

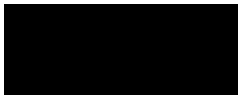
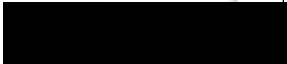
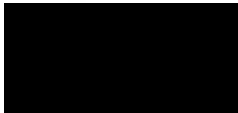
**REPORT ON
GROUND INVESTIGATION
AT
LANGSTONE TECHNOLOGY
PARK, HAVANT – PHASE 3A**



REPORT STATUS SHEET

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1.0 INTRODUCTION

1.1 Objectives and Scope of Investigation

An area of land at Langstone Technology Park, Havant (the site) known as Phase 3A, is being considered for redevelopment by Havant Sarl (the Client). The proposals for the site comprise construction of 2No new industrial units, with associated access road, service yard, parking, and minimal landscaping. It is understood that finished ground levels across the site will be raised by approximately 1m to provide flood protection.

The Phase 3A site sits within the wider Phase 3 development area, which includes Phase 3A and Phase 3B. A Phase I Desk Study/Geo-Environmental Risk Assessment for the wider Phase 3 development area was undertaken by Applied Geology on behalf of the Client (Report Ref: AG3645-26-AV04, April 2026). This report should be read in conjunction with the Desk Study/Phase I Geo-Environmental Risk Assessment. However, a summary of the pertinent desk study findings relevant to the Phase 3A area is presented in Section 3 below.

An intrusive ground investigation was undertaken across the southern part of the Phase 3A area and wider Langstone Technology Park. Clancy Consulting Ltd completed the works for AG Langstone B.V (Ref: 10/1425/001, October 2019). With reference to the southern part of the Phase 3A area only, one borehole (WS1) and two trial pits (HTP1–HTP2) were undertaken in July 2019.

Applied Geology was appointed by the Client to undertake a Phase II ground investigation in order to:

- assess the presence of hazardous substances or conditions at the site that might warrant mitigation or remediation appropriate to the intended end use proposed by the Client.
- establish geological conditions and geotechnical parameters to assist in the safe and economic engineering design of the proposed development.
- Support a future planning application

The terms of reference/brief for the works were mutually developed between Applied Geology Ltd and Baynham Meikle Partnership Ltd (The Client's Engineer) and are outlined in our proposal and estimate reference AG26-9280let001, dated 9th January 2026.

The scope of works undertaken by Applied Geology comprised a ground investigation together with sampling, monitoring, and a programme of laboratory testing, followed by assessment and reporting of the results.

Underground service plans for the site were obtained by Applied Geology on 3rd February 2026. A Topographical Survey drawing (Dwg ref: 38869_T, dated January 2021 by Greenhatch Group), a copy of which was provided by the Engineer, is presented in Appendix A.

1.2 Report Layout

This report presents a brief description of the site, a summary of the relevant desk study information for the Phase 3A development area and the factual results of the intrusive investigations carried out. An interpretation of the ground conditions and a discussion/assessment of the findings is presented in the later report text sections. The main text of the report has been produced in a concise format, including the use of data tables to summarise key information where possible. The report should be read in conjunction with the general procedures detailed in Appendix E and General Notes given at the end of the main text, which provide details of investigation techniques, assessment methodology and standards, health & safety and limitations and exceptions of the report. Drawings and factual data including exploratory hole records, laboratory testing results and desk study records are presented in the other Appendices.

2.0 SITE DESCRIPTION AND PROPOSALS

2.1 Site Description

The proposed development site (Phase 3A) is located in the central area of Langstone Technology Park, approximately 1km south-west of Havant town centre. The Ordnance Survey grid reference for the approximate centre of the site is 471342 105682 as shown on the Site Location Plan (Dwg. No AG3744-26-3A-01), in Appendix A.

The Phase 3A site is rectangular in plan shape, with approximate dimensions of 85m by 110m, covering an area of approximately 0.95ha. Topographically, the site falls steadily from approximately 4.20m AOD across the western boundary to 4.05m AOD across the eastern part of the site.

The Phase 3A site is bounded on all sides by the wider Langstone Technology Park, with Building 4000 to the north, Building 7000 to the east, an access road to the south, with commercial units and associated car parking beyond, and Building 5000 to the west.

A site inspection/walkover was undertaken by Applied Geology on 11th February 2026 as part of the Phase I Desk Study. No significant changes had occurred to the site between the time of the site walkover and the ground investigation fieldwork, with the site remaining vacant.

2.2 Site Proposals

The proposals for the Phase 3A site comprise the construction of two new commercial/industrial units (Units 8 and 9) on the footprint of the former Building 6000 (2,707 m² and 1,989 m² respectively). It is understood that existing ground levels across the site will be raised by approximately 1m to provide flood protection. At this stage, the detailed nature of the proposed upfill is not confirmed, although it is anticipated that this would comprise a combination of stockpiled granular demolition arisings and imported granular material.

The current proposals are shown on the B6000 Feasibility Layout Option 5 by PRC (Drawing No. 11392-ME-XX-XX-XX-X-52), dated November 2025. A copy of the drawing is presented in Appendix A.

3.0 DESK STUDY SUMMARY AND CONCEPTUAL SITE MODEL

The desk study and initial Conceptual Site Model for the site (which includes the Phase 3A and Phase 3B development areas) are presented in the Phase I Desk Study/Geo-Environmental Assessment (Report Ref: AG3744-26-AV04, April 2026), which should be referred to for full details of the anticipated geology, geoenvironmental site setting, site history and preliminary risk assessment.

With reference to the Phase 3A development area only, the initial conceptual site model established a low - medium risk to end users (Human Health) via inhalation, ingestion, dermal contact pathways and a low to medium risk to the underlying Principal Aquifer and Secondary 'A' Aquifer (Controlled Waters) via migration and leaching, due to potential contaminants in the Made Ground. The initial conceptual site model as part of the Phase 1 desk study for the Phase 3A development area is summarised in the table below.

Source	Pathway	Receptor	Risk*
Potential contaminants (e.g. heavy metals, hydrocarbons, asbestos VOCs) within Made Ground associated with historical and existing site development inc. unspecified heap shown on the southeastern corner.	Inhalation, ingestion, dermal contact	End users	Low
	Migration and leaching	Principal Aquifer / Secondary A Aquifer and surface water feature	Medium
Potential contaminants (e.g. heavy metals, hydrocarbons and VOCs) within off-site Made Ground or resulting from historical off-site usage.	Migration and leaching onto site	Principal Aquifer / Secondary A Aquifer and surface water feature	Medium
Localised hydrocarbon/ fuel leakages/spillages from vehicles (car park areas), industrial uses and tanks (on and off-site)	Inhalation, ingestion, dermal contact	End users	Low
	Migration and leaching	Principal Aquifer / Secondary A Aquifer and surface water feature	Low-medium
Ground gas/volatile vapours from Made Ground / Alluvium (Mainly methane, carbon dioxide)	Inhalation	End users	Low-Medium
	Migration into buildings, service ducts etc.	End users	Low
Elevated sulphates in Made ground or natural soils	Direct contact, leaching and contact with groundwater	Buried concrete	Low

*** Definition of Risk Categories**

Negligible - Contaminants that might have unacceptable impact on key receptors, are unlikely to be present, or, no pathway is envisaged.

Low Risk: Contaminants may be present but are unlikely to be at levels to have unacceptable impact on key receptors, or pathways are likely to be minimal.

Medium Risk: Contaminants are probably present and might have an unacceptable impact on key receptors. Pathways may also be present therefore remedial measures may be necessary to reduce the risks.

High Risk – Contaminants probably or certainly present and pathways are probably also present. Therefore, contaminants are likely to have an unacceptable impact on key receptors and remedial measures are likely to be necessary to reduce the risks to acceptable levels.

4.0 GROUND INVESTIGATION WORKS

4.1 Fieldwork

Fieldwork across the Phase 3A site area was undertaken between 23rd and 26th February 2026 and is summarised in the following table:

Type	Number	Reference	Max depth (m bgl)	Rationale
Cable Percussion Borehole	2	CP04 and CP05	17.30	General coverage to confirm deeper ground conditions, permit the collection of geotechnical and geo-environmental samples and the installation of ground gas and groundwater monitoring standpipes.
Trial Pits	5	TP01 – TP05	2.6	To provide general geotechnical and geoenvironmental coverage and permit the collection of geotechnical and geo-environmental samples
Driven Continuous Samples	1	DCS09	3.45	General coverage to supplement the cable percussive boreholes and trial pits, permitting the collection of geotechnical and geo-environmental samples and the installation of ground gas and groundwater monitoring standpipes.

Fieldwork was generally carried out, where relevant, in accordance with BS5930 (2015+A1-2020) “Code of Practice for Site Investigations” and was supervised by an experienced Geoenvironmental Engineer.

The borehole and trial pit records, along with the SPT calibration certificates are included in Appendix B. Trial pit photographs are also presented in Appendix B.

The locations of the exploratory holes were selected and set out on site by Applied Geology Limited by trained personnel using a calibrated CAT and Genny in conjunction with the consultation of statutory service drawings. The locations were locally constrained by the presence of underground supply services and by the presence of two stockpiles located in the north-eastern and south-eastern areas of the site. Surveying and service clearance of each location was undertaken by Safe Dig Surveys Ltd between the 23rd and 24th February 2026. The exploratory hole locations are presented on Drawing No. AG3744-26-3A-02 in Appendix A. Levels and locations are presented on the exploratory hole records included in Appendix B.

On-site UXO specialist support was provided by EOD Contracts Ltd between the 23rd and 26th February 2026.

A Photo-ionisation VOC detector (PID) was used on samples of the Made Ground and shallow natural strata to determine if VOCs were present at detectable concentrations.

Four out of the five trial pits (TP02, TP03, TP04 and TP05) were terminated at depths of between 1.90m and 2.60m below ground level (bgl) due to continuous collapse of the trial pit walls in granular strata. DCS09 was terminated at 3.45m, also due to continuous collapse of the borehole in granular strata. CP04 and CP05 were terminated at between 17.00m and 17.30m bgl on SPT refusals in Undifferentiated Chalk.

4.2 Instrumentation and Monitoring

On completion of boring, 50mm diameter standpipes were installed in CP04, CP05 and DCS09 as follows, with further details included in the relevant borehole logs in Appendix B:

Stratum	BH No.	Response Zone (m bgl)	Diameter (mm)	Rationale
River Terrace Deposits	DCS09	1.00-2.00	50	Primarily gas monitoring
	CP05	1.00-6.00	50	Groundwater monitoring/ sampling and gas monitoring
River Terrace Deposits/Undifferentiated Chalk	CP04	1.00-7.00	50	Groundwater monitoring/ sampling and gas monitoring

Washed silica gravel (6-10mm) was used as the filter medium and a 300-micron filter sock was wrapped around the slotted section of the standpipe. Each standpipe was fitted with a push-in bung and single gas tap and was finished with flush metal cover concreted in place.

Ground gas and groundwater monitoring visits were undertaken on 4 occasions between 9th March to 17th April 2026 during two periods of falling atmospheric pressure. An additional 5th monitoring visit was completed on 17th April 2026, as monitoring points CP04 and DCS09 were inaccessible during the third visit on 25th March 2026. Each monitoring well was monitored for concentrations of carbon dioxide, methane, oxygen and VOCs (by PID), flow rates and differential pressures and groundwater level. The monitoring records are included in Appendix C.

Groundwater sampling was carried out on 17th March 2026. The standpipes installed in CP04 and CP05 were developed during the initial site visit on 9th March 2026 and subsequently sampled during the second visit on 17th March using dedicated bailers. All groundwater sampling was conducted in accordance with BS 6068-6.1 and BS ISO 5667-11. The groundwater sampling records are included in Appendix C.

4.3 Laboratory Testing

Geotechnical laboratory testing was scheduled by Applied Geology on selected samples recovered. Testing was undertaken in accordance with BS1377 and carried out at UKAS accredited laboratories Professional Soils Laboratory (PSL) Ltd (UKAS

lab No. 4043) and SOCOTEC UK Ltd (UKAS Lab No. 1252) (i.e. for the BRE suites) and comprised the following:

- 2 No natural moisture content tests;
- 2 No Atterberg limit tests;
- 5 No particle size distribution tests;
- 3 No saturated moisture content of chalk tests;
- 1 No quick undrained triaxial test; and
- 11 No BRE SD1 suite tests.

Chemical testing was scheduled by Applied Geology based upon the desk study, walkover and site observations during the fieldwork. Testing was carried out at UKAS accredited laboratory (SOCOTEC UK Ltd) (UKAS Lab No. 1252) with asbestos testing by The Testing Lab PLC (UKAS Lab No. 7758). Six samples of the Made Ground soils were analysed for the following suite of contaminants:

- Selected metals suite [arsenic, boron, beryllium, cadmium, chromium (total, trivalent and hexavalent), copper, lead, mercury, nickel, selenium, vanadium and zinc];
- Speciated (16 US EPA) Polycyclic Aromatic Hydrocarbons (PAH);
- Total Petroleum Hydrocarbons Criteria Working Group (TPH CWG); Benzene, Toluene, Ethylbenzene, and Xylene (BTEX);
- Methyl-tertiary-butyl-ether (MTBE);
- Phenols;
- pH;
- Soluble sulphate, and;
- Soil organic matter.

Six samples of the Made Ground soils were also submitted for Asbestos testing (presence, identification, and quantification, where applicable).

Two samples of groundwater were obtained from the standpipes installed in CP04 (River Terrace Deposits and Undifferentiated Chalk) and CP05 (River Terrace Deposits) and were tested for the following suite of contaminants:

- Selected metals suite [arsenic, boron, beryllium, cadmium, chromium (total, trivalent and hexavalent), copper, lead, mercury, nickel, selenium, vanadium and zinc];
- Speciated (16 US EPA) Polycyclic Aromatic Hydrocarbons (PAHs);
- Phenols (total);
- Total Petroleum Hydrocarbons Criteria Working Group (TPH CWG);
- Hardness;
- pH;
- Water soluble sulphate; and
- Total Organic Carbon.

Laboratory test results are included in Appendix D.

5.0 GROUND CONDITIONS

5.1 Strata Encountered

The investigation has proven Made Ground to depths of between 0.50m and 1.60m bgl, locally increasing to 2.60m bgl towards the southwestern site boundary, overlying natural Superficial strata of River Terrace Deposits, proven to depths of between 4.50m and 6.50m bgl. Solid strata of Undifferentiated Chalk were encountered beneath the Superficial Deposits and were proven to depths of between 17.00m and 17.30m bgl.

Full details of the strata encountered are given on the exploratory hole records presented in Appendix B. SPT N value results are plotted against depth in Appendix A. A generalised ground profile is presented below to summarise the information.

Stratum	Depth to Top of Strata (m bgl)	Thickness (range) (m)	Comments
Made Ground	GL	0.50–1.60 and locally up to 2.60	Encountered across the entire site, increasing in thickness towards the southwestern part of the site. The base of the Made Ground was proven in all exploratory holes, with the exception of TP03 (base depth of 2.60m bgl)
River Terrace Deposits	0.50–1.60	4.00–5.90	Encountered at all locations, apart from TP03, where the base of the Made Ground was not proven.
Undifferentiated Chalk	4.50–6.50	10.80+	Encountered in the CP boreholes (CP04 and CP05) only. Depth to the top of the stratum generally increased towards the north. Base not proven.

5.2 Made Ground

Granular Made Ground was encountered in all exploratory holes from ground level, generally to depths of between 0.50m and 1.60m bgl, locally increasing to 2.60m bgl towards the south-western site boundary.

The previous ground investigation undertaken by Clancy Consulting Ltd in 2019 along the southern boundary of Phase 3A identified Made Ground to depths of 1.20m (WS1), 1.40m (HTP1) and 1.20m bgl (HTP2), which generally correlates with the findings of this recent investigation. The base of the Made Ground was proven at a depth of 1.30m bgl in WS1.

The Made Ground generally comprised greyish brown/brown sandy silty gravel, locally with a low to medium cobble content. The gravel comprised fine to coarse angular to subrounded flint, concrete, brick, chalk and asphalt, with frequent wood, metal and plastic fragments.

No odours were reported within the Made Ground. Headspace testing undertaken on samples of the Made Ground recorded negligible VOC concentrations of between less than the instrument limit of detection (<0.1ppm) and 0.2 ppm.

5.3 River Terrace Deposits

Natural superficial strata of River Terrace Deposits were encountered directly beneath the Made Ground in all exploratory holes, (apart from TP03 where the base of the Made Ground was not proven at depth of 2.60m bgl) across the site and were proven to depths of between 4.50m and 6.50m bgl, achieving thicknesses of between 4.0m and 5.90m.

The stratum was predominately described as yellowish brown/greyish brown sandy clayey/silty gravel. The gravel comprised fine to coarse angular to subangular flint and chalk.

The stratum was encountered as a cohesive soil between 3.60m and 4.50m bgl in CP04, in the southeastern corner of the site. The material comprised firm yellowish brown slightly sandy slightly gravelly clay. The gravel comprised fine to coarse angular to subangular flint and chalk.

The previous ground investigation undertaken by Clancy Consulting Ltd along the southern boundary of Phase 3A encountered River Terrace Deposits in WS1 at a depth of 1.3m bgl, proven to a depth of 3.70m bgl. The material was described as very soft to soft brown brownish white sandy very gravelly clay. The gravel included flint and chalk.

Five particle size distribution tests undertaken on samples of the River Terrace Deposits generally recorded fines contents of between 2% and 49%, sand contents of between 9% and 22%, and gravel contents of between 29% and 89%, indicating the soil to be silty/clayey sandy gravel and slightly sandy, slightly gravelly silt/clay, which is in general accordance with the field descriptions.

A single Atterberg limit test carried out on a sample of the cohesive River Terrace Deposits (CP04 at 4.00m) recorded a plastic limit of 14%, a liquid limit 24%, a plasticity index of 10% (corrected to 8%), indicating the soil to be clay of low plasticity and low volume change potential. A moisture content test recorded a value of 16%.

Ten in-situ Standard Penetration Tests (SPTs) undertaken in the granular River Terrace Deposits generally recorded 'N' values of between N=13 and N=20 (medium dense). As single SPT N value of N=5 (loose) was recorded at 2.0m bgl in DCS09. However, it is noted that this coincided with a water strike at the same depth and as such is considered unlikely to be wholly representative. A single SPT was undertaken in the cohesive River Terrace Deposits at a depth of 3.60m bgl in CP04 and recorded a 'N' value N=11.

5.4 Undifferentiated Chalk

Undifferentiated Chalk was encountered directly beneath the River Terrace Deposits in the cable percussion boreholes (CP04 and CP05), from depths of between 4.50m bgl and 6.50m bgl and was proven to depths of between 17.00m and 17.30m bgl. The base of the Undifferentiated Chalk was not proven.

The cable percussion drilling method severely disturbs any structure present within Chalk strata, resulting in the recovery of highly disturbed samples. Although full engineering descriptions were generally not possible, the Undifferentiated Chalk was generally described as structureless chalk recovered as cream gravelly silt, Grade

Dc. The clasts comprised extremely weak, cream-coloured chalk fragments of gravel size, and the matrix comprised cream-coloured calcareous silt.

Sixteen in-situ SPT test were carried out within the Undifferentiated Chalk, recording 'N' values of between N=12 and N=>50. Consistent 'SPT refusals' with extrapolated N values of between N=64 and N=556, were generally recorded from depths of 11.00m bgl.

Three Saturation Moisture Content (SMC) tests were undertaken on samples of Chalk and recorded dry density values of between 1.61Mg/m³ and 1.67Mg/m³, indicating medium density chalk. The tests also recorded saturated moisture contents of between 23% and 25%.

During the previous Clancy Consulting Ltd investigation, a single borehole WS1 encountered a white gravelly clay, interpreted as weathered bedrock from a depth of 3.70 m bgl and proven to 5.45m bgl. This is generally consistent with the findings recorded in CP04 along the southern boundary. Two SPTs undertaken in the shallow weathered chalk in WS1 recorded values of N=13 and N=15, which is in accordance with the findings of the current investigation.

5.5 Groundwater

Groundwater strikes were encountered during the ground investigation as summarised in the table below.

Location	Stratum	Depth of Groundwater
CP04	Undifferentiated Chalk	7.30m bgl no rise
CP05	River Terrace Deposits	2.10m rising to 1.80m bgl
DCS09	River Terrace Deposits	2.00m bgl
TP02	River Terrace Deposits	1.40m bgl
TP03	Made Ground	0.60m bgl
TP04	River Terrace Deposits	1.70m bgl
TP05	River Terrace Deposits	1.60m bgl

TP01 located along the northwestern corner of the Phase 3A area, remained dry during the ground investigation.

The previous boreholes along the southern site boundary, by Clancy Consulting Ltd, recorded groundwater at a depth of 2.00m, rising to 1.80m bgl after 20 minutes within the River Terrace Deposits, which is generally consistent with the findings of the recent investigation.

Subsequent groundwater level monitoring was undertaken on four occasions between 9th March and 25th March 2026. An additional monitoring visit was also completed on 17th April 2026, as CP04 and DCS09 were inaccessible during the third visit on 25th March 2026. Groundwater levels recorded during the monitoring visits are summarised in the table below:

Location	Stratum	Response Zone (m bgl)	Water level (m bgl)
CP04	River Terrace Deposits / Chalk	1.00–7.00	1.80 - 1.96 (3.02–2.86m AOD)
CP05	River Terrace Deposits	1.00–6.00	1.16 - 1.72 (3.33–2.77m AOD)
DCS09		1.00–2.00	Dry - 1.46 (2.82m AOD)

DCS09 was recorded as Dry during 3 out of the 4 groundwater visits.

It should also be noted that groundwater levels may vary beyond that observed during the fieldwork period due to seasonal effects throughout the year.

Based on the data collected, it is considered that the River Terrace Deposits and Chalk are likely to be in hydraulic continuity. The groundwater flow direction was unable to be determined as the levels are generally consistent across the site, however, it is likely to be towards the east and Lavant Stream.

5.6 Ground Gas

Variable thicknesses of Made Ground were encountered in all exploratory hole locations across the Phase 3A area. Apart from this, no other significant on-site sources of ground gas were observed during the site investigation.

Monitoring of the standpipes on a total of four occasions has recorded methane concentrations at less than detection limit (0.1% by volume). Carbon dioxide concentrations were recorded between less than detection limit (0.1% by volume) and 0.2% by volume. Oxygen concentrations were recorded between 11.3% (depleted) and 20.4% (atmospheric) by volume.

The boreholes were also screened using a Photo Ionisation Detector (PID) to determine the presence of VOCs, which recorded concentrations generally between less than the instrument detection limit (0.1ppm) and up to 0.4ppm in the standpipes (i.e. negligible).

Flow readings were taken over a three-minute period and reported maximum steady flow rates of less than the instrument detection limit (0.1l/hr).

Gas Screening Values (GSVs) have been calculated for each borehole, and the results are detailed in the table below.

Stratum	BH	Response Zone (m bgl)	Ground water level (m bgl)	Max. Methane (%)	Max. Carbon Dioxide (%)	Max. Steady Flow (l/hr)	GSV Methane (l/hr)	GSV Carbon Dioxide (l/hr)
RTD	DCS09	1.00 – 2.00	Dry – 1.46	0.1	0.1	0.1	0.0001	0.0001
	CP05	1.00 – 6.00	1.16 – 1.72	0.1	0.2	0.1	0.0001	0.0002
RTD/Chalk	CP04	1.00 – 7.00	1.80 – 1.96	0.1	0.1	0.1	0.0001	0.0001

RTD = River Terrace Deposits; Chalk = Undifferentiated Chalk
Green highlighted cells indicate CS-1 conditions.

5.7 Contamination

Apart from the presence of brick, concrete, asphalt and rare plastic fragments noted throughout the Made Ground there was no visual or olfactory evidence of significant potential contamination was noted. Specifically, no visual or olfactory of hydrocarbon or solvent contamination was identified during the fieldwork.

Headspace testing undertaken on samples of the Made Ground recorded negligible VOC concentrations of between <0.1ppm and 0.2ppm.

6.0 GEOENVIRONMENTAL ASSESSMENT

6.1 Human Health Risk Assessment

Although the current proposals allow for some minor areas of soft landscaping, mostly to the perimeter of the site, the proposed development generally comprises a large percentage of hardcover. Considering this and the context of the proposed development (commercial/industrial warehouses) and that the site levels will be raised in the order of 1m (although not confirmed, anticipated to comprise a combination of stockpiled granular demolition arisings and imported granular material), the source-pathway-receptor linkages to potential end users are effectively broken, and as such, there is considered to be a negligible risk to Human Health from potential contaminants in the ground. However, to account for the potential minor areas of proposed soft landscaping, a comparison of the chemical test results against generic screening criteria for a commercial/industrial end usage has been undertaken. The results of chemical testing on soils have been assessed as described in Appendix E, assuming 1% SOM in the soil.

The spreadsheets summarising the laboratory results and relevant screening values for each dataset are presented in Appendix D.

In respect of benzo(a)pyrene and other genotoxic PAHs, various PAH ratios have been plotted and compared against data from the Culp et al study and found to be generally within the same range, therefore the use of the surrogate marker approach is justified.

None of the chemical testing undertaken on the Made Ground samples exceeded their corresponding screening values based upon the currently proposed commercial/industrial end usage.

All volatile compounds, including Naphthalene, BTEX and 'lighter end' hydrocarbon fractions (<C₁₀) were recorded below the laboratory limit of detection. Total phenols were also recorded below the laboratory limit of detection.

Measurable concentrations of PAHs have been detected in the Made Ground across the site, although well below the adopted screening criteria. Based on the source signature double ratio plots, the PAHs identified are considered likely to be predominantly coal derived.

Although no exceedances have been identified when compared to the adopted screening criteria, measurable concentrations of heavier end petroleum hydrocarbon fractions (C₁₀-C₃₅) were reported in four of the five samples of Made Ground, at total TPH concentrations of between 52.5mg/kg and 423mg/kg. The highest concentration

of 423mg/kg was reported in DCS09, at 0.3m bgl adjacent to the western site boundary. This could however be attributed to the presence of PAHs in the same samples.

Laboratory screening for asbestos did not detect any ACM within any of the samples screened.

The spreadsheet summarising the laboratory results and relevant screening values are presented in Appendix E.

Based on the above assessments to date, it is considered that the site presents a negligible risk to end users with regards to Human Health. As the site levels are to be raised by c. 1.0m, any material used to achieve this uplift must comprise clean, suitable imported fill that does not pose a risk to future site users.

6.2 Controlled Waters Risk Assessment

Although no exceedances against the relevant Human Health screening criteria have been identified (or visual evidence of hydrocarbon impacted soils) across the Phase 3A development area, the soil testing has recorded some elevated concentrations of PAH and heavier end TPH (C₁₀-C₃₅) in the Made Ground soils.

Considering the results of chemical testing on the soil samples and the site history, testing was also undertaken on two groundwater samples during the investigation, collected from CP04 and CP05 at depths of 1.80m and 1.72m bgl within the natural strata respectively. The response zones are detailed below:

Stratum	BH No.	Response Zone (m bgl)	Aquifer classification
River Terrace Deposits	CP05	1.00 – 6.00	Secondary 'A' Aquifer
River Terrace Deposits/ Undifferentiated Chalk	CP04	1.50 – 7.00	Secondary 'A' Aquifer/ Principal Aquifer

The testing undertaken on the groundwater samples has identified only marginal exceedances of some PAHs from the sample collected at CP05. However considering that the proposed development will mostly comprise hardstanding this will therefore limit any leaching potential and migration of contaminants from the Made Ground into the underlying groundwater. It is also noted that historically the surrounding area has been utilised for numerous industrial uses which could potentially impact groundwater.

Therefore, based on the context of the site and the proposed redevelopment, there is considered to be a negligible to low risk to Controlled Waters.

The spreadsheet summarising the laboratory results and relevant screening criteria of the dataset is presented in Appendix D.

6.3 Disposal of Soil Arisings

The results of chemical testing on the Made Ground indicates that much of the material tested would likely be classified as non-hazardous waste if sent for disposal at landfill (for which WAC testing is not required).

The natural soils are likely to be classified as inert waste, , however if natural soils are to be disposed of from site, inert WAC testing will likely be required to classify the soils for disposal.

The results of chemical testing should be used to assist with the classification of the soils for disposal.

General comments regarding the procedures for the assessment of waste soil for off-site disposal purposes is included in Appendix E.

