1.50	D3							
					2.00			
2.00	D4					Complete at 2.00m		

Plan

Remarks

Trial pit dry and backfilled with arisings

Scale (approx)	Logged By	Figure No.
1:20	ljs	5993.SA-1

AP GEOTECHNICS
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Site	Trial Pit Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	SA-2

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Trial Pit			Rocco Homes	5993
	Location	**Dates**	**Engineer**	**Sheet**
	See site plan	23/06/2025		1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.26)	Vegetation over TOPSOIL		
					0.26	Firm to stiff orange brown, brown and grey mottled slightly sandy CLAY		
0.50	D1							
1.00	D2				(1.94)			
1.50	D3							
2.00	D4				2.20	Complete at 2.20m		

Plan

Remarks

Trial pit dry and backfilled with arisings

Scale (approx)	Logged By	Figure No.
1:20	ljs	5993.SA-2

AP GEOTECHNICS
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Site	Trial Pit Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	SA-3

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Trial Pit			Rocco Homes	5993
	Location	**Dates**	**Engineer**	**Sheet**
	See site plan	23/06/2025		1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.40)	Vegetation over brown sandy CLAY with rootlets and rare gravel ...roots from 0.18 m to 0.25 m		
0.35	D1				0.40	Firm orange brown and grey mottled slightly sandy CLAY		
					(0.65)			
1.00	D2				1.05	Very stiff grey CLAY with local orange brown mottling		
1.50	D3				(0.95)			
2.00	D4				2.00	Complete at 2.00m		

Plan

Remarks

Trial pit dry and backfilled with arisings

Scale (approx)	Logged By	Figure No.
1:20	ljs	5993.SA-3

AP GEOTECHNICS
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Site	Trial Pit Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	SA-4

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Trial Pit			Rocco Homes	5993
	Location	**Dates**	**Engineer**	**Sheet**
	See site plan	23/06/2025		1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.24)	Vegetation over TOPSOIL ....roots from 0.10 m to 0.40 m		
					0.24	Firm to stiff orange brown, brown and grey mottled slightly sandy CLAY		
0.50	D1							
					(1.16)			
1.00	D2							
					1.40	Very stiff grey CLAY with local orange brown mottling. Rootlets noted to 1.5 m depth		
1.50	D3							
					(0.60)			
2.00	D4				2.00	Complete at 2.00m		

Plan

Remarks

Trial pit dry and backfilled with arisings

Scale (approx)	Logged By	Figure No.
1:20	ljs	5993.SA-4

AP GEOTECHNICS
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Site	Trial Pit Number
LAND TO THE EAST OF MOUSDELL CLOSE, ASHINGTON	SA-5

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Trial Pit			Rocco Homes	5993
	Location	**Dates**	**Engineer**	**Sheet**
	See site plan	23/06/2025		1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.13) 0.13	Vegetation over TOPSOIL		
						Firm to stiff orange brown and brown grey mottled slightly sandy CLAY with rootlets ....roots @ 0.22 m		
0.50	D1				(0.67)			
0.75	D2				0.80	Firm brown slightly sandy CLAY		
					(0.30)			
					1.10	Firm to stiff orange brown, brown and grey mottled slightly sandy CLAY		
1.50	D3				(0.90)			
						...becoming very stiff		
2.00	D4				2.00	Complete at 2.00m		

Plan

Remarks

Trial pit dry and backfilled with arisings

Scale (approx)	Logged By	Figure No.
1:20	ljs	5993.SA-5

APPENDIX C

CALIFORNIA BEARING RATIO TEST RESULTS

CALIFORNIA BEARING RATIO

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON
Client: Rocco Homes

Project No: 5993-2
Sheet No: 1/8

Loc'n	Sample	Depth (m)
CBR 1		**0.5**

Description
Firm orange brown and grey mottled slightly sandy CLAY

Sample Preparation	
In situ	
Undisturbed	
Remoulded	
Recompacted	2.5kg
	4.5kg

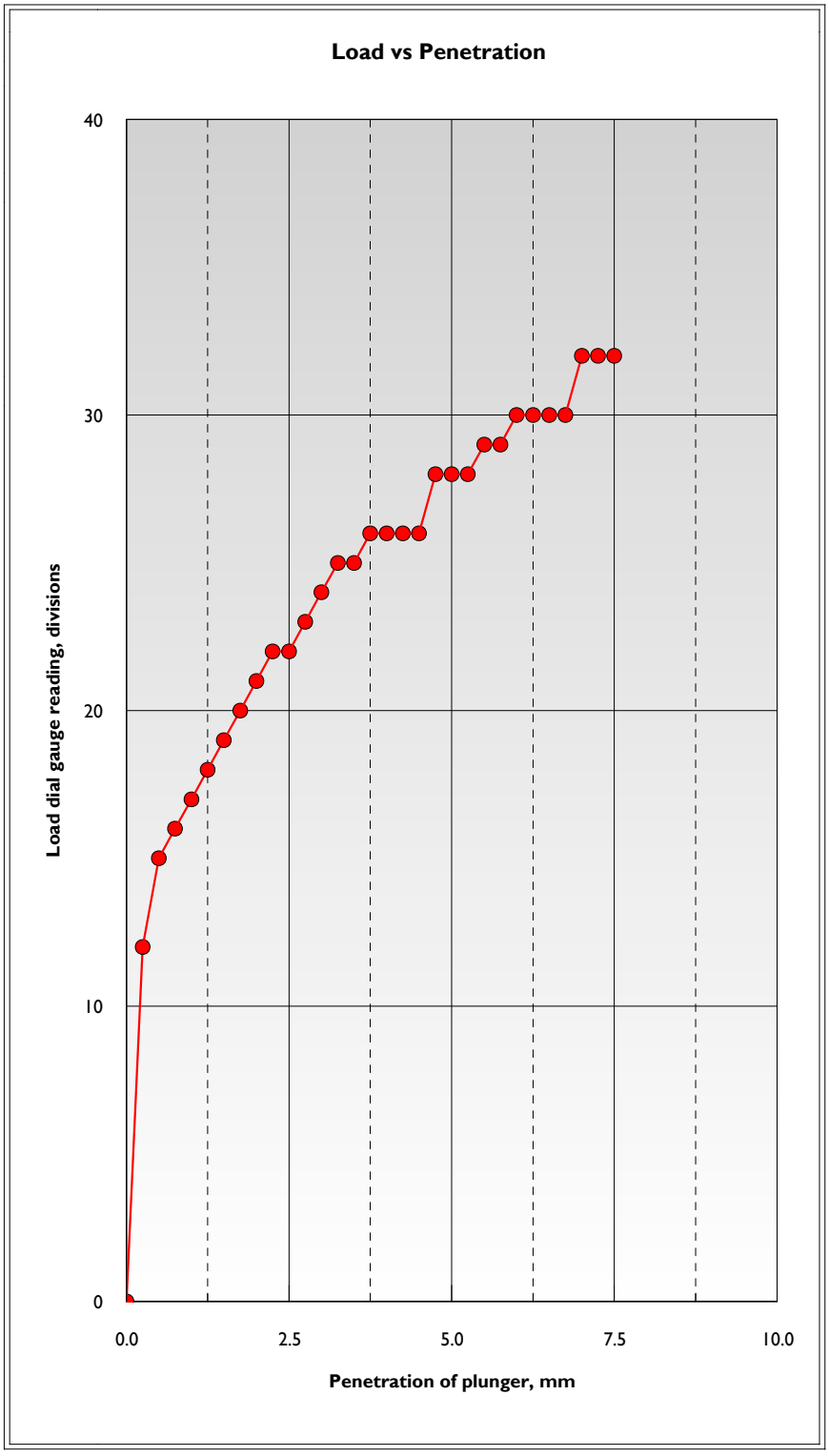
Penetration mm	Load Dial Gauge, div top	bottom
0.00	0	
0.25	12	
0.50	15	
0.75	16	
1.00	17	
1.25	18	
1.50	19	
1.75	20	
2.00	21	
2.25	22	
2.50	22	
2.75	23	
3.00	24	
3.25	25	
3.50	25	
3.75	26	
4.00	26	
4.25	26	
4.50	26	
4.75	28	
5.00	28	
5.25	28	
5.50	29	
5.75	29	
6.00	30	
6.25	30	
6.50	30	
6.75	30	
7.00	32	
7.25	32	
7.50	32	

Surcharge, kg	9
Seating Load, N	50
Proving Ring Factor, N/div	13.164

Particles larger than 20 mm may be present within the test area.

CBR at 2.5mm = (Dial reading x ring factor)/132.4

CBR at 5.0mm = (Dial reading x ring factor)/199.6



Moisture Cont. %	Density, Mg/m³ Bulk	Dry	% retained at 20mm
11			

CBR %	Penet'n	Top	Bottom
	2.5mm	**2.2**	
	5.0mm	**1.8**	

CALIFORNIA BEARING RATIO

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON
Client: Rocco Homes

Project No: 5993-2
Sheet No: 2/8

Loc'n	Sample	Depth (m)
CBR 2		**0.5**

Description
Firm orange brown and grey mottled slightly sandy CLAY

Sample Preparation	
In situ	
Undisturbed	
Remoulded	
Recompacted	2.5kg
	4.5kg

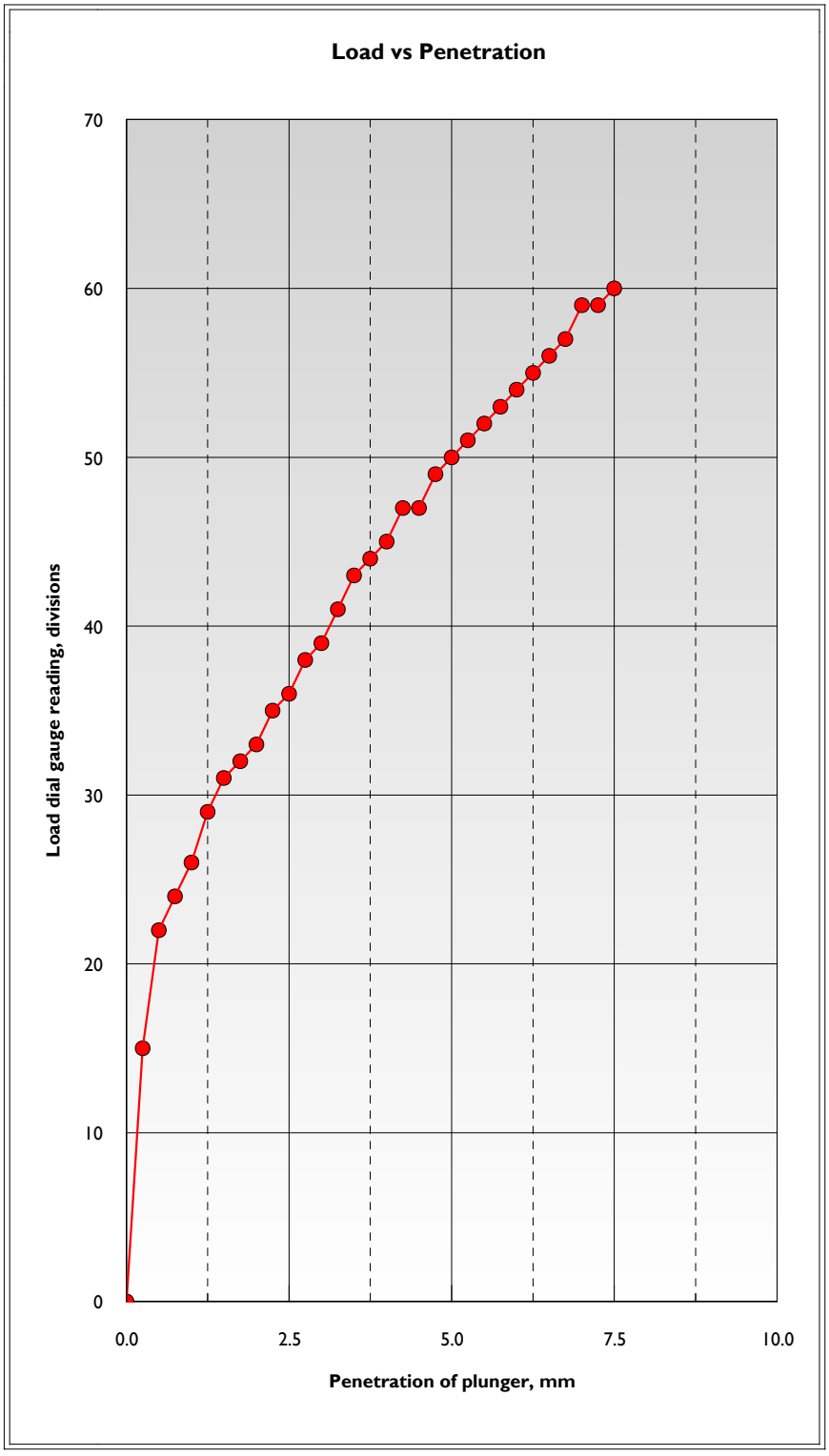
Penetration	Load Dial Gauge, div	
mm	top	bottom
0.00	0	
0.25	15	
0.50	22	
0.75	24	
1.00	26	
1.25	29	
1.50	31	
1.75	32	
2.00	33	
2.25	35	
2.50	36	
2.75	38	
3.00	39	
3.25	41	
3.50	43	
3.75	44	
4.00	45	
4.25	47	
4.50	47	
4.75	49	
5.00	50	
5.25	51	
5.50	52	
5.75	53	
6.00	54	
6.25	55	
6.50	56	
6.75	57	
7.00	59	
7.25	59	
7.50	60	

Surcharge, kg	9
Seating Load, N	50
Proving Ring Factor, N/div	13.164

Particles larger than 20 mm may be present within the test area.

