



Bluemay Phase 3 at Bidmead Park

Interpretive Report on Ground Investigation

Report No: 738355-2 (01)

Client: E.W. Beard Limited

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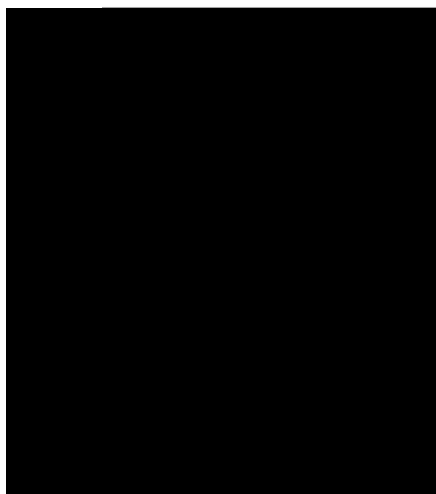
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1 EXECUTIVE SUMMARY

- 1.1 A new single storey production building is to be built for Bluemay Limited on a site within Bidmead Industrial Park at Sells Green near the town of Melksham, Wiltshire.
- 1.2 A ground investigation was completed by Structural Soils Limited (SSL) to obtain geotechnical and geoenvironmental on ground, groundwater and ground gas conditions at the site. This report (no. 738355-2) contains the investigation records and gives advice on geotechnical aspects such as foundation design and geoenvironmental aspects such as managing ground contamination risks.
- 1.3 A desk study and Preliminary Risk Assessment (PRA) that included research into the past uses of the site was previously completed by SSL and is detailed separately in report no. 738355-1.
- 1.4 The site lies within a small industrial park. The new unit is to be constructed on the eastern side of an existing Bluemay storage building that was built in the late 1990's and the two connected by a link. Most of the unit is to be built in a flat grassed area currently set at around 60.1 to 60.5 m above Ordnance Datum (mAOD), however ground levels at the northern end rise by about 2.5 m where a cutting into the slope is required. Ground levels across part of the building footprint were reduced in the late 1990's when the storage unit was constructed. An older Bluemay factory building is located upslope of the site to the north-east.
- 1.5 The site was formerly crossed by a railway line in a cutting. The railway was lifted in the 1960s, and west of the site was infilled and is a registered landfill. A report produced by E J Wilson and Associates detailing a 1996 ground investigation states that at that time the cutting was between 1 m and 3 m deep and a concrete slab used for the loading of lorries had been built within it at about 59.5 m AOD.
- 1.6 The new ground investigation completed by SSL consisted of window sample boreholes up to 5 m depth, machine and hand dug trial pits, in-situ plate load and TRL dynamic cone penetrometer (DCP) tests, laboratory testing, gas and groundwater monitoring.
- 1.7 The investigation showed that the concrete slab at the base of the cutting remains in place, and that post-1996 what remained of the cutting following the reduction in site level was infilled by up to around 1 m by clay soils mixed with varying quantities of rubble. The slab was proved to be underlain by 0.6 m of limestone gravel at one location, with the Made Ground adjacent to it extending to 2.2 m depth. Outside of the former cutting the Made Ground was typically <1 m thick.
- 1.8 The Made Ground was underlain by natural firm or stiff clay soils containing occasional gypsum crystals, shell fragments and sand classified as the Kimmeridge Clay Formation for the purposes of this report.

- 1.9 Groundwater was struck within the Made Ground within the infilled railway cutting below at 1.00-1.50 m depth and later stood at around or slightly <1.0 m below this ground level within standpipes.
- 1.10 Indications of possible contamination within the Made Ground included slag and clinker, a strong possible sewage type odour from one location, and an oily sheen to groundwater in one trial pit. These and other observations are summarised in Section 6.5.
- 1.11 The eastern elevation of the newer Bluemay production was found to be supported on a trench fill strip foundation overlain by flat concrete surface that projected by between 0.62 m and 0.93 m from the face of the building at around 0.20 m depth. The foundation tapered back towards the building with depth; the base was not reached by 1.40 m depth at which point the foundation was projecting by 0.50 m from the face and the trial pit appeared to just be reaching the natural clay soils.
- 1.12 The older Bluemay factory building was supported on a concrete trench fill foundation set at 0.65 m depth on firm Kimmeridge Clay, projecting by up to 400 mm from the building.
- 1.13 The proposed new building spans the infilled former railway and buried concrete slab, land north of the former railway where ground levels were reduced in the late 1990's, and higher ground where levels will be reduced and swelling of clay soils due to the reduction in ground pressure will occur.
- 1.14 Groundwater ingress into excavations completed within the footprint of the former railway is likely below around 1.00 to 1.50 m depth. Groundwater inflow into TP04 was relatively slow and likely to be controllable by sump pumping, but in TP05A/TP05B was more rapid and excavations here might require other methods of dewatering of excavations.
- 1.15 The Kimmeridge Clay has a medium volume change potential with changes in moisture content, according to the criteria of NHBC Standards, Chapter 4.2 *Building Near Trees*.
- 1.16 A minimum foundation depth of 0.90 m for a soil of medium volume change potential.
- 1.17 Where ground levels are reduced by 2.50 to 3.00 m at the northern end of the site some swelling of the natural clay soils beneath will occur due to reduction in overburden pressure. Total swelling heave in the order of 10 mm or less might reasonably be expected. The rate of swelling is affected by various factors, and full swelling would be likely to take weeks or months.
- 1.18 Conventional strip or pad foundations may be constructed upon the natural Kimmeridge Clay soils at a minimum depth of 0.90 m below final ground level (or, if ground level is raised, below current level). The natural clay A net allowable bearing capacity of up to around 200 kPa. Where the Made Ground is thicker, foundations will need to be deepened, in the central part of the site to up to 2.20 m depth.
- 1.19 A ground bearing floor slab is not recommended within the footprint of the former railway as differential settlement across the slab is likely. A suspended floor slab is recommended here which coves around one quarter of the proposed new building. North of the former

railway ground bearing slab is possible however where ground levels are reduced at the northern end swelling of the clay soils will occur. For this reason it would be preferable to suspend the entire floor slab. However, if this is not preferred a ground bearing floor slab with a suitable sub-base layer slab could be adopted north of the cutting if suitable additional precautions were taken.

- 1.20 As discussed in Section 7.3.2 a single laboratory swelling pressure test showed that a swelling pressure of 44 kPa could develop, and total swelling in the order of 10 mm or less might occur over a period of weeks or months. The swelling pressure would exceed the design floor load. To minimise a period of at least one month should be allowed between the reduction in ground level and commencement of floor construction and the floor should be provided with additional reinforcement. Ground levels should be monitored regularly throughout the one month period to an accuracy of +/- 1 mm or better to confirm whether heave has occurred or is continuing to occur, and the findings assessed before proceeding with floor construction.
- 1.21 To minimise the risk of damage to concrete foundations and floors under construction it is recommended that a period of at least one month be allowed between reduction in site levels and commencement of construction.
- 1.22 A soakaway test completed at 1.60 m depth in trial pit TP02 within natural Kimmeridge Clay soils showed negligible drainage over a 5 hour duration of the test. Within the footprint of the former railway groundwater recorded standing water levels of around 1 m below the main site level (~ 59 mAOD). The site is therefore considered unsuitable for soakaway type drainage.
- 1.23 The site is unsuitable for conventional soakaway type drainage due to shallow groundwater in the Made Ground within the footprint of the former railway, and low permeability clay soils outside of it.
- 1.24 The Kimmeridge Clay and any clay fill derived or groundwater in contact with it may contain elevated sulphate concentration or oxidisable sulphides due to gypsum with the clay, making the ground and groundwater more aggressive to buried concrete. Based on the results obtained in this investigation it is concluded that for this site the Aggressive Chemical Environment for Concrete (ACEC) classes for this site are AC-4 where concrete could be contact with groundwater (e.g. below about 1.00 m depth below the main site level) and AC-3 if there is no risk of concrete being in contact with groundwater, for example potentially in floor slabs.
- 1.25 Geotechnical parameters that may be used for the design of a retaining wall to retain the proposed new cutting are given in Section 7.8. If no retaining wall is to be used the slope should be battered back at a suitable angle in the order of 2.5:1 or shallower.
- 1.26 Samples tested of the Kimmeridge Clay show that if used as engineered fill it could be classified as Class 2A wet cohesive fill using Department for Transport, *Manual of Contract Documents for Highway Works (MCHW), Volume One: Specification for Highway Works, Section 600 Earthworks*. To achieve 95% maximum dry density with 5% or less air voids the clay would require drying before compaction. The liquid limits and

plasticity indices of the clay exceed the upper limits for various types of Class 7 fill, and the sulphate and total potential sulphate concentrations also restricts the use of the material as engineered fill.

- 1.27 The Designer may wish to consider repositioning the building further to the north to avoid building over the former railway. However, this would require ground levels to be reduced over a wider area generating more soil for disposal or reuse.
- 1.28 The Generic Quantitative Risk Assessment (GQRA) carried out has not identified any complete contaminant linkages to be present on the completed development. Accordingly the site is not considered to require specific remediation to facilitate the proposed development.
- 1.29 An initial waste classification utilising the contamination analysis results from the investigation has not identified any properties that would cause the soils to be classed as hazardous waste. Accordingly, the soils may be classed as non-hazardous waste for off-site disposal to landfill under List of Waste code 17 05 04.
- 1.30 Further sampling and analysis would be required to determine whether the soils would pass the Waste Acceptance Criteria for inert waste landfills.

2 INTRODUCTION

A ground investigation was carried out by Structural Soils Limited (SSL) on the instructions and on behalf of E. W. Beard Limited (the Client) at the site known as Bluemay Phase 3 within Bidmead Park near Melksham. The purpose of the work was to obtain geotechnical and geoenvironmental information for a proposed new warehouse building development which will be single storey and include production and staff facilities.

The scope of the investigation comprised:

- a desk study and Preliminary Risk Assessment (PRA) which included research into the past uses of the site and its surrounding area. This is detailed separately in SSL Report No. 738355-1 which should be read in conjunction with this report, and
- an intrusive ground investigation which is detailed in this report (SSL Report No. 738355-2).

A historical ground investigation report issued in January 1996 by E J Wilson and Associates for the development of an existing building on the site was made available to SSL, along with other historical documents, and is referred to within this report and the desk study.

The new ground investigation has been carried out by SSL in accordance with the contract specification, and the general requirements of BS 5930:2015+A1:2020, BS 10175:2011+A2:2017, BS EN 1997-2:2007, BS EN ISO 22475-1:2021, the UK Specification for Ground Investigation and other relevant standards as identified elsewhere in this report.

This report presents the factual records of the fieldwork and laboratory testing together with an interpretation of the findings with respect to the proposed development. The report gives recommendations relating to geotechnical aspects such as foundation design. It presents an appraisal of geoenvironmental aspects such as soil contamination and gives recommendations on risk reduction. It should not be assumed that these would meet the requirements of the local authority, whose advice should be sought regarding planning permission.

All information, comments and opinions given in this report are based on the findings of the desk study, on the ground conditions encountered during the site work, and on the results of laboratory, field tests and monitoring performed during the investigation. Whilst every attempt is made to record full details of the strata encountered in the exploratory holes, techniques of hole formation and sampling will inevitably lead to disturbance, mixing or loss of material in some soils and rocks. There may be conditions at the site that have not been taken into account, such as unpredictable soil strata, contaminant concentrations and water conditions between or below exploratory holes.

This report was prepared by SSL for the sole and exclusive use of E.W. Beard Limited in response to particular instructions. Any other parties using the information contained in this report do so at their own risk and any duty of care to those parties is excluded. No liability will be accepted after a period of 6 years from the date of the report.

3 SITE DESCRIPTION

3.1 Location and Topography

A full description of the site is given in Section 2 of the PRA report referenced in the preceding section. A brief summary is repeated below.

The site is located halfway between the towns of Melksham (west) and Devizes (east), around 75 m to the north of Bath Road (A365). It comprises an area within Bidmead Industrial Park. The British National Grid Reference of the site is ST955620 (see Site Location Map in Appendix A).

The site of the proposed new building is roughly rectangular and approximately 80 m by 60 m in size. Most of the site is flat, largely grass covered and set at a level of about 60.1 m above Ordnance Datum (mAOD) to 60.5 mAOD, however ground levels rise at the northern end up a grass slope to a field set at about 63.0 mAOD.

The site is bounded by a modern warehouse type storage building to the west built after 1995 and used by Bluemay Multicap Limited for plastic injection moulding, with the floor set around 300 mm above the adjacent site level. An older Bluemay factory building built at the higher site level bounds the site to the north-east. Immediately east and south of the site are parking and circulation areas, and a small rainwater storage and attenuation pond.

The site overlies an infilled railway cutting. Ground levels were also reduced by up to around 3 m on the northern end of the site at the time the newer of the existing Bluemay buildings was constructed - see the further discussion of the site history in Section 3.3, below.

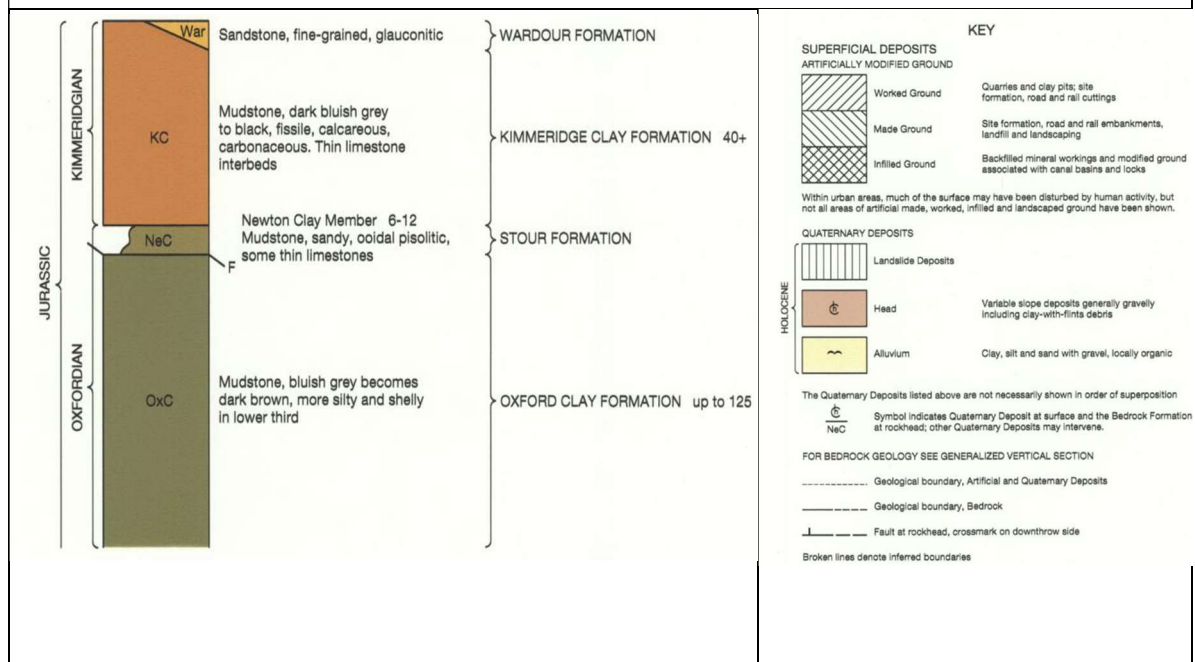
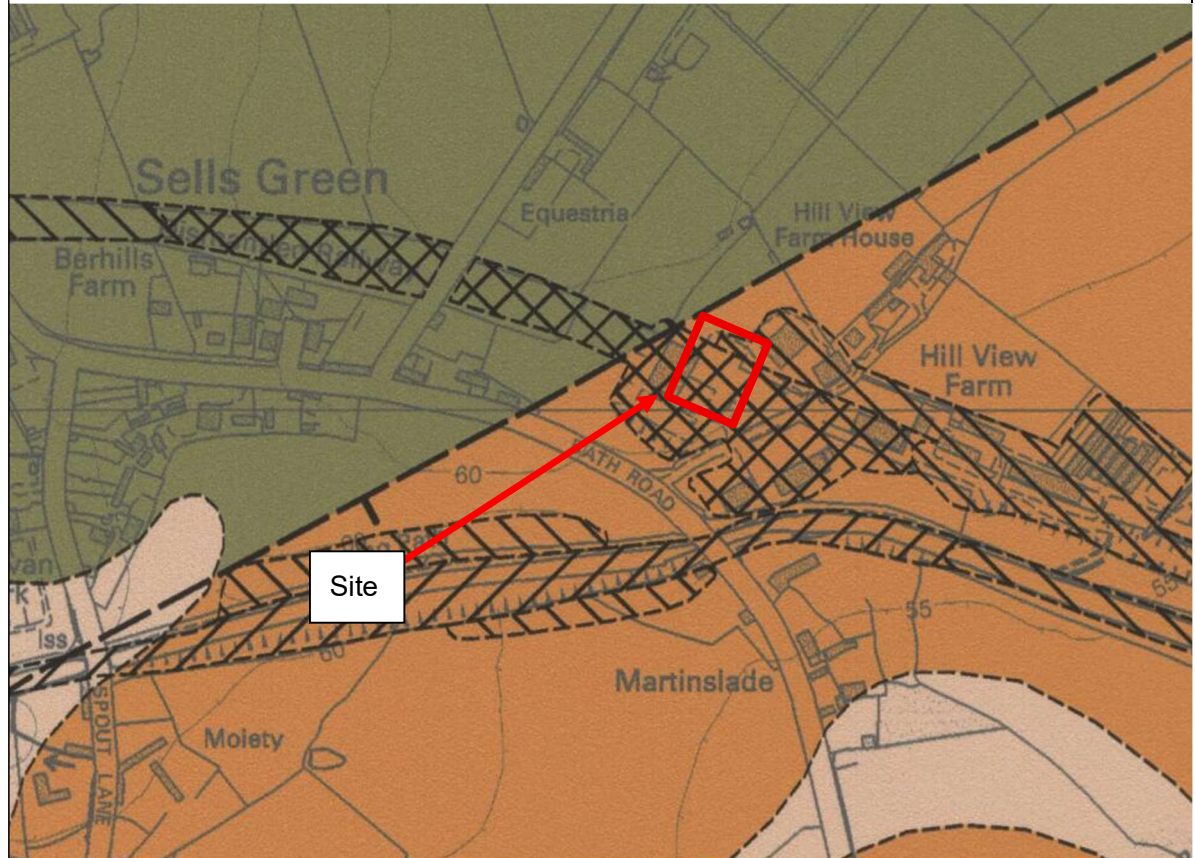
3.2 Summary of Published Geology

Information on the published geology at the site is detailed in Section 3.1 of the PRA referenced in the preceding section and summarised below.

Made Ground is shown along the footprint of the historical railway alignment and cutting that crossed the site.

No superficial deposits are recorded. A geological fault is mapped as crossing the north-western edge of wider Bluemay site, a little outside of the new building footprint, on a north-east to south-west alignment. South and east of this the majority of the site is mapped as being directly underlain by the Kimmeridge Clay Formation. North and west of the fault the older Oxford Clay Formation outcrops. For clarity the extract from the most recent British Geological Survey (BGS) 1:10,000 scale scanned paper map that is included in the desk study report is duplicated on the following page.

**PLATE 1: EXTRACT FROM BRITISH GEOLOGICAL SURVEY MAP SHEET ST96.SE,
SCALE 1:50,000 PUBLISHED 2011**



Note: Above images contain British Geological Survey materials © NERC [2025].

3.3 History of Site and Surrounding Area

A full description of the history of the site is given in Section 3 of the PRA referenced in the preceding section, which is summarised below.

The site has some industrial history dating from the mid 1800's with a railway line crossing the site within a cutting and a halt (platform and associated buildings) crossing the southern edge of the site. Following closure and lifting of the railway in the 1960s the use of the site is unclear, but a platform and gantry crane on the site were reportedly used for the loading of lorries.

The former railway cutting to the west of the site has been infilled and is registered as a landfill.

Seend Brickworks, which included a clay pit, was located east of the site. The wider area had several farms and an agricultural machinery depot. The clay pit appears to have been infilled between 1926 and 1991.

The site is currently used as storage and production facilities for a plastic injection moulding company (Bluemay Limited) and is located within Bidmead Industrial Park where other construction related businesses are also based.

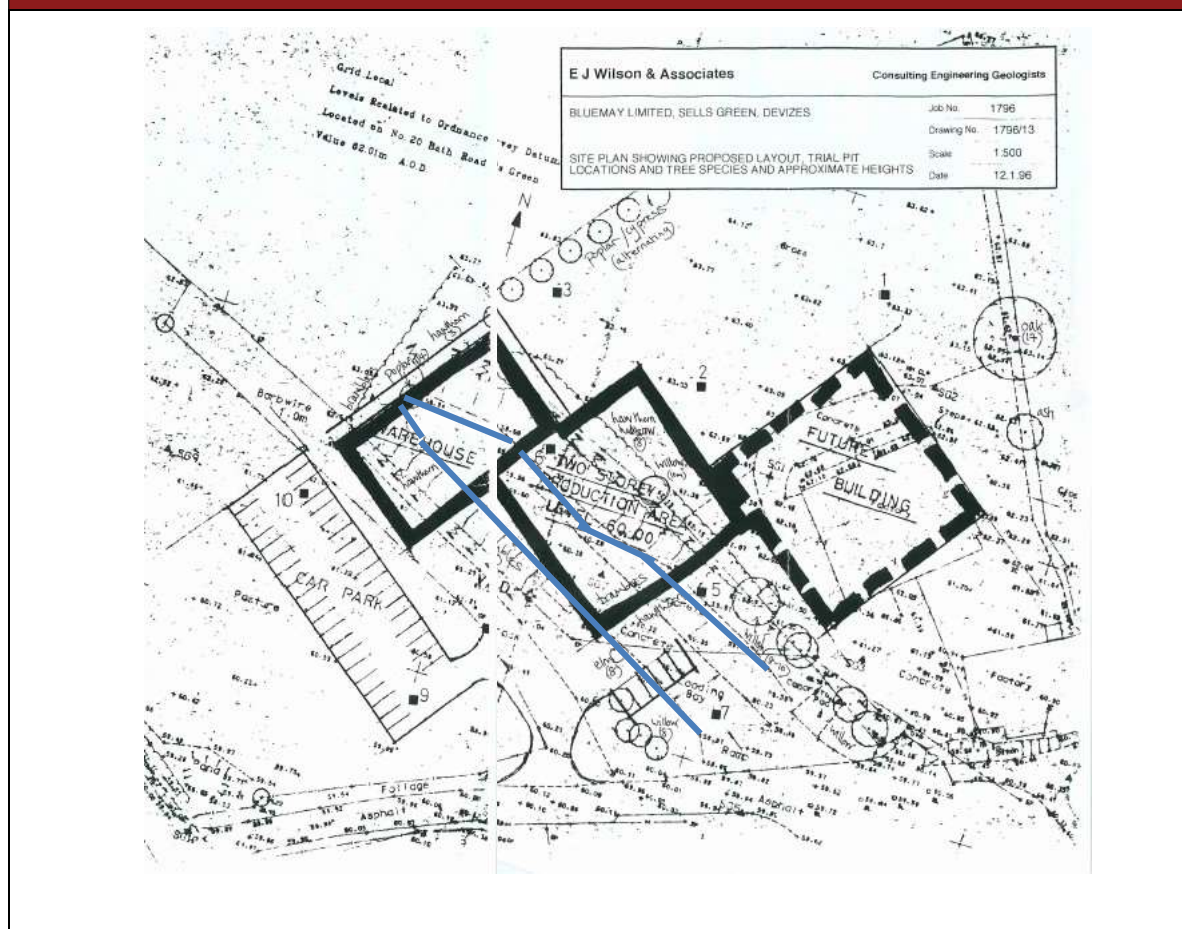
The report on the 1996 ground investigation by E J Wilson and Associates provides useful additional information on the appearance of the site at that time. Their description covers both the site of the proposed new building, the land where the newer Bluemay storage building now stands (to the west), and the land to the east and north-east (where the pond and older Bluemay factory building are located). Extracts from that site description are quoted below:

An existing building surrounded by a concrete apron standards at the western corner of the site. The main feature across the site is however an old railway cutting which traverses the site in a north-westerly to south-easterly direction, as indicated on the site plan. The depth of the cutting increases from approximately 1m at the south-eastern end of the site to approximately 3m at the north-western end of the site. The cutting had been backfilled further northwest of the site boundary.

The width of the cutting (from the crest of the slopes) is in the region of 25-30m. The line of the former railway had been covered with a concrete slab and forms the lowest part of the site at a level of approximately 59.5m OD. Adjacent to the former railway line is a concrete platform and it is understood that this is used as a lorry loading bay.

The overall ground profile is slightly southerly from some 64m OD at the northern end of the site to some 60m OD at the southern end. The railway cutting which runs centrally across the site varies between about 1m and 3m in depth (at about 59.5m OD).

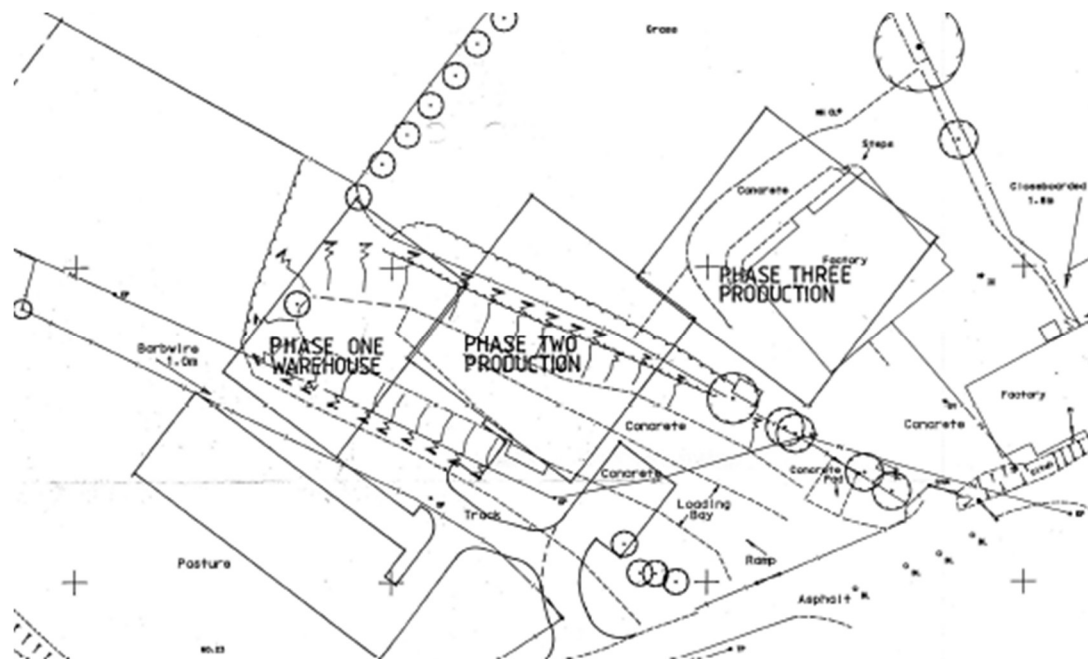
**PLATE 2: EXTRACT FROM EXPLORATORY HOLE LOCATION PLAN CONTAINED IN
1996 E J WILSON AND ASSOCIATED REPORT**



The left hand (westernmost) building footprint marked on the plan above as a heavy black line appears to roughly correspond with the position of the newer existing Bluemay storage building. The central footprint is roughly that of the new building now proposed, except that current proposal would extend the building further northwards.

The apparent extent of the concrete slab marked as being present within the cutting at that time is highlighted in blue above. The slab is discussed later in this report.

Similar details are shown another historical drawing that was supplied to SSL titled *Site Phases*, produced in August 1995 by Michael Sullivan Associates, an extract of which is included on the next page.



Above: extract of drawing showing site layout in 1995 and the new buildings proposed at that time.

4 FIELDWORK

4.1 General

The ground investigation was carried out by SSL in phases as follows:

- 15 and 16 July 2025: completed window sample boreholes (WS01 – 06, and 05A) plus one hand dug trial pit on the older Bluemay factory building (HDTP03).
- 24 July 2025: completed machine dug trial pits (TP01B, TP02), hand dug trial pits on the newer Bluemay storage building (HDTP01, 02 and 04) plus soakaway, plate load and TRL Dynamic Cone Penetrometer tests (DCP).
- 31 July 2025: completed machine dug trial pits TP03, TP05A and TP05B (which were combined into a single trench, TP04 which was both hand and machine dug, and DCP tests.

The investigations were supervised by engineers from SSL. The scope of works and positions were selected by and set out by SSL and adjusted where necessary to take account of buried or overhead services, or other restrictions. The initial planned machine dug trial pit locations were moved further away from the proposed new building footprint on the instruction of the Client.

The exploratory hole and field (in-situ) test locations are shown on the Exploratory Hole Location Plan presented in Appendix A.

4.2 Exploratory Holes

The exploratory holes completed are listed in the following table.

TABLE 1 :SCOPE OF INTRUSIVE WORKS			
Quantity	Exploratory Hole Type	Maximum depth (m)	Hole / Test Numbers
7	Window Sample Boreholes.	5.45	WS01 to WS06, plus WS05A
6	Machine Dug Trial Pits.	3.10	TP01B, TP02, TP03, TP04, TP05A, TP05B
4	Hand Dug Trial Pits.	0.65	HDTP01 to 04 (TP04 was also partly extended by hand)

The exploratory hole logs are presented in Appendix B. These provide information including the equipment and methods used, samples taken, tests carried out, water observations and descriptions of the strata encountered. Explanation of the terms and abbreviations used on the logs is given in the Key to Exploratory Hole Records in Appendix B, together with other explanatory information.

The holes were logged by an engineer in general accordance with the recommendations of BS 5930:2015+A1:2020 (which incorporates the requirements of BS EN ISO 14688-1:2018, 14688-2:2018 and 14689:2018). Detailed descriptions, together with relevant comments, are given on the logs.

Photographs of the trial pits are presented in Appendix B, alongside the logs. A sketch showing the foundation detail exposed is included with the log for TP03.

An underground utility survey was undertaken at all intrusive exploratory hole locations in accordance with Category B of PAS 128:2022 *Underground utility detection, verification and location – Specification*.

A desk top review of utility information, liaison with utility providers and site reconnaissance was completed. At each intrusive investigation location an underground utility survey was undertaken.

The utility survey was completed using electromagnetic (cable avoidance tool and signal generator) and ground penetrating radar (GPR) techniques. At borehole and field test location a minimum area of 25 m² centred at the location was surveyed (5 m x 5 m box), and at trial pit locations a minimum area of 49 m² (7 m x 7 m box). The survey was carried out by RSK SafeGround.

Inspection pits were hand dug at the window sample borehole locations prior to commencement of drilling.

A survey of the exploratory hole locations was undertaken using specialist Global Positioning System (GPS) equipment as part of the PAS 128 utility survey. The coordinates of each exploratory hole were measured relative to British National Grid, and the level relative to Ordnance Datum. These are shown on the exploratory hole logs contained in Appendix B which have been printed with a reduced level column.

Borehole WS05, which was 4.00 m deep (extended to 4.45 m with a SPT test) collapsed before a gas/groundwater monitoring well could be installed within it. A replacement hole, WS05A was drilled alongside in which no sample recovery was achieved between 2.00-3.00 m, and a standpipe was installed to 3.00 m depth.

A concrete slab was encountered at the base of TP01B at 1.10 m depth. The pit was given the superscript 'B' to differentiate from a possible alternative location, TP01A, east of it, which had also been cleared by the PAS 128 survey but which was not attempted.

Whilst clearing loose material out of the TP01B the mechanical excavator exposed a 50 mm diameter blue plastic duct in the north-western corner of the pit, breaking off a section of the upper surface of the duct, exposing a 25 mm diameter blue plastic water supply pipe inside which was undamaged.

The duct and pipe had not been detected in the May 2025 site utility survey undertaken for the Client by Solum Surveying Ltd, nor by RSK Safeground during the PAS 128 survey. However, the many cobbles and boulders in the Made Ground, 'reflective' materials like clinker, slag and the intact concrete slab, and the small diameters of the

duct and pipe would have made it very difficult if not impossible to identify them with ground penetrating radar. Both RSK Safeground and the SSL engineers detected multiple suspected false signals when using both GPR and radiodetection tools on the site, and Solum Surveying recorded multiple randomly orientated linear features starting and ending in open space on the site which are presumed to also be 'false' and not to represent actual utilities.

Further attempts to trace this water pipe using GPR on the visit of 31 July 2025 were unsuccessful. It is conjectured that the pipe probably either runs west towards a kitchen within the northern end of the Bluemay storage building, or south-west towards a barrier post outside of the building which incorporates an external water tap.

Hand dug trial pits HDTP01 and HDTP03 were positioned to expose column pad foundations to the newer Bluemay storage building, the locations based on a historical building and foundation layout drawing supplied to SSL. Both encountered a smooth concrete slab or 'shelf' at about 0.20 m depth that extended 0.70 m to 0.93 m from the face the building, had an irregular outer edge and was between 130 mm and 200 mm thick at the edge. This was assessed as too thin to represent a raft foundation, and to be too thin to support column foundations. A third pit, HDTP04 was dug between them, so between column locations on the historical drawing, and found the same flat concrete surface projecting from the face of the building. It was not practicable to excavate beneath the concrete by hand back toward the building to expose the assumed foundations.

On the visit of 31 July 2025 trial pits TP05A and TP05B were cautiously excavated either side of a linear feature detected by GPR initially thought to be a buried utility. It was subsequently found that the linear feature was the edge of an old concrete slab, and trial pits TP05A and TP05B were eventually extended into a single trench.

TP04 was dug down the side of the concrete 'shelf' seen in HDTP01, alongside the Bluemay storage building to expose the foundation. Here the concrete locally 'overhung' a concrete foundation by around 150 mm, and the foundation gradually curved back in toward the building. The pit was initially extended to 1.55 m depth but it was not possible to 'scrape' the excavator bucket down along the foundation due to an adjacent buried surface water drain preventing the excavator working perpendicular to the foundation. The pit was therefore backfilled to 1.00 m depth to enable safe personnel entry and extended by hand down the face the foundation to 1.40 m depth. The bottom of the foundation was not found; however it was not possible to extend it further due to groundwater inflow (at 1.35 m depth), difficult digging conditions and time constraints.

4.3 Field (In-Situ) Testing

The field (in-situ) tests completed are listed in the following table. The test methods used are detailed on the test result sheets included in Appendix C, unless otherwise noted.

TABLE 2 :SCOPE OF FIELD (IN-SITU) TESTING		
Quantity	Field (In-situ) Test	Remarks
20	Standard Penetration Tests (SPT).	Test results included on exploratory hole logs presented in Appendix B. SPT calibration certificate included in Appendix H.
3	Hand Vane (HV) Tests.	3 sets of 3 tests. Test results included on exploratory hole logs presented in Appendix B. HV calibration certificates included in Appendix H.
6	Hand Penetrometer (HP) Tests.	6 sets of 3 tests. Test results included on exploratory hole logs presented in Appendix B.
19	Photo-Ionisation Detector (PID) measurement of volatile hydrocarbons.	Measurement carried out on soils samples, results included on exploratory hole logs presented in Appendix B. PID calibration certificate included in Appendix H.
4	TRL Dynamic Cone Penetrometer (DCP).	Test results reported in accordance with CS 229 (see References; information such as traffic direction and lane only reported where tests completed on existing road). Plots of correlated modulus of subgrade reaction value (k) versus depth included.
2	Plate Loading Tests (PLT).	
GEOHYDRAULIC TESTS		
1	Soakaway Infiltration Test in trial pit.	

Standard Penetration Tests (SPT) were carried out in the window sample holes in accordance with BS EN ISO 22476-3:2005+A1:2011. The hammer used had been calibrated to measure energy losses due to friction and other effects. The calibration certificate is included in Appendix H. Seating drives were recorded in increments of 75 mm in accordance with recommended UK practice.

The results are presented on the logs in Appendix B as uncorrected 'N' values and in detail in tabular format on the Summary of Standard Penetration Tests in Appendix C, together with a plot showing uncorrected SPT N-value versus elevation

Normalised N_{60} values are reported on the summary table, which are the equivalent N-values for a hammer delivering 60% of the theoretical drop energy. N_{60} values have been calculated using the relationship presented for sands in Annex A of BS EN ISO 22476-3 and may be less applicable to other soils and rocks.

Hand vane and hand penetrometer tests were carried out on samples recovered from the window sample holes, and within the inspection pits for those holes. The results are presented on the logs in Appendix B.

All hand vane tests were completed using a hand vane tester which report a direct measurement of undrained shear strength based on a mathematical relationship between the applied torque and the cross-sectional area of the soil surface sheared in the test.

The in-situ CBR correlation tests were conducted using a TRL Dynamic Cone Penetrometer in accordance with the manufacturer's guidance and CS 229 *Data for pavement assessment*. The results are included in Appendix C as plots of number of test blows versus depth and correlated CBR value versus depth. The field measurements and derived CBR values are also presented in tabular format as required by CS 229.

The in-situ Plate Load Bearing Tests were conducted in accordance with BS 1377 Part 9:1990. The test plate diameter used is reported on the test results. A mechanical excavator was used as kentledge for the test. The incremental loading test method was used.

It has been intended to conduct the plate tests at around 0.40 m to 0.50 m depth however due to the many cobbles and boulders present within the Made Ground it was not possible to form sufficiently flat and undisturbed test areas to site the plate – efforts to do so dislodged these larger particles loosening the surrounding soil. As a result the plate load tests had to be conducted at around 0.10 m depth, beneath the topsoil. The plate load results are contained in Appendix C.

The Soakaway test was undertaken in trial pit TP02 in general accordance with recommended practice given in BRE Digest 365. Only a single filling was completed as the soil under test was clay and negligible infiltration occurred. The test result is contained in Appendix C.

It has been planned to conduct soakaway infiltration tests in TP01B, however due to concrete being found at the base of the pit and a plastic duct being struck in the corner of the pit which would have provided a pathway for water to drain from the pit, the test was not completed as it would have been unrepresentative of the ground.

4.4 Backfill and Instrumentation

On completion 40 mm diameter gas/groundwater monitoring wells were installed in selected exploratory holes the design having been decided by SSL. The installation details are shown on the exploratory hole logs and on a summary table presented within Appendix B.

On the remaining boreholes were backfilled with bentonite pellets until close to ground level and arisings above. The trial pits were backfilled with arisings, compacted in layers by the excavator bucket.

4.5 Monitoring and Post Fieldwork Environmental Sampling

Groundwater levels were recorded in the monitoring wells on 1, 6, 11 and 19 August 2025 by SSL. The standpipes were developed by pumping on the first visit, then micropurged and water samples taken for testing on the second visit.

In situ water quality measurements (pH, temperature, electrical conductivity, redox potential and dissolved oxygen) were undertaken during the purging and sampling processes.

Ground gas monitoring was and will be carried out over the monitoring rounds. An infrared gas meter was used to measure concentrations of carbon dioxide (CO₂), methane (CH₄) and oxygen (O₂) in percentage by volume, whilst hydrogen sulphide (H₂S) and carbon monoxide (CO) were recorded in parts per million. Initial and steady state concentrations were recorded. An integral flow meter was used to measure borehole flow rates (initial and steady state) in litres per hour (l/hr). In addition the atmospheric pressure before and during monitoring was recorded. The standpipes were also screened using a photo-ionisation detector (PID) on the first two visits.

All monitoring results together with the temporal (weather) conditions are tabulated in Appendix F. The PID measurements are recorded as ppm (isobutylene equivalent). The calibration certificates for the gas analysers used are contained in Appendix H.

It should be noted that groundwater levels, gas concentrations and gas flows usually vary due to seasonal, atmospheric and/or other effects and may at times differ to those measured during the investigation.

5 LABORATORY TESTING

Samples for potential geotechnical testing were returned to one of the Company's UKAS accredited laboratories

Samples for potential geoenvironmental testing were sent to a sister company Envirolab Limited, a MCERTS and UKAS accredited testing laboratory.

Laboratory tests were scheduled by SSL. Tests were carried out in accordance with MCERTS/UKAS standards where noted on the results sheets.

5.1 Geotechnical Laboratory Testing

Geotechnical laboratory testing was generally carried out in accordance with the relevant parts of:

- BS EN ISO 17892:2014-2022 Parts 1-12, *Geotechnical investigation and testing – Laboratory testing of soil*,
- BRE Special Digest 1:2005 (SD1) *Concrete in aggressive ground. Assessing the aggressive chemical environment*. Third edition.

The number of tests of each type completed are summarised below. The results are reported in tabular and/or graphical form and included as Appendix D of this report. The test methods used are detailed on the report sheets, and where non-standard procedures have been undertaken, this is recorded on the report sheet.

TABLE 3 : SUMMARY OF GEOTECHNICAL TESTING		
Number of tests	Test	Remarks
Classification Tests		
4	Water content.	
4	Liquid limit (four-point method), plastic limit and plasticity index (Atterberg limits).	
1	Particle size distribution by sieving.	
Compaction-related		
1	Dry density/moisture content relationship using 4.5kg rammer.	
Consolidation		
1	One-dimensional consolidation.	
1	Measurement of swelling pressure.	The test result is reported with the consolidation test result.
Shear Strength (Total Stress)		
2	Single stage unconsolidated undrained triaxial compression tests without the measurement of pore pressure.	

TABLE 3 : SUMMARY OF GEOTECHNICAL TESTING		
Number of tests	Test	Remarks
Ground aggressivity (Soil)*		
2	BRE SD1 Suite B (Greenfield site - pyrite present).	Comprises: water soluble sulphate, total (acid) soluble and total sulphate contents, and pH value).
1	BRE SD1 Suite D (Brownfield site - pyrite present).	Comprises: water soluble sulphate, total (acid) soluble and total sulphate contents, and pH value).
Note:* Test(s) carried out to method approved in BRE Special Digest 1.		
Groundwater aggressivity*		
1	BRE SD1 Groundwater Suite: Sulphate content and pH value.	Test carried out as part of the geoenvironmental testing and results included in Appendix E.
Note:* Test(s) carried out to method approved in BRE Special Digest 1.		

5.2 Geoenvironmental Laboratory Testing

The geoenvironmental testing carried out is summarised in the following table. The results are included as Appendix E of this report and include details of the test method.

TABLE 4 : SUMMARY OF GEOENVIRONMENTAL LABORATORY TESTING		
Numbers of tests	Description	Notes
SOIL		
5	SSL HHA-MG (Basic contamination screening suite for made ground).	Comprises speciated polycyclic aromatic hydrocarbons (PAH), total petroleum hydrocarbons TPH Banded-1 (with clean up and ID), arsenic, cadmium, chromium (total), chromium VI, lead, mercury, selenium, nickel, copper, zinc, soil organic matter (SOM), water soluble sulphate, pH, asbestos presence in soil screen and moisture content.
1	TPH Banded 1 (with clean up and ID).	
2	Volatile organic compounds (VOC).	
1	Polychlorinated bipheynls (PCBS).	Total PCB EC7 + WHO12 congeners.
5	Total cyanide.	
WATER		
3	SSL GWS (Groundwater Screening suite).	Comprises arsenic, cadmium, chromium (total), lead, mercury, selenium, copper, nickel, zinc, speciated polycyclic aromatic hydrocarbons (PAH), total petroleum hydrocarbons (TPH-CWG (speciated)), sulphate, hardness and pH.
3	Total cyanide.	

TABLE 4 : SUMMARY OF GEOENVIRONMENTAL LABORATORY TESTING

1	Volatile organic compounds (VOC).	
1	Polychlorinated bipheynls (PCBS).	Total PCB EC7 + WHO12 congeners.

6 GROUND CONDITIONS

6.1 General

The infilled railway cutting and concrete slab mentioned in the 1996 report by E J Wilson and Associates within it were found on site. Where found, the top of the concrete was set at about 59.20 mAOD and 59.50 mAOD compared to a general site level of about 60.30 mAOD. Ground levels had been raised above the slab by filling with clay soils mixed with varying quantities of rubble. The slab was proved to be underlain by 0.60 m of limestone gravel at one location.

Outside of the cutting, and below the limestone gravel beneath the slab, natural firm or stiff clay soils were found. The natural clays were weathered to an orangish brown colour near the surface and became more predominantly dark grey with depth. Occasional gypsum crystals, shell fragments and sand partings were present.

The natural clay soils could potentially be of the Kimmeridge Clay Formation or the Oxford Clay Formation as both occur as stiff over consolidated clays that can be similar in appearance and properties, with no distinct boundary between the two units. Laminations of sand considered more typical of the Kimmeridge Clay were seen at some locations, and this unit is mapped as outcropping beneath the site. For the purposes of this report the natural clay soils are therefore classified as the Kimmeridge Clay whereas in the 1996 E J Wilson and Associates report they were classified as being of the Oxford Clay Formation.

Groundwater was struck within the Made Ground within the infilled railway cutting below the concrete slab level at 1.00-1.50 m depth below ground level here and later found to be standing in standpipes at around or slightly less than 1.00 m.

The ground and groundwater conditions are summarised in more detail below.

6.2 Topsoil

Thin reworked topsoil was present above the deeper Made Ground at all locations except for HDTP03 that was dug through compacted gravel placed over the foundation to the older Bluemay factory building, and WS04 which was sunk through concrete nearby.

The reworked topsoil was typically 100-200 mm thick, except alongside the newer Bluemay building where it was <50 mm thick in HDTP01, HDTP02 and HDTP04. The topsoil typically comprised friable slightly gravelly clay, the gravel content including brick, chalk and limestone.

6.3 Made Ground

6.3.1 General Description

WS01 to WS04, TP02 and HDTP03 were located outside of the mapped footprint of the former railway. With the exception of HDTP03, the Made Ground at these locations was between 0.60 m thick (TP02) and 0.75 m thick (WS04). Beneath the reworked topsoil (or 50 mm on concrete and 250 mm of gravel subbase in WS04) it typically consisted of stiff slightly sandy slightly gravelly to gravelly clay, the gravel fraction comprising limestone,

brick, concrete and in WS03 also chalk (chalk was also recorded at some locations in the 1996 report).

In HDTP03, dug alongside the older Bluemay factory building at the higher site level 400 mm of compacted slightly sandy limestone gravel was present alongside the building foundation.

TP01B was located east of the proposed new building and showed 1.10 m of Made Ground overlying a concrete slab at 59.2 mAOD. The Made Ground comprised stiff slightly sandy slightly gravelly clay with cobbles and boulders of concrete up to 350 mm across, plus rare clinker and slag.

WS05, WS05A, TP05A and TP05B were located within the cutting. The window sample boreholes did not encounter the buried concrete slab, which was later proved south of these holes within TP05A.

TP05A found the concrete slab at 0.75 m depth (59.5 mAOD). The pit was extended northwards towards a linear feature detected using GPR that was initially thought to be a potential buried utility but which was subsequently shown to be the edge of the slab. TP05B was dug on the north side of this feature, then the two pits later combined into a single trench once it was clear that no utility was present.

The slab was overlain by similar reworked stiff clays containing concrete and limestone as seen elsewhere to 0.50 m depth, then gravelly silty sand. At the eastern end of the pit a concrete boulder 800 mm wide and 250 mm thick overlay the slab.

Excavation down the side of the slab at the northern end of the pit showed it to be 150 mm thick and underlain by dense sandy silty mostly coarse angular gravel of limestone presumed to be former railway ballast to the base of the pit at 1.50 m depth.

The adjacent pit positioned beyond the concrete, TP05B found similar materials down to 0.70 m depth, but then gravelly sand of limestone, ash and clinker to 1.30 m depth then reworked stiff greenish grey and orangish brown slightly gravelly sandy clay containing limestone and clinker to 2.20 m depth.

The Made Ground in TP05B was underlain by stiff clay assessed as natural soil (proved from 2.20 m to 3.10 m depth). Occasional gravel and clinker were recovered in the excavated material from below 2.20 m depth but this is thought to have been mixed in by the excavation process. Groundwater was struck at 1.50 m depth in the Made Ground making it difficult to visually inspect the trial pit surfaces below the water, from the observation point at ground level.

Window samples WS05 and WS05A were drilled two weeks before TP05A and TP05B were completed. In WS05 only 20% sample recovery was achieved between 2.00 m and 3.00 m depth, followed by 60% between 3.00 m and 4.00 m depth. The boundary between the Made Ground and the natural clays was initially assessed as being at 3.50 m, but following the completion of TP05B this boundary has been cautiously reassessed at probably being at around 2.20 m (as per TP05B). It is thought likely that either the groundwater strike (1.20 m depth in WS05, 1.50 m in TP05B) prevented the firm or stiff natural clays beneath being 'picked up' in the window sample barrel between 2.00 m and 3.00 m, and/or that an obstruction in the Made Ground was driven through the clay by the sample barrel. However, it also remains possible that the Made Ground is locally thicker here.

WS05 collapsed before a standpipe could be installed, therefore WS05A was sunk alongside to a lesser depth to install the pipe. No sample recovery was achieved in this hole between 2.00 m and 3.00 m. The Made Ground that was recovered was similar to that in TP05B alongside, other than that the recovered soils had a moderate sewage like odour from 0.60 m depth which became stronger with depth.

Hand dug trial pits HDTP01, HDTP02 and HDTP04 were hand dug alongside the newer Bluemay storage building to expose the foundation but terminated at a maximum 0.45 m depth once it became apparent that mechanical excavation would be necessary. TP04 was then dug through HDTP01. What initially appeared to be stiff natural clay soils were proved to be Made Ground when compacted probable railway ballast of dark brown to black sandy silty angular gravel of limestone was found at 0.95 m depth (59.30 m). It seems likely that the concrete slab had been removed here to facilitate the building construction, and the ground level raised using clay fill derived from the cut made into the slope at the northern end of the building.

The dark brown/black gravel layer extended to 1.35 m depth where it passed into orange and grey sandy silty sandstone gravel that was noticeably different from other materials seen. There was a rapid groundwater seepage into the pit at 1.35 m making it difficult to view the base of the pit, however at the top of the expected natural clay surface appeared to probably have just been reached at 1.55 m.

6.3.2 Location(s) of Buried Concrete Slab

The Solum Surveying Ltd utility survey drawing supplied by the Client includes a number of unidentified linear features detected during the survey. The RSK Safeground surveys during the investigation detected similar features. It is now clear that some of these represent the edges of buried concrete.

In the image on the following page, the exploratory holes are superimposed upon an extract from the Solum drawing. Two GPS measurements were made of the edge of the slab exposed in TP05A/5B, labelled 'Edge of Slab', below which appears to coincide with one of the mapped linear features (highlighted yellow in the image).



The measured coordinates for the two Edge of Slab locations were (in metres): (1) 395534.443, 162027.021, elevation 59.530, and (2) 395534.754, 162026.79, elevation 59.554. Although reported to the nearest millimetre, an accuracy of +/- 50 mm should be assumed for these measurements.

A concrete slab was also found in TP01B which lies north of the linear feature highlighted above. WS06 and DCP06 plot as being close to other linear features but did not encounter concrete.

If compared to the map from the 1996 report which showed the extent of the concrete at that time (see Section 3.3 of this report) it might reasonably be concluded that the concrete extends between the northernmost and southernmost of the green lines shown in the extract above, however this cannot be true for all locations as the concrete was absent in TP05B, WS05/5A and WS06.

Based on these observations it seems likely that if the concrete slab did once form a continuous surface as suggested by the 1996 map, sections of it have since been broken out, meaning that its full extents could only be confirmed by exposing it across the entire site. Some of the green lines in the drawing extract might mark steps in the concrete, or locations where there remain secondary concrete features above the slab.