7.0 GEOTECHNICAL ASSESSMENT

7.1 General

The proposals for the Phase 3A development area comprise the construction of two new commercial/industrial units (8 and 9), together with associated yard/loading areas and car parking. It is understood that site levels across the site will also be raised in the order of approximately 1.0m above existing ground level. No loading information was available at the time of writing this report, though conventional commercial/industrial loadings are envisaged.

The ground investigation has identified granular Made Ground, generally to depths of between 0.50m and 1.60m bgl, locally increasing to 2.60m bgl towards the south-western site boundary. The base of the Made Ground was not proven in the southwestern part of the site. The Made Ground was underlain by Superficial strata comprising granular River Terrace Deposits, proven to base depths of between 4.50m bgl and 6.50m bgl. Solid strata comprising Undifferentiated Chalk were encountered at depths of 4.5m and 6.5m and proven to depths of between 17.0m and 17.30m bgl.

Groundwater strikes were predominantly recorded in the Superficial River Terrace Deposits at depths of between 1.4m and 3.0m bgl, with a single groundwater strike recorded in the Undifferentiated Chalk at 7.3m bgl. Subsequent monitoring of the standpipes has generally recorded groundwater levels at depths of between c1.00m and 1.96m bgl.

7.2 Foundation Design and Floor Slabs

Prior to foundation construction, we understand that existing levels will be raised by approximately 1.00m. At this stage, the detailed nature of the proposed upfill is not known, though it is understood this would likely comprise a combination of stockpiled granular demolition crush and imported granular material. Prior to placement of upfill, it is recommended that any hardstanding and known obstructions are removed as they would represent potential obstructions to future construction and create hard spots which could influence future settlement of placed fills and foundations.

Placement of upfill above the existing ground surface will result in induced settlements within the underlying Made Ground and natural strata as a result of the additional surcharge. The majority of settlements within the granular Made Ground and granular River Terrace Deposits would occur quickly, though induced settlements within the cohesive River Terrace Deposits would be ongoing for a longer period. A detailed geotechnical assessment would be required to determine both the magnitude and duration of potential total and differential settlements.

A number of foundation solutions for column loads may be feasible, though these would need to be carefully considered alongside options for floor slabs, due to the proposed upfilling, as follows:

Deep Spread Foundations on Natural Strata

Based on the strata encountered, traditional pad foundations could be considered, founded on the medium-dense granular River Terrace Deposits encountered at depths of between 1m and c.2.5m below existing ground level across the site. Pad foundations placed within granular River Terrace Deposits may be designed to an allowable bearing pressure of up to 125kN/m². This is based on a lower-bound SPT N value of N=13 and using traditional methods of bearing capacity calculations e.g. as set out in Tomlinson 7th Edition and a factor of safety against a factor safety of 3 against bearing capacity failure whilst limiting total settlement to 25mm. However, taking into account the depth of the Made Ground and the proposal to raise site levels by the order of 1m, the River Terrace Deposits would be at increased depth following upfilling, resulting in potential overbreak/collapse and the requirement to remove greater volumes of soil.

Ground Improvement

Ground improvement by vibro-replacement or rigid inclusions could also be considered to support column loads and slabs following upfilling (or potentially prior to upfilling in association with upfill acting as an engineered load transfer platform), subject to the nature of the proposed upfill. This would however be subject to consultation with specialist contractors to assess the suitability of the soils to be treated. We understand this approach has been adopted on earlier development phases to the immediate south. Other proprietary forms of ground improvement may also be feasible and the advice of specialist contractors should be sought.

Where vibro-replacement was proposed prior to upfilling, proposed upfill could comprise suitably engineered granular material, or potentially other suitably engineered fill (including possible modified or stabilised clay fills). It should however be noted that the placement of the upfill material (either prior to or following vibro-replacement ground improvement), would result in total and differential consolidation settlement of any cohesive Made Ground and ground improvement would not wholly prevent this. It should be possible to manage this settlement with time and possibly some additional surcharging, although this would require careful technical appraisal and time allowance for the induced settlement to take place. The same effects would also need to be taken into account beneath ground floor slabs. It is recommended that discussions are undertaken with specialist contractors to establish whether they consider this solution to be feasible. Subject to specialist contractors confirming suitability for treatment and appropriate management of surcharge induced settlements, shallow reinforced foundations could be possible together with ground bearing floor slabs. Allowable bearing pressures would be defined by the appointed specialist contractor, though typically we would expect allowable bearing pressures in the range 100 – 150kN/m² to be feasible, potentially higher. Such a solution would reduce the required depth of excavation compared to spread foundations in natural strata and minimise risk of groundwater entry into foundation excavations.

Piled Foundations

A piled solution for both the foundations and floor slabs may be considered, which represents a low-risk solution to address the various technical considerations. This would also minimise the volume of arisings for potential disposal. Piles would need to extend through any imported upfill, existing Made Ground, Superficial Deposits and gain support via skin friction and end bearing, within the Undifferentiated Chalk. The use of bored, CFA or driven piles is likely to prove suitable for the site, however it is recommended that the advice of a specialist piling contractor is sought with regard to detailed design, including suitable pile diameters, capacities and confirmation of suitable pile types. The nature and thickness of the upfill material will also need to be taken in to account with regards to pile mat design.

Earthworks

Another potential option would be to excavate the existing Made Ground and replace suitable soils to an engineered specification. This would however require careful and detailed assessment and would require further ground investigation works in order to obtain bulk samples for earthworks testing. It should be noted that the engineered fill would also need to be placed to raise levels. Following such earthworks, shallow reinforced foundations on engineered fill should be possible together with ground bearing floor slabs. Allowable bearing pressures would be a function of the earthworks specification, though it is envisaged that allowable bearing pressures for pads in the range 100 – 150kN/m² would typically be feasible following a competent, controlled earthworks exercise.

If ground conditions encountered during construction differ from those recorded during the investigation, further geotechnical input should be sought to refine the foundation design.

7.3 Floor Slab Gas Protection

Based on the gas monitoring undertaken to date and the calculated GSVs the site is likely to be characterised as Characteristic Situation 1 (CIRIA C665). The site is also not in a Radon affected area. Therefore, gas protection measures are not considered necessary for the proposed development.

7.4 Excavations

Excavation depths will depend on the chosen foundation solution at the site. Any excavations on site can be expected to be in a combination of granular Made Ground and predominantly granular River Terrace Deposits. During the investigation, instability of the trial pit walls was observed in four out of five trial pits.

In general, excavations will likely be prone to some instability particularly where advanced into the granular River Terrace Deposits and in particular once groundwater is encountered. As such, excavations into these soils may need to be graded back to a stable angle or trench support be provided. Trench support or the angle of batter should be designed by an appropriately qualified engineer or competent person to suit the required depth and the ground and groundwater conditions. Furthermore, due to the potential for groundwater ingress (from depths of 1.4m below existing ground level), it is recommended provision for groundwater control is made, particularly if any deeper excavations are proposed.

7.5 Buried Concrete and Services

The Design Sulphate Class and the Aggressive Chemical Environment for Concrete (ACEC) class have been assessed for each of the strata encountered. The characteristic values calculated for each stratum are outlined in the table below.

Strata	No of samples tested	Soluble Sulphate (g/l) ^{*1}	Total Potential Sulphate (%)	Potentially Pyritic	pH	Design Sulphate Class	ACEC ^{*2}
Made Ground	8	548	-	No	8.5	DS-2	AC-2
River Terrace Deposits	6	217	-	No	8.8	DS-1	AC-1
Undifferentiated Chalk	2	17	-	No	9.1	DS-1	AC-1
Groundwater (River Terrace Deposits/Chalk)	2	19	-	-	7.4	DS-1	AC-1

Notes:

*1: Characteristic values are rounded to the nearest 10mg/l. In a data set of less than 5 samples, the highest sulphate value and lowest pH is taken as the characteristic value. In a data set of between 5 and 9 the mean of the highest two sulphate test results has been taken as the characteristic value. In a data set in excess of 9, the mean of the highest 20% has been taken as the characteristic value.

*2: Assumes mobile groundwater.

The results of the sulphate tests carried out have identified the Design Sulphate Class to be DS-2 with the Aggressive Chemical Environment for Concrete (ACEC) being AC-2 for the Made Ground as defined by the BRE Special Digest 1, Concrete Aggressive Ground, 2005 for a brownfield site and mobile groundwater regime. For the River Terrace Deposits and Undifferentiated Chalk, the sulphate test results indicate DS-1 and AC-1 conditions. Groundwater samples collected from standpipes in the River Terrace Deposits and Undifferentiated Chalk, also indicate DS-1 and AC-1 conditions.

Further reference should be made to BRE Special Digest 1 for requirements in respect of types of cement and aggregate to be used and variations in type of concrete construction.

No 'light end' (less than C₁₀) TPHs, BTEX, or MTBEs, were detected during the ground investigations undertaken. Locally, typically low concentrations of 'heavier end' (C₁₂ to C₃₅) TPH fractions were detected in the Made Ground at concentrations of between 52.5mg/kg and 423mg/kg. Subject to detailed proposals, some restrictions on buried water supply pipeline materials may be necessary. However, the chosen pipeline materials should be discussed and agreed with the local Water Authority once water supply pipe routes and depths are known.

8.0 CONCLUSIONS AND RECOMMENDATIONS

8.1 Geo-environmental

The risk assessments in Section 7.0 have indicated a negligible risk to human health and low risk to Controlled Water receptors based on the proposed development. Therefore, no further action is considered warranted. However, should any suspected

contamination be encountered during redevelopment appropriate advice should be sought.

8.2 Geotechnical

Based on the findings of the recent ground investigation, ground improvement techniques such as vibro-replacement or rigid inclusions are considered likely to provide an appropriate foundation solution for the proposed units and associated floor slabs. However, further consultation with specialist ground improvement contractors will be required to verify the suitability of the in-situ soils for treatment and to confirm the most appropriate method.

The proposed upfill will influence the design of ground improvement solutions (and piling if adopted) and will also influence the design of the external areas, in terms of induced settlements (which need to be assessed), likely CBR values, working platform design, sulphate classification etc.

Based on the gas monitoring undertaken on site, it is considered that Characteristic Situation 1 (CIRIA C665) applies, and gas protection measures are not required.

A Design Sulphate Class of DS-2 and ACEC Class AC-2 is considered appropriate for buried concrete.

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GENERAL NOTES

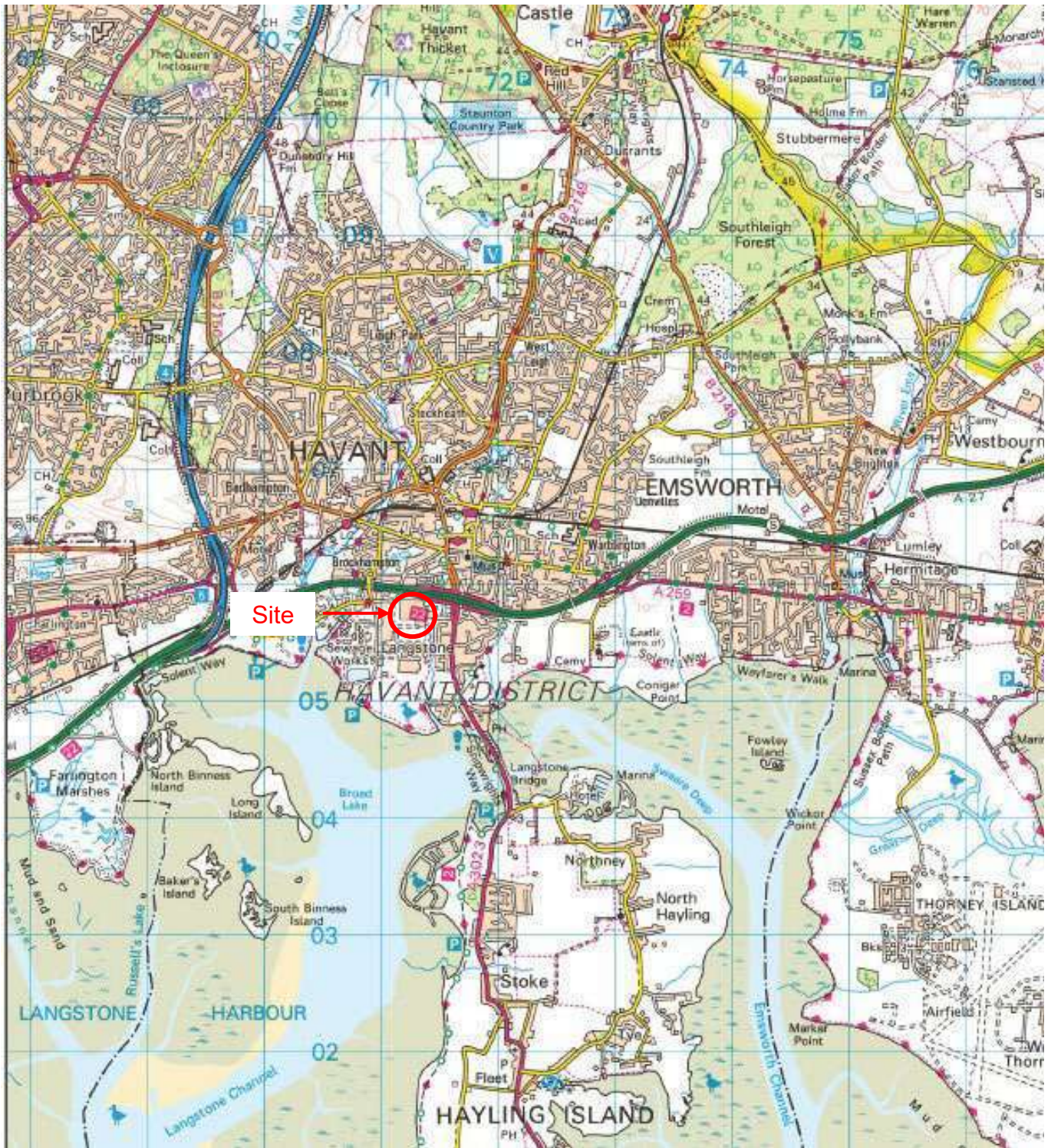
- A) The assessment made in this report is based on the site terrain and ground conditions revealed by the various field investigations undertaken and also any other relevant data for the site including previous site investigation reports (if available) and desk study data. There may be special conditions appertaining to the site, however, which have not been revealed by the investigation and which have not, therefore, been taken into account in the report. The assessment may be subject to amendment in the light of additional information becoming available. It must be recognised that many of the Environmental Searches obtained during the course of the desk study are often lengthy. Applied Geology have, where appropriate and in the interests of simplicity, only reproduced the summary of the searches within the report. A full copy of all the search data is held at the Applied Geology office and is available for inspection if required.
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- H) Ground conditions should be monitored during the construction of the works and the recommendations of the report re-evaluated in the light of this data by the supervising geotechnical or geo-environmental engineers.
- I) Unless specifically stated, the investigation has not taken into account the possible effects of mineral extraction.
- J) The economic viability of the proposals referred to in the report, or of the solutions put forward to any problems encountered, depends on very many factors in addition to geotechnical considerations and hence its evaluation is outside the scope of this report.
- K) Applied Geology operates as a Consultancy and does not operate its own laboratory for soil testing, this work being sub contracted to known and respected, generally UKAS accredited, laboratories. Applied Geology can therefore not be held responsible for the testing carried out.

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APPENDIX A



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Client:

HAVANT SARL

Project:

LANGSTONE TECHNOLOGY PARK,
HAVANT – PHASE 3A

Title:

SITE LOCATION PLAN

Drawn By:

KM

Checked By:

HS

Paper Size:

A4

Scale:

1:50,000

Date:

05.02.2026

NGR:

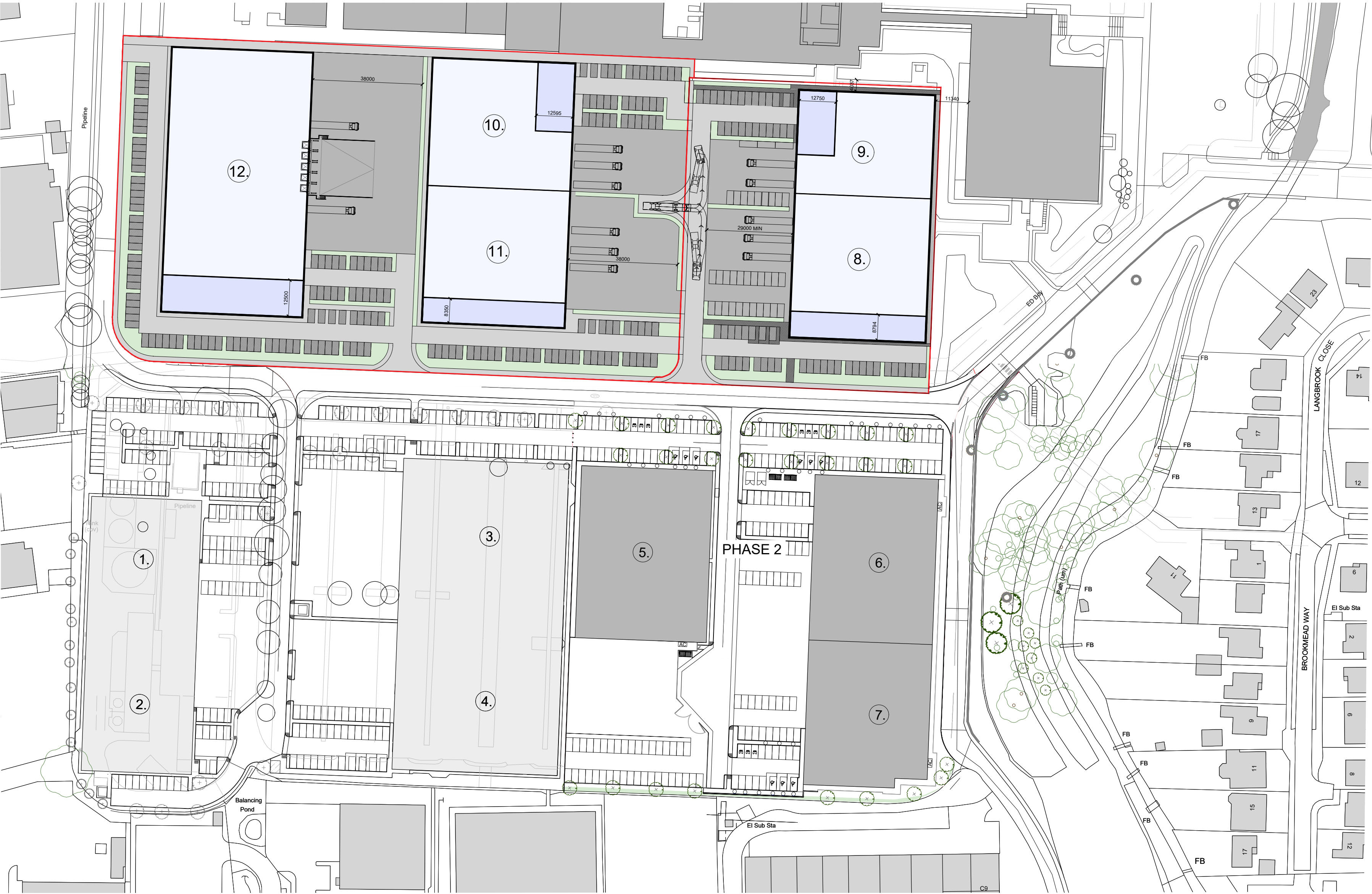
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Drawing No:

AG3744-26-3A-01

Revision:

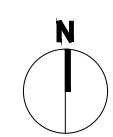
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Figured dimensions only are to be used. All dimensions to be checked onsite. Differences between drawings and between drawings and specification or bills of quantities to be reported to the PRC Group.

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Revisions: Drawn/Chkd: Date:



Site area	Site coverage
2.29acres approx	47% (gross/net)

Floor Area									
Unit	GF m² GIA	FF m² GIA	Total m² / ft² GIA	Total m² / ft² GEA	FF%	CIH M	CP		
8	2,202	390	2,592 / 27,900	2,707 / 29,137	15	8	59 (30 - 60)		
9	1579	278	1,857 / 19,988	1,989 / 21,409	15	8	40 (22 - 44)		
Total			4,449 / 47,888	4,650 / 50,052					

Car parking provide at LPA B8 standard 1 per 90m² with potential for B2 standards 1 per 45m²

<u>Site area</u>		<u>Site coverage</u>		
22,032msq / 5.4a approx		46% (gross/net)		
<u>Floor Area</u>				
Unit	GF m² GIA	FF m² GIA	Total m² / ft² GIA	Total m² / ft² GEA
10	2,159	296	2,455 / 26,425	2,546 / 27,404
11	2,313	409	2,722 / 29,299	2,831 / 30,472
12	4,437	606	5,043 / 54,282	5,214 / 56,123

Unit	GF m² GIA	FF m² GIA	Total m² / ft² GIA	Total m² / ft² GEA	FF%	CIH M	CP
8	2,202	390	2,592 / 27,900	2,546 / 27,404	12	8	35 (28- 56)
9	1579	278	1,857 / 19,988	2,831 / 30,472	15	8	40 (31 - 62)
10				5,214 / 56,123	12	10	95 (58 - 115)

Car parking provide at LPA B8 standard 1 per 90m² with potential for B2 standards 1 per 45m²



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Client: XLB PROPERTY & HAVANT
S.a.r.L (Luxembourg)
Project: LANGSTONE PARK

Drawing Title: B6000 FEASIBILITY LAYOUT
OPTION 5

Job No: 11392 Project Stage: FE Status:
First Issue Date: NOV 25 Scale: @A2 1:1000 Lead/Checked: ME

Project:	Originator:	Zone:	Level:	Type:	Role:	Drp. No:	Rev:
11392 - ME	- XX -	XX -	XX -	X -	52	-	

BIM File Name: *BIM File Number*



Station Information:

Station	Easting (m)	Northing (m)	Level (m)
GH1	471467.951	105703.881	5.210
GH2	471396.572	105689.078	4.947
GH3	471285.578	105556.151	4.627
GH4	471172.816	105589.916	4.778
GH5	471093.648	105505.482	5.240
GH5A	471096.513	105624.064	5.142
GH6	471110.514	105671.341	5.093
GH7	471216.661	105679.712	5.375
GH8	471348.628	105674.259	5.570
GH9	471482.805	105645.720	7.682
GH10	471673.802	105666.788	7.216
D1	471616.786	105730.882	7.451
D2	471655.323	105826.440	7.801

OS Note:

This survey has been completed to the Ordnance Survey (OS) National Grid (OSGB36) using Global Navigation Satellite System (GNSS) and the U.S. Active Network (USAN).

A true OSGB36 coordinate has been established near to the site centre, via a transformation using the OSTN15GB & OSGB15GB transformation models.

The survey has been completed to the point and a further one or more OSGB36 (13 point) established to create a true O.S. bearing for angle measurement.

No scale factor has been applied to the survey therefore the coordinates shown are arbitrary & not true O.S. Coordinates which have a scale factor applied.

Please refer to Survey Station Table to enable establishment of the arbitrary grid and datum.

Some services may have been omitted due to parked vehicles.

Legend:

Boundary	1	Boundary	1
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1 7.12.2021 Additional Road Survey GH GH1/232



Topographical Surveys
Site Engineering
Utility / CCTV Services

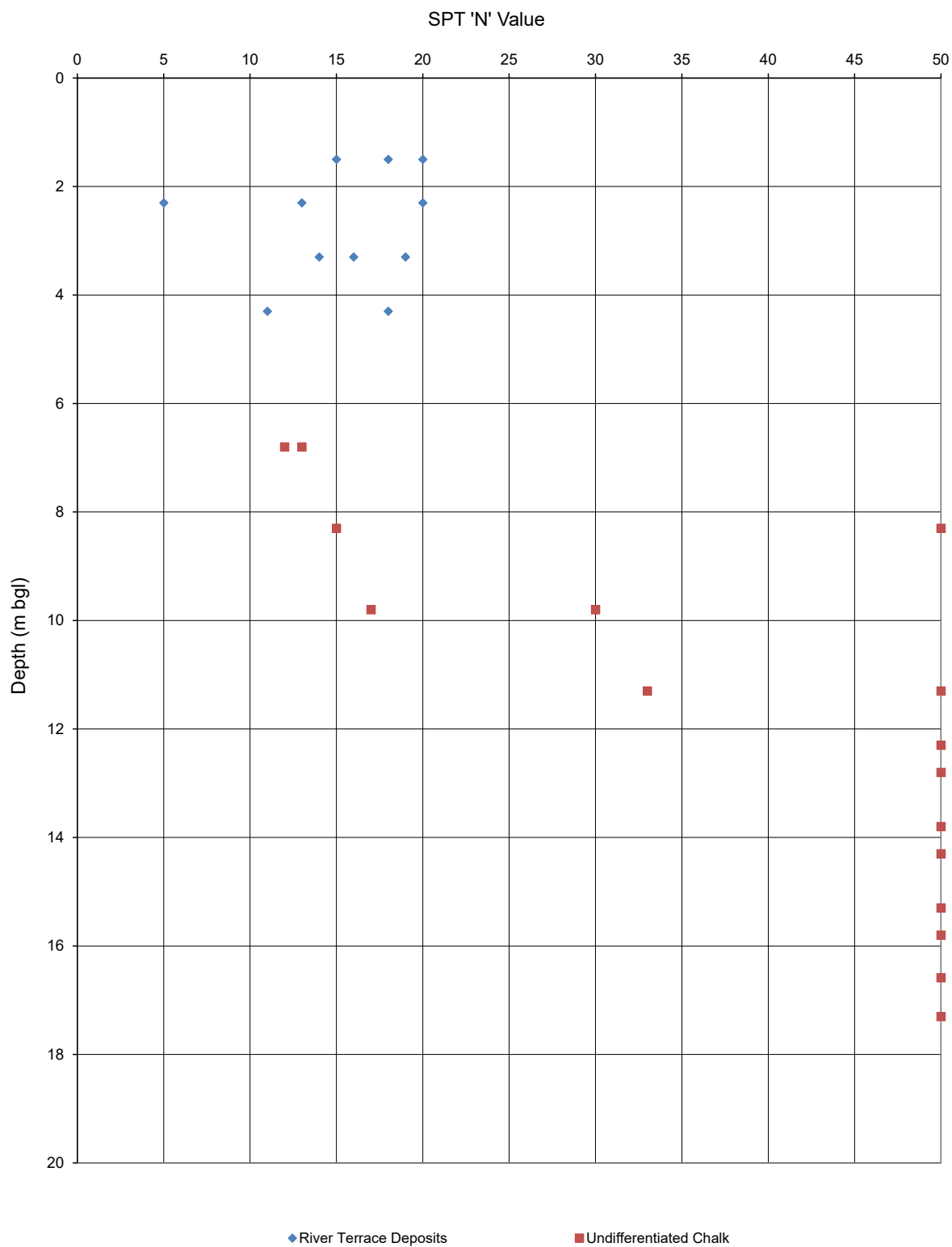
Measured Building Surveys
3D Laser Scanning
Road & BSH Works

Rowan House
Duffield Road
Little Wymondley
DE21 5DR

Tel: (01332) 830044 Fax: (01332) 830055
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www.greenhatchgroup.co.uk

Mr. Alan
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Uncorrected SPT 'N' Value versus depth



Notes: 1. *Uncorrected N values plotted, values >100 omitted for clarity etc*
 2. *Only axial point load test results shown*
 3. *Example*

Client:	Havant Sarl	APPLIED GEOLOGY
Project:	Langstone Technology Park, Havant Phase 3 – Phase 3A	
Project No.	AG3744-26	

APPENDIX B

BOREHOLE LOG - CABLE PERCUSSION

Project	Langstone Technology Park, Havant – Phase 3A			Project No.	AG3744-26	
Client	Havant Sarl			Sheet	1 of 2	
Start	23/02/2026	Coordinates	E 471 363.74 N 105 635.59		Scale	As shown
End	24/02/2026	Ground Level	4.82 m OD		Total Depth	17.00 m

Sample /Test Type	Depth (m)	Results	Casing (m)	Level (m OD)	Depth (m)	Description of Strata	Legend	GW	Install
B	0.30			4.32	0.50	Brown sandy silty GRAVEL. Gravel is fine to coarse angular to subrounded of flint, concrete and brick. (MADE GROUND)			
PID ES	0.70	0.2				Medium dense yellowish brown clayey sandy GRAVEL. Gravel is fine to coarse angular to subangular of flint. (RIVER TERRACE DEPOSITS)			Bentonite
D SPT	1.20	N=15	—						
ES PID B D SPT	1.80 2.00	<0.1 N=20	1.5						
SPT B D	3.00	N=16	2			3.00m: slightly sandy slightly gravelly CLAY.			
				1.22	3.60				
SPT D	4.00	N=11	3			Firm yellowish brown sandy gravelly CLAY. Gravel is fine to medium angular to subangular of flint. (RIVER TERRACE DEPOSITS)			Gravel
B	4.50			0.32	4.50				
UT	5.00			-0.18	5.00	Structureless CHALK composed of yellowish cream silty GRAVEL. Clasts are extremely weak cream with occasional black specks. Matrix is yellowish cream. Grade Dc. (UNDIFFERENTIATED CHALK)			
B	5.50					Structureless CHALK composed of cream gravelly SILT. Clasts are extremely weak cream. Matrix is cream. Grade Dc. (UNDIFFERENTIATED CHALK)			
SPT D B	6.50	N=12	6.5						
D SPT	8.00	N=15	8						Bentonite
D SPT	9.50	N=17	9.5						Arisings

Chiselling			Groundwater Strikes					Hole Diameter:		Drilled: ADS Drilling Ltd Logged: AM Checked: PG
From (m)	To (m)	Duration (min)	Depth Struck (m)	Rose to (m)	Remarks	Cased (m)	Sealed (m)	Diameter (mm)	Depth (m)	
13.00 13.50	13.50 16.00	30 30	7.30	7.30		—	—	150	17.00	

General Remarks: Hand dug service inspection pit excavated to 1.20m bgl.
50mm diameter standpipe installed to 7.00m bgl.