CBR at 2.5mm = (Dial reading x ring factor)/132.4

CBR at 5.0mm = (Dial reading x ring factor)/199.6



Moisture	Density, Mg/m³		% retained
Cont. %	Bulk	Dry	at 20mm
17			

CBR %	Penet'n	Top	Bottom
	2.5mm	**3.6**	
	5.0mm	**3.3**	

CALIFORNIA BEARING RATIO

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON
Client: Rocco Homes

Project No: 5993-2
Sheet No: 3/8

Loc'n	Sample	Depth (m)
CBR 3		**0.5**

Description
Firm orange brown and grey mottled slightly sandy CLAY

Sample Preparation	
In situ	
Undisturbed	
Remoulded	
Recompacted	2.5kg
	4.5kg

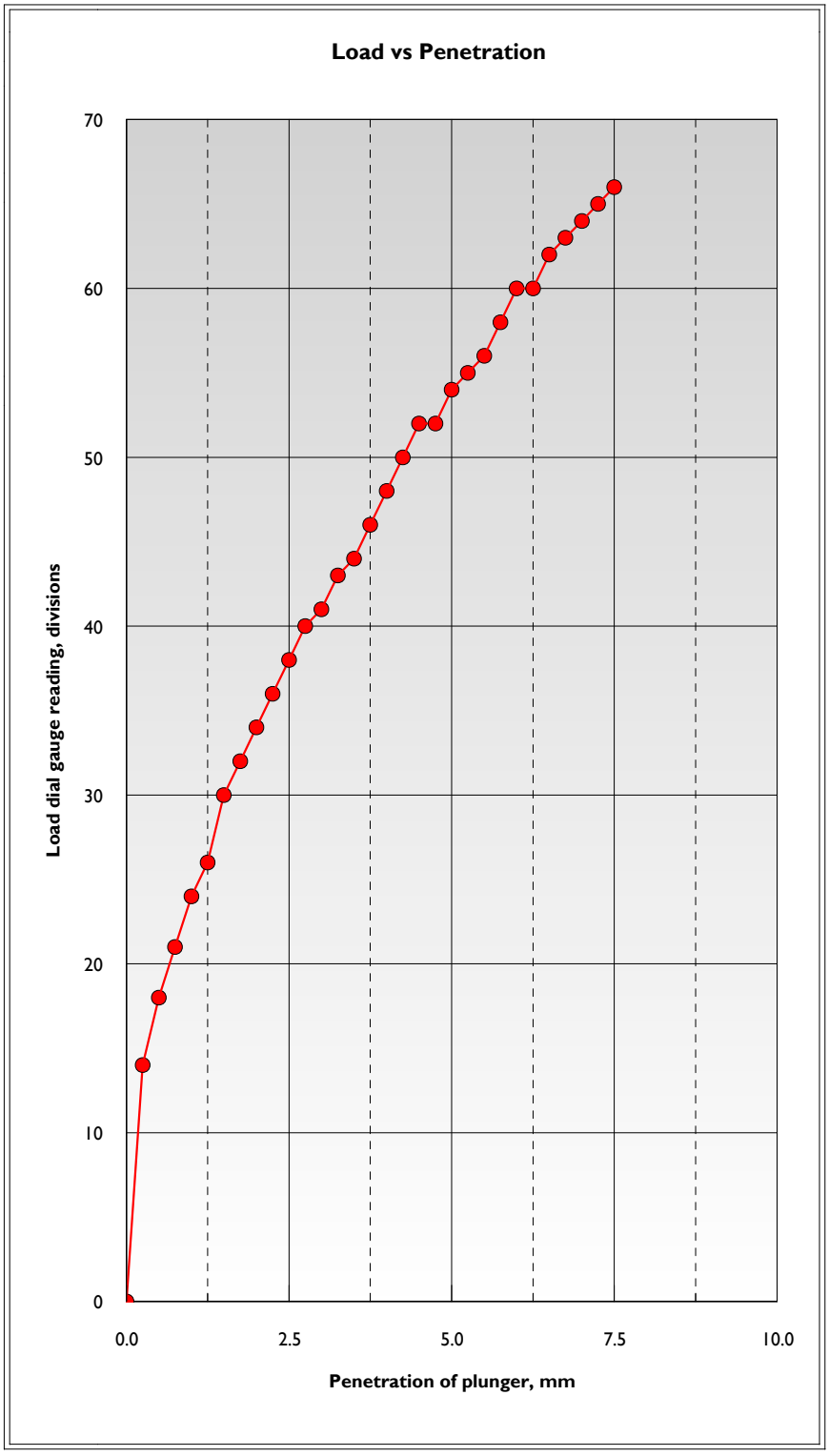
Penetration	Load Dial Gauge, div	
mm	top	bottom
0.00	0	
0.25	14	
0.50	18	
0.75	21	
1.00	24	
1.25	26	
1.50	30	
1.75	32	
2.00	34	
2.25	36	
2.50	38	
2.75	40	
3.00	41	
3.25	43	
3.50	44	
3.75	46	
4.00	48	
4.25	50	
4.50	52	
4.75	52	
5.00	54	
5.25	55	
5.50	56	
5.75	58	
6.00	60	
6.25	60	
6.50	62	
6.75	63	
7.00	64	
7.25	65	
7.50	66	

Surcharge, kg	9
Seating Load, N	50
Proving Ring Factor, N/div	13.164

Particles larger than 20 mm may be present within the test area.

CBR at 2.5mm = (Dial reading x ring factor)/132.4

CBR at 5.0mm = (Dial reading x ring factor)/199.6



Moisture	Density, Mg/m³		% retained
Cont. %	Bulk	Dry	at 20mm
16			

CBR %	Penet'n	Top	Bottom
	2.5mm	**3.8**	
	5.0mm	**3.6**	

CALIFORNIA BEARING RATIO

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON
Client: Rocco Homes

Project No: 5993-2
Sheet No: 4/8

Loc'n	Sample	Depth (m)
CBR 4		**0.5**

Description
Firm orange brown and grey mottled slightly sandy CLAY

Sample Preparation	
In situ	
Undisturbed	
Remoulded	
Recompacted	2.5kg
	4.5kg

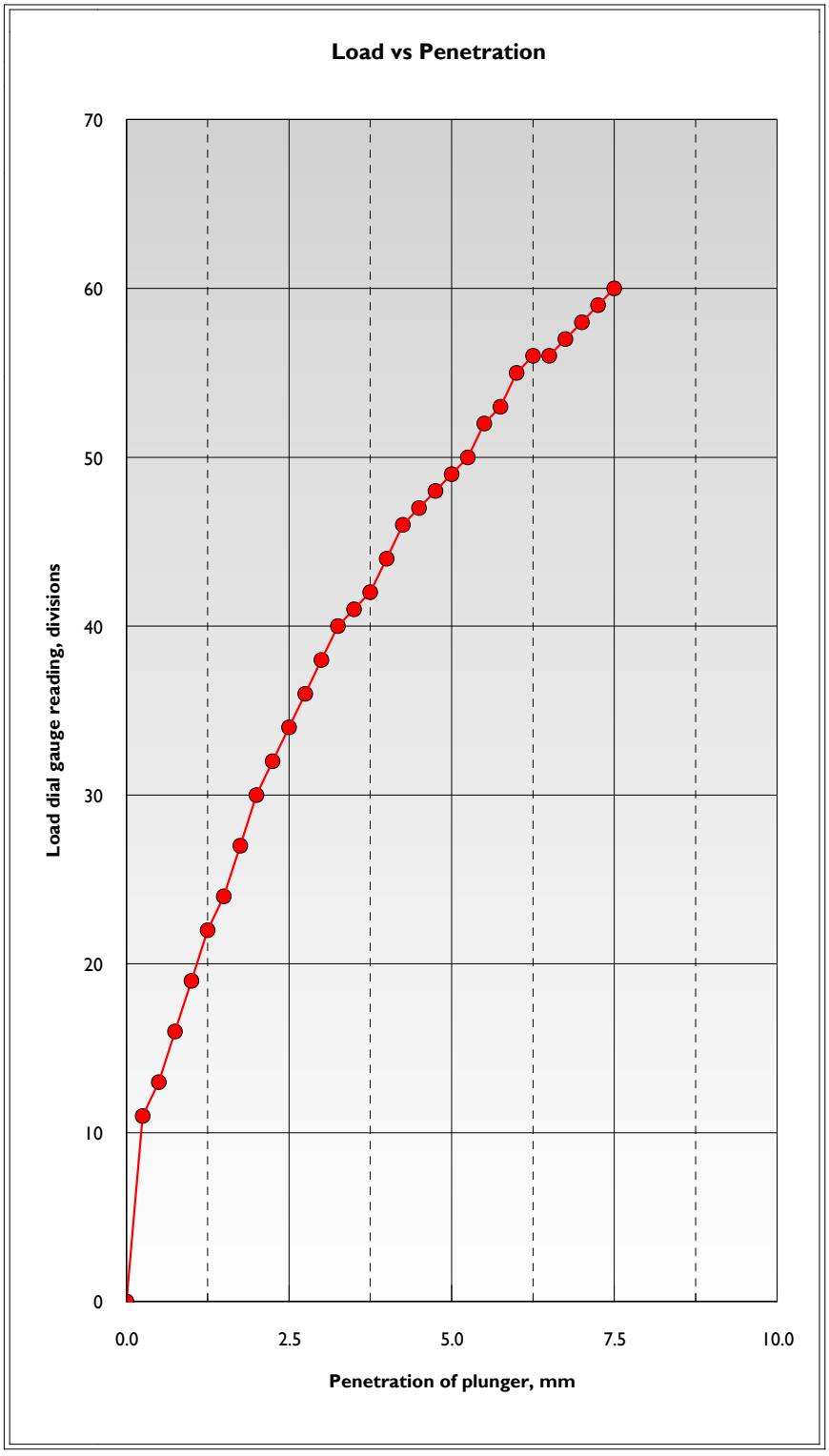
Penetration	Load Dial Gauge, div	
mm	top	bottom
0.00	0	
0.25	11	
0.50	13	
0.75	16	
1.00	19	
1.25	22	
1.50	24	
1.75	27	
2.00	30	
2.25	32	
2.50	34	
2.75	36	
3.00	38	
3.25	40	
3.50	41	
3.75	42	
4.00	44	
4.25	46	
4.50	47	
4.75	48	
5.00	49	
5.25	50	
5.50	52	
5.75	53	
6.00	55	
6.25	56	
6.50	56	
6.75	57	
7.00	58	
7.25	59	
7.50	60	

Surcharge, kg	9
Seating Load, N	50
Proving Ring Factor, N/div	13.164

Particles larger than 20 mm may be present within the test area.