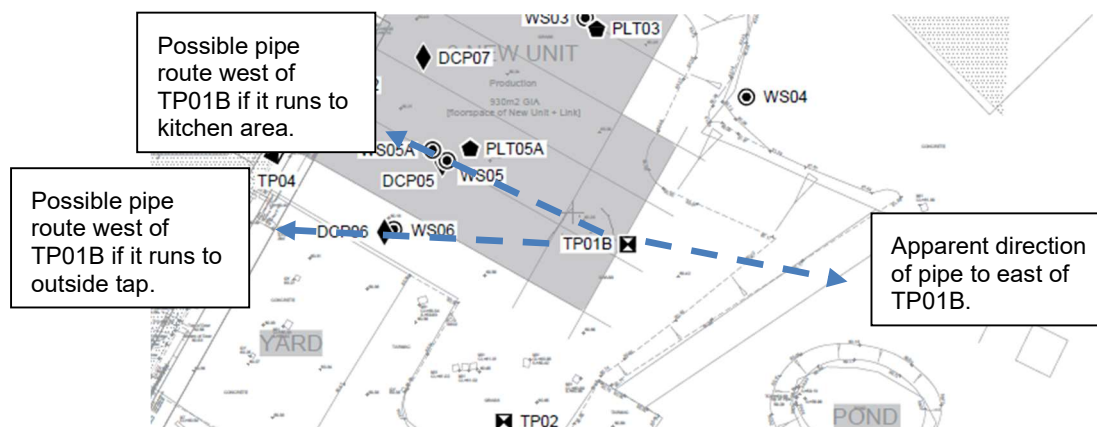
6.3.3 Water Supply Pipe within TP01B

A 25 mm diameter blue plastic water supply pipe within a 50 mm diameter blue plastic casing was exposed within TP01B at 0.70 m depth. The outer casing was broken by the excavator but the inner pipe was not damaged. As agreed with the Client the pit was carefully backfilled. Three 0.5 m long white wooden pegs wrapped in red and white striped warning tape were laid over and alongside the damaged casing to protect it, and a fourth peg driven into the ground at the surface to mark the location.

At this location the pipe was on a roughly east-west orientation, pointing towards a small substation or electrical switching building further to the east. The pipe was not detected in a prior utility survey completed for the Client by Solum Surveying Limited (see SSL desk study report 738355-1), nor could it be detected by RSK Safeground surveyors

employed by SSL. It is thought most likely that to the west the pipe runs either toward a kitchen area at the northern end of the newer Bluemay storage building, or towards an outside tap on a post by the roller shutter door to the building.

The location at which the pipe was stuck (TP01B), and the potential pipe routes mentioned above are shown below:



6.4 Kimmeridge Clay Formation

The Kimmeridge Clay Formation typically consisted of stiff, locally firm, clay weathered to a brown and orangish brown colour near the surface and becoming progressively darker and grey in colour with depth.

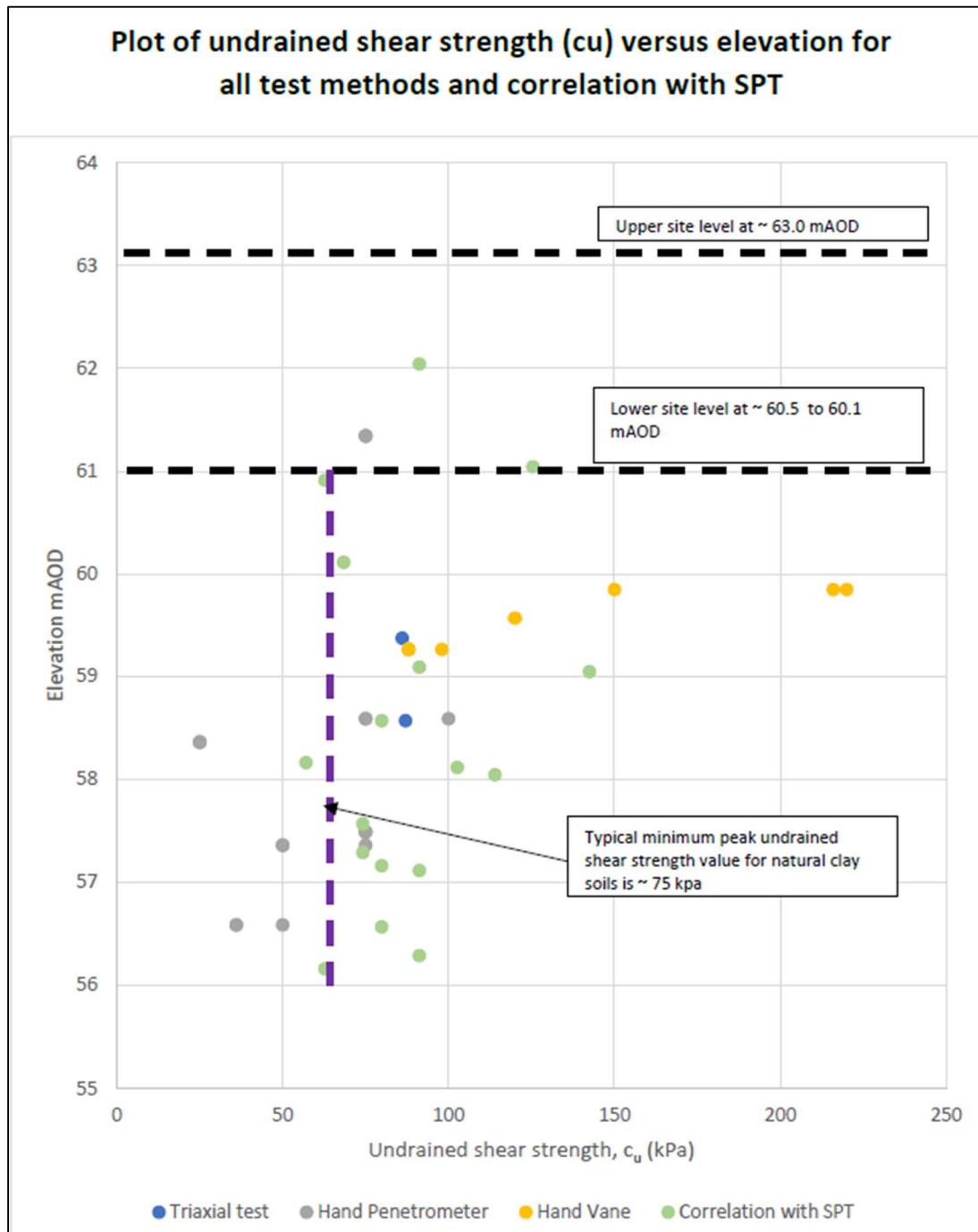
Occasional to frequent crystals of gypsum were present throughout, with occasional shell fragments seen at some locations. Much of the clay was thinly laminated, often with inter laminations of sandy clay and in WS03 between 2.20-2.90 m depth laminations of sand. The sand size particles are probably sand size gypsum.

Laboratory liquid and plastic limit tests completed showed the clay to be of medium to high plasticity, with plasticity indices ranging from 23 to 39% and liquid limits ranging from 48 to 59%.

The peak undrained shear strength was measured in-situ or on recovered samples using a hand vane and hand penetrometer, and in the laboratory by two unconsolidated undrained triaxial tests completed on undisturbed samples.

Stroud developed an empirical relationship between SPT N-value, undrained shear strength (c_u) and liquid limit for insensitive clay soils (see References), for which undrained $c_u = f_1 \times \text{SPT N-value}$, where f_1 is an empirical factor based on the plasticity index of the soil. For this site an f_1 value of about 4.5 would be applicable, however newer research by White et al (2019), and corresponding guidance in BS EN 1997-2:2024 has shown Stroud's factors to be conservative due, probably to changes in SPT test practice since 1974, and that a factor of between 5.5 and 6.0 is more likely to be appropriate.

Comparison of the laboratory triaxial test results from WS03 to SPT N-value completed in the same soils in WS02 nearby show that $f_1 = 5.7$ is reasonable for this site. c_u values derived from SPT N-values using this method, together with the other measured values are plotted against elevation in Appendix C, and in the extract on the following page:



The horizontal black dashed lines above represent, roughly, the higher site level where ground levels are to be reduced, and the lower site level respectively. SPT results for WS05 have been omitted due to collapse of this borehole during drilling with tests identified as being completed in natural soils possibly having been carried out in collapse material. The three highest hand vane measurements, shown as outliers to the right of the plot were completed in Made Ground in TP04, in clay fill.

Based on the above a typical minimum undrained shear strength of 75 kPa may be assumed for the natural Kimmeridge Clay soils.

One laboratory consolidation test was completed (sample from WS02 at 1.60 m). A coefficient of volume compressibility, m_v , of 0.17 m^2/MN was recorded for the load stage most applicable to likely floor and foundation pressures (50-100 kPa), reducing to 0.14 m^2/MN for the next load stage (100-200 kPa). A measurement of swelling pressure test was also completed on a sample from WS01 at 3.40 m depth to simulate the impact of the planned reduction in ground level there of around 2.50 to 3.00 m. A swelling pressure of 44 kPa was recorded.

6.5 Groundwater

Groundwater was struck in the following exploratory holes, within the Made Ground at all locations.

- WS05 and WS05A – slow seepage at 1.20 m depth at the base of the inspection pits, within Made Ground, rising to 1.00 m depth.
- WS06 – seepage at 1.40 m depth, 50 mm above the base of the Made Ground.
- TP04 – excavated alongside the newer of the Bluemay buildings- rapid seepage at 1.35 m depth within the Made Ground.
- TP05A/05B – water strike at 1.50 m depth. The water rapidly entered the pit from the corner of TP05B that met the concrete slab exposed in TP05A, and less rapidly from the other sides of the pit, suggesting a reservoir of water exists in the gravel soils beneath the

Groundwater monitoring standpipes were installed in three holes, and four monitoring visits have been completed. The full monitoring results are tabulated in Appendix F. A shorter summary of the recorded standing water levels, as both depth below ground level (bgl) and as m AOD is given below:

TABLE 5 : SUMMARY OF GROUNDWATER MONITORING RESULTS					
Location ID	Standpipe response zone, m bgl)	Unit(s) covered by response zone	No. of completed monitoring visits	Range of measured groundwater levels	
				Depth m bgl	Elevation m AOD
WS01	1.00-5.00	Kimmeridge Clay (installed on higher part of site)	4	3.75 – 3.84	59.29 – 59.20
WS05A	0.50-3.00	MADE GROUND to ~ 2.20 m, then probably Kimmeridge Clay	4	1.11 – 1.21	59.06 – 58.96
WS06	1.00-2.50	MADE GROUND to 1.45 m then Kimmeridge Clay	4	1.01 – 1.14	59.15 – 59.02

The groundwater elevation in all three standpipes is very similar despite WS01 being installed in natural clay soils relatively distant from WS05A and WS06 which are installed

within Made Ground. This may indicate that groundwater is able to move through fissures and sand partings in the natural clay and is in equilibrium with water perched within the adjacent Made Ground.

6.6 Indications of Contamination

Olfactory or visual indications of contamination were noted as summarised below:

TABLE 6 : OLFACTORY OR VISUAL INDICATIONS OF CONTAMINATION			
Location of contamination:	Hole(s) noted in:	Depth (m) (range):	Comments (e.g. staining, odours (inc strength), sheens, free product, etc):
Made Ground	WS05/05A	0.20 – 0.60	Clinker
	WS05/05A	0.60 – 1.80	Ash and clinker. Moderately strong possible sewage-like odour
	WS06	0.50 – 0.90	Slag and clinker. Weak organic odour (extending into top of Made Ground unit below)
	TP01B	0.20 – 1.10	Slag and clinker up to 350 mm across.
	TP04	0.95 – 1.35	Dark brown to black sandy silty limestone gravel with weak (chemical?) odour – probably railway ballast
	TP05B	0.70 – 1.30	Ash and clinker
	TP05B	1.30 – 2.20	Clinker
Groundwater	TP05A and TP05B	1.50	Water entering pit had a visibly oily sheen

6.7 Existing Foundations

Trial pits HDTP01, 02 and 04 were hand dug at three points along the eastern edge of the newer Bluemay storage building. The first two were located at the approximate positions of columns within the building shown on a historical *Foundations Proposals* drawing produced by DJP Consulting in December 1995, and HDTP04 then dug between them.

The DJP drawing shows that concrete pad foundations were planned at that time (before the 1995 ground investigation was carried out), to be connected by 450 mm wide, 700 mm deep (thick) trench fill footings. The proposed column pad foundations on along the north-west edge of the building were to be 1800 mm square and 900 mm deep (thick).

All three hand dug pits encountered a flat concrete surface at between 0.17 m and 0.20 m depth that projected by between 0.62 m and 0.93 m from the face of the building. The concrete was between 120 mm and 200 mm thick with a rough, varying edge, below which it dipped gradually back towards the building.

TP04 was then machine excavated through HDTP01. Here the flat concrete surface had a projecting 'lip'; the main mass of a trench fill concrete foundation was found to project 0.78 m from the face of the building at the top and taper irregularly back towards the building with depth. The foundation was followed down as far as 1.40 m depth at which point it was projecting around 500 mm from the face of the building; however the base

was not reached. A sketch and photographs are appended to the trial pit log in Appendix B.

HDT03 was excavated against the north-western elevation of the older Bluemay factory building at the higher site level, near the south-western corner of the building. Here a concrete foundation projecting up to 400 mm from the face of the building and set at 0.65 m depth on firm Kimmeridge Clay was proved. A sketch is included on the trial pit log in Appendix B.

7 GEOTECHNICAL ENGINEERING ASSESSMENT

7.1 Purpose of Investigation and Proposed Development

The purpose of the work was to:

- investigate and obtain information on ground, groundwater and ground gas conditions at the site
- to evaluate that information and to provide advice on geotechnical and geoenvironmental issues.

It is proposed to construct a new production building for Bluemay between the two existing Bluemay buildings on the site, and to construct a link to the newer storage building to the west. The proposed building footprint, which is not finalised at this time, is shown on the proposed layout plan that is included in Appendix A. No design foundation loads have been provided.

Most of the new unit is to be constructed on the lower site level that is currently at around 60.1 to 60.5 mAOD. The southern quarter of the proposed footprint overlies the infilled former railway. The northern quarter extends onto the higher part of the site and here ground levels would be reduced by around 2.50 to 3.00 m for construction.

The proposed footprint spans:

- the infilled former railway and buried concrete slab
- land north of the former railway where ground levels were reduced in the late 1990's during construction of newer of the existing Bluemay building. Any swelling of clay soils here due to the reduction in ground level should have long ceased.
- higher ground where ground levels will be reduced and swelling of clay soils due to the reduction in ground pressure will occur.

Advice on geotechnical issues is given below, advice on geoenvironmental issues is given in Section 8.

The Designer may wish to consider repositioning the building further to the north to avoid the various challenges posed by building over the former railway that are discussed in the following sections. However, this would require ground levels to be reduced over a wider area generating more soil for disposal or reuse, and may not be possible or desirable for planning, cost or other reasons.

7.2 Site Preparation and Excavation

The soils encountered at the site are considered suitable for excavation by standard mechanical plant such as a wheeled backhoe excavator. A hydraulic breaker will be required to break out the buried concrete slab and any other old foundations drainage/utility runs or other obstructions that might be encountered, where it is necessary to remove these for construction.

Groundwater ingress into excavations completed within the footprint of the former railway is likely below around 1.00 to 1.50 m depth, particularly if/where excavations are taken below the level of the buried concrete slab.

Groundwater levels may, however, change due to seasonal or other variations. Surface water run-off from rainfall may also enter excavations. Groundwater inflow into TP04 was relatively slow and likely to be controllable by sump pumping. Inflow into TP05A/TP05B was more rapid and excavations here might require other methods of dewatering of excavations. There is likely to be a large reservoir of water present.

Advice on suitable dewatering techniques is given in CIRIA Report C750 *Groundwater control: design and practice, second edition*. Pumped water should not be discharged to the ground or to surface water drainage without appropriate permits and testing.

Groundwater and/or surface water inflows into an excavation may cause or increase excavation instability. Where fine soils (clay, silt) are present at formation level, these may undergo softening if groundwater flows are occurring from them, or if surface or groundwater is allowed to pool upon them. If the excavation cannot be kept dry, it is recommended that foundations be constructed as soon as possible after excavation.

All excavations should be planned and due consideration should be given to providing temporary support or suitable battering. Excavations should be regularly inspected by a competent person to ensure continued safety. Further advice on the safety of excavations is given in *Health and Safety in Construction*.

Based on the ground conditions encountered, we would expect unsupported excavations outside of the footprint of the former railway to remain stable in the short to medium term.

Within the railway footprint, excavations are likely to remain stable in the short to medium term where above the water table. Below the water table excavations much of the Made Ground are likely to be unstable and require support. The underlying natural clays, plus the densely compacted gravel seen beneath the slab in TP05A (and also in the base of TP04) should be more stable where exposed.

Excavations or below ground voids should be checked for the presence of harmful gases and vapours (e.g. hydrocarbons and solvents) prior to personnel entry.

Excavated material from the site will, in most circumstances, be classified as waste if surplus to requirements or unsuitable for re-use and disposed of off-site. Testing and classification of this excavated material is likely to be required for disposal purposes.

7.3 Shrinkage and Swelling

7.3.1 Shrinkage and Swelling due to changes in moisture content

Atterberg Limits tests performed on selected samples of the Kimmeridge Clay show it to have a medium volume change potential with changes in moisture content, according to the criteria of NHBC Standards, Chapter 4.2 *Building Near Trees*, after correction where necessary for their >0.425 mm fraction.

The Made Ground clays are derived from the same local materials and the same classification may be assumed. Four test results contained in the 1996 E J Wilson and Associates report also showed medium volume change potential.

Shrinkable soils are present, therefore shrinkage and swelling due to changes in moisture content should be taken consideration on this site.

The NHBC Standards apply to residential developments but may reasonably be applied to other forms of development. The design of strip or pad foundations should follow the recommendations set out in the NHBC Standards and is based on a combination of factors, including the volume change potential of the soil mass, the type of trees, hedgerows or shrubs present or proposed (considered in terms of 'water demand') and their proximity to the proposed foundations.

Chapter 4.2 of the NHBC Standards recommends a minimum foundation depth of 0.90 m for a soil of medium volume change potential.

Foundations to the proposed new building will be >25 m from the closest trees and do not fall within the potential zone of influence of existing trees, hedgerows or shrubs. No new plantings are planned. Foundations need not be taken deeper than 0.90 m below the final site level due to changes in soil moisture content, but greater foundation depths will be required where the Made Ground is thicker, as discussed in Section 7.4.

7.3.2 Shrinkage and Swelling due to reduction in ground level

Where ground levels are reduced by 2.50 to 3.00 m at the northern end of the site some swelling of the natural clay soils beneath will occur due to reduction in overburden pressure. In effect, water that is present under pressure between the clay soil particles will act to push those particles apart once the weight on the soil is reduced.

The one laboratory swelling pressure test completed (sample from WS01 at 3.40 m depth) showed a swelling pressure of 44 kPa which is broadly similar to the overburden pressure imposed by soil that would be removed (~ 50 to 60 kPa), which seems credible.

There is little published guidance on the swelling of clay soils where changes in ground level are small, with most UK research having been carried out on deep basement projects in London.

Two unloading stages were completed on the laboratory consolidation carried out on a sample of Kimmeridge Clay from WS02. Although not shown on the results, the calculated coefficients of volume change in unloading derived for these stages were 0.024 and 0.085 m²/MN, around 15% to 50% of the equivalent values derived for the loading stages, i.e. the volume change of the clay is much greater in loading than in unloading, as would be expected. When compared with estimates of predicted settlement quoted for various foundations in Section 7.4 on the following page, total swelling heave in the order of 10 mm or less might reasonably be expected for the planned reduction in overburden pressure.

The rate of swelling is more difficult to estimate, is affected by factors such as rate of unloading and permeability of the soil, and full swelling would be likely to take weeks or months.

7.4 Foundations

Conventional strip or pad foundations may be constructed upon the natural Kimmeridge Clay soils at a minimum depth of 0.90 m below final ground level (or, if ground level is raised, below current level).

Where the Made Ground is thicker, foundations will need to be deepened to reach the natural clays. In the central part of the site where the Made Ground is thickest (WS05/05A, TP05A/TP05B) foundation depths of 2.20 m would be required.

The net allowable bearing capacity for different foundation depths, types and/or sizes, and the estimated total settlements of those foundations are summarised below:

TABLE 7 : RECOMMENDED FOUNDATION NET ALLOWABLE BEARING CAPACITY AND ESTIMATED SETTLEMENT					
Depth (m bgl)	Foundation Type	Dimensions	Net Allowable Bearing Capacity (kPa)	Estimated Total Foundation Settlement	Notes
0.90	Strip	0.6 m wide	205	15	
0.90	Strip	1.0 m wide	190	20	
0.90	Square Pad	1.0 m wide	220	15	
0.90	Square Pad	1.5 m wide	205	20	
0.90	Square Pad	2.0 m wide	200	25	

The values are based on an undrained shear strength (c_u), a 75 kPa, a coefficient of volume compressibility, m_v , of 0.17 m^2/MN , and a geological factor, μ_g , of 0.5. The net allowable bearing capacity figures have been rounded down to the nearest 5 kPa and the settlement figures rounded up to the nearest 5 mm. In practice foundation settlements cannot be predicted to this level of accuracy.

The estimated total foundation settlements assume that each foundation is loaded to the quoted net allowable bearing capacity. The factor of safety against bearing capacity failure will be at least 3.

The net allowable bearing capacity would increase slightly with increasing depth and foundations settlements reduce slightly.

Design foundation loads at the northern end of the building where ground levels are to be reduced would be expected to exceed the measured clay swelling pressure of 44 kPa once the building has been finished but not during the early stages of construction. To minimise the risk of damage to concrete foundations under construction it is recommended that a period of at least one month be allowed between reduction in site levels and commencement of construction.

7.5 Floor Slabs

The Made Ground within the footprint of the former railway cutting ranges in thickness from >1 m to >2 m, varies in composition to include firm and stiff clays, sand and gravel. A buried concrete slab underlies part of the area, and this, along with cobbles and boulders creates hard spots.

For these reasons a ground bearing floor slab is not recommended within the footprint of the former railway as differential settlement across the slab is likely. A suspended floor slab is recommended here. The likely extents of the former railway cutting are discussed in Section 6.3 of this report. Around one quarter of the proposed new building, the southern end, falls within this area.

North of the former railway WS02 and WS03 show that the Made Ground extends to between 0.70 m to 0.75 m depth, and comprises stiff to very stiff clay, overlying natural clay soils. Further north, where ground levels are to be reduced, a new floor would be directly underlain by natural clay soils.

Where ground levels are reduced at the northern end of the building swelling of the clay soils due to the reduction in overburden pressure will occur. For this reason it would be preferable to suspend the entire floor slab. However, if this is not preferred on cost grounds a ground bearing floor slab with a suitable sub-base layer slab could be adopted north of the cutting if suitable additional precautions were taken.

As discussed in Section 7.3.2 a single laboratory swelling pressure test showed that a swelling pressure of 44 kPa could develop, and total swelling in the order of 10 mm or less might occur over a period of weeks or months. The swelling pressure would exceed the design floor load. To minimise a period of at least one month should be allowed between the reduction in ground level and commencement of floor construction and the floor should be provided with additional reinforcement. Ground levels should be monitored regularly throughout the one month period to an accuracy of +/- 1 mm or better to confirm whether heave has occurred or is continuing to occur, and the findings assessed before proceeding with floor construction.

Wherever ground bearing floors are used, all formation level soils should be proof-rolled and all topsoil and any other loose, soft, organic or otherwise unsuitable materials should be removed and replaced with a suitable, well-compacted granular fill.

A suitable, flexible connection would be required between a suspended slab located over the former railway, and any ground bearing slab north of this.

The floor should be designed following appropriate guidance such as the Concrete Association Technical Report 34 (TR34), *Concrete industrial ground floors. A guide to design and construction*

TR34 uses the parameter modulus of subgrade reaction, k , for the design of ground supported floors. As discussed in Section 4.3, due to the many cobbles and boulders present within the Made Ground it was not possible to conduct plate load tests at the likely formation level of around 0.40 m to 0.50 m below ground level. The tests were therefore completed at around 0.10 m depth, meaning that the near surface topsoil and looser material would have more effect on the results than the soils at greater depths.

Correlated modulus of subgrade reaction values were also derived from the TRL Dynamic Cone Penetrometer tests using the method contained within the Department for

Transport, *Design Manual for Roads and Bridges Interim Advice Note (IAN) 73/06 (Draft HD25)* .

The plate load and TRL DCP test results are included in Appendix C. TRL DCP tests 02 and 07 show that a modulus of subgrade reaction value of at 60,000 kN/m²/m could be assumed for floor slab design north of the footprint of the former railway, where the floor would be underlain by stiff clay soils (both natural soils and Made Ground). Test DCP06, located near the southern edge of the former railway showed similar results below 0.90 m depth where it passed into clay soils (as seen in WS06 alongside).

Plate load test PLT03 showed a lower value of about 35,000 kN/m²/m but due to the very shallow test depth this is unlikely to be representative.

7.6 Soakaways

The suitability of a site for soakaways depends on the characteristics of the soil (or rock) and the groundwater level beneath the site. For design purposes the soil infiltration rate should be measured by completing soakage tests in pits following the methodology described in Building Research Establishment Digest 365 Soakaway design, 2016 (BRE-365).

BRE-365 states that a soakaway should discharge from full to half volume within 24 hours in readiness for subsequent storm inflow. Groundwater should not rise above the base of the soakaway.

A soakaway test was completed at 1.60 m depth in trial pit TP02 which was located outside of and >5 m from the proposed building footprint. Here very stiff natural Kimmeridge Clay soils were found below 0.60 m depth and negligible drainage occurred over the 5 hour duration of the test. The clay soils are unsuitable for soakaway type drainage.

SSL later learned that it is planned to construct a second flood attenuation pond south of the existing pond. This pond would fall outside of the mapped footprint of the former railway and the location is also expected to be underlain by stiff natural clays.

Within the footprint of the former railway groundwater was encountered at several locations at depths of between around 1.00 m and 1.50 m, with standing water levels of around 1 m below the main site level (~ 59 mAOD) subsequently being measured in monitoring wells.

The site is unsuitable for conventional soakaway type drainage due to shallow groundwater in the Made Ground within the footprint of the former railway, and low permeability clay soils outside of it.

It is understood, anecdotally, that rainwater ponds on the main flat grassed area of the site at times during wetter parts of the year.

7.7 Protection of Buried Concrete

This assessment of the potential for chemical attack on buried concrete is based on current guidance contained in BRE Special Digest 1 ('SD1', 2005) *Concrete in Aggressive Ground Part 1: Assessing the aggressive chemical environment*. Third Edition.

The site is classed as *brownfield*, as it has been subject to previous industrial development (the former railway) and received materials such as clinker used as railway ballast, and might contain chemical residues produced by or associated with industrial production. Table C2 in BRE SD1 is therefore used to assess the site.

Groundwater is assumed to be *mobile* below about 1.00 m below the main site level. The term 'mobile groundwater' includes water held in pores and structural discontinuities in the soil, and which is free to flow into an excavation to give a standing water level.

Soil pH values ranging from 7.71 to 8.45 were recorded. The water-soluble sulphate (SO₄) results range from <10 mg/l to 291 mg/l.

Groundwater pH values ranging from 6.88 to 7.43 were recorded. The groundwater sulphate (SO₄) results were 41 mg/l (WS06), 1620 mg/l (WS05A) and 2850 mg/l (WS01).

All results fall into Design Sulphate Class DS-3 due to the elevated sulphate levels in WS01 and WS05A.

The Made Ground, Kimmeridge Clay, and any clay fill that might have been locally derived from the Oxford Clay Formation at the site may be potentially pyritic. Therefore, total sulphur was analysed in order to examine the potential for the strata to contain a significant amount of sulphide such as pyrite. An estimate of oxidisable sulphide can be made by comparing the measured concentration of total (acid soluble) sulphate with the approximate amount of total potential sulphate (TPS) present.

Clay soils that contain significant pyrite are typically dark grey in colour. Near the surface these clays weather to an orange-brown colour and the pyrite will usually have already oxidise. This oxidation may not have yet occurred in recent clay fill derived from pyritic dark grey clays.

Assuming that buried concrete (e.g. foundations, drainage pipes, etc) may be exposed to disturbed ground in which pyrite may oxidize to sulphate, the oxidisable sulphide content of the soils must be calculated, using the total sulphur and acid soluble sulphate results. The results for the samples tested are summarised below:

TABLE 8 :VALUES OF TOTAL POTENTIAL SULPHATE						
Location	Depth (m)	MG or N	AS (Total sulphate (acid-soluble))	TS (Total sulphur)	TPS (Total potential sulphate)	OS (Oxidisable sulphides)
			%	%	%	%
WS05	1.00	MG	0.40	0.08	0.24	0.00
WS01	2.80	N	7.09	3.58	10.74	3.65
WS06	1.70	N	0.18	0.06	0.18	0.00

Note: MG or N = Made Ground or natural soils

The oxidisable sulphide content of the sample from WS01 at 2.80 m exceeds the 0.3% level given in the Digest and thus pyrite is probably present in this sample. Ground levels at WS01 are to be reduced by ~ 2.50 m to 3.00 m such that new foundations here are likely to be in direct contact with such soils.

The calculated value of total potential sulphate (TPS) for this sample is 10.74% which is a very high result that will be due to the gypsum crystals present in the soil. This corresponds to a Design Sulphate class of DS-5 but the water-soluble and groundwater results do not exceed DS-3. Therefore because the approach of using total potential sulphate can be conservative a limitation can be applied such that the design sulphate class is limited to DS-4.

Based on the results obtained in this investigation it is concluded that for this site the Aggressive Chemical Environment for Concrete (ACEC) classes for this site are:

- AC-4 where concrete could be in contact with groundwater (e.g. below about 1.00 m depth below the main site level), for example in foundations, and
- and AC-3 if there is no risk of concrete being in contact with groundwater, for example potentially in floor slabs.

The designer should utilise these classifications in order to produce the concrete specification.

The AC-4 classification is based on one elevated total sulphur result. If the use of AC-4 concrete for foundations and other buried concrete structures that might come into contact with groundwater is considered unduly onerous or costly a larger number of samples could be taken and tested to see whether the characteristic value for a larger data set would fall within class AC-3.

The pH and water soluble sulphate contents of four soil samples and one water sample were tested as part of the 1996 investigation by E J Wilson and Associates. The standards in use at that time to assess the findings were different; no total sulphur content tests were completed and only one total acid soluble sulphate content test. The water sample showed 3000 mg/l sulphate and a pH value of 7.3 which today would correspond to an ACEC class at the upper limit of AC-3 (3000 mg) and lower limit of AC-4 (3100 mg/kg) in BRE SD1. The single total acid soluble sulphate value was 7.5%, so similar to the highest result of 7.09% recorded by SSL. The four water soluble sulphate results ranged from 210 to 970 mg/l and pH values from 7.1 to 7.3.

In the 1996 investigation one water soluble sulphate test was repeated by increasing the time for water to dissolve the sulphate from 4 to 24 hours, from which E J Wilson and Associates *surmised that the sulphates in the soil are complex and not readily soluble*. This observation does not appear to have any bearing on modern methods of assessment.

7.8 Retaining Walls

Where ground levels are reduced to construct the northern end of the new building the slope will either need to be battered back to a safe and stable angle, or a retaining wall built to retain the cut face.

The retaining wall would be expected to be retaining stiff Kimmeridge Clay for which the following geotechnical parameters may be used for the design of retaining walls:

- Weight density, $\gamma = 2.0 \text{ Mg/m}^3$
- Peak undrained shear strength, $c_u = 75 \text{ kPa}$
- Drained shear strength, $\sigma' = \text{kN/m}^2$
- Drained constant volume angle of shearing resistance, $\phi' = 24^\circ$.

The values quoted for drained shear strength and peak angle of shearing resistance are based on the relationships and 'characteristic' values given in Table 2 of BS 8002 *Code of practice for Earth Retaining Structures*.

An effective cohesion value of zero should be used as the peak drained angle of shearing resistance has been estimated from plasticity index.

Retaining walls should incorporate sufficient drainage to prevent the build-up of pore water pressures behind the wall. Care should be taken to ensure that an appropriate degree of compactive effort is used when placing backfill material behind the wall.

If no retaining wall is to be used then the slope should be battered back at a suitable angle. No numerical stability analysis has been undertaken as part of this investigation. Based on records of cutting slopes collated in reports such as TRL report RR199 *Survey of Slope Condition on Motorways* (1989), for a cutting height of about 2.5 m a long term slope in the order of 2.5:1 or shallower should be adopted to minimise the risk of slope failure.

7.9 Earthworks

Beneath the topsoil, material cut from the northern part of the site to reduce ground levels will be typically stiff Kimmeridge Clay. This material could potentially be used on this site or elsewhere as engineered fill.

In the UK soil, crushed rock and aggregate is normally assessed for re-use as engineered fill using the Department for Transport, *Manual of Contract Documents for Highway Works (MCHW), Volume One: Specification for Highway Works, Section 600 Earthworks*.

The results of laboratory testing completed on one sample of the Kimmeridge Clay from TP03, taken from within the slope on northern part of the site shows, together with other results on samples from WS03 show that the natural clay meets the classification and grading requirements of Class 2A *wet cohesive fill*.

The water contents of the various samples tested ranged from 23.0% to 32.3% compared to plastic limits of 25% or less. The results of one laboratory dry density water content relationship ('compaction') test completed using a 4.5 kg rammer showed an optimum water content of 16% and a maximum dry density of 1.78 Mg/m^3 .

The elevated total potential sulphate and oxidisable sulphate contents seen in one sample would preclude, at least, the darker grey clays being used as certain types of engineering fill for structural purposes.

The liquid limits of all four clay samples tested exceed the upper limits of 45% defined in Series 600 for various types of Class 7 *Selected Cohesive Fill*, and the plasticity indices of three of them exceed the upper limit of 25%. This would appear to preclude their use as a structural fill beneath a floor slab without treatment by lime stabilisation or other techniques.

8 GEOENVIRONMENTAL ASSESSMENT

8.1 Purpose of Investigation

The purpose of the investigation and the proposed development are summarised in Section 7.1 of this report.

8.2 General

In line with Land Contamination Risk Management (LCRM) (Environment Agency, 2021) there are two stages of quantitative risk assessment, generic and detailed. The Generic Quantitative Risk Assessment (GQRA) comprises the comparison of soil, groundwater, soil gas and ground gas results with generic assessment criteria (GAC) that are appropriate to the linkage being assessed. This comparison can be undertaken directly against the laboratory results or following statistical analysis depending upon the sampling procedure that was adopted.

8.3 Linkages for Assessment

The significant linkages that required assessment after the findings of the Preliminary Risk Assessment (PRA) (as per the references detailed in Section 1 above) and the intrusive works of the site investigation had been considered are detailed below together with the method of assessment.

TABLE 9: LINKAGES FOR GENERIC QUANTITATIVE RISK ASSESSMENT	
Relevant pollutant linkage	Assessment method
Linkage 1.1, 1.2, 1.3 Oral, dermal and inhalation exposure to soil, soil vapour and dust that may impacted by contaminants of concern by future site users, construction workers or adjacent land users	Assessment of results against human health GAC in Appendix G for commercial land use
Linkage 1.4 Migration of soluble or liquid contaminants to groundwater	Assessment of groundwater results against controlled waters GAC in Appendix G.
Linkage 1.6, 2.3 Direct contact between aggressive ground and new concrete structures	See Section 7.7 above.
Linkage 2.2 Direct contact between construction workers and contaminated leachate/groundwater	Assessment of groundwater results against Drinking Water Standards controlled waters GAC in Appendix G, supplemented by a qualitative assessment of remaining contaminants.

TABLE 9: LINKAGES FOR GENERIC QUANTITATIVE RISK ASSESSMENT

Relevant pollutant linkage	Assessment method
Linkage 2.4 Migration of ground gas into proposed buildings potentially resulting in asphyxiation or explosion.	Gas Screening Values compared to the Revised Wilson and Card Classification (residential) presented within CIRIA Report 665 and BS:8485 2015
Linkage 2.5 Migration of ground gas into proposed excavations resulting in inhalation or asphyxiation	EH40/2005 Workplace Exposure Limits (January 2020)

8.3.1 Linkages 1.1, 1.2, 1.3 – Oral, dermal and inhalation exposure to soil, soil vapour and dust that may impacted by contaminants of concern by future site users, construction workers or adjacent land users.

8.3.1.1 General

To determine whether contaminants are present at levels that may be deemed to pose a significant hazard to human health, measured contamination levels in soil at the site are compared against derived guideline values ('Tier 2' soil screening). Where contaminants are present above the screening values it is probable that site-specific information will be required to further examine the potential risk of harm arising from such contamination.

The background to the assessment is contained in Appendix G and the findings are summarised below.

The RSK generic assessment criteria (GAC) for commercial land user has been used to assess the results. Due to the limited number of samples tested we have compared the results directly to the GAC without the use of statistics.

8.3.1.2 Results

The contaminants assessed against the GAC are: arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, zinc, Polycyclic Aromatic Hydrocarbons (PAH), Total Petroleum Hydrocarbons (TPH), asbestos, total cyanide, volatile organic compounds (VOCs) and Polychlorinated Biphenyls (PCBs)

None of the results exceeded the GAC, so these linkages are considered incomplete.

8.3.2 Linkage 1.4 – Migration of soluble or liquid contaminants to groundwater

8.3.2.1 General

Whilst the geological formation beneath the site is classed as a non-aquifer, there has been some evidence of the development of a water table which is comparable between the monitoring wells installed, suggesting that, at least locally, movement of groundwater is possible.

Groundwater results have been assessed against Drinking Water Standards (DWS) to assess any risk to wider groundwater, and also against Environmental Quality Standards

(EQS) for Fresh Water to assess any risks to surface waters which may be fed by that groundwater.

The respective GAC are presented in Appendix G. In line with the Environment Agency's Remedial Targets Methodology, the GAC for controlled waters are termed 'Target Concentrations'(TC).

8.3.2.2 *Results*

Results that exceeded limits of detection and the Target Concentrations are limited to the nickel recorded in WS01 at 28 µg/l. This marginally exceeds the Drinking Water Standard of 20 µg/l, and more significantly exceeds the Freshwater EQS of 4 µg/l (bioavailable).

8.3.2.3 *Conclusions*

In practice, exceedance of the Freshwater EQS at the point of discharge to the nearest surface water receptor is considered unlikely given the likely pH and Dissolved Organic Carbon levels in most shallow surface water bodies in similar settings.

This contaminant linkage is considered to be incomplete.

8.3.3 **Linkage 2.2 – Direct contact between construction workers and contaminated leachate or groundwater**

Screening the groundwater results against the Drinking Water Standards shows no exceedances. Consideration of the concentrations recorded for contaminants that do not have specified Drinking Water Standards shows none that are considered unusually elevated. Risk to construction workers from contact with the existing groundwater or leachate present in the ground on the site are therefore considered low.

This contaminant linkage is considered to be incomplete.

8.3.4 **Linkage 2.4 – Migration of ground gas into proposed buildings potentially resulting in asphyxiation or explosion**

8.3.4.1 *General*

Readily degradable organic matter content of the soils encountered during the investigation was generally low.

Four ground gas monitoring visits were undertaken between 01 August and 19 August 2025. Whilst this is a relatively short duration, it included periods of falling pressure during and in the 24 hours prior to the monitoring visit. The works have been undertaken at a time when groundwater elevations across the UK in general have been particularly low following a markedly dry spring and summer.

Measured concentrations (by volume in air) and flow rates have been used to generate preliminary Gas Screening Values (GSVs). These have then been compared to the Characteristic Situations (gas regimes) in CIRIA Report 665 and BS8485.

8.3.4.2 *Results*

Atmospheric pressure trends prior to the monitoring visits were falling, rising and steady for the first, second and third visits respectively.

The following ground gas results have been recorded over the four gas monitoring rounds.

- A maximum methane concentration of 0.1%;
- A maximum carbon dioxide concentration of 2.0%; and
- A maximum flow rate of 0.2 l/hr

The results align with the conceptualisation of the gas regime given the ground conditions proved by the investigation.

Gas Screening Values (GSV) for methane and carbon dioxide have been calculated as 0.000 l/h and 0.002 l/h respectively.

8.3.4.3 Conclusion

The GSVs fall well within CIRIA 665 Characteristic Situation 1 (upper limit 0.07 l/h) indicating that gas protection of new or existing buildings above ground is not required.

It is considered unlikely that this risk would change significantly during other seasons of the year. This linkage is considered incomplete.

8.3.5 Linkage 2.5 – Migration of ground gas into proposed excavations resulting in inhalation or asphyxiation

Consideration of the ground gas monitoring results show levels of carbon dioxide below both the Short-Term Exposure Limits (STEL) and Workplace Exposure Limits (WEL), and methane results significantly below the Lower Explosive Limits (LEL). However, oxygen concentrations have been recorded as low as 15.6% v/v. Accordingly there is the potential for the formation of hazardous atmospheres within confined spaces formed within the ground, and safe systems of work should be adopted to check for the presence of such atmospheres before entry.

8.4 Contamination Discussion, Conclusions and Recommendations

The Generic Quantitative Risk Assessment (GQRA) carried out above has not identified any complete contaminant linkages to be present on the completed development. Accordingly the site is not considered to require specific remediation to facilitate the proposed development.

There is a slight potential for the formation of hazardous atmospheres within confined spaces formed within the ground which will require management during construction and future maintenance activities. It is considered that these should be managed through the application of the principles of the Construction Design and Management Regulations.

However, no ground investigation can be exhaustive, and as Made Ground is present on the site, diligence should be maintained in case any evidence of suspect contamination is encountered.

General precautions should be taken to minimise risk to construction workers, including the use of gloves and long-sleeve PPE to minimise contact with the soils. Hands, arms and face should be washed prior to eating, drinking or smoking. Good practice to control emissions of soil dust during construction should be adopted.

8.5 Off-site Disposal of Surplus Spoil

8.5.1 General

All excavated material and excess spoil must be classified for waste disposal purposes prior to disposal at landfill. Under the Landfill (England and Wales) Regulations 2002 (as amended), prior to disposal all wastes must be classified as:

- 'inert', or
- 'non-hazardous', or
- 'hazardous'.

The Environment Agency's *Guidance on the Assessment and Classification of Waste*, Environment Agency, WM3, First Edition May 2015 document outlines the methodology for classifying wastes. Currently all wastes may require pre-treatment prior to disposal at landfill.

8.5.2 Initial Waste Characterisation

HazWasteOnline (HWOL) is online software available for undertaking an initial waste classification for waste soils to determine whether they may be hazardous or non-hazardous following the guidance within WM3. The 'total solid testing' results from this investigation have been run through this assessment tool to aid potential future off-site disposal of soils. The Waste Classification Report is presented in Appendix E.

The assessment indicates that none of the soil analysis results would indicate the presence of hazard properties. Accordingly, soils similar to those tested which are to be disposed of to landfill may be classed as non-hazardous waste, with a List of Waste code of 17 05 04.

Acceptance at inert landfill would require additional sampling and testing to confirm compliance with the Waste Acceptance Criteria for inert landfills.

9 REFERENCES

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- 9.4 BS EN ISO 22475-1:2021 *Geotechnical investigation and testing - Sampling methods and groundwater measurements. Part 1: Technical principles for the sampling of soil, rock and groundwater*
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- 9.12 BS EN ISO 14688-2:2018 *Geotechnical investigation and testing – Identification and classification of soil. Part 2: Principles for a classification*
- 9.13 BS EN ISO 14689:2018 *Geotechnical investigation and testing – Identification, description and classification of rock*

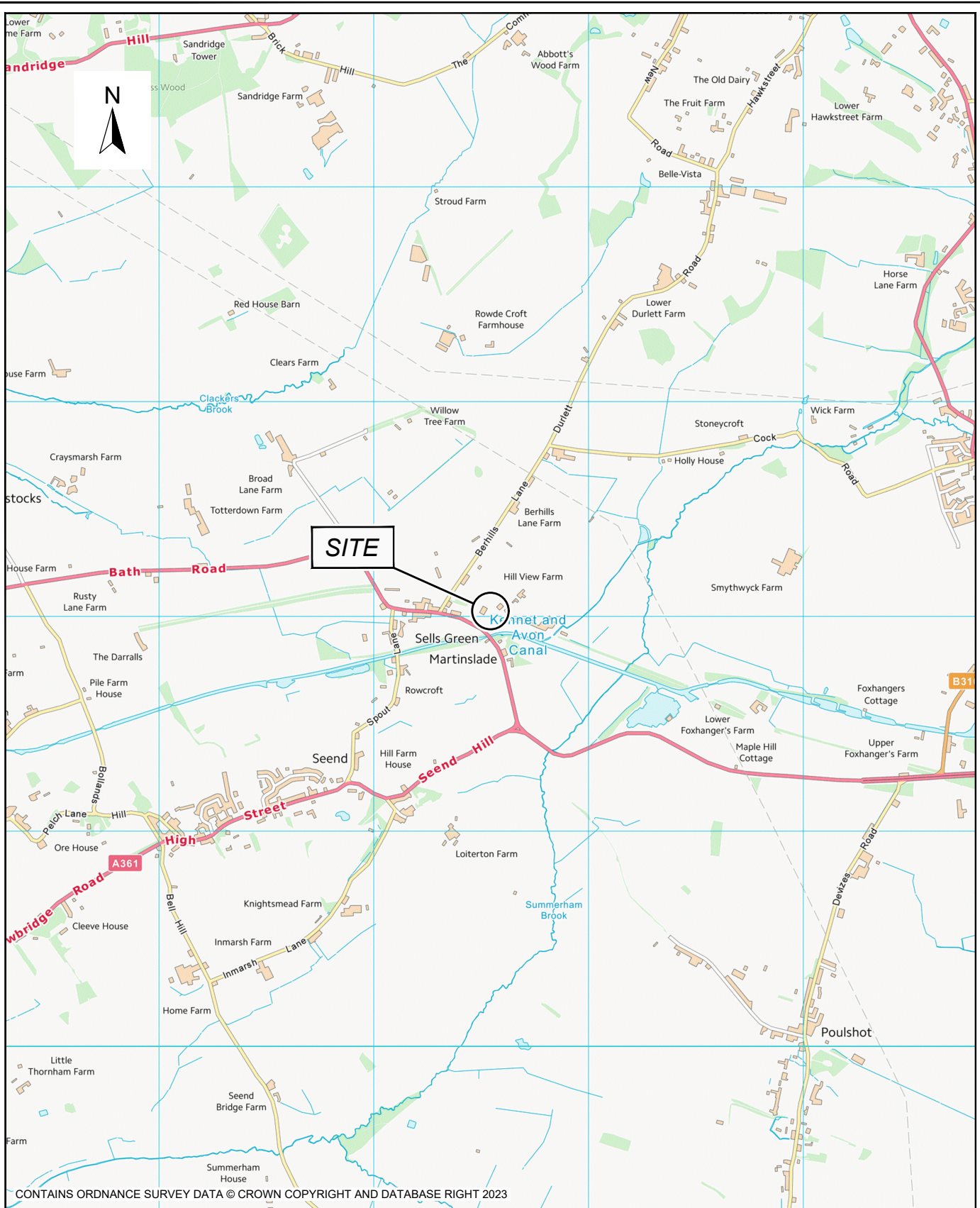
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- 9.17 BS 1377:2016-2022 *Methods of test for soils for civil engineering purposes. Parts 1-3.* (for test methods not covered by BS EN ISO 17892 series of standards)
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APPENDIX A - PLANS AND DRAWINGS

- (i) Site Location Plan
- (ii) Exploratory Hole Location Plan
- (iii) Proposed Development Layout Plan



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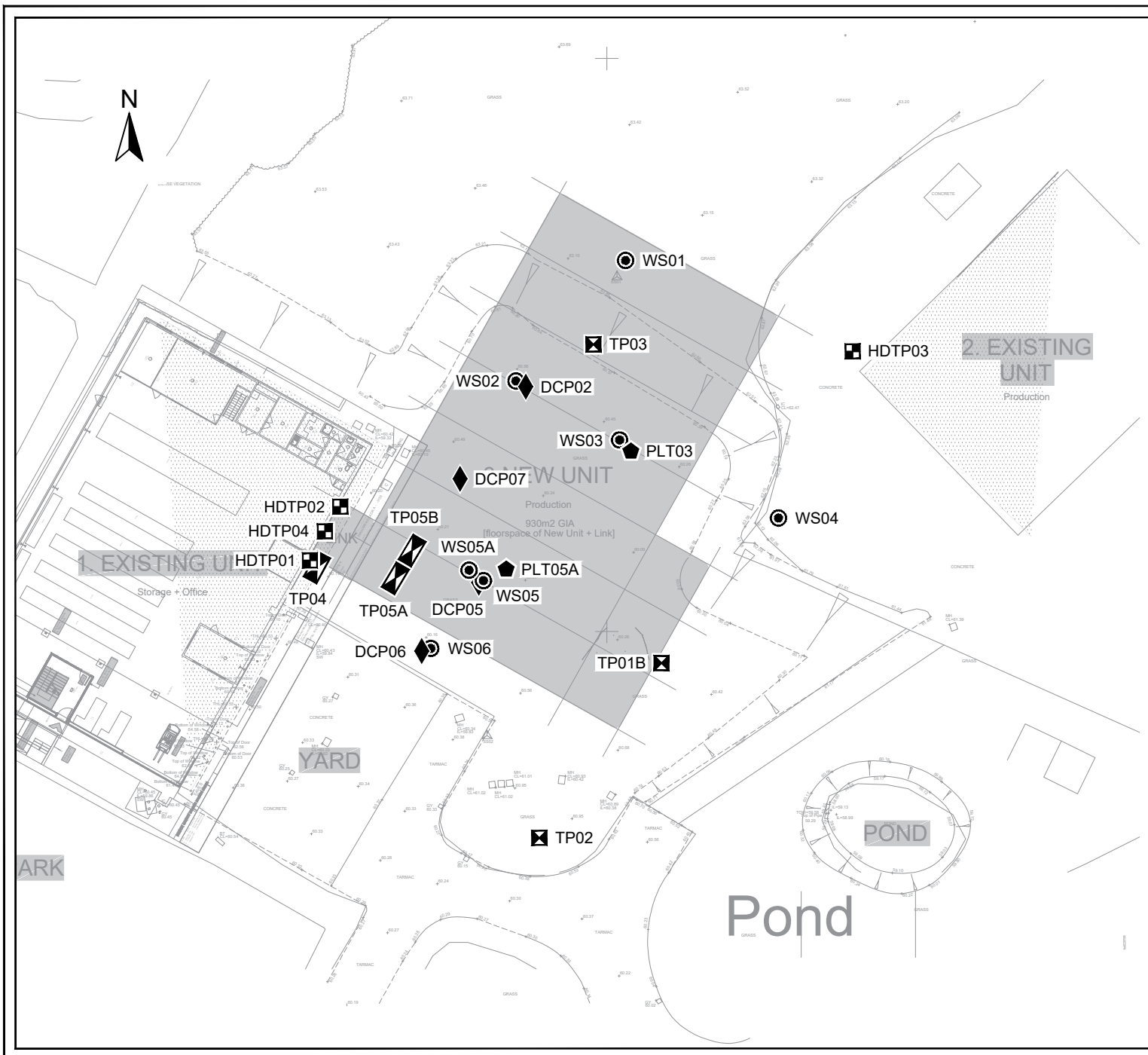
PROJECT

BLUEMAY PHASE 3, BIDMEAD PARK, MELKSHAM

TITLE

SITE LOCATION MAP

00	23.07.2025	FIRST ISSUE	AA	RA	-
REV.	DATE	DESCRIPTION	BY	CHD.	APR.
DIMENSION			SCALE		
m			1:25,000		
JOB NO			GRID REF		
738355			ST 955 620		
SCALE BAR			ORIGIN SIZE		
0 250 500 750 1,000m			A4		
FIGURE			1		



LEGEND

FOUNDATION PIT

TRIAL PIT

WINDOW SAMPLE

TRL DYNAMIC CONE PENETROMETER TEST

PLATE LOAD TEST

NOTES

-

00	21.08.2025	FIRST ISSUE	AA	RA	AL
REV	DATE	DESCRIPTION	BY	CHD	APR
DIMENSION		SCALE	ORIGIN SIZE		
m		1:500	A4		

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PROJECT

BLUEMAY PHASE 3, BIDMEAD PARK, MELKSHAM

TITLE

EXPLORATORY HOLE LOCATION PLAN

JOB NUMBER	FIGURE
738355	2
DRAWING STATUS	REV
-	00

SCALE BAR

0510152025m

BRIEF NOTES - NEW UNIT

- 10,000 sq ft [approx. 930m²] new heated warehouse building to act as a single-storey production unit
- min. internal clear height [below haunches] 5m
- steel frame building
- photovoltaic panels to roof
- building services, including data and comms
- toilets
- shower room + changing area
- kitchen + staff area
- maximise daylight
- direct access to existing production unit, with segregated (i) forklift access (ii) personnel access
- roller shutters between existing and new unit
- 'Own Products' area(s) screening solution required within New Unit
- no new additional car or cycle parking required by client
- New Unit occupancy/Total Site occupancy ≤20 persons
- new IT server room
- new external lunch break area

1. EXISTING UNIT

Storage + Office

LINK

3. NEW UNIT

Production

930m² GIA
[floorspace of New Unit + Link]

2. EXISTING UNIT

Production

YARD

POND

CAR PARK



Glentworth Court, Little Kiln Close,
Stoke Gifford, Bristol, BS34 8SR
+44 (0)117 931 2062
www.kendallkingscott.co.uk

Project
New Manufacturing Building

Client
Bluemay Ltd

Date
25/04/2025
Scale
1:200
Filename
250274 Bluemay.vwx

Purpose/Status
SKETCH
Scale
GJ
Checked
GA
Paper Size
ISO A2

Project Number/Drawing Number
250274-0502

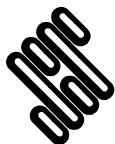
Check all dimensions and levels on site

Revision
P03
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APPENDIX B - EXPLORATORY HOLE RECORDS

- (i) Key to Exploratory Hole Logs
- (ii) Window Sample Logs
- (iii) Trial Pit Logs
- (iv) Standpipe Summary Table



KEY TO EXPLORATORY HOLE LOGS - SUMMARY OF ABBREVIATIONS

SAMPLING

Sample type codes:

B	=	Bulk disturbed sample.
D	=	Small disturbed sample.
DSPT	=	Small disturbed sample originating from SPT test.
ES	=	Soil sample for environmental testing.
U	=	Undisturbed driven tube sample - Number of blows indicated. % recovery reported.

