

ONE
HORTON
HEATH



Upper Acre

Preliminary Ground Investigation Report

December 2025



Upper Acre, One Horton Heath, Hampshire

Preliminary Ground Investigation Report

December 2025

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1 Introduction

1.1 Preamble

- 1.1.1 Stantec UK LTD (Stantec) has been commissioned by Eastleigh Borough Council (the Client) to prepare a Ground Investigation Report in relation to the ground conditions required to support the drainage strategy for Upper Acre (the Site) as part of the wider One Horton Heath Development.

1.2 Background

- 1.2.1 The Upper Acre area comprises of two developmental parcel, separated by a central road, and sits in the south-east of the wider One Horton Heath Development.
- 1.2.2 A site location plan is included as **Figure 1** whilst the layout of the site is shown on the Exploratory Hole Location Plan included as **Figure 2**.
- 1.2.3 Several previous phases of ground investigation and reporting have been undertaken across the Parkside area between 2019 and 2023. The list of relevant reports are summarised below:
- Hydrock (2019) Horton Heath, Hampshire: Desk Study Assessment HHD-HYD-XX-XX-RP-GE-0001 (HY, 2019a).
 - Hydrock (2019) Horton Heath, Hampshire: Ground Investigation Report HHD-HYD-XX-XX-RP-GE-0002 (HY, 2019b).
 - Ridge and Partners LLP (2023) Geotechnical Investigation Report: One Horton Heath. 5019962-RDG-XX-ST-DOC-C-00GIR01 (RD, 2023).
 - Ridge and Partners LLP (2023) Winter Groundwater Monitoring: One Horton Heath. 5019962-WGM/MS/T-815 (RD, 2023a).
- 1.2.4 This report aims to provide further ground and hydrogeological information to assist, alongside the available historical information, required to support the RMA submission for the Parkside area.

1.3 Scope of Work

- 1.3.1 The scope of works performed by Stantec comprises the preparation of a Ground Investigation Report in general accordance with the requirements of BS EN 1997-2 (2007). The Ground Investigation Report summarises the findings of the intrusive work, presents an assessment of the ground conditions, including infiltration testing, groundwater monitoring, and provides recommendations in relation to the proposed drainage design.

1.4 Proposed Development

- 1.4.1 The proposed development across the Site, comprise residential properties, soft landscaping, and new roads. The existing watercourse will be maintained as part of the proposed development. The new main access road will be from the south, carried by a bridge over the existing watercourse. It is understood that drainage basins are not proposed to be located within the Upper Acre site, instead being located offsite to the immediate south and west, within the surrounding development parcels (see Drawing UAOHH-BSL-ZZ-XX-DR-A-2002-G1).

1.5 Limitations

- 1.5.1 Unless stated otherwise, information from the ground investigations undertaken outside of the Parkside Site has not been included in this report and, where referenced, the reports presenting this information should be read in conjunction with this report. Except where noted, Stantec has

not been involved in the supervision and technical direction of the previous studies and investigations undertaken at the Site and accepts no responsibility for the accuracy and completeness of the data.

- 1.5.2 Guidance on the context of this report and any general limitations or constraints on its content and usage are given in a separate guidance note included after the text of this report.

2 The Site and Geological Setting

2.1 Site Location

- 2.1.1 The Upper Acre site is located to the south east of the wider One Horton Heath development, immediately west of Horton Heath, Hampshire. The approximate centre of the Site is located at National Grid Coordinates SU 49018 16630. The Site is currently accessed off Burnetts Lane which lies to the east.

2.2 Site Description

- 2.2.1 The site currently comprises of an open field with Burnett's Lane running parallel along the Site's eastern boundary. The parcel is typically bounded by mature hedgerows, with already existing residential properties along the north-eastern border. An existing solar panel farm is located west of the Site.
- 2.2.2 The southern portion of the Site is currently occupied by Hope and Clay Construction Limited constructing Lower Acre, another of the wider One Horton Heath's development parcels, located immediately south of the Site. Hope and Clay Construction Limited are currently stockpiling soil recovered from Lower Acre, in the south of the Site.
- 2.2.3 The ground levels across the Site typically fall gently from the north of the Site at 27.0m above Ordnance Datum (OD) towards the south-west boundary, where ground levels around circa 21.0m OD.

2.3 Site History

- 2.3.1 The wider One Horton Heath development history was summarised within the previous Phase 1 Desk Study Report (HY, 2019a). The report noted that the Site has remained relatively unchanged since 1868. The 1868 mapping noted areas of wetland/ waterlogged ground in the east and south of the Site. The waterlogged ground is believed to be associated with the watercourse which is mapped as entering the Site from the north east, adjacent to the residential properties off Burnetts Lane, before curving north westwards and exiting the Site and joining another watercourse, approximately 750m north west of the Site. These watercourses drain to the River Itchen approximately 2.3km north west of the Site. Satellite imagery from August 2023 (GE, 2025) first recorded the stockpiling of material from Lower Acre in the south of the Site.
- 2.3.2 The wider surrounding areas is associated with woodland and farmland with the town of Horton Heath present to north east of the Site.

2.4 Geological Setting

- 2.4.1 The Site is underlain by the Wittering Formation bedrock soils (BGS, 1987 Sheet 315), described by the British Geological Society (BGS, 2025 geindex) as a greyish brown laminated and interbedded clay and fine to medium grained sparsely glauconitic sand.
- 2.4.2 A limited extent of Alluvium is recorded in the south-west of site, associated with far western section of the existing watercourse. The Alluvium is typically described as a soft to firm compressible silt and clay which can contain layers and partings of sand, peat and gravel.

2.5 Hydrogeological Setting

- 2.5.1 The Alluvium (Defra, 2025) and underlying Wittering Formation are classified by the Environment agency (EA) as a Secondary A Aquifer (HY, 2019a), permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

- 2.5.2 The Site is not located within a source protection zone and there are no records of groundwater abstraction within 1km of the Site (HY, 2019a).

3 Ground Investigations

3.1 Previous Ground Investigations

- 3.1.1 The Site has previously undergone two phases of ground investigation. The first phase of ground investigation was carried out in 2019 by Hydrock Ltd (now part of Stantec) (HY, 2019b) and the second was carried out in 2023 by Ridge and Partners LLP (RD, 2023).
- 3.1.2 A summary of both phases of investigation is outlined in the section below.