CBR at 2.5mm = (Dial reading x ring factor)/132.4

CBR at 5.0mm = (Dial reading x ring factor)/199.6



Moisture	Density, Mg/m³		% retained
Cont. %	Bulk	Dry	at 20mm
17			

		Penet'n	Top	Bottom
C B R	%	2.5mm	**3.4**	
		5.0mm	**3.2**	

CALIFORNIA BEARING RATIO

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON
Client: Rocco Homes

Project No: 5993-2
Sheet No: 5/8

Loc'n	Sample	Depth (m)
CBR 5		**0.5**

Description
Firm orange brown and grey mottled slightly sandy CLAY

Sample Preparation	
In situ	
Undisturbed	
Remoulded	
Recompacted	2.5kg
	4.5kg

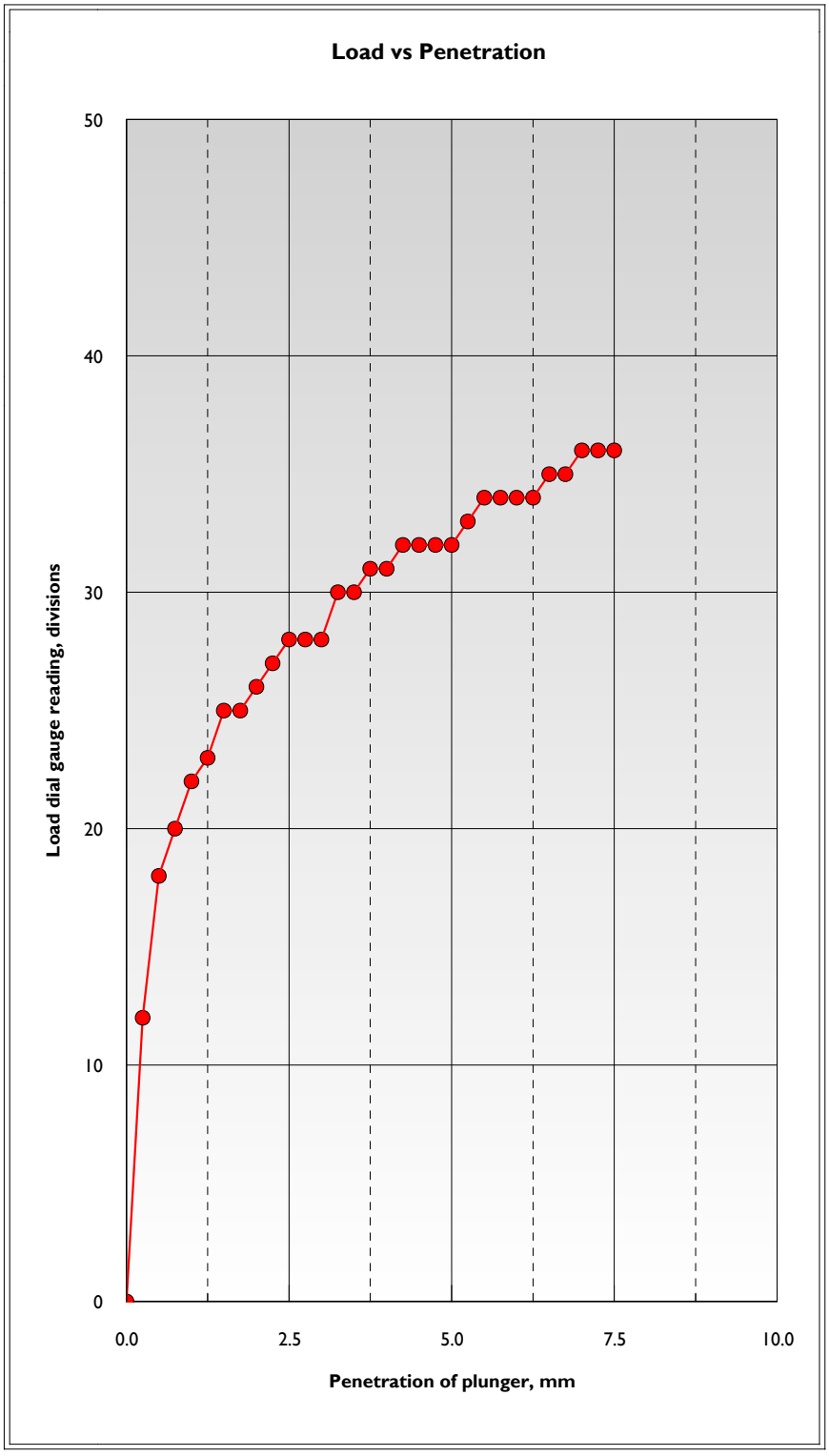
Penetration	Load Dial Gauge, div	
mm	top	bottom
0.00	0	
0.25	12	
0.50	18	
0.75	20	
1.00	22	
1.25	23	
1.50	25	
1.75	25	
2.00	26	
2.25	27	
2.50	28	
2.75	28	
3.00	28	
3.25	30	
3.50	30	
3.75	31	
4.00	31	
4.25	32	
4.50	32	
4.75	32	
5.00	32	
5.25	33	
5.50	34	
5.75	34	
6.00	34	
6.25	34	
6.50	35	
6.75	35	
7.00	36	
7.25	36	
7.50	36	

Surcharge, kg	9
Seating Load, N	50
Proving Ring Factor, N/div	13.164

Particles larger than 20 mm may be present within the test area.

CBR at 2.5mm = (Dial reading x ring factor)/132.4

CBR at 5.0mm = (Dial reading x ring factor)/199.6



Moisture	Density, Mg/m³		% retained
Cont. %	Bulk	Dry	at 20mm
21			

CBR %	Penet'n	Top	Bottom
	2.5mm	**2.8**	
	5.0mm	**2.1**	

CALIFORNIA BEARING RATIO

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON
Client: Rocco Homes

Project No: 5993-2
Sheet No: 6/8

Loc'n	Sample	Depth (m)
CBR 6		**0.5**

Description
Firm orange brown and grey mottled slightly sandy CLAY

Sample Preparation	
In situ	
Undisturbed	
Remoulded	
Recompacted	2.5kg
	4.5kg

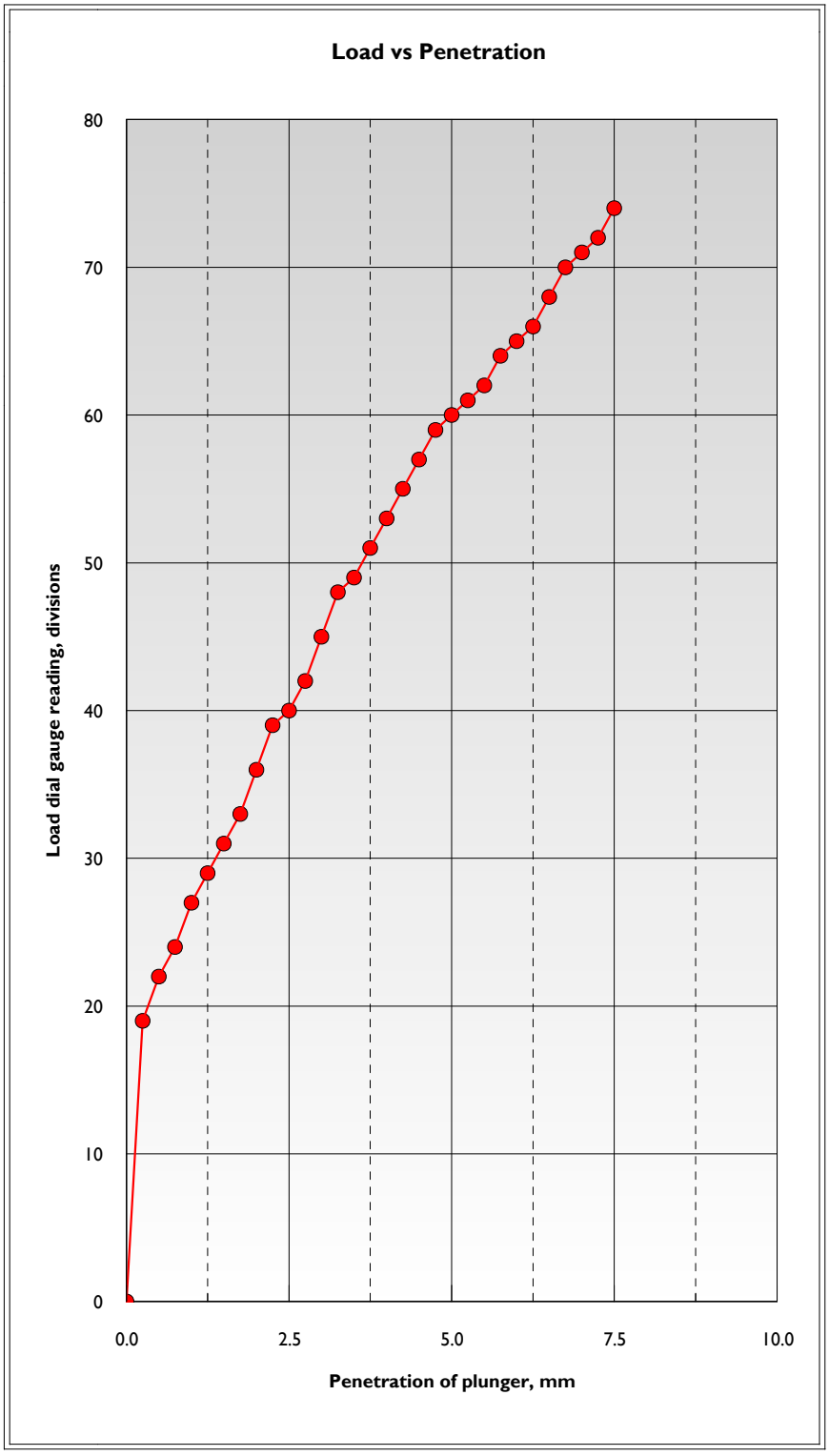
Penetration	Load Dial Gauge, div	
mm	top	bottom
0.00	0	
0.25	19	
0.50	22	
0.75	24	
1.00	27	
1.25	29	
1.50	31	
1.75	33	
2.00	36	
2.25	39	
2.50	40	
2.75	42	
3.00	45	
3.25	48	
3.50	49	
3.75	51	
4.00	53	
4.25	55	
4.50	57	
4.75	59	
5.00	60	
5.25	61	
5.50	62	
5.75	64	
6.00	65	
6.25	66	
6.50	68	
6.75	70	
7.00	71	
7.25	72	
7.50	74	

Surcharge, kg	9
Seating Load, N	50
Proving Ring Factor, N/div	13.164

Particles larger than 20 mm may be present within the test area.

CBR at 2.5mm = (Dial reading x ring factor)/132.4

CBR at 5.0mm = (Dial reading x ring factor)/199.6



Moisture	Density, Mg/m³		% retained
Cont. %	Bulk	Dry	at 20mm
26			

CBR %	Penet'n	Top	Bottom
	2.5mm	**4.0**	
	5.0mm	**4.0**	

CALIFORNIA BEARING RATIO

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON
Client: Rocco Homes

Project No: 5993-2
Sheet No: 7/8

Loc'n	Sample	Depth (m)
CBR 7		**0.5**

Description
Firm orange brown and grey mottled slightly sandy CLAY

Sample Preparation	
In situ	
Undisturbed	
Remoulded	
Recompacted	2.5kg
	4.5kg

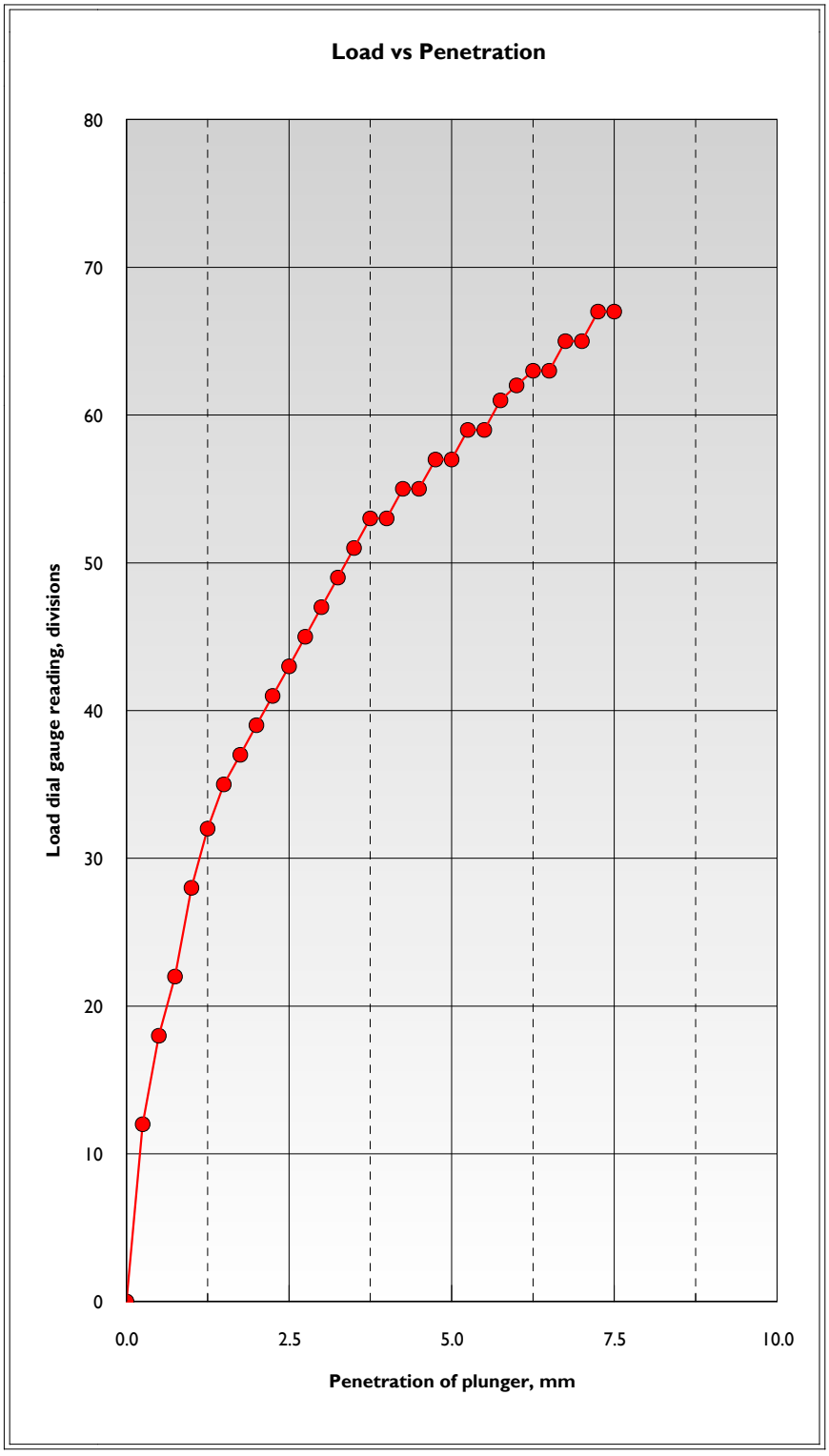
Penetration	Load Dial Gauge, div	
mm	top	bottom
0.00	0	
0.25	12	
0.50	18	
0.75	22	
1.00	28	
1.25	32	
1.50	35	
1.75	37	
2.00	39	
2.25	41	
2.50	43	
2.75	45	
3.00	47	
3.25	49	
3.50	51	
3.75	53	
4.00	53	
4.25	55	
4.50	55	
4.75	57	
5.00	57	
5.25	59	
5.50	59	
5.75	61	
6.00	62	
6.25	63	
6.50	63	
6.75	65	
7.00	65	
7.25	67	
7.50	67	

Surcharge, kg	9
Seating Load, N	50
Proving Ring Factor, N/div	13.164

Particles larger than 20 mm may be present within the test area.