APPLIED GEOLOGY

BOREHOLE LOG - CABLE PERCUSSION

Project	Langstone Technology Park, Havant – Phase 3A			Project No.	AG3744-26	
Client	Havant Sarl			Sheet	1 of 2	
Start	24/02/2026	Coordinates	E 471 327.89 N 105 729.67		Scale	As shown
End	25/02/2026	Ground Level	4.49 m OD		Total Depth	17.30 m

Sample /Test Type	Depth (m)	Results	Casing (m)	Level (m OD)	Depth (m)	Description of Strata	Legend	GW	Install
PID ES	0.50	0.1		3.89	0.60	Brown silty sandy GRAVEL. Gravel is fine to coarse subangular to subrounded of brick, concrete and flint. (MADE GROUND)			Bentonite
B	1.00					Medium dense greyish brown silty sandy GRAVEL. Gravel is fine to coarse angular to subangular of flint and chalk. (RIVER TERRACE DEPOSITS)			
SPT D	1.20	N=20	—						
PID ES	1.70	<0.1		2.59	1.90	Medium dense brown silty clayey sandy GRAVEL. Gravel is fine to medium angular to subangular of flint and chalk. (RIVER TERRACE DEPOSITS)			
SPT D	2.00	N=13	1.5						
SPT D	3.00	N=19	3						Gravel
B	3.50								
D SPT	4.00	N=18	4						
D	5.00								
B	6.00					-----; 6.00m: very clayey.			
SPT D	6.50	N=13	9.5	-2.01	6.50	Structureless CHALK composed of cream silty GRAVEL. Clasts are extremely weak cream. Matrix is cream. Grade Dc. (UNDIFFERENTIATED CHALK)			Bentonite
B	7.50								
D SPT	8.00	N>50	8						
D	9.00								Arisings
D SPT	9.50	N=30	9.5						

Chiselling			Groundwater Strikes					Hole Diameter:		Drilled: ADS Drilling Ltd Logged: AM Checked: PG
From (m)	To (m)	Duration (min)	Depth Struck (m)	Rose to (m)	Remarks	Cased (m)	Sealed (m)	Diameter (mm)	Depth (m)	
No chiselling data			2.10	1.80		—	—	150	17.30	

General Remarks: Hand dug service inspection pit excavated to 1.20m bgl.
50mm diameter standpipe installed to 6.00m bgl.

BOREHOLE LOG - CABLE PERCUSSION

CP05

Project	Langstone Technology Park, Havant – Phase 3A			Project No.	AG3744-26	
Client	Havant Sarl			Sheet	2 of 2	
Start	24/02/2026	Coordinates	E 471 327.89 N 105 729.67		Scale	As shown
End	25/02/2026	Ground Level	4.49 m OD		Total Depth	17.30 m

Sample /Test Type	Depth (m)	Results	Casing (m)	Level (m OD)	Depth (m)	Description of Strata	Legend	GW	Install
						Structureless CHALK composed of cream silty GRAVEL. Clasts are extremely weak cream. Matrix is cream. Grade Dc. (UNDIFFERENTIATED CHALK)			
SPT D	11.00	N>50	11	-6.51	11.00	CHALK recovered as cream silty GRAVEL. Gravel is extremely weak cream. (UNDIFFERENTIATED CHALK)			
D	11.80								
D SPT	12.50	N>50	12.5						
D SPT	14.00	N>50	14						
SPT D	15.50	N>50	15.5						
SPT D	17.00	N>50	17						
				-12.81	17.30	End of Borehole at 17.30 m			

Chiselling			Groundwater Strikes					Hole Diameter:		Drilled: ADS Drilling Ltd Logged: AM Checked: PG
From (m)	To (m)	Duration (min)	Depth Struck (m)	Rose to (m)	Remarks	Cased (m)	Sealed (m)	Diameter (mm)	Depth (m)	
No chiselling data			2.10	1.80		—	—	150	17.30	

General Remarks: Hand dug service inspection pit excavated to 1.20m bgl.
50mm diameter standpipe installed to 6.00m bgl.

APPLIED GEOLOGY

TRIAL PIT LOG

TP01

Project

Client

Date

Ground Level:

Langstone Technology Park, Havant – Phase 3A
Havant Sarl
24/02/2026
4.32 m OD

Project No.

Sheet

Scale

Total Depth

AG3744-26
1 of 1
As shown
2.60 m

Coordinates: E 471 309.99 N 105 729.95

Depth (m)	Sample / Test Type	Result	Level (m OD)	Depth (m)	Ease of Dig	Description of Strata	Legend	GW
0.50	ES PID	<0.1			E	Greyish brown silty sandy GRAVEL with a low cobble content. Gravel is fine to coarse subangular to subrounded of chalk, flint, concrete, brick and asphalt. Cobbles are subangular brick and concrete with frequent wood, metal, plastic and tile fragments. (MADE GROUND)		
1.00	ES B PID	<0.1			E			
1.50	ES		2.72	1.60		Yellowish brown sandy silty GRAVEL. Gravel is fine to coarse angular to subangular of flint. (RIVER TERRACE DEPOSITS)		
2.00	B				E			
			1.72	2.60		End of Trial Pit at 2.60 m		

Method: Wheeled Backhoe Excavator
Groundwater: Groundwater not encountered
Stability: Stable
Remarks: Terminated at maximum excavator reach. Trial pit backfilled with arisings on completion.

Length: 1.50m
Width: 0.50m
Logged: AM
Checked: PG

Exploratory hole logs to be read in conjunction with key sheet

TRIAL PIT LOG

TP02

Project	Langstone Technology Park, Havant – Phase 3A		
Client	Havant Sarl		
Date	24/02/2026		
Ground Level:	4.52 m OD	Coordinates:	E 47° 10' 00"

Project No.	AG3744-26
Sheet	1 of 1
Scale	As shown
Total Depth	1.90 m

Depth (m)	Sample / Test Type	Result	Level (m OD)	Depth (m)	Ease of Dig	Description of Strata	Legend	GW
0.10	ES PID				E	Brown sandy silty GRAVEL. Gravel is fine to coarse angular to subangular of flint, concrete and brick. (MADE GROUND)		
			3.22	1.30	E	Yellowish brown sandy silty GRAVEL. Gravel is fine to coarse angular to subangular of flint. (RIVER TERRACE DEPOSITS)		 1.40
			2.62	1.90		End of Trial Pit at 1.90 m		

Method: Wheeled Backhoe Excavator

Groundwater: 1.40 m bgl (Encountered as slight ingress east and west pit walls. Rose from 1.90m bgl to 1.60m bgl.)

Stability: Major spalling of trial pit walls from 1.40m bgl.

Remarks: Trial pit collapsed from 1.40m to 1.90m bgl on completion. Trial pit backfilled with arisings on completion.

Length: 1.40m

Width: 0.50m

Logged: AM

Checked: PG

Exploratory hole logs to be read in conjunction with key sheet

APPLIED GEOLOGY

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TRIAL PIT LOG

TP03

Project	Langstone Technology Park, Havant – Phase 3A		
Client	Havant Sarl		
Date	24/02/2026		
Ground Level:	4.71 m OD	Coordinates:	E 471.1

Project No.	AG3744-26
Sheet	1 of 1
Scale	As shown
Total Depth	2.60 m

Depth (m)	Sample / Test Type	Result	Level (m OD)	Depth (m)	Ease of Dig	Description of Strata	Legend	GW
0.50	B					Dark brown silty sandy GRAVEL with a medium cobble content. Distinct organic odour. Gravel is fine to coarse angular to subrounded of brick, concrete, flint and chalk with frequent wood/organic matter, metal and plastic fragments. Cobbles are angular to subangular brick and concrete. (MADE GROUND)		 0.60
0.70	ES PID	<0.1						
1.70	ES PID	<0.1			E			
			2.11	2.60		End of Trial Pit at 2.60 m		

Method: Wheeled Backhoe Excavator

Length: 1.60m

Groundwater: 0.60 m bgl

Width: 0.50m

Stability: Major spalling of northern trial pit wall from 0.60m bgl

Logged: AM

Remarks: Trial pit collapsed from 0.60m to 2.60m bql on completion.Trial pit backfilled with arisings on completion.

Checked: PG

TRIAL PIT LOG

TP04

Project	Langstone Technology Park, Havant – Phase 3A		
Client	Havant Sarl		
Date	24/02/2026		
Ground Level:	4.09 m OD	Coordinates:	E 47° 15' 00"

Project No.	AG3744-26
Sheet	1 of 1
Scale	As shown
Total Depth	1.90 m

Depth (m)	Sample / Test Type	Result	Level (m OD)	Depth (m)	Ease of Dig	Description of Strata	Legend	GW
0.20	ES PID	<0.1			E	Brown silty sandy GRAVEL. Gravel is fine to coarse angular to subrounded of flint, concrete and brick. (MADE GROUND)		
			3.49	0.60				
1.00	ES PID	<0.1			E	Yellowish brown clayey sandy GRAVEL. Gravel is fine to coarse angular to subangular of flint. (RIVER TERRACE DEPOSITS)		
1.20	B							
			2.19	1.90			 ▽ 1.70	
						End of Trial Pit at 1.90 m		

Method: Wheeled Backhoe Excavator

Length: 1.00m

Groundwater: 1.70 m bgl

Width: 0.50m

Stability: Major spalling of north and south pit walls from 0.60m bgl

Logged: AM

Remarks: Trial pit collapsed from 0.60m to 1.90m bgl on completion.Trial pit backfilled with arisings on completion.

Checked: PG

TRIAL PIT LOG

TP05

Project
Client
Date
Ground Level:

Langstone Technology Park, Havant – Phase 3A
Havant Sarl
24/02/2026
4.11 m OD

Coordinates:

E 471 339.48 N 105 665.95

Project No.
Sheet
Scale
Total Depth

AG3744-26
1 of 1
As shown
1.90 m

Depth (m)	Sample / Test Type	Result	Level (m OD)	Depth (m)	Ease of Dig	Description of Strata	Legend	GW
0.50	PID ES B	0.1			E	Greyish brown silty sandy GRAVEL with a low cobble content. Gravel is fine to coarse subangular to subrounded of chalk, flint, concrete, brick and asphalt with frequent wood, metal, plastic and tile fragments. Cobbles are subangular brick and concrete. (MADE GROUND)		
			3.31	0.80				
1.50	ES B PID	<0.1			E	Yellowish brown clayey sandy GRAVEL. Gravel is fine to coarse angular to subangular of flint. (RIVER TERRACE DEPOSITS)		 1.60
			2.21	1.90				
						End of Trial Pit at 1.90 m		

Method: Wheeled Backhoe Excavator
Groundwater: 1.60 m bgl (Encountered as slight ingress from all pit walls)
Stability: Unstable. North and south pit wall collapse from 0.8m bgl
Remarks: Terminated due to instability. Trial pit backfilled with arisings on completion.

Length: 1.50m
Width: 0.50m
Logged: AM
Checked: PG

Exploratory hole logs to be read in conjunction with key sheet

APPLIED GEOLOGY
soilcloud.tech

TRIAL PIT PHOTOGRAPHS		
Client:	Havant Sarl	
Project:	Langstone Technology Park, Havant – Phase 3A	
Project No:	AG3744-26	APPLIED GEOLOGY
Date:	24/02/2026	

TP01



TRIAL PIT PHOTOGRAPHS		
Client:	Havant Sarl	
Project:	Langstone Technology Park, Havant – Phase 3A	
Project No:	AG3744-26	APPLIED GEOLOGY
Date:	24/02/2026	

TP02



TRIAL PIT PHOTOGRAPHS		
Client:	Havant Sarl	
Project:	Langstone Technology Park, Havant – Phase 3A	
Project No:	AG3744-26	APPLIED GEOLOGY
Date:	24/02/2026	

TP03



TRIAL PIT PHOTOGRAPHS		
Client:	Havant Sarl	
Project:	Langstone Technology Park, Havant – Phase 3A	
Project No:	AG3744-26	APPLIED GEOLOGY
Date:	24/02/2026	

TP04



TRIAL PIT PHOTOGRAPHS		
Client:	Havant Sarl	
Project:	Langstone Technology Park, Havant – Phase 3A	
Project No:	AG3744-26	APPLIED GEOLOGY
Date:	24/02/2026	

TP05



SPT SUMMARY SHEET

Client: Havant Sarl

Project: Langstone Technology Park, Havant – Phase 3A

Project No: AG3744-26

Hole	Depth (m)	Water depth (m)	Casing depth (m)	SPT type	Hammer ref	Seating drive				Test (main) drive								N reported
						Blows	Pen (mm)	Blows	Pen (mm)	Blows	Pen (mm)	Blows	Pen (mm)	Blows	Pen (mm)	Blows	Pen (mm)	
CP04	1.2			S	AR4884	3	75	7	75	4	75	3	75	4	75	4	75	N=15
CP04	2		1.5	S	AR4884	2	75	3	75	5	75	5	75	4	75	6	75	N=20
CP04	3		2	S	AR4884	2	75	4	75	4	75	4	75	5	75	3	75	N=16
CP04	4		3	S	AR4884	2	75	4	75	3	75	3	75	3	75	2	75	N=11
CP04	6.5		6.5	S	AR4884	2	75	2	75	3	75	3	75	3	75	3	75	N=12
CP04	8	7.3	8	S	AR4884	2	75	4	75	3	75	5	75	4	75	3	75	N=15
CP04	9.5	7.3	9.5	S	AR4884	2	75	2	75	4	75	5	75	4	75	4	75	N=17
CP04	11	11	11	S	AR4884	3	75	5	75	9	75	7	75	7	75	10	75	N=33
CP04	12	11	12	S	AR4884	5	75	9	75	13	75	11	75	16	10			N>50
CP04	13.5	11	13.5	S	AR4884	7	75	10	75	9	75	11	75	12	13			N>50
CP04	15	11	15	S	AR4884	10	75	13	75	18	75	50	19					N>50
CP04	16.5	11	16.5	S	AR4884	25	42			50	27							N>50
CP05	1.2	Dry		S	AR4884	3	75	5	75	7	75	6	75	5	75	2	75	N=20
CP05	2	2.1	1.5	S	AR4884	3	75	5	75	4	75	4	75	2	75	3	75	N=13
CP05	3	2.1	3	S	AR4884	2	75	3	75	2	75	5	75	5	75	7	75	N=19
CP05	4	2.1	4	S	AR4884	2	75	4	75	5	75	4	75	4	75	5	75	N=18
CP05	6.5	2.1	9.5	S	AR4884	2	75	3	75	2	75	3	75	3	75	5	75	N=13
CP05	8	2.1	8	S	AR4884	3	75	7	75	10	75	18	75	50	21			N>50
CP05	9.5	2.1	9.5	S	AR4884	2	75	2	75	5	75	8	75	10	75	7	75	N=30
CP05	11	2.1	11	S	AR4884	4	75	7	75	12	75	10	75	13	75	50	11	N>50
CP05	12.5	2.1	12.5	S	AR4884	8	75	18	75	24	75	18	75	50	6			N>50
CP05	14	2.1	14	S	AR4884	4	75	13	75	16	75	50	12					N>50
CP05	15.5	2.1	15.5	S	AR4884	8	75	12	75	13	75	17	75	50	62			N>50
CP05	17	2.1	17	S	AR4884	4	75	10	75	13	75	10	75	16	2	50		N>50
DCS09	1.2			S	RG12	3	75	2	75	3	75	5	75	5	75	5	75	N=18
DCS09	2			S	RG12	1	75	1	75	1	75	1	75	1	75	2	75	N=5
DCS09	3			C	RG12	2	75	1	75	2	75	3	75	4	75	5	75	N=14

Notes

SPT type: S = split spoon, C = cone

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING (UK) LTD
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref: AR4884
Test Date: 20/03/2026
Report Date: 23/03/2026
File Name: AR4884.spt
Test Operator: TW



Instrumented Rod Data

Diameter d_r (mm): 54
Wall Thickness t_r (mm): 6.0
Rod Length l_r (m): 1.0
Assumed Modulus E_a (GPa): 200
Accelerometer No.1: 7080
Accelerometer No.2: 11609

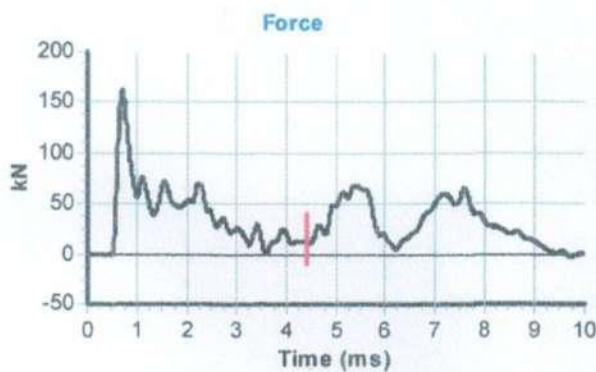
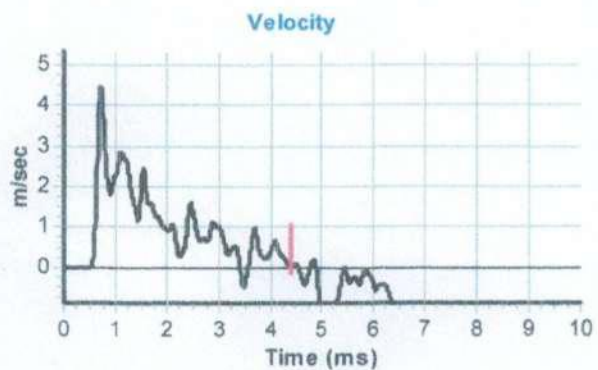
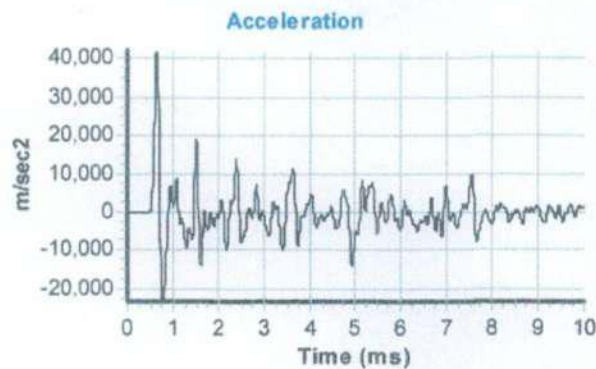
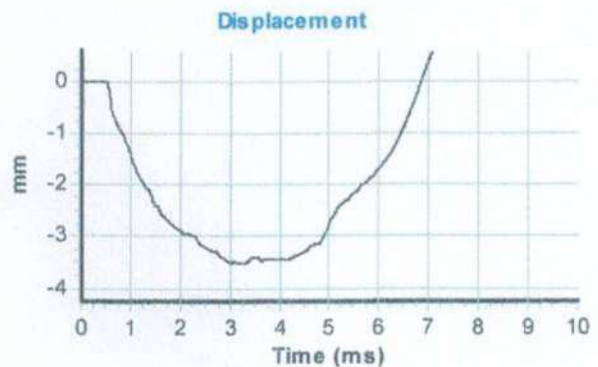
SPT Hammer Information

Hammer Mass m (kg): 63.5
Falling Height h (mm): 760
SPT String Length L (m): 10.0

Comments / Location

SEP GEO-TECH LTD

98721



Calculations

Area of Rod A (mm²): 905
Theoretical Energy E_{theor} (J): 473
Measured Energy E_{meas} (J): 316

Energy Ratio E_r (%): **67**

Signed: [Redacted Signature]

Title: FITTER

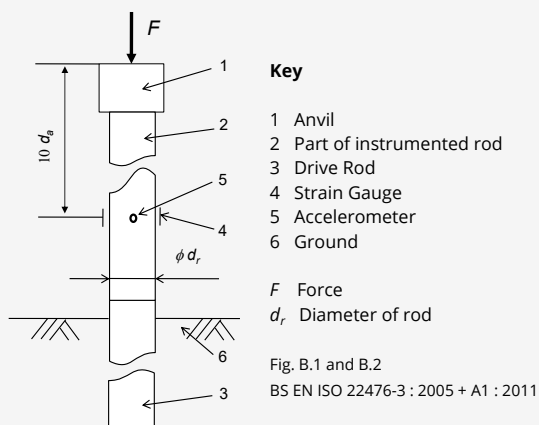
SPT Calibration Report

Hammer Energy Measurement Report

Type of Hammer SPT HAMMER
Test No EQU2025_86
Client RGI

Test Depth (m) 11.00
Mass of hammer $m = 63.5\text{kg}$
Falling height $h = 0.76\text{m}$
 $E_{\text{theor}} = m \times g \times h = 473\text{J}$

Characteristics of the instrumented rod



Diameter $d_r = 0.052\text{ m}$
Length of instrumented rod 0.558 m
Area $A = 11.61\text{ cm}^2$
Modulus $E_o = 206843\text{ MPa}$

$E_{\text{meas}} = 0.421\text{ kN-m}$

$E_{\text{theor}} = 0.473\text{ kN-m}$

Comments

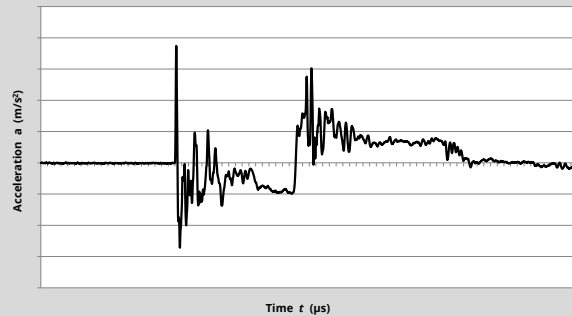
DATE OF TEST VALID UNTIL HAMMER ID

01/09/2025	01/09/2026	RGI12
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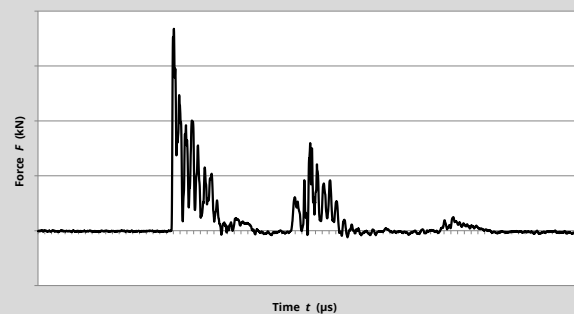
$$\text{Energy Ratio (Er)} = \frac{E_{\text{meas}}}{E_{\text{theor}}}$$

89.10%
© COPYRIGHT 2025

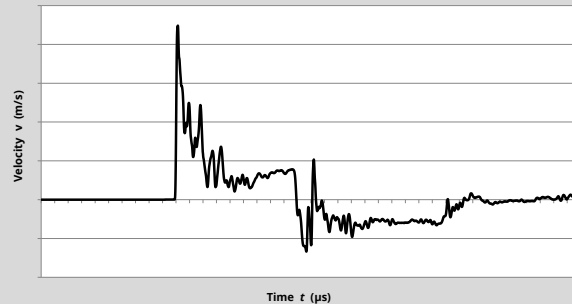
Acceleration



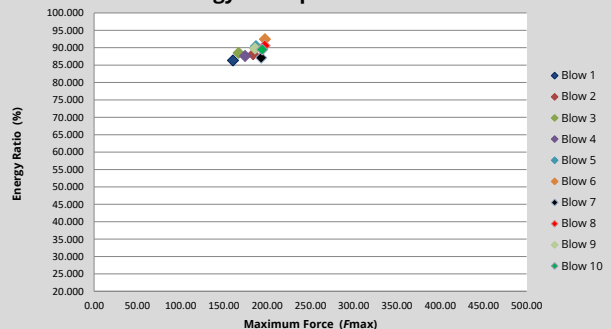
Force



Particle Velocity



Energy Ratio per Blow



Equipe SPT Analyzer Operator

AF

Certificate prepared by

Certificate checked by

Certificate date

02/09/2025

APPENDIX C

Gas Monitoring Equipment Specification and Accuracy Details

Instrument Specifications

Instrument	Atmospheric Pressure Range	Temperature Range	Flow Range	Flow Resolution	Borehole Pressure Range
GA5000	500-1500 mb +/- 5 mb	-10°C to + 50°C	0-20 lt/hr +/- 0.3 l/hr	0.1l/hr	.+500/-500 mbar +/- 4 mbar
Phocheck Tiger	-	-20 to + 60°C (Certified to -15 to + 45°C)	-	-	-

Instrument Accuracy

Instrument		Methane	Lower Explosive Limit	Carbon Dioxide	Oxygen	Volatile Organic Compounds	Hydrogen Sulphide	Carbon Monoxide
GA5000	Detection Range	0-100%	-	0 -100%	0-25%	NA	0 -50ppm response <30 secs	0 - 1000ppm response <30 Secs
	Detection Accuracy	./- 0.5% @ 0 to 70%, ./-1.5% @ 70 to 100% Response < 10 secs	N/A	./- 0.5% @ 0 to 60%, ./-1.5% @ 60 to 100% Response < 10 secs	./- 1.0% @ 0 to 25%, Response < 20 secs	NA	./- 1.5% FS	./- 2% of FS
Phocheck Tiger	Detection Range	N/A	N/A	N/A	N/A	1 ppb - 10,000 ppm	N/A	N/A
	Detection Accuracy	N/A	N/A	N/A	N/A	+/- 1ppb +/- 5% of actual displayed accuracy +/- One digit Response < 2sec	N/A	N/A

Calibration Frequency

Equipment Serial Numbers

<p>Instruments are calibrated annually.</p> <p>Details of the instrument calibration certificates and service records are available if required.</p>		
	GA5000 (G503948, G505383, G505737)	
	Phocheck Tiger - (T-108308, T-109597, T-109598, T-110423)	

Ground Gas Monitoring and Flow Results

Project Number: AG3744-26

Project Name: Langstone Technology Park, Havant – Phase 3A

Date and Start Time of Monitoring: 09/03/2026 13:30

Phase of Monitoring: 1 of 5

BH No.	Flow Range (litres/hr over 3 mins)			Differential Pressure (mb)	Methane % v/v		Carbon dioxide % v/v		Oxygen % v/v		Water level (m bgl)	Water level (m AOD)
	Max	Min	Steady		Peak	Steady	Peak	Steady	Min	Steady		
CP04	<0.1	<0.1	<0.1	0.00	<0.1	<0.1	0.0	0.0	19.1	19.1	-	-
CP05	<0.1	<0.1	<0.1	0.00	<0.1	<0.1	0.2	0.2	20.4	20.4	1.16	3.33
DCS09	<0.1	<0.1	<0.1	0.00	<0.1	<0.1	<0.1	<0.1	16.3	16.3	1.46	2.82

Additional gases (if required)

BH No.	VOCs (ppm)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Diameter of installation (mm)
CP04	0.2	-	-	50
CP05	<0.1	-	-	50
DCS09	0.1	-	-	50

Borehole specific comments/observations

CP04- Unable to remove bung.