Hydrock 2019

- 3.1.3 The 2019 ground investigation was carried out across the wider One Horton Heath site. The ground investigation included the drilling of one cable percussive borehole within the Upper Acre area.
- 3.1.4 The borehole denoted BH10 was drilled to a depth of 8.0m below ground level (bgl). The borehole was fitted with groundwater monitoring well.
- 3.1.5 The borehole recorded 0.5m of topsoil overlying 1.5m of Head Deposits overlying the Wittering Formation, comprising predominately sandy silt with layers of laminated sand, with some beds of laminated sand and clays. The Head Deposits in was described as orange, brown silty sand or sandy silt. Given the material record as Head Deposits on exploratory hole logs is very similar to the Wittering Formation this has been considered as the Wittering Formation for the purpose of this report.
- 3.1.6 Groundwater was not recorded during the drilling of the borehole. Post fieldworks groundwater monitoring carried out in November 2018 recorded water at a depth of 2.3m bgl corresponding to reduced elevation of 20.4m OD.
- 3.1.7 A suite of geotechnical testing was undertaken on samples recovered during the investigation. The tests comprised two moisture contents, two Atterberg Limits, one quick undrained triaxial test, and one determination of California Bearing Ratio (CBR)

Ridge 2023

- 3.1.8 The 2023 investigation comprised the excavation of two cable percussive boreholes and 17 trial pits. Soakaway infiltration testing was carried out in one of the trial pits (SA05).
- 3.1.9 The two boreholes (BH01 & BH02) were drilled to 20.5m bgl and recorded 0.4m of topsoil over the Wittering Formation to base, noted to comprise of a silty clay with frequent sand bands.
- 3.1.10 The one trial pit (SA05) with infiltration testing was excavated to 2.5m bgl with the infiltration testing undertaken between 0.5m to 2.5m bgl. The test duration was 23 hours, did not drain past the 75% or 25% head of water line as suggested in BRE 365 (BRE, 2016) in order to estimate infiltration rates.
- 3.1.11 The nine remaining trial pits were excavated to a maximum depth of 1m bgl.
- 3.1.12 A single dynamic borehole was drilled alongside SA05 to allow for installation of a monitoring well to a depth of 2.4m bgl, to allow for groundwater monitoring post completion of the intrusive fieldworks. Exploratory hole records for the shallow boreholes were not included in the factual report for the investigation but are expected to generally reflect those encountered within the adjacent trial pit (SA05).
- 3.1.13 Groundwater monitoring of SA05 was undertaken over six monitoring visits carried out between November 2022 and March 2023. The results of the groundwater monitoring are summarised below:

Table 3.1 Summary of Groundwater Monitoring result from the Ridge Investigation

Location	Groundwater depth (m bgl)	Groundwater Elevation (m OD)	Comments
SA05	0.0 to 1.1	24.7 to 23.6	Shallowest levels recorded between January and March

- 3.1.14 A suite of geotechnical testing was undertaken on samples recovered during the investigation. The geotechnical testing comprised six Particle Size Distributions (PSDs), six moisture contents, six Atterberg Limits, 19 California Bearing Ratio (CBRs), three compaction tests and three Moisture Condition Values (MCVs).

3.2 Recent Ground Investigation

- 3.2.1 Following a review of the existing ground investigation information available for the Upper Acre site, it was decided that further ground investigation was required to fill in any data gaps that were present in the area.
- 3.2.2 The ground conditions on the Site have been investigated by an intrusive ground investigation to provide information for the development of the Site, recommendations on the use of SUDs drainage and to aid in the design of off-site proposed drainage basins. The scope of works is summarised in the following sections of this report. The factual results of the investigation are presented in a separate report prepared by Stantec UK (STA, 2025) which should be read in conjunction with this report.

Aims of the Investigation

- 3.2.3 The aim of the investigation was to confirm the ground conditions within the area of Site such that informed decisions on the proposed development of the Site can be made. The principal aims of the investigation were to determine:
- The presence and depth of any shallow groundwater in the near surface soils.
 - Confirm the infiltration potential of the near surface soils and groundwater levels.
 - Confirm the ground conditions to determine geotechnical parameters.
- 3.2.4 To satisfy the aims of the investigation, the proposed design of the ground investigation allowed for:
- The excavation of 11 trial pits to maximum depths ranging from 1.5 to 3.4 m bgl with the recovery of soil samples for geotechnical analysis.
 - Infiltration testing at five trial pit locations in general accordance with BRE 365.
 - The sinking of four boreholes to a maximum depth of 5.5 m bgl with standard penetration testing.
 - The installation of a groundwater monitoring well at each borehole location required to monitor groundwater levels.
 - Geotechnical testing on selected soil samples to determine geotechnical parameters.
 - Groundwater monitoring on a monthly basis for 8 months to include monitoring extending over the winter period.

3.3 Fieldwork

- 3.3.1 The fieldwork for the ground investigation was carried out between 2nd and 5th September 2025 comprising the sinking of four boreholes, designated WS1001 to WS1004, and the excavation of 11 no. trial pits, designated TP1001 to TP1004, and SA1001 to SA1005 including SA1001A & SA1001B.
- 3.3.2 The four boreholes were sunk using light percussion techniques to a maximum depth of 5.5m bgl with the recovery of disturbed small and bulk samples and standard penetration testing.
- 3.3.3 On completion of the boreholes, a standpipe was constructed in each borehole to allow groundwater levels and concentrations of ground gases to be monitored. The boreholes were backfilled and sealed with bentonite pellets below the base of the installation.
- 3.3.4 The trial pits were excavated using a hydraulic excavator to depths between 1.5 and 3.4m below existing ground level to obtain detailed information on the near surface soils. Infiltration tests were carried out in five of the trial pits (SA1001B, SA1002, SA1003, SA1004, & SA1005) to determine the infiltration characteristics of the soils across the Upper Acre. Owing to slow infiltration rates, four of the five tests (SA1002, SA1003, SA1004, & SA1005) were terminated before the 75% volume loss was reached. The infiltration testing carried out in the trial pits were all terminated after a single test owing to time limitations. Therefore, the tests undertaken were not fully compliant with the requirements of BRE (2016).
- 3.3.5 The records of the exploratory holes are presented in Appendix B of the factual report (STA, 2025) and their locations are shown on the Site Layout Plan, **Figure 2**.

3.4 Laboratory Testing

- 3.4.1 A programme of geotechnical laboratory soils testing was carried out to verify the visual identification and classification, and to determine the physical properties of selected samples of the materials encountered. The testing was scheduled by Stantec and carried out in accordance with BS 1377 (1990) by i2 analytical Limited, who hold UKAS accreditation for geotechnical soil testing carried out. The results of the geotechnical testing are presented in the factual report (STA, 2025).

3.5 Monitoring

- 3.5.1 A monitoring well was installed within each borehole to monitor groundwater levels and ground gas concentrations, following completion of the intrusive works.
- 3.5.2 To date, monitoring has been carried out on one occasion, the 11th September, with a further seven monitoring rounds to be undertaken on monthly return intervals, extending over the winter period. The monitoring results available to date are presented in the factual report (STA, 2025).