CBR at 2.5mm = (Dial reading x ring factor)/132.4

CBR at 5.0mm = (Dial reading x ring factor)/199.6



Moisture	Density, Mg/m³		% retained
Cont. %	Bulk	Dry	at 20mm
19			

CBR %	Penet'n	Top	Bottom
	2.5mm	**4.3**	
	5.0mm	**3.8**	

CALIFORNIA BEARING RATIO

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON
Client: Rocco Homes

Project No: 5993-2
Sheet No: 8/8

Loc'n	Sample	Depth (m)
CBR 8		**0.5**

Description
Firm orange brown and grey mottled slightly sandy CLAY

Sample Preparation	
In situ	
Undisturbed	
Remoulded	
Recompacted	2.5kg
	4.5kg

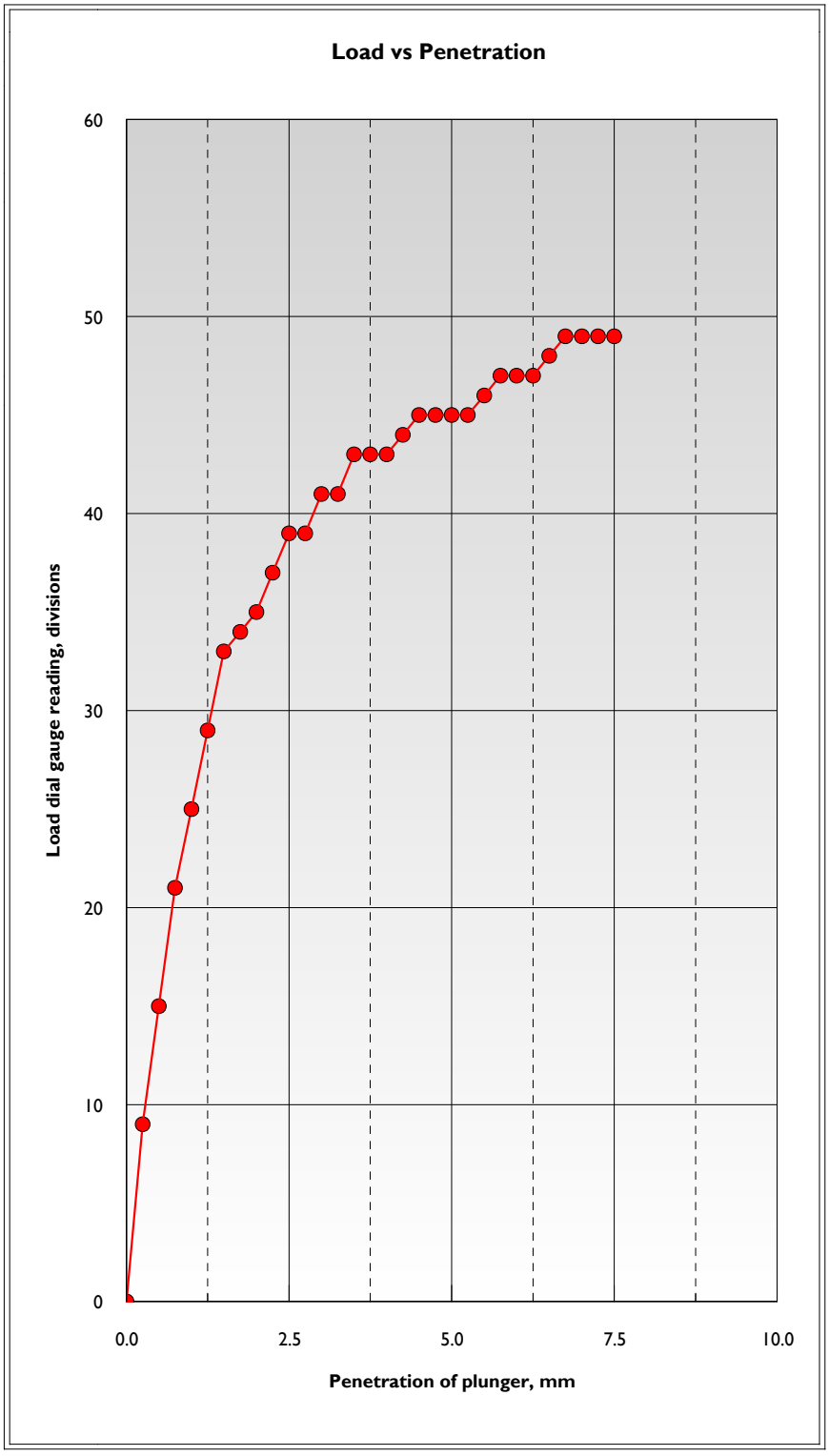
Penetration	Load Dial Gauge, div	
mm	top	bottom
0.00	0	
0.25	9	
0.50	15	
0.75	21	
1.00	25	
1.25	29	
1.50	33	
1.75	34	
2.00	35	
2.25	37	
2.50	39	
2.75	39	
3.00	41	
3.25	41	
3.50	43	
3.75	43	
4.00	43	
4.25	44	
4.50	45	
4.75	45	
5.00	45	
5.25	45	
5.50	46	
5.75	47	
6.00	47	
6.25	47	
6.50	48	
6.75	49	
7.00	49	
7.25	49	
7.50	49	

Surcharge, kg	9
Seating Load, N	50
Proving Ring Factor, N/div	13.164

Particles larger than 20 mm may be present within the test area.

CBR at 2.5mm = (Dial reading x ring factor)/132.4

CBR at 5.0mm = (Dial reading x ring factor)/199.6



Moisture	Density, Mg/m³		% retained
Cont. %	Bulk	Dry	at 20mm
20			

CBR %	Penet'n	Top	Bottom
	2.5mm	**3.9**	
	5.0mm	**3.0**	

APPENDIX D

SOAKAWAY TEST RESULTS

SOAKAWAY TEST RESULTS

BRE DIGEST 365 - SOIL INFILTRATION RATE

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON
Client: Rocco Homes

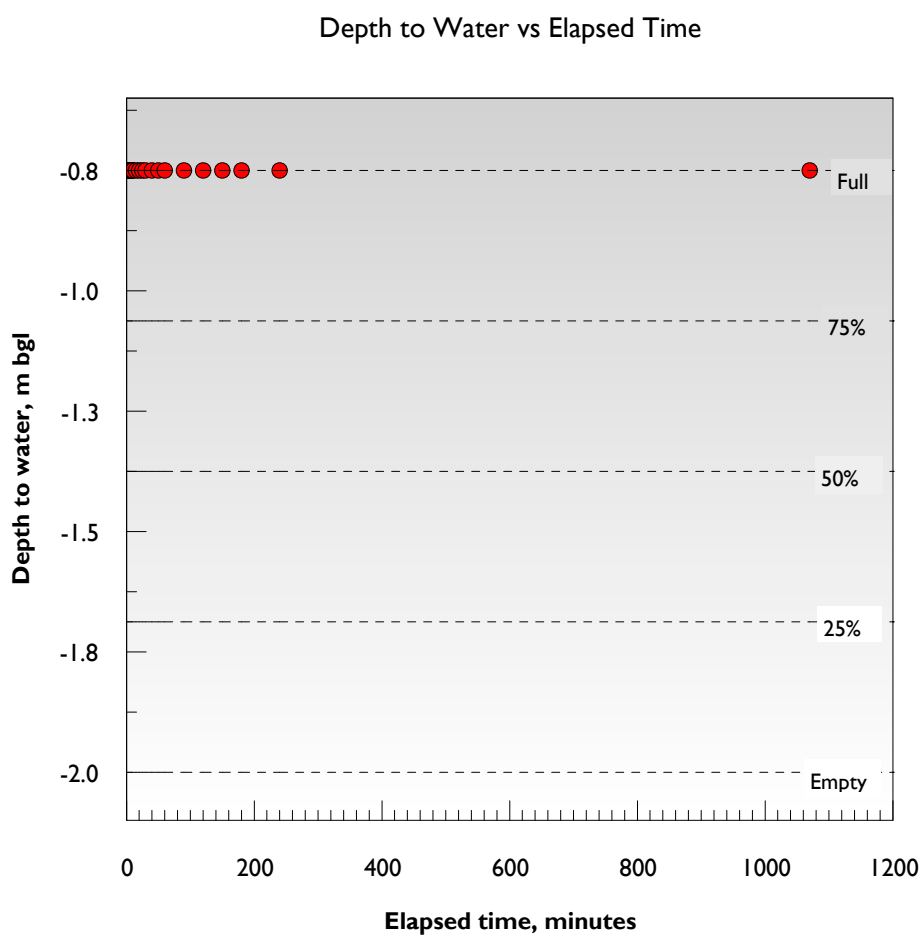
Project No: 5993-2
Sheet No: 1/1

SA	1
Test No.	1
Depth, m	2.00
Length, m	1.80
Width, m	0.50

Description of stratum under test
Weald Formation

Depth to water prior to test, m below g.l.
pit dry

Elapsed Time min	Depth to Water m
0.0	0.750
1.0	0.750
2.0	0.750
3.0	0.750
4.0	0.750
5.0	0.750
6.0	0.750
7.0	0.750
8.0	0.750
9.0	0.750
10.0	0.750
15.0	0.750
20.0	0.750
25.0	0.750
30.0	0.750
40.0	0.750
50.0	0.750
60.0	0.750
90.0	0.750
120.0	0.750
150.0	0.750
180.0	0.750
240.0	0.750
1070.0	0.750



f = (V75-V25)/A50(T75-T25)

V75-V25 = 0.56 m³
A50 = 3.78 m²
T75-T25 = indeterminate min

f = indeterminate m/s

SOAKAWAY TEST RESULTS

BRE DIGEST 365 - SOIL INFILTRATION RATE

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON
Client: Rocco Homes

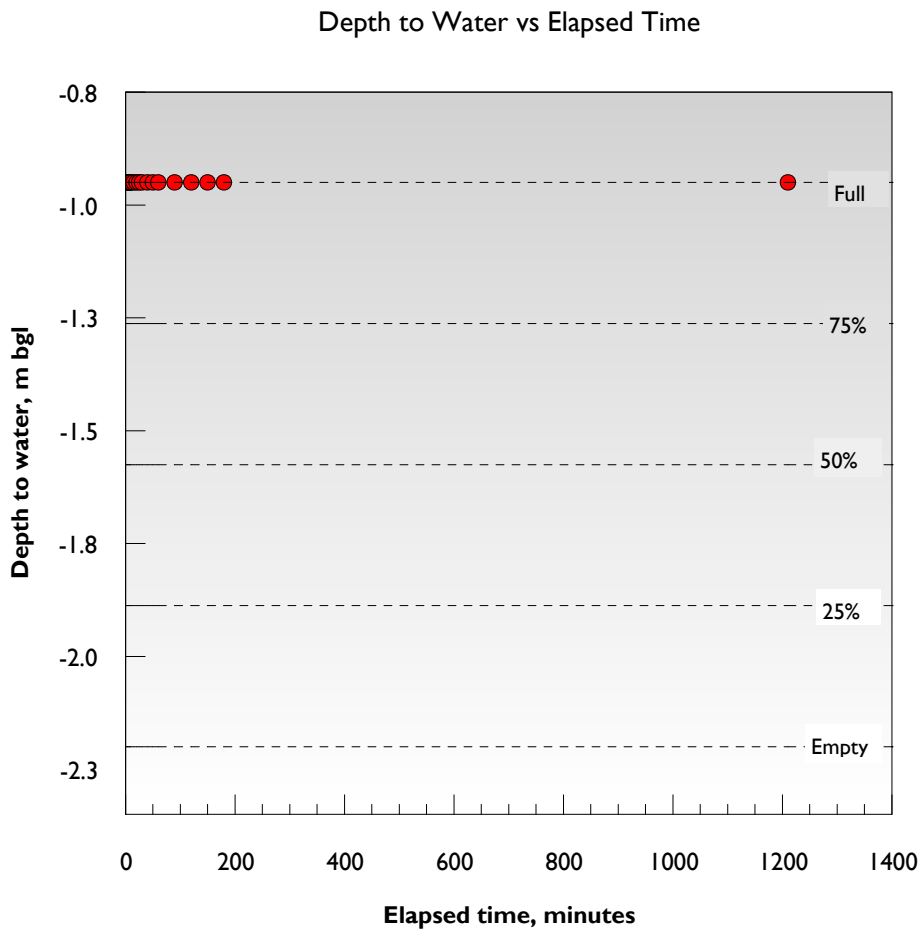
Project No: 5993-2
Sheet No: 1/1

SA	2
Test No.	1
Depth, m	2.20
Length, m	1.80
Width, m	0.50

Description of stratum under test
Weald Formation

Depth to water prior to test, m below g.l.
pit dry

Elapsed Time min	Depth to Water m
0.0	0.950
1.0	0.950
2.0	0.950
3.0	0.950
4.0	0.950
5.0	0.950
6.0	0.950
7.0	0.950
8.0	0.950
9.0	0.950
10.0	0.950
15.0	0.950
20.0	0.950
25.0	0.950
30.0	0.950
40.0	0.950
50.0	0.950
60.0	0.950
90.0	0.950
120.0	0.950
150.0	0.950
180.0	0.950
1210.0	0.950



f = (V75-V25)/A50(T75-T25)