Undisturbed sample detail codes:

=

IN-SITU TESTING

SPT _(c)	=	Standard Penetration Test using a solid 60 degree cone.
SPT	=	Standard Penetration Test using split spoon sampler. _(NR) indicates 'No Sample Recovery'.
	=	* denotes extrapolated N value. NP denotes 'No Penetration'.
HP	=	Hand Penetrometer Test. Value given as shear strength c_u , in kPa.
V	=	Field Vane Test. Peak value (c_u) & Residual value (c_r), given as shear strength in kPa.
PID	=	Photo Ionisation Detector Results, in ppm.

ADDITIONAL NOTES

1. All soil and rock descriptions and legends in general accordance with BS EN ISO 14688-1:2018, 14688-2:2018, 14689:2018, and BS5930:2015+A1:2020.
2. Material types divided by a broken line (- - -) indicates an unclear boundary.
3. Fracture spacings (lf) quoted in the Description of Strata for specific strata or specific fracture sets are also quoted in mm, e.g. (25/80/230) referring to (Min/Avg/Max).
4. The data on any sheet within the report showing the AGS icon is available in the AGS format.
5. Weathering descriptions in accordance with , BS 5930:2015+A1:2020 Code of practice for ground investigations - Figure 9 - Approach 2, BS 5930:2015+A1:2020 Code of practice for ground investigations - Figure 9 - Approach 4, BS EN ISO 14689:2018 Geotechnical Investigation and testing - Identification, Description and Classification of Rock - Table 13.



KEY TO EXPLORATORY HOLE LOGS - SUMMARY OF GRAPHIC SYMBOLS

WATER COLUMN SYMBOLS

- 
- First water strike, second water strike etc.
- 
- Standing water level following first strike, standing water level following second strike etc.
- 
- Seepage.
- 
- Standing water level recorded at documented date.

MATERIAL GRAPHIC LEGENDS

- 

CLAY
- 

Gravelly CLAY
- 

MADE GROUND
- 

Sandy CLAY
- 

Silty CLAY

INSTRUMENTATION SYMBOLS

- 

Backfill
- 

Bentonite seal
- 

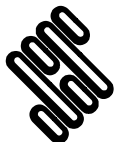
Concrete
- 

Gravel filter
- 

Flush cover
- 

Slotted pipe
- 

Plain pipe

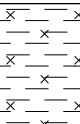


Contract: Bluemay Park Phase 3, Bidmead Park, Melksham			Client: E. W. Beard Limited		Window Sample: WS01
Contract Ref: 738355	Start: 16.07.25 End: 16.07.25	Ground Level (m AOD): 63.04	National Grid Co-ordinate: E:395553.4 N:162052.8		Sheet: 1 of 2

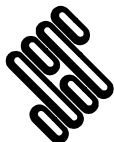
Progress	Samples / Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Window Run	Depth	No	Type	Results						
	0.20 0.20-0.30	1 101	D ES	1xT+1xJ			MADE GROUND: Grass over stiff brown slightly sandy CLAY with frequent rootlets. Sand is fine to coarse. (TOPSOIL)	62.94	0.10	
							MADE GROUND: Stiff brownish grey slightly sandy gravelly CLAY with a low cobble content. Gravel is subangular to subrounded fine to coarse of limestone and chalk. Cobbles are subangular limestone.	62.74	0.30	
	0.60-0.70 0.70	2 102	B ES	1xT+1xJ			MADE GROUND: Stiff brown and orangish brown mottled black slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse limestone with occasional brick fragments.	62.39	0.65	
	1.00-1.45 1.00-1.45	1 1	SPT DSPT	N=16			Stiff brown and orangish brown mottled black slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse limestone.	62.04	1.00	
	1.50-1.80	3	B				Stiff brown and orangish brown mottled black slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse limestone. (KIMMERIDGE CLAY FORMATION)		(0.80)	
	1.70 1.80-1.90	4 4	HP D	c _u =75/75/75			Stiff brown and orangish brown mottled black CLAY with occasional gypsum crystals. Gravel is subangular to subrounded fine to coarse limestone. (KIMMERIDGE CLAY FORMATION)	61.24 61.14	1.80 1.90	
	2.00-2.45 2.00-2.45	2 2	SPT DSPT	N=22			Very soft orangish brown sandy CLAY (KIMMERIDGE CLAY FORMATION)			
	2.50-2.80	5	D				Stiff orangish brown and grey silty CLAY with frequent gypsum crystals. (KIMMERIDGE CLAY FORMATION)		(0.90)	
	2.80-3.00	6	D					60.24	2.80	
	3.00-3.45	3	U ₍₇₀₎	26 blows 100% recovery			Stiff dark grey CLAY with occasional gypsum crystals and rare rootlets. (KIMMERIDGE CLAY FORMATION)		(0.45)	
	3.80-4.00	7	D				Stiff brown, orangish brown and grey silty CLAY with occasional gypsum crystals. (KIMMERIDGE CLAY FORMATION)		(1.15)	
	4.00-4.45 4.00-4.45	3 4	DSPT SPT	N=25				58.64	4.40	
	4.80-5.00	8	D				Stiff dark grey and brown CLAY with frequent crystal of gypsum. (KIMMERIDGE CLAY FORMATION)		(0.60)	
								58.04	5.00	

Drilling Progress and Water Observations						General Remarks	
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)		
16/07/25	14:24	5.45	-		-	1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation. 2. Inspection pit hand dug to 1.20m depth. 3. Borehole remained dry. 4. 40mm diameter gas/groundwater monitoring standpipe complete with flush protective cover installed to 5.00m depth on completion (response zone 1.00-5.00m).	
All dimensions in metres						Scale:	1:28
Method Used:	Inspection pit + Tracked window sampling		Plant Used:	Dando Terrier		Drilled By:	Phil Guinness
						Logged By:	RAIbertos
						Checked By:	AML
							AGS



Progress	Samples / Tests				Water	Backfill & Instru- mentation	Description of Strata	Reduced Level	Depth (Thick- ness)	Material Graphic Legend
Window Run	Depth	No	Type	Results						
	5.00-5.45 5.00-5.45	4 5	DSPT SPT	N=20			Stiff grey thinly laminated silty CLAY. (KIMMERIDGE CLAY FORMATION)		(0.45)	
							Borehole terminated at 5.45m depth.	57.59	5.45	

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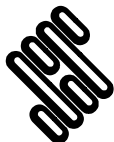
STRUCTURAL SOILS

WINDOW SAMPLE LOG

Contract: Bluemay Park Phase 3, Bidmead Park, Melksham			Client: E. W. Beard Limited		Window Sample: WS02
Contract Ref: 738355	Start: 15.07.25 End: 15.07.25	Ground Level (m AOD): 60.57	National Grid Co-ordinate: E:395543.8 N:162042.2		Sheet: 1 of 1

Progress	Samples / Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Window Run	Depth	No	Type	Results						
	0.20-0.30	1	B	1xT+1xJ			MADE GROUND: Grass over very stiff to friable greenish grey slightly sandy slightly gravelly CLAY with frequent rootlets. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse chalk and siltstone.	60.27	(0.30)	
	0.20-0.30	101	ES	0.4ppm						
	0.20		PID	1xT+1xJ			MADE GROUND: Very stiff to friable dark brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to coarse chalk, siltstone, brick. 0.30-0.34m : orangish brown layer. 0.40-0.46m : orangish brown layer.		(0.40)	
	0.40-0.50	102	ES	0.2ppm				59.87	0.70	
	0.40	2	D				Firm brownish grey silty CLAY interlaminated with orangish brown sandy clay, occasional gypsum crystals and shell fragments. Sand is fine. (KIMMERIDGE CLAY FORMATION)			
	0.40		PID							
	0.80-0.90	103	ES	1xT+1xJ						
	0.80-1.00	3	B	0.2ppm						
	0.80		PID							
	1.00		V	$c_u > 120 / > 120 / > 120$						
	1.20-1.65	1	U ₍₇₀₎	19 blows 100% recovery						
	1.60-2.00	4	B						(1.70)	
	2.00-2.45	1	DSPT	N=14						
	2.00-2.45	2	SPT					58.17	2.40	
	2.40-2.70	5	B					58.02	2.55	
	2.70-3.00	6	B					57.87	2.70	
	3.00-3.45	3	SPT	N=13					(0.85)	
	3.00-3.45	3	DSPT							
	3.55-3.65	7	D					57.02	3.55	
	3.65-4.00	8	B						(0.35)	
	4.00-4.45	4	SPT	N=14			Stiff dark grey CLAY with occasional gypsum crystals. (KIMMERIDGE CLAY FORMATION) 3.65-3.90m : frequent content of gypsum crystals.	56.67	3.90	
	4.00-4.45	4	DSPT						(0.55)	
							Firm greenish brown thinly laminated silty CLAY interlaminated with orangish brown sandy clay. Sand is fine. (KIMMERIDGE CLAY FORMATION)	56.12	4.45	
							Window sample borehole terminated at 4.45m depth.			

Drilling Progress and Water Observations						General Remarks
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	
15/07/25	15:20	4.45	-		-	
1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.						
2. Inspection pit hand dug to 1.20m depth.						
3. No groundwater encountered.						
4. On completion, borehole backfilled with bentonite pellets.						
5. SPT hammer DT15187-2025 (E_r = 80.00%) used.						



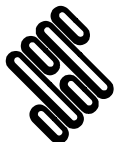
STRUCTURAL SOILS

WINDOW SAMPLE LOG

Contract: Bluemay Park Phase 3, Bidmead Park, Melksham			Client: E. W. Beard Limited		Window Sample: WS03
Contract Ref: 738355	Start: 15.07.25 End: 15.07.25	Ground Level (m AOD): 60.29	National Grid Co-ordinate: E:395552.9 N:162037.0		Sheet: 1 of 1

Progress	Samples / Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Window Run	Depth	No	Type	Results						
1.20 - 2.00 (98mm dia) 100% rec 2.00 - 3.00 (85mm dia) 100% rec 3.00 - 4.00 (75mm dia) 10% rec	0.30-0.40 0.30-0.40 0.30	1 101	B ES PID	1xT+1xJ 0.4ppm			MADE GROUND: Grass over stiff grey and orangish brown slightly sandy gravelly silty CLAY with frequent rootlets on the top. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse chalk, limestone and brick.	59.79	0.50	
	0.60	2	D				MADE GROUND: Very stiff dark grey and orangish brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse chalk and siltstone.	59.54	0.75	
	0.80-1.00 0.90-1.00 0.90	3 102	B ES PID	1xT+1xJ 0.0ppm			Firm locally stiff brownish grey silty CLAY interlaminated with orangish brown sand and frequent gypsum crystals. Sand is fine to coarse. (KIMMERIDGE CLAY FORMATION)		(1.15)	
	1.20-1.65	1	SPT	N=16						
	1.70-1.90 1.70	4	B HP	c _u =75/75/100				58.39	1.90	
	1.90-2.00 2.00-2.45	5 2	D U ₍₇₀₎	19 blows 100% recovery			Firm dark grey, and orangish brown mottled black sandy CLAY. (KIMMERIDGE CLAY FORMATION)	58.09	(0.30) 2.20	
	2.70-2.90 2.80	6	B HP	c _u =75/75/75			Firm brownish grey thinly laminated silty CLAY interlaminated with orangish brown sand and frequent gypsum crystals. Sand is fine. (KIMMERIDGE CLAY FORMATION)	57.39	2.90	
	2.90-3.00 3.00-3.45	7 3	D SPT	N=13			Stiff dark grey CLAY. (KIMMERIDGE CLAY FORMATION)		(0.50)	
	3.20-3.50	8	D					56.89	3.40	
	3.50-4.00 3.70	9	D HP	c _u =50/36/36			Firm brownish grey thinly laminated silty CLAY interlaminated with grey sandy clay and frequent gypsum crystals and shell fragments. Sand is fine to coarse. (KIMMERIDGE CLAY FORMATION)		(1.05)	
	4.00-4.45	4	SPT	N=16				55.84	4.45	
							Window sample borehole terminated at 4.45m depth.			

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation. 2. Inspection pit hand dug to 1.20m depth. 3. No groundwater encountered. 4. On completion, borehole backfilled with bentonite pellets. 5. SPT hammer DT15187-2025 (E _r = 80.00%) used.			
15/07/25	13:18	4.45	-		-				
All dimensions in metres						Scale:	1:28		
Method Used:	Inspection pit + Tracked window sampling		Plant Used:	Dando Terrier		Drilled By:	Phil Guinness	Logged By:	RAIbertos
						Checked By:	AML		AGS



Contract: Bluemay Park Phase 3, Bidmead Park, Melksham			Client: E. W. Beard Limited		Window Sample: WS04
Contract Ref: 738355	Start: 16.07.25 End: 16.07.25	Ground Level (m AOD): 62.11	National Grid Co-ordinate: E:395566.8 N:162030.2		Sheet: 1 of 2

Progress	Samples / Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Window Run	Depth	No	Type	Results						
1.20 - 2.00 (98mm dia) 100% rec 2.00 - 3.00 (85mm dia) 100% rec 3.00 - 4.00 (75mm dia) 90% rec 4.00 - 5.00 (75mm dia) 90% rec	0.30-0.40 0.30 0.40	101 1	ES PID D	1xT+1xJ 0.8ppm			MADE GROUND: Light grey CONCRETE.	62.06	0.05	
	0.60-0.80	2	B				MADE GROUND: Brown sandy angular to subangular predominantly medium to coarse GRAVEL of limestone and concrete with a low cobble content. Sand is fine to coarse. Cobbles are subangular limestone. (SUBBASE)	61.81	0.30	
	0.90-1.00 0.90	102	ES PID	1xT+1xJ 0.8ppm			MADE GROUND: Stiff greenish brown and orangish brown slightly sandy slightly gravelly CLAY and rare rootlets. Sand is fine to coarse. Gravel is limestone, concrete and brick.	61.21	0.90	
	1.20-1.65	1	SPT	N=11			Stiff brown and orangish brown mottled black silty CLAY. (KIMMERIDGE CLAY FORMATION)		(0.80)	
	1.70-1.85	3	B				1.60-1.63m : sandy angular fine to medium gravel of grey mudstone.	60.41	1.70	
	2.00-2.45	2	SPT	N=12			Stiff dark grey CLAY with frequent gypsum crystals. (KIMMERIDGE CLAY FORMATION)	60.26	1.85	
	2.70-3.00	4	B				Firm greenish grey locally mottled black thinly laminated silty CLAY interlaminated with orangish brown sand and occasional gypsum crystals and shell fragments. Sand is fine. (KIMMERIDGE CLAY FORMATION)		(2.05)	
	3.00-3.45	3	U ₍₇₀₎	27 blows 100% recovery						
	3.70-4.00	5	D					58.21	3.90	
	4.00-4.45	4	SPT	N=18			Stiff grey mottled orangish brown CLAY with occasional rootlets and frequent gypsum and occasional shell fragments. (KIMMERIDGE CLAY FORMATION)		(1.55)	
	4.50-5.00	6	D							

Drilling Progress and Water Observations						General Remarks				
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)					
16/07/25	14:30	5.45	-		-	1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation. 2. Inspection pit hand dug to 1.20m depth. 3. No groundwater encountered. 4. On completion, borehole backfilled with bentonite pellets. 5. SPT hammer DT15187-2025 ($E_r = 80.00\%$) used.				
						All dimensions in metres		Scale:	1:28	
Method Used:	Inspection pit + Tracked window sampling			Plant Used:	Dando Terrier		Drilled By:	Phil Guinness	Logged By:	RAIbertos
								Checked By:	AML	

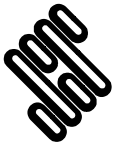


Contract: Bluemay Park Phase 3, Bidmead Park, Melksham		Client: E. W. Beard Limited		Window Sample: WS04	
Contract Ref: 738355		Start: 16.07.25 End: 16.07.25	Ground Level (m AOD): 62.11	National Grid Co-ordinate: E:395566.8 N:162030.2	Sheet: 2 of 2

Progress	Samples / Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Window Run	Depth	No	Type	Results						
	5.00-5.45	5	SPT	N=16			Stiff grey mottled orangish brown CLAY with occasional rootlets and frequent gypsum and occasional shell fragments. (KIMMERIDGE CLAY FORMATION) (stratum copied from 3.90m from previous sheet) Window sample borehole terminated at 5.45m depth.	56.66	5.45	

Drilling Progress and Water Observations						General Remarks							
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)								
						All dimensions in metres		Scale:	1:28				
Method Used:	Inspection pit + Tracked window sampling			Plant Used:	Dando Terrier		Drilled By:	Phil Guinness	Logged By:	RAIbertos	Checked By:	AML	AGS

GINT LIBRARY V10.01.GLB LibVersion: v8.07.001 ProjVersion: v8.07.01 Log WINDOW SAMPLE LOG - A4F | 738355-BLUEMAY-PARK-PHASE-3-BIDMEAD-PARK-MELKSHAM.GPJ - v10.01. Structural Soils Ltd, Head Office - Bristol: The Old School, Stillhouse Lane, Bidminster, Bristol, BS3 4EB. Tel: 0117-947-1000, Fax: 0117-947-1004, Web: www.soils.co.uk, Email: ask@soils.co.uk | 26/08/25 - 22:28 | AML.1 |



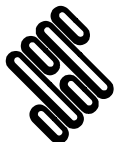
STRUCTURAL SOILS

WINDOW SAMPLE LOG

Contract: Bluemay Park Phase 3, Bidmead Park, Melksham			Client: E. W. Beard Limited		Window Sample: WS05
Contract Ref: 738355	Start: 15.07.25 End: 15.07.25	Ground Level (m AOD): 60.06	National Grid Co-ordinate: E:395540.9 N:162024.7		Sheet: 1 of 1

Progress	Samples / Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Window Run	Depth	No	Type	Results						
	0.20-0.30 0.20-0.30 0.20	1 101	B ES PID	1xT+1xJ 0.1ppm			MADE GROUND: Grass over stiff brown slightly sandy CLAY with frequent rootlets. Sand is fine to coarse.	59.86	0.20	
	0.70-0.80 0.70-0.80 0.70	102 2	ES B PID	1xT+1xJ+1xV 0.2ppm			MADE GROUND: Stiff friable greenish grey, orangish brown mottled black and white slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse chalk, concrete, brick, plastic, plastic membrane and clinker.	59.46	(0.40) 0.60	
	1.00-1.10 1.00-1.10 1.00 1.20-1.65	103 3 1	ES B PID SPT(c)	1xT+1xJ+1xV 0.4ppm N=13			MADE GROUND: Medium dense dark grey gravelly slightly clayey fine to coarse SAND with occasional fine to coarse pockets of orangish brown sandy clay. Gravel is angular to subrounded fine to coarse ballast, ash and clinker. Moderate odour (unidentified contamination, Driller's description is possible sewage). 1.00m : From 1.00m depth, increases clay content.		(1.20)	
	1.80-2.00	4	B				MADE GROUND: Firm orangish brown and greenish grey silty CLAY.	58.26	1.80	
	2.00-2.45 2.20-3.00	2 5	U ₍₇₀₎ B	14 blows 100% recovery			MADE GROUND: Poor recovery in window sample run from 2.00-3.00m. Recovered 200mm of black gravelly slightly silty fine to coarse SAND. Gravel is angular to subangular fine to coarse of ballast and clinker. Strong odour (unidentified contamination, Driller's description is possible sewage). To of next sample run recovered collapse material of very soft blackish brown and orangish brown slightly sandy gravelly silty CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to coarse ballast.	58.06 57.86	2.00 2.20	
	2.80-2.90 2.80 3.00-3.45	104 3	ES PID SPT(c)	1xT+1xJ 0.1ppm N=4			Firm greenish grey and orangish brown CLAY with frequent gypsum crystals. Description based on soils recovered below collapse material in sample run from 3.00-4.00m. Approximate upper boundary of 2.20m based upon observed boundary in adjacent trial pit TP05B. (KIMMERIDGE CLAY FORMATION) 3.00m : SPT test result considered unreliable due to collapse material or soil not recovered from previous sampling run being present in hole. 4.00m : SPT test at 4.00m considered potentially unreliable due to collapse material within unstable borehole.		(2.25)	
	3.60-3.70 3.60-4.00 3.60 4.00-4.45	105 6 4	ES D PID SPT	1xT+1xJ+1xV 0.1ppm N=9			Window sample borehole terminated at 4.45m depth.	55.61	4.45	

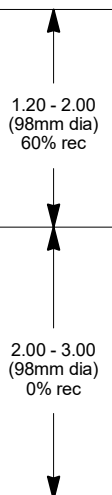
Drilling Progress and Water Observations						General Remarks						
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)							
15/07/25	16:55	4.45	-		-							
1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.												
2. Inspection pit hand dug to 1.20m depth.												
3. Water strike at 1.20m depth, rising to 1.00m.												
4. On completion, borehole backfilled with bentonite pellets.												
5. SPT hammer DT15187-2025 (E_r = 80.00%) used.												
All dimensions in metres					Scale:	1:28						
Method Used:	Inspection pit + Tracked window sampling		Plant Used:	Dando Terrier		Drilled By:	Phil Guinness	Logged By:	RAibertos	Checked By:	AML	AGS



STRUCTURAL SOILS

WINDOW SAMPLE LOG

Contract: Bluemay Park Phase 3, Bidmead Park, Melksham			Client: E. W. Beard Limited		Window Sample: WS05A
Contract Ref: 738355	Start: 16.07.25 End: 16.07.25	Ground Level (m AOD): 60.17	National Grid Co-ordinate: E:395539.7 N:162025.6		Sheet: 1 of 2

Progress	Samples / Tests				Water	Backfill & Instru- mentation	Description of Strata	Reduced Level	Depth (Thick- ness)	Material Graphic Legend
Window Run	Depth	No	Type	Results						
 1.20 - 2.00 (98mm dia) 60% rec 2.00 - 3.00 (98mm dia) 0% rec							MADE GROUND: Grass over stiff brown slightly sandy CLAY with frequent rootlets. Sand is fine to coarse.	59.97	0.20	
							MADE GROUND: Stiff friable greenish grey, orangish brown mottled black and white slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse chalk, concrete, brick, plastic, plastic membrane and clinker.	59.57	(0.40) 0.60	
							MADE GROUND: Medium dense dark grey gravelly slightly clayey fine to coarse SAND with occasional fine to coarse pockets of orangish brown sandy clay. Gravel is angular to subrounded fine to coarse ballast, ash and clinker. Moderate odour (unidentified contamination, Driller's description is possible sewage).		(1.20)	
								58.37	1.80	
							MADE GROUND: Firm orangish brown and greenish grey silty CLAY.	58.17	2.00	
							No recovery. Probable boundary between Made Ground and underlying natural clay at about 2.20m based on adjacent trial pit TP05B.		(1.00)	
								57.17	3.00	
							Window sample borehole terminated at 3.00m depth.			

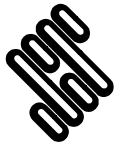
Drilling Progress and Water Observations						General Remarks						
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)							
16/07/25		3.00	-	98	1.00							
1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation. Inspection pit hand dug to 1.20m depth. 2. Borehole located ~1.00m from WS05 and was drilled to install a monitoring well (borehole WS05 having collapsed before one could be installed). Stratum descriptions duplicated from WS05. 3. Water strike at 1.20m depth, rising to 1.00m. 4. 40mm diameter gas/groundwater monitoring standpipe complete with flush												
All dimensions in metres Scale: 1:28												
Method Used:	Inspection pit + Tracked window sampling		Plant Used:	Dando Terrier		Drilled By:	Phil Guinness	Logged By:	RAIbertos	Checked By:	AML	AGS



Contract: Bluemay Park Phase 3, Bidmead Park, Melksham		Client: E. W. Beard Limited		Window Sample: WS05A
Contract Ref: 738355	Start: 16.07.25 End: 16.07.25	Ground Level (m AOD): 60.17	National Grid Co-ordinate: E:395539.7 N:162025.6	Sheet: 2 of 2

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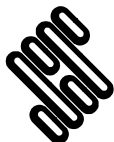
Drilling Progress and Water Observations						General Remarks
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	
						protective cover installed to 3.00m depth on completion (response zone 0.50-3.00m).
All dimensions in metres						Scale: 1:28
Method Used:	Inspection pit + Tracked window sampling		Plant Used:	Dando Terrier		Drilled By: Phil Guinness Logged By: RAIbertos Checked By: <i>AML</i>
						



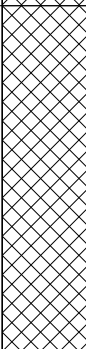
Contract: Bluemay Park Phase 3, Bidmead Park, Melksham			Client: E. W. Beard Limited		Window Sample: WS06
Contract Ref: 738355	Start: 15.07.25 End: 15.07.25	Ground Level (m AOD): 60.16	National Grid Co-ordinate: E:395536.3 N:162018.7		Sheet: 1 of 1

Progress	Samples / Tests				Water Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
1.20 - 2.00 (98mm dia) 90% rec 2.00 - 3.00 (85mm dia) 50% rec 3.00 - 4.00 (75mm dia) 40% rec	0.20-0.30	101	ES	1xT+1xJ+1xV		MADE GROUND: Grass over stiff brown slightly sandy CLAY with frequent rootlets. Sand is fine to coarse.		(0.50)	
	0.20	1	PID	0.2ppm			59.66	0.50	
	0.30		D						
	0.50		PID	0.1ppm		MADE GROUND: Dark brown slightly gravelly clayey fine to coarse SAND with a low cobble content and occasional rootlets. Gravel is angular to subrounded fine to coarse limestone, brick, slag, clinker, quartzite. Cobbles are subangular brick up to 110mm x 70mm.		(0.40)	
	0.60	102	ES	1xT+1xJ+1xV		0.80-1.20m : Slight organic odour.	59.26	0.90	
	0.60-0.70	2	B						
	0.80	3	D					(0.55)	
	0.90		V	c _u =98/88/88					
	0.90		V	c _v =28/58/20					
	1.00-1.10	103	ES	1xT+1xJ+1xV		MADE GROUND: Firm to stiff greenish grey, grey and orangish brown and black slightly sandy gravelly silty CLAY. Sand is fine to coarse. Driller notes organic odour in upper part of unit.		1.45	
	1.00-1.10	4	B						
	1.00		PID	0.0ppm					
	1.20-1.65	1	U ₍₇₀₎	12 blows					
	1.20-1.65	5	U ₍₇₀₎	100% recovery					
	1.20-1.65			12 blows					
2.00 - 3.00 (85mm dia) 50% rec 3.00 - 4.00 (75mm dia) 40% rec	1.30-1.40	104	ES	1xT+1xJ+1xV		Soft to firm greenish grey and grey silty CLAY interlaminated with orangish brown sandy clay and occasional shell fragments. Sand is fine. (KIMMERIDGE CLAY FORMATION)	58.16	2.00	
	1.30		PID	0.0ppm					
	1.70-2.00	6	B					(0.55)	
	1.80-1.90	105	ES	1xT+1xJ+1xV					
	1.80		HP	c _u =25/25/25					
	1.80		PID	0.0ppm					
	2.00-2.45	1	DSPT			Firm to stiff greenish brown and grey thinly laminated silty CLAY interlaminated with orangish brown sandy clay with occasional gypsum crystals. Sand is fine to coarse. (KIMMERIDGE CLAY FORMATION)			
	2.00-2.45	2	SPT	N=10					
	2.50-3.00	7	B					(2.45)	
	2.80		HP	c _u =50/50/75					
	3.00-3.45	2	DSPT						
	3.00-3.45	3	SPT	N=14					
	3.80-4.00	8	B						
	4.00-4.45	3	DSPT						
	4.00-4.45	4	SPT	N=11					
						Window sample terminated at 4.45m depth.			

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation. Inspection pit hand dug to 1.20m depth. 2. Water seepage at 1.40m depth. 3. 40mm diameter gas/groundwater monitoring standpipe complete with flush protective cover installed to 2.50m depth on completion (response zone 1.00-2.50m). 4. SPT hammer DT15187-2025 (E_r = 80.00%) used.			
15/07/25	11:30	4.45	-		-				
All dimensions in metres						Scale:	1:28		
Method Used:	Inspection pit + Tracked window sampling		Plant Used:	Dando Terrier		Drilled By:	Phil Guinness	Logged By:	RAIbertos
						Checked By:	AML		AGS

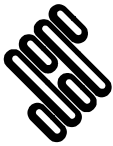


Contract: Bluemay Park Phase 3, Bidmead Park, Melksham			Client: E. W. Beard Limited		Trial Pit: TP01B
Contract Ref: 738355	Start: 24.07.25 End: 24.07.25	Ground Level (m AOD): 60.33	National Grid Co-ordinate: E:395556.5 N:162017.4		Sheet: 1 of 3

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.90-1.00	1	B				MADE GROUND: Grass over stiff dark brown slightly gravelly CLAY with frequent rootlets and occasional roots up to 5mm diameter. Gravel of angular fine to coarse concrete and limestone (TOPSOIL).	60.13	0.20	
						MADE GROUND: Stiff brown slightly sandy slightly gravelly CLAY with low varying to medium cobble and boulder contents. Gravel is fine to coarse angular concrete and occasionally limestone, cobbles and boulders are angular concrete up to 350mm across plus rare clinker or slag.		(0.90)	
						0.70-0.70m : 25mm diameter blue plastic water supply pipe exposed in north-west corner of pit contained within circa. 50mm diameter thin, darker blue plastic pipe. Section of larger pipe struck and damaged by excavator, inner pipe undamaged. Pit carefully backfilled around pipe with three 0.5m long wooden pegs laid alongside and over damaged pipe with red/white hazard warning tape wrapped around uppermost post.	59.23	1.10	
						Trial pit terminated at 1.10m depth on concrete slab. Unable to extend pit west due to water pipe, unable to extend east due to possible utility detected by earlier GPR survey.			

Plan (Not to Scale)			General Remarks		
			- Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation. - Trial pit remained dry and stable during excavation. 25mm diameter blue plastic water supply pipe exposed in north-west corner of pit contained within circa. 50mm diameter thin, darker blue plastic pipe - see fuller description given above in log.		
			All dimensions in metres		Scale: 1:19
Method Used: Machine dug	Plant Used: Mini tracked excavator	Logged By: ALumber	Checked By: AML		

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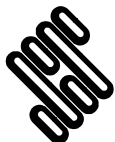
Contract: Bluemay Park Phase 3, Bidmead Park, Melksham		Client: E. W. Beard Limited		Trial Pit: TP01B
Contract Ref: 738355	Start: 24.07.25 End: 24.07.25	Ground Level (m AOD): 60.33	National Grid Co-ordinate: E:395556.5 N:162017.4	Sheet: 2 of 3

Excavation. Concrete in base, pipe in NW corner.



Pipe within larger duct in NW corner.

Method Used: Machine dug	Plant Used: Mini tracked excavator	Logged By: ALumber	Checked By: AML	
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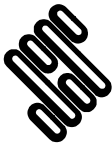
Contract: Bluemay Park Phase 3, Bidmead Park, Melksham		Client: E. W. Beard Limited		Trial Pit: TP01B
Contract Ref: 738355	Start: 24.07.25 End: 24.07.25	Ground Level (m AOD): 60.33	National Grid Co-ordinate: E:395556.5 N:162017.4	Sheet: 3 of 3

Main spoil heap.



Pipe protected when backfilled using wooden pegs.

Method Used: Machine dug	Plant Used: Mini tracked excavator	Logged By: ALumber	Checked By: AML	AGS
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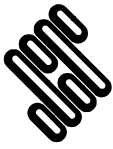


Contract: Bluemay Park Phase 3, Bidmead Park, Melksham			Client: E. W. Beard Limited		Trial Pit: TP02
Contract Ref: 738355	Start: 24.07.25 End: 24.07.25	Ground Level (m AOD): 60.90	National Grid Co-ordinate: E:395545.8 N:162002.1		Sheet: 1 of 2

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.40-0.40	1	D				MADE GROUND: Grass over stiff dark brown slightly sandy slightly gravelly friable CLAY. Occasional roots up to 3mm diameter, and occasional pieces of wire. Gravel is angular fine to coarse concrete and limestone.	60.63	(0.27)	
						MADE GROUND: Very stiff orangish brown mottled grey and orange slightly gravelly CLAY with a low cobble content. Gravel is angular fine to coarse limestone, concrete and brick; cobbles are concrete up to 130mm across. Single glass bottle.	60.30	(0.33)	
0.75-0.75	2	D				0.55-0.60m : section of old, crushed, circa 80mm diameter section of brick land drain. Very stiff orangish brown mottled grey and orange fissured CLAY with occasional decayed rootlets. (KIMMERIDGE CLAY FORMATION)			
1.10-1.10	3	D						(1.00)	
1.60-1.60	4	D				1.20-1.60m : occasional gravel size pockets of cream silt and gravel size calcite.	59.30	1.60	
Trial pit terminated at 1.60m depth.									

Plan (Not to Scale)			General Remarks		
			1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation. 2. Trial pit remained dry and stable during excavation. 3. Excavator struggling to shake stiff sticky clay soils from bucket towards base of excavation. 4. Soakaway test completed in pit prior to backfilling.		
All dimensions in metres			Scale: 1:19		
Method Used: Machine dug	Plant Used: Tracked excavator	Logged By: ALumber	Checked By: AML		

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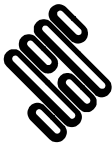


Contract: Bluemay Park Phase 3, Bidmead Park, Melksham		Client: E. W. Beard Limited		Trial Pit: TP02
Contract Ref: 738355	Start: 24.07.25 End: 24.07.25	Ground Level (m AOD): 60.90	National Grid Co-ordinate: E:395545.8 N:162002.1	Sheet: 2 of 2

Excavation prior to commencing soakaway test.



Method Used: Machine dug	Plant Used: Tracked excavator	Logged By: ALumber	Checked By: AML	AGS
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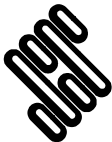


Contract: Bluemay Park Phase 3, Bidmead Park, Melksham			Client: E. W. Beard Limited		Trial Pit: TP03
Contract Ref: 738355	Start: 31.07.25	End: 31.07.25	Ground Level (m AOD): 61.18	National Grid Co-ordinate: E:395550.6 N:162045.4	Sheet: 1 of 2

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.50-0.60 0.50 0.60-1.00	101 1	ES PID LB	1xT+1xJ+1xV 0.2ppm			Grass over friable brown slightly sandy CLAY with frequent rootlets. Sand is fine to coarse. (TOPSOIL).	60.78	(0.40) 0.40	
1.50-1.60 1.50-2.00 1.50	102 2	ES LB PID	1xT+1xJ+1xV 0.3ppm			Stiff and friable thinly laminated dark grey slightly sandy slightly gravelly CLAY with occasional coarse gravel size pockets of orangish brown clay and occasional gypsum crystals. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse limestone. (KIMMERIDGE CLAY FORMATION)	59.88	(0.90) 1.30	
						Firm to stiff fissured grey and orangish brown CLAY with occasional gypsum crystals, decayed rootlets and rare shell fragments. (KIMMERIDGE CLAY FORMATION)	59.18	(0.70) 2.00	
						Trial pit terminated at 2.00m depth.			

Plan (Not to Scale)			General Remarks		
			1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation. 2. Trial pit remained dry and stable during excavation. 3. Trial pit excavated in cutting face slope, all depths measured from top of pit.		
All dimensions in metres			Scale: 1:19		
Method Used: Machine dug	Plant Used: Tracked excavator	Logged By: RALbertos	Checked By: AML		

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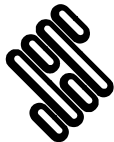


Contract: Bluemay Park Phase 3, Bidmead Park, Melksham		Client: E. W. Beard Limited		Trial Pit: TP03
Contract Ref: 738355	Start: 31.07.25 End: 31.07.25	Ground Level (m AOD): 61.18	National Grid Co-ordinate: E:395550.6 N:162045.4	Sheet: 2 of 2



GINT LIBRARY_V10_01.GLB LibVersion: v8_07_001 ProjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 738355-BLUEMAY-PARK-PHASE-3-BIDMEAD-PARK-MELKSHAM.GPJ - v10_01.
Structural Soils Ltd, Head Office - Bristol: The Old School, Stillhouse Lane, Bedminster, Bristol, BS3 4EB. Tel: 0117-947-1000, Fax: 0117-947-1004, Web: www.soils.co.uk, Email: ask@soils.co.uk | 26/08/25 - 22:24 | AML 1 |

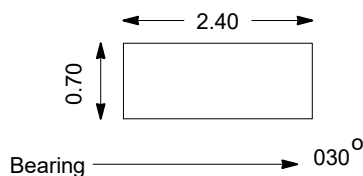
Method Used: Machine dug	Plant Used: Tracked excavator	Logged By: RALbertos	Checked By: AML	AGS
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Contract: Bluemay Park Phase 3, Bidmead Park, Melksham		Client: E. W. Beard Limited		Trial Pit: TP04
Contract Ref: 738355	Start: 31.07.25 End: 31.07.25	Ground Level (m AOD): 60.25	National Grid Co-ordinate: E:395526.0 N:162026.5	Sheet: 1 of 4

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.40		V	$c_u=150/220/216$			MADE GROUND: Grass and <50mm of topsoil over stiff friable slightly sandy to sandy gravelly CLAY with a low cobble content and rare pieces of plastic, rubber, wire and polystyrene, and rare rootlets. Gravel is angular fine to coarse concrete and limestone, cobbles up to 200mm x 100mm x 70mm. MADE GROUND: Stiff friable brown slightly sandy slightly gravelly to gravelly CLAY with a low to medium cobble content. Gravel is angular fine to coarse limestone with occasional brick and concrete, cobbles are angular limestone up to 200mm across. 0.20-0.37m : concrete 'shelf' above foundation on west Side of pit projecting 0.75- 0.90m from face of building. Flat upper surface, irregular outer edge. 0.37-1.40m : concrete foundation dips in towards building, unevenly, below the flat surface. Base of foundation not reached by 1.40m depth, at which point foundation extended about 0.50m from wall of building.	60.05	0.20	
								(0.30)	
							59.75	0.50	
								(0.45)	
1.00-1.10	1	B					59.30	0.95	
								(0.40)	
1.35-1.40	2	B				MADE GROUND: Very stiff, becoming firm with depth orangish brown mottled grey and orange CLAY with rare decayed rootlets, a single 30mm shell fragment, fine to coarse angular gravel and cobbles of limestone up to 75mm wide.	58.90	1.35	
						MADE GROUND: Dark brown to black sandy silty angular GRAVEL of limestone (mostly coarse), gravel up to 80mm long (probable railway ballast). Gravel fraction is grey in colour, silt and sand is dark brown to black. Weak (chemical?) odour. Assessed as dense based on difficulty of excavation by machine and using hand tools.	58.70	1.55	
						MADE GROUND: Orange and grey sandy silty fine to coarse angular to subangular GRAVEL of very weak sandstone. Trial pit extended by machine to 1.55m depth, then backfilled to 1.00m to enable personnel entry in order to dig down face of foundation by hand to 1.45m depth. Base of pit appeared to penetrate natural clay soils at 1.55m depth but difficult to visually inspect due to groundwater in pit.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Trial pit excavated down side of concrete 'shelf' that projects from building and which covers foundation. Foundation dips in toward building with depth. Unable to 'scrape' down side of foundation with excavator bucket due to overhanging concrete and adjacent surface water drain that precluded widening of pit or digging perpendicular to foundation.
3. Rapid groundwater seepage at 1.35m. Trial pit remained stable.
4. Trial pit backfilled from 1.55m to 1.00m depth to enable safe personnel entry. Pit extended by hand down face of foundation to 1.40m, unable to progress deeper due to water inflow, hard

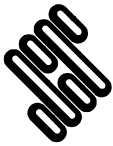
All dimensions in metres

Scale: **1:19**

Method Used: Machine dug	Plant Used: Tracked excavator	Logged By: ALumber	Checked By: AML	
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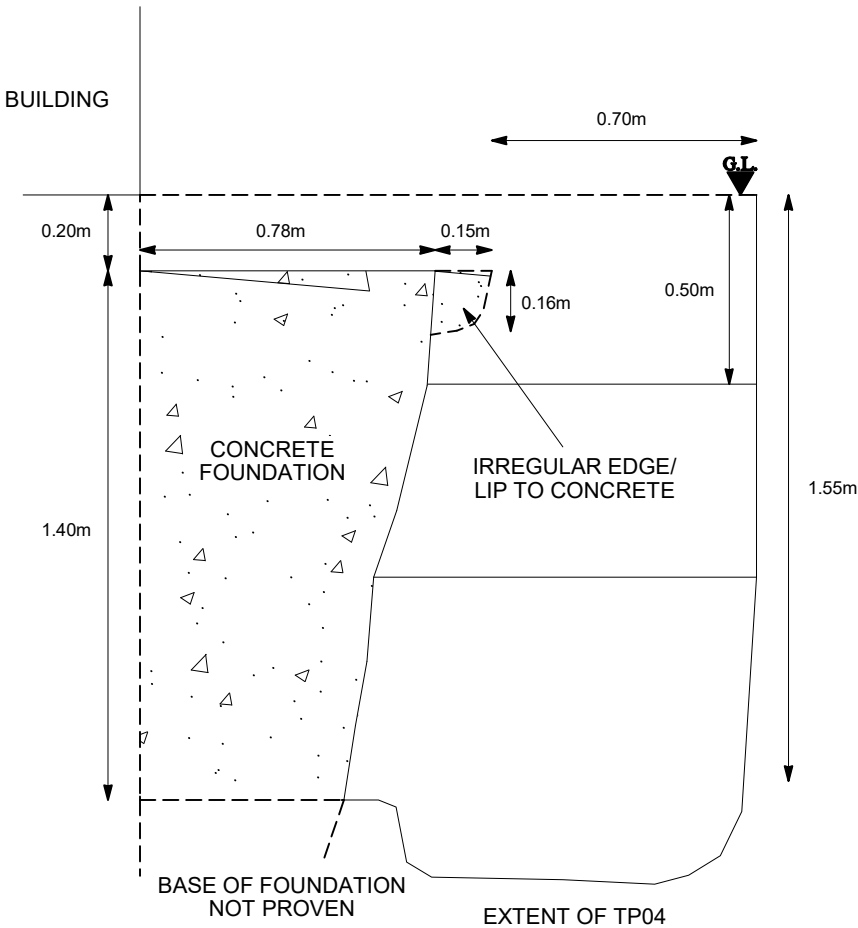
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GINT_LIBRARY_V10_01.GLB LibVersion: v8.07.001 PriVersion: v8.07 Log TRIAL PIT LOG - A4P 738355-BLUEMAY-PARK-PHASE-3-BIDMEAD-PARK-MELKSHAM.GPJ - v10_01.
Structural Soils Ltd, Head Office - Bristol: The Old School, Sillhouse Lane, Bedminster, Bristol, BS3 4EB. Tel: 0117-947-1000, Fax: 0117-947-1004, Web: www.soils.co.uk Email: ask@soils.co.uk | 26/08/25 - 22:48 | AML1 |



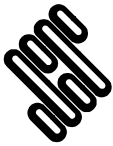
Contract: Bluemay Park Phase 3, Bidmead Park, Melksham		Client: E. W. Beard Limited		Trial Pit: TP04
Contract Ref: 738355	Start: 31.07.25 End: 31.07.25	Ground Level (m AOD): 60.25	National Grid Co-ordinate: E:395526.0 N:162026.5	Sheet: 3 of 4

SECTION
SCALE 1:20



GINT LIBRARY_V10_01.GLB LibVersion: v8_07_001 PjVersion: v8_07_001 Log TRIAL PIT LOG - A4P | 738355-BLUEMAY-PARK-PHASE-3-BIDMEAD-PARK-MELKSHAM.GPJ - v10_01.
Structural Soils Ltd, Head Office - Bristol: The Old School, Stillhouse Lane, Bedminster, Bristol, BS3 4EB. Tel: 0117-947-1000, Fax: 0117-947-1004, Web: www.soils.co.uk, Email: ask@soils.co.uk | 26/08/25 - 22:48 | AML1 |

Method Used: Machine dug	Plant Used: Tracked excavator	Logged By: ALumber	Checked By: AML	AGS
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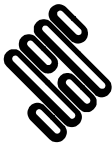


Contract: Bluemay Park Phase 3, Bidmead Park, Melksham		Client: E. W. Beard Limited		Trial Pit: TP04
Contract Ref: 738355	Start: 31.07.25 End: 31.07.25	Ground Level (m AOD): 60.25	National Grid Co-ordinate: E:395526.0 N:162026.5	Sheet: 4 of 4

Concrete foundation tapering in towards building.



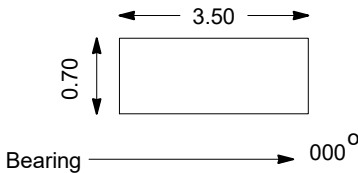
Excavated material.



Contract: Bluemay Park Phase 3, Bidmead Park, Melksham			Client: E. W. Beard Limited		Trial Pit: TP05A
Contract Ref: 738355	Start: 31.07.25	End: 31.07.25	Ground Level (m AOD): 60.26	National Grid Co-ordinate: E:395533.0 N:162024.8	Sheet: 1 of 2

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						MADE GROUND: Grass over stiff friable dark brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is angular fine to coarse concrete and limestone.	59.76	0.50	
						MADE GROUND: Orangish brown gravelly silty fine to coarse SAND. Gravel is angular to subangular of sandstone. 0.50-0.75m : at southern end of pit concrete slab was overlain by a concrete boulder around 800 mm wide and up to 250mm thick.	59.51	0.75	
						MADE GROUND: Grey CONCRETE slab.	59.36	0.90	
						MADE GROUND: Dark grey sandy silty angular, mostly coarse GRAVEL of limestone. Assessed as dense based on resistance to mechanical excavation.		(0.60)	
							58.76	1.50	
						Trial pit terminated extended northwards until edge of concrete slab was reached, then down the side of the slab where it merged into the edge of trial pit TP05B.			

Plan (Not to Scale)



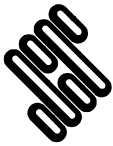
General Remarks

- 1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
- 2. Concrete slab exposed at 0.75m depth. Trial pit extended northwards until edge of concrete slab was reached, then down the side of the slab where it merged into the edge of trial pit TP05B to form a single trench.
- 3. Trial pit remained stable during excavation. Water strike at 1.50m depth.
- 4. Water strike at 1.50m depth.
- 5. On completion, trial pit backfilled with arisings.

All dimensions in metres

Scale: 1:19

Method Used: Machine dug	Plant Used: Tracked excavator	Logged By: RALbertos	Checked By: AML	
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Contract: Bluemay Park Phase 3, Bidmead Park, Melksham		Client: E. W. Beard Limited		Trial Pit: TP05A
Contract Ref: 738355	Start: 31.07.25 End: 31.07.25	Ground Level (m AOD): 60.26	National Grid Co-ordinate: E:395533.0 N:162024.8	Sheet: 2 of 2

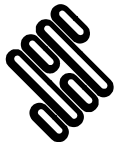
Edge of concrete exposed at northern end of pit (which bounds TP05B).



View south showing edge of concrete slab.

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Method Used: Machine dug	Plant Used: Tracked excavator	Logged By: RALbertos	Checked By: AML	AGS
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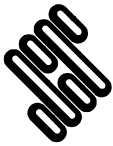


Contract: Bluemay Park Phase 3, Bidmead Park, Melksham		Client: E. W. Beard Limited		Trial Pit: TP05B
Contract Ref: 738355	Start: 31.07.25 End: 31.07.25	Ground Level (m AOD): 60.24	National Grid Co-ordinate: E:395535.5 N:162028.1	Sheet: 1 of 2

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
2.00-2.20	1	B				MADE GROUND: Grass over stiff friable dark brown slightly sandy CLAY with frequent rootlets. Sand is fine to coarse (TOPSOIL)>	60.04	0.20	
						MADE GROUND: Stiff friable dark brown slightly sandy slightly gravelly CLAY. Gravel is angular fine to coarse concrete and limestone.	59.74	(0.30) 0.50	
						MADE GROUND: Orangish brown gravelly silty fine to coarse SAND. Gravel is angular to subangular of sandstone, concrete, brick, plastic and clinker.	59.54	0.70	
						MADE GROUND: Dark grey gravelly slightly silty fine to coarse SAND. Gravel is angular to subrounded fine to coarse limestone, ash and clinker.	58.94	(0.60) 1.30	
						MADE GROUND: Stiff friable greenish grey and orangish brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse limestone and clinker.	58.04	(0.90) 2.20	
2.50-3.00	2	B				Stiff greenish grey and orangish brown slightly sandy CLAY. Sand is fine to coarse. (KIMMERIDGE CLAY FORMATION) 2.21-3.00m : recovered occasional subangular to subrounded fine to coarse gravel of limestone and clinker in excavated material, probably mixed into the soil when excavating below the water table, as overlying Made Ground was slightly unstable.	57.14	(0.90) 3.10	
Trial pit terminated at 3.10m depth. Pit initially backfilled up to around 1.50m depth prior to TP05A, which was adjoined to the south, being extended down face of concrete slab at that location.									