Meteorological Data

Atmospheric Pressure (mb)	Start: 1016
Atmospheric Pressure (mb)	Finish: 1016
Pressure Rising or Falling	Rising over 24hrs
Weather Conditions	Overcast, dry
Atmospheric Oxygen (% vol)	20.4
Wind Speed & Direction	6 Kts SSW
Ambient Air Temperature (°C)	12.0

Site Data

Monitoring Personnel	Kristian Bennett
Gasmeter Serial Number	GM25-14417
PID Serial Number	109597
Ground Conditions (vegetation stress, visual contamination):	

General Notes:

- Instrument specification data and calibration information provided on a separate sheet
- Pressure rising / falling based on 24hr period over monitoring day

Ground Gas Monitoring and Flow Results

Project Number: AG3744-26

Date and Start Time of Monitoring: 17/03/2026 9:00 AM

Project Name: Langstone Technology Park, Havant – Phase 3A

Phase of Monitoring: 2 of 5

BH No.	Flow Range (litres/hr over 3 mins)			Differential Pressure (mb)	Methane % v/v		Carbon dioxide % v/v		Oxygen % v/v		Water level (m bgl)	Water level (m AOD)
	Max	Min	Steady		Peak	Steady	Peak	Steady	Min	Steady		
CP04	<0.1	<0.1	<0.1	0.00	<0.1	<0.1	<0.1	<0.1	20.2	20.2	1.80	3.02
CP05	<0.1	<0.1	<0.1	0.00	<0.1	<0.1	0.2	0.2	20.2	20.2	1.72	2.77
DCS09	0.8	<0.1	<0.1	0.00	<0.1	<0.1	<0.1	<0.1	16.9	16.9	DRY	-

Additional gases (if required)

BH No.	VOCs (ppm)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Diameter of installation (mm)
CP04	<0.1	-	-	50
CP05	<0.1	-	-	50
DCS09	<0.1	-	-	50

Borehole specific comments/observations

Meteorological Data

Atmospheric Pressure (mb)	Start: 1014
Atmospheric Pressure (mb)	Finish: 1011
Pressure Rising or Falling	Rising over 24hrs
Weather Conditions	Cloudy, dry
Atmospheric Oxygen (% vol)	20.1
Wind Speed & Direction	14 Kts SSW
Ambient Air Temperature (°C)	9.0

Site Data

Monitoring Personnel	Kristian Bennett
Gasmeter Serial Number	GM25-14417
PID Serial Number	109597
Ground Conditions (vegetation stress, visual contamination):	

General Notes:

1. Instrument specification data and calibration information provided on a separate sheet
2. Pressure rising / falling based on 24hr period over monitoring day

Ground Gas Monitoring and Flow Results

Project Number: AG3744-26

Project Name: Langstone Technology Park, Havant – Phase 3A

Date and Start Time of Monitoring: 25/03/2026 10:10 AM

Phase of Monitoring: 3 of 5

BH No.	Flow Range (litres/hr over 3 mins)			Differential Pressure (mb)	Methane % v/v		Carbon dioxide % v/v		Oxygen % v/v		Water level (m bgl)	Water level (m AOD)
	Max	Min	Steady		Peak	Steady	Peak	Steady	Min	Steady		
CP04	-	-	-	-	-	-	-	-	-	-	-	-
CP05	<0.1	<0.1	<0.1	0.00	<0.1	<0.1	0.2	0.2	18.4	18.4	1.27	3.22
DCS09	-	-	-	-	-	-	-	-	-	-	-	-

Additional gases (if required)

BH No.	VOCs (ppm)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Diameter of installation (mm)
CP04	-	-	-	50
CP05	<0.1	-	-	50
DCS09	-	-	-	50

Borehole specific comments/observations

CP04 - no access

DCS09 - no access

Meteorological Data

Atmospheric Pressure (mb)	Start: 1009
Atmospheric Pressure (mb)	Finish: 1014
Pressure Rising or Falling	Falling over 24hrs
Weather Conditions	very windy, no rain
Atmospheric Oxygen (% vol)	20.4
Wind Speed & Direction	23kts NW
Ambient Air Temperature (°C)	7.0

Site Data

Monitoring Personnel	Kristian Bennett
Gasmeter Serial Number	GM25-14417
PID Serial Number	109598
Ground Conditions (vegetation stress, visual contamination): dry concrete / dry grass	

General Notes:

- Instrument specification data and calibration information provided on a separate sheet
- Pressure rising / falling based on 24hr period over monitoring day

Ground Gas Monitoring and Flow Results

Project Number: AG3744-26

Date and Start Time of Monitoring: 31/03/2026 11:30 AM

Project Name: Langstone Technology Park, Havant – Phase 3A

Phase of Monitoring: 4 of 5

BH No.	Flow Range (litres/hr over 3 mins)			Differential Pressure (mb)	Methane % v/v		Carbon dioxide % v/v		Oxygen % v/v		Water level (m bgl)	Water level (m AOD)
	Max	Min	Steady		Peak	Steady	Peak	Steady	Min	Steady		
CP04	<0.1	<0.1	<0.1	0.00	<0.1	<0.1	<0.1	<0.1	19.9	19.9	1.84	2.98
CP05	<0.1	<0.1	<0.1	0.00	<0.1	<0.1	0.2	0.2	16.1	16.1	1.29	3.20
DCS09	<0.1	<0.1	<0.1	0.00	<0.1	<0.1	<0.1	<0.1	16.9	16.9	DRY	-

Additional gases (if required)

BH No.	VOCs (ppm)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Diameter of installation (mm)
CP04	0.2	-	-	50
CP05	0.1	-	-	50
DCS09	<0.1	-	-	50

Borehole specific comments/observations

Meteorological Data

Atmospheric Pressure (mb)	Start: 1028
Atmospheric Pressure (mb)	Finish: 1027
Pressure Rising or Falling	Rising
Weather Conditions	Partial cloud
Atmospheric Oxygen (% vol)	20.3
Wind Speed & Direction	8kts NW
Ambient Air Temperature (°C)	12.0

Site Data

Monitoring Personnel	Kristian Bennett
Gasmeter Serial Number	GM25-14417
PID Serial Number	109598
Ground Conditions (vegetation stress, visual contamination):	

General Notes:

1. Instrument specification data and calibration information provided on a separate sheet
2. Pressure rising / falling based on 24hr period over monitoring day

Ground Gas Monitoring and Flow Results

Project Number: AG3744-26

Date and Start Time of Monitoring: 17/03/2026 9:00 AM

Project Name: Langstone Technology Park, Havant – Phase 3A

Phase of Monitoring: 5 of 5

BH No.	Flow Range (litres/hr over 3 mins)			Differential Pressure (mb)	Methane % v/v		Carbon dioxide % v/v		Oxygen % v/v		Water level (m bgl)	Water level (m AOD)
	Max	Min	Steady		Peak	Steady	Peak	Steady	Min	Steady		
CP04	<0.1	<0.1	<0.1	0.00	<0.1	<0.1	<0.1	<0.1	19.5	19.5	1.96	2.86
CP05	0.2	<0.1	<0.1	0.00	<0.1	<0.1	0.1	0.1	11.3	11.3	1.37	3.12
DCS09	<0.1	<0.1	<0.1	0.00	<0.1	<0.1	<0.1	<0.1	20.3	20.3	DRY	-

Additional gases (if required)

BH No.	VOCs (ppm)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Diameter of installation (mm)
CP04	0.4	-	-	50
CP05	0.4	-	-	50
DCS09	0.1	-	-	50

Borehole specific comments/observations

Meteorological Data

Atmospheric Pressure (mb)	Start: 1018
Atmospheric Pressure (mb)	Finish: 1018
Pressure Rising or Falling	Falling over 24hrs
Weather Conditions	Sunny
Atmospheric Oxygen (% vol)	20.3
Wind Speed & Direction	7 km/h NNE
Ambient Air Temperature (°C)	11.0

Site Data

Monitoring Personnel	Kristian Bennett
Gasmeter Serial Number	GM25-14417
PID Serial Number	109597
Ground Conditions (vegetation stress, visual contamination):	

General Notes:

1. Instrument specification data and calibration information provided on a separate sheet
2. Pressure rising / falling based on 24hr period over monitoring day

GROUNDWATER SAMPLING RECORD

PROJECT: Langstone Technology Park, Havant – Phase 3A	PROJECT No: AG3744-26
DATE: 17/03/2026	PHASE OF SAMPLING: 1
WEATHER: Partial cloud, dry, windy	AIR TEMP (°C): 9
FIELD PERSONNEL: Kristian Bennett	

Monitoring Well	Standpipe Depth (m bgl)	Standpipe Diameter (mm)	Purging Method*1	Sampling Depth (m bgl)	Groundwater Level Before Purging (m bgl)	Groundwater Level After Purging (m bgl)	Purge Volume (l)	Sample Colour, Odour & Turbidity	Samples Taken *2			LNAPL/ DNAPL *3	Product Thickness (mm)
									P (l)	G (l)	V (No.)		
CP03	3.05	50	Bailer	1.90	1.98	1.98	-	Light brown colour. No odour. Moderate turbidity.	1	2	3	NPD	-
CP04	6.30	50	Bailer	1.80	1.80	1.80	-	Light yellow colour. No odour. Low turbidity.	1	2	3	NPD	-

COMMENTS:

- *Notes:**
1. W = Waterra Inertia Tubing, B = Disposable Bailer, P = Downhole Pump.
 2. P = Plastic Bottle (l), G = Glass Bottle (l), V = Glass Vial (No.)
 3. NPD = No Product Detected

See Accompanying Gas Monitoring Sheet:

Y

Sample Storage Method:

APPENDIX D

SOIL CHEMICAL RESULTS COMPARED AGAINST SCREENING VALUES FOR HUMAN HEALTH										
Site:		Langstone Technology Park, Havant - Phase 3A								
Job No:		AG3744-26								
Land Use:		Commercial / Industrial								
Dataset:		Made Ground								
Soil Organic Matter (%)		1.0 %								
Exploratory Hole Reference		TP01	TP03	TP04	TP05	CP05	DCS09	No. of samples (n)	Commercial / Industrial	Source/Justification
Depth (m)		0.50	0.70	0.20	0.50	0.50	0.30			
Strata		MG	MG	MG	MG	MG	MG			
	Units									
Organic Matter (%)	%	0.86	1.05	0.23	0.56	1.5	0.46	6		
pH		10.2	8.8	9.4	11.1	11.2	10.4	6		
Arsenic	mg/kg	3.5	5.6	9.2	12.9	8.3	7.9	6	640	LQM/CI EH S4UL (2015)
Beryllium	mg/kg	0.24	0.25	0.15	0.22	0.17	0.26	6	12	LQM/CI EH S4UL (2015)
Boron	mg/kg	0.6	0.7	0.5	0.6	1	0.7	6	240000	LQM/CI EH S4UL (2015)
Cadmium	mg/kg	0.4	0.3	0.4	0.2	0.6	0.2	6	190	LQM/CI EH S4UL (2015)
Chromium III	mg/kg	11.5	12.3	23.8	14.1	11.4	10.6	6	8600	LQM/CI EH S4UL (2015)
Chromium (Hexavalent)	mg/kg	0.1	0.1	0.1	0.1	0.6	0.1	6	49	C4SL (2014)
Copper	mg/kg	7.6	8.9	22.5	8.1	7.5	8.1	6	68000	LQM/CI EH S4UL (2015)
Lead	mg/kg	14.6	19.7	40.6	9.6	28.3	9.3	6	2330	C4SL (2014)
Mercury	mg/kg	0.5	0.5	0.5	0.5	0.5	0.5	6	1100	LQM/CI EH S4UL (2015)
Nickel	mg/kg	8.9	10.4	22.8	16.2	9.7	6.1	6	980	LQM/CI EH S4UL (2015)
Selenium	mg/kg	0.5	0.5	1.2	0.5	0.5	0.5	6	12000	LQM/CI EH S4UL (2015)
Vanadium	mg/kg	15.5	18.2	39.6	28.8	0.5	17.7	6	9000	LQM/CI EH S4UL (2015)
Zinc	mg/kg	28.8	37.9	58.8	29	94.6	29.5	6	730000	LQM/CI EH S4UL (2015)
Naphthalene	mg/kg	0.09	0.09	0.09	0.09	0.09	0.09	6	190	LQM/CI EH S4UL (2015)
Acenaphthylene	mg/kg	0.09	0.09	0.09	0.09	0.09	0.08	6	84000	LQM/CI EH S4UL (2015)
Acenaphthene	mg/kg	0.09	0.09	0.09	0.09	0.09	0.08	6	83000	LQM/CI EH S4UL (2015)
Fluorene	mg/kg	0.09	0.09	0.09	0.09	0.09	0.08	6	63000	LQM/CI EH S4UL (2015)
Phenanthrene	mg/kg	0.09	0.09	0.09	0.09	0.31	0.17	6	22000	LQM/CI EH S4UL (2015)
Anthracene	mg/kg	0.09	0.09	0.09	0.09	0.14	0.08	6	520000	LQM/CI EH S4UL (2015)
Fluoranthene	mg/kg	0.25	0.18	0.09	0.2	0.8	0.48	6	23000	LQM/CI EH S4UL (2015)
Pyrene	mg/kg	0.24	0.16	0.09	0.19	0.7	0.42	6	54000	LQM/CI EH S4UL (2015)
Benzo[a]anthracene	mg/kg	0.15	0.13	0.09	0.12	0.41	0.28	6		Genotoxic PAH see Benzo(a)pyrene
Chrysene	mg/kg	0.16	0.14	0.09	0.17	0.35	0.29	6		Genotoxic PAH see Benzo(a)pyrene
Benzo[b]fluoranthene	mg/kg	0.22	0.26	0.09	0.23	0.47	0.41	6		Genotoxic PAH see Benzo(a)pyrene
Benzo[k]fluoranthene	mg/kg	0.1	0.1	0.09	0.1	0.2	0.17	6		Genotoxic PAH see Benzo(a)pyrene
Benzo[a]pyrene	mg/kg	0.17	0.18	0.09	0.16	0.38	0.29	6	76	C4SL (2014)
Dibenzo[a,h]anthracene	mg/kg	0.09	0.09	0.09	0.09	0.09	0.08	6		Genotoxic PAH see Benzo(a)pyrene
Indeno[1,2,3-cd]pyrene	mg/kg	0.13	0.17	0.09	0.14	0.24	0.2	6		Genotoxic PAH see Benzo(a)pyrene
Benzo[g,h,i]perylene	mg/kg	0.13	0.17	0.09	0.14	0.23	0.18	6		Genotoxic PAH see Benzo(a)pyrene
Total of 16 PAHs	mg/kg	2.18	2.13	1.44	2.08	4.66	3.37	6		
Phenols (Total)	mg/kg	0.45	0.46	0.45	0.46	0.43	0.43	6	440	LQM/CI EH S4UL (2015)
Benzene	mg/kg	0.011	0.012	0.011	0.012	0.011	0.011	6	27	LQM/CI EH S4UL (2015)
Toluene	mg/kg	0.011	0.006	0.006	0.006	0.005	0.005	6	56000	LQM/CI EH S4UL (2015)
Ethylbenzene	mg/kg	0.006	0.006	0.006	0.006	0.005	0.005	6	5700	LQM/CI EH S4UL (2015)
m&p Xylene	mg/kg	0.012	0.011	0.011	0.012	0.011	0.011	6	5900	LQM/CI EH S4UL (2015)
o-Xylene	mg/kg	0.006	0.006	0.006	0.006	0.005	0.005	6	6600	LQM/CI EH S4UL (2015)
Aliphatic TPH >C5-C6	mg/kg	0.225	0.23	0.225	0.23	0.216	0.211	6	3200	LQM/CI EH S4UL (2015)
Aliphatic TPH >C6-C7	mg/kg	0.225	0.23	0.225	0.23	0.216	0.211	6	7800	LQM/CI EH S4UL (2015)
Aliphatic TPH >C7-C8	mg/kg	0.225	0.23	0.225	0.23	0.216	0.211	6		
Aliphatic TPH >C8-C10	mg/kg	0.225	0.23	0.225	0.23	0.216	0.211	6	2000	LQM/CI EH S4UL (2015)
Aliphatic TPH >C10-C12	mg/kg	4.49	4.6	4.5	4.61	4.33	4.23	6	9700	LQM/CI EH S4UL (2015)
Aliphatic TPH >C12-C16	mg/kg	4.49	4.6	4.5	4.61	4.33	4.23	6	59000	LQM/CI EH S4UL (2015)
Aliphatic TPH >C16-C21	mg/kg	4.49	4.6	4.5	4.61	7.87	6.54	6	-	-
Aliphatic TPH >C21-C35	mg/kg	15.2	11.5	11.3	14.9	68.4	96.3	6	No Risk	LQM/CI EH S4UL (2015)
Total Aliphatic Hydrocarbons	mg/kg	22.5	23	22.5	23.8	106	150	6	No Risk	LQM/CI EH S4UL (2015)
Aromatic TPH >C5-C7	mg/kg	0.011	0.012	0.011	0.012	0.011	0.011	6	26000	LQM/CI EH S4UL (2015)
Aromatic TPH >C7-C8	mg/kg	0.011	0.006	0.006	0.006	0.005	0.005	6	56000	LQM/CI EH S4UL (2015)
Aromatic TPH >C8-C10	mg/kg	0.023	0.024	0.023	0.024	0.022	0.021	6	3500	LQM/CI EH S4UL (2015)
Aromatic TPH >C10-C12	mg/kg	4.49	4.6	4.5	4.61	4.33	4.23	6	16000	LQM/CI EH S4UL (2015)
Aromatic TPH >C12-C16	mg/kg	4.49	4.6	4.5	4.61	4.33	4.23	6	36000	LQM/CI EH S4UL (2015)
Aromatic TPH >C16-C21	mg/kg	4.49	4.6	4.5	4.61	9.5	8.48	6	28000	LQM/CI EH S4UL (2015)
Aromatic TPH >C21-C35	mg/kg	23.4	20.7	11.3	18.3	101	157	6	28000	LQM/CI EH S4UL (2015)
Total Aromatic Hydrocarbons	mg/kg	36	30.4	22.5	28.7	164	273	6		
Total Petroleum Hydrocarbons	mg/kg	58.5	53.4	45	52.5	270	423	6		
		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected			
Asbestos ID	Detection							6		

Value within sample set exceeds screening value
Statistical value exceeds screening value

LQM/CI EH S4UL Reference No. S4UL3159 (2015)
Values in **bold** are reported at the laboratory limit of detection
Benzo(a)pyrene has been used as a 'surrogate marker for genotoxic PAH' as discussed in Appendix E of CL:AIRE SP1010 'Development of C4SL for Assessment of Land Affected by Contamination', December 2013.
This allows assessment of the combined carcinogenic risk associated with genotoxic PAH using only b(a)p. Genotoxic PAHs include Benz(a)pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(ah)anthracene, Indeno(123cd)pyrene, Benzo(ghi)perylene and have been marked with a * on the table.

SUMMARY OF GROUNDWATER TEST RESULTS

Site Langstone Technology Park, Havant Phase 3 - Phase 3A
 Job Number AG3744-26
 Type of Water Groundwater

Determinand	Hazardous or Non-Hazardous^	Sample Identity Depth Sampled Date	CP04 1.8 17/03/2026	CP05 1.72 17/03/2026	No. of samples (n)	Waters Screening Value	Source & Justification
pH	-	-	7.4	7.5	2	-	-
TOC	-	mg l ⁻¹	0.60	0.43	2	-	-
Arsenic	Haz	µg l ⁻¹	1	1	2	10	UK Drinking Water Standards (2010)
Beryllium	Non Haz	µg l ⁻¹	10	10	2	12	UK Drinking Water Standards (2010)
Boron	Non Haz	µg l ⁻¹	30	20	2	1000	UK Drinking Water Standards (2010)
Cadmium	Non Haz	µg l ⁻¹	0.02	0.02	2	5	UK Drinking Water Standards (2010)
Chromium (VI)	Haz	µg l ⁻¹	3	3	2	32	WFD Environmental Standard, 2010
Chromium (III)	Non Haz	µg l ⁻¹	3	3	2	50	UK Drinking Water Standards (2010)
Chromium (Total)	Non Haz	µg l ⁻¹	1	1	2	32	WFD Environmental Standard, 2010
Copper	Non Haz	µg l ⁻¹	1	1	2	2000	UK Drinking Water Standards (2010)
Lead	Haz	µg l ⁻¹	0.2	0.2	2	10	UK Drinking Water Standards (2010)
Mercury	Haz	µg l ⁻¹	0.03	0.03	2	1	UK Drinking Water Standards (2010)
Nickel	Non Haz	µg l ⁻¹	1	1	2	20	UK Drinking Water Standards (2010)
Selenium	Non Haz	µg l ⁻¹	1	1	2	10	UK Drinking Water Standards (2010)
Vanadium	Non Haz	µg l ⁻¹	1	1	2	60	EQS
Zinc	Non Haz	µg l ⁻¹	14	7	2	5000	UK Drinking Water Standards (2010)
Sulphate	Non Haz	mg l ⁻¹	19	11	2	250	UK Drinking Water Standards (2010)
Phenol	Non Haz	µg l ⁻¹	20	20	2	46	WFD Environmental Standard, 2010
Naphthalene	Non Haz	µg l ⁻¹	0.01	0.01	2	2.4	WFD Environmental Standard, 2010
Acenaphthylene	Haz	µg l ⁻¹	0.01	0.01	2	0.01	Detection limit
Acenaphthene	Haz	µg l ⁻¹	0.01	0.01	2	0.01	Detection limit
Fluorene	Haz	µg l ⁻¹	0.01	0.01	2	0.01	Detection limit
Phenanthrene	Haz	µg l ⁻¹	0.01	0.03	2	0.01	Detection limit
Anthracene	Haz	µg l ⁻¹	0.01	0.01	2	0.4	WFD Environmental Standard, 2010
Fluoranthene	Haz	µg l ⁻¹	0.01	0.12	2	1.0	WFD Environmental Standard, 2010
Pyrene	Haz	µg l ⁻¹	0.01	0.10	2	0.01	Detection limit
Benzo[a]anthracene	Haz	µg l ⁻¹	0.01	0.07	2	0.01	Detection limit
Chrysene	Haz	µg l ⁻¹	0.01	0.09	2	0.01	Detection limit
Benzo[b]fluoranthene	Haz	µg l ⁻¹	0.01	0.12	2	0.03	WFD Environmental Standard, 2010
Benzo[k]fluoranthene	Haz	µg l ⁻¹	0.01	0.04	2	0.03	WFD Environmental Standard, 2010
Benzo[a]pyrene	Haz	µg l ⁻¹	0.01	0.08	2	0.1	WFD Environmental Standard, 2010
Indeno(1,2,3-c,d)Pyrene	Haz	µg l ⁻¹	0.01	0.06	2	0.002	WFD Environmental Standard, 2010
Dibenz(a,h)Anthracene	Haz	µg l ⁻¹	0.01	0.01	2	0.01	Detection limit
Benzo[g,h,i]perylene	Haz	µg l ⁻¹	0.01	0.05	2	0.002	WFD Environmental Standard, 2010
Total PAH*		µg l ⁻¹	0.04	0.27	2	0.1	WFD Environmental Standard, 2010

SUMMARY OF GROUNDWATER TEST RESULTS

Site Langstone Technology Park, Havant Phase 3 - Phase 3A
Job Number AG3744-26
Type of Water Groundwater

Determinand	Hazardous or Non-Hazardous^	Sample Identity Depth Sampled Date	CP04 1.8 17/03/2026	CP05 1.72 17/03/2026	No. of samples (n)	Waters Screening Value	Source & Justification
Benzene	Haz	µg l ⁻¹	1.00	1.00	2	1	UK Drinking Water Standards (2010)
Toluene	Haz	µg l ⁻¹	1.00	1.00	2	380	WFD Environmental Standard, 2010
Ethylbenzene	Haz	µg l ⁻¹	0.50	0.50	2	300	WHO Guidelines for Drinking Water Quality, 4th Edition (2011)
m & p-Xylene	Haz	µg l ⁻¹	1.00	1.00	2	30	WFD Environmental Standard, 2010
o-Xylene	Haz	µg l ⁻¹	1.00	1.00	2	30	WFD Environmental Standard, 2010
TPH							
Aliphatic TPH >C5-C6	Haz	µg l ⁻¹	100	100	2	100	Detection limit
Aliphatic TPH >C6-C8	Haz	µg l ⁻¹	100	100	2	100	Detection limit
Aliphatic TPH >C8-C10	Haz	µg l ⁻¹	100	100	2	100	Detection limit
Aliphatic TPH >C10-C12	Haz	µg l ⁻¹	10	10	2	10	Detection limit
Aliphatic TPH >C12-C16	Haz	µg l ⁻¹	10	10	2	10	Detection limit
Aliphatic TPH >C16-C21	Haz	µg l ⁻¹	10	10	2	10	Detection limit
Aliphatic TPH >C21-C35	Haz	µg l ⁻¹	10	10	2	10	Detection limit
Total Aliphatic Hydrocarbons	Haz	µg l ⁻¹	10	10	2	-	
Aromatic TPH >C5-C7	Haz	µg l ⁻¹	5	5	2	5	Detection limit
Aromatic TPH >C7-C8	Haz	µg l ⁻¹	5	5	2	5	Detection limit
Aromatic TPH >C8-C10	Haz	µg l ⁻¹	20	20	2	20	Detection limit
Aromatic TPH >C10-C12	Haz	µg l ⁻¹	10	10	2	10	Detection limit
Aromatic TPH >C12-C16	Haz	µg l ⁻¹	10	10	2	10	Detection limit
Aromatic TPH >C16-C21	Haz	µg l ⁻¹	10	10	2	10	Detection limit
Aromatic TPH >C21-C35	Haz	µg l ⁻¹	10	10	2	10	Detection limit
Total Aromatic Hydrocarbons	Haz	µg l ⁻¹	10	20	2	-	-
Total Petroleum Hydrocarbons	Haz	µg l ⁻¹	10	20	2	50	UK Drinking Water Standards (2010)
VOC			All below LOD				Detection Limit
SVOC			All below LOD				Detection Limit

^ Note: Hazardous and non-hazardous substances determined by JAGDAG (Jan 2017) and published at <http://www.wfduk.org/sites/default/files/Media/170116%20Substance%20Determinationsfinal.pdf>.

Key- These are marked in bold.

Result exceeds Screening Value (for Haz determinands)

Result exceeds Screening Value (for Non Haz determinands)

Values in bold at the limit of detection

For substances not assessed by JAGDAG, Applied Geology has assumed a determination based on our understanding of the behaviour of the chemical. These determinations are highlighted in yellow.