4 Ground Conditions

4.1 Stratigraphy

4.1.1 The ground conditions in the area of the site, as revealed by the previous and recent ground investigations across the Upper Acre site, comprises a layer of Topsoil overlying the Wittering Formation. The ground conditions are in general agreement with the published geological information and known history of the site. It is noted that the southern area of the site was not able to be investigated during the recent ground investigation due to the presence of the Hope and Clay works area. Alluvium is mapped in this area, to follow the alignment of the existing watercourse, it is noted that no Alluvium was encountered during either the historical or recent investigation. It is expected that the lateral distribution of the Alluvium is localised to the alignment of the watercourse, as it was not recorded in the available exploratory holes.

4.1.2 Based on the information from the previous and recent ground investigations, the ground conditions encountered are summarised in the following table:

Table 4.1 Summary of Existing Ground Conditions

Strata	Depth to Strata, m bgl [mOD]	Thickness, m	Typical Description
Topsoil	0.0 [21.3 to 27.8]	0.3 to 0.5	Soft to firm dark to light brown slightly sandy CLAY to clayey SAND.
Wittering Formation (Cohesive)	0.3 to 0.5 [21.1 to 27.3]	>19.6	Soft to firm orangish brown mottled greyish brown sandy CLAY interbedded with orangish brown to greyish brown clayey SAND.

4.1.3 Comments and the nature and extent of each stratum are presented in the following sections of this report. Where characteristic values of parameters for geotechnical design are suggested in the discussion on ground conditions below, reference should be made to terminology and definitions given in the BS EN 1997-1 (2013) and BS EN 1997-2 (2007) as appropriate.

4.2 Topsoil

4.2.1 **Description** Topsoil was encountered from ground level at each location investigated to between reported between 0.3m and 0.5m below existing ground level. Typically, the Topsoil was described as a soft to firm dark to light brown slightly sandy CLAY and locally as a brown SAND with rare fine to coarse subangular and rounded flint gravel.

4.2.2 **Characteristic Values** Given the limited thickness of the Topsoil, and the expectation that this material will be removed prior to any engineering works, therefor characteristic values are not assigned for the stratum.

4.3 Wittering Formation

4.3.1 **Description** Wittering Formation was encountered in all locations investigated underlying the Topsoil and was encountered as a cohesive and granular strata down to a maximum depth of 20.0m bgl.

4.3.2 There is no notable boundary between the granular and the cohesive beds with these varying both horizontally and vertically. It should be noted that a large portion of the Wittering Formation was found to behave as a predominantly cohesive soil comprising more than 30% of silt and clay with the rest of the soils behave as a granular soil with circa less than 30% clay and silt. Some of the soils include borderline cohesive / granular materials. As such, the strata boundaries between the cohesive and granular soils of the Wittering Formation shown on the exploratory hole records will need to be used with caution.

- 4.3.3 **Classification** Results of the classification testing are presented on a Casagrande Chart on **Figure 3**, with measured values of liquid and plastic limit typically between about 34 and 77, and between 17 and 37 per cent, respectively, with corresponding modified values of plasticity index typically of 17 to 53 per cent. This indicates the material is typically intermediate to high plasticity clay with locally low and very high plasticity clays. Measured values of moisture content are between about 14 and 46 per cent; these values reflect the variable nature and degree of saturation of the material.
- 4.3.4 **Material Properties** Results of particle size distribution analyses for the Wittering Formation are presented on **Figure 4** and indicate the gravel sized fraction is up to 30 per cent. The sand size fraction is between about 9 and 47 per cent. The samples tested were found to contain up to between 38 and 90 per cent fines fraction (<63 µm). The results of the PSD testing support the engineering log descriptions which typically recorded the material as predominately cohesive, with less frequent granular layers. It should be noted that the majority of the testing undertaken on the material recovered during the Ridge Investigation was recorded as a fines dominated material. However, three of the four samples tested within the Stantec investigation were on samples of material described on the logs as a granular dominated material.
- 4.3.5 It should be noted that part of the fines fraction can be lost in the samples recovered using light cable percussive boring techniques hence the measured particle size distributions may not be representative of the in situ conditions.
- 4.3.6 **Penetration Resistance** Standard Penetration Tests (SPTs) were undertaken across the granular and cohesive (respectively) dominated Wittering Formation soils. The results of the SPTs, normalised for hammer efficiency (SPT N_{60}) ranged between 9 blows and 47 blows within the granular horizons corresponding to a loose to dense granular soil (BS, 2020) SPT N_{60} values recorded within the cohesive horizons were recorded between 5 and 42 blows, typically increasing with depth. Values of SPT N_{60} for both the granular and cohesive layers within the Wittering Formation are presented on a plot vs depth as shown on **Figure 5**. SPT values taken from the Ridge (2023) and Hydrock (2019) investigations did not include hammer efficiency, a conservative hammer efficiency of 60% has been adopted for the historical data. It is noted that the majority of the Wittering Formation was encountered as a predominately cohesive material.
- 4.3.7 **Undrained Shear Strength** Visual examination of the material indicates the material is typically firm in consistency although locally the material was described as soft or very stiff in consistency. It is expected that the variation in noted consistency reflects the variable nature and degree of saturation of the material. Measured values of undrained shear strength of, as determined by in situ hand shear vanes, are presented as a plot against reduced level on **Figure 6** together with values of undrained shear strength determined using an empirical correlation with SPT N values (Stroud, 1989). Historical SPT values were assumed as having a hammer efficiency of 60%. The measured and determined values typically increase with depth with values range typically between approximately 25 and 195 kPa.
- 4.3.8 **Compaction** Maximum dry density (MDD) vs optimum moisture content (OMC) relationship tests were carried out on samples recovered as part of the Stantec (2025) and Ridge (2023) phases of investigations. The MDD for the Wittering Formation ranges from 1.54 to 1.84 mg/m³ (typically 1.76 to 1.84mg/m³) with corresponding OMC of between 12 and 25 per cent (typically 12 and 16 per cent) using a 2.5kg rammer. Natural moisture contents of the samples were recorded between 14 and 34 per cent, generally showing the material is close to or wet of optimum.

4.4 Groundwater

- 4.4.1 **Groundwater Entries** During the previous ground investigation undertaken by Ridge and Hydrock, four groundwater strikes were recorded in two exploratory holes, with an initial strike at between 4.8m to 5.0m bgl rising to between 2.8m and 3.8m bgl respectively – and secondary strikes encountered at 8.60m bgl (BH02) rising to 4.5m bgl, and at 11.0m bgl (BH01) rising to 9.2m bgl. During the recent investigation undertaken by Stantec, groundwater entries were encountered in six exploratory holes in the Wittering Formation between 1.8m and 3.0m bgl within both boreholes and soakaway pits during excavation.

4.4.2 **Groundwater Levels** A single groundwater monitoring round was undertaken during the Hydrock investigation in November 2018. Groundwater was monitored in standpipes targeting the Wittering Formation, recorded approximately 2.3m bgl (20.4m OD), in BH10.

4.4.3 Groundwater monitoring of standpipes installed in the Wittering Formation was undertaken by Ridge between November 2022 and March 2023 in monitoring wells SA05, located in north-east of the site. A summary of the groundwater monitoring has been re-produced below as **Plate 4.1**.