Plan (Not to Scale)		General Remarks		
		1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation. 2. Inspection pit remained stable during excavation. 3. Water strike at 1.50m depth. Oily sheen on water. 4. On completion, trial pit backfilled with arisings.		
All dimensions in metres		Scale: 1:19		
Method Used: Machine dug	Plant Used: Tracked excavator	Logged By: RAIbertos	Checked By: AML	

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Contract: Bluemay Park Phase 3, Bidmead Park, Melksham		Client: E. W. Beard Limited		Trial Pit: TP05B
Contract Ref: 738355	Start: 31.07.25 End: 31.07.25	Ground Level (m AOD): 60.24	National Grid Co-ordinate: E:395535.5 N:162028.1	Sheet: 2 of 2

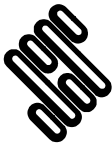
View facing north.



View looking west (before pit extended south to join TP05A).

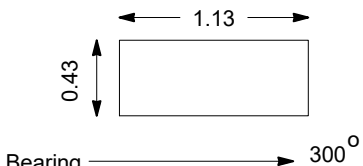
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Method Used: Machine dug	Plant Used: Tracked excavator	Logged By: RAIbertos	Checked By: AML	
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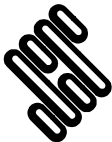


Contract: Bluemay Park Phase 3, Bidmead Park, Melksham		Client: E. W. Beard Limited		Trial Pit: HDTP01
Contract Ref: 738355	Start: 24.07.25 End: 24.07.25	Ground Level (m AOD): 60.25	National Grid Co-ordinate: E:395525.7 N:162026.5	Sheet: 1 of 2

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						MADE GROUND: Grass and <50mm of topsoil over stiff friable slightly sandy to sandy gravelly CLAY with a low cobble content and rare pieces of plastic, rubber, wire and polystyrene, and rare rootlets. Gravel is angular fine to coarse concrete and limestone, cobbles up to 200mm x 100mm x 70m. 0.17-0.37m : flat concrete surface found at 0.17m depth, projecting to between 0.78-0.93m from face of building with uneven outer face and variable thickness at edge of between 160-200mm. Immediately alongside top edge of foundation is a <50mm thickness of compacted pink to orange sandy gravel ('ballast'). MADE GROUND: Stiff brownish grey mottled orange CLAY. Trial pit terminated at 0.45m depth. Moved to Position HDTP04 to confirm whether same feature occurs there.	59.88	0.37	
							59.80	0.45	

Plan (Not to Scale) 		General Remarks 1. Trial pit excavated against wall of existing building to expose foundation detail. Flat concrete surface found at 0.17m depth projecting by between 0.78-0.93m from building, 160-200mm thick, as noted above. 2. Distance between edge of concrete and assessed centerline of surface water draining running parallel to building is 1.10m. 3. Trial pit remained dry and stable.			
		All dimensions in metres		Scale: 1:13	
		Method Used: Hand dug	Plant Used: Hand tools	Logged By: ALumber	Checked By: AML

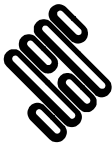
GINT LIBRARY V10_01.GLB LibVersion: v8_07_001 PitVersion: v8_07_001 Log TRIAL PIT LOG - A4P | 738355-BLUEMAY-PARK-PHASE-3-BIDMEAD-PARK-MELKSHAM GPJ - v10_01. Structural Soils Ltd, Head Office - Bristol: The Old School, Stillhouse Lane, Bedminster, Bristol, BS3 4EB. Tel: 0117-947-1000, Fax: 0117-947-1004, Web: www.soils.co.uk, Email: ask@soils.co.uk | 26/08/25 - 22:19 | AML1 |



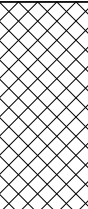
Contract: Bluemay Park Phase 3, Bidmead Park, Melksham		Client: E. W. Beard Limited		Trial Pit: HDTP01
Contract Ref: 738355	Start: 24.07.25 End: 24.07.25	Ground Level (m AOD): 60.25	National Grid Co-ordinate: E:395525.7 N:162026.5	Sheet: 2 of 2

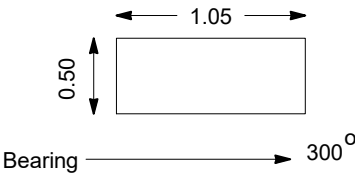


Method Used: Hand dug	Plant Used: Hand tools	Logged By: ALumber	Checked By: AML	AGS
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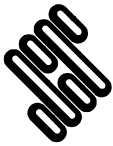


Contract: Bluemay Park Phase 3, Bidmead Park, Melksham		Client: E. W. Beard Limited		Trial Pit: HDTP02
Contract Ref: 738355	Start: 24.07.25 End: 24.07.25	Ground Level (m AOD): 60.26	National Grid Co-ordinate: E:395528.3 N:162031.2	Sheet: 1 of 2

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						MADE GROUND: Grass and <50mm of topsoil over stiff friable slightly sandy to sandy gravelly CLAY with a low cobble and boulder content and rare pieces of plastic, rubber and wire, and rare rootlets. Gravel is angular fine to coarse concrete and limestone, cobbles and boulders up to 400mm x 100mm x 300mm. 0.20-0.35m : flat concrete surface found at 0.20m depth, projecting to between 0.62-0.75m from face of building with uneven outer face and variable thickness at edge of between 120-150mm. Probing beneath concrete with suggests that underside of concrete dips down towards building (i.e. extends to a greater depth closer to building). Immediately alongside top edge of foundation is a <50mm thickness of compacted pink to orange sandy gravel ('ballast'). MADE GROUND: Stiff brownish grey mottled orange CLAY. Trial pit terminated at 0.42m depth. Moved to Position HDTP01 to confirm whether same feature occurs there.	59.91 59.84	0.35 0.42	 

Plan (Not to Scale) 	General Remarks 1. Trial pit excavated against wall of existing building to expose foundation detail. Flat concrete surface found at 0.20m depth projecting by between 0.62-0.75m from building, 120-150mm thick as noted above. Probing beneath concrete with long handled screwdriver suggests concrete extends deeper but curves backwards towards the building. 2. Distance between edge of concrete and assessed centreline of surface water draining running parallel to building is 1.05m. 3. Trial pit remained dry and stable.		
All dimensions in metres		Scale: 1:13	
Method Used: Hand dug	Plant Used: Hand tools	Logged By: ALumber	Checked By: AML 

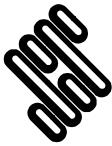
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Contract: Bluemay Park Phase 3, Bidmead Park, Melksham		Client: E. W. Beard Limited		Trial Pit: HDTP02
Contract Ref: 738355	Start: 24.07.25 End: 24.07.25	Ground Level (m AOD): 60.26	National Grid Co-ordinate: E:395528.3 N:162031.2	Sheet: 2 of 2



Method Used: Hand dug	Plant Used: Hand tools	Logged By: ALumber	Checked By: AML	AGS
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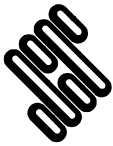


Contract: Bluemay Park Phase 3, Bidmead Park, Melksham			Client: E. W. Beard Limited		Trial Pit: HDTP03
Contract Ref: 738355	Start: 16.07.25 End: 16.07.25	Ground Level (m AOD): 62.34	National Grid Co-ordinate: E:395573.3 N:162044.8		Sheet: 1 of 2

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.40-0.50	1	D				MADE GROUND: Grey slightly sandy fine to medium GRAVEL of limestone. Sand is fine to coarse.		(0.40)	
						Firm greenish grey silty CLAY. (KIMMERIDGE CLAY FORMATION)	61.94	0.40	
						Hand dug pit terminated at 0.65m depth.	61.69	0.65	

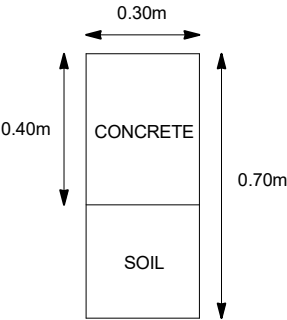
Plan (Not to Scale)		General Remarks			
		1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation. 2. Trial pit excavated against side of existing building to expose and confirm foundation detail - see attached sketch. 3. Hand dug trial pit remained dry and stable during excavation. 4. On completion, borehole backfilled with arisings.			
		All dimensions in metres		Scale:	1:13
Method Used:	Hand tools + Hand dug	Plant Used:	Hand tools	Logged By:	RAIbertos
		Checked By:	AML		

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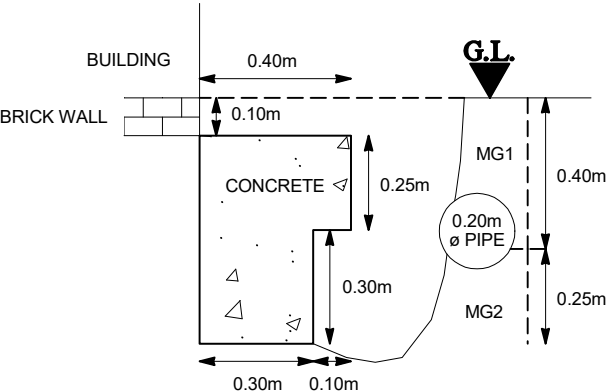


Contract: Bluemay Park Phase 3, Bidmead Park, Melksham		Client: E. W. Beard Limited		Trial Pit: HDTP03
Contract Ref: 738355	Start: 16.07.25 End: 16.07.25	Ground Level (m AOD): 62.34	National Grid Co-ordinate: E:395573.3 N:162044.8	Sheet: 2 of 2

PLAN
SCALE 1:20

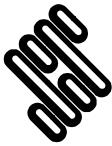


SECTION
SCALE 1:20



GINT LIBRARY_V10_01.GLB LibVersion: v8_07 | Log TRIAL PIT LOG - A4P | 738355-BLUEMAY-PARK-PHASE-3-BIDMEAD-PARK-MELKSHAM.GPJ - v10_01.
Structural Soils Ltd, Head Office - Bristol: The Old School, Stillhouse Lane, Bedminster, Bristol, BS3 4EB. Tel: 0117-947-1000, Fax: 0117-947-1004, Web: www.soils.co.uk, Email: ask@soils.co.uk | 26/08/25 - 22:20 | AML1 |

Method Used: Hand tools + Hand dug	Plant Used: Hand tools	Logged By: RAIbertos	Checked By: AML	
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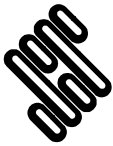


Contract: Bluemay Park Phase 3, Bidmead Park, Melksham		Client: E. W. Beard Limited		Trial Pit: HDTP04
Contract Ref: 738355	Start: 24.07.25 End: 24.07.25	Ground Level (m AOD): 60.25	National Grid Co-ordinate: E:395527.0 N:162029.0	Sheet: 1 of 2

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						MADE GROUND: Grass and <50mm of topsoil over stiff friable slightly sandy to sandy gravelly CLAY with a low cobble content and rare pieces of plastic, rubber and wire, and rare rootlets. Gravel is angular fine to coarse concrete and limestone, cobbles are concrete and brick to 300mm x 150mm x 120mm. 0.20-0.22m : flat concrete surface round at 0.20m depth. Outer edge not conclusively proven due to hard digging conditions but appears to be at circa 0.68m from edge of building. Immediately alongside top edge of foundation is compacted pink to orange sandy gravel ('ballast'). Trial pit terminated at 0.22m depth after proving that flat concrete surface is also present here (midway between HDTP01 and 02 which targetted building column locations shown on historical drawing).	60.03	0.22	

Plan (Not to Scale)		General Remarks		
		1. Trial pit excavated against wall of existing building to expose foundation detail. Flat concrete surface found at 0.20m depth. Edge of concrete not conclusively proven but appears to be project 0.68 from building as noted above. 2. Distance between edge of concrete and assessed centreline of surface water draining running parallel to building is 1.30m 3. Trial pit remained dry and stable.		
		All dimensions in metres	Scale:	1:13
Method Used: Hand dug	Plant Used: Hand tools	Logged By: ALumber	Checked By: AML	

GINT LIBRARY_V10_01.GLB LibVersion: v8_07 | Log TRIAL PIT LOG - A4P | 738355-BLUEMAY-PARK-PHASE-3-BIDMEAD-PARK-MELKSHAM.GPJ - v10_01.
Structural Soils Ltd, Head Office - Bristol: The Old School, Stillhouse Lane, Bedminster, Bristol, BS3 4EB. Tel: 0117-947-1000, Fax: 0117-947-1004, Web: www.soils.co.uk, Email: ask@soils.co.uk | 26/08/25 - 22:20 | AML.1 |

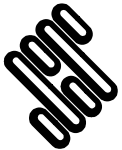


Contract: Bluemay Park Phase 3, Bidmead Park, Melksham		Client: E. W. Beard Limited		Trial Pit: HDTP04
Contract Ref: 738355	Start: 24.07.25 End: 24.07.25	Ground Level (m AOD): 60.25	National Grid Co-ordinate: E:395527.0 N:162029.0	Sheet: 2 of 2



Method Used: Hand dug	Plant Used: Hand tools	Logged By: ALumber	Checked By: AML	
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SUMMARY OF INSTALLATION AND PIEZOMETER CHARACTERISTICS

[illegible]

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The Old School
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Bristol BS3 4EB

Compiled By

Date _____

Contract Ref:

738355

Contract:

Bluemay Park Phase 3, Bidmead Park, Melksham

Page:

1 of 1



APPENDIX C - IN-SITU TESTING

- (i) Standard Penetration Test (SPT) Summary Sheet
- (ii) SPT N value versus Elevation Plot
- (iii) SPT N_{60} value versus Elevation Plot
- (iv) TRL-DCP Test Results – Plots of test blows versus depth
- (v) TRL-DCP Test Results – Plots of correlated modulus of subgrade reaction values (k) versus depth
- (vi) TRL-DCP Test Results – Summary of test readings
- (vii) Plate Load Test Results
- (viii) Soakaway Test Result
- (ix) Plot of Peak Undrained Shear Strength vs Elevation

STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N ₆₀	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
WS01	1.00	300	0.00	DRY	3,4	150	4,3,5,4		N=16	DT15187-2025	14/04/2025	80	21	
	2.00	98	0.00	DRY	4,5	150	5,5,6,6		N=22	DT15187-2025	14/04/2025	80	29	
	4.00	75	0.00	Dry	4,5	150	5,7,7,6		N=25	DT15187-2025	14/04/2025	80	33	
	5.00	75	0.00	DRY	3,4	150	4,4,5,7		N=20	DT15187-2025	14/04/2025	80	27	
WS02	2.00	98	0.00	DRY	2,4	150	4,3,4,3		N=14	DT15187-2025	14/04/2025	80	19	
	3.00	85	0.00	DRY	2,2	150	3,3,3,4		N=13	DT15187-2025	14/04/2025	80	17	
	4.00	75	0.00	DRY	3,3	150	3,4,4,3		N=14	DT15187-2025	14/04/2025	80	19	
WS03	1.20	300	0.00	DRY	3,4	150	3,4,5,4		N=16	DT15187-2025	14/04/2025	80	21	
	3.00	85	0.00	DRY	2,3	150	2,3,4,4		N=13	DT15187-2025	14/04/2025	80	17	
	4.00	75	0.00	DRY	3,4	150	4,4,4,4		N=16	DT15187-2025	14/04/2025	80	21	
WS04	1.20	300	0.00	DRY	2,3	150	3,3,3,2		N=11	DT15187-2025	14/04/2025	80	15	
	2.00	85	0.00	DRY	2,2	150	3,3,3,3		N=12	DT15187-2025	14/04/2025	80	16	
	4.00	75	0.00	DRY	3,4	150	4,5,5,4		N=18	DT15187-2025	14/04/2025	80	24	
	5.00	75	0.00	DRY	5,4	150	4,4,4,4		N=16	DT15187-2025	14/04/2025	80	21	

Notes:

1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
5. Entries in the water depth column reflects the measured water depth at time of test.
6. Results marked with * indicate an extrapolated reading from tests not achieving the full 450mm penetration

$$N_{60} = (\text{Measured hammer energy ratio} / 60) \times N \text{ value}$$

 STRUCTURAL SOILS The Old School Stillhouse Lane Bedminster Bristol BS3 4EB	Compiled By		Date	Contract Ref: 738355
	[REDACTED]		21.07.25	
	Contract: Bluemay Park Phase 3, Bidmead Park, Melksham			Page: 1 of 2 

STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N ₆₀	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
WS05	1.20	300	0.00	Dry	6,5	150	3,3,4,3		N=13	DT15187-2025	14/04/2025	80	17	SPT(c)
	3.00	85	0.00	1.30	2,1	150	1,2,1,0		N=4	DT15187-2025	14/04/2025	80	5	SPT(c)
	4.00	75	0.00	1.20	3,3	150	3,2,2,2		N=9	DT15187-2025	14/04/2025	80	12	
WS06	2.00	90	0.00	1.40	3,3	150	2,3,3,2		N=10	DT15187-2025	14/04/2025	80	13	
	3.00	85	0.00	1.40	3,3	150	3,3,4,4		N=14	DT15187-2025	14/04/2025	80	19	
	4.00	75	0.00	1.20	2,3	150	3,2,3,3		N=11	DT15187-2025	14/04/2025	80	15	

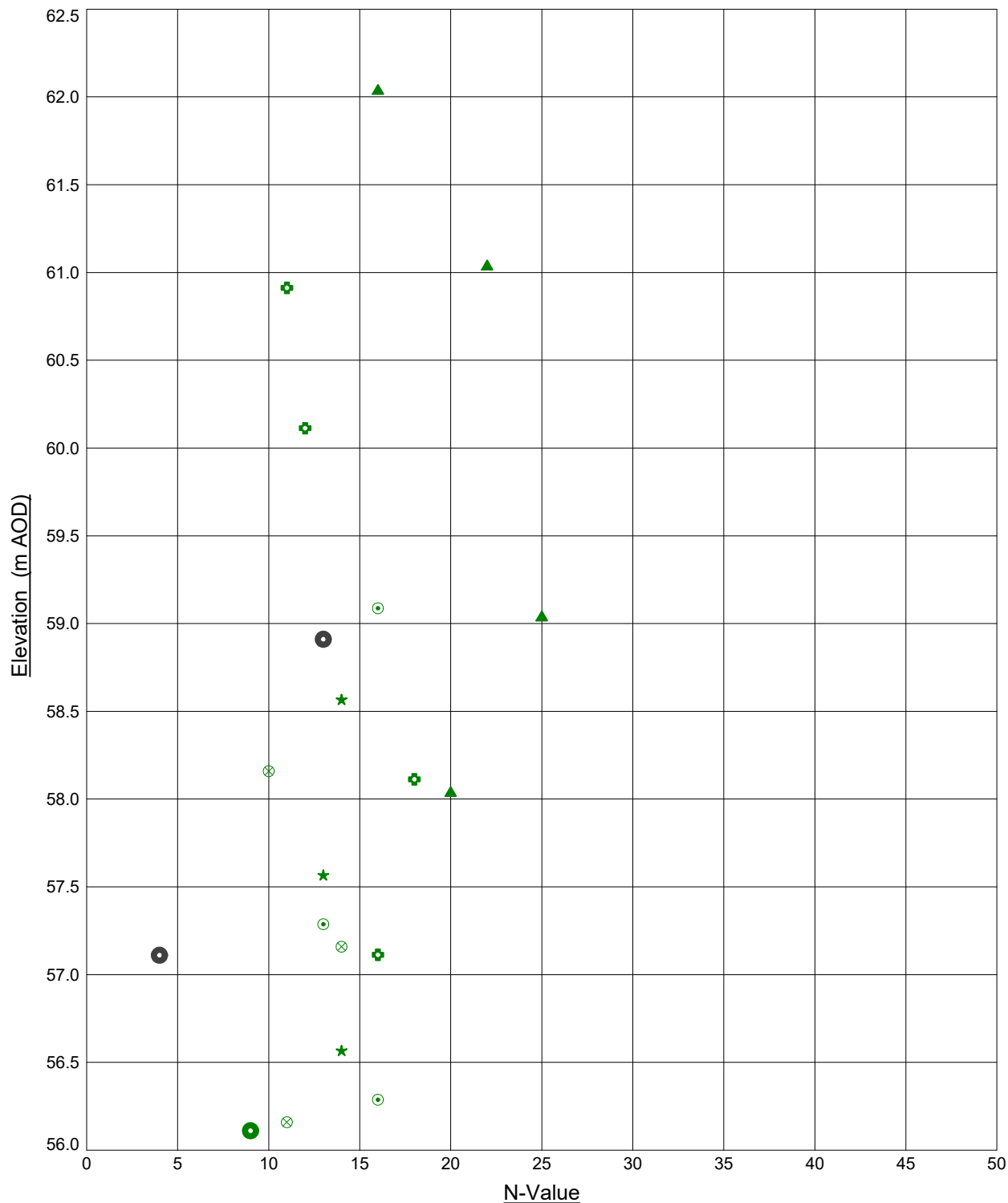
Notes:

1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
5. Entries in the water depth column reflects the measured water depth at time of test.
6. Results marked with * indicate an extrapolated reading from tests not achieving the full 450mm penetration

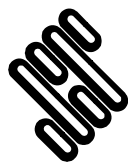
$$N_{60} = (\text{Measured hammer energy ratio} / 60) \times N \text{ value}$$

 STRUCTURAL SOILS The Old School Stillhouse Lane Bedminster Bristol BS3 4EB	Compiled By			Date	Contract Ref: 738355
			ALUMBER	21.07.25	
	Contract: Bluemay Park Phase 3, Bidmead Park, Melksham				Page: 2 of 2 

STANDARD PENETRATION TEST (SPT N-Value) vs ELEVATION



Key: ▲ = WS01, ★ = WS02, ⊙ = WS03, ⊕ = WS04, ● = WS05, ⊗ = WS06
Colour legend: Natural Clay soils, Made Ground

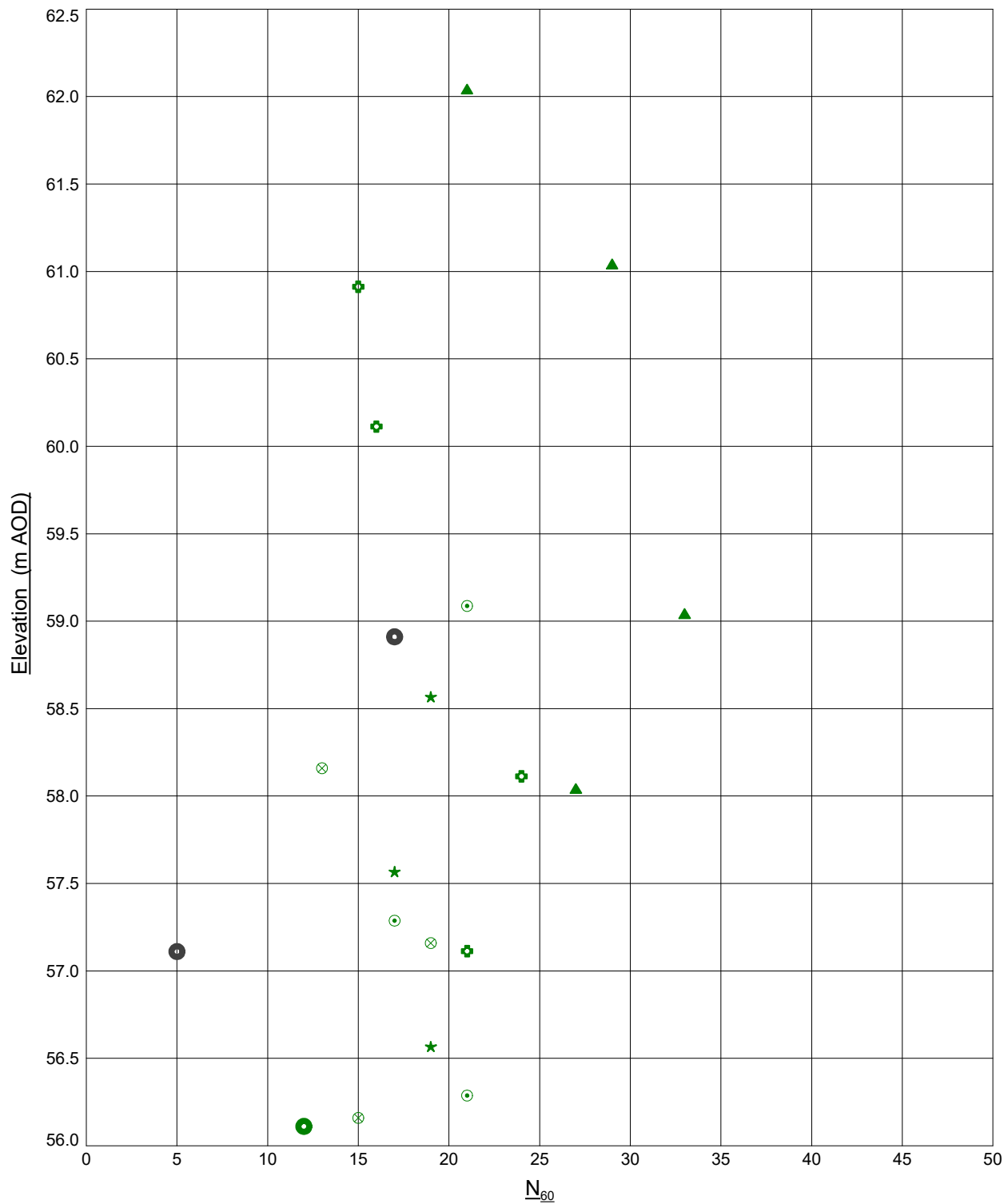


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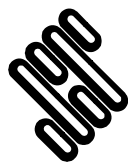
Contract	Date	Compiled By
	21.07.25	AML
Client		Contract Ref:
E. W. Beard Limited		738355



STANDARD PENETRATION TEST (SPT N₆₀) vs ELEVATION



Key: ▲ = WS01, ★ = WS02, ⊙ = WS03, ⊕ = WS04, ● = WS05, ⊗ = WS06
Colour legend: Natural Clay soils, Made Ground



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	21.07.25	AML
Client		Contract Ref:
E. W. Beard Limited		738355



DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

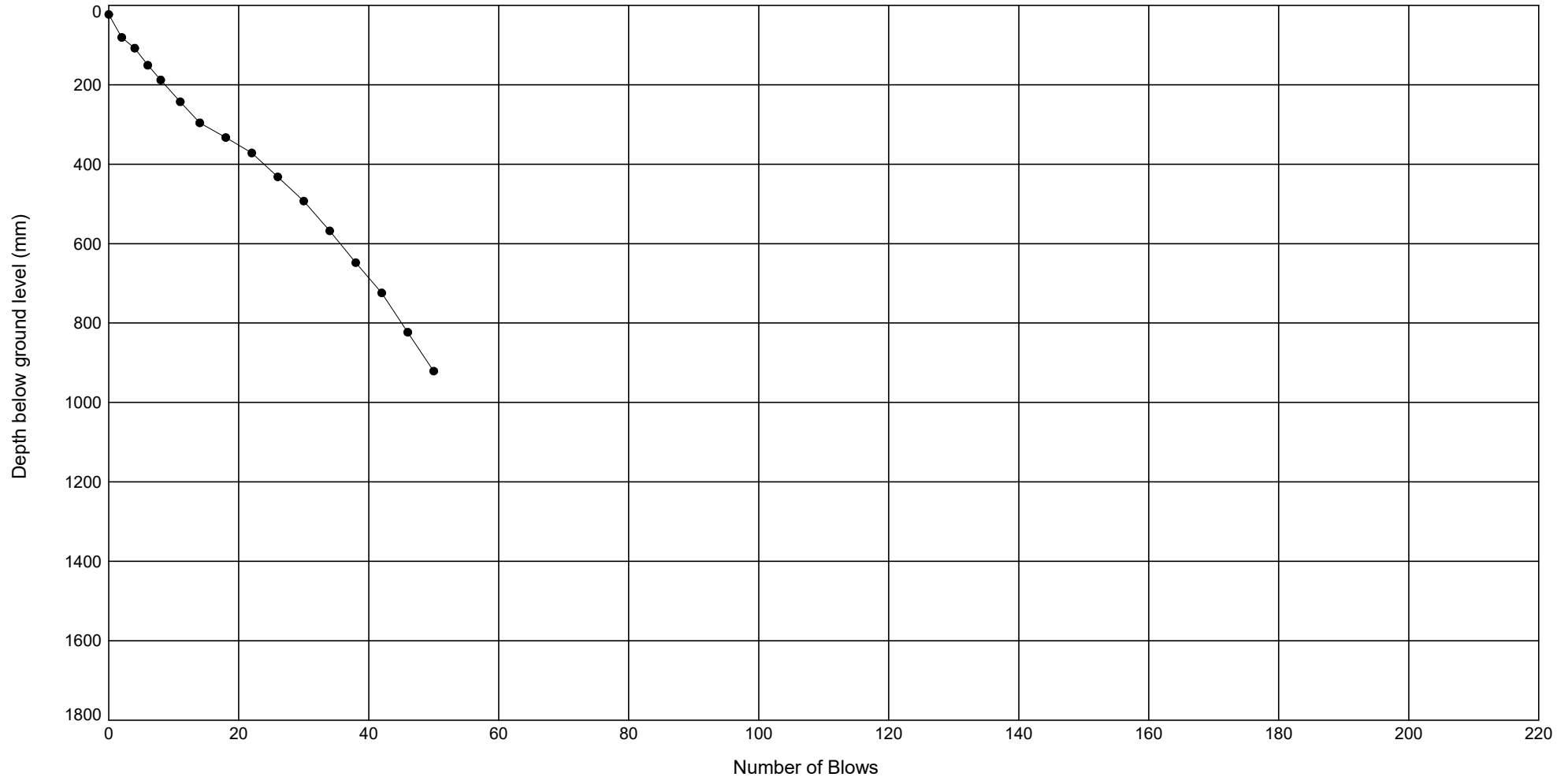
Position Ref : **DCP02**

Test Date : **24.07.25**

Test Number : **1**

Ground Level (m AOD): **60.60**

National Grid Co-ordinates: **E:395544.6 N:162041.7**



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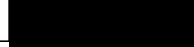
Test Supervisor

James McQueen

Date

24/07/25

Checked By



Date

30/07/25

Contract Ref:

738355

Contract

Bluemay Park Phase 3, Bidmead Park, Melksham

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

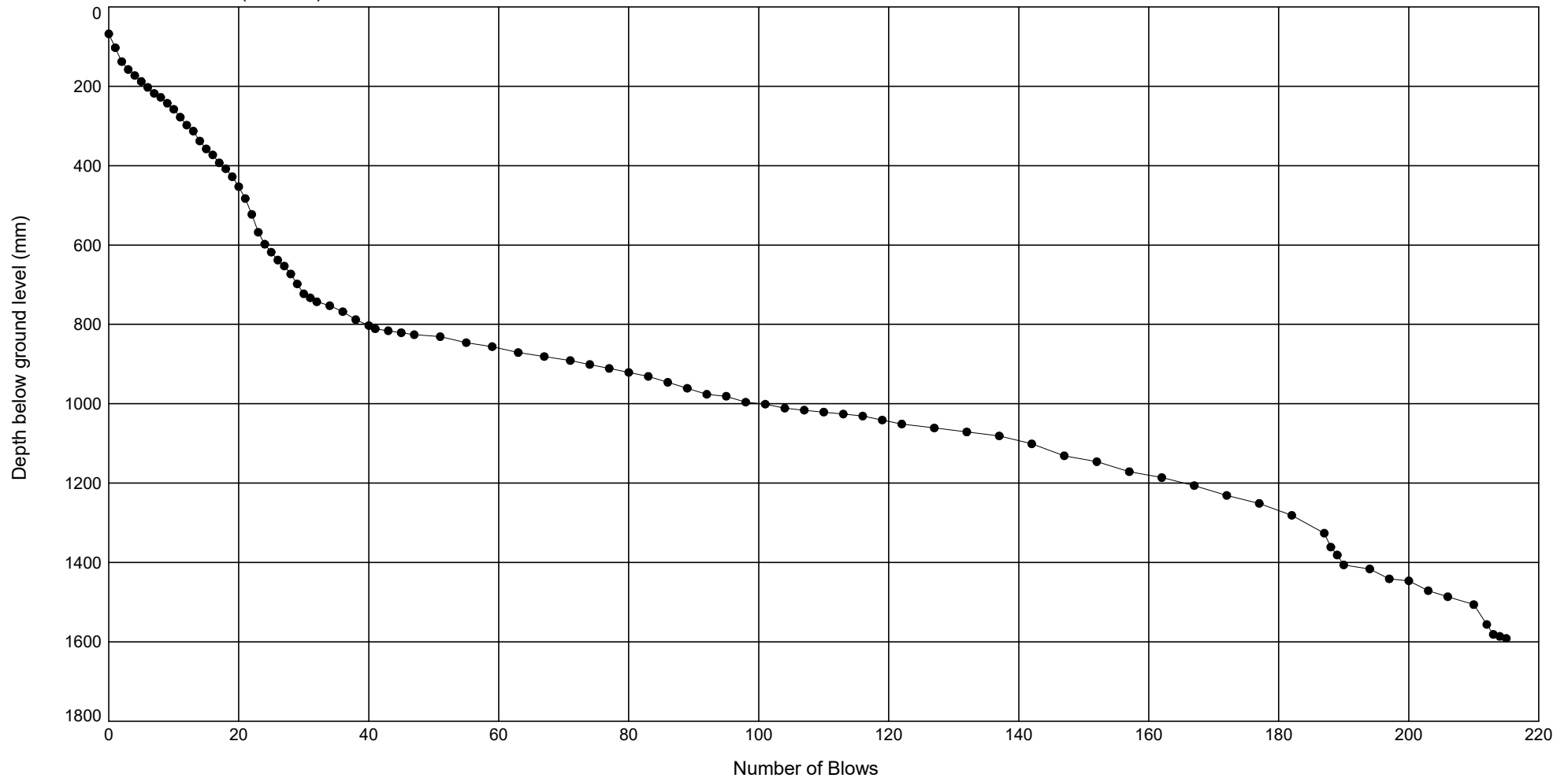
Position Ref : **DCP05**

Test Date : **31.07.25**

Test Number : **1**

Ground Level (m AOD): **60.10**

National Grid Co-ordinates: **E:395540.5 N:162024.5**



STRUCTURAL SOILS
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Test Supervisor

Rocio Albertos Vazquez

Date

31/07/25

Checked By

Adh Lue

Date

04/08/25

Contract Ref:

738355

Contract

Bluemay Park Phase 3, Bidmead Park, Melksham

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

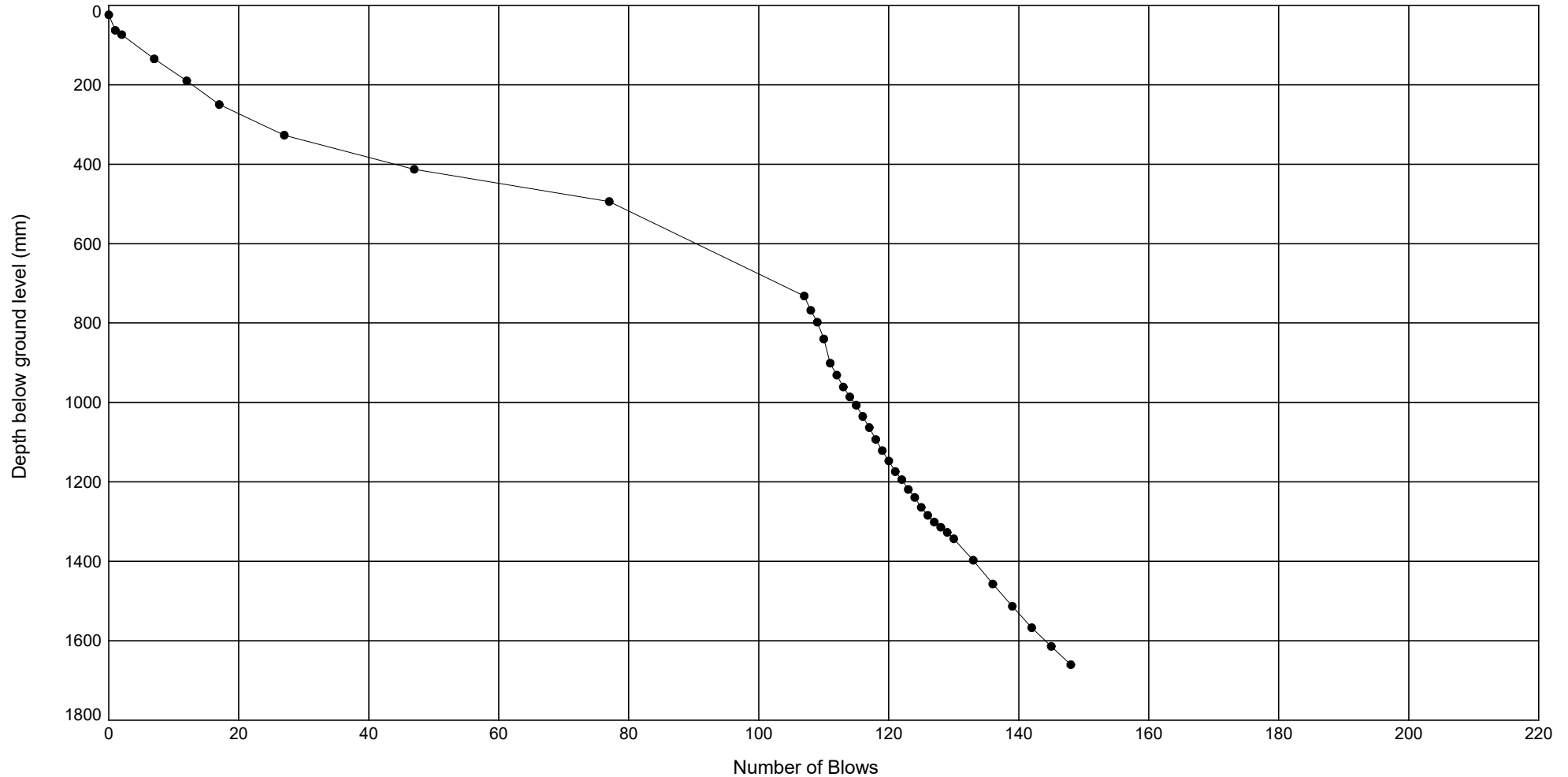
Position Ref : **DCP06**

Test Date : **31.07.25**

Test Number : **1**

Ground Level (m AOD): **60.15**

National Grid Co-ordinates: **E:395535.5 N:162018.5**



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Test Supervisor

Adam Lumber

Date

31/07/25

Checked By



Date

04/08/25

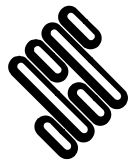
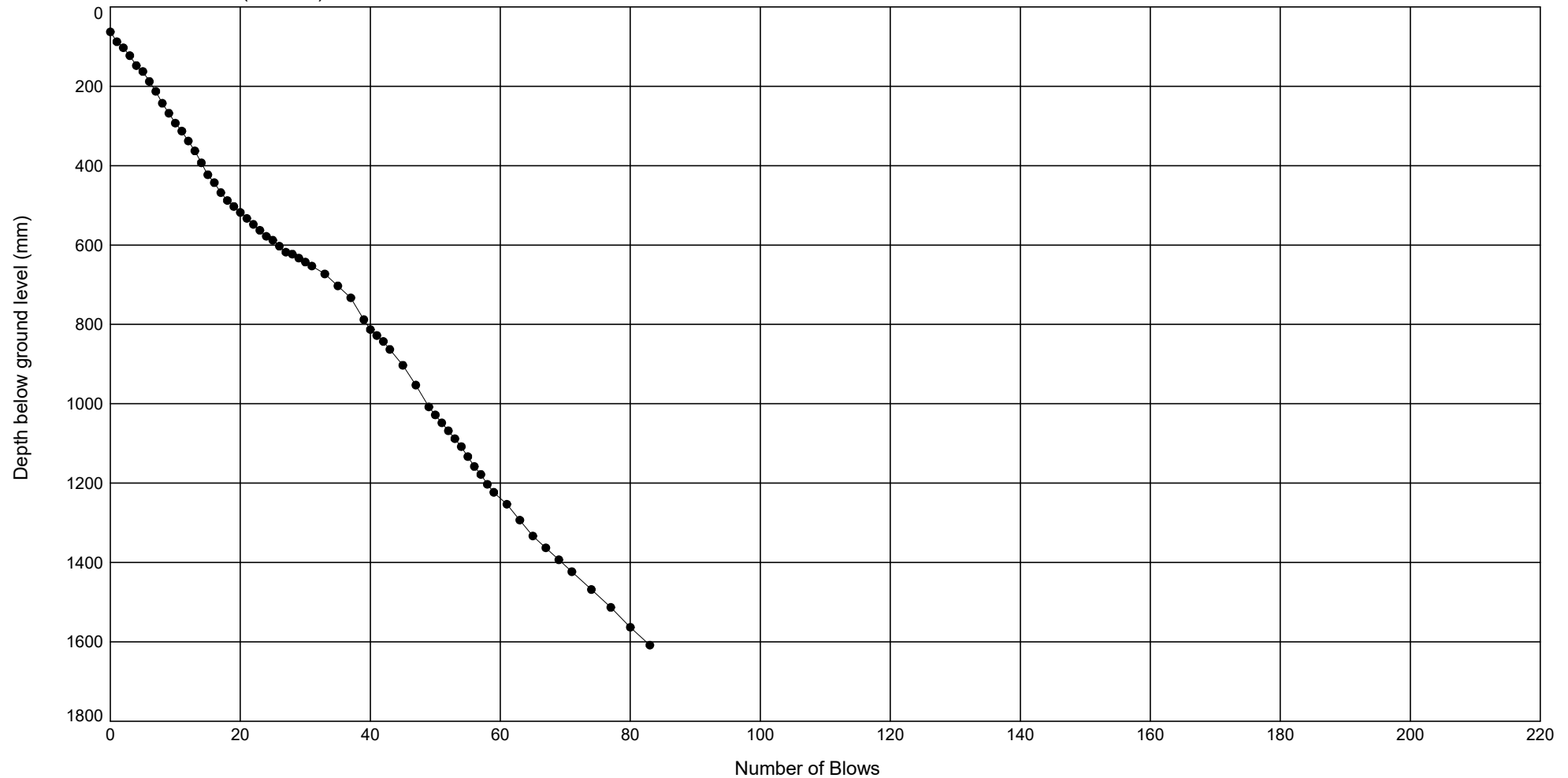
Contract Ref:

738355

Contract

Bluemay Park Phase 3, Bidmead Park, Melksham

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **DCP07**Test Date : **31.07.25**Test Number : **1**Ground Level (m AOD): **60.50**National Grid Co-ordinates: **E:395538.9 N:162033.6**

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Test Supervisor

Adam Lumber

Date

31/07/25

Checked By

Date

04/08/25

Contract Ref:

738355

Contract

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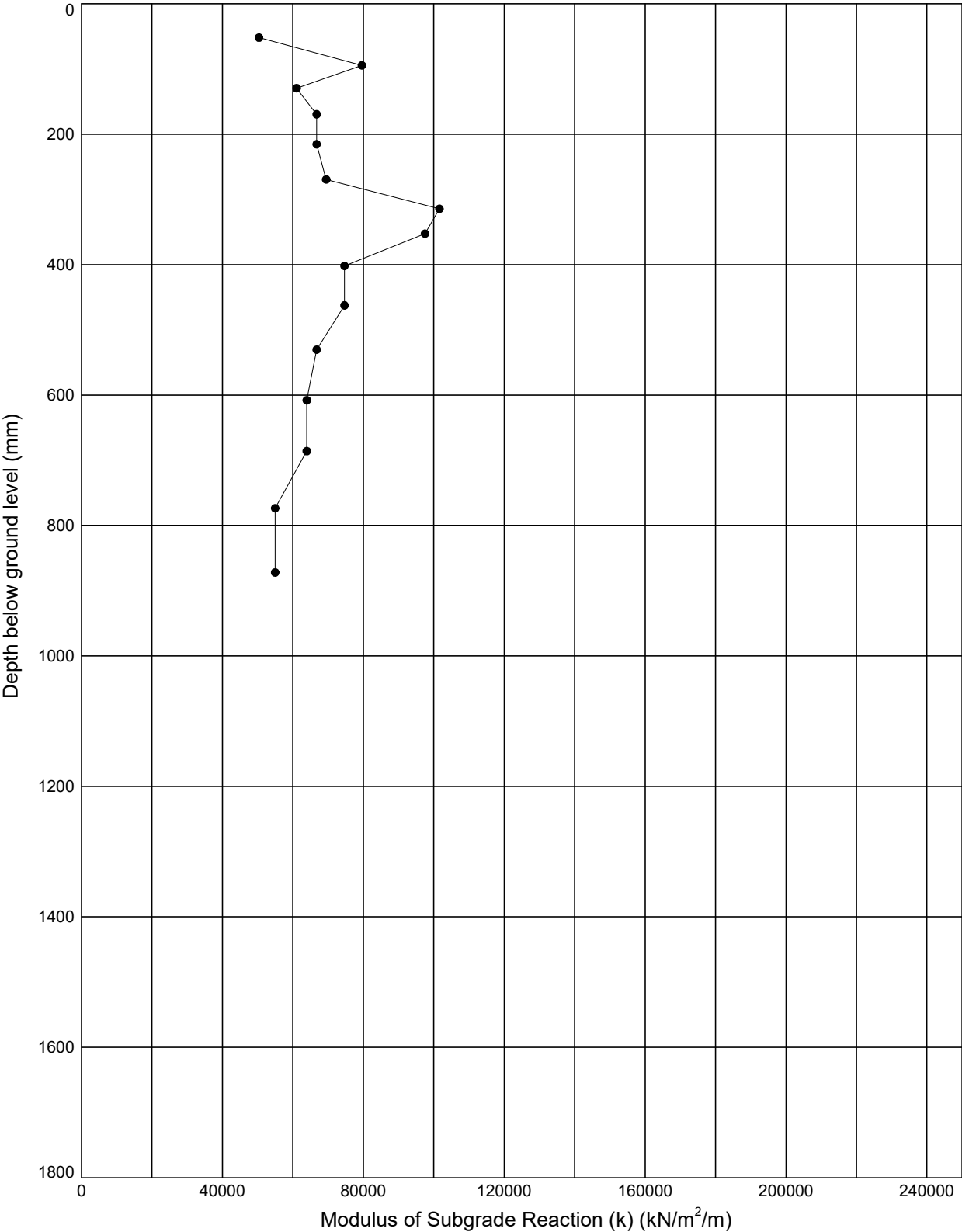
DCP TEST RESULTS
DEPTH vs MODULUS OF SUBGRADE REACTION

Position Ref : DCP02

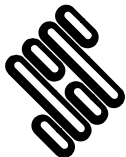
Test Date : 24.07.25

Ground Level (m AOD): 60.60

National Grid Co-ordinates: E:395544.6 N:162041.7



Notes : Modulus of Subgrade Reaction calculated from: $CBR = 6.1 \times 10^{-8} \times (k_{762})^{1.733}$ % where k_{762} is the equivalent value obtained from a plate load test using a 762mm diameter plate. The equation has been derived as per Interim Advice Note 73/06 Revision 1 (2009) [now withdrawn but parts still relevant where not replaced by CD225 Design for new pavement foundations].



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Test Supervisor	Date	Checked By	Date
James McQueen	24/07/25		30/07/25
Contract		Contract Ref:	
Bluemay Park Phase 3, Bidmead Park, Melksham		738355	

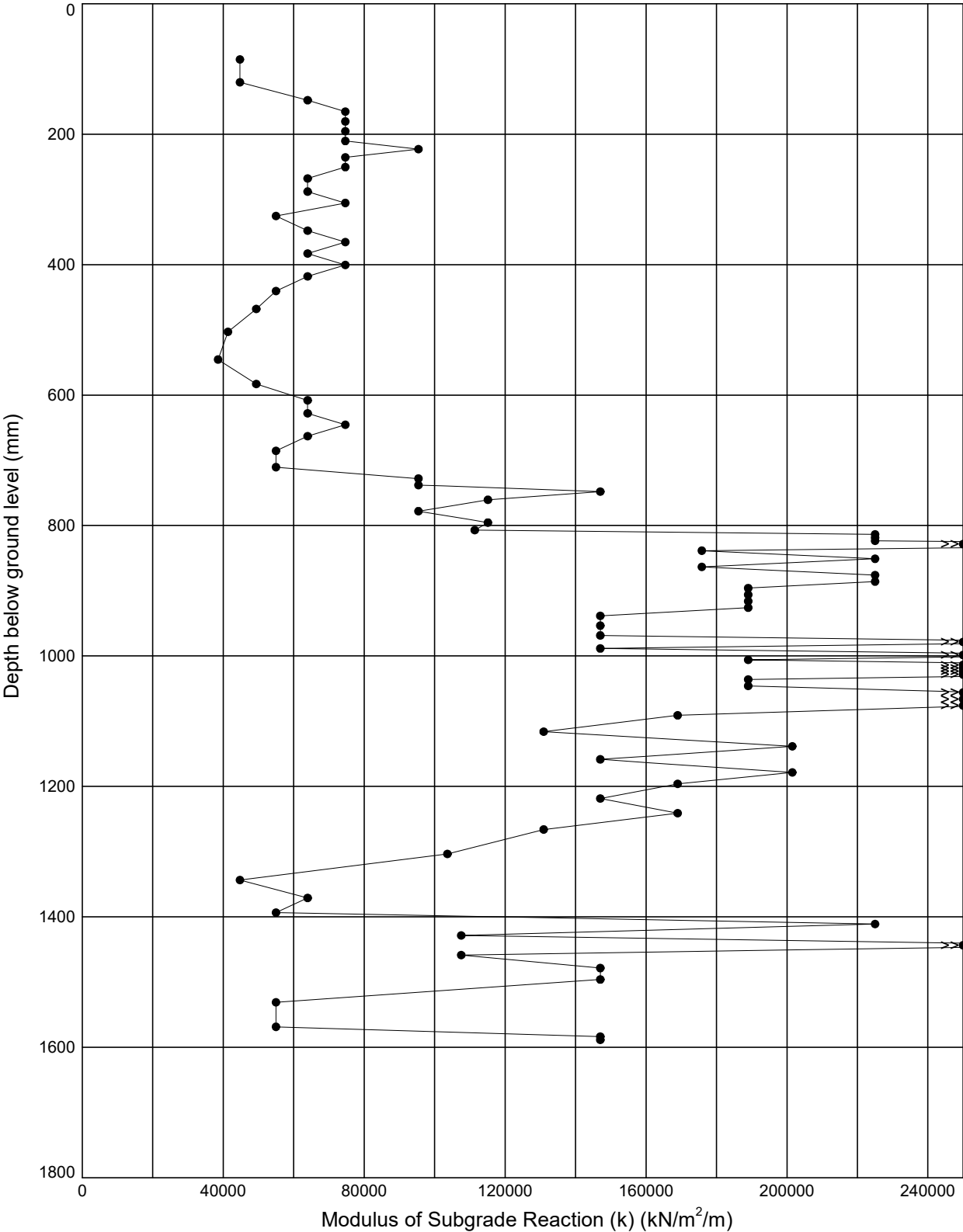
DCP TEST RESULTS
DEPTH vs MODULUS OF SUBGRADE REACTION

Position Ref : DCP05

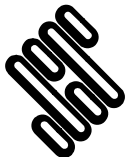
Test Date : 31.07.25

Ground Level (m AOD): 60.10

National Grid Co-ordinates: E:395540.5 N:162024.5



Notes : Modulus of Subgrade Reaction calculated from: $CBR = 6.1 \times 10^{-8} \times (k_{762})^{1.733} \%$ where k_{762} is the equivalent value obtained from a plate load test using a 762mm diameter plate. The equation has been derived as per Interim Advice Note 73/06 Revision 1 (2009) [now withdrawn but parts still relevant where not replaced by CD225 Design for new pavement foundations].