V75-V25 = 0.56 m³
A50 = 3.78 m²
T75-T25 = indeterminate min

f = indeterminate m/s

SOAKAWAY TEST RESULTS

BRE DIGEST 365 - SOIL INFILTRATION RATE

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON
Client: Rocco Homes

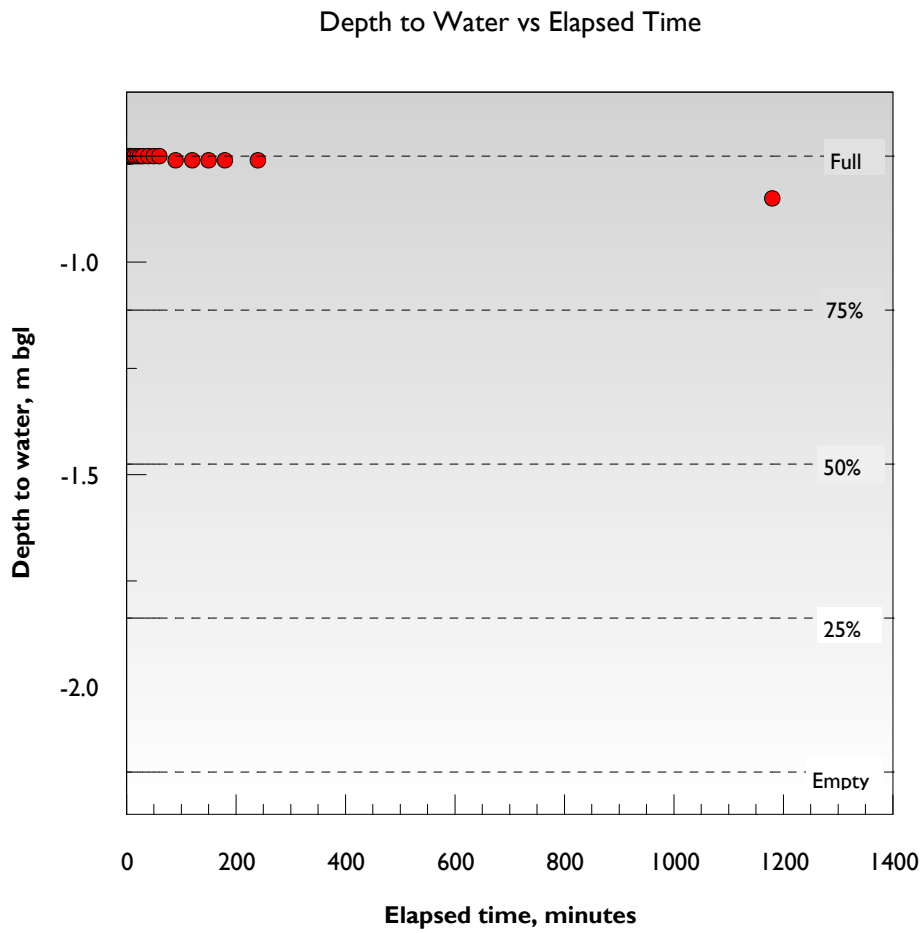
Project No: 5993-2
Sheet No: 1/1

SA	3
Test No.	1
Depth, m	2.20
Length, m	1.80
Width, m	0.50

Description of stratum under test
Weald Formation

Depth to water prior to test, m below g.l.
pit dry

Elapsed Time min	Depth to Water m
0.0	0.750
1.0	0.750
2.0	0.750
3.0	0.750
4.0	0.750
5.0	0.750
6.0	0.750
7.0	0.750
8.0	0.750
9.0	0.750
10.0	0.750
15.0	0.750
20.0	0.750
25.0	0.750
30.0	0.750
40.0	0.750
50.0	0.750
60.0	0.750
90.0	0.760
120.0	0.760
150.0	0.760
180.0	0.760
240.0	0.760
1180.0	0.850



f = (V75-V25)/A50(T75-T25)

V75-V25 = 0.65 m³
A50 = 4.24 m²
T75-T25 = indeterminate min

f = indeterminate m/s

SOAKAWAY TEST RESULTS

BRE DIGEST 365 - SOIL INFILTRATION RATE

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON
Client: Rocco Homes

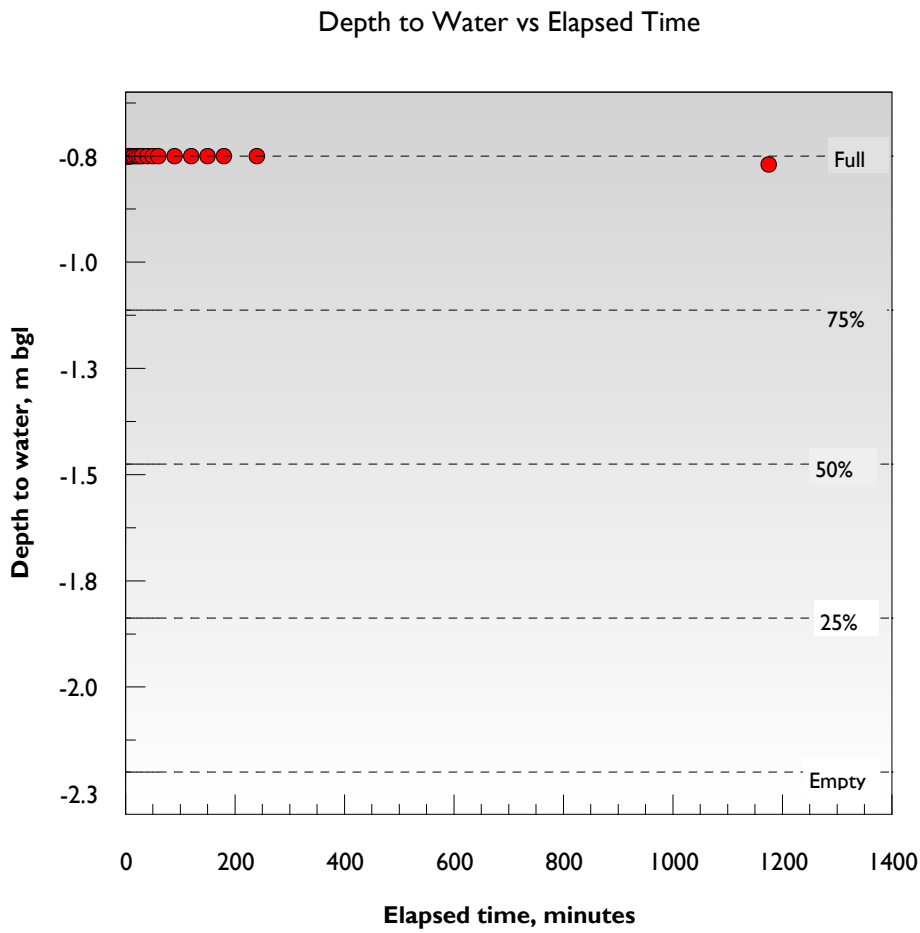
Project No: 5993-2
Sheet No: 1/1

SA	4
Test No.	1
Depth, m	2.20
Length, m	1.80
Width, m	0.50

Description of stratum under test
Weald Formation

Depth to water prior to test, m below g.l.
pit dry

Elapsed Time min	Depth to Water m
0.0	0.750
1.0	0.750
2.0	0.750
3.0	0.750
4.0	0.750
5.0	0.750
6.0	0.750
7.0	0.750
8.0	0.750
9.0	0.750
10.0	0.750
15.0	0.750
20.0	0.750
25.0	0.750
30.0	0.750
40.0	0.750
50.0	0.750
60.0	0.750
90.0	0.750
120.0	0.750
150.0	0.750
180.0	0.750
240.0	0.750
1175.0	0.770



f = (V75-V25)/A50(T75-T25)

V75-V25 = 0.65 m³
A50 = 4.24 m²
T75-T25 = indeterminate min

f = indeterminate m/s

SOAKAWAY TEST RESULTS

BRE DIGEST 365 - SOIL INFILTRATION RATE

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON
Client: Rocco Homes

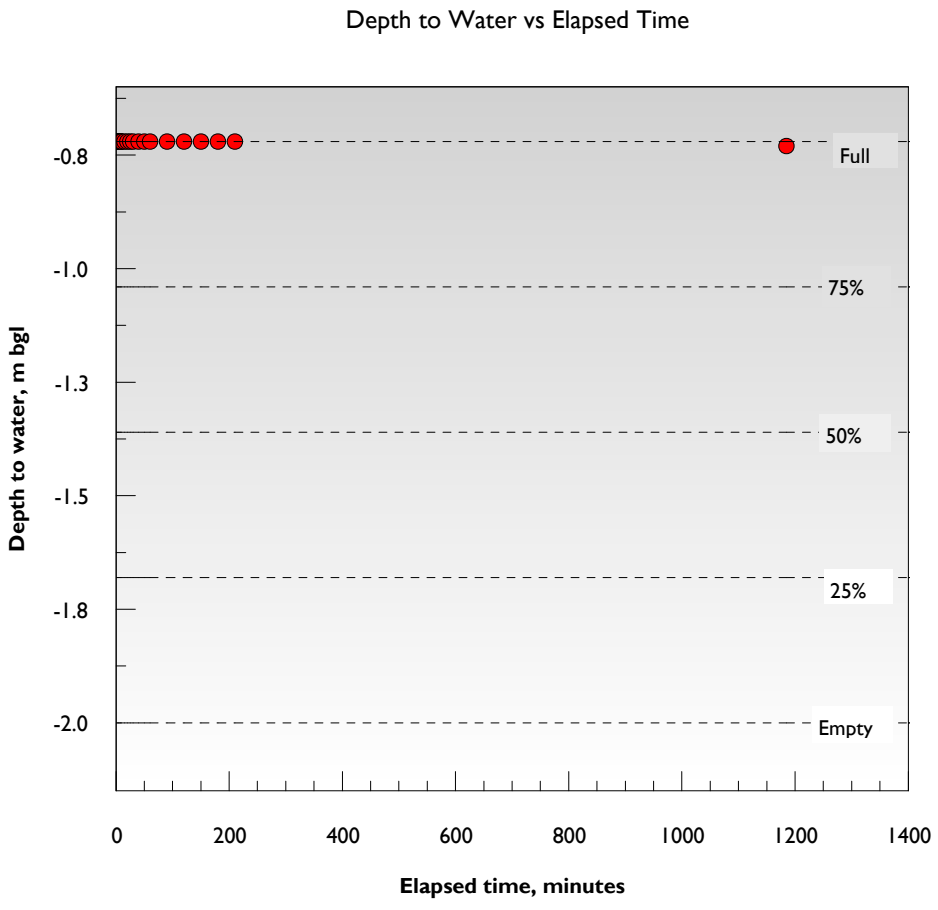
Project No: 5993-2
Sheet No: 1/1

SA	5
Test No.	1
Depth, m	2.00
Length, m	1.80
Width, m	0.50

Description of stratum under test
Weald Formation

Depth to water prior to test, m below g.l.
pit dry

Elapsed Time min	Depth to Water m
0.0	0.720
1.0	0.720
2.0	0.720
3.0	0.720
4.0	0.720
5.0	0.720
6.0	0.720
7.0	0.720
8.0	0.720
9.0	0.720
10.0	0.720
15.0	0.720
20.0	0.720
25.0	0.720
30.0	0.720
40.0	0.720
50.0	0.720
60.0	0.720
90.0	0.720
120.0	0.720
150.0	0.720
180.0	0.720
210.0	0.720
1185.0	0.730



f = (V75-V25)/A50(T75-T25)

V75-V25 = 0.58 m³
A50 = 3.84 m²
T75-T25 = 1700 min

f = 1.47E-006 m/s

APPENDIX E

STANDPIPE RECORDS

STANDPIPE RECORDS

GAS EMISSIONS AND WATER LEVELS

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON
Client: Rocco Homes

Project No: 5993-2
Sheet No: 1/2

Date		Measurement	Units	Location							
04/07/2025				WS1		WS6		WS9			
Weather conditions				Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady
Temp. °C	23	Flow rate	l/hr	0.0	0.0	0.0	0.0	0.0	0.0		
Atmos. mb	1025	Methane	%	0.0	0.0	0.0	0.0	0.0	0.0		
		Carbon dioxide	%	0.8	0.6	0.7	0.5	0.4	0.3		
Cloud	5%	Carbon monoxide	ppm	0	0	0	0	0	0		
Sun	bright	Hydrogen sulphide	ppm	0	0	0	0	0	0		
Rainfall	nil	Oxygen	%	20.3	20.4	20.3	20.5	20.8	20.7		
		PID reading	ppm	0	0	0	0	0	0		
		Water level	m bgl	1.27		Dry @ 2.70		0.85			