Certificate of Analysis

Client: Applied Geology Ltd

Project: 26030178

Quote: BEC251243961 V3.1

Project Ref: AG3744-26

Site: Langstone Technology Park, Havant - Phase 3

Contact: Cassandra Ellis

Address: The Old Barn, Church Farm
Fulbrook Lane,
Sherbourne
Warwick
CV35 8AR

E-Mail: Cassandra.Ellis@appliedgeology.co.uk

Phone: 07841 369192

No. Samples Received: 6

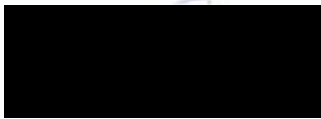
Date Received: 03/03/2026

Analysis Completed: 19/03/2026

Date Issued: 20/03/2026

Report Type: Version 01

This report supersedes any versions previously issued by the laboratory



Reported by Customer Service Coordinator
Aniko Gondolne-Mantler
01283 554 429
Aniko.Gondolne-Mantler@socotec.co.uk

**Project Number: 26030178****Client:** Applied Geology Ltd**Date Issued:** 20/03/2026**Project Name:** AG3744-26 - Langstone Technology Park, Havant - Phase 3**Samples Analysed**

<u>Text ID</u>	<u>Sample Reference</u>	<u>Sampling Date</u>	<u>Sample Type</u>	<u>Sample Description</u>
26030178-001	TP05-0-ES-0.5-0.5	23/02/2026 00:00:00	SOLID	Clay Sample
26030178-002	TP04-0-ES-0.2-0.2	24/02/2026 00:00:00	SOLID	Gravel Sample
26030178-003	TP01-0-ES-0.5-0.5	24/02/2026 00:00:00	SOLID	Clay Sample
26030178-004	TP03-0-ES-0.7-0.7	24/02/2026 00:00:00	SOLID	Clay Sample
26030178-005	DCS09-0-ES-0.3-0.3	23/02/2026 00:00:00	SOLID	Silt Sample
26030178-006	CP05-0-ES-0.5-0.5	24/02/2026 00:00:00	SOLID	Silt Sample

Analysis Results

Analysis Results			SOCOTEC Sample ID:		26030178-001	26030178-002	26030178-003	26030178-004	26030178-005
			Sampling Date:		23/02/2026 00:00	24/02/2026 00:00	24/02/2026 00:00	24/02/2026 00:00	23/02/2026 00:00
			Customer ID:		TP05-0-ES-0.5-0.5	TP04-0-ES-0.2-0.2	TP01-0-ES-0.5-0.5	TP03-0-ES-0.7-0.7	DCS09-0-ES-0.3-0.3
Method Code	Analysis	MDL	Accred.						
CLANDPREP	Total Moisture at 35°C	0.1 %	N	13.2	11.2	11.0	13.0	5.4	
	Major Constituents	-	N	CLAY	GRAVEL	CLAY	CLAY	SILT	
	Minor Constituents	-	N	Gravel	Chalk	Gravel	Gravel	Gravel	
	Miscellaneous Constituents	-	N	Chalk	Miscellaneous	Miscellaneous	Miscellaneous	Miscellaneous	
	Colour of Material	-	N	Brown/Grey	Brown/Grey	Grey/Brown	Grey/Brown	Grey/Brown	
SUB035	Asbestos Identification	-	N	NAIIS	NAIIS	NAIIS	NAIIS	NAIIS	
PHSOIL	pH (2.5:1 extraction)	1 pH units	M^	11.1	9.4*	10.2	8.8	10.4	
WSLM59	Soil Organic Matter	0.04 % m/m	U^	0.56	0.23*	0.86	1.05	0.46	
ICPWSS	Water Soluble Sulphate as SO4 by Mass	20 mg/kg	M^	527	35*	480	1570	350	
ICPMSS	Arsenic as As	0.3 mg/kg	M^	12.9	9.2*	3.5	5.6	7.9	
ICPSOIL	Beryllium as Be	0.1 mg/kg	U^	0.22	0.15*	0.24	0.25	0.26	
ICPMSS	Cadmium as Cd	0.2 mg/kg	M^	<0.2	0.4*	0.4	0.3	0.2	
ICPMSS	Total Chromium as Cr	1.2 mg/kg	M^	14.1	23.8*	11.5	12.3	10.6	
CALC_CR3	Chromium (III)	1.2 mg/kg	N^	14.1	23.8	11.5	12.3	10.6	
KONENS	Chromium (VI) as Cr	0.1 mg/kg	N^	<0.1	<0.1	<0.1	<0.1	<0.1	
ICPMSS	Copper as Cu	1.6 mg/kg	M^	8.1	22.5*	7.6	8.9	8.1	
ICPMSS	Lead as Pb	0.7 mg/kg	M^	9.6	40.6*	14.6	19.7	9.3	
ICPSOIL	Magnesium as Mg	10 mg/kg	U^	1130	782*	1480	4540	3570	
ICPMSS	Mercury as Hg	0.5 mg/kg	M^	<0.5	<0.5*	<0.5	<0.5	<0.5	
ICPMSS	Nickel as Ni	2 mg/kg	M^	16.2	22.8*	8.9	10.4	6.1	
ICPMSS	Selenium as Se	0.5 mg/kg	M^	<0.5	1.2*	<0.5	<0.5	<0.5	
ICPMSS	Vanadium as V	0.6 mg/kg	N^	28.8	39.6	15.5	18.2	17.7	
ICPMSS	Zinc as Zn	16 mg/kg	M^	29.0	58.8*	28.8	37.9	29.5	
ICPBOR	Boron as B	0.5 mg/kg	M^	0.6	<0.5*	0.6	0.7	0.7	
BTEXHSA	MTBE	10 µg/kg	U^	<12	<11*	<11	<12	<11	
	Benzene (HS_1D_AR)	10 µg/kg	M^	<12	<11*	<11	<12	<11	
	Toluene (HS_1D_AR)	5 µg/kg	M^	6	<6*	11	<6	<5	
	Ethylbenzene (HS_1D_AR)	5 µg/kg	M^	<6	<6*	<6	<6	<5	
	m/p-Xylene (HS_1D_AR)	10 µg/kg	M^	<12	<11*	<11	<12	<11	
	o-Xylene (HS_1D_AR)	5 µg/kg	M^	<6	<6*	<6	<6	<5	
GROHSA	>C6-C10 (HS_1D_Total)	0.2 mg/kg	M^	<0.230	<0.225*	<0.225	<0.230	<0.211	
TPHCALC	>C6-C40 (HS+EH_1D_Total)	10.2 mg/kg	U^	37.2	<11.5*	40.3	27.6	279	
TPHFIDUS	>C10-C12 (EH_1D_Total)	2 mg/kg	U^	<2.30	<2.25*	<2.25	<2.30	<2.11	
	>C10-C40 (EH_1D_Total)	10 mg/kg	U^	37.0	<11.3*	40.1	27.4	279	
	>C12-C16 (EH_1D_Total)	2 mg/kg	U^	<2.30	<2.25*	<2.25	<2.30	2.60	
	>C16-C21 (EH_1D_Total)	2 mg/kg	U^	6.61	<2.25*	7.91	3.85	16.4	
	>C21-C35 (EH_1D_Total)	5 mg/kg	U^	26.3	<5.63*	28.8	21.0	219	
	Total GRO C5-C10 (HS_1D_Total)	0.2 mg/kg	M^	<0.230	<0.225*	<0.225	<0.230	<0.211	
GROHSA/BTEXHSA	C5-C6 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^	<0.230	<0.225*	<0.225	<0.230	<0.211	
	>C6-C7 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^	<0.230	<0.225*	<0.225	<0.230	<0.211	
	>C7-C8 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^	<0.23	<0.225*	<0.225	<0.230	<0.211	
	>C8-C10 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^	<0.230	<0.225*	<0.225	<0.230	<0.211	
	C5-C7 Aromatic (HS_1D_AR)	0.01 mg/kg	M^	<0.012	<0.011*	<0.011	<0.012	<0.011	
	>C7-C8 Aromatic (HS_1D_AR)	0.005 mg/kg	M^	0.006	<0.006*	0.011	<0.006	<0.005	
	>C8-C10 Aromatic (HS_1D_AR)	0.02 mg/kg	M^	<0.024	<0.023*	<0.023	<0.024	<0.021	
	Total TPH >C8-C40 (Aliphatic) (EH_CU_1D_AL)	20 mg/kg	U^	23.8	<22.5*	<22.5	<23.0	150	
TPHFIDUS (Aliphatic)	>C10-C12 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^	<4.61	<4.50*	<4.49	<4.60	<4.23	
	>C12-C16 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^	<4.61	<4.50*	<4.49	<4.60	<4.23	
	>C16-C21 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^	<4.61	<4.50*	<4.49	<4.60	6.54	
	>C21-C35 (Aliphatic) (EH_CU_1D_AL)	10 mg/kg	U^	14.9	<11.3*	15.2	<11.5	96.3	
TPHFIDUS (Aromatic)	Total TPH >C8-C40 (Aromatic) (EH_CU_1D_AR)	20 mg/kg	U^	28.7	<22.5*	36.0	30.4	273	
	>C10-C12 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^	<4.61	<4.50*	<4.49	<4.60	<4.23	
	>C12-C16 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^	<4.61	<4.50*	<4.49	<4.60	<4.23	
	>C16-C21 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^	<4.61	<4.50*	<4.49	<4.60	8.48	
	>C21-C35 (Aromatic) (EH_CU_1D_AR)	10 mg/kg	U^	18.3	<11.3*	23.4	20.7	157	
PAHMSUS	Acenaphthene	0.08 mg/kg	M^	<0.09	<0.09*	<0.09	<0.09	<0.08	
	Acenaphthylene	0.08 mg/kg	U^	<0.09	<0.09*	<0.09	<0.09	<0.08	
	Anthracene	0.08 mg/kg	U^	<0.09	<0.09*	<0.09	<0.09	<0.08	
	Benzo[a]anthracene	0.08 mg/kg	M^	0.12	<0.09*	0.15	0.13	0.28	
	Benzo[a]pyrene	0.08 mg/kg	M^	0.16	<0.09*	0.17	0.18	0.29	
	Benzo[b]fluoranthene	0.08 mg/kg	M^	0.23	<0.09*	0.22	0.26	0.41	
	Benzo[g,h,i]perylene	0.08 mg/kg	M^	0.14	<0.09*	0.13	0.17	0.18	
	Benzo[k]fluoranthene	0.08 mg/kg	M^	0.10	<0.09*	0.10	0.10	0.17	
	Chrysene	0.08 mg/kg	M^	0.17	<0.09*	0.16	0.14	0.29	
	Dibenzo[a,h]anthracene	0.08 mg/kg	M^	<0.09	<0.09*	<0.09	<0.09	<0.08	
	Fluoranthene	0.08 mg/kg	M^	0.20	<0.09*	0.25	0.18	0.48	
	Fluorene	0.08 mg/kg	M^	<0.09	<0.09*	<0.09	<0.09	<0.08	
	Indeno[1,2,3-cd]pyrene	0.08 mg/kg	M^	0.14	<0.09*	0.13	0.17	0.20	
	Naphthalene	0.08 mg/kg	M^	<0.09	<0.09*	<0.09	<0.09	<0.08	
	Phenanthrene	0.08 mg/kg	M^	<0.09	<0.09*	<0.09	<0.09	0.17	
	Pyrene	0.08 mg/kg	M^	0.19	<0.09*	0.24	0.16	0.42	
PHEHPLCUV	Total PAH 16	1.28 mg/kg	U^	2.08	<1.44*	2.18	2.13	3.37	
	Phenol	0.1 mg/kg	M^	<0.11	<0.11*	<0.10	<0.10	<0.10	
	Methylphenols	0.1 mg/kg	U^	<0.11	<0.11*	<0.10	<0.10	<0.10	
	Dimethylphenols	0.1 mg/kg	U^	<0.11	<0.11*	<0.10	<0.10	<0.10	
	Trimethylphenols	0.1 mg/kg	U^	<0.11	<0.11*	<0.10	<0.10	<0.10	
	Total Phenols	0.4 mg/kg	U^	<0.46	<0.45*	<0.45	<0.46	<0.42	

Analysis Results

SOCOTEC Sample ID: 26030178-006

Sampling Date: 24/02/2026 00:00

Customer ID: CP05-0-ES-0.5-0.5

Method Code	Analysis	MDL	Accred.	
CLANDPREP	Total Moisture at 35°C	0.1 %	N	7.6
	Major Constituents	-	N	SILT
	Minor Constituents	-	N	Gravel
	Miscellaneous Constituents	-	N	Miscellaneous
	Colour of Material	-	N	Grey/Brown
SUB035	Asbestos Identification	-	N	NAIIS
PHSOIL	pH (2.5:1 extraction)	1 pH units	M ^A	11.2
WSLM59	Soil Organic Matter	0.04 % m/m	U ^A	1.50
ICPWSS	Water Soluble Sulphate as SO ₄ by Mass	20 mg/kg	M ^A	708
ICPMSS	Arsenic as As	0.3 mg/kg	M ^A	8.3
ICPSOIL	Beryllium as Be	0.1 mg/kg	U ^A	0.17
ICPMSS	Cadmium as Cd	0.2 mg/kg	M ^A	0.6
ICPMSS	Total Chromium as Cr	1.2 mg/kg	M ^A	12.0
CALC_CR3	Chromium (III)	1.2 mg/kg	N ^A	11.4
KONENS	Chromium (VI) as Cr	0.1 mg/kg	N ^A	0.6
ICPMSS	Copper as Cu	1.6 mg/kg	M ^A	7.5
ICPMSS	Lead as Pb	0.7 mg/kg	M ^A	28.3
ICPSOIL	Magnesium as Mg	10 mg/kg	U ^A	8000
ICPMSS	Mercury as Hg	0.5 mg/kg	M ^A	<0.5
ICPMSS	Nickel as Ni	2 mg/kg	M ^A	9.7
ICPMSS	Selenium as Se	0.5 mg/kg	M ^A	<0.5
ICPMSS	Vanadium as V	0.6 mg/kg	N ^A	18.2
ICPMSS	Zinc as Zn	16 mg/kg	M ^A	94.6
ICPBOR	Boron as B	0.5 mg/kg	M ^A	1.0
BTXHSA	MTBE	10 µg/kg	U ^A	<11
	Benzene (HS_1D_AR)	10 µg/kg	M ^A	<11
	Toluene (HS_1D_AR)	5 µg/kg	M ^A	<5
	Ethylbenzene (HS_1D_AR)	5 µg/kg	M ^A	<5
	m/p-Xylene (HS_1D_AR)	10 µg/kg	M ^A	<11
	o-Xylene (HS_1D_AR)	5 µg/kg	M ^A	<5
GROHSA	>C6-C10 (HS_1D_Total)	0.2 mg/kg	M ^A	<0.216
TPHCALC	>C6-C40 (HS+EH_1D_Total)	10.2 mg/kg	U ^A	<11.0
TPHFIDUS	>C10-C12 (EH_1D_Total)	2 mg/kg	U ^A	<2.16
	>C10-C40 (EH_1D_Total)	10 mg/kg	U ^A	<10.8
	>C12-C16 (EH_1D_Total)	2 mg/kg	U ^A	<2.16
	>C16-C21 (EH_1D_Total)	2 mg/kg	U ^A	<2.16
	>C21-C35 (EH_1D_Total)	5 mg/kg	U ^A	<5.41
GROHSA/BTEXHSA	Total GRO C5-C10 (HS_1D_Total)	0.2 mg/kg	M ^A	<0.216
	C5-C6 Aliphatic (HS_1D_AL)	0.2 mg/kg	M ^A	<0.216
	>C6-C7 Aliphatic (HS_1D_AL)	0.2 mg/kg	M ^A	<0.216
	>C7-C8 Aliphatic (HS_1D_AL)	0.2 mg/kg	M ^A	<0.216
	>C8-C10 Aliphatic (HS_1D_AL)	0.2 mg/kg	M ^A	<0.216
	C5-C7 Aromatic (HS_1D_AR)	0.01 mg/kg	M ^A	<0.011
	>C7-C8 Aromatic (HS_1D_AR)	0.005 mg/kg	M ^A	<0.005
	>C8-C10 Aromatic (HS_1D_AR)	0.02 mg/kg	M ^A	<0.022
TPHFIDUS (Aliphatic)	Total TPH >C8-C40 (Aliphatic) (EH_CU_1D_AL)	20 mg/kg	U ^A	106
	>C10-C12 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U ^A	<4.33
	>C12-C16 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U ^A	<4.33
	>C16-C21 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U ^A	7.87
	>C21-C35 (Aliphatic) (EH_CU_1D_AL)	10 mg/kg	U ^A	68.4
TPHFIDUS (Aromatic)	Total TPH >C8-C40 (Aromatic) (EH_CU_1D_AR)	20 mg/kg	U ^A	164
	>C10-C12 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U ^A	<4.33
	>C12-C16 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U ^A	<4.33
	>C16-C21 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U ^A	9.50
	>C21-C35 (Aromatic) (EH_CU_1D_AR)	10 mg/kg	U ^A	101
PAHMSUS	Acenaphthene	0.08 mg/kg	M ^A	<0.09
	Acenaphthylene	0.08 mg/kg	U ^A	<0.09
	Anthracene	0.08 mg/kg	U ^A	0.14
	Benzo[a]anthracene	0.08 mg/kg	M ^A	0.41
	Benzo[a]pyrene	0.08 mg/kg	M ^A	0.38
	Benzo[b]fluoranthene	0.08 mg/kg	M ^A	0.47
	Benzo[g,h,i]perylene	0.08 mg/kg	M ^A	0.23
	Benzo[k]fluoranthene	0.08 mg/kg	M ^A	0.20
	Chrysene	0.08 mg/kg	M ^A	0.35
	Dibenzo[a,h]anthracene	0.08 mg/kg	M ^A	<0.09
	Fluoranthene	0.08 mg/kg	M ^A	0.80
	Fluorene	0.08 mg/kg	M ^A	<0.09
	Indeno[1,2,3-cd]pyrene	0.08 mg/kg	M ^A	0.24
	Naphthalene	0.08 mg/kg	M ^A	<0.09
	Phenanthrene	0.08 mg/kg	M ^A	0.31
	Pyrene	0.08 mg/kg	M ^A	0.70
PHEHPLCUV	Total PAH 16	1.28 mg/kg	U ^A	4.66
	Phenol	0.1 mg/kg	M ^A	<0.10
	Methylphenols	0.1 mg/kg	U ^A	<0.10
	Dimethylphenols	0.1 mg/kg	U ^A	<0.10
	Trimethylphenols	0.1 mg/kg	U ^A	<0.10
	Total Phenols	0.4 mg/kg	U ^A	<0.43



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7758

CERTIFICATE OF ANALYSIS OF ASBESTOS IN SOILS

JOB NO: 154093/1/1

CLIENT DETAILS:

Client: SOCOTEC UK LIMITED For the attention of: SOCOTEC Purchasing
Client Address: Socotec House, Bretby Business Park, Ashby Road, Burton-upon-Trent, DE15 0YZ
Site Address: Socotec

SAMPLE DETAILS:

TTL Reference: J346573-26030178 Del 06-03-26-S No. Samples Reported: 6
Date of Sample Receipt: 6 Mar 2026 Date of Analysis: 9 Mar 2026, 10 Mar 2026
Sample Taken By: Client

LABORATORY RESULTS:

Aslab ID	Client Sample Reference	Qualitative	Quantitative %	Soil Matrix
154093/01	26030178-001	NAD	-	Soil
154093/02	26030178-002	NAD	-	Soil
154093/03	26030178-003	NAD	-	Soil
154093/04	26030178-004	NAD	-	Soil
154093/05	26030178-005	NAD	-	Soil
154093/06	26030178-006	NAD	-	Soil

Key: NAD - No Asbestos Detected in this sample

Method: Samples of materials, referenced as shown above, have been analysed qualitatively and or quantitatively subject to Customer requirements to determine the presence of asbestos fibres. Fibres in the sample were identified using a stereo microscope, polarised light and dispersion staining in accordance with in-house Procedure MQP118 based on Appendix 2 of HSG 248 'Asbestos: The analyst's guide'.
Disclaimer: Opinions and interpretations, including the description of material type, are outside the scope of our UKAS accreditation. Results apply only to the sample(s) listed in the table above. No responsibility is accepted for errors which may have arisen during sampling or transportation and responsibility cannot be taken for the accuracy, representative nature and location of samples taken by external customers. This test report shall not be reproduced except in full without our prior written approval. Records shall be held securely and electronically for a minimum of 6 years and samples retained for a minimum of 6 months.

Analyst(s): LILITA MULARS

Analyst Signature(s):

Analyst(s): SARAH GUTTERIDGE

Analyst Signature(s):

Analyst(s): ALISA EGLITE

Analyst Signature(s):

Analyst(s): CONNOR BAXTER

Analyst Signature(s):

Approved by: (Approval should be from Laboratory Manager or other authorised personnel)

Name: ALISA EGLITE

Position: LABORATORY MANAGER

Authorised Signature:

Report Issue Date: 10 March 2026

Page 1 of 1

MQF3206 ISSUE NO.03 Issue Date: 04/2023



Project Number: 26030178

Client: Applied Geology Ltd

Date Issued: 20/03/2026

Project Name: AG3744-26 - Langstone Technology Park, Havant - Phase 3

Deviating Sample Report

<u>Sample Reference</u>	<u>Text ID</u>	<u>Method Code</u>	Inadequate Transit Cooling	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
TP05-0-ES-0.5-0.5	26030178-001	BTEXHSA							✓
TP05-0-ES-0.5-0.5	26030178-001	GROHSA							✓
TP05-0-ES-0.5-0.5	26030178-001	GROHSA/BTEXHSA							✓
TP05-0-ES-0.5-0.5	26030178-001	PHSOIL							✓
TP05-0-ES-0.5-0.5	26030178-001	TPHCALC							✓
TP04-0-ES-0.2-0.2	26030178-002	BTEXHSA							✓
TP04-0-ES-0.2-0.2	26030178-002	GROHSA							✓
TP04-0-ES-0.2-0.2	26030178-002	GROHSA/BTEXHSA							✓
TP04-0-ES-0.2-0.2	26030178-002	PHSOIL							✓
TP04-0-ES-0.2-0.2	26030178-002	TPHCALC							✓
TP01-0-ES-0.5-0.5	26030178-003	BTEXHSA							✓
TP01-0-ES-0.5-0.5	26030178-003	GROHSA							✓
TP01-0-ES-0.5-0.5	26030178-003	GROHSA/BTEXHSA							✓
TP01-0-ES-0.5-0.5	26030178-003	PHSOIL							✓
TP01-0-ES-0.5-0.5	26030178-003	TPHCALC							✓
TP03-0-ES-0.7-0.7	26030178-004	BTEXHSA							✓
TP03-0-ES-0.7-0.7	26030178-004	GROHSA							✓
TP03-0-ES-0.7-0.7	26030178-004	GROHSA/BTEXHSA							✓
TP03-0-ES-0.7-0.7	26030178-004	PHSOIL							✓
TP03-0-ES-0.7-0.7	26030178-004	TPHCALC							✓
DCS09-0-ES-0.3-0.3	26030178-005	BTEXHSA							✓
DCS09-0-ES-0.3-0.3	26030178-005	GROHSA							✓
DCS09-0-ES-0.3-0.3	26030178-005	GROHSA/BTEXHSA							✓
DCS09-0-ES-0.3-0.3	26030178-005	PHSOIL							✓
DCS09-0-ES-0.3-0.3	26030178-005	TPHCALC							✓
CP05-0-ES-0.5-0.5	26030178-006	BTEXHSA							✓
CP05-0-ES-0.5-0.5	26030178-006	GROHSA							✓
CP05-0-ES-0.5-0.5	26030178-006	GROHSA/BTEXHSA							✓
CP05-0-ES-0.5-0.5	26030178-006	PHSOIL							✓
CP05-0-ES-0.5-0.5	26030178-006	TPHCALC							✓

Analysis Method

Method Code

BTEXHSA
BTEXHSA

Method Description

BTEX by GCFID
MTBE by GCFID

Analysis Method

As Received
As Received



Project Number: 26030178

Client: Applied Geology Ltd
Date Issued: 20/03/2026
Project Name: AG3744-26 - Langstone Technology Park, Havant - Phase 3

CALC_CR3	Chromium III (Trivalent) (Calc)	Air Dried & Ground
CLANDPREP	CLand Prep and Dry Weight Correction to 35°C	As Received
CLANDPREP	Solid Material Description	As Received
GROHSA	GRO (>C6-C10) Total	As Received
GROHSA/BTEXHSA	GRO CWG (C5-C10) Ali/Aro Split	As Received
ICPBOR	Boron (Water Soluble) by ICPOES	Air Dried & Ground
ICPMSS	Arsenic in Solids by ICPMS	Air Dried & Ground
ICPMSS	Cadmium in Solids by ICPMS	Air Dried & Ground
ICPMSS	Chromium in Solids by ICPMS	Air Dried & Ground
ICPMSS	Copper in Solids by ICPMS	Air Dried & Ground
ICPMSS	Lead in Solids by ICPMS	Air Dried & Ground
ICPMSS	Mercury in Solids by ICPMS	Air Dried & Ground
ICPMSS	Nickel in Solids by ICPMS	Air Dried & Ground
ICPMSS	Selenium in Solids by ICPMS	Air Dried & Ground
ICPMSS	Vanadium in Solids by ICPMS	Air Dried & Ground
ICPMSS	Zinc in Solids by ICPMS	Air Dried & Ground
ICPSOIL	Beryllium in Solids by ICPOES	Air Dried & Ground
ICPSOIL	Magnesium in Solids by ICPOES	Air Dried & Ground
ICPWSS	Sulphate as SO ₄ (Water Soluble)	Air Dried & Ground
KONENS	Chromium VI (Hexavalent) by Colorimetry	Air Dried & Ground
PAHMSUS	16 PAHs by GCMS	As Received
PHEHPLCUV	Phenols Suite by HPLC UV	As Received
PHSOIL	pH (2.5:1)	As Received
SUB020	Asbestos Stage 1 (with Stage 2 Trigger)	
SUB035	Asbestos Stage 1 (with Stage 2 Trigger)	
TPHCALC	TPH (>C6-C40) Total (Calc)	As Received
TPHFIDUS	TPH (>C10-C35) Carbon Banded plus (>C10-40) Total	As Received
TPHFIDUS	Waste Guidance Interpretation on TPH Band >C6-C40	As Received
TPHFIDUS (Aliphatic)	TPH (CWG) Aliphatic Split with Carbon Banding	As Received
TPHFIDUS (Aromatic)	TPH (CWG) Aromatic Split with Carbon Banding	As Received
WSLM59	SOM: Soil Organic Matter (%) (Calc)	Air Dried & Ground

Result Report Notes

Letters alongside results signify that the result has associated report notes.
The report notes are as follows:

Letter	Note
A	Due to the matrix of the sample the laboratory has had to deviate from our standard protocols to be able to process the sample and provide a result. Where applicable the accreditation has been removed and this should be taken into consideration when utilising the data.
B	The QC associated with this result has not wholly met the QMS requirements, the accreditation has therefore been removed. However, the Laboratory has confidence in the performance of the method as a whole and that the integrity of the data has not been significantly compromised.
C	Due to matrix interference, the internal standard and/or surrogate has not met the QMS requirements. This should be taken into consideration when utilising the data.
D	A non-standard volume or mass has been used for this test which has resulted in a raised detection limit.
E	Due to the parameter value being beyond our calibration range (and following the maximum size of dilution allowed, where applicable), the result cannot be quantified and as such the result will appear as a greater than symbol (>) with the accreditation removed. This data should be used for indicative purposes only.



Project Number: 26030178

Client: Applied Geology Ltd

Date Issued: 20/03/2026

Project Name: AG3744-26 - Langstone Technology Park, Havant - Phase 3

- F Based on the sample history, appearance and smell a dilution was applied prior to testing. Unfortunately, the result is either above (>) or below (<) our calibration range. Results above our calibration range have accreditation removed. The data should be used for indicative purposes only.
- G The day 5 oxygen reading was below the capability of the instrument to detect, and therefore the calculated BOD has been reported unaccredited for guidance purposes only.

HWOL Acronym Key

<u>Acronym</u>	<u>Description</u>
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

Additional Information

This report refers to samples as received. SOCOTEC UK Ltd takes no responsibility for accuracy or competence of sampling by others.

Results within this report relate only to the samples tested.

The accreditation codes are as follows:

U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

Any accreditation marked with ^ signify results are reported on a dry weight basis of 35 ° c.

All Air Dried and Ground Samples (ADG) are oven dried at less than 35 ° c.

This report shall not be reproduced except in full, without written approval of the laboratory.

Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any results marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis
NA = Sample is not amenable for the required analysis
ND = Results cannot be determined

Items listed with a 'SUB' method code prefix have been carried out by another SOCOTEC department or by an external subcontracted laboratory. Further information is available upon request.

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the subcontracted lab for information regarding any deviancies for this analysis.

Summaries of analysis methods are available upon request.