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Test Supervisor	Date	Checked By	Date
Rocio Albertos Vazquez	31/07/25	[REDACTED]	04/08/25
Contract		Contract Ref:	
Bluemay Park Phase 3, Bidmead Park, Melksham		738355	

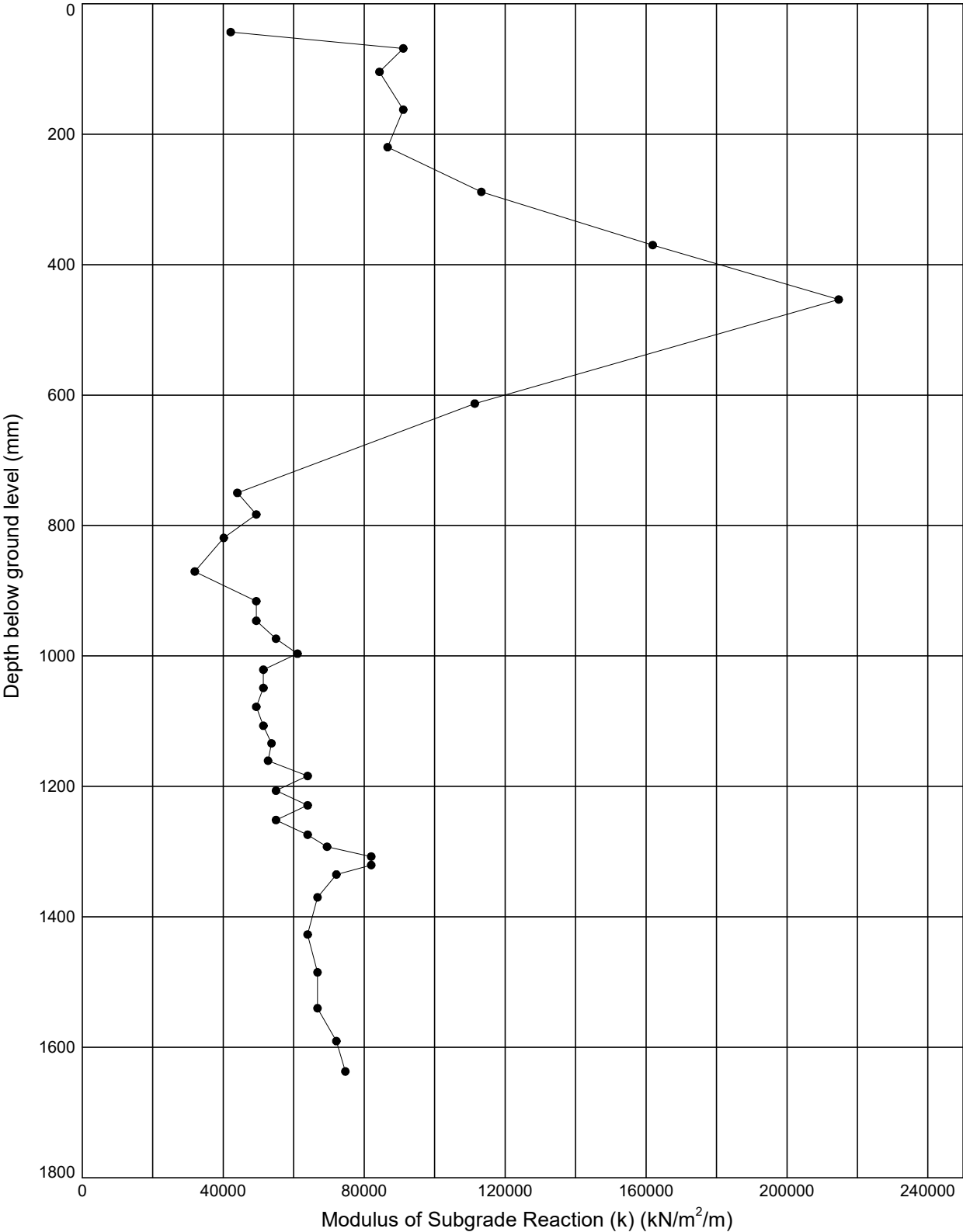
DCP TEST RESULTS
DEPTH vs MODULUS OF SUBGRADE REACTION

Position Ref : DCP06

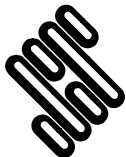
Test Date : 31.07.25

Ground Level (m AOD): 60.15

National Grid Co-ordinates: E:395535.5 N:162018.5



Notes : Modulus of Subgrade Reaction calculated from: $CBR = 6.1 \times 10^{-8} \times (k_{762})^{1.733} \%$ where k_{762} is the equivalent value obtained from a plate load test using a 762mm diameter plate. The equation has been derived as per Interim Advice Note 73/06 Revision 1 (2009) [now withdrawn but parts still relevant where not replaced by CD225 Design for new pavement foundations].



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Test Supervisor	Date	Checked By	Date
Adam Lumber	31/07/25		04/08/25
Contract		Contract Ref:	
Bluemay Park Phase 3, Bidmead Park, Melksham		738355	

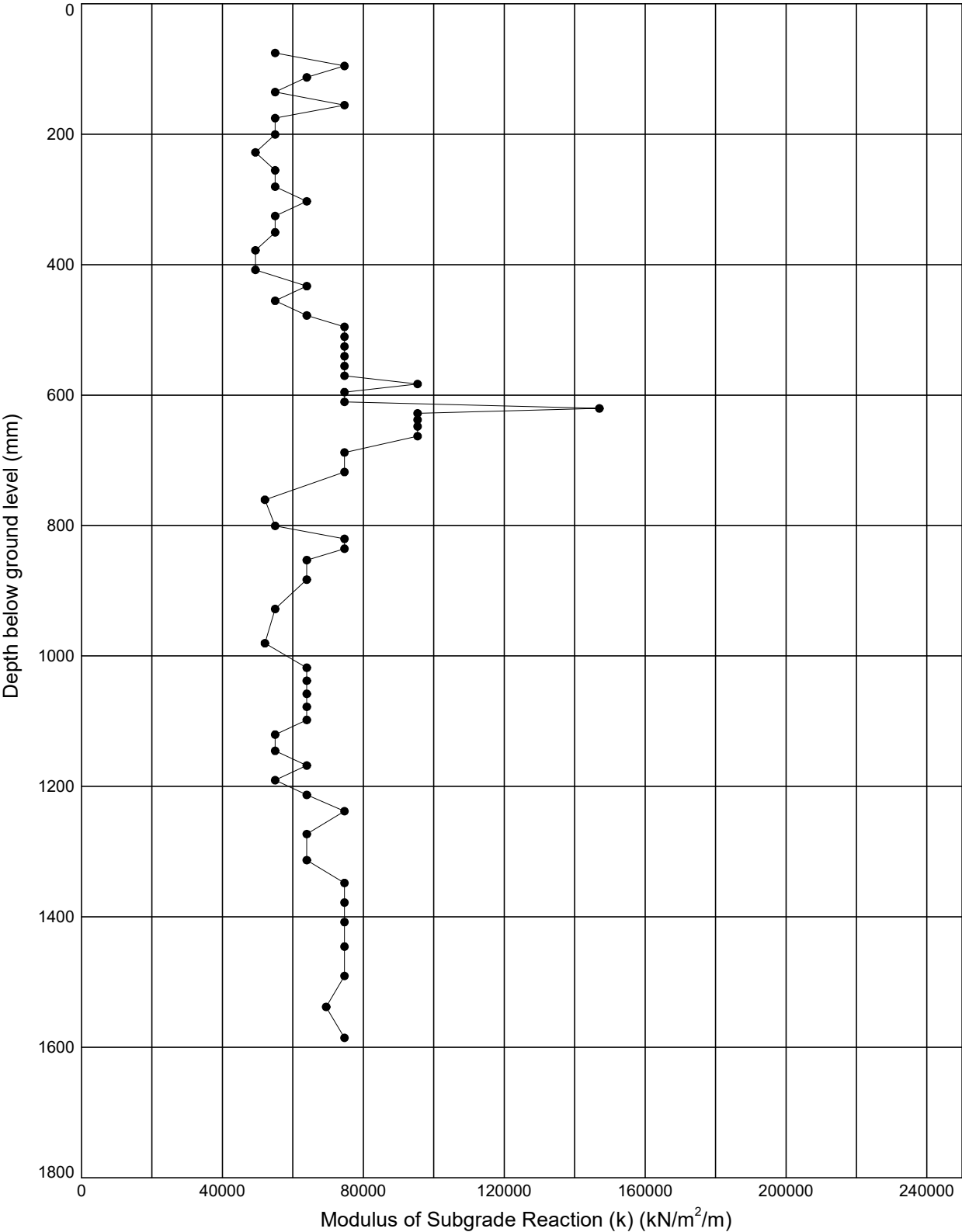
DCP TEST RESULTS
DEPTH vs MODULUS OF SUBGRADE REACTION

Position Ref : DCP07

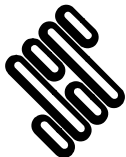
Test Date : 31.07.25

Ground Level (m AOD): 60.50

National Grid Co-ordinates: E:395538.9 N:162033.6



Notes : Modulus of Subgrade Reaction calculated from: $CBR = 6.1 \times 10^{-8} \times (k_{762})^{1.733}$ % where k_{762} is the equivalent value obtained from a plate load test using a 762mm diameter plate. The equation has been derived as per Interim Advice Note 73/06 Revision 1 (2009) [now withdrawn but parts still relevant where not replaced by CD225 Design for new pavement foundations].



STRUCTURAL SOILS
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Test Supervisor	Date	Checked By	Date
Adam Lumber	31/07/25		04/08/25
Contract		Contract Ref:	
Bluemay Park Phase 3, Bidmead Park, Melksham		738355	

SUMMARY OF TRL DYNAMIC CONE PENETROMETER (DCP) FIELD MEASUREMENTS AND DERIVED CBR VALUES

In accordance with TRL; Highways Agency IAN 73/06

Exploratory Position ID: **DCP02** Test Date: **24/07/2025** Zero Reading (mm): **47** Test Supervisor: **JMcQueen** Device Serial No.: **Not Recorded** Test Number: **1**

Start Depth of Test (mm)	Incremental Blows	Reading From Ruler (mm)	Extension Shaft Added	Cumulative Blows	Actual Penetration (mm)	mm/Blow	Average Penetration (mm)	CBR Value (%)	Remarks
0	0	70	---	0	23	0.00	11.5	1.#INF	
	2	128	---	2	81	29.00	52	8.6	
	2	155	---	4	108	13.50	94.5	19	
	2	198	---	6	151	21.50	129.5	12	
	2	235	---	8	188	18.50	169.5	14	
	3	290	---	11	243	18.33	215.5	14	
	3	343	---	14	296	17.67	269.5	15	
	4	380	---	18	333	9.25	314.5	29	
	4	419	---	22	372	9.75	352.5	27	
	4	479	---	26	432	15.00	402	17	
	4	540	---	30	493	15.25	462.5	17	
	4	615	---	34	568	18.75	530.5	14	
	4	695	---	38	648	20.00	608	13	
	4	771	---	42	724	19.00	686	13	
	4	870	---	46	823	24.75	773.5	10	
	4	968	---	50	921	24.50	872	10	

General Remarks:

CBR calculation method used: **TRRL Road Note 8**

Section reference and chainage: **Not applicable**, Lane and offset: **Not Applicable**, Traffic direction: **Not Applicable**

Other remarks:

 STRUCTURAL SOILS The Old School Stillhouse Lane Bedminster Bristol BS3 4EB	Compiled By		Date	Contract Ref:
	[REDACTED]		ALUMBER	738355
	Contract: Bluemay Park Phase 3, Bidmead Park, Melksham			Page: 1 of 1 

SUMMARY OF TRL DYNAMIC CONE PENETROMETER (DCP) FIELD MEASUREMENTS AND DERIVED CBR VALUES

In accordance with TRL; Highways Agency IAN 73/06

Exploratory Position ID: **DCP05**

Test Date: **31/07/2025**

Zero Reading (mm): **47**

Test Supervisor: **RAIbertos** Device Serial No.: **Not Recorded**

Test Number: **1**

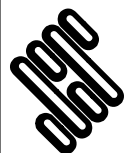
Start Depth of Test (mm)	Incremental Blows	Reading From Ruler (mm)	Extension Shaft Added	Cumulative Blows	Actual Penetration (mm)	mm/Blow	Average Penetration (mm)	CBR Value (%)	Remarks
0	0	115	---	0	68	0.00	34	1.#INF	
	1	150	---	1	103	35.00	85.5	7	
	1	185	---	2	138	35.00	120.5	7	
	1	205	---	3	158	20.00	148	13	
	1	220	---	4	173	15.00	165.5	17	
	1	235	---	5	188	15.00	180.5	17	
	1	250	---	6	203	15.00	195.5	17	
	1	265	---	7	218	15.00	210.5	17	
	1	275	---	8	228	10.00	223	26	
	1	290	---	9	243	15.00	235.5	17	
	1	305	---	10	258	15.00	250.5	17	
	1	325	---	11	278	20.00	268	13	
	1	345	---	12	298	20.00	288	13	
	1	360	---	13	313	15.00	305.5	17	
	1	385	---	14	338	25.00	325.5	10	
	1	405	---	15	358	20.00	348	13	

General Remarks:

CBR calculation method used: **TRRL Road Note 8**

Section reference and chainage: **Not applicable**, Lane and offset: **Not Applicable**, Traffic direction: **Not Applicable**

Other remarks:



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04.08.25

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SUMMARY OF TRL DYNAMIC CONE PENETROMETER (DCP) FIELD MEASUREMENTS AND DERIVED CBR VALUES

In accordance with TRL; Highways Agency IAN 73/06

Exploratory Position ID: **DCP05**

Test Date: **31/07/2025**

Zero Reading (mm): **47**

Test Supervisor: **RAIbertos** Device Serial No.: **Not Recorded**

Test Number: **1**

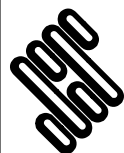
Start Depth of Test (mm)	Incremental Blows	Reading From Ruler (mm)	Extension Shaft Added	Cumulative Blows	Actual Penetration (mm)	mm/Blow	Average Penetration (mm)	CBR Value (%)	Remarks
0	1	420	---	16	373	15.00	365.5	17	
	1	440	---	17	393	20.00	383	13	
	1	455	---	18	408	15.00	400.5	17	
	1	475	---	19	428	20.00	418	13	
	1	500	---	20	453	25.00	440.5	10	
	1	530	---	21	483	30.00	468	8.3	
	1	570	---	22	523	40.00	503	6.1	
	1	615	---	23	568	45.00	545.5	5.4	
	1	645	---	24	598	30.00	583	8.3	
	1	665	---	25	618	20.00	608	13	
	1	685	---	26	638	20.00	628	13	
	1	700	---	27	653	15.00	645.5	17	
	1	720	---	28	673	20.00	663	13	
	1	745	---	29	698	25.00	685.5	10	
	1	770	---	30	723	25.00	710.5	10	
	1	780	---	31	733	10.00	728	26	

General Remarks:

CBR calculation method used: **TRRL Road Note 8**

Section reference and chainage: **Not applicable**, Lane and offset: **Not Applicable**, Traffic direction: **Not Applicable**

Other remarks:



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SUMMARY OF TRL DYNAMIC CONE PENETROMETER (DCP) FIELD MEASUREMENTS AND DERIVED CBR VALUES

In accordance with TRL; Highways Agency IAN 73/06

Exploratory Position ID: **DCP05**

Test Date: **31/07/2025**

Zero Reading (mm): **47**

Test Supervisor: **RAIbertos** Device Serial No.: **Not Recorded**

Test Number: **1**

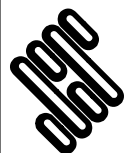
Start Depth of Test (mm)	Incremental Blows	Reading From Ruler (mm)	Extension Shaft Added	Cumulative Blows	Actual Penetration (mm)	mm/Blow	Average Penetration (mm)	CBR Value (%)	Remarks
0	1	790	---	32	743	10.00	738	26	
	2	800	---	34	753	5.00	748	55	
	2	815	---	36	768	7.50	760.5	36	
	2	835	---	38	788	10.00	778	26	
	2	850	---	40	803	7.50	795.5	36	
	0	57	Yes						
	1	65	---	41	811	8.00	807	34	
	2	70	---	43	816	2.50	813.5	115	
	2	75	---	45	821	2.50	818.5	115	
	2	80	---	47	826	2.50	823.5	115	
	4	85	---	51	831	1.25	828.5	239	
	4	100	---	55	846	3.75	838.5	75	
	4	110	---	59	856	2.50	851	115	
	4	125	---	63	871	3.75	863.5	75	
	4	135	---	67	881	2.50	876	115	
	4	145	---	71	891	2.50	886	115	

General Remarks:

CBR calculation method used: **TRRL Road Note 8**

Section reference and chainage: **Not applicable**, Lane and offset: **Not Applicable**, Traffic direction: **Not Applicable**

Other remarks:



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SUMMARY OF TRL DYNAMIC CONE PENETROMETER (DCP) FIELD MEASUREMENTS AND DERIVED CBR VALUES

In accordance with TRL; Highways Agency IAN 73/06

Exploratory Position ID: **DCP05**

Test Date: **31/07/2025**

Zero Reading (mm): **47**

Test Supervisor: **RAIbertos** Device Serial No.: **Not Recorded**

Test Number: **1**

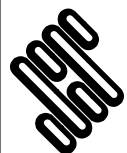
Start Depth of Test (mm)	Incremental Blows	Reading From Ruler (mm)	Extension Shaft Added	Cumulative Blows	Actual Penetration (mm)	mm/Blow	Average Penetration (mm)	CBR Value (%)	Remarks
0	3	155	---	74	901	3.33	896	85	
	3	165	---	77	911	3.33	906	85	
	3	175	---	80	921	3.33	916	85	
	3	185	---	83	931	3.33	926	85	
	3	200	---	86	946	5.00	938.5	55	
	3	215	---	89	961	5.00	953.5	55	
	3	230	---	92	976	5.00	968.5	55	
	3	235	---	95	981	1.67	978.5	176	
	3	250	---	98	996	5.00	988.5	55	
	3	255	---	101	1001	1.67	998.5	176	
	3	265	---	104	1011	3.33	1006	85	
	3	270	---	107	1016	1.67	1013.5	176	
	3	275	---	110	1021	1.67	1018.5	176	
	3	280	---	113	1026	1.67	1023.5	176	
	3	285	---	116	1031	1.67	1028.5	176	
	3	295	---	119	1041	3.33	1036	85	

General Remarks:

CBR calculation method used: **TRRL Road Note 8**

Section reference and chainage: **Not applicable**, Lane and offset: **Not Applicable**, Traffic direction: **Not Applicable**

Other remarks:



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SUMMARY OF TRL DYNAMIC CONE PENETROMETER (DCP) FIELD MEASUREMENTS AND DERIVED CBR VALUES

In accordance with TRL; Highways Agency IAN 73/06

Exploratory Position ID: **DCP05**

Test Date: **31/07/2025**

Zero Reading (mm): **47**

Test Supervisor: **RAIbertos** Device Serial No.: **Not Recorded**

Test Number: **1**

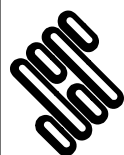
Start Depth of Test (mm)	Incremental Blows	Reading From Ruler (mm)	Extension Shaft Added	Cumulative Blows	Actual Penetration (mm)	mm/Blow	Average Penetration (mm)	CBR Value (%)	Remarks
0	3	305	---	122	1051	3.33	1046	85	
	5	315	---	127	1061	2.00	1056	145	
	5	325	---	132	1071	2.00	1066	145	
	5	335	---	137	1081	2.00	1076	145	
	5	355	---	142	1101	4.00	1091	70	
	5	385	---	147	1131	6.00	1116	45	
	5	400	---	152	1146	3.00	1138.5	95	
	5	425	---	157	1171	5.00	1158.5	55	
	5	440	---	162	1186	3.00	1178.5	95	
	5	460	---	167	1206	4.00	1196	70	
	5	485	---	172	1231	5.00	1218.5	55	
	5	505	---	177	1251	4.00	1241	70	
	5	535	---	182	1281	6.00	1266	45	
	5	580	---	187	1326	9.00	1303.5	30	
	1	615	---	188	1361	35.00	1343.5	7	
	1	635	---	189	1381	20.00	1371	13	

General Remarks:

CBR calculation method used: **TRRL Road Note 8**

Section reference and chainage: **Not applicable**, Lane and offset: **Not Applicable**, Traffic direction: **Not Applicable**

Other remarks:



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SUMMARY OF TRL DYNAMIC CONE PENETROMETER (DCP) FIELD MEASUREMENTS AND DERIVED CBR VALUES

In accordance with TRL; Highways Agency IAN 73/06

Exploratory Position ID: **DCP05** Test Date: **31/07/2025** Zero Reading (mm): **47** Test Supervisor: **RAIbertos** Device Serial No.: **Not Recorded** Test Number: **1**

Start Depth of Test (mm)	Incremental Blows	Reading From Ruler (mm)	Extension Shaft Added	Cumulative Blows	Actual Penetration (mm)	mm/Blow	Average Penetration (mm)	CBR Value (%)	Remarks
0	1	660	---	190	1406	25.00	1393.5	10	
	4	670	---	194	1416	2.50	1411	115	
	3	695	---	197	1441	8.33	1428.5	32	
	3	700	---	200	1446	1.67	1443.5	176	
	3	725	---	203	1471	8.33	1458.5	32	
	3	740	---	206	1486	5.00	1478.5	55	
	4	760	---	210	1506	5.00	1496	55	
	2	810	---	212	1556	25.00	1531	10	
	1	835	---	213	1581	25.00	1568.5	10	
	1	840	---	214	1586	5.00	1583.5	55	
	1	845	---	215	1591	5.00	1588.5	55	

General Remarks:
 CBR calculation method used: **TRRL Road Note 8**
 Section reference and chainage: **Not applicable**, Lane and offset: **Not Applicable**, Traffic direction: **Not Applicable**
 Other remarks:

 STRUCTURAL SOILS The Old School Stillhouse Lane Bedminster Bristol BS3 4EB	Compiled By		Date	Contract Ref: 738355
	[REDACTED]	ALUMBER	04.08.25	
	Contract: Bluemay Park Phase 3, Bidmead Park, Melksham			

SUMMARY OF TRL DYNAMIC CONE PENETROMETER (DCP) FIELD MEASUREMENTS AND DERIVED CBR VALUES

In accordance with TRL; Highways Agency IAN 73/06

Exploratory Position ID: **DCP06** Test Date: **31/07/2025** Zero Reading (mm): **47** Test Supervisor: **ALUMBER** Device Serial No.: **Not Recorded** Test Number: **1**

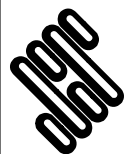
Start Depth of Test (mm)	Incremental Blows	Reading From Ruler (mm)	Extension Shaft Added	Cumulative Blows	Actual Penetration (mm)	mm/Blow	Average Penetration (mm)	CBR Value (%)	Remarks
0	0	71	---	0	24	0.00	12	1.#INF	
	1	110	---	1	63	39.00	43.5	6.3	
	1	121	---	2	74	11.00	68.5	24	
	5	182	---	7	135	12.20	104.5	21	
	5	237	---	12	190	11.00	162.5	24	
	5	297	---	17	250	12.00	220	22	
	0		Yes						
	10	374	---	27	327	7.70	288.5	35	
	20	460	---	47	413	4.30	370	65	
	30	541	---	77	494	2.70	453.5	106	
	30	779	---	107	732	7.93	613	34	
	1	815	---	108	768	36.00	750	6.8	
	1	845	---	109	798	30.00	783	8.3	
	1	887	---	110	840	42.00	819	5.8	
	1	948	---	111	901	61.00	870.5	3.9	
	0	101	Yes						

General Remarks:

CBR calculation method used: **TRRL Road Note 8**

Section reference and chainage: **Not applicable**, Lane and offset: **Not Applicable**, Traffic direction: **Not Applicable**

Other remarks:



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SUMMARY OF TRL DYNAMIC CONE PENETROMETER (DCP) FIELD MEASUREMENTS AND DERIVED CBR VALUES

In accordance with TRL; Highways Agency IAN 73/06

Exploratory Position ID: **DCP06** Test Date: **31/07/2025** Zero Reading (mm): **47** Test Supervisor: **ALUMBER** Device Serial No.: **Not Recorded** Test Number: **1**

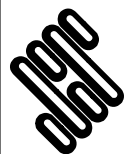
Start Depth of Test (mm)	Incremental Blows	Reading From Ruler (mm)	Extension Shaft Added	Cumulative Blows	Actual Penetration (mm)	mm/Blow	Average Penetration (mm)	CBR Value (%)	Remarks
0	1	131	---	112	931	30.00	916	8.3	
	1	161	---	113	961	30.00	946	8.3	
	1	186	---	114	986	25.00	973.5	10	
	1	207	---	115	1007	21.00	996.5	12	
	1	235	---	116	1035	28.00	1021	8.9	
	1	263	---	117	1063	28.00	1049	8.9	
	1	293	---	118	1093	30.00	1078	8.3	
	1	321	---	119	1121	28.00	1107	8.9	
	1	347	---	120	1147	26.00	1134	9.6	
	1	374	---	121	1174	27.00	1160.5	9.3	
	1	394	---	122	1194	20.00	1184	13	
	1	419	---	123	1219	25.00	1206.5	10	
	1	439	---	124	1239	20.00	1229	13	
	1	464	---	125	1264	25.00	1251.5	10	
	1	484	---	126	1284	20.00	1274	13	
	1	501	---	127	1301	17.00	1292.5	15	

General Remarks:

CBR calculation method used: **TRRL Road Note 8**

Section reference and chainage: **Not applicable**, Lane and offset: **Not Applicable**, Traffic direction: **Not Applicable**

Other remarks:



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SUMMARY OF TRL DYNAMIC CONE PENETROMETER (DCP) FIELD MEASUREMENTS AND DERIVED CBR VALUES

In accordance with TRL; Highways Agency IAN 73/06

Exploratory Position ID: **DCP06** Test Date: **31/07/2025** Zero Reading (mm): **47** Test Supervisor: **ALUMBER** Device Serial No.: **Not Recorded** Test Number: **1**

Start Depth of Test (mm)	Incremental Blows	Reading From Ruler (mm)	Extension Shaft Added	Cumulative Blows	Actual Penetration (mm)	mm/Blow	Average Penetration (mm)	CBR Value (%)	Remarks
0	1	514	---	128	1314	13.00	1307.5	20	
	1	527	---	129	1327	13.00	1320.5	20	
	1	543	---	130	1343	16.00	1335	16	
	3	597	---	133	1397	18.00	1370	14	
	3	657	---	136	1457	20.00	1427	13	
	3	713	---	139	1513	18.67	1485	14	
	3	767	---	142	1567	18.00	1540	14	
	3	814	---	145	1614	15.67	1590.5	16	
	3	860	---	148	1660	15.33	1637	17	

General Remarks:
 CBR calculation method used: **TRRL Road Note 8**
 Section reference and chainage: **Not applicable**, Lane and offset: **Not Applicable**, Traffic direction: **Not Applicable**
 Other remarks:

 STRUCTURAL SOILS The Old School Stillhouse Lane Bedminster Bristol BS3 4EB	Compiled By		Date	Contract Ref: 738355
	[REDACTED]	ALUMBER	04.08.25	
	Contract: Blueamay Park Phase 3, Bidmead Park, Melksham			

SUMMARY OF TRL DYNAMIC CONE PENETROMETER (DCP) FIELD MEASUREMENTS AND DERIVED CBR VALUES

In accordance with TRL; Highways Agency IAN 73/06

Exploratory Position ID: **DCP07**

Test Date: **31/07/2025**

Zero Reading (mm): **47**

Test Supervisor: **ALumber**

Device Serial No.: **Not Recorded**

Test Number: **1**

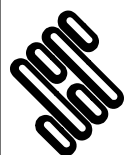
Start Depth of Test (mm)	Incremental Blows	Reading From Ruler (mm)	Extension Shaft Added	Cumulative Blows	Actual Penetration (mm)	mm/Blow	Average Penetration (mm)	CBR Value (%)	Remarks
0	0	110	---	0	63	0.00	31.5	1.#INF	
	1	135	---	1	88	25.00	75.5	10	
	1	150	---	2	103	15.00	95.5	17	
	1	170	---	3	123	20.00	113	13	
	1	195	---	4	148	25.00	135.5	10	
	1	210	---	5	163	15.00	155.5	17	
	1	235	---	6	188	25.00	175.5	10	
	1	260	---	7	213	25.00	200.5	10	
	1	290	---	8	243	30.00	228	8.3	
	1	315	---	9	268	25.00	255.5	10	
	1	340	---	10	293	25.00	280.5	10	
	1	360	---	11	313	20.00	303	13	
	1	385	---	12	338	25.00	325.5	10	
	1	410	---	13	363	25.00	350.5	10	
	1	440	---	14	393	30.00	378	8.3	
	1	470	---	15	423	30.00	408	8.3	

General Remarks:

CBR calculation method used: **TRRL Road Note 8**

Section reference and chainage: **Not applicable**, Lane and offset: **Not Applicable**, Traffic direction: **Not Applicable**

Other remarks:



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SUMMARY OF TRL DYNAMIC CONE PENETROMETER (DCP) FIELD MEASUREMENTS AND DERIVED CBR VALUES

In accordance with TRL; Highways Agency IAN 73/06

Exploratory Position ID: **DCP07**

Test Date: **31/07/2025**

Zero Reading (mm): **47**

Test Supervisor: **ALUMBER**

Device Serial No.: **Not Recorded**

Test Number: **1**

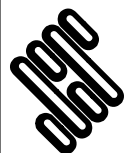
Start Depth of Test (mm)	Incremental Blows	Reading From Ruler (mm)	Extension Shaft Added	Cumulative Blows	Actual Penetration (mm)	mm/Blow	Average Penetration (mm)	CBR Value (%)	Remarks
0	1	490	---	16	443	20.00	433	13	
	1	515	---	17	468	25.00	455.5	10	
	1	535	---	18	488	20.00	478	13	
	1	550	---	19	503	15.00	495.5	17	
	1	565	---	20	518	15.00	510.5	17	
	1	580	---	21	533	15.00	525.5	17	
	1	595	---	22	548	15.00	540.5	17	
	1	610	---	23	563	15.00	555.5	17	
	1	625	---	24	578	15.00	570.5	17	
	1	635	---	25	588	10.00	583	26	
	1	650	---	26	603	15.00	595.5	17	
	1	665	---	27	618	15.00	610.5	17	
	1	670	---	28	623	5.00	620.5	55	
	1	680	---	29	633	10.00	628	26	
	1	690	---	30	643	10.00	638	26	
	1	700	---	31	653	10.00	648	26	

General Remarks:

CBR calculation method used: **TRRL Road Note 8**

Section reference and chainage: **Not applicable**, Lane and offset: **Not Applicable**, Traffic direction: **Not Applicable**

Other remarks:



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SUMMARY OF TRL DYNAMIC CONE PENETROMETER (DCP) FIELD MEASUREMENTS AND DERIVED CBR VALUES

In accordance with TRL; Highways Agency IAN 73/06

Exploratory Position ID: **DCP07**

Test Date: **31/07/2025**

Zero Reading (mm): **47**

Test Supervisor: **ALumber**

Device Serial No.: **Not Recorded**

Test Number: **1**

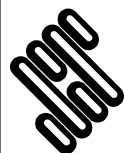
Start Depth of Test (mm)	Incremental Blows	Reading From Ruler (mm)	Extension Shaft Added	Cumulative Blows	Actual Penetration (mm)	mm/Blow	Average Penetration (mm)	CBR Value (%)	Remarks
0	2	720	---	33	673	10.00	663	26	
	2	750	---	35	703	15.00	688	17	
	2	780	---	37	733	15.00	718	17	
	2	835	---	39	788	27.50	760.5	9.1	
	1	860	---	40	813	25.00	800.5	10	
	0	60	Yes						
	1	75	---	41	828	15.00	820.5	17	
	1	90	---	42	843	15.00	835.5	17	
	1	110	---	43	863	20.00	853	13	
	2	150	---	45	903	20.00	883	13	
	2	200	---	47	953	25.00	928	10	
	2	255	---	49	1008	27.50	980.5	9.1	
	1	275	---	50	1028	20.00	1018	13	
	1	295	---	51	1048	20.00	1038	13	
	1	315	---	52	1068	20.00	1058	13	
	1	335	---	53	1088	20.00	1078	13	

General Remarks:

CBR calculation method used: **TRRL Road Note 8**

Section reference and chainage: **Not applicable**, Lane and offset: **Not Applicable**, Traffic direction: **Not Applicable**

Other remarks:



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Date

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ALUMBER

04.08.25

738355

Contract:

Bluemay Park Phase 3, Bidmead Park, Melksham

Page:

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SUMMARY OF TRL DYNAMIC CONE PENETROMETER (DCP) FIELD MEASUREMENTS AND DERIVED CBR VALUES

In accordance with TRL; Highways Agency IAN 73/06

Exploratory Position ID: **DCP07**

Test Date: **31/07/2025**

Zero Reading (mm): **47**

Test Supervisor: **ALumber**

Device Serial No.: **Not Recorded**

Test Number: **1**

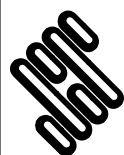
Start Depth of Test (mm)	Incremental Blows	Reading From Ruler (mm)	Extension Shaft Added	Cumulative Blows	Actual Penetration (mm)	mm/Blow	Average Penetration (mm)	CBR Value (%)	Remarks
0	1	355	---	54	1108	20.00	1098	13	
	1	380	---	55	1133	25.00	1120.5	10	
	1	405	---	56	1158	25.00	1145.5	10	
	1	425	---	57	1178	20.00	1168	13	
	1	450	---	58	1203	25.00	1190.5	10	
	1	470	---	59	1223	20.00	1213	13	
	2	500	---	61	1253	15.00	1238	17	
	2	540	---	63	1293	20.00	1273	13	
	2	580	---	65	1333	20.00	1313	13	
	2	610	---	67	1363	15.00	1348	17	
	2	640	---	69	1393	15.00	1378	17	
	2	670	---	71	1423	15.00	1408	17	
	3	715	---	74	1468	15.00	1445.5	17	
	3	760	---	77	1513	15.00	1490.5	17	
	3	810	---	80	1563	16.67	1538	15	
	3	855	---	83	1608	15.00	1585.5	17	

General Remarks:

CBR calculation method used: **TRRL Road Note 8**

Section reference and chainage: **Not applicable**, Lane and offset: **Not Applicable**, Traffic direction: **Not Applicable**

Other remarks:



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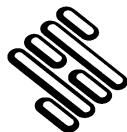
Contract:

Bluemay Park Phase 3, Bidmead Park, Melksham

Page:

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STRUCTURAL SOILS LTD

INSITU TESTING REPORT



1774

Report No. 738355R.01(00)

Office Location: Bristol

Date 28-July-2025 Contract : Bidmead Park Melksham

Client SSL Bristol Engineering

Address

For the Attention of: Adam Lumber

Order received 10-July-2025
Testing Started 24-July-2025
Testing Completed 24-July-2025

Client Reference None
Client Order No. None
Instruction Type Written

Tests marked 'Not UKAS Accredited' in this report are not included in the UKAS Accreditation Schedule for our Laboratory.

UKAS Accredited Tests

2 no. Plate Loading Tests carried out in accordance with BS 1377-9:1990 part 4.1.

Not UKAS Accredited Tests

1 no. Soakaway Infiltration Tests carried out in accordance with BRE365.

The results represent the ground conditions at the specified locations and depths at the time of testing.

Please Note: Remaining samples will be retained for a period of one month from today and will then be disposed of.

Test were undertaken on samples 'as received' unless otherwise stated.

Opinions and interpretations expressed in this report are outside the scope of accreditation for this laboratory.

Results relate only to items tested

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Structural Soils Ltd, Unit 1A Princess St, Bedminster, Bristol, BS3 4AG, Tel 01179471000, email Lydia Souch, lydia.souch@soils.co.uk

TESTING VERIFICATION CERTIFICATE



1774

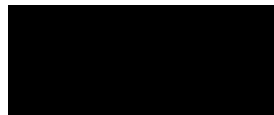
The test results included in this report are certified as:-

ISSUE STATUS: **FINAL**

In accordance with the Structural Soils Ltd Laboratory Quality Management System, results sheets and summaries of results issued by the laboratory are checked by an approved signatory. The integrity of the test data and results are ensured by control of the computer system employed by the laboratory as part of the Software Verification Program as detailed in the Laboratory Quality Manual.

This testing verification certificate covers all testing compiled on or before the following datetime: **28/07/2025 13:53:16**.

Testing reported after this date is not covered by this Verification Certificate.



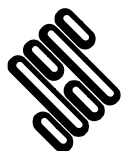
Approved Signatory

Alasdair Padgett (Graduate Engineering Geologist)

(Head Office)
Bristol Laboratory
Unit 1A, Princess Street
Bedminster
Bristol
BS3 4AG

Castleford Laboratory
The Potteries, Pottery Street
Castleford
West Yorkshire
WF10 1NJ

Hemel Laboratory
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT



**STRUCTURAL
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Contract:

**Bluemay Park Phase 3, Bidmead
Park, Melksham**

Job No:

738355



PLATE LOADING TEST - INCREMENTAL

BS1377:Part 9:1990, Clause 4.1

Position ID: **PLT03** Depth (m) : **0.00** Date of Test : **24/07/25**

Ground Level (m AOD):**60.30** National Grid Co-ordinates:**E:395553.9 N:162036.0**



Applied Pressure (kPa)	Average Settlement (mm)
3	0.000
74	0.900
144	1.960
215	4.120
286	6.723
357	8.673

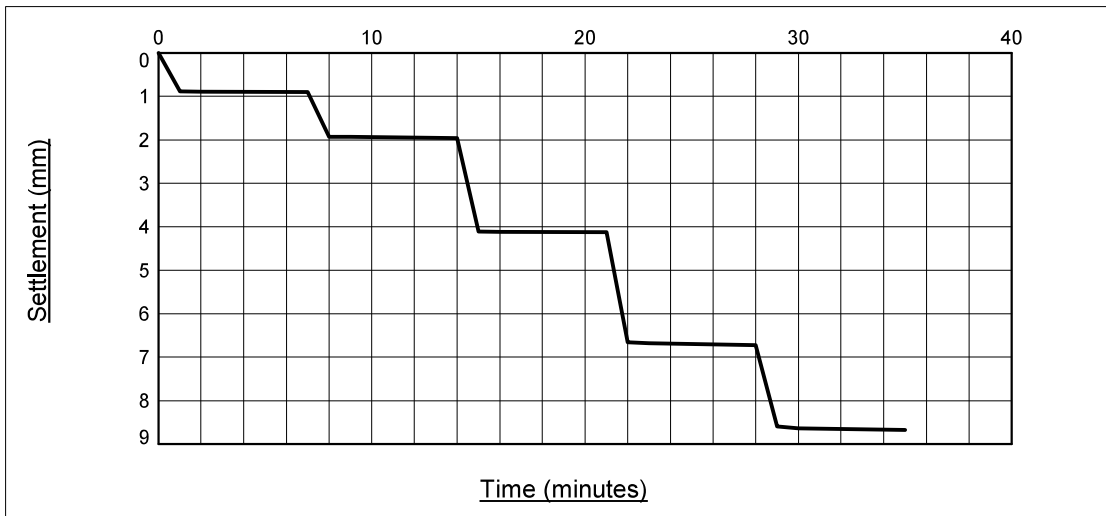


Plate Diameter (mm): **300** Reaction Load : **Tracked Excavator**
 Maximum Applied Pressure (kPa): **357** Maximum Applied Deformation (mm) : **8.673**

Modulus of Subgrade Reaction at 1.25mm

Applied Pressure: **97** kPa Conversion to k_{762} : **$k_{300} \times 0.4417$**
 k_{300} : **77600** kN/m²/m k_{762} : **34276** kN/m²/m

Approximate Equivalent CBR Value (%): **4.4**

Calculations derived from section 7.14 of Department of Transport, Interim Advice Note 73/06 (Draft HD25) February 2009 Design Guidance for Road Pavement Foundations

Additional Information

Description of Test Material: **Greyish brown CLAY.**
 Environmental Conditions at Time of Test: **Cloudy**
 Start Temperature: **20°C**



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Compiled By

Date

ALASDAIR PADGETT

28/07/25

Contract

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 Park, Melksham**

Contract Ref:

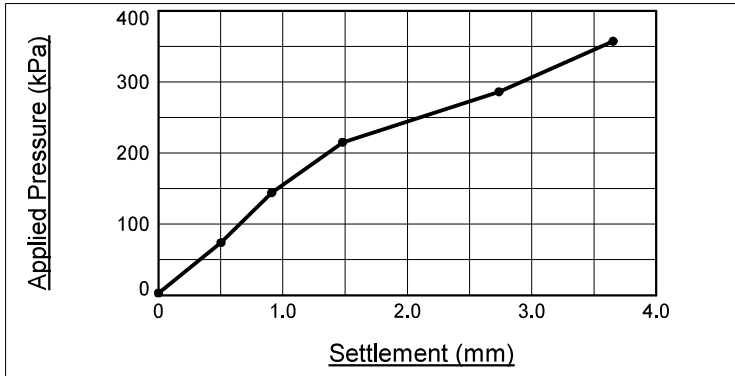
738355

PLATE LOADING TEST - INCREMENTAL

BS1377:Part 9:1990, Clause 4.1

Position ID: **PLT05A** Depth (m) : **0.00** Date of Test : **24/07/25**

Ground Level (m AOD):**60.05** National Grid Co-ordinates:**E:395542.9 N:162025.7**



Applied Pressure (kPa)	Average Settlement (mm)
3	0.000
74	0.503
144	0.910
215	1.480
286	2.737
357	3.653

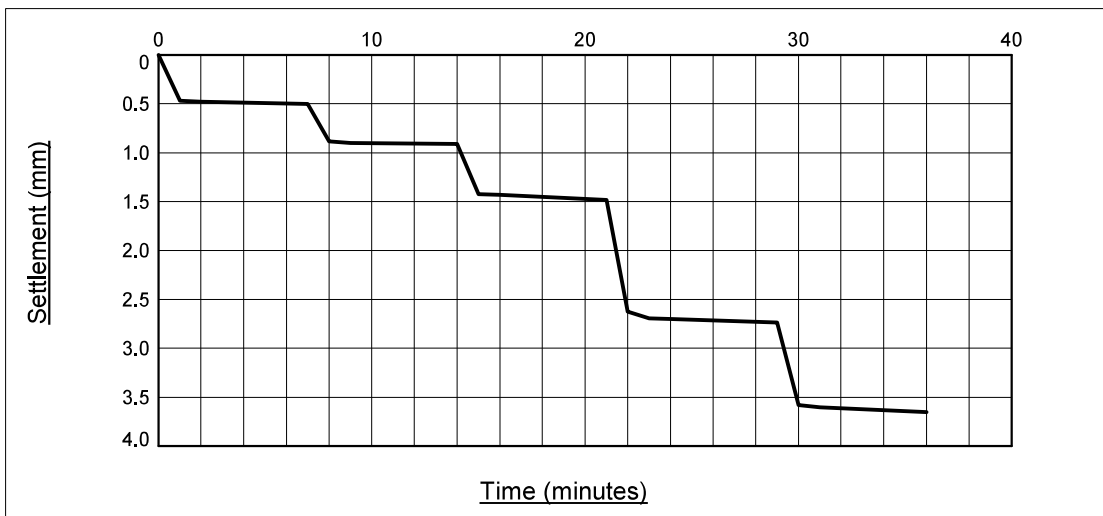


Plate Diameter (mm): **300** Reaction Load : **Tracked Excavator**
 Maximum Applied Pressure (kPa): **357** Maximum Applied Deformation (mm) : **3.653**

Modulus of Subgrade Reaction at 1.25mm

Applied Pressure: **186** kPa Conversion to k_{762} : **$k_{300} \times 0.4417$**
 k_{300} : **148800** kN/m²/m k_{762} : **65725** kN/m²/m

Approximate Equivalent CBR Value (%): **14**

Calculations derived from section 7.14 of Department of Transport, Interim Advice Note 73/06 (Draft HD25) February 2009 Design Guidance for Road Pavement Foundations

Additional Information

Description of Test Material: **Greyish brown CLAY.**
 Environmental Conditions at Time of Test: **Cloudy**
 Start Temperature: **20°C**



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28/07/25

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 Park, Melksham**

Contract Ref:

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FULL SCALE SOAKAWAY TEST

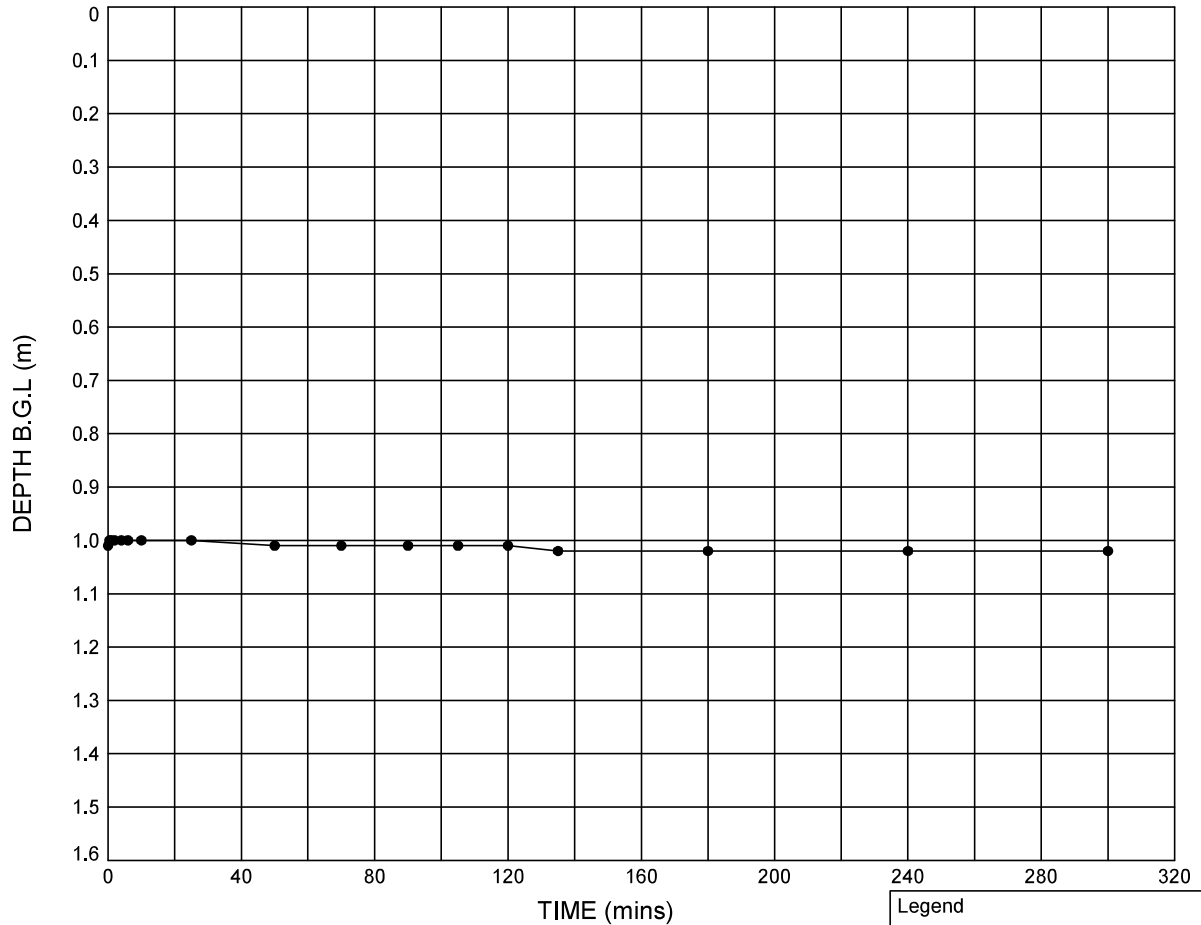
In accordance with BRE Digest 365

Soakaway Test - Position ID : **TP02**

Ground Level (m AOD): ---

National Grid Co-ordinates: ---

PLOT OF DEPTH OF WATER BELOW GROUND LEVEL AGAINST TIME



Test 1

Pit start depth: = **1.60** m

Pit final depth: = **1.60** m

Effective depth, D_e = **0.59** m

Effective storage volume, V_{p75-25} = **0.6136** m³

Surface area, a_{s50} = **4.0860** m²

Time, t_{p75-25} = **N/A** secs

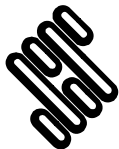
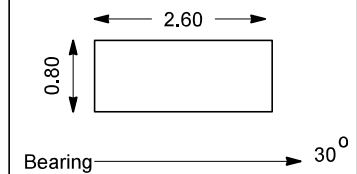
Infiltration rate, f = **N/A** m/s

Notes: Test 1 - CLAY.