Plate 4.1. Summary of Ridge 2023 groundwater monitoring (RD,2023)

mAO	mAO5	03/11/2022 MR1			06/01/2023 MR2			02/02/2023 MR3			21/02/2023 MR4			13/03/2023 MR5			30/03/2023 MR6		
		Depth to Water (mbgl)	Water Level (mAO)	Depth to Base (mbgl)	Depth to Water (mbgl)	Water Level (mAO)	Depth to Base (mbgl)	Depth to Water (mbgl)	Water Level (mAO)	Depth to Base (mbgl)	Depth to Water (mbgl)	Water Level (mAO)	Depth to Base (mbgl)	Depth to Water (mbgl)	Water Level (mAO)	Depth to Base (mbgl)	Depth to Water (mbgl)	Water Level (mAO)	Depth to Base (mbgl)
24.65	SA05	1.07	23.58	2.37	0.02	24.63	2.32	0.16	24.49	2.32	0.18	24.47	2.35	0.02	24.63	2.31	0.00	24.65	2.33

4.4.4 The groundwater levels during the winter monitoring period in 2022/2023 recorded groundwater between circa 1.0 m bgl and at very shallow depth with one record at existing ground level.

4.4.5 On completion of the recent investigation (STA, 2025); groundwater levels were monitored on three occasions between September and November 2025. Groundwater levels were recorded between 0.5 to 2.4m bgl were measured in the standpipes installed within the Wittering Formation. Additional groundwater monitoring rounds are scheduled to be completed over the winter period and will be reported during a subsequent revision to the factual report (STA, 2025).

4.5 Infiltration Testing

4.5.1 Shallow infiltration testing was carried out as part of both the 2023 investigation undertaken by Ridge and Partners LLP and the 2025 Investigation undertaken by Stantec. A total of six tests were conducted across the Site, all within the Wittering Formation, one during the 2023 investigation (SA05) and five during the 2025 investigation (SA1001B, SA1002 to SA1005). A summary of the shallow infiltration testing result calculated by the ground investigation contractors is presented in **Table 4.2** below:

Table 4.2 Summary of Infiltration testing results

Location	Depth (m bgl)	Soil Infiltration Coefficient (m/s)	Comment
2023 Ridge and Partners LLP Investigation			
SA05	0.5 to 2.5	Not Calculated	Terminated after 23 hours due to low infiltration.
Stantec 2025 Investigation			
SA1001B	0.6 to 2.0	1.64×10^{-6}	Terminated after 5.5 hours after completion of test
SA1002	2.0 to 3.0	Not Calculated	Terminated after 24 hours due to low infiltration.
SA1003	1.9 to 3.0	Not Calculated	Terminated after 23.5 hours due to low infiltration.
SA1004	0.6 to 1.5	Not Calculated	Terminated after 6 hours due to low infiltration.
SA1005	0.7 to 1.5	Not Calculated	Terminated after 23 hours due to low infiltration

4.5.2 It is noted that the completed test in SA1001B was predominately undertaken across granular dominated soils in the Wittering Formation.

4.5.3 Testing undertaken across the remaining five infiltration tests which failed to pass the 25% head of water line were undertaken predominantly in cohesive stratum. Soil infiltration coefficient could not be calculated for these tests owing to the very slow infiltration.

4.6 Infiltration Assessment

- 4.6.1 The groundwater levels at the site were recorded typically between 0.73 and 2.1 m bgl, rising as shallow as ground level during winter months. Whilst the proposed attenuation basins are expected to be located offsite to the south, the groundwater monitoring data obtained for the Site can be used to inform typical levels that could be expected across the proposed basin areas. Additionally, the observed seasonal variability of groundwater levels should be accounted for in the design of the attenuation basins.
- 4.6.2 It is noted that the vast majority of infiltration tests did not drain the required amount to achieve a complete test, owing to the very low infiltration rates of the near surface soils and time restrictions. The single successfully completed infiltration test calculated an infiltration rate of about 1.6×10^{-6} m/s. Estimate values of infiltration coefficient could not be calculated for the majority of the locations tested with the exception of one test where the soil infiltration rate was calculated to be around 1×10^{-6} m/s which is equivalent to a 'poor infiltration media – silt loam' (CIRIA, 2015). The engineering descriptions and available Particle Size Distribution test for the tested samples of the Wittering Formation predominately support the CIRIA classification of a 'loamy sand' soil type.
- 4.6.3 Overall, it is considered that based on the presence of groundwater at a shallow depth in combination with the low infiltration coefficient of the near surface soils it is concluded that the use of shallow infiltration systems for the disposal of surface water is not suitable for the site.

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- RD (2023) Geotechnical Investigation Report: One Horton Heath. 5019962-RDG-XX-ST-DOC-C-00GIR01, Ridge and Partners LLP, Winchester.
- RD (2023a) Winter Groundwater Monitoring: One Horton Heath. 5019962-WGM/MS/T-815, Ridge and Partners LLP, Winchester.
- STA (2025) Factual Ground Investigation Report. Upper Acre, One Horton Heath, Eastleigh. STN-10-XX-RP-G-0001 P02. November 2025. Stantec UK Limited, Southampton.
- Stroud M A (1989) The standard penetration test its application and interpretation. ICE Conference on Penetration Testing in the UK, Birmingham, pp 29-50.

Drawings



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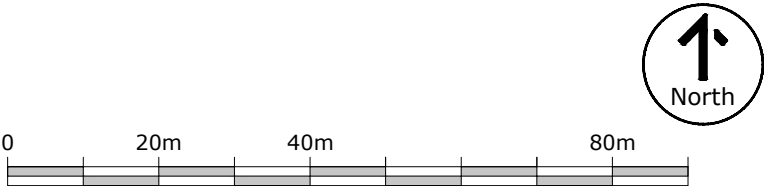
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Notes

At least 80% of Dwellings meet M4(2) with regard to access, parking and internal standards, unless otherwise stated.

House type VV FOG complies with M4(1) only.