End of Certificate of Analysis

Certificate of Analysis

Client: Applied Geology Ltd

Project: 26040994

Quote: BEC251243961 V7.2

Project Ref: AG3744-26

Site: Langstone Technology Park, Havant - Phase 3

Contact: Cassandra Ellis

Address: The Old Barn, Church Farm
Fulbrook Lane,
Sherbourne
Warwick
CV35 8AR

E-Mail: Cassandra.Ellis@appliedgeology.co.uk

Phone: 07841 369192

No. Samples Received: 6

Date Received: 09/04/2026

Analysis Completed: 23/04/2026

Date Issued: 23/04/2026

Report Type: Version 01

This report supersedes any versions previously issued by the laboratory



Reported by Customer Service Co-Ordinator
Julie Dickinson
01283 204 384
Julie.Dickinson@socotec.co.uk

**Project Number: 26040994****Client:** Applied Geology Ltd**Date Issued:** 23/04/2026**Project Name:** AG3744-26 - Langstone Technology Park, Havant - Phase 3**Samples Analysed**

<u>Text ID</u>	<u>Sample Reference</u>	<u>Sampling Date</u>	<u>Sample Type</u>	<u>Sample Description</u>
26040994-001	TP05-0-ES-0.5-0.5	23/02/2026 00:00:00	SOLID	Clay Sample
26040994-002	TP04-0-ES-0.2-0.2	24/02/2026 00:00:00	SOLID	Gravel Sample
26040994-003	TP01-0-ES-0.5-0.5	24/02/2026 00:00:00	SOLID	Clay Sample
26040994-004	TP03-0-ES-0.7-0.7	24/02/2026 00:00:00	SOLID	Clay Sample
26040994-005	DCS09-0-ES-0.3-0.3	23/02/2026 00:00:00	SOLID	Silt Sample
26040994-006	CP05-0-ES-0.5-0.5	24/02/2026 00:00:00	SOLID	Silt Sample

Analysis Results

		SOCOTEC Sample ID:		26040994-001	26040994-002	26040994-003	26040994-004	26040994-005
		Sampling Date:		23/02/2026 00:00	24/02/2026 00:00	24/02/2026 00:00	24/02/2026 00:00	23/02/2026 00:00
		Customer ID:		TP05-0-ES-0.5-0.5	TP04-0-ES-0.2-0.2	TP01-0-ES-0.5-0.5	TP03-0-ES-0.7-0.7	DCS09-0-ES-0.3-0.3
Method Code	Analysis	MDL	Accred.					
CLANDPREP	Total Moisture at 35°C	0.1 %	N	13.2	11.2	11.0	14.3	5.4
	Major Constituents	-	N	CLAY	GRAVEL	CLAY	CLAY	SILT
	Minor Constituents	-	N	Gravel	Chalk	Gravel	Gravel	Gravel
	Miscellaneous Constituents	-	N	Chalk	Miscellaneous	Miscellaneous	Miscellaneous	Miscellaneous
	Colour of Material	-	N	Brown/Grey	Brown/Grey	Grey/Brown	Grey/Brown	Grey/Brown
ICPWSS	Water Soluble Sulphate as SO ₄ 2:1 Ext	10 mg/l	U	271	18*	249	813	182

Analysis Results

SOCOTEC Sample ID:	26040994-006
Sampling Date:	24/02/2026 00:00
Customer ID:	CP05-0-ES-0.5-0.5

Method Code	Analysis	MDL	Accred.	
CLANDPREP	Total Moisture at 35°C	0.1 %	N	7.6
	Major Constituents	-	N	SILT
	Minor Constituents	-	N	Gravel
	Miscellaneous Constituents	-	N	Miscellaneous
	Colour of Material	-	N	Grey/Brown
ICPWSS	Water Soluble Sulphate as SO ₄ 2:1 Ext	10 mg/l	U	366

Deviating Sample Report

Sample Reference	Text ID	Method Code	Inadequate Transit Cooling	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
TP05-0-ES-0.5-0.5	26040994-001	CLANDPREP							✓
TP05-0-ES-0.5-0.5	26040994-001	ICPWSS							✓
TP04-0-ES-0.2-0.2	26040994-002	CLANDPREP							✓
TP04-0-ES-0.2-0.2	26040994-002	ICPWSS							✓
TP01-0-ES-0.5-0.5	26040994-003	CLANDPREP							✓
TP01-0-ES-0.5-0.5	26040994-003	ICPWSS							✓
TP03-0-ES-0.7-0.7	26040994-004	CLANDPREP							✓
TP03-0-ES-0.7-0.7	26040994-004	ICPWSS							✓
DCS09-0-ES-0.3-0.3	26040994-005	CLANDPREP							✓
DCS09-0-ES-0.3-0.3	26040994-005	ICPWSS							✓
CP05-0-ES-0.5-0.5	26040994-006	CLANDPREP							✓
CP05-0-ES-0.5-0.5	26040994-006	ICPWSS							✓

Analysis Method

Method Code

CLANDPREP
CLANDPREP
ICPWSS

Method Description

Moisture Content @ 35°C
Solid Material Description
Sulphate as SO₄ (Water Soluble 2:1 Extract)

Analysis Method

As Received
As Received
Air Dried & Ground

Result Report Notes

Letters alongside results signify that the result has associated report notes.
The report notes are as follows:

Letter

Note

- A Due to the matrix of the sample the laboratory has had to deviate from our standard protocols to be able to process the sample and provide a result. Where applicable the accreditation has been removed and this should be taken into consideration when utilising the data.
- B The QC associated with this result has not wholly met the QMS requirements, the accreditation has therefore been removed. However, the Laboratory has confidence in the performance of the method as a whole and that the integrity of the data has not been significantly compromised.
- C Due to matrix interference, the internal standard and/or surrogate has not met the QMS requirements. This should be taken into consideration when utilising the data.
- D A non-standard volume or mass has been used for this test which has resulted in a raised detection limit.
- E Due to the parameter value being beyond our calibration range (and following the maximum size of dilution allowed, where applicable), the result cannot be quantified and as such the result will appear as a greater than symbol (>) with the accreditation removed. This data should be used for indicative purposes only.



Project Number: 26040994

Client: Applied Geology Ltd

Date Issued: 23/04/2026

Project Name: AG3744-26 - Langstone Technology Park, Havant - Phase 3

- F Based on the sample history, appearance and smell a dilution was applied prior to testing. Unfortunately, the result is either above (>) or below (<) our calibration range. Results above our calibration range have accreditation removed. The data should be used for indicative purposes only.
- G The day 5 oxygen reading was below the capability of the instrument to detect, and therefore the calculated BOD has been reported unaccredited for guidance purposes only.

HWOL Acronym Key

<u>Acronym</u>	<u>Description</u>
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

Additional Information

This report refers to samples as received. SOCOTEC UK Ltd takes no responsibility for accuracy or competence of sampling by others.

Results within this report relate only to the samples tested.

The accreditation codes are as follows:

U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

Any accreditation marked with ^ signify results are reported on a dry weight basis of 105° c.

All Air Dried and Ground Samples (ADG) are oven dried at less than 35° c.

This report shall not be reproduced except in full, without written approval of the laboratory.

Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any results marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis
NA = Sample is not amenable for the required analysis
ND = Results cannot be determined

Items listed with a 'SUB' method code prefix have been carried out by another SOCOTEC department or by an external subcontracted laboratory. Further information is available upon request.

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the subcontracted lab for information regarding any deviancies for this analysis.

Summaries of analysis methods are available upon request.

End of Certificate of Analysis

Certificate of Analysis

Client: Applied Geology Ltd

Project: 26033901

Quote: BEC251243961 V6.1

Project Ref: AG3744-26

Site: Langstone Technology Park, Havant - Phase 3

Contact: Cassandra Ellis

Address: The Old Barn, Church Farm
Fulbrook Lane,
Sherbourne
Warwick
CV35 8AR

E-Mail: Cassandra.Ellis@appliedgeology.co.uk

Phone: 07841 369192

No. Samples Received: 2

Date Received: 26/03/2026

Analysis Completed: 13/04/2026

Date Issued: 13/04/2026

Report Type: Version 01

This report supersedes any versions previously issued by the laboratory



Reported by Customer Service Co-Ordinator
Julie Dickinson
01283 204 384
Julie.Dickinson@socotec.co.uk



Project Number: 26033901

Client: Applied Geology Ltd

Date Issued: 13/04/2026

Project Name: AG3744-26 - Langstone Technology Park, Havant - Phase 3

Samples Analysed

<u>Text ID</u>	<u>Sample Reference</u>	<u>Sampling Date</u>	<u>Sample Type</u>	<u>Sample Description</u>
26033901-001	CP04	17/03/2026 15:30:00	WATER	Ground Water
26033901-002	CP05	17/03/2026 16:00:00	WATER	Ground Water

Analysis Results

		SOCOTEC Sample ID:		26033901-001	26033901-002
		Sampling Date:		17/03/2026 15:30	17/03/2026 16:00
		Customer ID:		CP04	CP05
Method Code	Analysis	MDL	Accred.		
PHCONDW	pH	1 pH units	U	7.4	7.5
TOCW	Total Organic Carbon	0.4 mg/l	U	0.60	0.43
ICPMSW (Dissolved)	Arsenic as As	0.001 mg/l	U	<0.001	<0.001
ICPWATVAR (Dissolved)	Beryllium as Be	0.01 mg/l	N	<0.01	<0.01
ICPWATVAR (Dissolved)	Boron as B	0.01 mg/l	U	0.03	0.02
ICPMSW (Dissolved)	Cadmium as Cd	0.00002 mg/l	U	<0.00002	<0.00002
ICPMSW (Dissolved)	Total Chromium as Cr	0.001 mg/l	U	<0.001	<0.001
CALC_CR3	Chromium (III)	0.003 mg/l	U	<0.003	<0.003
KONENS	Chromium (VI) as Cr	0.003 mg/l	U	<0.003	<0.003
ICPMSW (Dissolved)	Copper as Cu	0.001 mg/l	U	<0.001	<0.001
ICPMSW (Dissolved)	Lead as Pb	0.0002 mg/l	U	<0.0002	<0.0002
ICPWATVAR (Dissolved)	Magnesium as Mg	1 mg/l	U	3	2
ICPMSW (Dissolved)	Mercury as Hg	0.00003 mg/l	U	<0.00003	<0.00003
ICPMSW (Dissolved)	Nickel as Ni	0.001 mg/l	U	<0.001	<0.001
ICPMSW (Dissolved)	Selenium as Se	0.001 mg/l	U	<0.001	<0.001
ICPWATVAR (Dissolved)	Total Sulphur as SO4	3 mg/l	U	19	11
ICPMSW (Dissolved)	Vanadium as V	0.001 mg/l	U	<0.001	<0.001
ICPMSW (Dissolved)	Zinc as Zn	0.002 mg/l	U	0.014	0.007
ICPWATVAR (Dissolved)	Total Hardness as CaCO3	6.6 mg/l	U	298	268
BTXEXHA	Benzene (HS_1D_AR)	5 µg/l	U	<5	<5
	Toluene (HS_1D_AR)	5 µg/l	U	<5	<5
	Ethylbenzene (HS_1D_AR)	5 µg/l	U	<5	<5
	m/p-Xylene (HS_1D_AR)	10 µg/l	U	<10	<10
	o-Xylene (HS_1D_AR)	5 µg/l	U	<5	<5
GROHSA	>C6-C10 (HS_1D_Total)	0.1 mg/l	N	<0.100	<0.100
TPHCALC	>C6-C40 (HS+EH_1D_Total)	0.11 mg/l	N	<0.110	0.120
TPHFID	>C10-C12 (EH_1D_Total)	0.01 mg/l	U	<0.01	<0.01
	>C10-C40 (EH_1D_Total)	0.01 mg/l	U	<0.01	0.02
	>C12-C16 (EH_1D_Total)	0.01 mg/l	U	<0.01	<0.01
	>C16-C21 (EH_1D_Total)	0.01 mg/l	U	<0.01	<0.01
	>C21-C35 (EH_1D_Total)	0.01 mg/l	U	<0.01	0.01
GROHSA/BTEXHSA	Total GRO C5-C10 (HS_1D_Total)	0.1 mg/l	U	<0.100	<0.100
	C5-C6 Aliphatic (HS_1D_AL)	0.1 mg/l	N	<0.100	<0.100
	>C6-C7 Aliphatic (HS_1D_AL)	0.1 mg/l	N	<0.100	<0.100
	>C7-C8 Aliphatic (HS_1D_AL)	0.1 mg/l	N	<0.100	<0.100
	>C8-C10 Aliphatic (HS_1D_AL)	0.1 mg/l	N	<0.100	<0.100
	C5-C7 Aromatic (HS_1D_AR)	0.005 mg/l	U	<0.005	<0.005
	>C7-C8 Aromatic (HS_1D_AR)	0.005 mg/l	U	<0.005	<0.005
	>C8-C10 Aromatic (HS_1D_AR)	0.02 mg/l	U	<0.020	<0.020
TPHFID (Aliphatic)	Total TPH >C8-C40 (Aliphatic) (EH_CU_1D_AL)	0.01 mg/l	U	<0.01	<0.01
	>C10-C12 (Aliphatic) (EH_CU_1D_AL)	0.01 mg/l	U	<0.01	<0.01
	>C12-C16 (Aliphatic) (EH_CU_1D_AL)	0.01 mg/l	U	<0.01	<0.01
	>C16-C21 (Aliphatic) (EH_CU_1D_AL)	0.01 mg/l	U	<0.01	<0.01
	>C21-C35 (Aliphatic) (EH_CU_1D_AL)	0.01 mg/l	U	<0.01	<0.01
TPHFID (Aromatic)	Total TPH >C8-C40 (Aromatic) (EH_CU_1D_AR)	0.01 mg/l	U	0.01	0.02
	>C10-C12 (Aromatic) (EH_CU_1D_AR)	0.01 mg/l	U	<0.01	<0.01
	>C12-C16 (Aromatic) (EH_CU_1D_AR)	0.01 mg/l	U	<0.01	<0.01
	>C16-C21 (Aromatic) (EH_CU_1D_AR)	0.01 mg/l	U	<0.01	<0.01
	>C21-C35 (Aromatic) (EH_CU_1D_AR)	0.01 mg/l	U	<0.01	0.01
PAHMSW	Acenaphthene	0.01 µg/l	U	<0.01	<0.01
	Acenaphthylene	0.01 µg/l	U	<0.01	<0.01
	Anthracene	0.01 µg/l	U	<0.01	<0.01
	Benzo[a]anthracene	0.01 µg/l	U	<0.01	0.07
	Benzo[a]pyrene	0.01 µg/l	U	<0.01	0.08
	Benzo[b]fluoranthene	0.01 µg/l	U	<0.01	0.12
	Benzo[g,h,i]perylene	0.01 µg/l	U	<0.01	0.05
	Benzo[k]fluoranthene	0.01 µg/l	U	<0.01	0.04
	Chrysene	0.01 µg/l	U	<0.01	0.09
	Dibenzo[a,h]anthracene	0.01 µg/l	U	<0.01	0.01
	Fluoranthene	0.01 µg/l	U	<0.01	0.12
	Fluorene	0.01 µg/l	U	<0.01	<0.01
	Indeno[1,2,3-cd]pyrene	0.01 µg/l	U	<0.01	0.06
	Naphthalene	0.01 µg/l	U	<0.01	<0.01
	Phenanthrene	0.01 µg/l	U	<0.01	0.03
	Pyrene	0.01 µg/l	U	<0.01	0.10
	Total PAH 16	0.16 µg/l	U	<0.16	0.83
PHEHPLCUV	Phenol	0.05 mg/l	U	<0.05	<0.05
	Methylphenols	0.05 mg/l	U	<0.05	<0.05
	Dimethylphenols	0.05 mg/l	U	<0.05	<0.05
	Trimethylphenols	0.05 mg/l	U	<0.05	<0.05
	Total Phenols	0.2 mg/l	U	<0.20	<0.20
SVOCSW	1,2,4-Trichlorobenzene	0.005 mg/l	N	<0.005	<0.005
	1,2-Dichlorobenzene	0.005 mg/l	N	<0.005	<0.005
	1,3-Dichlorobenzene	0.005 mg/l	N	<0.005	<0.005
	1,4-Dichlorobenzene	0.005 mg/l	N	<0.005	<0.005
	1-Methylnaphthalene	0.002 mg/l	N	<0.002	<0.002
	2,4,5-Trichlorophenol	0.02 mg/l	N	<0.020	<0.020
	2,4,6-Trichlorophenol	0.02 mg/l	N	<0.020	<0.020
	2,4-Dichlorophenol	0.02 mg/l	N	<0.020	<0.020

Analysis Results

SOCOTEC Sample ID:	26033901-001	26033901-002
Sampling Date:	17/03/2026 15:30	17/03/2026 16:00
Customer ID:	CP04	CP05

Method Code	Analysis	MDL	Accred.		
SVOCSW	2,4-Dimethylphenol	0.02 mg/l	N	<0.020	<0.020
	2,4-Dinitrophenol	0.01 mg/l	N	<0.010	<0.010
	2,4-Dinitrotoluene	0.005 mg/l	N	<0.005	<0.005
	2,6-Dinitrotoluene	0.005 mg/l	N	<0.005	<0.005
	2-Chloronaphthalene	0.002 mg/l	N	<0.002	<0.002
	2-Chlorophenol	0.02 mg/l	N	<0.020	<0.020
	2-Methylnaphthalene	0.002 mg/l	N	<0.002	<0.002
	2-Methylphenol	0.005 mg/l	N	<0.005	<0.005
	2-Nitroaniline	0.005 mg/l	N	<0.005	<0.005
	2-Nitrophenol	0.02 mg/l	N	<0.020	<0.020
	3- & 4-Methylphenol	0.02 mg/l	N	<0.020	<0.020
	3-Nitroaniline	0.005 mg/l	N	<0.005	<0.005
	4,6-Dinitro-2-methylphenol	0.05 mg/l	N	<0.050	<0.050
	4-Bromophenyl-phenylether	0.005 mg/l	N	<0.005	<0.005
	4-Chloro-3-methylphenol	0.005 mg/l	N	<0.005	<0.005
	4-Chloroaniline	0.005 mg/l	N	<0.005	<0.005
	4-Chlorophenol	0.02 mg/l	N	<0.020	<0.020
	4-Chlorophenyl-phenylether	0.005 mg/l	N	<0.005	<0.005
	4-Nitroaniline	0.005 mg/l	N	<0.005	<0.005
	4-Nitrophenol	0.05 mg/l	N	<0.050	<0.050
	Acenaphthene	0.002 mg/l	N	<0.002	<0.002
	Acenaphthylene	0.002 mg/l	N	<0.002	<0.002
	Anthracene	0.002 mg/l	N	<0.002	<0.002
	Azobenzene	0.01 mg/l	N	<0.010	<0.010
	Benzo[a]anthracene	0.002 mg/l	N	<0.002	<0.002
	Benzo[a]pyrene	0.002 mg/l	N	<0.002	<0.002
	Benzo[b]fluoranthene	0.002 mg/l	N	<0.002	<0.002
	Benzo[g,h,i]perylene	0.002 mg/l	N	<0.002	<0.002
	Benzo[k]fluoranthene	0.002 mg/l	N	<0.002	<0.002
	Benzoic Acid	0.1 mg/l	N	<0.100	<0.100
	Benzyl alcohol	0.005 mg/l	N	<0.005	<0.005
	Biphenyl	0.002 mg/l	N	<0.002	<0.002
	bis(2-Chloroethoxy)methane	0.005 mg/l	N	<0.005	<0.005
	bis(2-Chloroethyl)ether	0.005 mg/l	N	<0.005	<0.005
	bis(2-Chloroisopropyl)ether	0.005 mg/l	N	<0.005	<0.005
	bis(2-Ethylhexyl)phthalate	0.005 mg/l	N	<0.005	<0.005
	Butylbenzylphthalate	0.005 mg/l	N	<0.005	<0.005
	Carbazole	0.01 mg/l	N	<0.010	<0.010
	Chrysene	0.002 mg/l	N	<0.002	<0.002
	Coronene	0.05 mg/l	N	<0.050	<0.050
	Dibenzo[a,h]anthracene	0.002 mg/l	N	<0.002	<0.002
	Dibenzofuran	0.005 mg/l	N	<0.005	<0.005
	Diethylphthalate	0.005 mg/l	N	<0.005	<0.005
	Dimethylphthalate	0.005 mg/l	N	<0.005	<0.005
	Di-n-butylphthalate	0.005 mg/l	N	<0.005	<0.005
	Di-n-octylphthalate	0.002 mg/l	N	<0.002	<0.002
	Diphenyl ether	0.002 mg/l	N	<0.002	<0.002
	Fluoranthene	0.002 mg/l	N	<0.002	<0.002
	Fluorene	0.002 mg/l	N	<0.002	<0.002
	Hexachlorobenzene	0.005 mg/l	N	<0.005	<0.005
	Hexachlorobutadiene	0.005 mg/l	N	<0.005	<0.005
	Hexachlorocyclopentadiene	0.005 mg/l	N	<0.005	<0.005
	Hexachloroethane	0.005 mg/l	N	<0.005	<0.005
	Indeno[1,2,3-cd]pyrene	0.002 mg/l	N	<0.002	<0.002
	Isophorone	0.005 mg/l	N	<0.005	<0.005
	Naphthalene	0.002 mg/l	N	<0.002	<0.002
	Nitrobenzene	0.005 mg/l	N	<0.005	<0.005
	N-Nitroso-di-n-propylamine	0.005 mg/l	N	<0.005	<0.005
	N-Nitrosodiphenylamine	0.005 mg/l	N	<0.005	<0.005
	Pentachlorophenol	0.05 mg/l	N	<0.050	<0.050
	Phenanthrene	0.002 mg/l	N	<0.002	<0.002
	Phenol	0.02 mg/l	N	<0.020	<0.020
	Pyrene	0.002 mg/l	N	<0.002	<0.002
VOCHSAW	1,1,1,2-Tetrachloroethane	1 µg/l	U	<1	<1
	1,1,1-Trichloroethane	1 µg/l	U	<1	<1
	1,1,2,2-Tetrachloroethane	1 µg/l	N	<1	<1
	1,1,2-Trichloroethane	1 µg/l	U	<1	<1
	1,1-Dichloroethane	1 µg/l	U	<1	<1
	1,1-Dichloroethene	1 µg/l	U	<1	<1
	1,1-Dichloropropene	1 µg/l	U	<1	<1
	1,2,3-Trichlorobenzene	5 µg/l	U	<5	<5
	1,2,3-Trichloropropane	1 µg/l	U	<1	<1
	1,2,4-Trichlorobenzene	5 µg/l	U	<5	<5
	1,2,4-Trimethylbenzene	1 µg/l	U	<1	<1
	1,2-Dibromo-3-chloropropane	5 µg/l	U	<5	<5
	1,2-Dibromoethane	1 µg/l	U	<1	<1
	1,2-Dichlorobenzene	5 µg/l	U	<5	<5
	1,2-Dichloroethane	1 µg/l	U	<1	<1
	1,2-Dichloropropane	1 µg/l	U	<1	<1

Analysis Results

SOCOTEC Sample ID:	26033901-001	26033901-002
Sampling Date:	17/03/2026 15:30	17/03/2026 16:00

Customer ID:	CP04	CP05
--------------	------	------

Method Code	Analysis	MDL	Accred.		
VOCHSAW	1,3,5-Trimethylbenzene	0.6 µg/l	U	<0.6	<0.6
	1,3-Dichlorobenzene	1 µg/l	U	<1	<1
	1,3-Dichloropropane	1 µg/l	N	<1	<1
	1,4-Dichlorobenzene	1 µg/l	U	<1	<1
	2,2-Dichloropropane	1 µg/l	N	<1	<1
	2-Chlorotoluene	1 µg/l	U	<1	<1
	4-Chlorotoluene	1 µg/l	U	<1	<1
	Benzene	1 µg/l	U	<1	<1
	Bromobenzene	1 µg/l	U	<1	<1
	Bromochloromethane	1 µg/l	U	<1	<1
	Bromodichloromethane	1 µg/l	U	<1	<1
	Bromoform	1 µg/l	U	<1	<1
	Bromomethane	5 µg/l	N	<5	<5
	Carbon Tetrachloride	1 µg/l	U	<1	<1
	Chlorobenzene	1 µg/l	U	<1	<1
	Chloroethane	5 µg/l	U	<5	<5
	Chloroform	5 µg/l	U	<5	<5
	Chloromethane	1 µg/l	U	<1	<1
	cis 1,2-Dichloroethene	1 µg/l	U	<1	<1
	cis 1,3-Dichloropropene	1 µg/l	N	<1	<1
	Dibromochloromethane	1 µg/l	U	<1	<1
	Dibromomethane	1 µg/l	U	<1	<1
	Dichlorodifluoromethane	1 µg/l	N	<1	<1
	Ethylbenzene	0.5 µg/l	U	<0.5	<0.5
	Hexachlorobutadiene	5 µg/l	U	<5	<5
	iso-Propylbenzene	1 µg/l	U	<1	<1
	m and p-Xylene	1 µg/l	U	<1	<1
	MTBE	1 µg/l	N	<1	<1
	Naphthalene	5 µg/l	U	<5	<5
	n-Butylbenzene	1 µg/l	U	<1	<1
	o-Xylene	1 µg/l	U	<1	<1
	p-Isopropyltoluene	1 µg/l	U	<1	<1
	Propylbenzene	1 µg/l	U	<1	<1
	sec-Butylbenzene	1 µg/l	U	<1	<1
	Styrene	1 µg/l	U	<1	<1
	tert-Butylbenzene	1 µg/l	U	<1	<1
	Tetrachloroethene	5 µg/l	U	<5	<5
	Toluene	1 µg/l	U	<1	<1
	trans 1,2-Dichloroethene	1 µg/l	U	<1	<1
	trans 1,3-Dichloropropene	1 µg/l	U	<1	<1
	Trichloroethene	5 µg/l	U	<5	<5
	Trichlorofluoromethane	1 µg/l	U	<1	<1
	Vinyl Chloride	1 µg/l	U	<1	<1



Project Number: 26033901

Client: Applied Geology Ltd

Date Issued: 13/04/2026

Project Name: AG3744-26 - Langstone Technology Park, Havant - Phase 3

Deviating Sample Report

<u>Sample Reference</u>	<u>Text ID</u>	<u>Method Code</u>	Inadequate Transit Cooling	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
CP04	26033901-001	BTEXHSA							✓
CP04	26033901-001	GROHSA							✓
CP04	26033901-001	GROHSA/BTEXHSA							✓
CP04	26033901-001	PAHMSW							✓
CP04	26033901-001	PHCONDW							✓
CP04	26033901-001	PHEHPLCUV							✓
CP04	26033901-001	TOCW							✓
CP04	26033901-001	TPHCALC							✓
CP04	26033901-001	TPHFID							✓
CP04	26033901-001	TPHFID (Aliphatic)							✓
CP04	26033901-001	TPHFID (Aromatic)							✓
CP05	26033901-002	BTEXHSA							✓
CP05	26033901-002	GROHSA							✓
CP05	26033901-002	GROHSA/BTEXHSA							✓
CP05	26033901-002	PAHMSW							✓
CP05	26033901-002	PHCONDW							✓
CP05	26033901-002	PHEHPLCUV							✓
CP05	26033901-002	TOCW							✓
CP05	26033901-002	TPHCALC							✓
CP05	26033901-002	TPHFID							✓
CP05	26033901-002	TPHFID (Aliphatic)							✓
CP05	26033901-002	TPHFID (Aromatic)							✓

Analysis Method

Method Code

BTEXHSA
 CALC_CR3
 GROHSA
 GROHSA/BTEXHSA
 ICPMSW (Dissolved)
 ICPMSW (Dissolved)
 ICPMSW (Dissolved)
 ICPMSW (Dissolved)
 ICPMSW (Dissolved)
 ICPMSW (Dissolved)
 ICPMSW (Dissolved)
 ICPMSW (Dissolved)
 ICPMSW (Dissolved)
 ICPMSW (Dissolved)
 ICPMSW (Dissolved)

Method Description

BTEX by GCFID
 Chromium III (Trivalent) (Calc)
 GRO (>C6-C10) Total
 GRO CWG (C5-C10) Ali/Aro Split
 Arsenic (Diss.) in Water by ICPMS
 Cadmium (Diss.) in Water by ICPMS
 Chromium (Diss.) in Water by ICPMS
 Copper (Diss.) in Water by ICPMS
 Lead (Diss.) in Water by ICPMS
 Mercury (Diss.) in Water by ICPMS
 Nickel (Diss.) in Water by ICPMS
 Selenium (Diss.) in Water by ICPMS
 Vanadium (Diss.) in Water by ICPMS
 Zinc (Diss.) in Water by ICPMS

Analysis Method

Unfiltered
 Filtered
 Unfiltered
 Unfiltered
 Filtered
 Filtered
 Filtered
 Filtered
 Filtered
 Filtered
 Filtered
 Filtered
 Filtered



Project Number: 26033901

Client: Applied Geology Ltd

Date Issued: 13/04/2026

Project Name: AG3744-26 - Langstone Technology Park, Havant - Phase 3

ICPWATVAR (Dissolved)	Beryllium (Diss.) in Water by ICPOES	Filtered
ICPWATVAR (Dissolved)	Boron (Diss.) in Water by ICPOES	Filtered
ICPWATVAR (Dissolved)	Magnesium (Diss.) in Water by ICPOES	Filtered
ICPWATVAR (Dissolved)	Total Hardness as CaCO3 in Water	Filtered
ICPWATVAR (Dissolved)	Total Sulphur as SO4 (Diss.) in Water	Filtered
KONENS	Chromium VI (Hexavalent) by Colorimetry	Filtered
PAHMSW	16 PAHs by GCMS	Unfiltered
PHCONDW	pH	Unfiltered
PHEHPLCUV	Phenols Suite by HPLC UV	Unfiltered
SVOCSW	SVOCs (Target List) by GCMS	Unfiltered
TOCW	TOC: Total Organic Carbon	Unfiltered
TPHCALC	TPH (>C6-C40) Total (Calc)	Unfiltered
TPHFID	TPH (>C10-C35) Carbon Banded plus (>C10-40) Total	Unfiltered
TPHFID (Aliphatic)	TPH (CWG) Aliphatic Split with Carbon Banding	Unfiltered
TPHFID (Aromatic)	TPH (CWG) Aromatic Split with Carbon Banding	Unfiltered
VOCHSAW	VOCs (Target List) by GCMS	Unfiltered

Result Report Notes

Letters alongside results signify that the result has associated report notes.