Date		Measurement	Units	Location							
17/07/2025				WS1		WS6		WS9			
Weather conditions				Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady
Temp. °C	25	Flow rate	l/hr	0.0	0.0	0.0	0.0	0.0	0.0		
Atmos. mb	1013	Methane	%	0.0	0.0	0.0	0.0	0.0	0.0		
		Carbon dioxide	%	0.8	0.6	0.8	0.5	0.6	0.6		
Cloud	95 %	Carbon monoxide	ppm	0	0	0	0	0	0		
Sun	5 %	Hydrogen sulphide	ppm	0	0	0	0	0	0		
Rainfall	nil	Oxygen	%	20.5	20.5	20.4	20.5	20.5	20.5		
		PID reading	ppm	0	0	0	0	0	0		
		Water level	m bgl	0.71		Dry @ 2.70		0.96			

Date		Measurement	Units	Location							
15/08/2025				WS1		WS6		WS9			
Weather conditions				Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady
Temp. °C	24	Flow rate	l/hr	0.0	0.0	0.0	0.0	0.0	0.0		
Atmos. mb	1021	Methane	%	0.0	0.0	0.0	0.0	0.0	0.0		
		Carbon dioxide	%	0.8	0.9	1.0	0.7	0.7	0.6		
Cloud	nil	Carbon monoxide	ppm	0	0	0	0	0	0		
Sun	100 %	Hydrogen sulphide	ppm	0	0	0	0	0	0		
Rainfall	nil	Oxygen	%	20.4	20.2	20.2	20.4	20.5	20.5		
		PID reading	ppm	0	0	0	0	0	0		
		Water level	m bgl	0.93		2.46		1.08			

Date		Measurement	Units	Location							
08/09/2025				WS1		WS6		WS9			
Weather conditions				Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady
Temp. °C	18	Flow rate	l/hr	0.0	0.0	0.0	0.0	0.0	0.0		
Atmos. mb	1013	Methane	%	0.0	0.0	0.0	0.0	0.0	0.0		
		Carbon dioxide	%	0.8	0.9	0.8	0.3	0.6	0.5		
Cloud	20 %	Carbon monoxide	ppm	0	0	0	0	0	0		
Sun	80 %	Hydrogen sulphide	ppm	0	0	0	0	0	0		
Rainfall	nil	Oxygen	%	20.1	19.5	20.0	20.4	20.4	20.3		
		PID reading	ppm	0	0	0	0	0	0		
		Water level	m bgl	1.05		0.52		0.87			

Readings taken with GFM435 manufactured by Gas Data Ltd.

STANDPIPE RECORDS

GAS EMISSIONS AND WATER LEVELS

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON
Client: Rocco Homes

Project No: 5993-2
Sheet No: 2/2

Date		Measurement	Units	Location							
19/09/2025				WS1		WS6		WS9			
Weather conditions				Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady
Temp. °C	20	Flow rate	l/hr	0.0	0.0	0.0	0.0	0.0	0.0		
Atmos. mb	1015	Methane	%	0.0	0.0	0.0	0.0	0.0	0.0		
		Carbon dioxide	%	1.2	0.8	0.9	0.5	0.6	0.4		
Cloud	50 %	Carbon monoxide	ppm	0	0	0	0	0	0		
Sun	50 %	Hydrogen sulphide	ppm	0	0	0	0	0	0		
Rainfall	nil	Oxygen	%	19.8	20.1	20.0	20.3	20.4	20.4		
		PID reading	ppm	0	0	0	0	0	0		
		Water level	m bgl	0.96		0.44		0.70			

Date		Measurement	Units	Location							
Weather conditions				Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady
Temp. °C		Flow rate	l/hr								
Atmos. mb		Methane	%								
		Carbon dioxide	%								
Cloud		Carbon monoxide	ppm								
Sun		Hydrogen sulphide	ppm								
Rainfall		Oxygen	%								
		PID reading	ppm								
		Water level	m bgl								

Date		Measurement	Units	Location							
Weather conditions				Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady
Temp. °C		Flow rate	l/hr								
Atmos. mb		Methane	%								
		Carbon dioxide	%								
Cloud		Carbon monoxide	ppm								
Sun		Hydrogen sulphide	ppm								
Rainfall		Oxygen	%								
		PID reading	ppm								
		Water level	m bgl								

Date		Measurement	Units	Location							
Weather conditions				Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady
Temp. °C		Flow rate	l/hr								
Atmos. mb		Methane	%								
		Carbon dioxide	%								
Cloud		Carbon monoxide	ppm								
Sun		Hydrogen sulphide	ppm								
Rainfall		Oxygen	%								
		PID reading	ppm								
		Water level	m bgl								

Readings taken with GFM435 manufactured by Gas Data Ltd.

APPENDIX F

LABORATORY TEST RESULTS

SUMMARY OF GEOTECHNICAL TESTS

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON, RH20 3AR
Client: Rocco Homes

Project No: 5993-2
Sheet No: 1/2

Location	Sample No	Depth	Description	CLASSIFICATION							TRIAXIAL COMPRESSION - TOTAL STRESS							CHEMICAL		
				Natural Moisture Content	Liquid Limit	Plastic Limit	Plast. Index	Passing 425µm	Mod. Plast. Index	Class	Type	Moisture Content	Bulk Density	Radial Stress	Deviator Stress	Cohesion		Sulphate (SO4)		pH
																cu, kPa assuming	cu, kPa Øu, deg	Water	Soil (Sol)	
		m		%	%	%	%	%	%			%	Mg/m³	kPa	kPa	Øu = 0		g/l	g/l	
BH1	D1	0.50	Soft to firm mottled brown slightly sandy CLAY with black carbonaceous material	17	31	17	14	96	13	CL									0.10	7.23
	D3	2.00	Firm orange brown, brown and grey mottled slightly sandy CLAY	17	42	15	27	100		CI									0.23	7.58
	U1	7.50	Very stiff red brown and grey mottled CLAY	14																
	U2	10.50	Very stiff grey CLAY with sandy laminations	9															0.15	7.44
BH2	D3	1.00	Firm to stiff orange brown, brown and grey mottled slightly sandy CLAY	21	52	25	27	100		CH									0.19	7.48
	U1	2.50	Very stiff yellow, orange brown, brown and blue grey CLAY	8																
	U2	4.50	Very stiff grey blue and brown CLAY with sandy horizons	26																
	B3	9.00	Very stiff grey blue and brown CLAY with sandy horizons	18	24	7	17	100		CL									0.34	7.55
	B5	12.00	Stiff to very stiff red brown and blue grey CLAY	16	36	16	20	100		CI										

Note: Soil Classification based upon unmodified Plasticity Index

SUMMARY OF GEOTECHNICAL TESTS

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON, RH20 3AR
Client: Rocco Homes

Project No: 5993-2
Sheet No: 2/2

Location	Sample No	Depth	Description	CLASSIFICATION							TRIAXIAL COMPRESSION - TOTAL STRESS							CHEMICAL		
				Natural Moisture Content	Liquid Limit	Plastic Limit	Plast. Index	Passing 425µm	Mod. Plast. Index	Class	Type	Moisture Content	Bulk Density	Radial Stress	Deviator Stress	Cohesion		Sulphate (SO4)		pH
																cu, kPa assuming	cu, kPa Øu, deg	Water	Soil (Sol)	
		m		%	%	%	%	%	%			%	Mg/m³	kPa	kPa	Øu = 0		g/l	g/l	
BH3	D3	1.00	Firm brown grey sandy CLAY	13	45	18	27	100		CI									0.27	7.61
	U1	1.50	Firm orange brown, brown and grey blue slightly sandy CLAY	17	33	13	20	100		CL	UU 102	17	2.01	30	88	44			0.25	7.68
	U2	3.50	Firm orange brown, brown and grey blue slightly sandy CLAY								UU 102	19	2.02	70	144	57				
	U3	6.00	Very stiff grey and nrown mottled slightly sandy to sandy CLAY (premature failure)								UU 102	15	2.09	120	148	74			0.08	7.38
WS1	D1	1.00	Firm brown grey mottled CLAY	19	50	19	31	100		CI/ CH										
WS2	D1	1.50	Firm orange brown and grey mottled CLAY	16	41	15	26	100		CI									0.17	7.40
WS4	D1	1.00	Firm orange brown and grey mottled CLAY	21	53	25	28	100		CH										
WS7	D1	1.50	Firm to stiff orange brown and grey mottled CLAY	18	38	12	26	100		CI										
WS10	D1	2.00	Firm to stiff orange brown and grey mottled CLAY	15	46	19	27	100		CI									0.40	7.72

Note: Soil Classification based upon unmodified Plasticity Index

CONTAMINANTS IN SOIL

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON, RH20 3AR
Client: Rocco Homes

Project No: 5993-2
Sheet No: 1/1

Location	Sample	Depth	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc	Boron	Chromium	Phenols	Sulphate	TPH by GCMS							pH
		m			trivalent			inorganic				water sol.	hexavalent	tot. monohydric	water sol.	C8 - C10	C10 - C12	C12 - C16	C16 - C21	C21 - C35	C35 - C40		
WS1	C1	0.20	12	<0.2	18	9.1	19	<0.3	6.6	1.7	44	1		<1.0									
WS2	C1	0.40	14	<0.2	20	8.1	18	<0.3	6.6	1.4	43	0.9		<1.0									
WS4	C1	0.30	30	<0.2	18	14	14	<0.3	9.5	3.5	68	0.4		<1.0									
WS5	C1	0.50	12	<0.2	20	8.8	12	<0.3	5.2	1.2	33	0.6		<1.0									
WS8	C1	0.30	7.5	<0.2	22	11	15	<0.3	5.9	<1.0	22	0.6		<1.0									
WS9	C1	0.10	11	<0.2	16	9.1	21	<0.3	5.2	<1.0	37	0.6		<1.0									
WS11	C1	0.40	13	<0.2	19	9.8	26	<0.3	6.3	1.4	47	0.7		<1.0									
S4UL[1]	residential[3]		37	11	910	2400		40	180	250	3700	290	6	380									
	residential[3a]		40	85	910	7100		56	180	430	40000	11000	6	1200									
	commercial		640	190	8600	68000		1100	980	12000	730000	240000	33	1300									
	POS resi*		79	120	1500	12000		120	230	1100	81000	21000	7.7										
CLEA[2]	residential		32					170	130	350													
	commercial		640					3600	1800	13000													

Notes

1. S4UL given at 6% soil organic matter
2. CLEA SGVs given at 6% soil organic matter
3. Residential with plant uptake

3a. Residential without plant uptake

All units are mg/kg dry weight of soil unless otherwise stated, except for pH which is dimensionless

Exceptions denoted thus: Residential XX
Commercial XX

CONTAMINANTS IN SOIL

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON, RH20 3AR
Client: Rocco Homes

Project No: 5993-2
Sheet No: 1/1

Speciated Total Petroleum Hydrocarbons (Aromatic / Aliphatic Split with BTEX)											
Location	WS1	WS2	WS4	WS5	WS8	WS9	WS11		LQM/CIEH S4UL		
Sample	C1	C1	C1	C1	C1	C1	C1				
Depth, m	0.20	0.40	0.30	0.50	0.30	0.10	0.40		residential	allotments	commercial
Determinand	Concentration, mg/kg										
Aromatic Hydrocarbons											
C5 - C7	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		300	57	86000
>C7 - C8	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		660	120	180000
>C8 - C10	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020		190	51	17000
>C10 - C12	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		380	74	34000
>C12 - C16	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0		660	130	38000
>C16 - C21	<10	<10	<10	<10	<10	<10	<10		930	260	28000
>C21 - C35	<10	<10	<10	<10	<10	<10	<10		1700	1600	28000
Total Aromatic Hydrocarbons	**<10**	**<10**	**<10**	**<10**	**<10**	**<10**	**<10**				
Aliphatic Hydrocarbons											
C5 - C6	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		160	3900	12000
>C6 - C8	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		530	13000	40000
>C8 - C10	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		150	1700	11000
>C10 - C12	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		760	7300	47000
>C12 - C16	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0		4300	13000	90000
>C16 - C21	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0				
>C21 - C35	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0				
Total Aliphatic Hydrocarbons	**<10**	**<10**	**<10**	**<10**	**<10**	**<10**	**<10**				
Total Petroleum Hydrocarbons	**<10**	**<10**	**<10**	**<10**	**<10**	**<10**	**<10**				
BTEX	Concentration, µg/kg										
Benzene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		370	75	90000
Toluene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		660000	120000	180000000
Ethyl Benzene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		260000	91000	27000000
p & m-xylene	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0				
o-xylene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		310000	160000	30000000
MTBE (Methyl Tertiary Butyl Ether)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0				

Notes
Total = Sum of compounds above detection limit.
S4UL given at 6% soil organic matter
*Results given as total of (ortho), (meta) and (para) xylene. SGV given is the lowest permissible value for any xylene compound

Exceptions denoted thus: Residential XX
Commercial XX

CONTAMINANTS IN SOIL

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON, RH20 3AR
Client: Rocco Homes