GIA sqm taken from EBC OHH House Types Booklet (undated)



G1	First Issue	02-12-25	RE	RS
Rev	Comments	Date	Dr	Ch

Principal Plan

UAOHH- BSL - ZZ - XX - DR - A - 2002 - G1

Upper Acre, One Horton Heath23074

Land west of Burnetts Lane, Eastleigh, SO30 2HH1:1000 @ A2

Eastleigh Borough Council

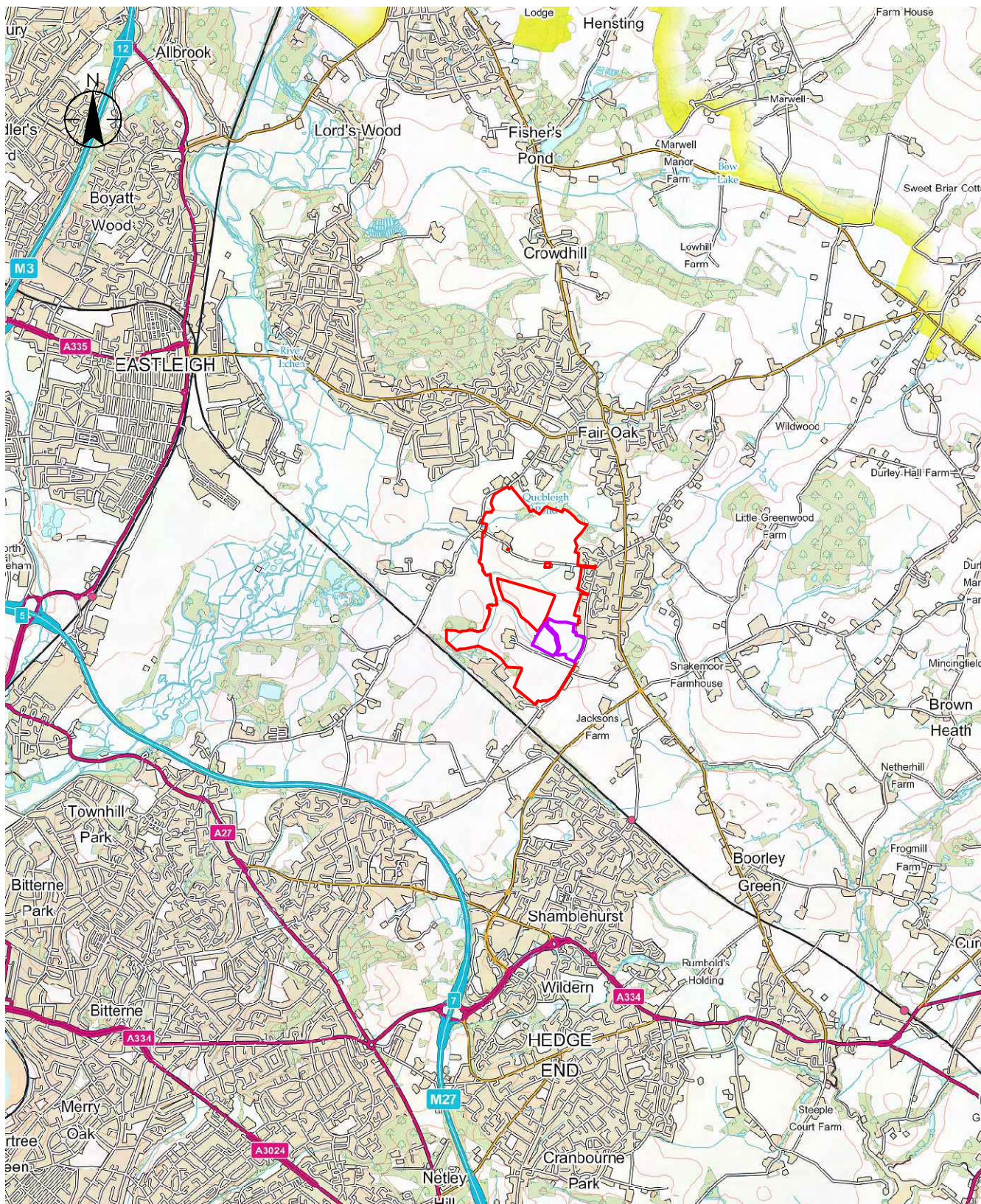
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SO14 3FJ

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Figures



- Wider Site Boundary
- Upper Acre Parcel

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Site Grid Ref: 448780E 117001N



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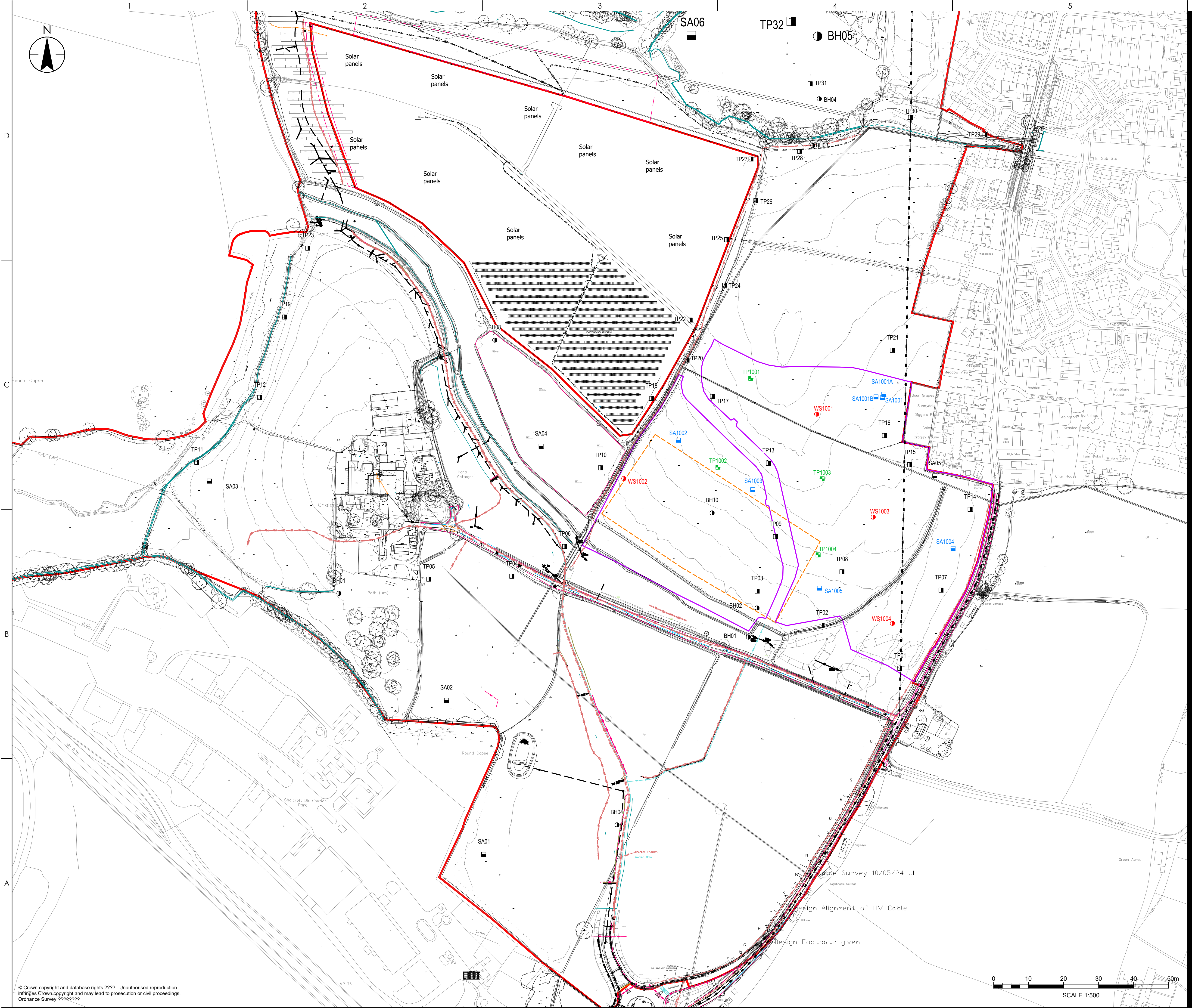
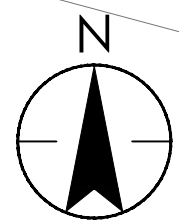
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One Horton Heath