Legend

● Test 1 (25.07.25)

Plan (Not to scale)



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Date

25/07/25

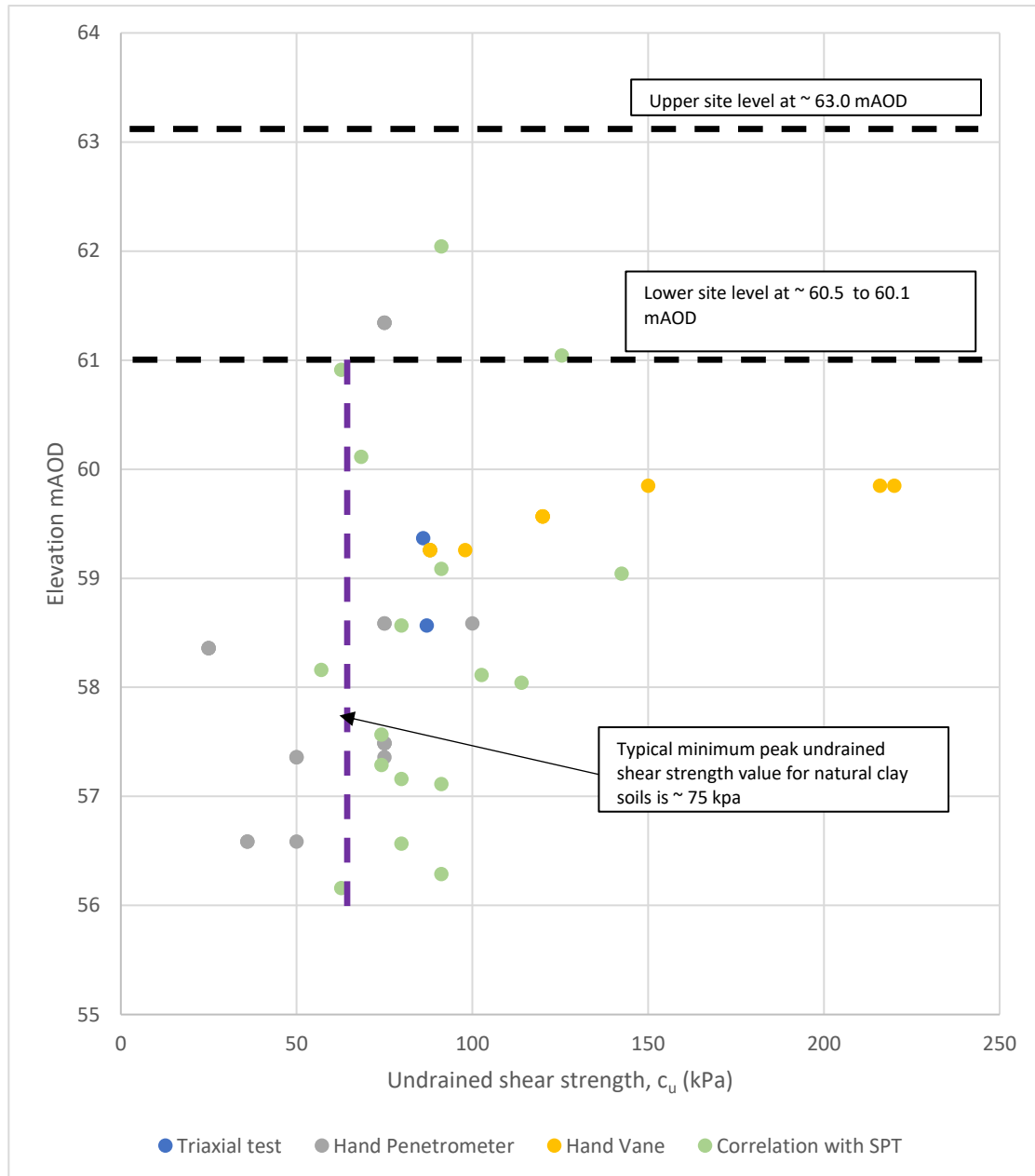
Contract

**Bluemay Park Phase 3, Bidmead
Park, Melksham**

Contract Ref:

738355

Plot of undrained shear strength (c_u) versus elevation for all test methods and correlation with SPT



Notes:

1. Correlated c_u values for SPT tests derived using $c_u = f_1 \times N$ value, where $f_1 = 5.7$.
2. SPT results from WS05, where tests potentially affected by borehole collapse are omitted.

 STRUCTURAL SOILS The Old School Stillhouse Lane Bristol BS3 4EB	Contract	Date	Compiled by
	Bluemay Park Phase 3, Bidmead Park, Melksham Client Bidmead Park Melksham SN12 6RS	21.08.2025 Contract ref: 738355	Adam Lumber Figure No. C01

APPENDIX D - GEOTECHNICAL LABORATORY TESTING

- (i) Laboratory Test Verification Sheet
- (ii) Laboratory Test Results

TESTING VERIFICATION CERTIFICATE



1774

The test results included in this report are certified as:-

ISSUE STATUS: **FINAL**

In accordance with the Structural Soils Ltd Laboratory Quality Management System, results sheets and summaries of results issued by the laboratory are checked by an approved signatory. The integrity of the test data and results are ensured by control of the computer system employed by the laboratory as part of the Software Verification Program as detailed in the Laboratory Quality Manual.

This testing verification certificate covers all testing compiled on or before the following datetime: **26/08/2025 11:50:14**.

Testing reported after this date is not covered by this Verification Certificate.



Approved Signatory
Alan Frost (Data Quality Manager)

(Head Office)
Bristol Laboratory
Unit 1A, Princess Street
Bedminster
Bristol
BS3 4AG

Castleford Laboratory
The Potteries, Pottery Street
Castleford
West Yorkshire
WF10 1NJ

Hemel Laboratory
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT



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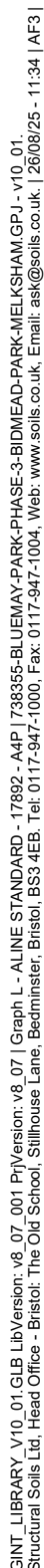
**Bluemay Park Phase 3, Bidmead
Park, Melksham**

Job No:

738355



According to BS EN 14688-2:2018
Testing in accordance with BS EN ISO 17892-12:2018+A2:2022



Tested in accordance with the following clauses of BS EN ISO 17892-12:2018+A2:2022
5.3 - Cone Penetrometer Method; 5.3.14 - One-Point Cone Penetrometer Method (factors are from Table 1, BS 1377-2:2022);
5.4 - Casagrande Method; 5.5 - Plastic Limit Method; 6.5 - Plasticity Index
Water Content (WC) tested in accordance with BS EN ISO 17892-1:2014+A1:2022
+ Tested in accordance with the following clauses of BS EN ISO 17892-12:2018+A2:2022
5.2.1 - Natural State and 5.2.7 - Wet Sieved

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT)

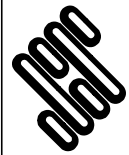
 STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By		Date
		FRANCESCA BENNETT	26/08/25
Contract		Contract Ref:	
Bluemay Park Phase 3, Bidmead Park, Melksham		738355 	

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
TP03	1	LB	0.60	19.6	59	20	39	100	Grey mottled orangish brown slightly gravelly slightly sandy CLAY
WS03	3	B	0.80	26.4	54	22	32	93	Light grey slightly sandy CLAY with occasional gypsum
WS03	5	D	1.90	32.3	48	25	23	96	Grey mottled orangish brown slightly gravelly slightly sandy silty CLAY
WS03	8	D	3.20	30.2	51	22	29	97	Dark grey mottled brown slightly gravelly CLAY

SYMBOLS: * denotes BS 1377



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Bluemay Park Phase 3, Bidmead Park, Melksham

Contract Ref:

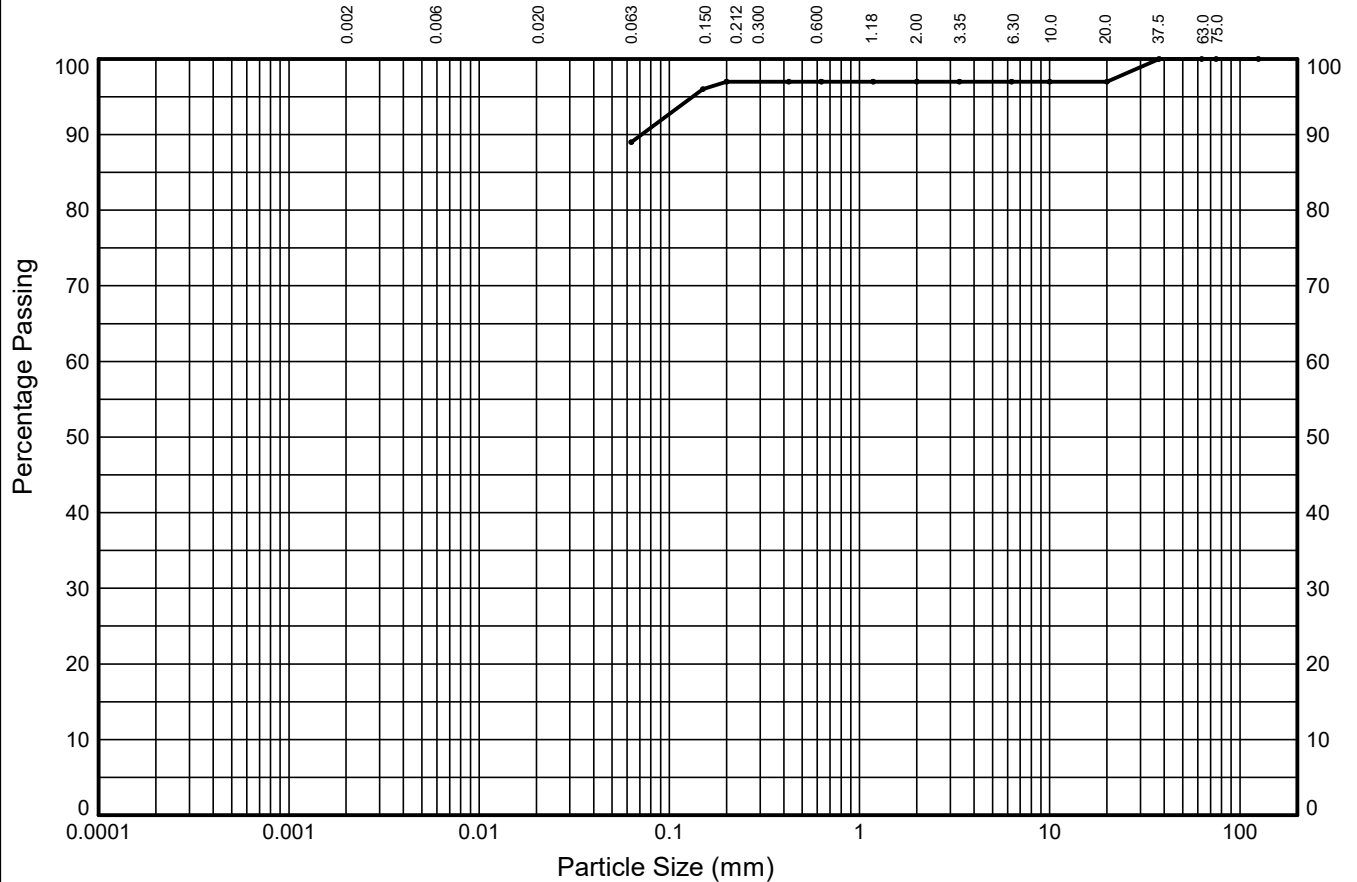
738355



PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

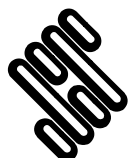
Trial Pit: **TP03** Sample Ref: **1** Sample Type: **LB** Depth (m): **0.60**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	8%	0%	0%	0%	0%	3%	
	SILT			SAND			GRAVEL			
89%				8%			3%			0%

Test Sieve (mm)	Percent Passing (%)	Particle Diameter (mm)	Percent Passing (%)	Coefficients	
125.0	100			D ₁₀ (mm)	NA
75.0	100			D ₁₅ (mm)	NA
63.0	100			D ₃₀ (mm)	NA
37.5	100			D ₅₀ (mm)	NA
20.0	97			D ₆₀ (mm)	NA
10.0	97			D ₈₅ (mm)	NA
6.30	97			D ₉₀ (mm)	0.071
3.35	97			C _U	NA
2.00	97			C _C	NA
1.18	97			Soil Description: Grey mottled orangish brown slightly gravelly slightly sandy CLAY	
0.630	97				
0.425	97				
0.200	97				
0.150	96				
0.063	89				
		Sedimentation sample was not pre-treated			

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018



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Park, Melksham**

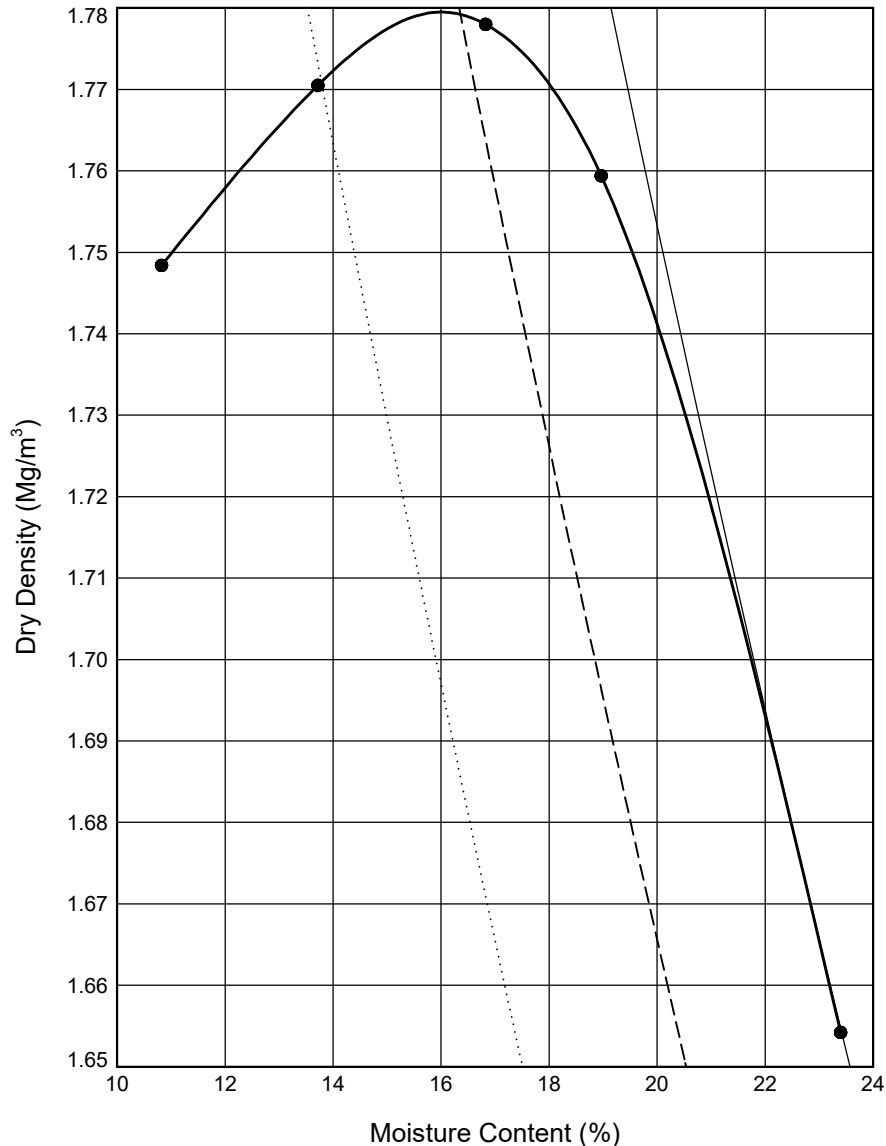
738355



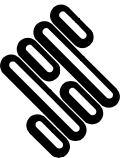
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Trial Pit: **TP03** Sample Ref: **1** Sample Type: **LB** Depth (m): **0.60**



Initial Sample Conditions		Test Details		Test Results		
Initial Moisture Content (%)	: 23	Compaction Type	: Heavy	Maximum Dry Density (Mg/m³) : 1.78		
% Retained on 37.5mm BS Sieve	: 0	Mass of Rammer (kg):	4.5	Optimum Moisture Content (%) : 16		
% Retained on 20.0mm BS Sieve	: 0	Type of Mould	: 1 LITRE	Method Used: Clause 11.5		
Particle Density - assumed (Mg/m³)	: 2.70	Remarks:				
Size of Soil Pieces	: <20mm					
Sample Description				Key to Air Voids Lines		
Grey mottled orangish brown slightly gravelly slightly sandy CLAY				———— 0%		
				— — — — 5%		
				 10%		

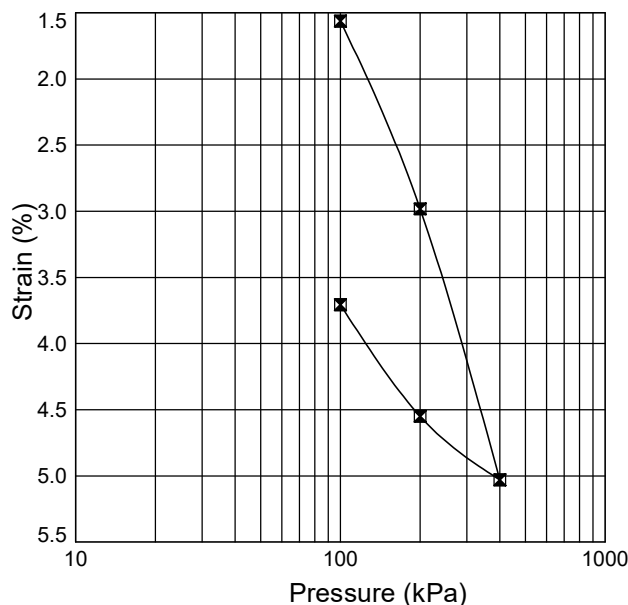
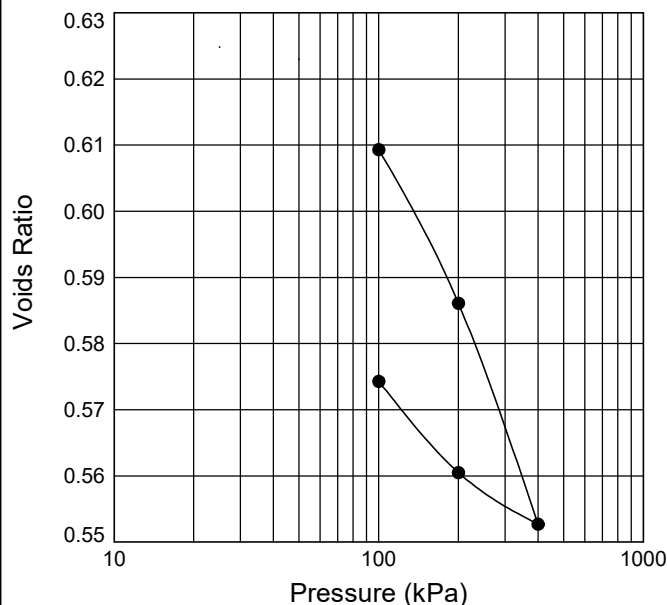
 STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By		Date
			FRANCESCA BENNETT
	Contract		Contract Ref:
Bluemay Park Phase 3, Bidmead Park, Melksham		738355	
			

INCREMENTAL LOADING OEDOMETER TEST

In accordance with BS EN ISO 17892 Part 5 : 2017

Window Sample: **WS02** Sample Ref: **1** Sample Type: **U** Depth (m): **1.60**

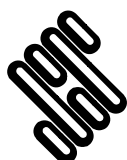
Description : **Brownish grey mottled orange slightly sandy silty CLAY with occasional gypsum**



SPECIMEN DETAILS	INITIAL	FINAL
Diameter (mm) :	50.00	50.00
Height (mm) :	20.02	19.28
Assumed Particle Density (Mg/m ³) :	2.65	2.65
Water Content (%) :	23.8	23.4
Wet Density (Mg/m ³) :	2.01	2.08
Dry Density (Mg/m ³) :	1.62	1.68
Voids Ratio :	0.6349	0.5743

TEST DETAILS								
Stage	Duration (days)	Pressure (kPa)	Strain (%)	Void Ratio	M _v (m ² /MN)	T ₉₀ (min)	C _v (m ² /yr)	Comments etc.
Loading	0.5	0 - 25	0.619	0.6248	NA	NA	NA	Sample swelling
Loading	0.5	25 - 50	0.729	0.6230	NA	NA	NA	
Loading	1	50 - 100	1.563	0.6093	0.17	10	4.3	Sample swelling
Loading	1	100 - 200	2.982	0.5861	0.14	13	3.2	
Loading	1	200 - 400	5.030	0.5527	0.11	19	2.2	
Unloading	1	400 - 200	4.550	0.5605	NA	NA	NA	
Unloading	1	200 - 100	3.706	0.5743	NA	NA	NA	

Notes: Method of time-setting used (min): **T₉₀**. Average temperature during test (degC): **21.3**.
Frame Correction Applied



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Contract		Contract Ref:
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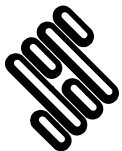
SUMMARY OF MEASUREMENT OF SWELLING PRESSURE TESTS

In accordance with clause 4.3 of BS1377:Part 5:1990

[illegible]

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT)

Note: X_a = assumed particle density, X_m = measured particle density.



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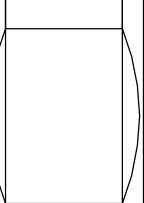


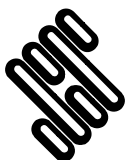
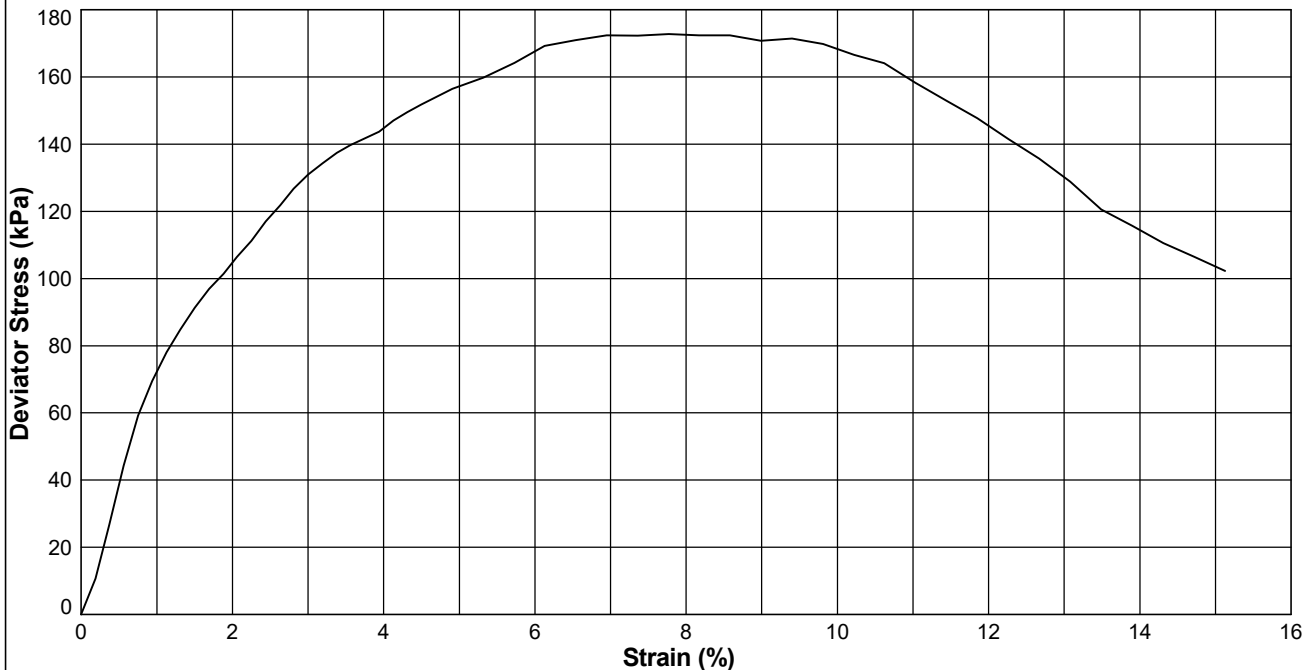
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8 : 2018

Window Sample: **WS02** Sample Ref: **1** Sample Type: **U** Depth (m): **1.42**

Description : **Brownish grey mottled orange slightly sandy silty CLAY with occasional gypsum**

STAGE/SPECIMEN NUMBER		1	2	3
SPECIMEN DETAILS	Sample Condition	Undisturbed		
	Orientation of sample	Vertical		
	Diameter (mm)	68.75		
	Height (mm)	138.49		
	Water Content (%)	22.8		
	Bulk Density (Mg/m ³)	2.03		
	Dry Density (Mg/m ³)	1.65		
	Void Ratio	0.6022		
TEST DETAILS	Membrane Type	Rubber		
	Membrane Thickness (mm)	0.45		
	Rate of Axial Displacement (%/min)	1.44		
	Cell Pressure (kPa)	25		
	Membrane Correction (kPa)	1.23		
	Corrected Deviator Stress (kPa)	173		
	Undrained Shear Strength (kPa)	86		
FAILURE DETAILS	Strain at Failure (%)	7.8		
	Mode of Failure			
	1 : Plastic (Barrelling)			



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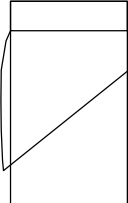


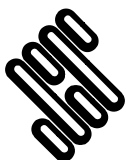
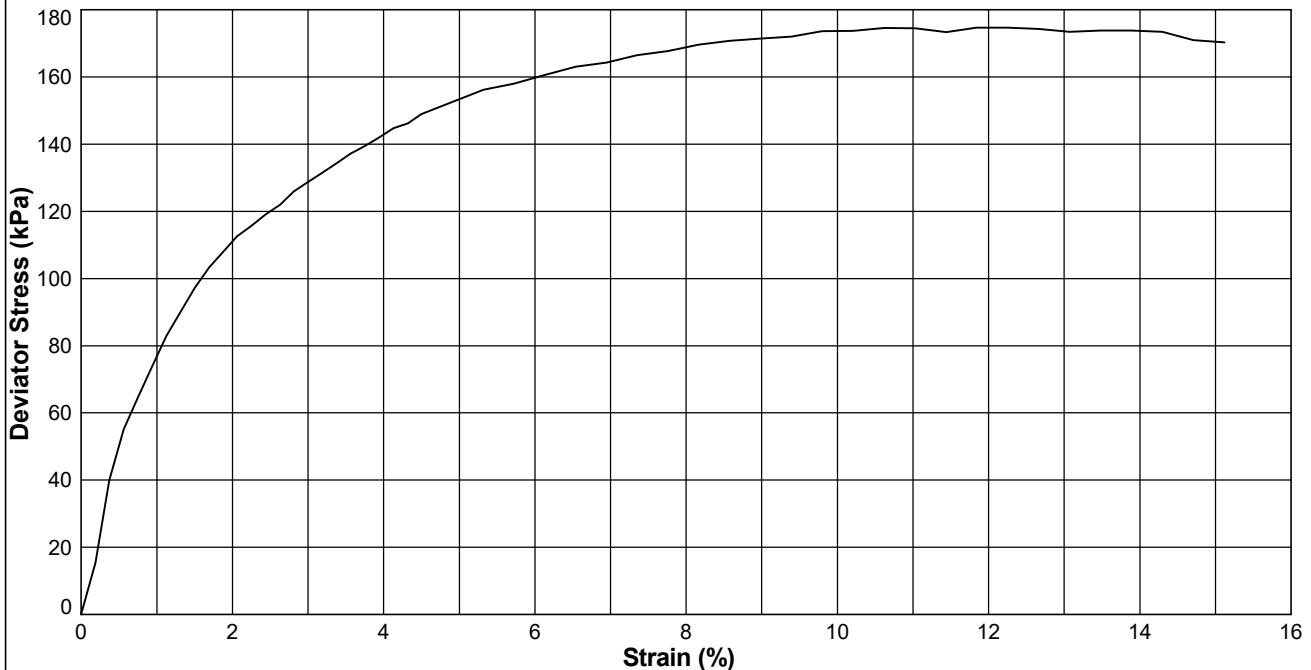
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8 : 2018

Window Sample: **WS03** Sample Ref: **2** Sample Type: **U** Depth (m): **2.29**

Description : **Light brownish grey silty CLAY with some gypsum**

STAGE/SPECIMEN NUMBER		1	2	3
SPECIMEN DETAILS	Sample Condition	Undisturbed		
	Orientation of sample	Vertical		
	Diameter (mm)	68.92		
	Height (mm)	138.43		
	Water Content (%)	22.5		
	Bulk Density (Mg/m ³)	2.01		
	Dry Density (Mg/m ³)	1.64		
	Void Ratio	0.6122		
TEST DETAILS	Membrane Type	Rubber		
	Membrane Thickness (mm)	0.45		
	Rate of Axial Displacement (%/min)	1.44		
	Cell Pressure (kPa)	40		
	Membrane Correction (kPa)	1.73		
	Corrected Deviator Stress (kPa)	175		
	Undrained Shear Strength (kPa)	87		
FAILURE DETAILS	Strain at Failure (%)	12.2		
	Mode of Failure			
	1 : Brittle (shear plane)			



STRUCTURAL SOILS
1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By

Date

FRANCESCA BENNETT

26/08/25

Contract

Contract Ref:

**Bluemay Park Phase 3, Bidmead
Park, Melksham**

738355



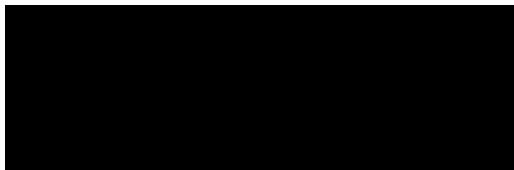
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/08296
Issue Number: 1
Date: 08 August, 2025

Client: Structural Soils Limited (Bristol Lab)
Unit 1a
Princess Street
Bedminster
Bristol
UK
BS3 4AG

Project Manager: Bristolchem/Valeria Chacinmijova
Project Name: Bluemay Park Phase 3, Bidmead Park, Melksham
Project Ref: 738355
Order No: N/A
Date Samples Received: 28/07/25
Date Instructions Received: 30/07/25
Date Analysis Completed: 08/08/25

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 25/08296

Client Project Name: Bluemay Park Phase 3, Bidmead
Park, Melksham

Client Project Ref: 738355

Lab Sample ID	25/08296/1	25/08296/2						Units	Limit of Detection	Method ref
Client Sample No	6	6								
Client Sample ID	WS01	WS06								
Depth to Top	2.80	1.70								
Depth To Bottom	3.00	2.00								
Date Sampled										
Sample Type	SOIL - D	SOIL - B								
Sample Matrix Code	6A	6A								
% Stones >10mm _A	<0.1	<0.1						% w/w	0.1	A-T-044
pH BRE _D ^{M#}	7.55	8.09						pH	0.01	A-T-031s
Sulphate BRE (water sol 2:1) _D ^{M#}	2120	647						mg/l	10	A-T-026s
Sulphate BRE (acid sol) _D ^{M#}	7.09	0.18						% w/w	0.02	A-T-028s
Sulphur BRE (total) _D	3.58	0.06						% w/w	0.01	A-T-024s

Report Notes

General

- This report shall not be reproduced, except in full, without written approval from Envirolab.
- The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
- The results reported herein relate only to the material supplied to the laboratory.
- The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
- Analytical results reflect the quality of the sample at the time of analysis only.
- Opinions and Interpretations expressed are outside our scope of accreditation.
- A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
- If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
- Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript “#”	Accredited to ISO 17025
Superscript “M”	Accredited to MCertS
Superscript “U”	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript “A”	Analysis performed on as-received Sample
Subscript “D”	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript “D” on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript “A”	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis

“Trace Asbestos Identified” will be reported if there is not enough present to verify the type.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs

Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.

Soil Chemical Analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as “% stones >10mm”.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any “A” subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any “D” subscripts.

TPH by method A-T-007:

For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.

Results “with Clean up” indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:

EPH CWG results have humics mathematically subtracted through instrument calculation.

Where these humic substances have been identified in any IDs from “TPH CWG with clean up” please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Bristol Lab), Unit 1a, Princess Street, Bedminster,
Bristol, UK, BS3 4AG

Project: Bluemay Park Phase 3, Bidmead Park, Melksham
Clients Project No: 738355

Project No: 25/08296
Date Received: 30/07/2025 (am)
Cool Box Temperatures (°C): 17.4

Lab Sample ID	25/08296/1	25/08296/2
Client Sample No	6	6
Client Sample ID/Depth	WS01 2.80-3.00m	WS06 1.70-2.00m
Date Sampled		
Deviation Code		
E (no date)	✓	✓

Key
E (no date) No sampling date provided (all results affected if not provided)

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	25/08296/1	25/08296/2
Client Sample No	6	6
Client Sample ID/Depth	WS01 2.80-3.00m	WS06 1.70-2.00m
Date Sampled		
A-T-024s	08/08/2025	08/08/2025
A-T-026s	04/08/2025	04/08/2025
A-T-028s	08/08/2025	06/08/2025
A-T-031s	04/08/2025	04/08/2025
A-T-044	06/08/2025	06/08/2025

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

APPENDIX E - GEOENVIRONMENTAL TESTING

- (i) Laboratory Test Results
- (ii) HazWasteOnline Classification Report

FINAL ANALYTICAL TEST REPORT

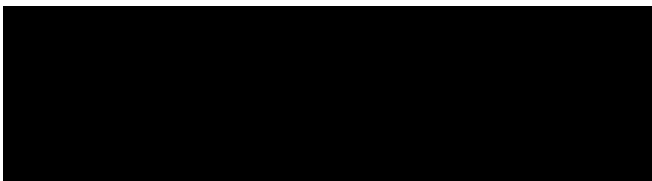
Envirolab Job Number: 25/07965
Issue Number: 1

Date: 18 August, 2025

Client: Structural Soils Limited (Bristol)
The Old School
Stillhouse Lane
Bedminster
Bristol
UK
BS3 4EB

Project Manager: Adam Lumber/Rocio Albertos
Project Name: Bluemay Phase 3, Bidmead Park, Melksham
Project Ref: 738355
Order No: N/A
Date Samples Received: 18/07/25
Date Instructions Received: 23/07/25
Date Analysis Completed: 18/08/25

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 25/07965

Client Project Name: Bluemay Phase 3, Bidmead Park,
Melksham

Client Project Ref: 738355

Lab Sample ID	25/07965/1	25/07965/4	25/07965/10	25/07965/11	25/07965/12	25/07965/13	25/07965/15	Units	Limit of Detection	Method ref
Client Sample No	101	102	101	102	103	104	101			
Client Sample ID	WS01	WS02	WS05	WS05	WS05	WS05	WS06			
Depth to Top	0.20	0.40	0.20	0.70	1.00	1.80	0.20			
Depth To Bottom	0.30	0.50	0.30	0.80	1.10	1.90	0.30			
Date Sampled	16-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25			
Sample Type	SOLID	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	7	6AE	5AE	5ABE	5A	3AE	6AE			
% Moisture at <40C _A	8.6	13.4	12.1	-	-	18.0	8.1	% w/w	0.1	A-T-044
% Stones >10mm _A	<0.1	18.7	25.5	9.6	24.2	22.3	18.3	% w/w	0.1	A-T-044
pH _D ^{M#}	8.16 ^U	7.71	7.71	-	-	8.31	8.45	pH	0.01	A-T-031s
pH BRE _D ^{M#}	-	-	-	-	8.01	-	-	pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	<0.01 ^U	2.91	1.13	-	-	1.20	0.16	g/l	0.01	A-T-026s
Sulphate BRE (water sol 2:1) _D ^{M#}	-	-	-	-	168	-	-	mg/l	10	A-T-026s
Sulphate BRE (acid sol) _D ^{M#}	-	-	-	-	0.14	-	-	% w/w	0.02	A-T-028s
Sulphur BRE (total) _D	-	-	-	-	0.08	-	-	% w/w	0.01	A-T-024s
Cyanide (total) _A ^{M#}	<1 ^U	<1	<1	-	-	<1	<1	mg/kg	1	A-T-042sTCN
Organic Matter _D ^{M#}	2.00 ^U	1.10	0.79	-	-	0.75	3.01	% w/w	0.14	A-T-032s
Arsenic _D ^{M#}	6 ^U	7	7	-	-	8	6	mg/kg	1	A-T-024s
Cadmium _D	<1.0	<1.0	<1.0	-	-	<1.0	<1.0	mg/kg	1	A-T-024s
Copper _D ^{M#}	7 ^U	15	10	-	-	11	13	mg/kg	1	A-T-024s
Chromium _D ^{M#}	13 ^U	13	12	-	-	12	11	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	-	-	<1	<1	mg/kg	1	A-T-040s
Lead _D ^{M#}	15 ^U	14	12	-	-	12	58	mg/kg	1	A-T-024s
Mercury _D	<0.17	<0.17	<0.17	-	-	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	11 ^U	26	25	-	-	26	12	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1 ^U	<1	<1	-	-	<1	<1	mg/kg	1	A-T-024s
Zinc _D ^{M#}	35 ^U	67	50	-	-	51	54	mg/kg	1	A-T-024s

Envirolab Job Number: 25/07965

Client Project Name: Bluemay Phase 3, Bidmead Park,
Melksham

Client Project Ref: 738355

Lab Sample ID	25/07965/1	25/07965/4	25/07965/10	25/07965/11	25/07965/12	25/07965/13	25/07965/15	Units	Limit of Detection	Method ref
Client Sample No	101	102	101	102	103	104	101			
Client Sample ID	WS01	WS02	WS05	WS05	WS05	WS05	WS06			
Depth to Top	0.20	0.40	0.20	0.70	1.00	1.80	0.20			
Depth To Bottom	0.30	0.50	0.30	0.80	1.10	1.90	0.30			
Date Sampled	16-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25			
Sample Type	SOLID	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	7	6AE	5AE	5ABE	5A	3AE	6AE			
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD ^U	NAD	NAD	-	-	NAD	NAD			A-T-045
Asbestos Matrix (visual) _D	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope) _D	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	N/A	N/A	-	-	N/A	N/A			A-T-045

Envirolab Job Number: 25/07965

Client Project Name: Bluemay Phase 3, Bidmead Park,
Melksham

Client Project Ref: 738355

Lab Sample ID	25/07965/1	25/07965/4	25/07965/10	25/07965/11	25/07965/12	25/07965/13	25/07965/15	Units	Limit of Detection	Method ref
Client Sample No	101	102	101	102	103	104	101			
Client Sample ID	WS01	WS02	WS05	WS05	WS05	WS05	WS06			
Depth to Top	0.20	0.40	0.20	0.70	1.00	1.80	0.20			
Depth To Bottom	0.30	0.50	0.30	0.80	1.10	1.90	0.30			
Date Sampled	16-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25			
Sample Type	SOLID	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	7	6AE	5AE	5ABE	5A	3AE	6AE			
PAH-16MS										
Acenaphthene _A ^{M#}	<0.01 ^U	<0.01	<0.01	-	-	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01 ^U	<0.01	<0.01	-	-	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02 ^U	<0.02	<0.02	-	-	<0.02	0.03	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.05 ^U	<0.04	<0.04	-	-	<0.04	0.18	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.04 ^U	<0.04	0.04	-	-	<0.04	0.18	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.05 ^U	<0.05	0.05	-	-	<0.05	0.23	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05 ^U	<0.05	<0.05	-	-	<0.05	0.12	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07 ^U	<0.07	<0.07	-	-	<0.07	0.08	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	0.07 ^U	<0.06	<0.06	-	-	<0.06	0.23	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04 ^U	<0.04	<0.04	-	-	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	0.10 ^U	<0.08	<0.08	-	-	<0.08	0.29	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01 ^U	<0.01	<0.01	-	-	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.03 ^U	<0.03	0.03	-	-	<0.03	0.12	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.03 ^U	<0.03	<0.03	-	-	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	0.07 ^U	<0.03	<0.03	-	-	<0.03	0.11	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	0.09 ^U	<0.07	<0.07	-	-	<0.07	0.28	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	0.50 ^U	<0.08	0.12	-	-	<0.08	1.85	mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/07965

Client Project Name: Bluemay Phase 3, Bidmead Park,
Melksham

Client Project Ref: 738355

Lab Sample ID	25/07965/1	25/07965/4	25/07965/10	25/07965/11	25/07965/12	25/07965/13	25/07965/15	Units	Limit of Detection	Method ref
Client Sample No	101	102	101	102	103	104	101			
Client Sample ID	WS01	WS02	WS05	WS05	WS05	WS05	WS06			
Depth to Top	0.20	0.40	0.20	0.70	1.00	1.80	0.20			
Depth To Bottom	0.30	0.50	0.30	0.80	1.10	1.90	0.30			
Date Sampled	16-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25			
Sample Type	SOLID	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	7	6AE	5AE	5ABE	5A	3AE	6AE			
Speciated PCB-EC7 & WHO12										
PCB BZ 28 _A ^{M#}	-	-	-	<0.003	-	-	-	mg/kg	0.003	A-T-004s
PCB BZ 52 _A ^{M#}	-	-	-	<0.002	-	-	-	mg/kg	0.002	A-T-004s
PCB BZ 81 _A ^{M#}	-	-	-	<0.005 ^U	-	-	-	mg/kg	0.005	A-T-004s
PCB BZ 101 _A ^{M#}	-	-	-	<0.004	-	-	-	mg/kg	0.004	A-T-004s
PCB BZ 105 _A ^{M#}	-	-	-	<0.005 ^U	-	-	-	mg/kg	0.005	A-T-004s
PCB BZ 114 _A ^{M#}	-	-	-	<0.005 ^U	-	-	-	mg/kg	0.005	A-T-004s
PCB BZ 118 _A ^{M#}	-	-	-	<0.007	-	-	-	mg/kg	0.007	A-T-004s
PCB BZ 123 _A ^{M#}	-	-	-	<0.005 ^U	-	-	-	mg/kg	0.005	A-T-004s
PCB BZ 126 _A ^{M#}	-	-	-	<0.005 ^U	-	-	-	mg/kg	0.005	A-T-004s
PCB BZ 138 _A ^{M#}	-	-	-	<0.006	-	-	-	mg/kg	0.006	A-T-004s
PCB BZ 153 _A ^{M#}	-	-	-	<0.004	-	-	-	mg/kg	0.004	A-T-004s
PCB BZ 156 _A ^{M#}	-	-	-	<0.005 ^U	-	-	-	mg/kg	0.005	A-T-004s
PCB BZ 157 _A ^{M#}	-	-	-	<0.005 ^U	-	-	-	mg/kg	0.005	A-T-004s
PCB BZ 167 _A ^{M#}	-	-	-	<0.005 ^U	-	-	-	mg/kg	0.005	A-T-004s
PCB BZ 169 _A ^{M#}	-	-	-	<0.005 ^U	-	-	-	mg/kg	0.005	A-T-004s
PCB BZ 180 _A ^{M#}	-	-	-	<0.004	-	-	-	mg/kg	0.004	A-T-004s
PCB BZ 189 _A ^{M#}	-	-	-	<0.005 ^U	-	-	-	mg/kg	0.005	A-T-004s
PCB BZ 77 _A ^{M#}	-	-	-	<0.005 ^U	-	-	-	mg/kg	0.005	A-T-004s
Total Speciated PCB-EC7 & WHO12 _A ^{M#}	-	-	-	<0.007	-	-	-	mg/kg	0.003	A-T-004s
TPH Banded 1 with CLEANUP + ID										
>C6-C8 _A ^{M#}	<5 ^U	<5	<5	-	-	<5	<5	mg/kg	5	A-T-007s
>C6-C8 _A	-	-	-	-	<5	-	-	mg/kg	5	A-T-007s
>C8-C10 _A ^{M#}	<1 ^U	<1	<1	-	-	<1	<1	mg/kg	1	A-T-007s
>C8-C10 _A	-	-	-	-	<1	-	-	mg/kg	1	A-T-007s
>C10-C12 _A ^{M#}	<1 ^U	<1	<1	-	-	<1	<1	mg/kg	1	A-T-007s
>C10-C12 _A	-	-	-	-	<1	-	-	mg/kg	1	A-T-007s
>C12-C16 _A ^{M#}	<2 ^U	<2	<2	-	-	<2	<2	mg/kg	2	A-T-007s
>C12-C16 _A	-	-	-	-	6	-	-	mg/kg	2	A-T-007s
>C16-C21 _A ^{M#}	<2 ^U	<2	<2	-	-	<2	<2	mg/kg	2	A-T-007s
>C16-C21 _A	-	-	-	-	13	-	-	mg/kg	2	A-T-007s
>C21-C40 _A ^{M#}	<5 ^U	<5	5	-	-	<5	14	mg/kg	5	A-T-007s

Envirolab Job Number: 25/07965

Client Project Name: Bluemay Phase 3, Bidmead Park,
Melksham

Client Project Ref: 738355

Lab Sample ID	25/07965/1	25/07965/4	25/07965/10	25/07965/11	25/07965/12	25/07965/13	25/07965/15	Units	Limit of Detection	Method ref
Client Sample No	101	102	101	102	103	104	101			
Client Sample ID	WS01	WS02	WS05	WS05	WS05	WS05	WS06			
Depth to Top	0.20	0.40	0.20	0.70	1.00	1.80	0.20			
Depth To Bottom	0.30	0.50	0.30	0.80	1.10	1.90	0.30			
Date Sampled	16-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25			
Sample Type	SOLID	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	7	6AE	5AE	5ABE	5A	3AE	6AE			
>C21-C40 _A	-	-	-	-	66	-	-	mg/kg	5	A-T-007s
TPH ID Interpretation _A	Concentration too low to identify	Concentration too low to identify	C12-C40 with unknown hydrocarbons	-	C12-C40 with unknown hydrocarbons	Concentration too low to identify	C10-C40 with unknown hydrocarbons			A-T-007s
Total TPH Banded 1 with CLEANUP + ID _A	<5 ^U	<5	5	-	85	<5	14	mg/kg	5	A-T-007s

Envirolab Job Number: 25/07965

Client Project Name: Bluemay Phase 3, Bidmead Park,
Melksham

Client Project Ref: 738355

Lab Sample ID	25/07965/1	25/07965/4	25/07965/10	25/07965/11	25/07965/12	25/07965/13	25/07965/15	Units	Limit of Detection	Method ref
Client Sample No	101	102	101	102	103	104	101			
Client Sample ID	WS01	WS02	WS05	WS05	WS05	WS05	WS06			
Depth to Top	0.20	0.40	0.20	0.70	1.00	1.80	0.20			
Depth To Bottom	0.30	0.50	0.30	0.80	1.10	1.90	0.30			
Date Sampled	16-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25			
Sample Type	SOLID	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	7	6AE	5AE	5ABE	5A	3AE	6AE			
VOC										
Dichlorodifluoromethane _A	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
Chloromethane _A	-	-	-	-	<250	<250	-	µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene) _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
Bromomethane _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
Chloroethane _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
Trichlorofluoromethane _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
1,1-Dichloroethene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
Carbon Disulphide _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
Dichloromethane _A	-	-	-	-	<125	<125	-	µg/kg	5	A-T-006s
trans 1,2-Dichloroethene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
1,1-Dichloroethane _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
cis 1,2-Dichloroethene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
2,2-Dichloropropane _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
Bromochloromethane _A [#]	-	-	-	-	<125	<125	-	µg/kg	5	A-T-006s
Chloroform _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
1,1,1-Trichloroethane _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
1,1-Dichloropropene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
Carbon Tetrachloride _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
1,2-Dichloroethane _A [#]	-	-	-	-	<50	<50	-	µg/kg	2	A-T-006s
Benzene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
Trichloroethene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
1,2-Dichloropropane _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
Dibromomethane _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
Bromodichloromethane _A [#]	-	-	-	-	<250	<250	-	µg/kg	10	A-T-006s
cis 1,3-Dichloropropene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
Toluene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
trans 1,3-Dichloropropene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
1,1,2-Trichloroethane _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
1,3-Dichloropropane _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
Tetrachloroethene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
Dibromochloromethane _A [#]	-	-	-	-	<75	<75	-	µg/kg	3	A-T-006s
1,2-Dibromoethane _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s

Envirolab Job Number: 25/07965

Client Project Name: Bluemay Phase 3, Bidmead Park,
Melksham

Client Project Ref: 738355

Lab Sample ID	25/07965/1	25/07965/4	25/07965/10	25/07965/11	25/07965/12	25/07965/13	25/07965/15	Units	Limit of Detection	Method ref
Client Sample No	101	102	101	102	103	104	101			
Client Sample ID	WS01	WS02	WS05	WS05	WS05	WS05	WS06			
Depth to Top	0.20	0.40	0.20	0.70	1.00	1.80	0.20			
Depth To Bottom	0.30	0.50	0.30	0.80	1.10	1.90	0.30			
Date Sampled	16-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25	15-Jul-25			
Sample Type	SOLID	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	7	6AE	5AE	5ABE	5A	3AE	6AE			
Chlorobenzene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane _A	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
Ethylbenzene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
m & p Xylene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
o-Xylene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
Styrene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
Bromoform _A [#]	-	-	-	-	<75	<75	-	µg/kg	3	A-T-006s
Isopropylbenzene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane _A	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
1,2,3-Trichloropropane _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
Bromobenzene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
n-Propylbenzene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
2-Chlorotoluene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
4-Chlorotoluene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
tert-Butylbenzene _A [#]	-	-	-	-	<50	<50	-	µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
sec-Butylbenzene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
4-Isopropyltoluene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
1,3-Dichlorobenzene _A	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
1,4-Dichlorobenzene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
n-Butylbenzene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
1,2-Dichlorobenzene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP) _A	-	-	-	-	<50	<50	-	µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene _A	-	-	-	-	<75	<75	-	µg/kg	3	A-T-006s
Hexachlorobutadiene _A [#]	-	-	-	-	<25	<25	-	µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene _A	-	-	-	-	<75	<75	-	µg/kg	3	A-T-006s

Report Notes

General

- This report shall not be reproduced, except in full, without written approval from Envirolab.
- The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
- The results reported herein relate only to the material supplied to the laboratory.
- The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
- Analytical results reflect the quality of the sample at the time of analysis only.
- Opinions and Interpretations expressed are outside our scope of accreditation.
- A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
- If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
- Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript “#”	Accredited to ISO 17025
Superscript “M”	Accredited to MCertS
Superscript “U”	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript “A”	Analysis performed on as-received Sample
Subscript “D”	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript “D” on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript “A”	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis

“Trace Asbestos Identified” will be reported if there is not enough present to verify the type.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs

Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.

Soil Chemical Analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as “% stones >10mm”.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any “A” subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any “D” subscripts.

TPH by method A-T-007:

For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.

Results “with Clean up” indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:

EPH CWG results have humics mathematically subtracted through instrument calculation.