Project No: 5993-2
Sheet No: 1/1

Speciated Polyaromatic Hydrocarbons by GCMS

Location	WS1	WS2	WS4	WS5	WS8	WS9	WS11					LQM/CIEH S4UL[3]		
Sample	C1	C1	C1	C1	C1	C1	C1							
Depth, m	0.20	0.40	0.30	0.50	0.30	0.10	0.40					residential4	residential5	allotments	commercial
Determinand	Concentration, mg/kg														
PAH															
Naphthalene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					13	13	24	1100
Acenaphthylene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					920	6000	160	100000
Acenaphthene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					1100	6000	200	100000
Fluorene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					860	4500	160	71000
Phenanthrene	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					440	1500	90	23000
Anthracene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					11000	37000	2200	540000
Fluoranthene	0.14	0.13	<0.05	<0.05	<0.05	<0.05	<0.05					890	1600	290	23000
Pyrene	0.12	0.11	<0.05	<0.05	<0.05	<0.05	<0.05					2000	3800	620	54000
Benzo(a)anthracene	0.06	0.05	<0.05	<0.05	<0.05	<0.05	<0.05					13	15	13	180
Chrysene	0.08	0.06	<0.05	<0.05	<0.05	<0.05	<0.05					27	32	19	350
Benzo(b)fluoranthene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					3.7	4.0	3.9	45
Benzo(k)fluoranthene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					100	110	130	1200
Benzo(a)pyrene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					3	3.2	3.5	36
Indeno(123-cd)pyrene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					41	46	39	510
Dibenzo(ah)anthracene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					0.3	0.32	0.43	3.6
Benzo(ghi)perylene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					350	360	640	4000
Total PAH (16)	**<0.80**	**<0.80**	**<0.80**	**<0.80**	**<0.80**	**<0.80**	**<0.80**								

Notes

1. Total PAH = Sum of EPA16 identified components
2. The results are expressed as mg/kg dry weight soil after correction for moisture content
3. S4UL given at 6% soil organic matter
4. Residential with plant uptake
5. Residential without plant uptake

Exceptions denoted thus: Residential XX
Commercial XX

CONTAMINANTS IN SOIL

Project: LAND EAST OF MOUSDELL CLOSE, ASHINGTON, RH20 3AR Project No: 5993-2
Client: Rocco Homes Sheet No: 1/1

Location	Sample	Depth	Asbestos identification		
		m	Description of matrix	Overall percentage of asbestos identified (approx.)	Type of asbestos identified
WS1	C1	0.20	Brown loam		none detected
WS2	C1	0.40	Brown loam with vegetation		none detected
WS4	C1	0.30	Brown loam and clay with gravel		none detected
ES5	C1	0.50	Brown clay and loam with vegetation		none detected
WS8	C1	0.30	Brown clay and loam with vegetation		none detected
WS9	C1	0.10	Brown loam with vegetation		none detected
WS11	C1	0.40	Brown loam with vegetation		none detected

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Waste Acceptance Criteria Analytical Results

Report No:	**25-035959**						
					Client:	**AP Geotechnics Ltd**	
Location	**Ashington**						
Lab Reference (Sample Number)	607053				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	sampdatenull				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	WS3 C1						
Depth (m)	0.50-1.00						
Solid Waste Analysis							
TOC (%)**	0.2				3%	5%	6%
Loss on Ignition (%) **	2.4				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg) EH_1D_CU_AL	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	< 0.85				100	--	--
pH (units)**	7.7				--	>6	--
Acid Neutralisation Capacity (mmol / kg)	1.2				--	To be evaluated	To be evaluated
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.00100			< 0.0100	0.5	2	25
Barium *	0.00121			0.0121	20	100	300
Cadmium *	< 0.000100			< 0.00100	0.04	1	5
Chromium *	0.00097			0.0097	0.5	10	70
Copper *	0.0047			0.047	2	50	100
Mercury *	< 0.000500			< 0.00500	0.01	0.2	2
Molybdenum *	0.000663			0.00663	0.5	10	30
Nickel *	< 0.00030			< 0.0030	0.4	10	40
Lead *	< 0.0010			< 0.010	0.5	10	50
Antimony *	0.002			0.02	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0028			0.028	4	50	200
Chloride *	1.2			12	800	15000	25000
Fluoride*	0.17			1.7	10	150	500
Sulphate *	2.5			25	1000	20000	50000
TDS*	17			170	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	6.11			61.1	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.2						
Dry Matter (%)	86						
Moisture (%)	14						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.

*= UKAS accredited (liquid eluate analysis only)

Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation

** = MCERTS accredited

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Waste Acceptance Criteria Analytical Results

Report No:	**25-035959**						
					Client:	**AP Geotechnics Ltd**	
Location	**Ashington**						
Lab Reference (Sample Number)	607054				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	sampdatenull				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	WS7 C1						
Depth (m)	1.00-1.50						
Solid Waste Analysis							
TOC (%)**	< 0.1				3%	5%	6%
Loss on Ignition (%) **	2.5				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg) EH_1D_CU_AL	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	< 0.85				100	--	--
pH (units)**	5.7				--	>6	--
Acid Neutralisation Capacity (mmol / kg)	-12				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.00100			< 0.0100	0.5	2	25
Barium *	0.00621			0.0621	20	100	300
Cadmium *	< 0.000100			< 0.00100	0.04	1	5
Chromium *	0.0017			0.017	0.5	10	70
Copper *	0.0099			0.099	2	50	100
Mercury *	< 0.000500			< 0.00500	0.01	0.2	2
Molybdenum *	0.000526			0.00526	0.5	10	30
Nickel *	< 0.00030			< 0.0030	0.4	10	40
Lead *	< 0.0010			< 0.010	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0077			0.077	4	50	200
Chloride *	1.4			14	800	15000	25000
Fluoride*	0.3			3	10	150	500
Sulphate *	2			20	1000	20000	50000
TDS*	11			110	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	2.74			27.4	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.2						
Dry Matter (%)	87						
Moisture (%)	13						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.

*= UKAS accredited (liquid eluate analysis only)

Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation

** = MCERTS accredited

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Waste Acceptance Criteria Analytical Results

Report No:	**25-035959**						
					Client:	**AP Geotechnics Ltd**	
Location	**Ashington**						
Lab Reference (Sample Number)	607055				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	sampdatenull				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	WS12 C1						
Depth (m)	0.50-1.00						
Solid Waste Analysis							
TOC (%)**	0.2				3%	5%	6%
Loss on Ignition (%) **	3.3				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg) EH_1D_CU_AL	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	< 0.85				100	--	--
pH (units)**	7.5				--	>6	--
Acid Neutralisation Capacity (mmol / kg)	0.53				--	To be evaluated	To be evaluated
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.00100			< 0.0100	0.5	2	25
Barium *	0.00682			0.0682	20	100	300
Cadmium *	< 0.000100			< 0.00100	0.04	1	5
Chromium *	0.0025			0.025	0.5	10	70
Copper *	0.013			0.13	2	50	100
Mercury *	< 0.000500			< 0.00500	0.01	0.2	2
Molybdenum *	0.000609			0.00609	0.5	10	30
Nickel *	< 0.00030			< 0.0030	0.4	10	40
Lead *	< 0.0010			< 0.010	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.016			0.16	4	50	200
Chloride *	1			10	800	15000	25000
Fluoride*	0.15			1.5	10	150	500
Sulphate *	0.97			9.7	1000	20000	50000
TDS*	16			160	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	5.03			50.3	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.2						
Dry Matter (%)	84						
Moisture (%)	16						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.

*= UKAS accredited (liquid eluate analysis only)

Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation

** = MCERTS accredited

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

APPENDIX G

ORIGINAL TESTING HOUSE CERTIFICATES

Appendix B

DC/22/0372 Drainage Strategy

GENERAL NOTES

1. The location, size, depth and identification of existing services that may be shown or referred to on this drawing have been assessed from non intrusive observations , record drawings or the like. The contractor shall safely carry out intrusive investigations, trial holes or soundings prior to commencing work to satisfy himself that it is safe to proceed and that the assessments are accurate. any discrepancies shall be notified to gta prior to works commencing.

2. Tender or billing drawings shall not be used for construction or the ordering of materials.

3. Do not scale. All dimensions and levels to be site confirmed.

4. This drawing shall be read in conjunction with all relevant architects, consultants drawings and specifications, together with H&S plan requirements

5. Copyright : This drawing must not be copied, amended nor reproduced without the prior written agreement of gta.

6. All drawings specifications and recommendations made by gta are subject to Local Authority and other relevant Statutory Authorities approval. Any works or services made abortive due to the client proceeding prior to these approvals is considered wholly at the Clients risk. gta hold no responsibility for resulting abortive works or costs.

KEY

Exceedance flow route for events over and above the design storm of 1 In 100 years + 40%

PN REFERENCES X.XXX RELATE TO NETWORK AS SHOWN MICRO DRAINAGE OUTPUT SHEETS WITHIN FRA REPORT

Rev	Amendments	Date	Dsn	Chk
P1	INITIAL ISSUE	26.11.21	JR	MR

Status: FOR INFORMATION

Client: LANDACRE DEVELOPMENTS

Architect: ECE ARCHITECUTRE

Project: CHANCTONBURY NURSERY ASHINGTON

Title: EXCEEDANCE FLOWS

Date: NOVEMBER 2021 | Scale @ A1: 1:500

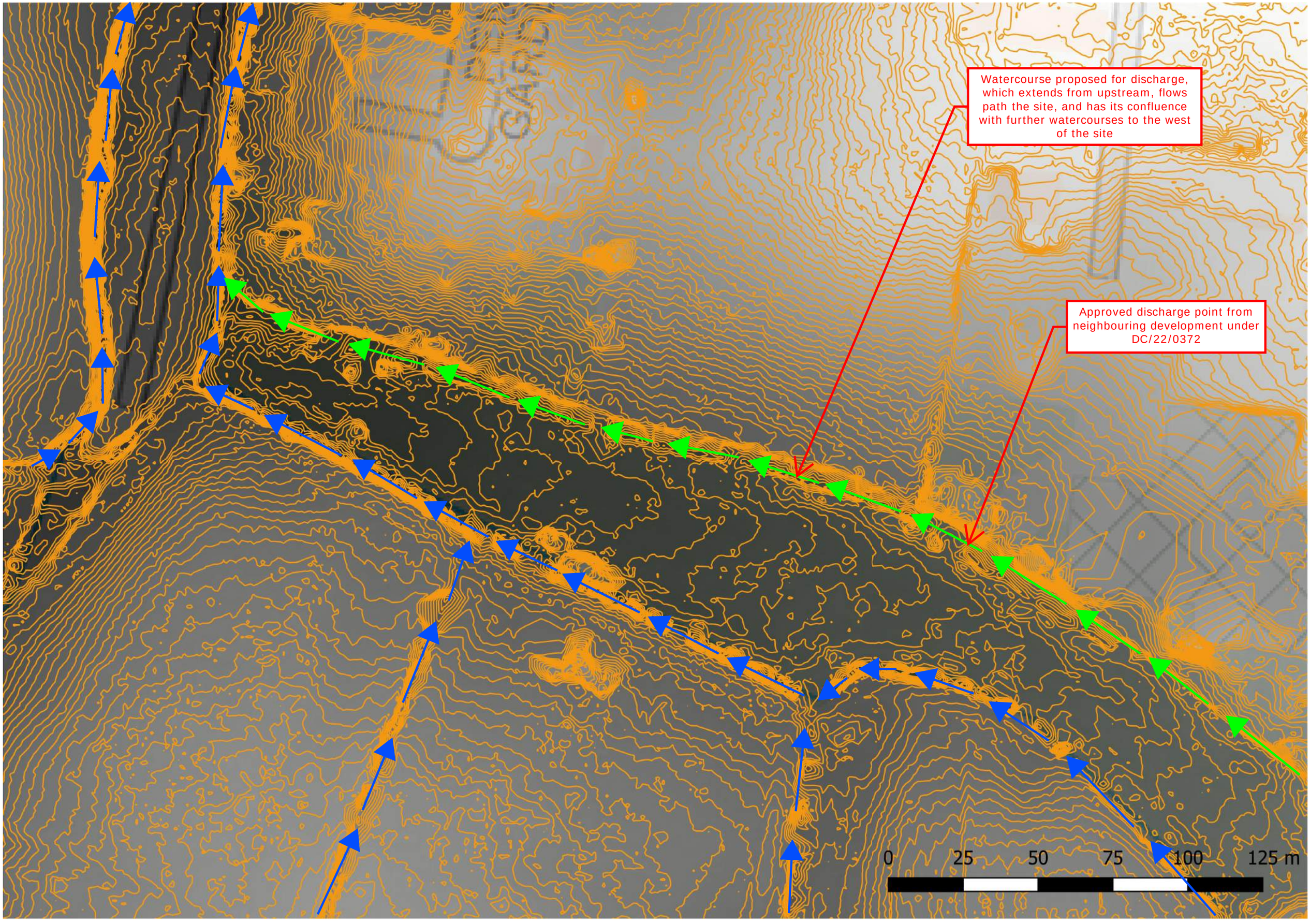
Clients Ref. | Project Ref.: 10725

gta Civils & Transport
Gloucester House, 66a Church Walk,
Burgess Hill, West Sussex, RH15 9AS
Tel.01444 871444 Web: www.gtacivils.co.uk

Drawing Number: 10725/1102 | Rev.: P1

Appendix C

LiDAR Contour Plan Showing Watercourse Connectivity


Watercourse proposed for discharge, which extends from upstream, flows path the site, and has its confluence with further watercourses to the west of the site
Approved discharge point from neighbouring development under DC/22/0372
0
25
50
75
100
125 m

Appendix D

RIBA Plan of Work 2020

RIBA Plan of Work 2020

The RIBA Plan of Work organises the process of briefing, designing, delivering, maintaining, operating and using a building into eight stages. It is a framework for all disciplines on construction projects and should be used solely as guidance for the preparation of detailed professional services and building contracts.