Title
Site Location Plan
Upper Acre

Prepared: davco
Checked: TF
Date: 2025.11.06

Revision: 01
Figure



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

Key

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

P01 FIRST ISSUE	davco Dwn.	RPa Dsgn.	RPa Chkd.	2025.11.06 YYYY.MM.DD
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Issue Status

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Client/Project Logo

Client/Project
Eastleigh Borough Council

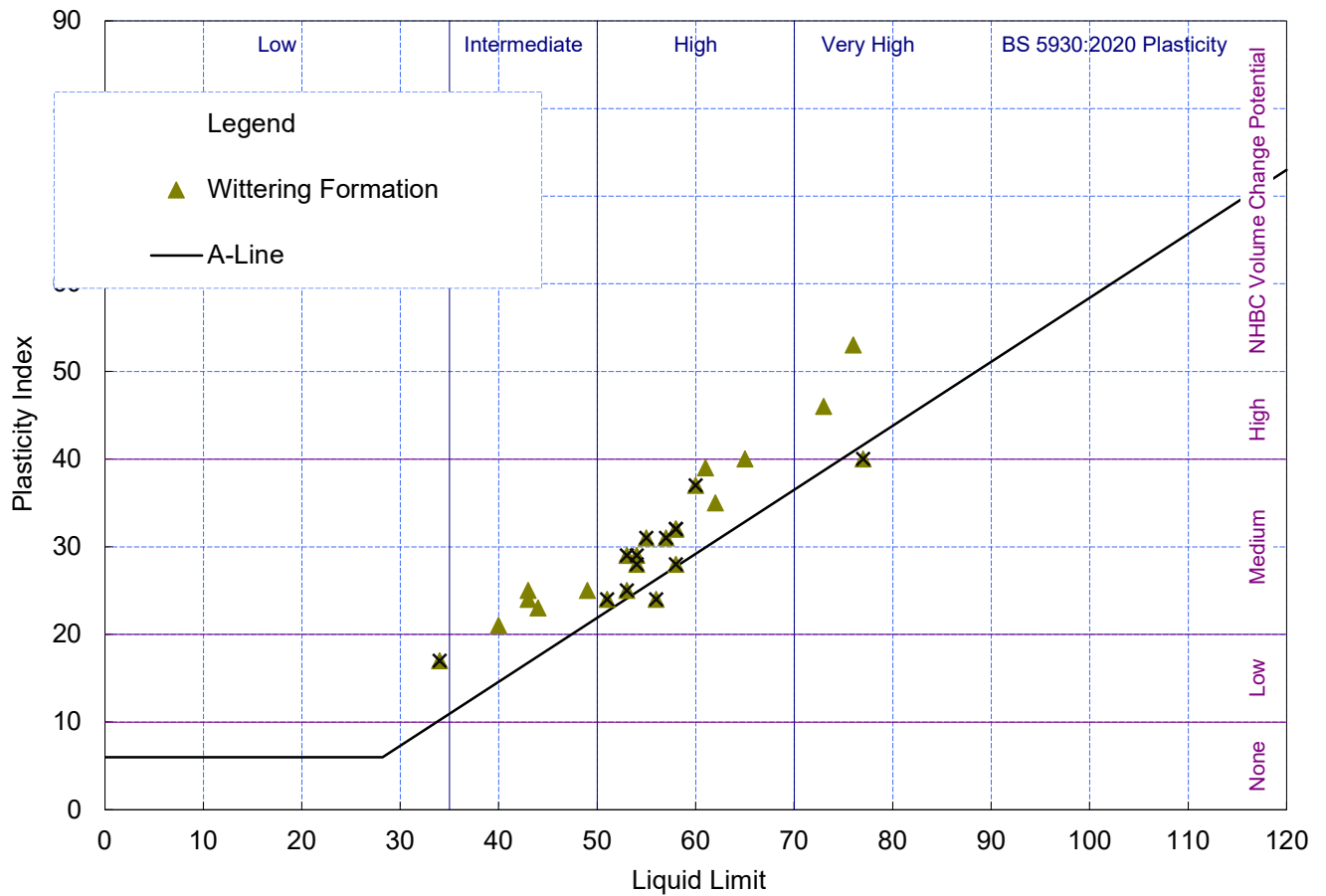
One Horton Heath

Upper Acre

Title
Exploratory Hole Location Plan

Project No. 332612639	A1 Scale 1:2000
Revision P01	Figure No.

Figure 3



Notes

- 1 Values of liquid limit and plasticity index have been modified by the percentage of particles less than 425µm.
- 2 Symbols marked x denote data from historical ground investigations



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ONE HORTON HEATH,
HAMPSHIRE: UPPER ACRE