Where these humic substances have been identified in any IDs from “TPH CWG with clean up” please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Bristol), The Old School , Stillhouse Lane, Bedminster, Bristol, UK, BS3 4EB **Project No:** 25/07965
Project: Bluemay Phase 3, Bidmead Park, Melksham **Date Received:** 23/07/2025 (pm)
Clients Project No: 738355 **Cool Box Temperatures (°C):** 19.7-21.0

Lab Sample ID	25/07965/1	25/07965/4	25/07965/10	25/07965/12	25/07965/13	25/07965/15
Client Sample No	101	102	101	103	104	101
Client Sample ID/Depth	WS01 0.20-0.30m	WS02 0.40-0.50m	WS05 0.20-0.30m	WS05 1.00-1.10m	WS05 1.80-1.90m	WS06 0.20-0.30m
Date Sampled	16/07/25	15/07/25	15/07/25	15/07/25	15/07/25	15/07/25
Deviation Code						
F	✓	✓	✓	✓	✓	✓

Key

F Maximum holding time exceeded between sampling date and analysis for analytes listed below

HOLDING TIME EXCEEDANCES

Lab Sample ID	25/07965/1	25/07965/4	25/07965/10	25/07965/12	25/07965/13	25/07965/15
Client Sample No	101	102	101	103	104	101
Client Sample ID/Depth	WS01 0.20-0.30m	WS02 0.40-0.50m	WS05 0.20-0.30m	WS05 1.00-1.10m	WS05 1.80-1.90m	WS06 0.20-0.30m
Date Sampled	16/07/25	15/07/25	15/07/25	15/07/25	15/07/25	15/07/25
PAH-16MS	✓	✓	✓		✓	✓
TPH Banded 1 with CLEANUP + ID	✓	✓	✓	✓	✓	✓
Cyanide (total)	✓	✓	✓		✓	✓
VOC				✓	✓	

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	25/07965/1	25/07965/4	25/07965/10	25/07965/11	25/07965/12	25/07965/13	25/07965/15
Client Sample No	101	102	101	102	103	104	101
Client Sample ID/Depth	WS01 0.20-0.30m	WS02 0.40-0.50m	WS05 0.20-0.30m	WS05 0.70-0.80m	WS05 1.00-1.10m	WS05 1.80-1.90m	WS06 0.20-0.30m
Date Sampled	16/07/25	15/07/25	15/07/25	15/07/25	15/07/25	15/07/25	15/07/25
A-T-004s				04/08/2025			
A-T-006s					05/08/2025	05/08/2025	
A-T-007s	01/08/2025	01/08/2025	01/08/2025		01/08/2025	01/08/2025	01/08/2025
A-T-019s	04/08/2025	04/08/2025	04/08/2025			04/08/2025	04/08/2025
A-T-024s	06/08/2025	06/08/2025	06/08/2025		14/08/2025	06/08/2025	06/08/2025
A-T-026s	04/08/2025	04/08/2025	04/08/2025		12/08/2025	04/08/2025	04/08/2025
A-T-028s					14/08/2025		
A-T-031s	05/08/2025	05/08/2025	05/08/2025		18/08/2025	05/08/2025	05/08/2025
A-T-032s	06/08/2025	06/08/2025	06/08/2025			06/08/2025	06/08/2025
A-T-040s	04/08/2025	04/08/2025	04/08/2025			04/08/2025	04/08/2025
A-T-042sTCN	01/08/2025	01/08/2025	01/08/2025			01/08/2025	01/08/2025
A-T-044	06/08/2025	06/08/2025	06/08/2025	06/08/2025	06/08/2025	06/08/2025	06/08/2025
A-T-045	28/07/2025	28/07/2025	28/07/2025			28/07/2025	28/07/2025

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

FINAL ANALYTICAL TEST REPORT

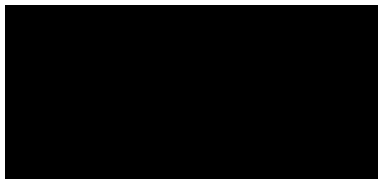
Envirolab Job Number: 25/08645
Issue Number: 1

Date: 20 August, 2025

Client: Structural Soils Limited (Bristol)
The Old School
Stillhouse Lane
Bedminster
Bristol
UK
BS3 4EB

Project Manager: Adam Lumber/Gerry Whittall/Matthew Hall/Mike Addin
Project Name: Bluemay Phase 3, Bidmead Park, Melksham
Project Ref: 738355
Order No: N/A
Date Samples Received: 07/08/25
Date Instructions Received: 07/08/25
Date Analysis Completed: 20/08/25

Approved by:



Gemma Berrisford
Deputy Client Services Supervisor

Envirolab Job Number: 25/08645

Client Project Name: Bluemay Phase 3, Bidmead Park,
Melksham

Client Project Ref: 738355

Lab Sample ID	25/08645/1	25/08645/2	25/08645/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS01	WS05A	WS06							
Depth to Top	4.75	2.02	1.88							
Depth To Bottom										
Date Sampled	06-Aug-25	06-Aug-25	06-Aug-25							
Sample Type	WATER - GW	WATER - GW	WATER - GW							
Sample Matrix Code	N/A	N/A	N/A							
pH (w) _A [#]	6.68	7.26	7.43					pH	0.01	A-T-031w
Hardness Total _A [#]	2660	1593.5	1700.6					mg/l Ca CO3	4	A-T-049w
Sulphate (w) _A [#]	2850	1620	41					mg/l	1	A-T-026w
Cyanide (total) (w) _A [#]	<0.005	<0.005	<0.005					mg/l	0.005	A-T-042wTCN
DOC - Dissolved Organic Carbon (w) _A [#]	12.6	8.1	<2.0					mg/l	2	A-T-032w
Arsenic (dissolved) _A [#]	<10	<10	<10					µg/l	1	A-T-025w
Cadmium (dissolved) _A [#]	<2.0	<2.0	<2.0					µg/l	0.2	A-T-025w
Calcium (dissolved) _A [#]	494	442	463					mg/l	1	A-T-049w
Copper (dissolved) _A [#]	<40	<40	<40					µg/l	4	A-T-025w
Chromium (dissolved) _A [#]	<10	<10	<10					µg/l	1	A-T-025w
Lead (dissolved) _A [#]	<10	<10	<10					µg/l	0.1	A-T-025w
Mercury (dissolved) _A [#]	<1.0	<1.0	<1.0					µg/l	0.1	A-T-025w
Nickel (dissolved) _A [#]	28	<20	<20					µg/l	2	A-T-025w
Selenium (dissolved) _A [#]	<10	<10	<10					µg/l	1	A-T-025w
Zinc (dissolved) _A [#]	<20	<20	<20					µg/l	2	A-T-025w
EPH CWG GCxGC ID (w) (for FID characterisations) _A	N/A	N/A	N/A							A-T-055w

Envirolab Job Number: 25/08645

Client Project Name: Bluemay Phase 3, Bidmead Park,
Melksham

Client Project Ref: 738355

Lab Sample ID	25/08645/1	25/08645/2	25/08645/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS01	WS05A	WS06							
Depth to Top	4.75	2.02	1.88							
Depth To Bottom										
Date Sampled	06-Aug-25	06-Aug-25	06-Aug-25							
Sample Type	WATER - GW	WATER - GW	WATER - GW							
Sample Matrix Code	N/A	N/A	N/A							
PAH 16MS (w)										
Acenaphthene (w) _A [#]	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Acenaphthylene (w) _A [#]	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Anthracene (w) _A [#]	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Benzo(a)anthracene (w) _A [#]	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Benzo(a)pyrene (w) _A [#]	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w) _A [#]	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Benzo(ghi)perylene (w) _A [#]	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w) _A [#]	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Chrysene (w) _A [#]	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w) _A [#]	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Fluoranthene (w) _A [#]	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Fluorene (w) _A [#]	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w) _A [#]	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Naphthalene (w) _A [#]	0.02	<0.01	<0.01					µg/l	0.01	A-T-019w
Phenanthrene (w) _A [#]	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Pyrene (w) _A [#]	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Total PAH 16MS (w) _A [#]	0.02	<0.01	<0.01					µg/l	0.01	A-T-019w

Envirolab Job Number: 25/08645

Client Project Name: Bluemay Phase 3, Bidmead Park,
Melksham

Client Project Ref: 738355

Lab Sample ID	25/08645/1	25/08645/2	25/08645/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS01	WS05A	WS06							
Depth to Top	4.75	2.02	1.88							
Depth To Bottom										
Date Sampled	06-Aug-25	06-Aug-25	06-Aug-25							
Sample Type	WATER - GW	WATER - GW	WATER - GW							
Sample Matrix Code	N/A	N/A	N/A							
Speciated PCB-EC7 & WHO12 (w)										
PCB BZ 28 (w) ^{A#}	-	<0.001	-					µg/l	0.001	A-T-004w
PCB BZ 52 (w) ^{A#}	-	<0.001	-					µg/l	0.001	A-T-004w
PCB BZ 81 (w) _A	-	<0.001	-					µg/l	0.001	A-T-004w
PCB BZ 101 (w) ^{A#}	-	<0.001	-					µg/l	0.001	A-T-004w
PCB BZ 105 (w) _A	-	<0.001	-					µg/l	0.001	A-T-004w
PCB BZ 114 (w) _A	-	<0.001	-					µg/l	0.001	A-T-004w
PCB BZ 118 (w) ^{A#}	-	<0.002	-					µg/l	0.002	A-T-004w
PCB BZ 123 (w) _A	-	<0.001	-					µg/l	0.001	A-T-004w
PCB BZ 126 (w) _A	-	<0.001	-					µg/l	0.001	A-T-004w
PCB BZ 138 (w) ^{A#}	-	<0.001	-					µg/l	0.001	A-T-004w
PCB BZ 153 (w) ^{A#}	-	<0.001	-					µg/l	0.001	A-T-004w
PCB BZ 156 (w) _A	-	<0.001	-					µg/l	0.001	A-T-004w
PCB BZ 157 (w) _A	-	<0.001	-					µg/l	0.001	A-T-004w
PCB BZ 167 (w) _A	-	<0.001	-					µg/l	0.001	A-T-004w
PCB BZ 169 (w) _A	-	<0.001	-					µg/l	0.001	A-T-004w
PCB BZ 180 (w) ^{A#}	-	<0.001	-					µg/l	0.001	A-T-004w
PCB BZ 189 (w) _A	-	<0.001	-					µg/l	0.001	A-T-004w
PCB BZ 77 (w) _A	-	<0.001	-					µg/l	0.001	A-T-004w
Total Speciated PCB-EC7 & WHO12 (w) _A	-	<0.002	-					µg/l	0.001	A-T-004w

Envirolab Job Number: 25/08645

Client Project Name: Bluemay Phase 3, Bidmead Park,
Melksham

Client Project Ref: 738355

Lab Sample ID	25/08645/1	25/08645/2	25/08645/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS01	WS05A	WS06							
Depth to Top	4.75	2.02	1.88							
Depth To Bottom										
Date Sampled	06-Aug-25	06-Aug-25	06-Aug-25							
Sample Type	WATER - GW	WATER - GW	WATER - GW							
Sample Matrix Code	N/A	N/A	N/A							
VOC excl. BTEX										
Dichlorodifluoromethane _A	-	<1	-					µg/l	1	A-T-006w
Chloromethane _A	-	<10	-					µg/l	10	A-T-006w
Vinyl Chloride _A [#]	-	<1	-					µg/l	1	A-T-006w
Bromomethane _A [#]	-	<1	-					µg/l	1	A-T-006w
Chloroethane _A [#]	-	<1	-					µg/l	1	A-T-006w
Trichlorofluoromethane _A [#]	-	<1	-					µg/l	1	A-T-006w
trans 1,2-Dichloroethene _A [#]	-	<1	-					µg/l	1	A-T-006w
Dichloromethane _A	-	<5	-					µg/l	5	A-T-006w
Carbon Disulphide _A [#]	-	<1	-					µg/l	1	A-T-006w
1,1-Dichloroethene _A [#]	-	<1	-					µg/l	1	A-T-006w
1,1-Dichloroethane _A [#]	-	3	-					µg/l	1	A-T-006w
cis 1,2-Dichloroethene _A [#]	-	<1	-					µg/l	1	A-T-006w
Bromochloromethane _A [#]	-	<5	-					µg/l	5	A-T-006w
Chloroform _A [#]	-	<1	-					µg/l	1	A-T-006w
2,2-Dichloropropane _A [#]	-	<1	-					µg/l	1	A-T-006w
1,2-Dichloroethane _A [#]	-	<2	-					µg/l	2	A-T-006w
1,1,1-Trichloroethane _A [#]	-	1	-					µg/l	1	A-T-006w
1,1-Dichloropropene _A [#]	-	<1	-					µg/l	1	A-T-006w
Carbon Tetrachloride _A [#]	-	<1	-					µg/l	1	A-T-006w
Dibromomethane _A [#]	-	<1	-					µg/l	1	A-T-006w
1,2-Dichloropropane _A [#]	-	<1	-					µg/l	1	A-T-006w
Bromodichloromethane _A [#]	-	<10	-					µg/l	10	A-T-006w
Trichloroethene _A [#]	-	<1	-					µg/l	1	A-T-006w
cis 1,3-Dichloropropene _A [#]	-	<1	-					µg/l	1	A-T-006w
trans 1,3-Dichloropropene _A [#]	-	<1	-					µg/l	1	A-T-006w
1,1,2-Trichloroethane _A [#]	-	<1	-					µg/l	1	A-T-006w
1,3-Dichloropropane _A [#]	-	<1	-					µg/l	1	A-T-006w
Dibromochloromethane _A [#]	-	<3	-					µg/l	3	A-T-006w
1,2-Dibromoethane _A [#]	-	<1	-					µg/l	1	A-T-006w
Tetrachloroethene _A	-	<1	-					µg/l	1	A-T-006w
1,1,1,2-Tetrachloroethane _A	-	<1	-					µg/l	1	A-T-006w
Chlorobenzene _A [#]	-	<1	-					µg/l	1	A-T-006w

Envirolab Job Number: 25/08645

Client Project Name: Bluemay Phase 3, Bidmead Park,
Melksham

Client Project Ref: 738355

Lab Sample ID	25/08645/1	25/08645/2	25/08645/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS01	WS05A	WS06							
Depth to Top	4.75	2.02	1.88							
Depth To Bottom										
Date Sampled	06-Aug-25	06-Aug-25	06-Aug-25							
Sample Type	WATER - GW	WATER - GW	WATER - GW							
Sample Matrix Code	N/A	N/A	N/A							
Bromoform _A [#]	-	<3	-					µg/l	3	A-T-006w
Styrene _A [#]	-	<1	-					µg/l	1	A-T-006w
1,1,2,2-Tetrachloroethane _A	-	<1	-					µg/l	1	A-T-006w
1,2,3-Trichloropropane _A [#]	-	<1	-					µg/l	1	A-T-006w
Isopropylbenzene _A [#]	-	<1	-					µg/l	1	A-T-006w
Bromobenzene _A [#]	-	<1	-					µg/l	1	A-T-006w
2-Chlorotoluene _A [#]	-	<1	-					µg/l	1	A-T-006w
n-propylbenzene _A [#]	-	<1	-					µg/l	1	A-T-006w
4-Chlorotoluene _A [#]	-	<1	-					µg/l	1	A-T-006w
1,2,4-Trimethylbenzene _A [#]	-	<1	-					µg/l	1	A-T-006w
4-Isopropyltoluene _A [#]	-	<1	-					µg/l	1	A-T-006w
1,3,5-Trimethylbenzene _A [#]	-	<1	-					µg/l	1	A-T-006w
1,2-Dichlorobenzene _A [#]	-	<1	-					µg/l	1	A-T-006w
1,4-Dichlorobenzene _A [#]	-	<1	-					µg/l	1	A-T-006w
sec-Butylbenzene _A [#]	-	<1	-					µg/l	1	A-T-006w
tert-Butylbenzene _A [#]	-	<2	-					µg/l	2	A-T-006w
1,3-Dichlorobenzene _A [#]	-	<1	-					µg/l	1	A-T-006w
n-butylbenzene _A [#]	-	<1	-					µg/l	1	A-T-006w
1,2-Dibromo-3-chloropropane _A [#]	-	<2	-					µg/l	2	A-T-006w
1,2,4-Trichlorobenzene _A [#]	-	<3	-					µg/l	3	A-T-006w
1,2,3-Trichlorobenzene _A [#]	-	<3	-					µg/l	3	A-T-006w
Hexachlorobutadiene _A [#]	-	<1	-					µg/l	1	A-T-006w
TPH CWG (w) with Clean Up										
Ali >C5-C6 (w) _A [#]	<1	<1	<1					µg/l	1	A-T-022w
Ali >C6-C8 (w) _A [#]	<1	<1	<1					µg/l	1	A-T-022w
Ali >C8-C10 (w) _A [#]	<5	<5	<5					µg/l	5	A-T-055w
Ali >C10-C12 (w) _A [#]	<5	<5	<5					µg/l	5	A-T-055w
Ali >C12-C16 (w) _A [#]	<5	<5	<5					µg/l	5	A-T-055w
Ali >C16-C21 (w) _A [#]	<5	<5	<5					µg/l	5	A-T-055w
Ali >C21-C35 (w) _A [#]	<5	<5	<5					µg/l	5	A-T-055w
Ali >C35-C40 (w) _A	<5	<5	<5					µg/l	5	A-T-055w
Total Aliphatics (w) _A [#]	<5	<5	<5					µg/l	5	Calc-As Recd

Envirolab Job Number: 25/08645

Client Project Name: Bluemay Phase 3, Bidmead Park,
Melksham

Client Project Ref: 738355

Lab Sample ID	25/08645/1	25/08645/2	25/08645/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS01	WS05A	WS06							
Depth to Top	4.75	2.02	1.88							
Depth To Bottom										
Date Sampled	06-Aug-25	06-Aug-25	06-Aug-25							
Sample Type	WATER - GW	WATER - GW	WATER - GW							
Sample Matrix Code	N/A	N/A	N/A							
Aro >C5-C7 (w) _A [#]	<1	<1	<1					µg/l	1	A-T-022w
Aro >C7-C8 (w) _A [#]	<1	<1	<1					µg/l	1	A-T-022w
Aro >C8-C10 (w) _A	<5	<5	<5					µg/l	5	A-T-055w
Aro >C10-C12 (w) _A [#]	<5	<5	<5					µg/l	5	A-T-055w
Aro >C12-C16 (w) _A [#]	<5	<5	<5					µg/l	5	A-T-055w
Aro >C16-C21 (w) _A [#]	<5	<5	<5					µg/l	5	A-T-055w
Aro >C21-C35 (w) _A [#]	<10	<10	<10					µg/l	10	A-T-055w
Aro >C35-C40 (w) _A	<5	<5	<5					µg/l	5	A-T-055w
Total Aromatics (w) _A	<10	<10	<10					µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) (w) _A	<10	<10	<10					µg/l	10	Calc-As Recd
BTEX - Benzene (w) _A [#]	<1	<1	<1					µg/l	1	A-T-022w
BTEX - Toluene (w) _A [#]	<1	<1	<1					µg/l	1	A-T-022w
BTEX - Ethyl Benzene (w) _A [#]	<1	<1	<1					µg/l	1	A-T-022w
BTEX - m & p Xylene (w) _A [#]	<1	<1	<1					µg/l	1	A-T-022w
BTEX - o Xylene (w) _A [#]	<1	<1	<1					µg/l	1	A-T-022w
MTBE (w) _A [#]	<1	<1	<1					µg/l	1	A-T-022w

Report Notes

General

- This report shall not be reproduced, except in full, without written approval from Envirolab.
- The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
- The results reported herein relate only to the material supplied to the laboratory.
- The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
- Analytical results reflect the quality of the sample at the time of analysis only.
- Opinions and Interpretations expressed are outside our scope of accreditation.
- A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
- If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
- Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript “#”	Accredited to ISO 17025
Superscript “M”	Accredited to MCertS
Superscript “U”	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript “A”	Analysis performed on as-received Sample
Subscript “D”	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript “D” on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript “A”	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis

“Trace Asbestos Identified” will be reported if there is not enough present to verify the type.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs

Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.

Soil Chemical Analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as “% stones >10mm”.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any “A” subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any “D” subscripts.

TPH by method A-T-007:

For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.

Results “with Clean up” indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:

EPH CWG results have humics mathematically subtracted through instrument calculation.

Where these humic substances have been identified in any IDs from “TPH CWG with clean up” please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Bristol), The Old School , Stillhouse Lane, Bedminster, Bristol, UK, BS3 4EB **Project No:** 25/08645
Project: Bluemay Phase 3, Bidmead Park, Melksham **Date Received:** 07/08/2025 (am)
Clients Project No: 738355 **Cool Box Temperatures (°C):** 14.1

Lab Sample ID	25/08645/1	25/08645/2	25/08645/3
Client Sample No			
Client Sample ID/Depth	WS01 4.75m	WS05A 2.02m	WS06 1.88m
Date Sampled	06/08/25	06/08/25	06/08/25
Deviation Code			
A9 (no H2SO4)	✓	✓	✓

Key
A9 (no H2SO4) No H2SO4 preserved bottle provided (phenols, ammonia, DOC, COD will be deviating)

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	25/08645/1	25/08645/2	25/08645/3
Client Sample No			
Client Sample ID/Depth	WS01 4.75m	WS05A 2.02m	WS06 1.88m
Date Sampled	06/08/25	06/08/25	06/08/25
A-T-004w		11/08/2025	
A-T-006w		14/08/2025	
A-T-019w	11/08/2025	11/08/2025	11/08/2025
A-T-022w	12/08/2025	12/08/2025	12/08/2025
A-T-025w	12/08/2025	12/08/2025	12/08/2025
A-T-026w	08/08/2025	08/08/2025	08/08/2025
A-T-031w	08/08/2025	08/08/2025	08/08/2025
A-T-032w	20/08/2025	20/08/2025	20/08/2025
A-T-042wTCN	08/08/2025	08/08/2025	08/08/2025
A-T-049w	14/08/2025	14/08/2025	14/08/2025
A-T-055w	20/08/2025	20/08/2025	20/08/2025
Calc-As Recd	12/08/2025	12/08/2025	12/08/2025

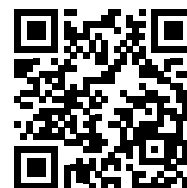
The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

- understand the origin of the waste
- select the correct List of Waste code(s)
- confirm that the list of determinands, results and sampling plan are fit for purpose
- select and justify the chosen metal species (Appendix B)
- correctly apply moisture correction and other available corrections
- add the meta data for their user-defined substances (Appendix A)
- check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)



ZS7RB-WZ2EX-Y5W1S

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in pale yellow.

Report is invalid if pages are removed.

Job name

Bidmead Park Melksham

Description/Comments

Project

738355

Site

Bidmead Park Melksham

Classified by

Name: **Danielle Lightfoot**
 Date: **12 Sep 2025 09:55 GMT**
 Telephone: **0117 947 1000**
 Company: **Structural Soils**
The Old School, Stillhouse Lane,
Bedminster
Bristol
BS3 4EB

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification:

CERTIFIED

Course

Hazardous Waste Classification
 Most recent 3 year Refresher

Date

08 Jun 2023
 05 Aug 2025

Next 3 year Refresher due by Aug 2028

Purpose of classification

2 - Material Characterisation

Address of the waste

Binmead Park, Sells Green, Melksham

Post Code **SN12 6DQ**

SIC for the process giving rise to the waste

41201 Construction of commercial buildings

Description of industry/producer giving rise to the waste

Extension to existing commercial buildings.

Description of the specific process, sub-process and/or activity that created the waste

Groundworks

Description of the waste

Soil



Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	WS01-101-0.20-0.30m-20250716	0.20-0.30m	Non Hazardous		3
2	WS02-102-0.40-0.50m-20250715	0.40-0.50m	Non Hazardous		5
3	WS05-101-0.20-0.30m-20250715	0.20-0.30m	Non Hazardous		7
4	WS05-102-0.70-0.80m-20250715	0.70-0.80m	Non Hazardous		9
5	WS05-103-1.00-1.10m-20250715	1.00-1.10m	Non Hazardous		10
6	WS05-104-1.80-1.90m-20250715	1.80-1.90m	Non Hazardous		13
7	WS06-101-0.20-0.30m-20250715	0.20-0.30m	Non Hazardous		17

Related documents

#	Name	Description
1	25-07965.batch	Envirolab .batch file used to populate the Job
2	25-07965.hwol	Envirolab .hwol file used to populate the Job
3	25-08645.hwol	Envirolab .hwol file used to populate the Job
4	SSL worst case waste stream template 170504 or 170503* WM3 v1.2 GB	waste stream template used to create this Job

Report

Created by: Danielle Lightfoot

Created date: 12 Sep 2025 09:55 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	19
Appendix B: Rationale for selection of metal species	23
Appendix C: Version	24

Classification of sample: WS01-101-0.20-0.30m-20250716

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample name:	LoW Code:
WS01-101-0.20-0.30m-20250716	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20-0.30m m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
8.6%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 8.6% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	asbestos fibres detected (Yes/No)				No						
			ACM_FIBRES								
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				6 mg/kg	1.895	11.367 mg/kg		0.00114 %		
	033-005-00-1										
3	cadmium { cadmium sulfate }				<1 mg/kg	1.855	<1.855 mg/kg		<0.000185 %		<LOD
	048-009-00-9	233-331-6	10124-36-4								
4	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				13 mg/kg	1.462	19 mg/kg		0.0019 %		
		215-160-9	1308-38-9								
5	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27 mg/kg		<0.000227 %		<LOD
	024-017-00-8										
6	copper { copper sulphate pentahydrate }				7 mg/kg	3.929	27.503 mg/kg		0.00275 %		
	029-023-00-4	231-847-6	7758-99-8								
7	lead { lead chromate }			1	15 mg/kg	1.56	23.397 mg/kg		0.0015 %		
	082-004-00-2	231-846-0	7758-97-6								
8	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg		<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
9	nickel { nickel dibromate }				11 mg/kg	5.358	58.941 mg/kg		0.00589 %		
	028-053-00-5	238-596-1	14550-87-9								
10	selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg		<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5								
11	zinc { zinc chromate }				35 mg/kg	2.774	97.095 mg/kg		0.00971 %		
	024-007-00-3	236-878-9	13530-65-9								
12	TPH (C6 to C40) petroleum group				<5 mg/kg		<5 mg/kg		<0.0005 %		<LOD
			TPH								
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1 mg/kg	1.884	<1.884 mg/kg		<0.000188 %		<LOD
	006-007-00-5										
14	pH				8.16 pH		8.16 pH		8.16 pH		
			PH								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
15	naphthalene 601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
16	acenaphthylene 205-917-1	208-96-8			<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
17	acenaphthene 201-469-6	83-32-9			<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
18	fluorene 201-695-5	86-73-7			<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
19	phenanthrene 201-581-5	85-01-8			0.07 mg/kg		0.07 mg/kg	0.000007 %		
20	anthracene 204-371-1	120-12-7			<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
21	fluoranthene 205-912-4	206-44-0			0.1 mg/kg		0.1 mg/kg	0.00001 %		
22	pyrene 204-927-3	129-00-0			0.09 mg/kg		0.09 mg/kg	0.000009 %		
23	benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		0.05 mg/kg		0.05 mg/kg	0.000005 %		
24	chrysene 601-048-00-0	205-923-4	218-01-9		0.07 mg/kg		0.07 mg/kg	0.000007 %		
25	benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		0.05 mg/kg		0.05 mg/kg	0.000005 %		
26	benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.07 mg/kg		<0.07 mg/kg	<0.000007 %		<LOD
27	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		0.04 mg/kg		0.04 mg/kg	0.000004 %		
28	indeno[123-cd]pyrene 205-893-2	193-39-5			0.03 mg/kg		0.03 mg/kg	0.000003 %		
29	dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
30	benzo[ghi]perylene 205-883-8	191-24-2			<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
Total:								0.0229 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS02-102-0.40-0.50m-20250715

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample name:	LoW Code:
WS02-102-0.40-0.50m-20250715	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.40-0.50m m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
13.4%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 13.4% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	asbestos fibres detected (Yes/No)				No					
			ACM_FIBRES							
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				7 mg/kg	1.895	13.262 mg/kg	0.00133 %		
	033-005-00-1									
3	cadmium { cadmium sulfate }				<1 mg/kg	1.855	<1.855 mg/kg	<0.000185 %		<LOD
	048-009-00-9	233-331-6	10124-36-4							
4	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				13 mg/kg	1.462	19 mg/kg	0.0019 %		
		215-160-9	1308-38-9							
5	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
	024-017-00-8									
6	copper { copper sulphate pentahydrate }				15 mg/kg	3.929	58.936 mg/kg	0.00589 %		
	029-023-00-4	231-847-6	7758-99-8							
7	lead { lead chromate }			1	14 mg/kg	1.56	21.837 mg/kg	0.0014 %		
	082-004-00-2	231-846-0	7758-97-6							
8	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel dibromate }				26 mg/kg	5.358	139.316 mg/kg	0.0139 %		
	028-053-00-5	238-596-1	14550-87-9							
10	selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
11	zinc { zinc chromate }				67 mg/kg	2.774	185.868 mg/kg	0.0186 %		
	024-007-00-3	236-878-9	13530-65-9							
12	TPH (C6 to C40) petroleum group				<5 mg/kg		<5 mg/kg	<0.0005 %		<LOD
			TPH							
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
	006-007-00-5									
14	pH				7.71 pH		7.71 pH	7.71 pH		
			PH							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
15	naphthalene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
16	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
17	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
18	fluorene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-695-5	86-73-7							
19	phenanthrene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
		201-581-5	85-01-8							
20	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
21	fluoranthene				<0.08 mg/kg		<0.08 mg/kg	<0.000008 %		<LOD
		205-912-4	206-44-0							
22	pyrene				<0.07 mg/kg		<0.07 mg/kg	<0.000007 %		<LOD
		204-927-3	129-00-0							
23	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
24	chrysene				<0.06 mg/kg		<0.06 mg/kg	<0.000006 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
25	benzo[b]fluoranthene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
26	benzo[k]fluoranthene				<0.07 mg/kg		<0.07 mg/kg	<0.000007 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
27	benzo[a]pyrene; benzo[def]chrysene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
28	indeno[123-cd]pyrene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
		205-893-2	193-39-5							
29	dibenz[a,h]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
30	benzo[ghi]perylene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		205-883-8	191-24-2							
Total:								0.043 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS05-101-0.20-0.30m-20250715

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample name:	LoW Code:
WS05-101-0.20-0.30m-20250715	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20-0.30m m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
12.1%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 12.1% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	asbestos fibres detected (Yes/No)				No					
			ACM_FIBRES							
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				7 mg/kg	1.895	13.262 mg/kg	0.00133 %		
	033-005-00-1									
3	cadmium { cadmium sulfate }				<1 mg/kg	1.855	<1.855 mg/kg	<0.000185 %		<LOD
	048-009-00-9	233-331-6	10124-36-4							
4	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				12 mg/kg	1.462	17.539 mg/kg	0.00175 %		
		215-160-9	1308-38-9							
5	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
	024-017-00-8									
6	copper { copper sulphate pentahydrate }				10 mg/kg	3.929	39.291 mg/kg	0.00393 %		
	029-023-00-4	231-847-6	7758-99-8							
7	lead { lead chromate }			1	12 mg/kg	1.56	18.718 mg/kg	0.0012 %		
	082-004-00-2	231-846-0	7758-97-6							
8	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel dibromate }				25 mg/kg	5.358	133.958 mg/kg	0.0134 %		
	028-053-00-5	238-596-1	14550-87-9							
10	selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
11	zinc { zinc chromate }				50 mg/kg	2.774	138.707 mg/kg	0.0139 %		
	024-007-00-3	236-878-9	13530-65-9							
12	TPH (C6 to C40) petroleum group				5 mg/kg		5 mg/kg	0.0005 %		
			TPH							
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
	006-007-00-5									
14	pH				7.71 pH		7.71 pH	7.71 pH		
			PH							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
15	naphthalene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
16	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
17	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
18	fluorene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-695-5	86-73-7							
19	phenanthrene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
		201-581-5	85-01-8							
20	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
21	fluoranthene				<0.08 mg/kg		<0.08 mg/kg	<0.000008 %		<LOD
		205-912-4	206-44-0							
22	pyrene				<0.07 mg/kg		<0.07 mg/kg	<0.000007 %		<LOD
		204-927-3	129-00-0							
23	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
24	chrysene				<0.06 mg/kg		<0.06 mg/kg	<0.000006 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
25	benzo[b]fluoranthene				0.05 mg/kg		0.05 mg/kg	0.000005 %		
	601-034-00-4	205-911-9	205-99-2							
26	benzo[k]fluoranthene				<0.07 mg/kg		<0.07 mg/kg	<0.000007 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
27	benzo[a]pyrene; benzo[def]chrysene				0.04 mg/kg		0.04 mg/kg	0.000004 %		
	601-032-00-3	200-028-5	50-32-8							
28	indeno[123-cd]pyrene				0.03 mg/kg		0.03 mg/kg	0.000003 %		
		205-893-2	193-39-5							
29	dibenz[a,h]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
30	benzo[ghi]perylene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		205-883-8	191-24-2							
Total:								0.036 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 12500 mg/kg (1.25%) because: Does not apply to solid waste.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0005%)

Classification of sample: WS05-102-0.70-0.80m-20250715

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample name:	LoW Code:	
WS05-102-0.70-0.80m-20250715	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.70-0.80m m		

Hazard properties

None identified

Determinands

Moisture content: None

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	polychlorobiphenyls; PCB				<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
2	PCB 81				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		690-324-4	70362-50-4							
3	PCB 105				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		634-808-5	32598-14-4							
4	PCB 114				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		690-296-3	74472-37-0							
5	PCB 123				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		690-284-8	65510-44-3							
6	PCB 126				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		682-346-8	57465-28-8							
7	PCB 156				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		620-601-7	38380-08-4							
8	PCB 157				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		690-279-0	69782-90-7							
9	PCB 167				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		690-199-6	52663-72-6							
10	PCB 169				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		682-345-2	32774-16-6							
11	PCB 189				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		690-157-7	39635-31-9							
12	PCB 77				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		634-804-3	32598-13-3							
Total:								0%		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
<LOD	Below limit of detection

Classification of sample: **WS05-103-1.00-1.10m-20250715**

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample name:	LoW Code:
WS05-103-1.00-1.10m-20250715	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
1.00-1.10m m	

Hazard properties

None identified

Determinands

Moisture content: None

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	TPH (C6 to C40) petroleum group				85 mg/kg		85	mg/kg	0.0085 %		
			TPH								
2	benzene				<0.001 mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
3	toluene				<0.001 mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
4	ethylbenzene				<0.001 mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4								
5	xylene				<0.002 mg/kg		<0.002	mg/kg	<0.0000002 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
6	pH				8.01 pH		8.01	pH	8.01 pH		
			PH								
7	1,1-dichloroethane and 1,2-dichloroethane (combined)				<0.003 mg/kg		<0.003	mg/kg	<0.0000003 %		<LOD
		203-458-1, 200-863-5	107-06-2, 75-34-3								
8	tetrachloroethylene				<0.001 mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-028-00-4	204-825-9	127-18-4								
9	carbon tetrachloride; tetrachloromethane				<0.001 mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-008-00-5	200-262-8	56-23-5								
10	trichloroethylene; trichloroethene				<0.001 mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-027-00-9	201-167-4	79-01-6								
11	vinyl chloride; chloroethylene				<0.001 mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-023-00-7	200-831-0	75-01-4								
12	dichlorodifluoromethane				<0.001 mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		200-893-9	75-71-8								
13	chloromethane; methyl chloride				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	602-001-00-7	200-817-4	74-87-3								
14	bromomethane; methylbromide				<0.001 mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-002-00-2	200-813-2	74-83-9								
15	chloroethane				<0.001 mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-009-00-0	200-830-5	75-00-3								
16	trichlorofluoromethane				<0.001 mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		200-892-3	75-69-4								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
17	1,1-dichloroethylene; vinylidene chloride				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-025-00-8	200-864-0	75-35-4							
18	carbon disulphide				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	006-003-00-3	200-843-6	75-15-0							
19	dichloromethane; methylene chloride				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	602-004-00-3	200-838-9	75-09-2							
20	2,2-dichloropropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
		209-832-0	594-20-7							
21	bromochloromethane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		200-826-3	74-97-5							
22	chloroform; trichloromethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-006-00-4	200-663-8	67-66-3							
23	1,1,1-trichloroethane; methyl chloroform				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-013-00-2	200-756-3	71-55-6							
24	1,1-dichloropropene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-031-00-0	209-253-3	563-58-6							
25	1,2-dichloropropane; propylene dichloride				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-020-00-0	201-152-2	78-87-5							
26	dibromomethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-003-00-8	200-824-2	74-95-3							
27	bromodichloromethane				<0.01 mg/kg		<0.01 mg/kg	<0.0000001 %		<LOD
		200-856-7	75-27-4							
28	1,3-dichloropropene; [1] (Z)-1,3-dichloropropene [2]				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-030-00-5	208-826-5 [1] 233-195-8 [2]	542-75-6 [1] 10061-01-5 [2]							
29	trans-1,3-dichloropropene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
		431-460-4	10061-02-6							
30	1,1,2-trichloroethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-014-00-8	201-166-9	79-00-5							
31	1,3-dichloropropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
		205-531-3	142-28-9							
32	dibromochloromethane				<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %		<LOD
		204-704-0	124-48-1							
33	1,2-dibromoethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-010-00-6	203-444-5	106-93-4							
34	chlorobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-033-00-1	203-628-5	108-90-7							
35	1,1,1,2-tetrachloroethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
		211-135-1	630-20-6							
36	styrene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-026-00-0	202-851-5	100-42-5							
37	bromoform; tribromomethane				<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %		<LOD
	602-007-00-X	200-854-6	75-25-2							
38	cumene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-024-00-X	202-704-5	98-82-8							
39	1,1,2,2-tetrachloroethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-015-00-3	201-197-8	79-34-5							
40	1,2,3-trichloropropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-062-00-X	202-486-1	96-18-4							
41	bromobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-060-00-9	203-623-8	108-86-1							
42	propylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-097-00-8	203-132-9	103-65-1							
43	mesitylene; 1,3,5-trimethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-025-00-5	203-604-4	108-67-8							
44	tert-butylbenzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
		202-632-4	98-06-6							
45	1,2,4-trimethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-043-00-3	202-436-9	95-63-6							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
46	sec-butylbenzene	205-227-0	135-98-8		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
47	1-isopropyl-4-methylbenzene; p-cymene	202-796-7	99-87-6		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
48	1,3-dichlorobenzene	208-792-1	541-73-1		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
49	1,4-dichlorobenzene; p-dichlorobenzene	203-400-5	106-46-7		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
50	n-butylbenzene	203-209-7	104-51-8		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
51	1,2-dichlorobenzene; o-dichlorobenzene	202-425-9	95-50-1		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
52	1,2-dibromo-3-chloropropane	202-479-3	96-12-8		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
53	1,2,4-trichlorobenzene	204-428-0	120-82-1		<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %		<LOD
54	hexachlorobutadiene	201-765-5	87-68-3		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
55	1,2,3-trichlorobenzene	201-757-1	87-61-6		<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %		<LOD
56	1,2-dichloroethylene; [1] cis-dichloroethylene; [2] trans-dichloroethylene [3]	208-750-2 [1] 205-859-7 [2] 205-860-2 [3]	540-59-0 [1] 156-59-2 [2] 156-60-5 [3]		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
57	2-chlorotoluene; [1] 3-chlorotoluene; [2] 4-chlorotoluene; [3] chlorotoluene [4]	202-424-3 [1] 203-580-5 [2] 203-397-0 [3] 246-698-2 [4]	95-49-8 [1] 108-41-8 [2] 106-43-4 [3] 25168-05-2 [4]		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
Total:								0.0085 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
<LOD	Below limit of detection

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: **12500 mg/kg (1.25%)**
because: Does not apply to solid waste.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0085%)

Classification of sample: WS05-104-1.80-1.90m-20250715

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample name:	LoW Code:
WS05-104-1.80-1.90m-20250715	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.80-1.90m m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
18%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 18% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	asbestos fibres detected (Yes/No)				No						
			ACM_FIBRES								
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				8 mg/kg	1.895	15.156 mg/kg		0.00152 %		
	033-005-00-1										
3	cadmium { cadmium sulfate }				<1 mg/kg	1.855	<1.855 mg/kg		<0.000185 %		<LOD
	048-009-00-9	233-331-6	10124-36-4								
4	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				12 mg/kg	1.462	17.539 mg/kg		0.00175 %		
		215-160-9	1308-38-9								
5	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27 mg/kg		<0.000227 %		<LOD
	024-017-00-8										
6	copper { copper sulphate pentahydrate }				11 mg/kg	3.929	43.22 mg/kg		0.00432 %		
	029-023-00-4	231-847-6	7758-99-8								
7	lead { lead chromate }			1	12 mg/kg	1.56	18.718 mg/kg		0.0012 %		
	082-004-00-2	231-846-0	7758-97-6								
8	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg		<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
9	nickel { nickel dibromate }				26 mg/kg	5.358	139.316 mg/kg		0.0139 %		
	028-053-00-5	238-596-1	14550-87-9								
10	selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg		<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5								
11	zinc { zinc chromate }				51 mg/kg	2.774	141.481 mg/kg		0.0141 %		
	024-007-00-3	236-878-9	13530-65-9								
12	TPH (C6 to C40) petroleum group				<5 mg/kg		<5 mg/kg		<0.0005 %		<LOD
			TPH								
13	benzene				<0.001 mg/kg		<0.001 mg/kg		<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
14	toluene				<0.001 mg/kg		<0.001 mg/kg		<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
15	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg		<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %			<LOD
17	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex } 006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
18	pH		PH		8.31 pH		8.31 pH	8.31 pH			
19	naphthalene 601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
20	acenaphthylene 205-917-1	208-96-8			<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
21	acenaphthene 201-469-6	83-32-9			<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
22	fluorene 201-695-5	86-73-7			<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
23	phenanthrene 201-581-5	85-01-8			<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
24	anthracene 204-371-1	120-12-7			<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
25	fluoranthene 205-912-4	206-44-0			<0.08 mg/kg		<0.08 mg/kg	<0.000008 %			<LOD
26	pyrene 204-927-3	129-00-0			<0.07 mg/kg		<0.07 mg/kg	<0.000007 %			<LOD
27	benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.04 mg/kg		<0.04 mg/kg	<0.000004 %			<LOD
28	chrysene 601-048-00-0	205-923-4	218-01-9		<0.06 mg/kg		<0.06 mg/kg	<0.000006 %			<LOD
29	benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
30	benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.07 mg/kg		<0.07 mg/kg	<0.000007 %			<LOD
31	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.04 mg/kg		<0.04 mg/kg	<0.000004 %			<LOD
32	indeno[123-cd]pyrene 205-893-2	193-39-5			<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
33	dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.04 mg/kg		<0.04 mg/kg	<0.000004 %			<LOD
34	benzo[ghi]perylene 205-883-8	191-24-2			<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
35	1,1-dichloroethane and 1,2-dichloroethane (combined) 203-458-1, 200-863-5	107-06-2, 75-34-3			<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %			<LOD
36	tetrachloroethylene 602-028-00-4	204-825-9	127-18-4		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
37	carbon tetrachloride; tetrachloromethane 602-008-00-5	200-262-8	56-23-5		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
38	trichloroethylene; trichloroethene 602-027-00-9	201-167-4	79-01-6		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
39	vinyl chloride; chloroethylene 602-023-00-7	200-831-0	75-01-4		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
40	dichlorodifluoromethane 200-893-9	75-71-8			<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
41	chloromethane; methyl chloride 602-001-00-7	200-817-4	74-87-3		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
42	bromomethane; methylbromide				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-002-00-2	200-813-2	74-83-9							
43	chloroethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-009-00-0	200-830-5	75-00-3							
44	trichlorofluoromethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
		200-892-3	75-69-4							
45	1,1-dichloroethylene; vinylidene chloride				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-025-00-8	200-864-0	75-35-4							
46	carbon disulphide				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	006-003-00-3	200-843-6	75-15-0							
47	dichloromethane; methylene chloride				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	602-004-00-3	200-838-9	75-09-2							
48	2,2-dichloropropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
		209-832-0	594-20-7							
49	bromochloromethane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		200-826-3	74-97-5							
50	chloroform; trichloromethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-006-00-4	200-663-8	67-66-3							
51	1,1,1-trichloroethane; methyl chloroform				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-013-00-2	200-756-3	71-55-6							
52	1,1-dichloropropene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-031-00-0	209-253-3	563-58-6							
53	1,2-dichloropropane; propylene dichloride				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-020-00-0	201-152-2	78-87-5							
54	dibromomethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-003-00-8	200-824-2	74-95-3							
55	bromodichloromethane				<0.01 mg/kg		<0.01 mg/kg	<0.0000001 %		<LOD
		200-856-7	75-27-4							
56	1,3-dichloropropene; [1] (Z)-1,3-dichloropropene [2]				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-030-00-5	208-826-5 [1] 233-195-8 [2]	542-75-6 [1] 10061-01-5 [2]							
57	trans-1,3-dichloropropene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
		431-460-4	10061-02-6							
58	1,1,2-trichloroethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-014-00-8	201-166-9	79-00-5							
59	1,3-dichloropropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
		205-531-3	142-28-9							
60	dibromochloromethane				<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %		<LOD
		204-704-0	124-48-1							
61	1,2-dibromoethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-010-00-6	203-444-5	106-93-4							
62	chlorobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-033-00-1	203-628-5	108-90-7							
63	1,1,1,2-tetrachloroethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
		211-135-1	630-20-6							
64	styrene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-026-00-0	202-851-5	100-42-5							
65	bromoform; tribromomethane				<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %		<LOD
	602-007-00-X	200-854-6	75-25-2							
66	cumene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-024-00-X	202-704-5	98-82-8							
67	1,1,2,2-tetrachloroethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-015-00-3	201-197-8	79-34-5							
68	1,2,3-trichloropropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-062-00-X	202-486-1	96-18-4							
69	bromobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-060-00-9	203-623-8	108-86-1							
70	propylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-097-00-8	203-132-9	103-65-1							

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
71		mesitylene; 1,3,5-trimethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
		601-025-00-5	203-604-4	108-67-8							
72	●	tert-butylbenzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
			202-632-4	98-06-6							
73		1,2,4-trimethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
		601-043-00-3	202-436-9	95-63-6							
74	●	sec-butylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
			205-227-0	135-98-8							
75		1-isopropyl-4-methylbenzene; p-cymene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
		601-094-00-1	202-796-7	99-87-6							
76		1,3-dichlorobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
		602-067-00-7	208-792-1	541-73-1							
77		1,4-dichlorobenzene; p-dichlorobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
		602-035-00-2	203-400-5	106-46-7							
78	●	n-butylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
			203-209-7	104-51-8							
79		1,2-dichlorobenzene; o-dichlorobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
		602-034-00-7	202-425-9	95-50-1							
80		1,2-dibromo-3-chloropropane				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
		602-021-00-6	202-479-3	96-12-8							
81		1,2,4-trichlorobenzene				<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %		<LOD
		602-087-00-6	204-428-0	120-82-1							
82	●	hexachlorobutadiene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
			201-765-5	87-68-3							
83	●	1,2,3-trichlorobenzene				<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %		<LOD
			201-757-1	87-61-6							
84		1,2-dichloroethylene; [1] cis-dichloroethylene; [2] trans-dichloroethylene [3]				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
		602-026-00-3	208-750-2 [1] 205-859-7 [2] 205-860-2 [3]	540-59-0 [1] 156-59-2 [2] 156-60-5 [3]							
85		2-chlorotoluene; [1] 3-chlorotoluene; [2] 4-chlorotoluene; [3] chlorotoluene [4]				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
		602-040-00-X	202-424-3 [1] 203-580-5 [2] 203-397-0 [3] 246-698-2 [4]	95-49-8 [1] 108-41-8 [2] 106-43-4 [3] 25168-05-2 [4]							
Total:									0.0369 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS06-101-0.20-0.30m-20250715

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample name:	LoW Code:
WS06-101-0.20-0.30m-20250715	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20-0.30m m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
8.1%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 8.1% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	asbestos fibres detected (Yes/No)				No						
			ACM_FIBRES								
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				6 mg/kg	1.895	11.367 mg/kg		0.00114 %		
	033-005-00-1										
3	cadmium { cadmium sulfate }				<1 mg/kg	1.855	<1.855 mg/kg		<0.000185 %		<LOD
	048-009-00-9	233-331-6	10124-36-4								
4	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				11 mg/kg	1.462	16.077 mg/kg		0.00161 %		
		215-160-9	1308-38-9								
5	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27 mg/kg		<0.000227 %		<LOD
	024-017-00-8										
6	copper { copper sulphate pentahydrate }				13 mg/kg	3.929	51.078 mg/kg		0.00511 %		
	029-023-00-4	231-847-6	7758-99-8								
7	lead { lead chromate }			1	58 mg/kg	1.56	90.469 mg/kg		0.0058 %		
	082-004-00-2	231-846-0	7758-97-6								
8	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg		<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
9	nickel { nickel dibromate }				12 mg/kg	5.358	64.3 mg/kg		0.00643 %		
	028-053-00-5	238-596-1	14550-87-9								
10	selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg		<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5								
11	zinc { zinc chromate }				54 mg/kg	2.774	149.804 mg/kg		0.015 %		
	024-007-00-3	236-878-9	13530-65-9								
12	TPH (C6 to C40) petroleum group				14 mg/kg		14 mg/kg		0.0014 %		
			TPH								
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1 mg/kg	1.884	<1.884 mg/kg		<0.000188 %		<LOD
	006-007-00-5										
14	pH				8.45 pH		8.45 pH		8.45 pH		
			PH								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
15	naphthalene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
16	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
17	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
18	fluorene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-695-5	86-73-7							
19	phenanthrene				0.11 mg/kg		0.11 mg/kg	0.000011 %		
		201-581-5	85-01-8							
20	anthracene				0.03 mg/kg		0.03 mg/kg	0.000003 %		
		204-371-1	120-12-7							
21	fluoranthene				0.29 mg/kg		0.29 mg/kg	0.000029 %		
		205-912-4	206-44-0							
22	pyrene				0.28 mg/kg		0.28 mg/kg	0.000028 %		
		204-927-3	129-00-0							
23	benzo[a]anthracene				0.18 mg/kg		0.18 mg/kg	0.000018 %		
	601-033-00-9	200-280-6	56-55-3							
24	chrysene				0.23 mg/kg		0.23 mg/kg	0.000023 %		
	601-048-00-0	205-923-4	218-01-9							
25	benzo[b]fluoranthene				0.23 mg/kg		0.23 mg/kg	0.000023 %		
	601-034-00-4	205-911-9	205-99-2							
26	benzo[k]fluoranthene				0.08 mg/kg		0.08 mg/kg	0.000008 %		
	601-036-00-5	205-916-6	207-08-9							
27	benzo[a]pyrene; benzo[def]chrysene				0.18 mg/kg		0.18 mg/kg	0.000018 %		
	601-032-00-3	200-028-5	50-32-8							
28	indeno[123-cd]pyrene				0.12 mg/kg		0.12 mg/kg	0.000012 %		
		205-893-2	193-39-5							
29	dibenz[a,h]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
30	benzo[ghi]perylene				0.12 mg/kg		0.12 mg/kg	0.000012 %		
		205-883-8	191-24-2							
Total:								0.0366 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 12500 mg/kg (1.25%) because: Does not apply to solid waste.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0014%)

Appendix A: Classifier defined and non GB MCL determinands

▀ **asbestos fibres detected (Yes/No)** (CAS Number: ACM_FIBRES)

Description/Comments: not classified, information only

Data source: N/A

Data source date: 15 Jan 2020

Hazard Statements: None.

▀ **chromium(III) oxide (worst case)** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from C&L Inventory Database

Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806>

Data source date: 17 Jul 2015

Hazard Statements: Acute Tox. 4; H332, Acute Tox. 4; H302, Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315, Resp. Sens. 1; H334, Skin Sens. 1; H317, Repr. 1B; H360FD, Aquatic Acute 1; H400, Aquatic Chronic 1; H410

▀ **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Unknown Oil

Hazard statements taken from WM3 1st Edition 2015

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: Flam. Liq. 3; H226, Asp. Tox. 1; H304, STOT RE 2; H373, Muta. 1B; H340, Carc. 1B; H350, Repr. 2; H361d, Aquatic Chronic 2; H411

▀ **salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex**

GB MCL index number: 006-007-00-5

Description/Comments: Conversion factor based on a worst case compound: sodium cyanide

Additional Hazard Statement(s): EUH032 >= 0.2 %

Reason for additional Hazards Statement(s):

20 Nov 2021 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

▀ **pH** (CAS Number: PH)

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: None.