The report notes are as follows:

<u>Letter</u>	<u>Note</u>
A	Due to the matrix of the sample the laboratory has had to deviate from our standard protocols to be able to process the sample and provide a result. Where applicable the accreditation has been removed and this should be taken into consideration when utilising the data.
B	The QC associated with this result has not wholly met the QMS requirements, the accreditation has therefore been removed. However, the Laboratory has confidence in the performance of the method as a whole and that the integrity of the data has not been significantly compromised.
C	Due to matrix interference, the internal standard and/or surrogate has not met the QMS requirements. This should be taken into consideration when utilising the data.
D	A non-standard volume or mass has been used for this test which has resulted in a raised detection limit.
E	Due to the parameter value being beyond our calibration range (and following the maximum size of dilution allowed, where applicable), the result cannot be quantified and as such the result will appear as a greater than symbol (>) with the accreditation removed. This data should be used for indicative purposes only.
F	Based on the sample history, appearance and smell a dilution was applied prior to testing. Unfortunately, the result is either above (>) or below (<) our calibration range. Results above our calibration range have accreditation removed. The data should be used for indicative purposes only.
G	The day 5 oxygen reading was below the capability of the instrument to detect, and therefore the calculated BOD has been reported unaccredited for guidance purposes only.

HWOL Acronym Key

<u>Acronym</u>	<u>Description</u>
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total



Project Number: [26033901](#)

Client: Applied Geology Ltd

Date Issued: 13/04/2026

Project Name: AG3744-26 - Langstone Technology Park, Havant - Phase 3

SVOCSW - N-Nitrosodiphenylamine

N-Nitrosodiphenylamine decomposes in the GC inlet and cannot be separated from diphenylamine. For this reason we will report a combined result for N-Nitrosodiphenylamine and Diphenylamine.

Additional Information

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U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

Any accreditation marked with ^ signify results are reported on a dry weight basis of 105 ° c.

All Air Dried and Ground Samples (ADG) are oven dried at less than 35° c.

This report shall not be reproduced except in full, without written approval of the laboratory.

Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any results marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis
NA = Sample is not amenable for the required analysis
ND = Results cannot be determined

Items listed with a 'SUB' method code prefix have been carried out by another SOCOTEC department or by an external subcontracted laboratory. Further information is available upon request.

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the subcontracted lab for information regarding any deviancies for this analysis.

Summaries of analysis methods are available upon request.

End of Certificate of Analysis

Certificate of Analysis

Client: Applied Geology Ltd

Project: 26031962

Quote: BEC251243961 V5.1

Project Ref: AG3744-26

Site: Langstone Technology PArk, Havant-Phase 3

Contact: Cassandra Ellis

Address: The Old Barn, Church Farm
Fulbrook Lane,
Sherbourne
Warwick
CV35 8AR

E-Mail: Cassandra.Ellis@appliedgeology.co.uk

Phone: 07841 369192

No. Samples Received: 10

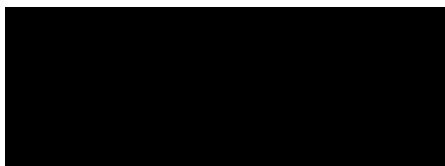
Date Received: 13/03/2026

Analysis Completed: 30/03/2026

Date Issued: 30/03/2026

Report Type: Version 01

This report supersedes any versions previously issued by the laboratory



Reported by Account Manager
Isabella Gibbs

Isabella.Gibbs@socotec.co.uk

**Project Number: 26031962****Client:** Applied Geology Ltd**Date Issued:** 30/03/2026**Project Name:** AG3744-26 - Langstone Technology PArk, Havant-Phase 3**Samples Analysed**

<u>Text ID</u>	<u>Sample Reference</u>	<u>Sampling Date</u>	<u>Sample Type</u>	<u>Sample Description</u>
26031962-001	TP03-0-D-0.50	24/02/2026 00:00:00	SOLID	Gravel Sample
26031962-002	TP05-0-D-0.50	24/02/2026 00:00:00	SOLID	Gravel Sample
26031962-003	TP01-0-D-1.00	24/02/2026 00:00:00	SOLID	Gravel Sample
26031962-004	CP04-0-D-1.20	23/02/2026 00:00:00	SOLID	Gravel Sample
26031962-005	DCS09-0-D-1.20	26/02/2026 00:00:00	SOLID	Gravel Sample
26031962-006	TP04-0-D-1.20	24/02/2026 00:00:00	SOLID	Gravel Sample
26031962-007	TP01-0-D-2.00	24/02/2026 00:00:00	SOLID	Gravel Sample
26031962-008	CP04-0-D-3.00	23/02/2026 00:00:00	SOLID	Gravel Sample
26031962-009	CP05-0-D-4.00	24/02/2026 00:00:00	SOLID	Gravel Sample
26031962-010	CP05-0-D-6.50	24/02/2026 00:00:00	SOLID	Chalk Sample



Project Number: 26031962

Client: Applied Geology Ltd

Date Issued: 30/03/2026

Project Name: AG3744-26 - Langstone Technology Park, Havant-Phase 3

Analysis Results

SOCOTEC Sample ID:				26031962-001	26031962-002	26031962-003	26031962-004	26031962-005
Sampling Date:				24/02/2026 00:00	24/02/2026 00:00	24/02/2026 00:00	23/02/2026 00:00	26/02/2026 00:00
Customer ID:				TP03-0-D-0.50	TP05-0-D-0.50	TP01-0-D-1.00	CP04-0-D-1.20	DCS09-0-D-1.20
Method Code	Analysis	MDL	Accred.					
CLANDPREP	Total Moisture at 35°C	0.1 %	N	12.3	11.2	11.9	9.5	11.4
	Major Constituents	-	N	GRAVEL	GRAVEL	GRAVEL	GRAVEL	GRAVEL
	Minor Constituents	-	N	Clay	Clay	Clay	Clay	Clay
	Miscellaneous Constituents	-	N	Chalk	Chalk	Chalk	Chalk	Chalk
	Colour of Material	-	N	Brown	Brown	Brown	Brown	Brown
PHSOIL	pH (2.5:1 extraction)	1 pH units	N	8.4	8.6	8.6	9.8	8.6
KONENO3	Nitrate as NO3	2 mg/kg	N	5.6	9.0	7.3		
KONECL	Chloride as Cl	2 mg/kg	N	45	10	33		
ICPWSS	Water Soluble Sulphate as SO4 2:1 Ext	10 mg/l	N	283	78	201	174	89
ICPWMSG	Magnesium as Mg (2:1 Extract)	0.1 mg/l	N	<0.1	0.1	<0.1		



Project Number: 26031962

Client: Applied Geology Ltd

Date Issued: 30/03/2026

Project Name: AG3744-26 - Langstone Technology PARK, Havant-Phase 3

Analysis Results

		SOCOTEC Sample ID:		26031962-006	26031962-007	26031962-008	26031962-009	26031962-010
		Sampling Date:		24/02/2026 00:00	24/02/2026 00:00	23/02/2026 00:00	24/02/2026 00:00	24/02/2026 00:00
		Customer ID:		TP04-0-D-1.20	TP01-0-D-2.00	CP04-0-D-3.00	CP05-0-D-4.00	CP05-0-D-6.50
Method Code	Analysis	MDL	Accred.					
CLANDPREP	Total Moisture at 35°C	0.1 %	N	11.6	11.8	10.9	17.5	21.0
	Major Constituents	-	N	GRAVEL	GRAVEL	GRAVEL	GRAVEL	CHALK
	Minor Constituents	-	N	Clay	Clay	Clay	Clay	Gravel
	Miscellaneous Constituents	-	N	Chalk	Chalk	Chalk	Chalk	n/a
	Colour of Material	-	N	Brown	Brown	Brown	Brown	Cream
PHSOIL	pH (2.5:1 extraction)	1 pH units	N	8.9	11.3	9.3	9.2	9.1
ICPWSS	Water Soluble Sulphate as SO4 2:1 Ext	10 mg/l	N	12	259	29	57	17



Project Number: 26031962

Client: Applied Geology Ltd

Date Issued: 30/03/2026

Project Name: AG3744-26 - Langstone Technology PArk, Havant-Phase 3

Deviating Sample Report

Sample Reference	Text ID	Method Code	Inadequate Transit Cooling	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
TP03-0-D-0.50	26031962-001	PHSOIL							✓
TP05-0-D-0.50	26031962-002	PHSOIL							✓
TP01-0-D-1.00	26031962-003	PHSOIL							✓
CP04-0-D-1.20	26031962-004	PHSOIL							✓
DCS09-0-D-1.20	26031962-005	PHSOIL							✓
TP04-0-D-1.20	26031962-006	PHSOIL							✓
TP01-0-D-2.00	26031962-007	PHSOIL							✓
CP04-0-D-3.00	26031962-008	PHSOIL							✓
CP05-0-D-4.00	26031962-009	PHSOIL							✓
CP05-0-D-6.50	26031962-010	PHSOIL							✓

Analysis Method

Method Code

CLANDPREP
CLANDPREP
ICPWSMG
ICPWSS
KONECL
KONENO3
PHSOIL

Method Description

Moisture Content @ 35°C
Solid Material Description
Magnesium (Water Soluble) (2:1)
Sulphate as SO₄ (Water Soluble 2:1 Extract)
Chloride (2:1) by Colorimetry
Nitrate as NO₃ (2:1) by Colorimetry
pH (2.5:1)

Analysis Method

As Received
As Received
Air Dried & Ground
Air Dried & Ground
Air Dried & Ground
Air Dried & Ground
As Received

Result Report Notes

Letters alongside results signify that the result has associated report notes.
The report notes are as follows:

Letter

Note

- A Due to the matrix of the sample the laboratory has had to deviate from our standard protocols to be able to process the sample and provide a result. Where applicable the accreditation has been removed and this should be taken into consideration when utilising the data.
- B The QC associated with this result has not wholly met the QMS requirements, the accreditation has therefore been removed. However, the Laboratory has confidence in the performance of the method as a whole and that the integrity of the data has not been significantly compromised.
- C Due to matrix interference, the internal standard and/or surrogate has not met the QMS requirements. This should be taken into consideration when utilising the data.
- D A non-standard volume or mass has been used for this test which has resulted in a raised detection limit.
- E Due to the parameter value being beyond our calibration range (and following the maximum size of dilution allowed, where applicable), the result cannot be quantified and as such the result will appear as a greater than symbol (>) with the accreditation removed. This data should be used for indicative purposes only.



Project Number: 26031962

Client: Applied Geology Ltd

Date Issued: 30/03/2026

Project Name: AG3744-26 - Langstone Technology PArk, Havant-Phase 3

- F Based on the sample history, appearance and smell a dilution was applied prior to testing. Unfortunately, the result is either above (>) or below (<) our calibration range. Results above our calibration range have accreditation removed. The data should be used for indicative purposes only.
- G The day 5 oxygen reading was below the capability of the instrument to detect, and therefore the calculated BOD has been reported unaccredited for guidance purposes only.

HWOL Acronym Key

<u>Acronym</u>	<u>Description</u>
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

Additional Information

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U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

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All Air Dried and Ground Samples (ADG) are oven dried at less than 35° c.

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Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any results marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis
NA = Sample is not amenable for the required analysis
ND = Results cannot be determined

Items listed with a 'SUB' method code prefix have been carried out by another SOCOTEC department or by an external subcontracted laboratory. Further information is available upon request.

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the subcontracted lab for information regarding any deviancies for this analysis.

Summaries of analysis methods are available upon request.

End of Certificate of Analysis

Certificate of Analysis

Client: Applied Geology Ltd

Project: 26032449

Quote: BEC251243961 V5.1

Project Ref: AG3744-26

Site: Langstone Technology Park, Havent

Contact: Cassandra Ellis

Address: The Old Barn, Church Farm
Fulbrook Lane,
Sherbourne
Warwick
CV35 8AR

E-Mail: Cassandra.Ellis@appliedgeology.co.uk

Phone: 07841 369192

No. Samples Received: 1

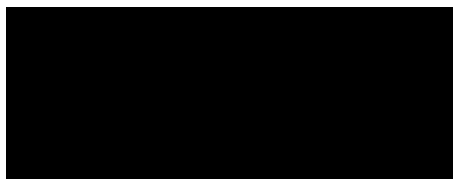
Date Received: 17/03/2026

Analysis Completed: 27/03/2026

Date Issued: 31/03/2026

Report Type: Version 01

This report supersedes any versions previously issued by the laboratory



Reported by Account Manager
Isabella Gibbs

Isabella.Gibbs@socotec.co.uk



Project Number: 26032449

Client: Applied Geology Ltd

Date Issued: 31/03/2026

Project Name: AG3744-26 - Langstone Technology Park, Havent

Samples Analysed

<u>Text ID</u>	<u>Sample Reference</u>	<u>Sampling Date</u>	<u>Sample Type</u>	<u>Sample Description</u>
26032449-001	CP04	23/02/2026 00:00:00	SOLID	Chalk Sample



Project Number: 26032449

Client: Applied Geology Ltd

Date Issued: 31/03/2026

Project Name: AG3744-26 - Langstone Technology Park, Havent

Analysis Results

		SOCOTEC Sample ID:		26032449-001
		Sampling Date:		23/02/2026 00:00
		Customer ID:		CP04
Method Code	Analysis	MDL	Accred.	
CLANDPREP	Total Moisture at 35°C	0.1 %	N	18.1
	Major Constituents	-	N	CHALK
	Minor Constituents	-	N	None
	Miscellaneous Constituents	-	N	n/a
	Colour of Material	-	N	White/Brown
PHSOIL	pH (2.5:1 extraction)	1 pH units	N	9.2
ICPWSS	Water Soluble Sulphate as SO4 2:1 Ext	10 mg/l	N	<10



Project Number: 26032449

Client: Applied Geology Ltd

Date Issued: 31/03/2026

Project Name: AG3744-26 - Langstone Technology Park, Havent

Deviating Sample Report

Sample Reference	Text ID	Method Code	Inadequate Transit Cooling	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
CP04	26032449-001	ICPWSS							✓
CP04	26032449-001	PHSOIL							✓

Analysis Method

Method Code

CLANDPREP
CLANDPREP
ICPWSS
PHSOIL

Method Description

Moisture Content @ 35°C
Solid Material Description
Sulphate as SO₄ (Water Soluble 2:1 Extract)
pH (2.5:1)

Analysis Method

As Received
As Received
Air Dried & Ground
As Received

Result Report Notes

Letters alongside results signify that the result has associated report notes.
The report notes are as follows:

Letter

Note

- A Due to the matrix of the sample the laboratory has had to deviate from our standard protocols to be able to process the sample and provide a result. Where applicable the accreditation has been removed and this should be taken into consideration when utilising the data.
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- E Due to the parameter value being beyond our calibration range (and following the maximum size of dilution allowed, where applicable), the result cannot be quantified and as such the result will appear as a greater than symbol (>) with the accreditation removed. This data should be used for indicative purposes only.
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- G The day 5 oxygen reading was below the capability of the instrument to detect, and therefore the calculated BOD has been reported unaccredited for guidance purposes only.



Project Number: 26032449

Client: Applied Geology Ltd

Date Issued: 31/03/2026

Project Name: AG3744-26 - Langstone Technology Park, Havent

HWOL Acronym Key

Acronym

HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

Description

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Results within this report relate only to the samples tested.

The accreditation codes are as follows:

U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

Any accreditation marked with ^ signify results are reported on a dry weight basis of 105° c.

All Air Dried and Ground Samples (ADG) are oven dried at less than 35° c.

This report shall not be reproduced except in full, without written approval of the laboratory.

Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any results marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis
NA = Sample is not amenable for the required analysis
ND = Results cannot be determined

Items listed with a 'SUB' method code prefix have been carried out by another SOCOTEC department or by an external subcontracted laboratory. Further information is available upon request.

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the subcontracted lab for information regarding any deviancies for this analysis.

Summaries of analysis methods are available upon request.

End of Certificate of Analysis



LABORATORY REPORT



Contract Number: PSL26/2109

Report Date: 02 April 2026

Client's Reference: 22107

Client Name: Applied Geology
The Old Barn
Church Farm
Fulbrook Lane
Sherbourne
Warwick

For the attention of: Hannah Spencer

Contract Title: Langstone Technology Park, Havant - Phase 3

Date Received: 11/3/2026

Date Commenced: 11/3/2026

Date Completed: 2/4/2026

Notes: Opinions and Interpretations are outside the UKAS Accreditation

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

Checked and Approved Signatories:

A Watkins
(Managing Director)

R Berriman
(Associate Director)

S Royle
(Laboratory Manager)

L Knight
(Assistant Laboratory Manager)

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(Senior Technician)

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Page 1 of

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

[illegible]

Langstone Technology Park, Havant - Phase 3

Contract No:

PSL26/2109

Client Ref:

AG3744-26

SUMMARY OF SOIL CLASSIFICATION TESTS

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

[illegible]

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

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

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

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

SYMBOLS : NP = Non Plastic



Langstone Technology Park, Havant - Phase 3

Contract No:

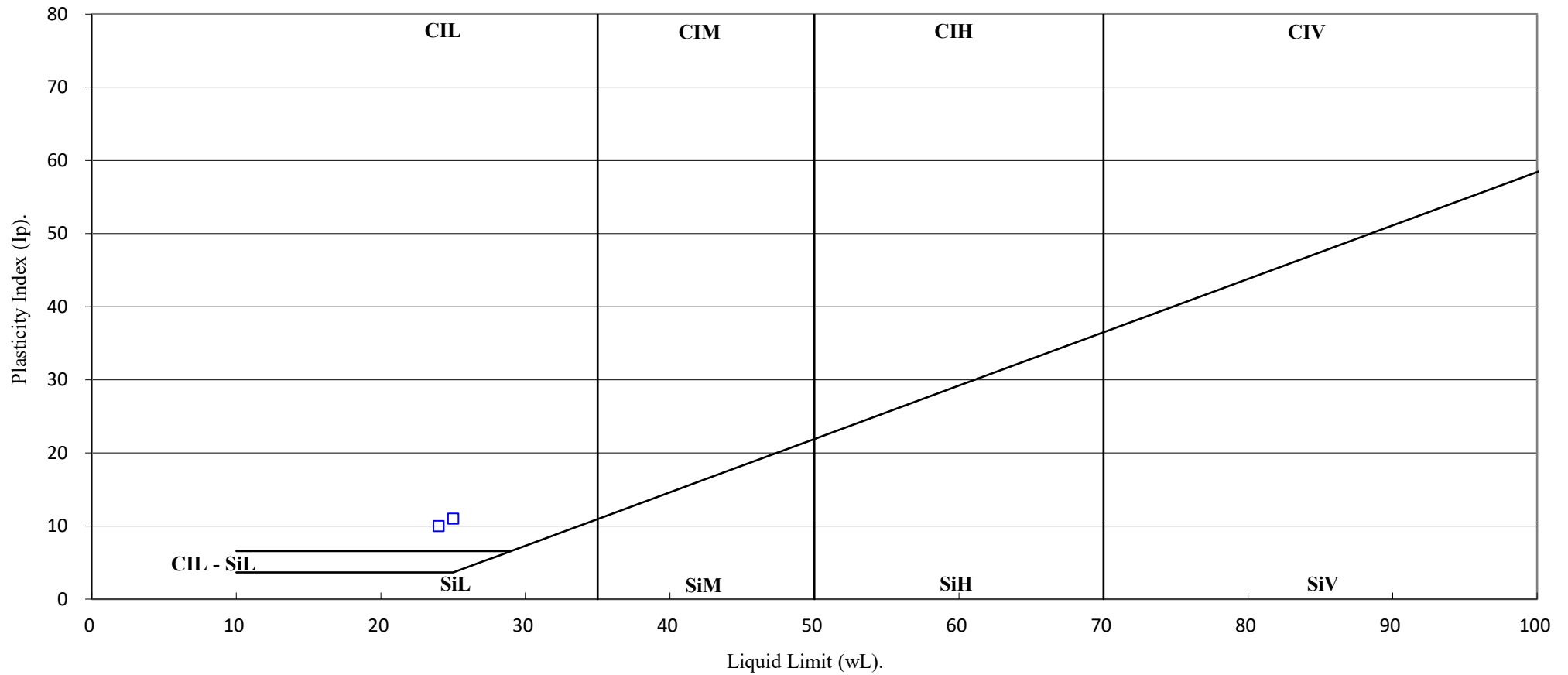
PSL26/2109

Client Ref:

AG3744-26

PLASTICITY CHART

BS EN ISO 14688-2:2017 Clause 4.4



Langstone Technology Park, Havant - Phase 3

Contract No:

PSL26/2109

Client Ref:

AG3744-26

PARTICLE SIZE DISTRIBUTION TEST

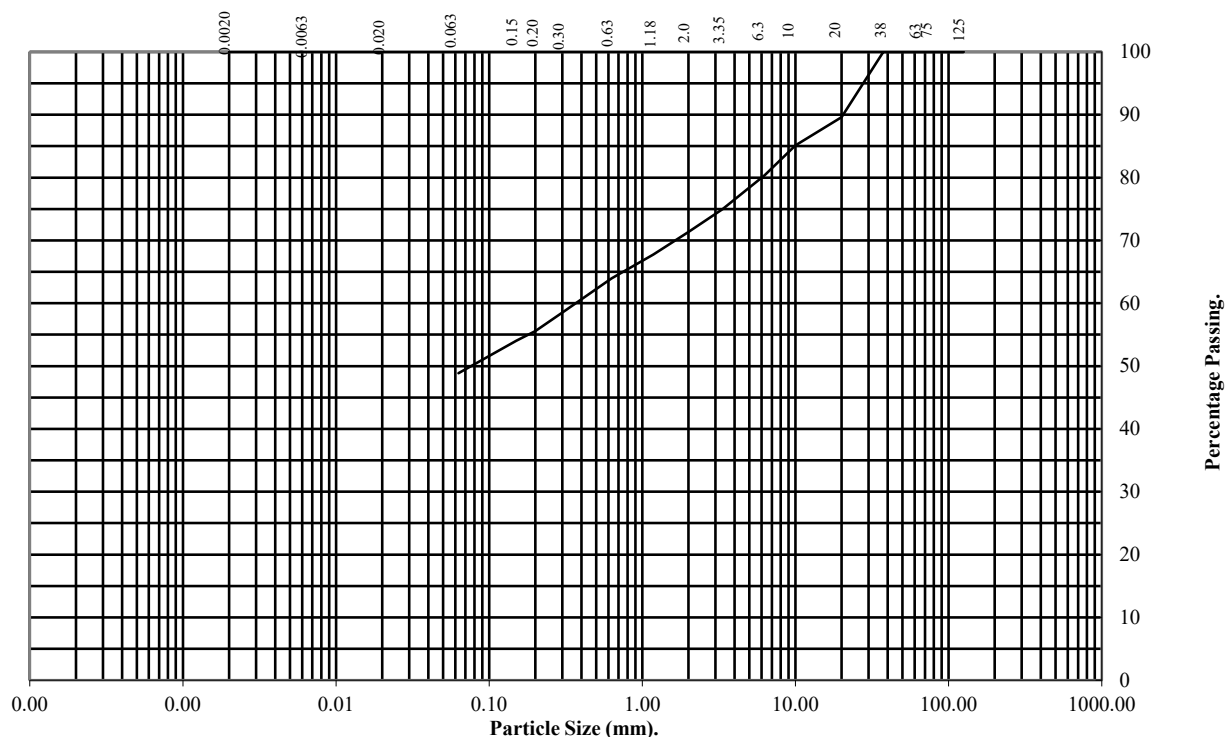
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number: CP04 Top Depth (m): 3.00

Sample Number: Base Depth (m):

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	90
10	85
6.3	80
3.35	75
2	71
1.18	68
0.63	64
0.3	59
0.2	56
0.15	54
0.063	49

Soil Fraction	Total Percentage
Cobbles	0
Gravel	29
Sand	22
Silt/Clay	49

Remarks:

See Summary of Soil Descriptions



Langstone Technology Park, Havant - Phase 3

Contract No:
PSL26/2109
Client Ref:
AG3744-26

PARTICLE SIZE DISTRIBUTION TEST

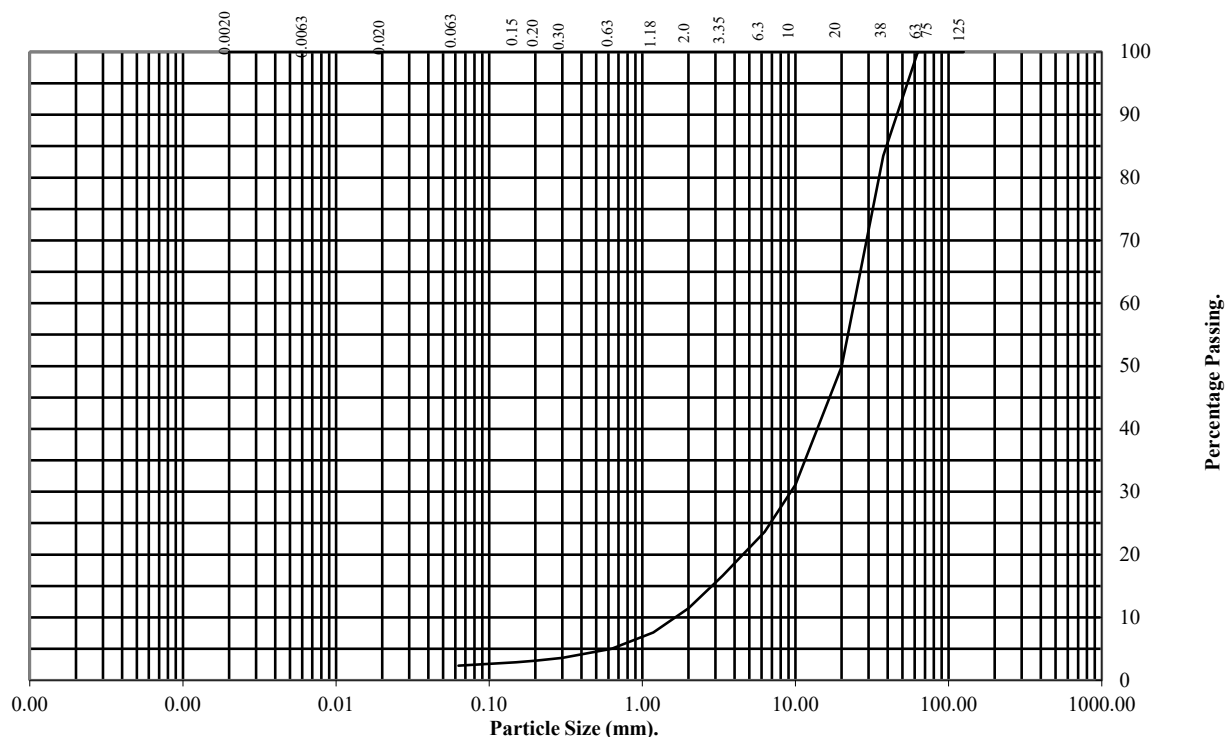
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number: CP05 Top Depth (m): 3.50