Stage Boundaries:

Stages 0-4 will generally be undertaken one after the other.

Stages 4 and 5 will overlap in the **Project Programme** for most projects.

Stage 5 commences when the contractor takes possession of the site and finishes at **Practical Completion**.

Stage 6 starts with the handover of the building to the client immediately after **Practical Completion** and finishes at the end of the **Defects Liability Period**.

Stage 7 starts concurrently with Stage 6 and lasts for the life of the building.

Planning Note:

Planning Applications are generally submitted at the end of Stage 3 and should only be submitted earlier when the threshold of information required has been met. If a **Planning Application** is made during Stage 3, a mid-stage gateway should be determined and it should be clear to the project team which tasks and deliverables will be required.
See *Overview* guidance.

Procurement:

The RIBA Plan of Work is procurement neutral – See *Overview* guidance for a detailed description of how each stage might be adjusted to accommodate the requirements of the **Procurement Strategy**.

ER Employer's Requirements

CP Contractor's Proposals

	0 Strategic Definition	1 Preparation and Briefing	2 Concept Design	3 Spatial Coordination	4 Technical Design	5 Manufacturing and Construction	6 Handover	7 Use
	← Projects span from Stage 1 to Stage 6; the outcome of Stage 0 may be the decision to initiate a project and Stage 7 covers the ongoing use of the building. →							
Stage Outcome at the end of the stage	The best means of achieving the **Client Requirements** confirmed If the outcome determines that a building is the best means of achieving the **Client Requirements**, the client proceeds to Stage 1	**Project Brief** approved by the client and confirmed that it can be accommodated on the site	**Architectural Concept** approved by the client and aligned to the **Project Brief** The brief remains "live" during Stage 2 and is derogated in response to the **Architectural Concept**	Architectural and engineering information **Spatially Coordinated**	All design information required to manufacture and construct the project completed Stage 4 will overlap with Stage 5 on most projects	Manufacturing, construction and **Commissioning** completed There is no design work in Stage 5 other than responding to **Site Queries**	Building handed over, **Aftercare** initiated and **Building Contract** concluded	Building used, operated and maintained efficiently Stage 7 starts concurrently with Stage 6 and lasts for the life of the building
Core Tasks during the stage **Project Strategies** might include: – **Conservation** (if applicable) – **Cost** – **Fire Safety** – **Health and Safety** – **Inclusive Design** – **Planning** – **Plan for Use** – **Procurement** – **Sustainability** See *RIBA Plan of Work 2020 Overview* for detailed guidance on **Project Strategies**	Prepare **Client Requirements** Develop **Business Case** for feasible options including review of **Project Risks** and **Project Budget** Ratify option that best delivers **Client Requirements** Review **Feedback** from previous projects Undertake **Site Appraisals** No design team required for Stages 0 and 1. Client advisers may be appointed to the client team to provide strategic advice and design thinking before Stage 2 commences.	Prepare **Project Brief** including **Project Outcomes** and **Sustainability Outcomes**, **Quality Aspirations** and **Spatial Requirements** Undertake **Feasibility Studies** Agree **Project Budget** Source **Site Information** including **Site Surveys** Prepare **Project Programme** Prepare **Project Execution Plan**	Prepare **Architectural Concept** incorporating **Strategic Engineering** requirements and aligned to **Cost Plan**, **Project Strategies** and **Outline Specification** Agree **Project Brief Derogations** Undertake **Design Reviews** with client and **Project Stakeholders** Prepare stage **Design Programme**	Undertake **Design Studies**, **Engineering Analysis** and **Cost Exercises** to test **Architectural Concept** resulting in **Spatially Coordinated** design aligned to updated **Cost Plan**, **Project Strategies** and **Outline Specification** Initiate **Change Control Procedures** Prepare stage **Design Programme**	Develop architectural and engineering technical design Prepare and coordinate design team **Building Systems** information Prepare and integrate specialist subcontractor **Building Systems** information Prepare stage **Design Programme** Specialist subcontractor designs are prepared and reviewed during Stage 4	Finalise **Site Logistics** Manufacture **Building Systems** and construct building Monitor progress against **Construction Programme** Inspect **Construction Quality** Resolve **Site Queries** as required Undertake **Commissioning** of building Prepare **Building Manual** Building handover tasks bridge Stages 5 and 6 as set out in the **Plan for Use Strategy**	Hand over building in line with **Plan for Use Strategy** Undertake review of **Project Performance** Undertake seasonal **Commissioning** Rectify defects Complete initial **Aftercare** tasks including light touch **Post Occupancy Evaluation**	Implement **Facilities Management** and **Asset Management** Undertake **Post Occupancy Evaluation** of building performance in use Verify **Project Outcomes** including **Sustainability Outcomes** Adaptation of a building (at the end of its useful life) triggers a new Stage 0
Core Statutory Processes during the stage: Planning Building Regulations Health and Safety (CDM)	Strategic appraisal of **Planning** considerations	Source pre-application **Planning Advice** Initiate collation of health and safety **Pre-construction Information**	Obtain pre-application **Planning Advice** Agree route to **Building Regulations** compliance Option: submit outline **Planning Application**	Review design against **Building Regulations** Prepare and submit **Planning Application** See ***Planning Note*** for guidance on submitting a **Planning Application** earlier than at end of Stage 3	Submit **Building Regulations Application** Discharge pre-commencement **Planning Conditions** Prepare **Construction Phase Plan** Submit form F10 to HSE if applicable	Carry out **Construction Phase Plan** Comply with **Planning Conditions** related to construction	Comply with **Planning Conditions** as required	Comply with **Planning Conditions** as required
Procurement Route Traditional	Appoint client team	Appoint design team			Tender / Appoint contractor			Appoint **Facilities Management** and **Asset Management** teams, and strategic advisers as needed
Design & Build 1 Stage					ER / CP / Appoint contractor			
Design & Build 2 Stage			ER	Pre-contract services agreement	CP / Appoint contractor			
Management Contract Construction Management			Appoint contractor					
Contractor-led			ER	Preferred bidder	CP / Appoint contractor			
Information Exchanges at the end of the stage	**Client Requirements** **Business Case**	**Project Brief** **Feasibility Studies** **Site Information** **Project Budget** **Project Programme** **Procurement Strategy** **Responsibility Matrix** **Information Requirements**	**Project Brief Derogations** Signed off **Stage Report** **Project Strategies** **Outline Specification** **Cost Plan**	Signed off **Stage Report** **Project Strategies** Updated **Outline Specification** Updated **Cost Plan** **Planning Application**	**Manufacturing Information** **Construction Information** **Final Specifications** Residual **Project Strategies** **Building Regulations Application**	**Building Manual** including **Health and Safety File** and **Fire Safety Information** **Practical Completion** certificate including **Defects List** **Asset Information** If **Verified Construction Information** is required, verification tasks must be defined	**Feedback** on **Project Performance** **Final Certificate** **Feedback** from light touch **Post Occupancy Evaluation**	**Feedback** from **Post Occupancy Evaluation** Updated **Building Manual** including **Health and Safety File** and **Fire Safety Information** as necessary

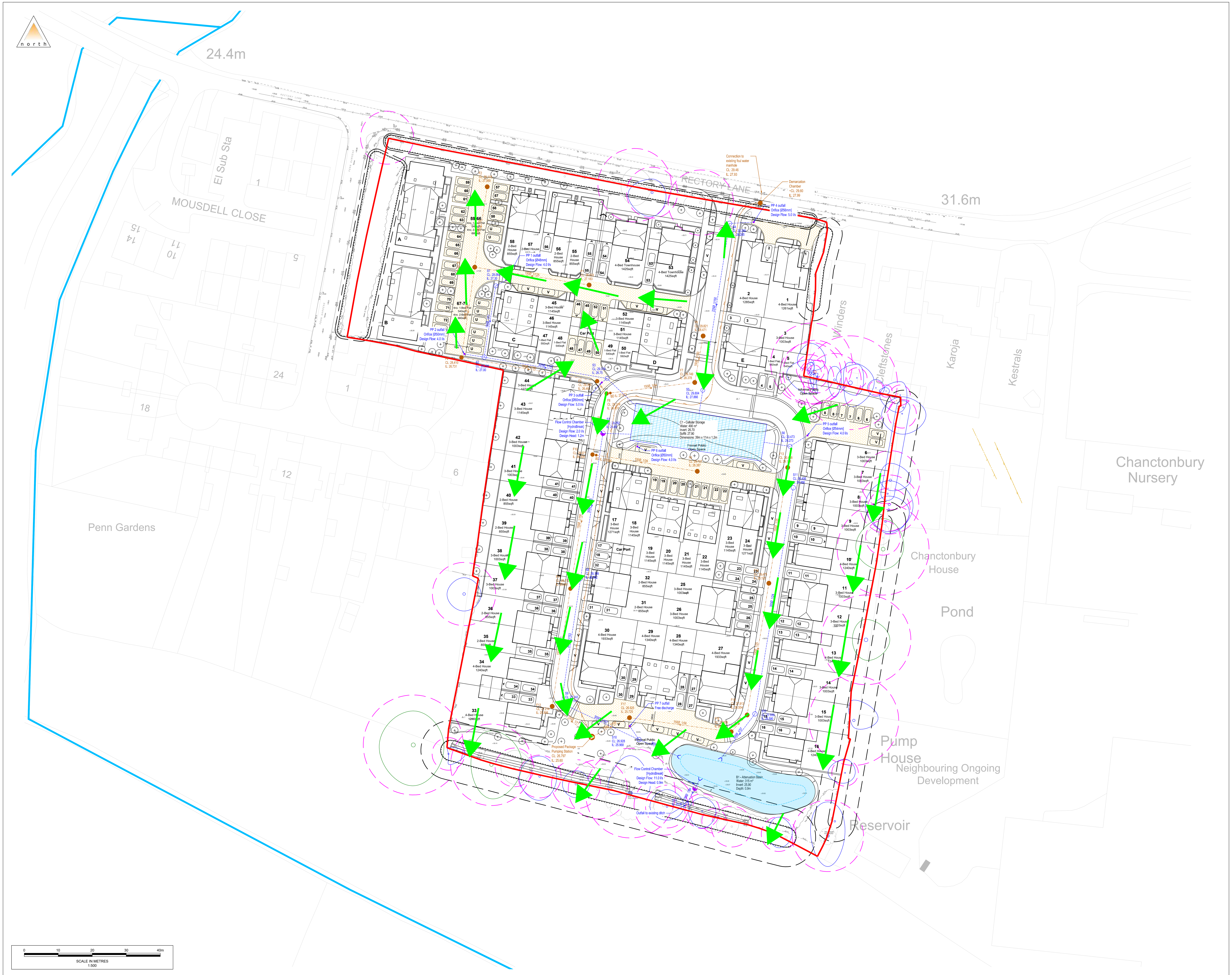
RIBA Architecture.com

Core RIBA Plan of Work terms are defined in the *RIBA Plan of Work 2020 Overview* glossary and set in **Bold Type**.

Further guidance and detailed stage descriptions are included in the *RIBA Plan of Work 2020 Overview*.

Appendix E

Exceedance Plan



Notes

1. All levels and dimensions are to be checked on site before any work commences. All dimensions are in metres unless stated otherwise.
2. This drawing has been based upon survey information supplied by ECE Architecture and Motion cannot guarantee the accuracy of the data provided.
3. Any discrepancies should be reported to the engineer immediately, so that clarification can be sought prior to the commencement of works.
4. This drawing should be read in conjunction with all other relevant engineering details, drawings and specification.
5. 350mm minimum cover is to be provided for private pipes laid in soft/paved areas, with 900mm minimum cover to be provided for private pipes laid beneath roads / driveways unless not practicable. Where unachievable, shallow pipe drains may require protection using concrete surround or paving slabs bridging the trench, subject to the NHBC Inspector's requirements.
6. Manholes situated within areas accessible to motor vehicles are to be fitted with suitable strength covers and frames.

Legend

- Site Boundary
- Existing Watercourse
- Pervious Pavement [450mm-600mm no infiltration Type 3 open graded sub-base with 30% void ratio]
- Surface Water Attenuation Basin
- Surface Water Gravity Pipe
- Surface Water Manhole
- Surface Water Flow Control Chamber
- Porous Pavement Outfall with Orifice Plate
- Proposed Headwall
- Foul Water Gravity Pipe
- Foul Water Rising Main
- Surface Water Manhole
- Foul Water Pumping Station

Rev.	Description	Drn	Chk	App	Date
P03	Outfall pipe realigned to minimize RPA impact	CC	PA	JM	04/08/2025
P02	Updated following layout changes	CC	PA	JM	31/07/2025
P01	First Issue	CC	PA	JM	11/07/2025

Drawing Status:

FOR PLANNING
NOT FOR CONSTRUCTION

Guildford - Reading - London
www.motion.co.uk

Client:
Rocco Homes

Project:
Land East of Mousdell Close
Ashington

Title:
Drainage Strategy

Scale: 1:500 (@ A1)

Drawing: 2504072-0501

Revision: P03