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tt

Checked:
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Date:
Nov 2025

Title

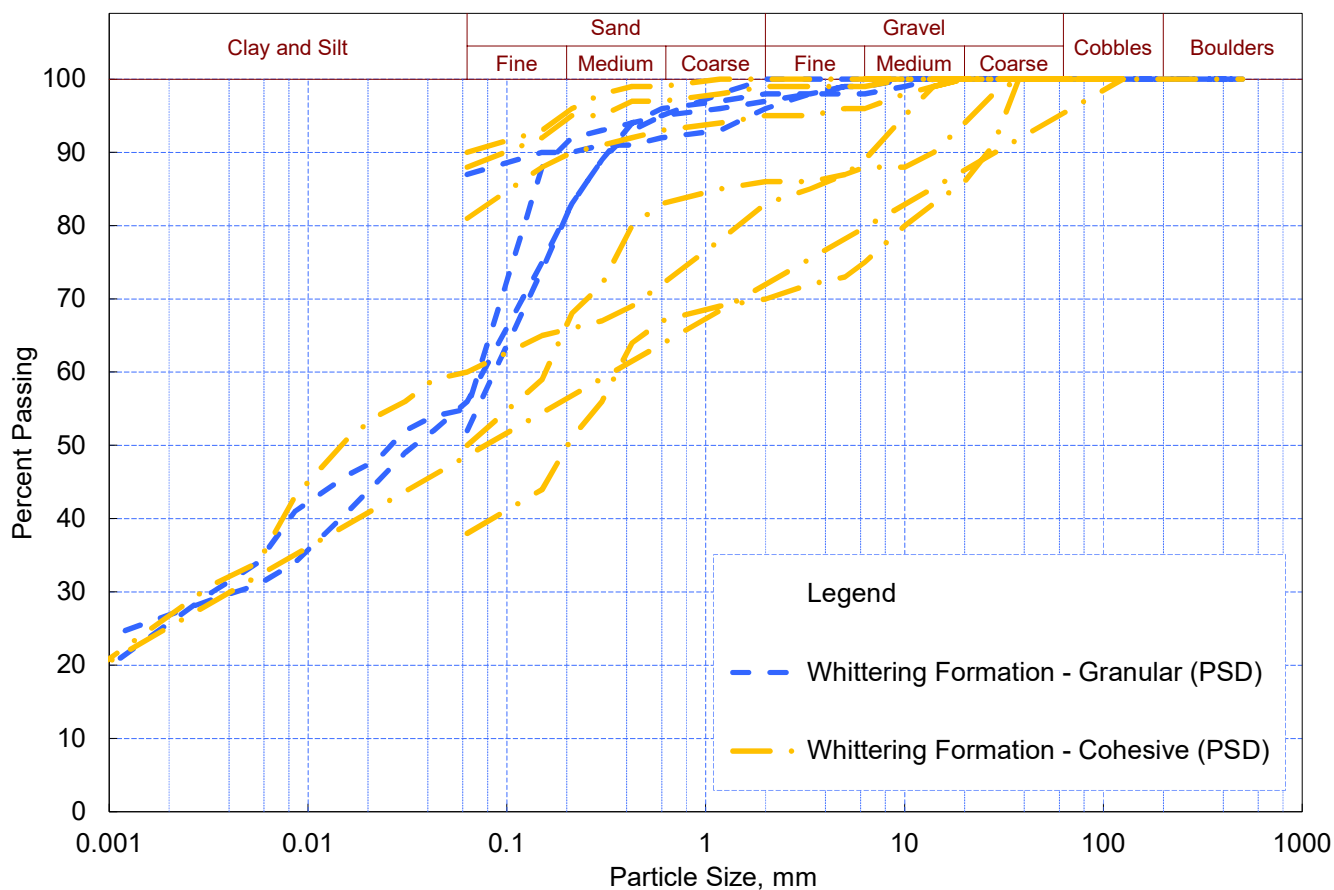
ATTERBERG LIMITS

Version
01

Sheet
1 of 1

Figure

3



Notes

1 Selected Data: Stantec 2025, Ridge 2023

Strata	Number of Tests	Gravel Content, %	Sand Content, %	Fines Content, %
Whittering Formation	10	0 to 30	9 to 47	38 to 90



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**ONE HORTON HEATH,
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PARTICLE SIZE DISTRIBUTION

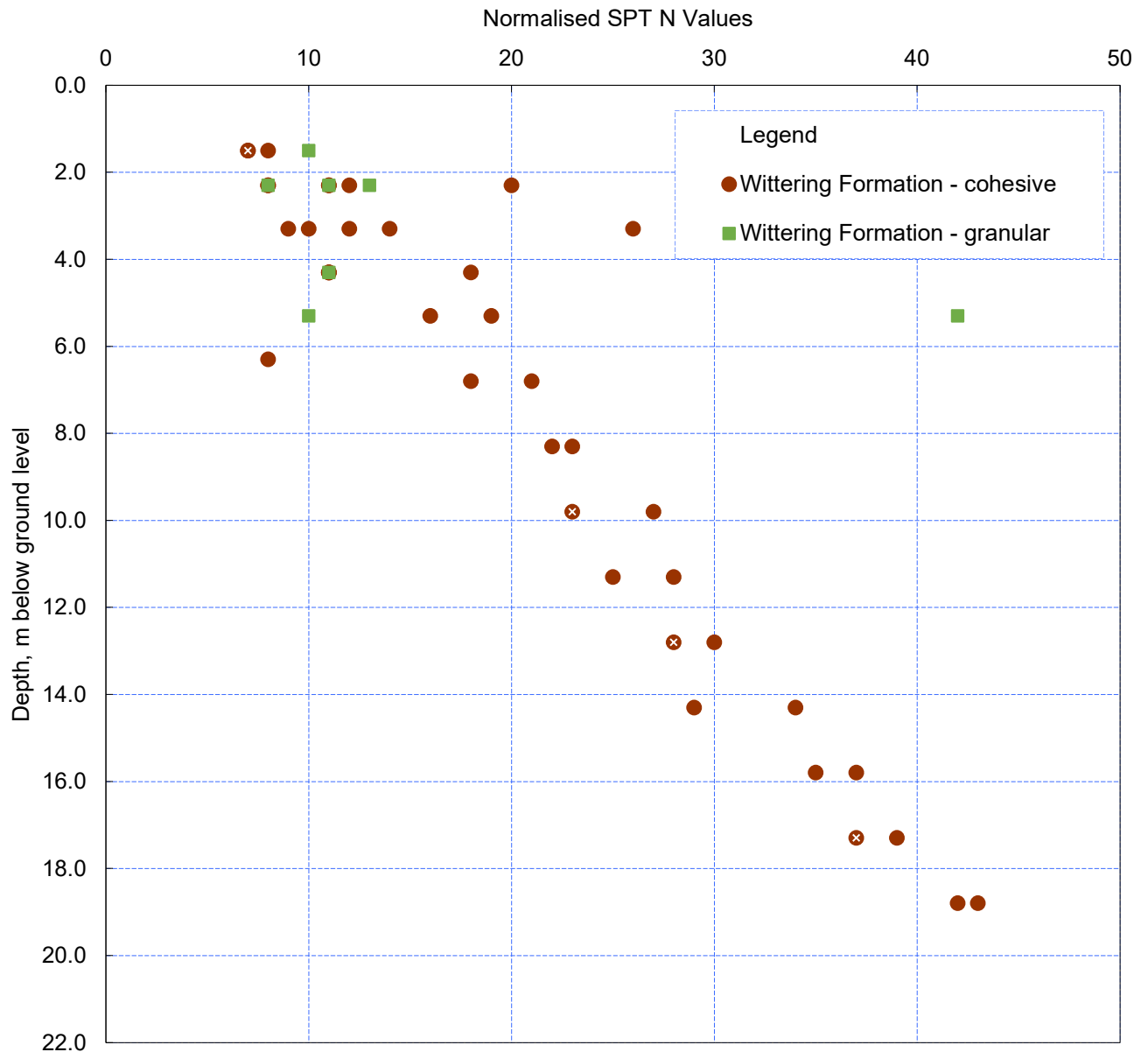
Version
01

Sheet
1 of 1

Figure

4

\\Cbh-vfil-001\cbb\Projects\332612639 - One Horton Heath\3500 - Geotechnical\04 - Reports\3501_02_Report\Figures\Excel Plots\Fig 5 & 6 geo25_strength v01_tf.xls[SPT N Values
[Printed: 11/11/2025 14:13 By: Fairweather, Tom]