Sample Number: Base Depth (m):

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	83
20	50
10	31
6.3	24
3.35	17
2	11
1.18	8
0.63	5
0.3	4
0.2	3
0.15	3
0.063	2

Soil Fraction	Total Percentage
Cobbles	0
Gravel	89
Sand	9
Silt/Clay	2

Remarks:

See Summary of Soil Descriptions



Langstone Technology Park, Havant - Phase 3

Contract No:
PSL26/2109
Client Ref:
AG3744-26

PARTICLE SIZE DISTRIBUTION TEST

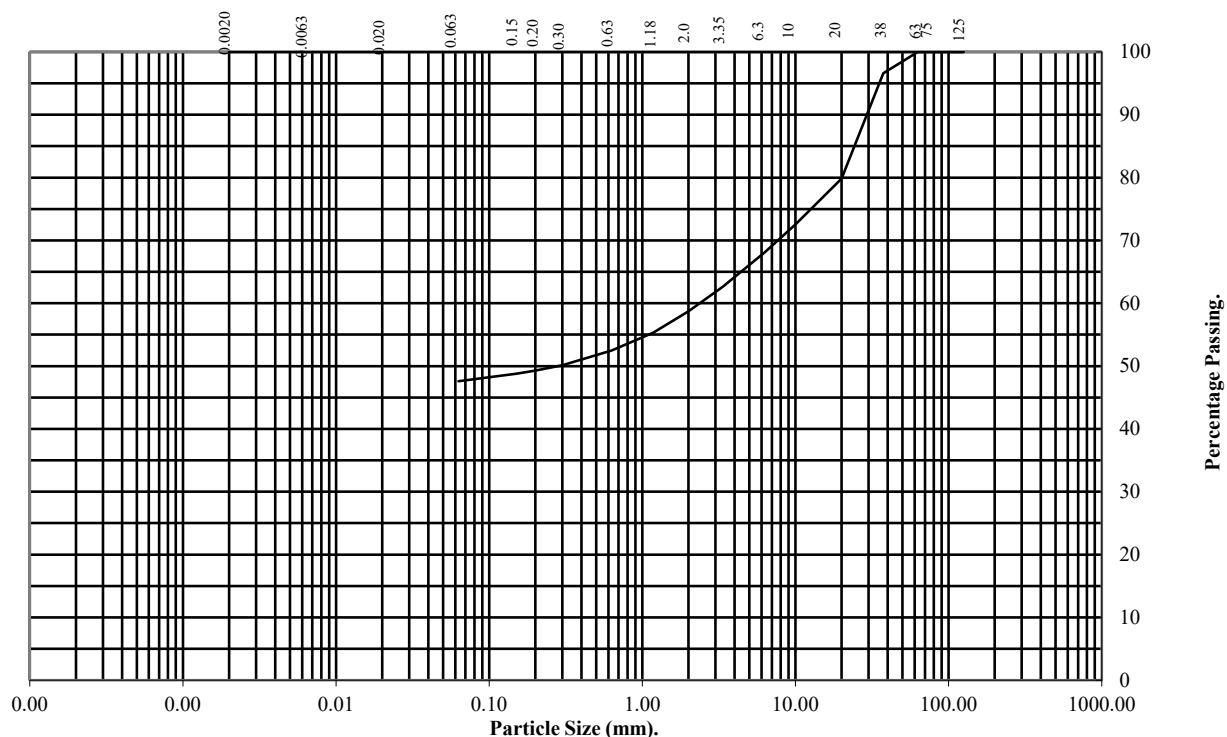
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number: CP05 Top Depth (m): 6.00

Sample Number: Base Depth (m):

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	97
20	80
10	73
6.3	68
3.35	63
2	59
1.18	55
0.63	52
0.3	50
0.2	49
0.15	49
0.063	48

Soil Fraction	Total Percentage
Cobbles	0
Gravel	41
Sand	11
Silt/Clay	48

Remarks:

See Summary of Soil Descriptions



Langstone Technology Park, Havant - Phase 3

Contract No:
PSL26/2109
Client Ref:
AG3744-26

PARTICLE SIZE DISTRIBUTION TEST

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

Sieve Method, Clause 5.2

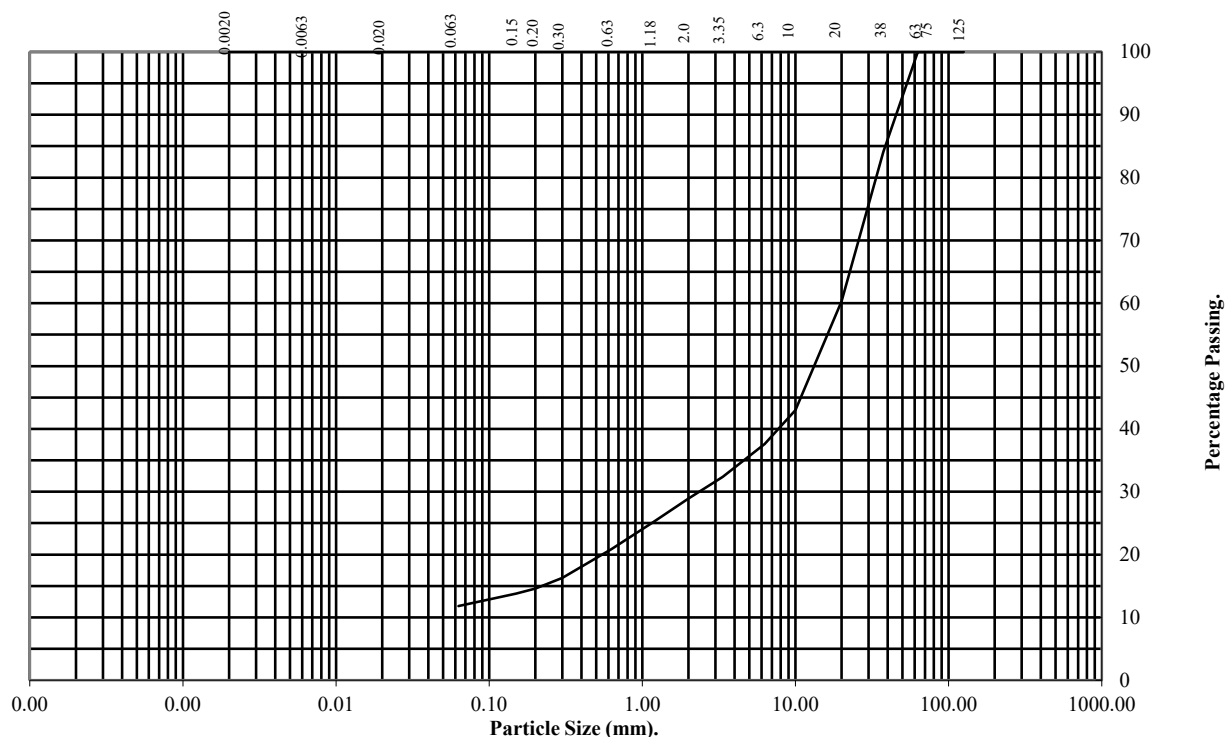
Hole Number: TP04

Top Depth (m): 1.20

Sample Number:

Base Depth (m):

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	84
20	60
10	43
6.3	38
3.35	32
2	29
1.18	25
0.63	21
0.3	16
0.2	15
0.15	14
0.063	12

Soil Fraction	Total Percentage
Cobbles	0
Gravel	71
Sand	17
Silt/Clay	12

Remarks:

See Summary of Soil Descriptions



Langstone Technology Park, Havant - Phase 3

Contract No:
PSL26/2109
Client Ref:
AG3744-26

PARTICLE SIZE DISTRIBUTION TEST

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

Sieve Method, Clause 5.2

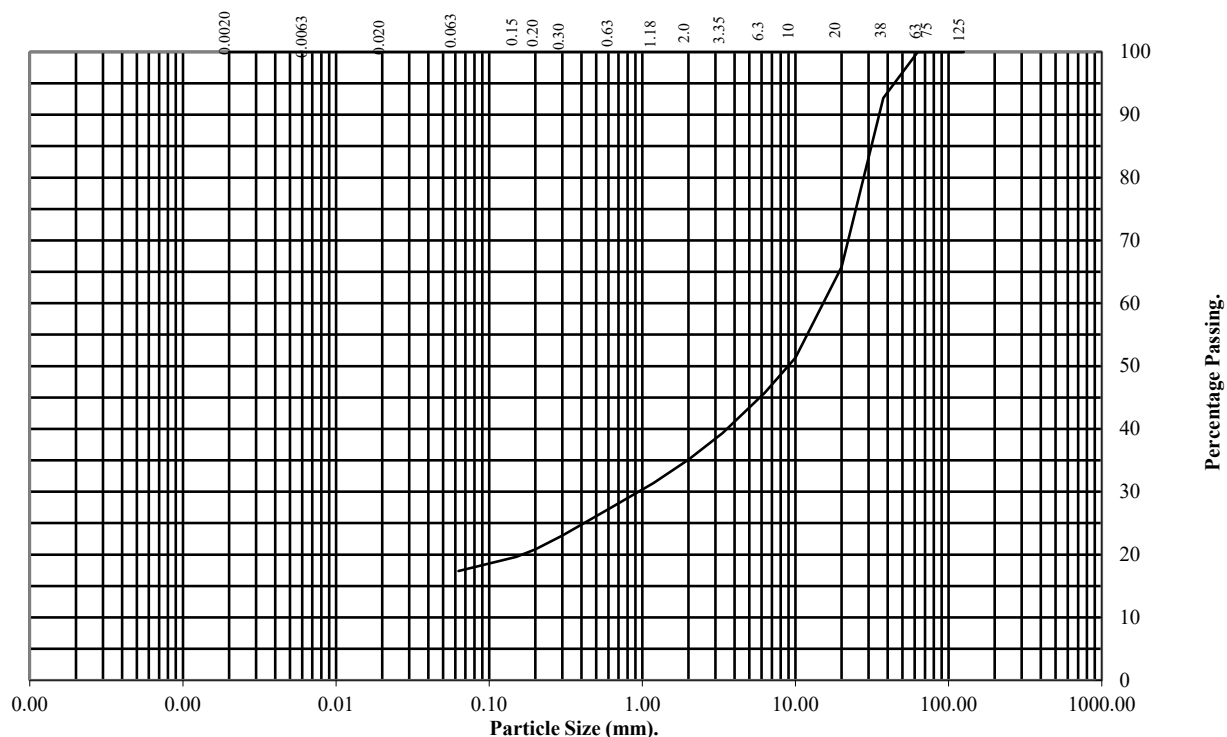
Hole Number: TP05

Top Depth (m): 1.50

Sample Number:

Base Depth (m):

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	93
20	66
10	51
6.3	46
3.35	39
2	35
1.18	31
0.63	28
0.3	23
0.2	21
0.15	20
0.063	17

Soil Fraction	Total Percentage
Cobbles	0
Gravel	65
Sand	18
Silt/Clay	17

Remarks:

See Summary of Soil Descriptions



Langstone Technology Park, Havant - Phase 3

Contract No:
PSL26/2109
Client Ref:
AG3744-26

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST

BS 1377 - Part 2 : 2022 : Clause 28 in accordance with BS EN ISO 17892 - 8 : 2018

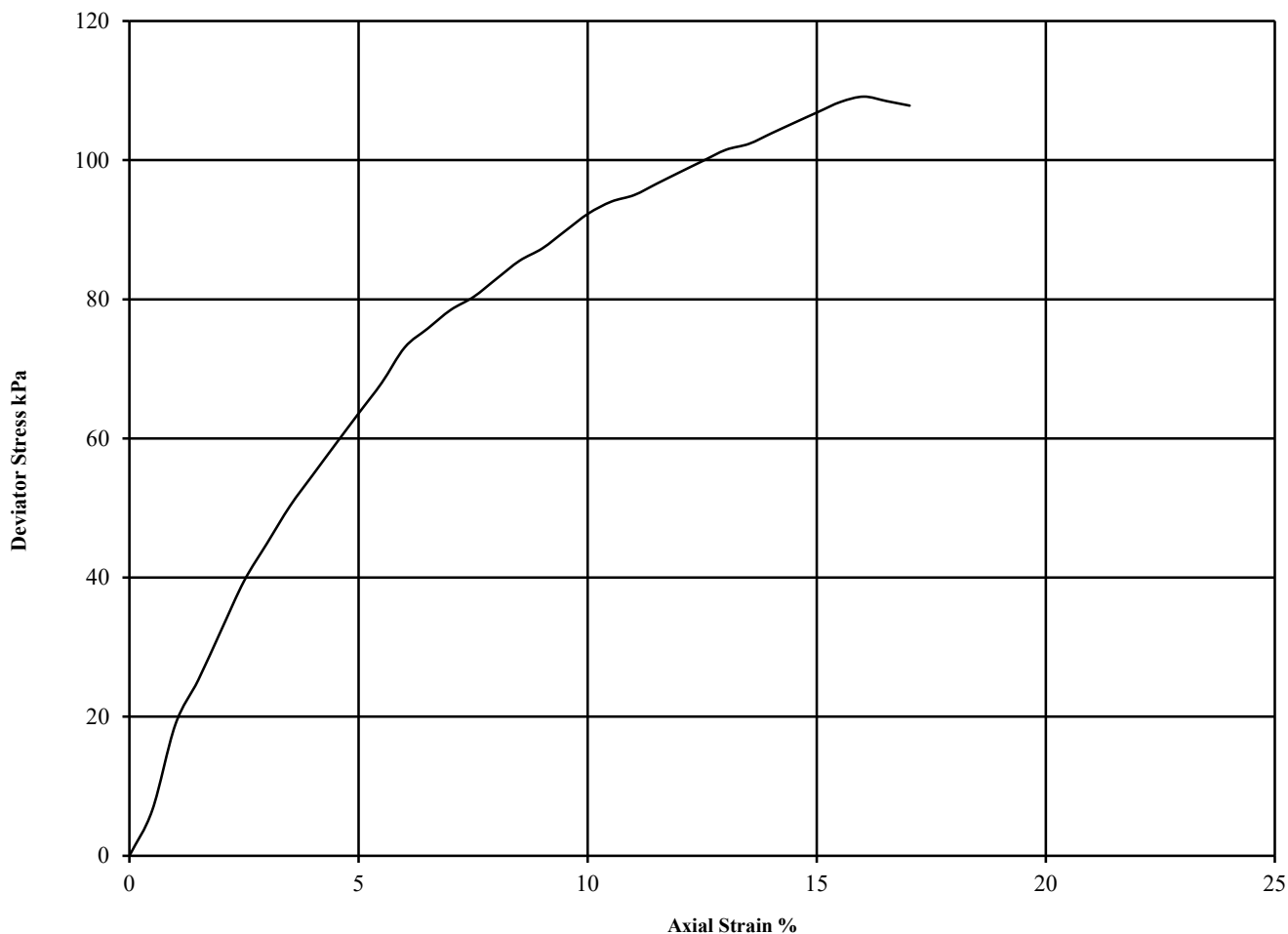
Hole Number: CP04

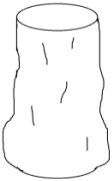
Top Depth (m): 5.00

Sample Number

Base Depth (m):

Sample Type UT



Diameter (mm):		Height (mm):			Test:		UU Single Stage		Remarks:
Specimen	Water Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Cell Pressure (kPa)	Corr. Max. Deviator Stress (kPa)	Shear Strength Cu (kPa)	Failure Strain (%)		Undisturbed Sample Sample taken from top of tube Rate of strain = 2.6 %/min See summary of soil descriptions
1	17.8	2.13	1.81	100	109	55	15.5	Plastic	



Langstone Technology Park, Havant - Phase 3

Contract No:

PSL26/2109

Client Ref:

AG3744-26

BS 1377 - Part 2 : 2022 : Clause 4.2 in accordance with BS EN ISO 17892 - 2 : 2014 : Clause 5.2 & 6

[illegible]

Langstone Technology Park, Havant - Phase 3

Contract No:

PSL26/2109

Client Ref:

AG3744-26

APPENDIX E

APPENDIX E

STANDARD FIELDWORK AND ASSESSMENT PROCEDURES

Scope of Work

The scope of work undertaken is defined in Section 1 of the Report. It should be noted that Applied Geology Limited does not provide arboricultural surveys, specialist surveys for the detection of invasive plant species (such as Japanese Knotweed) or protected species of wildlife. Information from environmental and ecological datasets is included from a review of the MAGIC (Multi-Agency Geographic Information for the Countryside) website, however, if a full assessment of Environmental or Ecological aspects is required, it is recommended that other specialists are consulted. Similarly, information on flood risk is included; obtained from the Environment Agency Web site and the GroundSure report; but this is not intended to be a full hydrological study and, if a flood risk assessment is needed, additional analysis by others is recommended to confirm this aspect of the development. Also, whilst our field staff have undergone asbestos awareness training, Applied Geology does not undertake asbestos surveys or provide specific advice relating to asbestos-containing materials. Any suspected asbestos-containing materials observed by our field staff will be mentioned in the report but further assessment by others may be required.

Fieldwork

Fieldwork is generally carried out in accordance with BS5930 (2015) "Code of Practice for Site Investigations" and BS10175 (2011) Investigation of Potentially Contaminated Sites, unless otherwise stated.

Prior to commencement on site, statutory services plans are generally obtained and verbal enquiries are also made regarding the positions of private or statutory services on site. Prior to excavation or drilling, locations are scanned with a cable avoidance tool (CAT) and service pits are generally excavated at borehole positions, where possible.

Descriptions and depths of the various strata recovered are presented on the exploratory hole records, reproduced in the report appendices, together with sample depths, the results of in-situ testing, comments on groundwater inflows, and any other pertinent information. The strata descriptions are in general accordance with BS5930:2015. Disturbed plastic pot and glass amber jar samples are recovered from the various strata and stored and transported in cool boxes, where relevant, for possible future laboratory testing.

Light cable percussion boreholes are generally drilled using a Pilcon Wayfarer or Dando rig and are advanced using equipment to bore 200/150mm diameter boreholes. Disturbed plastic pot samples are recovered from all deposits encountered to allow examination and laboratory testing. Certain strata are cased off due to their tendency to collapse, particularly in the presence of groundwater inflows and/or to reduce the risk of cross contamination. In situ Standard Penetration Tests, using Split Spoon (SPT) and Cone (CPT) are undertaken in the boreholes to provide a measure of the relative density of the granular (coarse grained) deposits or shear strength of the clay/chalk/ weathered rock deposits using industry recognised correlation guidelines of shear strength against SPT "N" value results. Within the fine grained (cohesive) deposits, "undisturbed" 100mm driven open tube samples were recovered from the various deposits to provide samples for examination and laboratory testing. On encountering groundwater, boring is usually suspended for 20 minutes while any rise in water level is recorded. Full details of the groundwater observations and monitoring results during boring operations are included on the borehole records. All boreholes without monitoring wells installed are usually backfilled with arisings upon completion, unless otherwise stated on the individual logs.

Unless otherwise stated on the relevant logs, trial pits are excavated using a wheeled backhoe excavator, usually with a 0.6m wide bucket. The excavations are logged from the ground surface by an Engineering Geologist / Geo-environmental Engineer and relevant field testing, appropriate to the soils encountered, is carried out on samples brought to the surface. Representative disturbed soil samples are collected from selected horizons for subsequent laboratory testing. The trial pits are

usually unshored and where reasonable, left open for a period of time to allow observations of pit stability and depth and inflow rate of any groundwater ingress. The excavations are backfilled with arisings prior to moving on to the next position. Any trial pits carried out as part of this or previous investigations may represent soft spots and conduits/sumps for groundwater or surface water. In excavations, such materials may also be loose and unstable.

Driven Continuous Sampling (DCS) boreholes are drilled using a track mounted Global mini-rig or similar using sampling tubes of varying diameter (decreasing with depth). Samples of the deposits encountered are recovered in 1m long clear plastic liners, which are logged and sub-sampled on site by an Engineering Geologist. Generally for geotechnical investigations, during the drilling process in-situ Standard Penetration Tests (SPTs) are undertaken at selected depths to provide a measure of the relative density of the granular (coarse grained) deposits or shear strength of the clay/chalk/ weathered rock deposits using industry recognised correlation guidelines of shear strength against SPT "N" value results. Groundwater seepages are noted during drilling if encountered. All boreholes without monitoring wells installed are usually backfilled with arisings upon completion.

Unless specifically stated in the report, exploratory hole locations should be regarded as approximate. Consideration should be given to accurate location of the exploratory holes where it is considered they may impact on proposed development.

It should be noted that groundwater levels at any particular site may fluctuate due to rainfall, seasonal variations etc and, therefore, levels may be different to those measured during the course of the fieldwork and monitoring period.

Laboratory Testing

The geotechnical testing was carried out in accordance with BS 1377:1990 Method of Tests for Soils for Civil Engineering Purposes and was undertaken by a UKAS accredited specialist laboratory. Chemical testing was undertaken by a UKAS accredited specialist chemical testing laboratory and MCERTS accredited methods, in accordance with Environment Agency recommendations, were specified where available.

Contamination Assessment – Human Health

Applied Geology Limited has followed the guidance given in the Land Contamination Risk Management (LCRM) publication and other available guidance to assess the contaminant concentrations. Details of the methodology followed are briefly outlined below.

The available chemical data is sorted into appropriate datasets depending on sampling regime and ground conditions. An initial generic quantitative risk assessment is undertaken on this data using statistical tests, where appropriate, and relevant screening values. Risk to human health has been initially assessed by comparing soil results against various published screening criteria. These have been sourced from the following, in order of preference:

- DEFRA. Category 4 Screening Levels (C4SL), March 2014;
- LQM/CIEH S4UL for Human Health Risk Assessment (S4UL), 2015*;
- Environment Agency/DEFRA, Soil Guideline Values (SGV) published in 2009;
- EIC/AGS/CL:AIRE Soil Generic Assessment Criteria (GAC), 2010.

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Except for lead and benzo(a)pyrene, the assessments will be carried out by comparing results against the LQM/CIEH S4UL in the first instance, where these values are exceeded, then reference will be made to the C4SLs where such exist. Lead will only be compared to the C4SL because no S4UL exists for lead. For Benzo(a)pyrene, Applied Geology has chosen to adopt the approach presented by the C4SL committee rather than the approach proposed by LQM/CIEH. Further discussion on this is presented below.

It is our view, and the view of others in the industry, that the C4SL were derived for use in both the Part IIA system and through the planning system, as they allow identification of those sites that fall within Category 4 (not contaminated) and are therefore able to be developed with no further remedial action. The C4SLs are considered to represent a contamination level that is 'low' from a toxicological view point, which we therefore consider to be 'acceptable' under planning.

Historically, the level of contamination has been assessed with reference to SGV values which were derived to represent a 'minimal' level of contamination. The SGVs are still valid and can be used alongside C4SL, however both screening values are only intended to provide guidance as to the level of contamination and, where concentrations fall below these screening values, the site is not contaminated (and is within Category 4). Exceedance of a SGV/S4UL/C4SL does not automatically indicate that an 'unacceptable' risk exists at a site; simply that further consideration of that particular contaminant is required.

At this time, there are two toxicological methodologies that can be used in the derivation of screening criteria for PAHs; Relative Potency Factor (RPFs) or the Surrogate Marker approach. Applied Geology has chosen (based on the latest guidance from the Health Protection Agency (HPA) to use the surrogate marker approach proposed in the C4SL methodology, whereby benzo(a)pyrene can be used as a surrogate marker for all 'genotoxic' (gene damaging) PAHs. The surrogate marker approach estimates the toxicity of a mixture of PAHs in an environmental matrix by using data from toxicity studies in which a PAH mixture of known composition was tested. Exposure to the surrogate marker benzo(a)pyrene is assumed to represent exposure to all the PAHs in the environmental matrix. Thus, the level of toxicity ascribed to the surrogate represents the toxicity of the PAH mixture. This allows an assessment of the combined carcinogenic risk associated with genotoxic PAHs using only benzo(a)pyrene. In order to confirm that the mixture of genotoxic PAH in the soil is similar to the coal tar mixture used in the toxicological study, various PAH ratios are plotted and checked to see that they fall within the limits set in HPA, 2010.

Contamination Assessment – Water Quality

Risks to water quality has been assessed by following the Environment Agency guidance on groundwater protection (previously known as GP3), updated on their website in March 2017, see <https://www.gov.uk/government/policies/water-quality> and 'The Environment Agency's approach to groundwater protection' (March 2017 Version 1.0).

For hazardous substances, which should be prevented from entering groundwater, the screening criteria are initially set as the limit of detection, however, if groundwater has already been impacted, an appropriate environmental standard will then be used. For hazardous substances, background quality may also be taken into account.

For non-hazardous compounds, their release should not result in any pollution or significant risk of pollution in the future, as such comparison with UK DWS or EQS standards will allow determination of whether pollution could occur. Typically screening criteria will be sourced from the following:

- Environmental Standards (ES), which are defined in European legislation such as the Water Framework Directive (WFD) (2000/60/EC) and the Priority Substances Directive (PSD) (2008/105/EC) a daughter directive of the WFD.
- The River Basin Districts Typology, Standards and Groundwater Threshold Values (Water Framework Directive) (England and Wales) Direction, 2010.
- UK Water Supply (Water Quality) Regulations, 2010.
- UK quality standards for water to be used for direct abstraction to potable supply e.g. Surface Water (Abstraction for Drinking Water) (Classification) Regulations, 1996.
- World Health Organisation (WHO) Guidelines for Drinking Water Quality.

Re-use of Soils and Waste Soil Disposal

It is noted that if any excavated material is to be reused on site, a Waste Management Plan (WMP) and / or a Materials Management Plan (MMP) will probably be required. Any such materials must be suitable for re-use without further treatment, and only the quantity necessary for the specified works should be used. Any materials not within these definitions may need to be considered as waste whereby a Waste Management Licence Exemption may also be required.

A specific categorisation and assessment of potential waste soils arising from the proposed development has not been undertaken as part of the investigation, unless otherwise detailed in the report text. However, generic comments and advice are made below for the reader.

All waste soils should be sorted to prevent mixtures of waste types. Where possible, any waste soil should be recycled and the volume of soil to be disposed of should be minimised. Any excavated soil material and excess spoil disposed of off-site should be treated as Waste and classified as Inert, Non-hazardous or Hazardous, prior to removal from site, as required by the "Duty of Care" (Environmental Protection Act, 1990) legislation together with Annex II of Directive 1999/31/EC ("Landfill Directive"). Initially, Basic Characterisation of the waste is required whereby the material should be described and its source of origin recorded (a site plan, exploratory hole records and the certificates of chemical analysis in this report should be included). This should also include data on its composition and leaching behaviour, its European Waste Catalogue (EWC) code, and where relevant any hazardous properties according to Annex III of Directive 91/689/EEC. This information should be provided to the licensed waste contractor.

Soils excavated on many sites would generally fall under the EWC description "Soil and Stones", EWC code 17 05 04. Waste Acceptance Criteria (WAC) testing is required for many Inert wastes and generally for all Hazardous Waste but not for non-hazardous waste. There are certain restrictions for inert wastes regarding topsoil and peat. Any asbestos must be disposed of by suitably licensed contractors to a suitably licensed facility.

Health & Safety Aspects

As outlined within the HSE publication 'Successful Health and Safety Management - HSG65', this report should inform your development of safe systems of work and information as an input into the safety management system.

When developing risk control systems we suggest making reference to the CIRIA report 132 "A guide for safe working on contaminated sites" and the HSE document "Protection of workers and the general public during the development of contaminated land – HSG66". All risk control measures should be in accordance with the guidelines laid down within the Management of Health and Safety at Work Regulations 1999.

The contents of this report may be used to supplement the contents of the Health and Safety File as required under the Construction Design and Management (CDM) Regulations.

Where excavations are undertaken on site, trench support or the angle of batter should be designed by an appropriately qualified engineer or competent person to suit the required depth and the ground and groundwater conditions. Care should be taken when digging excavations to prevent undermining or causing loss of support to the foundations of the nearby adjoining structures. Surcharging such as from spoil or vehicle movements close to excavation sides should be avoided. Practical guidance on trench excavation is given in CIRIA Report 97 Trenching Practice. Guidance on groundwater control is given in CIRIA Report 113 Control of groundwater for temporary works. Temporary works should be designed by a suitably qualified engineer or a competent person particularly where personnel access is necessary, in accordance with the requirements of the Construction (Design and Management) (CDM) Regulations.