Notes

- SPT N values have been normalised for hammer efficiency. Hammer efficiency of 60% has been adopted for historical tests in absence of
- 1 hammer efficiency value
 - 2 Symbols marked x denote data from historical ground investigations



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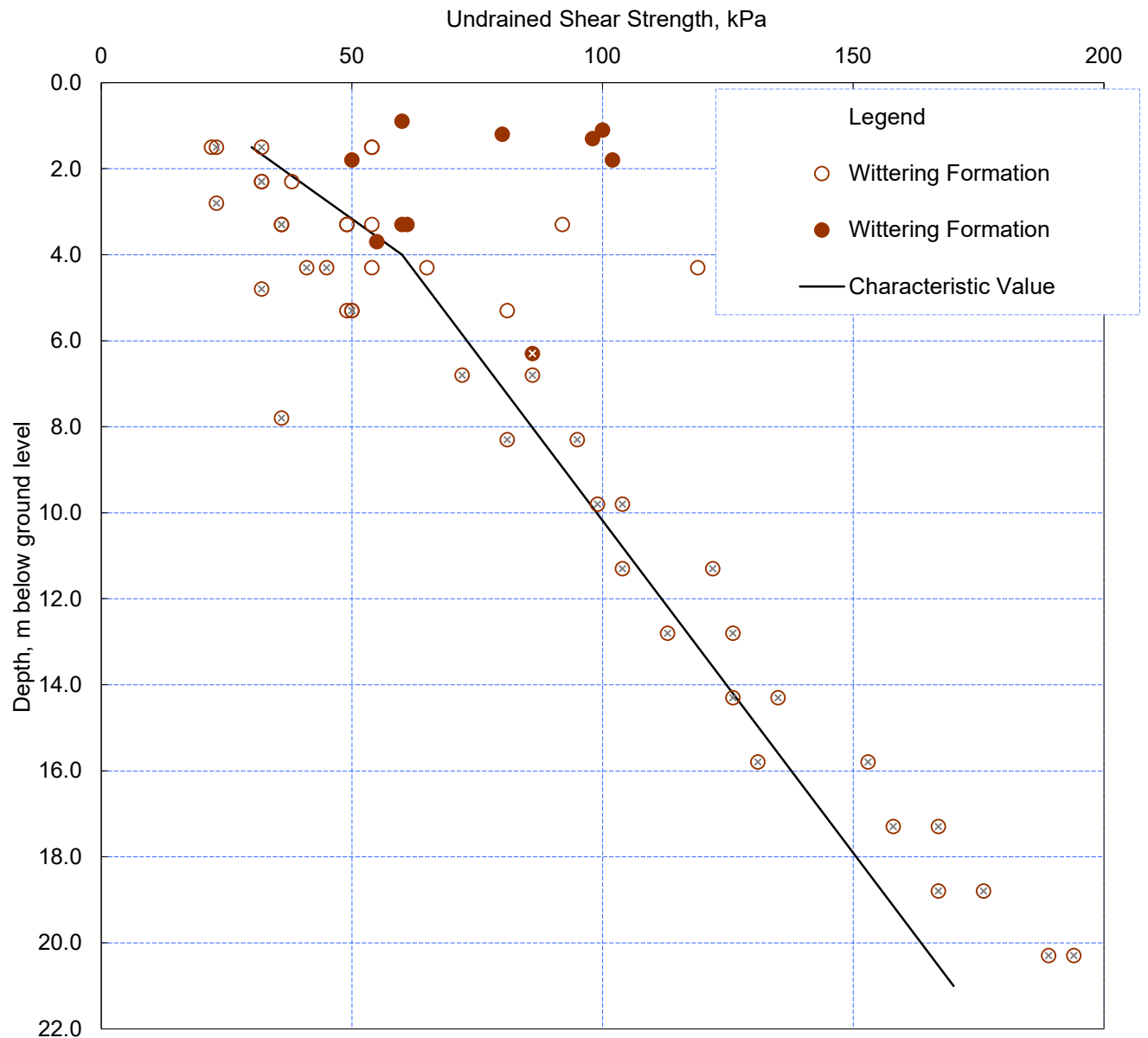
SPT N60 values

Version
01

Sheet
1 of 1

Figure

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[Printed: 11/11/2025 14:18 By: Fairweather, Tom]



Notes

- 1 Open symbols denote values of undrained shear strength determined using the empirical correlation with SPT N values (Stroud, 1989) with a factor N_c of 4.5 and SPT N values normalised for hammer efficiency.
- 2 Closed symbols denote values of undrained shear strength determined by hand shear vanes
- 3 Symbols marked x denote data from historical ground investigations



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UNDRAINED SHEAR STRENGTH

Version
01

Sheet
1 of 1

Figure

6

Guidance Notes

Stantec Guide: Essential Guidance for Report Readers (England)

- 1) This report has been prepared within an agreed timeframe and to an agreed budget that will necessarily apply some constraints on its content and usage. The remarks below are presented to assist the reader in understanding the context of this report and any general limitations or constraints. If there are any specific limitations and constraints, they are described in the report text.
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- 3) Some of the conclusions in this report may be based on third party data. No guarantee can be given for the accuracy or completeness of any of the third-party data used.
- 4) Historical maps and aerial photographs provide a “snapshot” in time about conditions or activities at the site and cannot be relied upon as indicators of any events or activities that may have taken place at other times. It is possible for developments to have occurred between surveys that are not shown or for the map record to have been censored for military security.
- 5) The absence of cavity records in the Stantec natural and mining cavities (non-coal) databases is not considered as conclusive as to the absence of these features and we do not warrant that the data is complete or error free.
- 6) The conclusions and recommendations made in this report and the opinions expressed are based on the information reviewed and/or the ground conditions encountered in exploratory holes and the results of any field or laboratory testing undertaken. There may be ground conditions at the site that have not been disclosed by the information reviewed or by the investigative work undertaken. Such undisclosed conditions cannot be considered in any analysis and reporting.
- 7) It should be noted that this report is a land condition assessment and does not purport to be an ecological, flood risk or archaeological survey and additional specific surveys may be required.
- 8) The identification of invasive and/or noxious plants such as Japanese Knotweed is outside the remit of our appointment.
- 9) This report has been written for the sole use of the Client stated at the front of the report in relation to a specific development or scheme. The conclusions and recommendations presented herein are only relevant to the scheme or the phase of project under consideration. This report shall not be relied upon or transferred to any other party without the expressed written authorisation of Stantec. Any such party relies upon the report at its own risk.
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- 11) Public or legal consultations or enquiries, or consultation with any Regulatory Bodies (such as the Environment Agency, Natural England or Local Authority) have taken place only as part of this work where specifically stated.