▀ **acenaphthylene** (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Acute Tox. 4; H302, Acute Tox. 1; H330, Acute Tox. 1; H310, Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315

▀ **acenaphthene** (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315, Aquatic Acute 1; H400, Aquatic Chronic 1; H410, Aquatic Chronic 2; H411

▀ **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Aquatic Acute 1; H400, Aquatic Chronic 1; H410

▀ **phenanthrene** (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Acute Tox. 4; H302, Eye Irrit. 2; H319, STOT SE 3; H335, Carc. 2; H351, Skin Sens. 1; H317, Aquatic Acute 1; H400, Aquatic Chronic 1; H410, Skin Irrit. 2; H315

■ **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

■ **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 21 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

■ **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 21 Aug 2015
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

■ **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2; H351

■ **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

■ **polychlorobiphenyls; PCB** (EC Number: 215-648-1, CAS Number: 1336-36-3)

GB MCL index number: 602-039-00-4
Description/Comments: Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;

POP specific threshold from ATP1 (Regulation 756/2010/EU) to POPs Regulation (Regulation 850/2004/EC). Where applicable, the calculation method laid down in European standards EN 12766-1 and EN 12766-2 shall be applied.
Additional Hazard Statement(s): Carc. 1A; H350
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 1 (23, Sup 7, 100C) 2012

■ **PCB 81** (EC Number: 690-324-4, CAS Number: 70362-50-4)

Description/Comments: POP; 3,4,4',5-Tetrachlorobiphenyl

Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;
Data source: Classification data from C&L Inventory, TEF from Regulation (EU) 2022/2400 of 23 November 2022
Data source date: 28 Feb 2024
Hazard Statements: Carc. 1A; H350 , STOT RE 2; H373 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , PCDD/PCDF (TEF=0.0003)

■ **PCB 105** (EC Number: 634-808-5, CAS Number: 32598-14-4)

Description/Comments: POP; 2,3,3',4,4'-Pentachlorobiphenyl

Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;
Data source: Classification data from C&L Inventory, TEF from Regulation (EU) 2022/2400 of 23 November 2022
Data source date: 28 Feb 2024
Hazard Statements: Acute Tox. 4; H302 , Carc. 1A; H350 , STOT RE 2; H373 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , PCDD/PCDF (TEF=3E-05)

■ **PCB 114** (EC Number: 690-296-3, CAS Number: 74472-37-0)

Description/Comments: POP; 2,3,4,4',5-Pentachlorobiphenyl

Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;
Data source: Classification data from C&L Inventory, TEF from Regulation (EU) 2022/2400 of 23 November 2022
Data source date: 28 Feb 2024
Hazard Statements: Carc. 1A; H350 , STOT RE 2; H373 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , PCDD/PCDF (TEF=3E-05)

■ **PCB 123** (EC Number: 690-284-8, CAS Number: 65510-44-3)

Description/Comments: POP; 2,3',4,4',5'-Pentachlorobiphenyl

Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;

Data source: Classification data from C&L Inventory, TEF from Regulation (EU) 2022/2400 of 23 November 2022

Data source date: 28 Feb 2024

Hazard Statements: Carc. 1A; H350 , STOT RE 2; H373 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , PCDD/PCDF (TEF=3E-05)

■ **PCB 126** (EC Number: 682-346-8, CAS Number: 57465-28-8)

Description/Comments: POP; 3,3',4,4',5'-Pentachlorobiphenyl

Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;

Data source: Classification data from C&L Inventory, TEF from Regulation (EU) 2022/2400 of 23 November 2022

Data source date: 28 Feb 2024

Hazard Statements: Carc. 1A; H350 , STOT RE 2; H373 , STOT RE 2; H373 >= 0.01 % , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , PCDD/PCDF (TEF=0.1)

■ **PCB 156** (EC Number: 620-601-7, CAS Number: 38380-08-4)

Description/Comments: POP; 2',3,3',4,4',5'-Hexachlorobiphenyl

Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;

Data source: Classification data from C&L Inventory, TEF from Regulation (EU) 2022/2400 of 23 November 2022

Data source date: 28 Feb 2024

Hazard Statements: Carc. 1A; H350 , STOT RE 2; H373 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , PCDD/PCDF (TEF=3E-05)

■ **PCB 157** (EC Number: 690-279-0, CAS Number: 69782-90-7)

Description/Comments: POP; 2',3,3',4,4',5'-Hexachlorobiphenyl

Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;

Data source: Classification data from C&L Inventory, TEF from Regulation (EU) 2022/2400 of 23 November 2022

Data source date: 28 Feb 2024

Hazard Statements: Carc. 1A; H350 , STOT RE 2; H373 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , PCDD/PCDF (TEF=3E-05)

■ **PCB 167** (EC Number: 690-199-6, CAS Number: 52663-72-6)

Description/Comments: POP; 2,3',4,4',5,5'-Hexachlorobiphenyl

Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;

Data source: Classification data from C&L Inventory, TEF from Regulation (EU) 2022/2400 of 23 November 2022

Data source date: 28 Feb 2024

Hazard Statements: Carc. 1A; H350 , STOT RE 2; H373 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , PCDD/PCDF (TEF=3E-05)

■ **PCB 169** (EC Number: 682-345-2, CAS Number: 32774-16-6)

Description/Comments: POP; 3,3',4,4',5,5'-Hexachlorobiphenyl

Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;

Data source: Classification data from C&L Inventory, TEF from Regulation (EU) 2022/2400 of 23 November 2022

Data source date: 28 Feb 2024

Hazard Statements: Carc. 1A; H350 , STOT RE 2; H373 , STOT RE 2; H373 >= 0.01 % , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , PCDD/PCDF (TEF=0.03)

■ **PCB 189** (EC Number: 690-157-7, CAS Number: 39635-31-9)

Description/Comments: POP; 2,3,3',4,4',5,5'-Heptachlorobiphenyl

Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;

Data source: Classification data from C&L Inventory, TEF from Regulation (EU) 2022/2400 of 23 November 2022

Data source date: 28 Feb 2024

Hazard Statements: Carc. 1A; H350 , STOT RE 2; H373 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , PCDD/PCDF (TEF=3E-05)

■ **PCB 77** (EC Number: 634-804-3, CAS Number: 32598-13-3)

Description/Comments: POP; 3,3',4,4'-Tetrachlorobiphenyl

Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;

Data source: Classification data from C&L Inventory, TEF from Regulation (EU) 2022/2400 of 23 November 2022

Data source date: 28 Feb 2024

Hazard Statements: Carc. 1A; H350 , STOT RE 2; H373 , STOT RE 2; H373 >= 0.01 % , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , PCDD/PCDF (TEF=0.0001)

■ **ethylbenzene** (EC Number: 202-849-4, CAS Number: 100-41-4)

GB MCL index number: 601-023-00-4

Description/Comments:

Additional Hazard Statement(s): Carc. 2; H351

Reason for additional Hazards Statement(s):

20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

■ **1,1-dichloroethane and 1,2-dichloroethane (combined)** (EC Number: 203-458-1, 200-863-5, CAS Number: 107-06-2, 75-34-3)

Description/Comments: Combines the hazard statements and risk phrases for 1,1-dichloroethane and 1,2-dichloroethane

Data source: N/a

Data source date: 14 Oct 2016

Hazard Statements: Flam. Liq. 2; H225 , Acute Tox. 4; H302 , Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 1B; H350 , Aquatic Chronic 3; H412

■ **dichlorodifluoromethane** (EC Number: 200-893-9, CAS Number: 75-71-8)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Aquatic Chronic 3; H412 , Ozone 1; H420 , Press. Gas; H280

■ **trichlorofluoromethane** (EC Number: 200-892-3, CAS Number: 75-69-4)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Acute Tox. 4; H312 , Ozone 1; H420

■ **2,2-dichloropropane** (EC Number: 209-832-0, CAS Number: 594-20-7)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Acute Tox. 4; H332 , Flam. Liq. 2; H225 , Acute Tox. 4; H302 , Acute Tox. 4; H312 , Eye Irrit. 2; H319

■ **bromochloromethane** (EC Number: 200-826-3, CAS Number: 74-97-5)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Acute Tox. 4; H312 , Skin Corr. 1B; H314 , Eye Dam. 1; H318 , Acute Tox. 4; H332 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Ozone 1; H420

■ **bromodichloromethane** (EC Number: 200-856-7, CAS Number: 75-27-4)

Description/Comments: VOC; Data from C&L Inventory Database; IARC considers substance Group 2B;

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Acute Tox. 4; H302 , Skin Irrit. 2; H315 , Eye Dam. 1; H318 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 1A; H360

■ **trans-1,3-dichloropropene** (EC Number: 431-460-4, CAS Number: 10061-02-6)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Flam. Liq. 3; H226 , Acute Tox. 3; H301 , Asp. Tox. 1; H304 , Acute Tox. 3; H311 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Eye Irrit. 2; H319 , Acute Tox. 4; H332 , STOT SE 3; H335 , Aquatic Chronic 1; H410

■ **1,3-dichloropropane** (EC Number: 205-531-3, CAS Number: 142-28-9)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Acute Tox. 4; H332 , Flam. Liq. 2; H225 , Flam. Liq. 3; H226 , Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335

■ **dibromochloromethane** (EC Number: 204-704-0, CAS Number: 124-48-1)

Description/Comments: VOC; Data from C&L Inventory Database; IARC considers substance Group 3;

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 4; H312 , Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , Acute Tox. 4; H332 , STOT SE 3; H335 , STOT SE 3; H336 , Muta. 2; H341 , Aquatic Chronic 2; H411

▪ **1,1,1,2-tetrachloroethane** (EC Number: 211-135-1, CAS Number: 630-20-6)

Description/Comments: VOC; Data from C&L Inventory Database; IARC considers substance Group 2B;

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 1; H310 , Eye Irrit. 2; H319 , Acute Tox. 3; H331 , Eye Dam. 1; H318 , Acute Tox. 4; H332 , Carc. 2; H351 , Acute Tox. 4; H312 , Aquatic Chronic 3; H412 , Skin Irrit. 2; H315

▪ **tert-butylbenzene** (EC Number: 202-632-4, CAS Number: 98-06-6)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Flam. Liq. 3; H226 , Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , Acute Tox. 3; H331 , Acute Tox. 4; H332 , STOT SE 3; H335 , Asp. Tox. 1; H304 , Aquatic Chronic 2; H411

▪ **sec-butylbenzene** (EC Number: 205-227-0, CAS Number: 135-98-8)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , Aquatic Chronic 2; H411

▪ **n-butylbenzene** (EC Number: 203-209-7, CAS Number: 104-51-8)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Flam. Liq. 3; H226 , Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

▪ **hexachlorobutadiene** (EC Number: 201-765-5, CAS Number: 87-68-3)

Description/Comments: VOC; Data from C&L Inventory Database; IARC considers substance Group 3;

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Acute Tox. 3; H301 , Acute Tox. 2; H310 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Eye Irrit. 2; H319 , Acute Tox. 2; H330 , Carc. 2; H351 , Repr. 2; H361 , STOT SE 2; H371 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

▪ **1,2,3-trichlorobenzene** (EC Number: 201-757-1, CAS Number: 87-61-6)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Acute Tox. 4; H302 , Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , STOT SE 3; H336 , Aquatic Acute 1; H400 , Aquatic Chronic 3; H410

Appendix B: Rationale for selection of metal species

arsenic {arsenic acid and its salts with the exception of those specified elsewhere in this Annex}

Worst case CLP species based on hazard statements/molecular weight and conversion factor for arsenic acid H₃AsO₄.

cadmium {cadmium sulfate}

Worst case CLP species based on hazard statements/molecular weight.

chromium in Cr(III) compounds {chromium(III) oxide (worst case)}

Worst case - not enough Cr(VI) present for chromium III chromate

chromium in Cr(VI) compounds {chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex}

Worst case species based on hazard statements/molecular weight.

copper {copper sulphate pentahydrate}

Worst case CLP species based on hazard statements/molecular weight.

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight.

mercury {mercury dichloride}

Reasonable worst case CLP species based on hazard statements/molecular weight and assuming no evidence for the use of explosives.

nickel {nickel dibromate}

Worst case CLP species based on hazard statements/molecular weight.

selenium {nickel selenate}

Worst case CLP species based on hazard statements/molecular weight.

zinc {zinc chromate}

Worst case CLP species based on hazard statements/molecular weight.

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case as complex cyanides and those specified elsewhere in the annex are not likely to be present in this soil: [Note conversion factor based on a worst case compound: sodium cyanide] (edit as required)

Appendix C: Version

HazWasteOnline Classification Engine: **WM3 1st Edition v1.2.GB - Oct 2021**
HazWasteOnline Classification Engine Version: 2025.248.6764.12269 (06 Sep 2025)
HazWasteOnline Database: 2025.248.6764.12269 (06 Sep 2025)

This classification utilises the following guidance and legislation:

WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021

CLP Regulation - Regulation 1272/2008/EC of 16 December 2008

1st ATP - Regulation 790/2009/EC of 10 August 2009

2nd ATP - Regulation 286/2011/EC of 10 March 2011

3rd ATP - Regulation 618/2012/EU of 10 July 2012

4th ATP - Regulation 487/2013/EU of 8 May 2013

Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013

5th ATP - Regulation 944/2013/EU of 2 October 2013

6th ATP - Regulation 605/2014/EU of 5 June 2014

WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014

Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014

7th ATP - Regulation 2015/1221/EU of 24 July 2015

8th ATP - Regulation (EU) 2016/918 of 19 May 2016

9th ATP - Regulation (EU) 2016/1179 of 19 July 2016

10th ATP - Regulation (EU) 2017/776 of 4 May 2017

HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017

13th ATP - Regulation (EU) 2018/1480 of 4 October 2018

14th ATP - Regulation (EU) 2020/217 of 4 October 2019

15th ATP - Regulation (EU) 2020/1182 of 19 May 2020

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit)

Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020

The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020

GB MCL List - version 1.1 of 09 June 2021

GB MCL List v2.0 - version 2.0 of 20th October 2023

GB MCL List v3.0 - version 3.0 of 11th January 2024

GB MCL List v4.0 - version 4.0 of 2nd March 2024

GB MCL List v5.0 - version 5.0 of 26th June 2024

GB MCL List v6.0 - version 6.0 of 15th February 2025

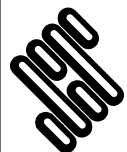
APPENDIX F - MONITORING RECORDS

- (i) Summary of Monitoring Results
- (ii) Gas Monitoring Results
- (iii) Groundwater Monitoring Results

IN-SITU MONITORING ROUNDS SUMMARY

Monitoring Round Reference	Round Description	Start Date	End Date	Atmospheric Pressure Prior to Monitoring (mb)	Atmospheric Pressure During Monitoring (mb)	Atmospheric Pressure at Start of Round (mb)	Atmospheric Pressure at End of Round (mb)	Equipment Used	Weather Conditions	Ground Conditions	Wind Conditions	Air Temp (°C)
1	Gas & water	01/08/2025	01/08/2025	Rising	Falling	1009	1009	GA5000 SN-G503222	Overcast	Dry	Medium	20
2	Gas & water	06/08/2025	06/08/2025	Rising	Falling	1017	1016	GA5000 SN-G503222	Sunny	Dry	Light	22
3	Gas & water	11/08/2025	11/08/2025	Falling	Falling	1011	1011	GA5000 SN-G505786	Overcast	Dry	Medium	27
4	Gas & water	19/08/2025	19/08/2025	Falling	Falling	1007	1006	GA5000 SN-G505786	Overcast	Dry	Light	22

Key: Dates in parenthesis after the equipment name refer to the calibration date

	STRUCTURAL SOILS The Old School Stillhouse Lane Bedminster Bristol BS3 4EB	Checked By		Date	Contract Ref: 738355
				05/09/2025	
		Contract: Bluemay Park Phase 3, Bidmead Park, Melksham			Page 1 of 1 

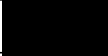
IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe Diameter (mm)	Monitoring Round / Test Number	Reported Installation Depth (mbgl)	Measured Installation Depth (mbgl)	Response Zone (m)	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	CO ₂ (% / vol)	CH ₄ (% / vol)	O ₂ (% / vol)	LEL (%)	PID (ppm)	CO (ppm)	H ₂ (% / vol)	H ₂ S (ppm)	NH ₃ (ppm)	N ₂ (% / vol)
WS01	1	40	1	5.00	---	1.00 to 5.00	01/08/2025 09:35:45	1009	1009	0.0 _(I)	-	-	-	-	-	-	-	-	-	-	-
WS01	1	40	1	---	---	1.00 to 5.00	30 secs	-	-	0.0 _(SS)	-	-	-	-	-	-	-	-	-	-	-
WS01	1	40	1/2	5.00	---	1.00 to 5.00	01/08/2025 09:38:18	-	-	-	-	0.1	0.0	21.0	0.0	-	0	-	0	-	-
WS01	1	40	1/2	---	---	1.00 to 5.00	15 secs	-	-	-	-	1.6	0.0	20.4	0.0	-	0	-	0	-	-
WS01	1	40	1/2	---	---	1.00 to 5.00	30 secs	-	-	-	-	1.7	0.0	20.0	0.0	-	0	-	0	-	-
WS01	1	40	1/2	---	---	1.00 to 5.00	61 secs	-	-	-	-	1.8	0.0	19.9	0.0	-	0	-	0	-	-
WS01	1	40	1/2	---	---	1.00 to 5.00	91 secs	-	-	-	-	1.9	0.0	19.9	0.0	-	0	-	0	-	-
WS01	1	40	1/2	---	---	1.00 to 5.00	121 secs	-	-	-	-	2.0	0.0	19.9	0.0	-	0	-	0	-	-
WS01	1	40	1/2	---	---	1.00 to 5.00	182 secs	-	-	-	-	1.9	0.0	20.0	0.0	-	0	-	0	-	-
WS01	1	40	1/2	---	---	1.00 to 5.00	242 secs	-	-	-	-	1.7	0.0	20.1	0.0	-	0	-	0	-	-
WS01	1	40	1/2	---	---	1.00 to 5.00	303 secs	-	-	-	-	1.5	0.0	20.2	0.0	-	0	-	0	-	-
WS01	1	40	1/3	5.00	4.89	1.00 to 5.00	01/08/2025 09:47:12	-	-	-	3.75	-	-	-	-	0.5	-	-	-	-	-
WS01	1	40	3	5.00	---	1.00 to 5.00	06/08/2025 11:33:39	1017	1016	0.0 _(I)	-	-	-	-	-	-	-	-	-	-	-
WS01	1	40	3	---	---	1.00 to 5.00	30 secs	-	-	0.0 _(SS)	-	-	-	-	-	-	-	-	-	-	-
WS01	1	40	3/2	5.00	---	1.00 to 5.00	06/08/2025 11:36:07	-	-	-	-	0.0	0.0	20.8	0.0	-	0	-	0	-	-
WS01	1	40	3/2	---	---	1.00 to 5.00	16 secs	-	-	-	-	0.7	0.0	20.7	0.0	-	1	-	0	-	-
WS01	1	40	3/2	---	---	1.00 to 5.00	32 secs	-	-	-	-	0.8	0.0	20.4	0.0	-	0	-	0	-	-
WS01	1	40	3/2	---	---	1.00 to 5.00	61 secs	-	-	-	-	1.0	0.0	20.2	0.0	-	0	-	0	-	-
WS01	1	40	3/2	---	---	1.00 to 5.00	91 secs	-	-	-	-	1.2	0.0	20.1	0.0	-	0	-	0	-	-
WS01	1	40	3/2	---	---	1.00 to 5.00	121 secs	-	-	-	-	1.4	0.0	20.0	0.0	-	0	-	0	-	-
WS01	1	40	3/2	---	---	1.00 to 5.00	181 secs	-	-	-	-	1.5	0.0	20.1	0.0	-	0	-	0	-	-
WS01	1	40	3/2	---	---	1.00 to 5.00	241 secs	-	-	-	-	1.3	0.0	20.2	0.0	-	0	-	0	-	-
WS01	1	40	3/2	---	---	1.00 to 5.00	302 secs	-	-	-	-	1.2	0.0	20.3	0.0	-	0	-	0	-	-
WS01	1	40	3/3	5.00	5.02	1.00 to 5.00	06/08/2025 11:43:15	-	-	-	3.81	-	-	-	-	0.4	-	-	-	-	-

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. >>> = exceeds range.

Abbreviations: CO₂ = Carbon Dioxide, CH₄ = Methane, O₂ = Oxygen, LEL = Lower Explosive Limit, PID = Photo Ionisation Detector Reading, CO = Carbon Monoxide, H₂ = Hydrogen, H₂S = Hydrogen Sulphide, NH₃ = Ammonia, N₂ = Nitrogen.

Note: Lower Explosive Limit (LEL) = 5% v/v of Methane.

 STRUCTURAL SOILS The Old School Stillhouse Lane Bedminster Bristol BS3 4EB	Checked By		Date	Contract Ref: 738355
			Adam Watts	
	Contract: Bluemay Park Phase 3, Bidmead Park, Melksham			Page 1 of 7 

IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe Diameter (mm)	Monitoring Round / Test Number	Reported Installation Depth (mbgl)	Measured Installation Depth (mbgl)	Response Zone (m)	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	CO ₂ (% / vol)	CH ₄ (% / vol)	O ₂ (% / vol)	LEL (%)	PID (ppm)	CO (ppm)	H ₂ (% / vol)	H ₂ S (ppm)	NH ₃ (ppm)	N ₂ (% / vol)
WS01	1	40	3	5.00	---	1.00 to 5.00	11/08/2025 15:36:43	1011	1011	0.0 _(I)	-	-	-	-	-	-	-	-	-	-	-
WS01	1	40	3	---	---	1.00 to 5.00	30 secs	-	-	0.1 _(SS)	-	-	-	-	-	-	-	-	-	-	-
WS01	1	40	3/2	5.00	---	1.00 to 5.00	11/08/2025 15:38:46	-	-	-	-	0.1	0.0	20.5	0.0	-	0	-	0	-	-
WS01	1	40	3/2	---	---	1.00 to 5.00	15 secs	-	-	-	-	0.4	0.0	20.3	0.0	-	1	-	0	-	-
WS01	1	40	3/2	---	---	1.00 to 5.00	30 secs	-	-	-	-	0.6	0.0	20.0	0.0	-	0	-	0	-	-
WS01	1	40	3/2	---	---	1.00 to 5.00	60 secs	-	-	-	-	0.8	0.0	19.8	0.0	-	0	-	0	-	-
WS01	1	40	3/2	---	---	1.00 to 5.00	91 secs	-	-	-	-	1.1	0.0	19.6	0.0	-	0	-	0	-	-
WS01	1	40	3/2	---	---	1.00 to 5.00	121 secs	-	-	-	-	1.4	0.0	19.4	0.0	-	0	-	0	-	-
WS01	1	40	3/2	---	---	1.00 to 5.00	181 secs	-	-	-	-	1.4	0.0	19.4	0.0	-	0	-	0	-	-
WS01	1	40	3/2	---	---	1.00 to 5.00	241 secs	-	-	-	-	1.3	0.0	19.4	0.0	-	0	-	0	-	-
WS01	1	40	3/2	---	---	1.00 to 5.00	301 secs	-	-	-	-	1.3	0.0	19.4	0.0	-	0	-	0	-	-
WS01	1	40	3/3	5.00	4.95	1.00 to 5.00	11/08/2025 15:47:41	-	-	-	3.79	-	-	-	-	-	-	-	-	-	-
WS01	1	40	4	5.00	---	1.00 to 5.00	19/08/2025 11:40:36	1006	1006	0.1 _(I)	-	-	-	-	-	-	-	-	-	-	-
WS01	1	40	4	---	---	1.00 to 5.00	30 secs	-	-	0.2 _(SS)	-	-	-	-	-	-	-	-	-	-	-
WS01	1	40	4/2	5.00	---	1.00 to 5.00	19/08/2025 11:42:42	-	-	-	-	0.1	0.0	20.9	0.0	-	0	-	0	-	-
WS01	1	40	4/2	---	---	1.00 to 5.00	14 secs	-	-	-	-	0.9	0.0	20.5	0.0	-	1	-	0	-	-
WS01	1	40	4/2	---	---	1.00 to 5.00	29 secs	-	-	-	-	0.8	0.0	20.4	0.0	-	0	-	0	-	-
WS01	1	40	4/2	---	---	1.00 to 5.00	59 secs	-	-	-	-	0.8	0.0	20.4	0.0	-	1	-	0	-	-
WS01	1	40	4/2	---	---	1.00 to 5.00	89 secs	-	-	-	-	0.8	0.0	20.3	0.0	-	0	-	0	-	-
WS01	1	40	4/2	---	---	1.00 to 5.00	119 secs	-	-	-	-	0.8	0.0	20.3	0.0	-	1	-	0	-	-
WS01	1	40	4/2	---	---	1.00 to 5.00	180 secs	-	-	-	-	0.9	0.0	20.3	0.0	-	1	-	0	-	-
WS01	1	40	4/2	---	---	1.00 to 5.00	240 secs	-	-	-	-	0.9	0.0	20.3	0.0	-	1	-	0	-	-
WS01	1	40	4/2	---	---	1.00 to 5.00	300 secs	-	-	-	-	0.9	0.0	20.3	0.0	-	0	-	0	-	-

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. >>> = exceeds range.

Abbreviations: CO₂ = Carbon Dioxide, CH₄ = Methane, O₂ = Oxygen, LEL = Lower Explosive Limit, PID = Photo Ionisation Detector Reading, CO = Carbon Monoxide, H₂ = Hydrogen, H₂S = Hydrogen Sulphide, NH₃ = Ammonia, N₂ = Nitrogen.

Note: Lower Explosive Limit (LEL) = 5% v/v of Methane.

 STRUCTURAL SOILS The Old School Stillhouse Lane Bedminster Bristol BS3 4EB	Checked By		Date	Contract Ref: 738355
			Adam Watts	
	Contract: Bluemay Park Phase 3, Bidmead Park, Melksham			Page 2 of 7 

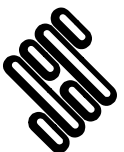
IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe Diameter (mm)	Monitoring Round / Test Number	Reported Installation Depth (mbgl)	Measured Installation Depth (mbgl)	Response Zone (m)	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	CO ₂ (% / vol)	CH ₄ (% / vol)	O ₂ (% / vol)	LEL (%)	PID (ppm)	CO (ppm)	H ₂ (% / vol)	H ₂ S (ppm)	NH ₃ (ppm)	N ₂ (% / vol)
WS01	1	40	4/3	5.00	4.95	1.00 to 5.00	19/08/2025 11:51:03	-	-	-	3.84	-	-	-	-	-	-	-	-	-	-
WS05A	1	40	1	3.00	---	0.50 to 3.00	01/08/2025 09:23:18	1009	1009	0.0 _(I)	-	-	-	-	-	-	-	-	-	-	-
WS05A	1	40	1	---	---	0.50 to 3.00	30 secs	-	-	0.0 _(SS)	-	-	-	-	-	-	-	-	-	-	-
WS05A	1	40	1/2	3.00	---	0.50 to 3.00	01/08/2025 09:26:46	-	-	-	-	0.1	0.0	20.9	0.0	-	0	-	0	-	-
WS05A	1	40	1/2	---	---	0.50 to 3.00	15 secs	-	-	-	-	1.5	0.0	17.8	0.0	-	0	-	0	-	-
WS05A	1	40	1/2	---	---	0.50 to 3.00	30 secs	-	-	-	-	1.5	0.0	16.1	0.0	-	0	-	0	-	-
WS05A	1	40	1/2	---	---	0.50 to 3.00	60 secs	-	-	-	-	1.7	0.0	16.0	0.0	-	0	-	0	-	-
WS05A	1	40	1/2	---	---	0.50 to 3.00	90 secs	-	-	-	-	1.9	0.0	15.6	0.0	-	0	-	0	-	-
WS05A	1	40	1/2	---	---	0.50 to 3.00	120 secs	-	-	-	-	1.9	0.0	15.6	0.0	-	0	-	0	-	-
WS05A	1	40	1/2	---	---	0.50 to 3.00	181 secs	-	-	-	-	1.8	0.0	15.9	0.0	-	0	-	0	-	-
WS05A	1	40	1/2	---	---	0.50 to 3.00	241 secs	-	-	-	-	1.7	0.0	16.2	0.0	-	0	-	0	-	-
WS05A	1	40	1/2	---	---	0.50 to 3.00	301 secs	-	-	-	-	1.6	0.0	16.6	0.0	-	0	-	0	-	-
WS05A	1	40	1/3	3.00	2.78	0.50 to 3.00	01/08/2025 09:34:01	-	-	-	1.12	-	-	-	-	0.2	-	-	-	-	-
WS05A	1	40	2	3.00	---	0.50 to 3.00	06/08/2025 09:39:08	1017	1017	0.0 _(I)	-	-	-	-	-	-	-	-	-	-	-
WS05A	1	40	2	---	---	0.50 to 3.00	30 secs	-	-	0.0 _(SS)	-	-	-	-	-	-	-	-	-	-	-
WS05A	1	40	2/2	3.00	---	0.50 to 3.00	06/08/2025 09:41:34	-	-	-	-	0.0	0.0	20.9	0.0	-	0	-	0	-	-
WS05A	1	40	2/2	---	---	0.50 to 3.00	15 secs	-	-	-	-	1.6	0.0	19.6	0.0	-	0	-	0	-	-
WS05A	1	40	2/2	---	---	0.50 to 3.00	30 secs	-	-	-	-	1.6	0.0	19.0	0.0	-	0	-	0	-	-
WS05A	1	40	2/2	---	---	0.50 to 3.00	61 secs	-	-	-	-	1.7	0.0	18.8	0.0	-	0	-	0	-	-
WS05A	1	40	2/2	---	---	0.50 to 3.00	91 secs	-	-	-	-	1.9	0.0	18.5	0.0	-	0	-	0	-	-
WS05A	1	40	2/2	---	---	0.50 to 3.00	121 secs	-	-	-	-	1.9	0.0	18.6	0.0	-	0	-	0	-	-
WS05A	1	40	2/2	---	---	0.50 to 3.00	181 secs	-	-	-	-	1.8	0.0	18.7	0.0	-	0	-	0	-	-
WS05A	1	40	2/2	---	---	0.50 to 3.00	241 secs	-	-	-	-	1.7	0.0	18.9	0.0	-	0	-	0	-	-

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. >>> = exceeds range.

Abbreviations: CO₂ = Carbon Dioxide, CH₄ = Methane, O₂ = Oxygen, LEL = Lower Explosive Limit, PID = Photo Ionisation Detector Reading, CO = Carbon Monoxide, H₂ = Hydrogen, H₂S = Hydrogen Sulphide, NH₃ = Ammonia, N₂ = Nitrogen.

Note: Lower Explosive Limit (LEL) = 5% v/v of Methane.

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			Adam Watts	
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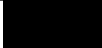
IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe Diameter (mm)	Monitoring Round / Test Number	Reported Installation Depth (mbgl)	Measured Installation Depth (mbgl)	Response Zone (m)	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	CO ₂ (% / vol)	CH ₄ (% / vol)	O ₂ (% / vol)	LEL (%)	PID (ppm)	CO (ppm)	H ₂ (% / vol)	H ₂ S (ppm)	NH ₃ (ppm)	N ₂ (% / vol)
WS05A	1	40	2/2	---	---	0.50 to 3.00	301 secs	-	-	-	-	1.7	0.0	19.1	0.0	-	0	-	0	-	-
WS05A	1	40	2/3	3.00	2.78	0.50 to 3.00	06/08/2025 09:49:15	-	-	-	1.11	-	-	-	-	0.1	-	-	-	-	-
WS05A	1	40	3	3.00	---	0.50 to 3.00	11/08/2025 15:26:23	1011	1011	0.1 _(I)	-	-	-	-	-	-	-	-	-	-	-
WS05A	1	40	3	---	---	0.50 to 3.00	30 secs	-	-	0.2 _(SS)	-	-	-	-	-	-	-	-	-	-	-
WS05A	1	40	3/2	3.00	---	0.50 to 3.00	11/08/2025 15:28:29	-	-	-	-	0.1	0.0	20.8	0.0	-	0	-	0	-	-
WS05A	1	40	3/2	---	---	0.50 to 3.00	15 secs	-	-	-	-	1.6	0.0	18.8	0.0	-	0	-	0	-	-
WS05A	1	40	3/2	---	---	0.50 to 3.00	30 secs	-	-	-	-	1.5	0.0	18.5	0.0	-	0	-	0	-	-
WS05A	1	40	3/2	---	---	0.50 to 3.00	60 secs	-	-	-	-	1.5	0.0	18.5	0.0	-	0	-	0	-	-
WS05A	1	40	3/2	---	---	0.50 to 3.00	91 secs	-	-	-	-	1.5	0.0	18.4	0.0	-	0	-	0	-	-
WS05A	1	40	3/2	---	---	0.50 to 3.00	121 secs	-	-	-	-	1.5	0.0	18.4	0.0	-	0	-	0	-	-
WS05A	1	40	3/2	---	---	0.50 to 3.00	182 secs	-	-	-	-	1.5	0.0	18.3	0.0	-	0	-	0	-	-
WS05A	1	40	3/2	---	---	0.50 to 3.00	242 secs	-	-	-	-	1.5	0.0	18.3	0.0	-	0	-	0	-	-
WS05A	1	40	3/2	---	---	0.50 to 3.00	302 secs	-	-	-	-	1.5	0.0	18.2	0.0	-	0	-	0	-	-
WS05A	1	40	3/3	3.00	2.78	0.50 to 3.00	11/08/2025 15:36:05	-	-	-	1.15	-	-	-	-	-	-	-	-	-	-
WS05A	1	40	4	3.00	---	0.50 to 3.00	19/08/2025 11:29:20	1007	1007	0.1 _(I)	-	-	-	-	-	-	-	-	-	-	-
WS05A	1	40	4	---	---	0.50 to 3.00	30 secs	-	-	0.2 _(SS)	-	-	-	-	-	-	-	-	-	-	-
WS05A	1	40	4/2	3.00	---	0.50 to 3.00	19/08/2025 11:31:33	-	-	-	-	0.1	0.0	20.8	0.0	-	0	-	0	-	-
WS05A	1	40	4/2	---	---	0.50 to 3.00	15 secs	-	-	-	-	1.4	0.0	19.4	0.0	-	1	-	0	-	-
WS05A	1	40	4/2	---	---	0.50 to 3.00	30 secs	-	-	-	-	1.3	0.0	19.3	0.0	-	1	-	0	-	-
WS05A	1	40	4/2	---	---	0.50 to 3.00	60 secs	-	-	-	-	1.3	0.0	19.2	0.0	-	1	-	0	-	-
WS05A	1	40	4/2	---	---	0.50 to 3.00	90 secs	-	-	-	-	1.3	0.0	19.1	0.0	-	0	-	0	-	-
WS05A	1	40	4/2	---	---	0.50 to 3.00	120 secs	-	-	-	-	1.3	0.0	19.1	0.0	-	1	-	0	-	-
WS05A	1	40	4/2	---	---	0.50 to 3.00	180 secs	-	-	-	-	1.3	0.0	19.0	0.0	-	1	-	0	-	-
WS05A	1	40	4/2	---	---	0.50 to 3.00	240 secs	-	-	-	-	1.3	0.0	18.9	0.0	-	0	-	0	-	-

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. >>> = exceeds range.

Abbreviations: CO₂ = Carbon Dioxide, CH₄ = Methane, O₂ = Oxygen, LEL = Lower Explosive Limit, PID = Photo Ionisation Detector Reading, CO = Carbon Monoxide, H₂ = Hydrogen, H₂S = Hydrogen Sulphide, NH₃ = Ammonia, N₂ = Nitrogen.

Note: Lower Explosive Limit (LEL) = 5% v/v of Methane.

 STRUCTURAL SOILS The Old School Stillhouse Lane Bedminster Bristol BS3 4EB	Checked By		Date	Contract Ref: 738355
			Adam Watts	
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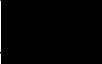
IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe Diameter (mm)	Monitoring Round / Test Number	Reported Installation Depth (mbgl)	Measured Installation Depth (mbgl)	Response Zone (m)	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	CO ₂ (% / vol)	CH ₄ (% / vol)	O ₂ (% / vol)	LEL (%)	PID (ppm)	CO (ppm)	H ₂ (% / vol)	H ₂ S (ppm)	NH ₃ (ppm)	N ₂ (% / vol)
WS05A	1	40	4/2	---	---	0.50 to 3.00	300 secs	-	-	-	-	1.3	0.0	18.9	0.0	-	0	-	0	-	-
WS05A	1	40	4/3	3.00	2.77	0.50 to 3.00	19/08/2025 11:38:33	-	-	-	1.21	-	-	-	-	-	-	-	-	-	-
WS06	1	40	1	2.50	---	1.00 to 2.50	01/08/2025 09:11:40	1009	1009	0.0 _(I)	-	-	-	-	-	-	-	-	-	-	-
WS06	1	40	1	---	---	1.00 to 2.50	30 secs	-	-	0.0 _(SS)	-	-	-	-	-	-	-	-	-	-	-
WS06	1	40	1/2	2.50	---	1.00 to 2.50	01/08/2025 09:15:09	-	-	-	-	0.1	0.0	20.9	0.0	-	0	-	0	-	-
WS06	1	40	1/2	---	---	1.00 to 2.50	15 secs	-	-	-	-	0.1	0.0	20.8	0.0	-	1	-	0	-	-
WS06	1	40	1/2	---	---	1.00 to 2.50	30 secs	-	-	-	-	0.1	0.0	20.8	0.0	-	0	-	0	-	-
WS06	1	40	1/2	---	---	1.00 to 2.50	60 secs	-	-	-	-	0.1	0.0	20.9	0.0	-	0	-	0	-	-
WS06	1	40	1/2	---	---	1.00 to 2.50	90 secs	-	-	-	-	0.1	0.0	20.8	0.0	-	0	-	0	-	-
WS06	1	40	1/2	---	---	1.00 to 2.50	121 secs	-	-	-	-	0.1	0.0	20.8	0.0	-	0	-	0	-	-
WS06	1	40	1/2	---	---	1.00 to 2.50	181 secs	-	-	-	-	0.1	0.0	20.8	0.0	-	0	-	0	-	-
WS06	1	40	1/2	---	---	1.00 to 2.50	241 secs	-	-	-	-	0.1	0.0	20.8	0.0	-	0	-	0	-	-
WS06	1	40	1/2	---	---	1.00 to 2.50	301 secs	-	-	-	-	0.1	0.0	20.8	0.0	-	0	-	0	-	-
WS06	1	40	1/3	2.50	2.62	1.00 to 2.50	01/08/2025 09:21:49	-	-	-	1.07	-	-	-	-	0.3	-	-	-	-	-
WS06	1	40	2	2.50	---	1.00 to 2.50	06/08/2025 09:22:11	1017	1017	0.0 _(I)	-	-	-	-	-	-	-	-	-	-	-
WS06	1	40	2	---	---	1.00 to 2.50	30 secs	-	-	0.0 _(SS)	-	-	-	-	-	-	-	-	-	-	-
WS06	1	40	2/2	2.50	---	1.00 to 2.50	06/08/2025 09:25:00	-	-	-	-	0.1	0.0	20.9	0.0	-	0	-	0	-	-
WS06	1	40	2/2	---	---	1.00 to 2.50	16 secs	-	-	-	-	0.5	0.0	20.7	0.0	-	1	-	0	-	-
WS06	1	40	2/2	---	---	1.00 to 2.50	32 secs	-	-	-	-	0.2	0.0	20.8	0.0	-	0	-	0	-	-
WS06	1	40	2/2	---	---	1.00 to 2.50	62 secs	-	-	-	-	0.1	0.0	20.8	0.0	-	0	-	0	-	-
WS06	1	40	2/2	---	---	1.00 to 2.50	93 secs	-	-	-	-	0.1	0.0	20.8	0.0	-	0	-	0	-	-
WS06	1	40	2/2	---	---	1.00 to 2.50	123 secs	-	-	-	-	0.1	0.0	20.7	0.0	-	0	-	0	-	-
WS06	1	40	2/2	---	---	1.00 to 2.50	184 secs	-	-	-	-	0.1	0.0	20.7	0.0	-	0	-	0	-	-

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. >>> = exceeds range.

Abbreviations: CO₂ = Carbon Dioxide, CH₄ = Methane, O₂ = Oxygen, LEL = Lower Explosive Limit, PID = Photo Ionisation Detector Reading, CO = Carbon Monoxide, H₂ = Hydrogen, H₂S = Hydrogen Sulphide, NH₃ = Ammonia, N₂ = Nitrogen.

Note: Lower Explosive Limit (LEL) = 5% v/v of Methane.

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			Adam Watts	
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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe Diameter (mm)	Monitoring Round / Test Number	Reported Installation Depth (mbgl)	Measured Installation Depth (mbgl)	Response Zone (m)	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	CO ₂ (% / vol)	CH ₄ (% / vol)	O ₂ (% / vol)	LEL (%)	PID (ppm)	CO (ppm)	H ₂ (% / vol)	H ₂ S (ppm)	NH ₃ (ppm)	N ₂ (% / vol)
WS06	1	40	2/2	---	---	1.00 to 2.50	244 secs	-	-	-	-	0.1	0.0	20.7	0.0	-	0	-	0	-	-
WS06	1	40	2/2	---	---	1.00 to 2.50	305 secs	-	-	-	-	0.1	0.0	20.6	0.0	-	0	-	0	-	-
WS06	1	40	2/3	2.50	2.67	1.00 to 2.50	06/08/2025 09:33:24	-	-	-	1.01	-	-	-	-	0.2	-	-	-	-	-
WS06	1	40	3	2.50	---	1.00 to 2.50	11/08/2025 15:15:27	1011	1011	0.0 _(l)	-	-	-	-	-	-	-	-	-	-	-
WS06	1	40	3	---	---	1.00 to 2.50	30 secs	-	-	0.0 _(SS)	-	-	-	-	-	-	-	-	-	-	-
WS06	1	40	3/2	2.50	---	1.00 to 2.50	11/08/2025 15:17:33	-	-	-	-	0.1	0.0	20.7	0.0	-	0	-	0	-	-
WS06	1	40	3/2	---	---	1.00 to 2.50	15 secs	-	-	-	-	0.4	0.0	20.3	0.0	-	1	-	0	-	-
WS06	1	40	3/2	---	---	1.00 to 2.50	30 secs	-	-	-	-	0.4	0.0	20.2	0.0	-	1	-	0	-	-
WS06	1	40	3/2	---	---	1.00 to 2.50	60 secs	-	-	-	-	0.4	0.0	20.1	0.0	-	1	-	0	-	-
WS06	1	40	3/2	---	---	1.00 to 2.50	90 secs	-	-	-	-	0.4	0.0	20.1	0.0	-	1	-	0	-	-
WS06	1	40	3/2	---	---	1.00 to 2.50	120 secs	-	-	-	-	0.4	0.0	20.1	0.0	-	1	-	0	-	-
WS06	1	40	3/2	---	---	1.00 to 2.50	180 secs	-	-	-	-	0.4	0.0	20.0	0.0	-	1	-	0	-	-
WS06	1	40	3/2	---	---	1.00 to 2.50	240 secs	-	-	-	-	0.4	0.0	19.9	0.0	-	1	-	0	-	-
WS06	1	40	3/2	---	---	1.00 to 2.50	301 secs	-	-	-	-	0.4	0.0	19.9	0.0	-	1	-	1	-	-
WS06	1	40	3/3	2.50	2.67	1.00 to 2.50	11/08/2025 15:25:26	-	-	-	1.08	-	-	-	-	-	-	-	-	-	-
WS06	1	40	4	2.50	---	1.00 to 2.50	19/08/2025 11:18:36	1007	1007	0.0 _(l)	-	-	-	-	-	-	-	-	-	-	-
WS06	1	40	4	---	---	1.00 to 2.50	30 secs	-	-	0.1 _(SS)	-	-	-	-	-	-	-	-	-	-	-
WS06	1	40	4/2	2.50	---	1.00 to 2.50	19/08/2025 11:20:56	-	-	-	-	0.2	0.1	20.8	2.0	-	0	-	0	-	-
WS06	1	40	4/2	---	---	1.00 to 2.50	15 secs	-	-	-	-	0.3	0.0	20.6	0.0	-	1	-	0	-	-
WS06	1	40	4/2	---	---	1.00 to 2.50	30 secs	-	-	-	-	0.3	0.0	20.5	0.0	-	0	-	0	-	-
WS06	1	40	4/2	---	---	1.00 to 2.50	61 secs	-	-	-	-	0.4	0.0	20.4	0.0	-	0	-	0	-	-
WS06	1	40	4/2	---	---	1.00 to 2.50	91 secs	-	-	-	-	0.4	0.0	20.4	0.0	-	0	-	0	-	-
WS06	1	40	4/2	---	---	1.00 to 2.50	121 secs	-	-	-	-	0.4	0.0	20.4	0.0	-	0	-	0	-	-
WS06	1	40	4/2	---	---	1.00 to 2.50	181 secs	-	-	-	-	0.3	0.0	20.3	0.0	-	1	-	0	-	-

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. >>> = exceeds range.

Abbreviations: CO₂ = Carbon Dioxide, CH₄ = Methane, O₂ = Oxygen, LEL = Lower Explosive Limit, PID = Photo Ionisation Detector Reading, CO = Carbon Monoxide, H₂ = Hydrogen, H₂S = Hydrogen Sulphide, NH₃ = Ammonia, N₂ = Nitrogen.

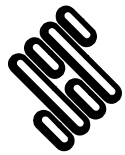
Note: Lower Explosive Limit (LEL) = 5% v/v of Methane.

 STRUCTURAL SOILS The Old School Stillhouse Lane Bedminster Bristol BS3 4EB	Checked By		Date	Contract Ref: 738355
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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe Diameter (mm)	Monitoring Round / Test Number	Reported Installation Depth (mbgl)	Measured Installation Depth (mbgl)	Response Zone (m)	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	CO ₂ (% / vol)	CH ₄ (% / vol)	O ₂ (% / vol)	LEL (%)	PID (ppm)	CO (ppm)	H ₂ (% / vol)	H ₂ S (ppm)	NH ₃ (ppm)	N ₂ (% / vol)
WS06	1	40	4/2	---	---	1.00 to 2.50	242 secs	-	-	-	-	0.3	0.0	20.2	0.0	-	0	-	0	-	-
WS06	1	40	4/2	---	---	1.00 to 2.50	303 secs	-	-	-	-	0.3	0.0	20.2	0.0	-	0	-	0	-	-
WS06	1	40	4/3	2.50	2.67	1.00 to 2.50	19/08/2025 11:28:34	-	-	-	1.14	-	-	-	-	-	-	-	-	-	-

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. >>> = exceeds range.
Abbreviations: CO₂ = Carbon Dioxide, CH₄ = Methane, O₂ = Oxygen, LEL = Lower Explosive Limit, PID = Photo Ionisation Detector Reading, CO = Carbon Monoxide, H₂ = Hydrogen, H₂S = Hydrogen Sulphide, NH₃ = Ammonia, N₂ = Nitrogen.
Note: Lower Explosive Limit (LEL) = 5% v/v of Methane.

	Checked By		Date	Contract Ref: 738355
			Adam Watts	
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IN-SITU WATER MONITORING RESULTS

Exploratory Position ID	Ground Level (m AOD)	Pipe Ref	Pipe Diameter (mm)	Monitoring Round / Test Number	Reported Installation Depth (mbgl)	Measured Installation Depth (mbgl)	Response Zone (m)	Date & Time of Monitoring	Water Depth (mbgl)	Water Elevation (m AOD)	pH	ORP (mV)	Eh (mV)	Conductivity (uS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)
WS01	63.043	1	40	1 / 1	5.00	4.89	1.00 to 5.00	01/08/2025 11:45	3.75	59.29	5.28	8	201	2445	28.2	4.8
General Remarks: Standpipe developed, very slow recharge. Purged dry 5 times with 5 minute gap between each purge.																
WS01	63.043	1	40	2 / 1	5.00	5.02	1.00 to 5.00	06/08/2025 11:53	3.81	59.23	5.89	125	306	3593	39.6	4.7
General Remarks: Standpipe micropurged and water samples taken. Water clear, no odour, no sheen. Water level dropping during sampling, unable to fill 1 litre glass bottle due to negligible recharge.																
WS01	63.043	1	40	3 / 1	5.00	4.95	1.00 to 5.00	11/08/2025 15:47	3.79	59.25	---	---	---	---	---	---
WS01	63.043	1	40	4 / 1	5.00	4.95	1.00 to 5.00	19/08/2025 11:51	3.84	59.20	---	---	---	---	---	---
WS05A	60.173	1	40	1 / 1	3.00	2.78	0.50 to 3.00	01/08/2025 11:00	1.12	59.06	6.28	-69	130	1459	20.9	2.9
WS05A	60.173	1	40	1 / 2	3.00	2.78	0.50 to 3.00	01/08/2025 11:40	1.13	59.05	5.16	63	255	1442	29.0	1.8
General Remarks: Standpipe developed.																
WS05A	60.173	1	40	2 / 1	3.00	2.78	0.50 to 3.00	06/08/2025 10:20	1.11	59.07	---	---	---	---	---	---
WS05A	60.173	1	40	2 / 2	3.00	2.78	0.50 to 3.00	06/08/2025 10:37	1.11	59.07	6.21	136	328	1839	27.9	2.9
WS05A	60.173	1	40	2 / 2	---	2.78	---	06/08/2025 10:40	1.11	59.07	5.99	141	333	1751	27.7	1.9
WS05A	60.173	1	40	2 / 2	---	2.78	---	06/08/2025 10:43	1.11	59.07	5.93	139	331	1698	27.6	1.3
WS05A	60.173	1	40	2 / 2	---	2.78	---	06/08/2025 10:46	1.11	59.07	5.91	135	327	1658	27.7	0.9
WS05A	60.173	1	40	2 / 2	---	2.78	---	06/08/2025 10:49	1.11	59.07	5.87	132	324	1612	27.5	0.7
WS05A	60.173	1	40	2 / 2	---	2.78	---	06/08/2025 10:52	1.11	59.07	5.86	126	318	1574	27.5	0.5
WS05A	60.173	1	40	2 / 2	---	2.78	---	06/08/2025 10:55	1.11	59.07	5.88	113	305	1547	27.5	0.4
WS05A	60.173	1	40	2 / 2	---	2.78	---	06/08/2025 10:58	1.11	59.07	5.88	94	286	1510	27.5	0.3
WS05A	60.173	1	40	2 / 2	---	2.78	---	06/08/2025 11:01	1.11	59.07	5.89	71	264	1476	27.6	0.3
WS05A	60.173	1	40	2 / 2	---	2.78	---	06/08/2025 11:04	1.10	59.08	5.88	48	242	1429	27.4	0.2
WS05A	60.173	1	40	2 / 2	---	2.78	---	06/08/2025 11:07	1.11	59.07	5.92	26	219	1395	27.4	0.2
General Remarks: Standpipe micropurged and water sample taken. Water clear, no odour, no sheen. Redox potential and conductivity parameters did not stabilise after 30 minutes.																
WS05A	60.173	1	40	3 / 1	3.00	2.78	0.50 to 3.00	11/08/2025 15:36	1.15	59.03	---	---	---	---	---	---

Key: NDA denotes 'no data available'.

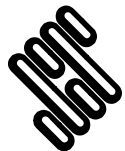
 STRUCTURAL SOILS The Old School Stillhouse Lane Bedminster Bristol BS3 4EB	Checked By		Date	Contract Ref: 738355
			Adam Lumber	
	Contract: Bluemay Park Phase 3, Bidmead Park, Melksham			Page 1 of 2



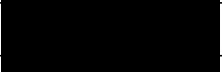
IN-SITU WATER MONITORING RESULTS

Exploratory Position ID	Ground Level (m AOD)	Pipe Ref	Pipe Diameter (mm)	Monitoring Round / Test Number	Reported Installation Depth (mbgl)	Measured Installation Depth (mbgl)	Response Zone (m)	Date & Time of Monitoring	Water Depth (mbgl)	Water Elevation (m AOD)	pH	ORP (mV)	Eh (mV)	Conductivity (uS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)
WS05A	60.173	1	40	4 / 1	3.00	2.77	0.50 to 3.00	19/08/2025 11:38	1.21	58.97	---	---	---	---	---	---
WS06	60.159	1	40	1 / 1	2.50	2.62	1.00 to 2.50	01/08/2025 10:02	1.07	59.09	---	---	---	---	---	---
WS06	60.159	1	40	1 / 2	2.50	2.62	1.00 to 2.50	01/08/2025 10:07	1.07	59.09	6.74	136	328	1811	29.4	5.1
WS06	60.159	1	40	1 / 2	---	2.62	---	01/08/2025 10:50	1.02	59.14	5.90	295	487	1076	28.0	3.2
General Remarks: Standpipe developed.																
WS06	60.159	1	40	2 / 1	2.50	2.67	1.00 to 2.50	06/08/2025 09:31	1.01	59.15	---	---	---	---	---	---
WS06	60.159	1	40	2 / 2	2.50	2.67	1.00 to 2.50	06/08/2025 09:38	1.01	59.15	6.71	154	347	2343	27.4	5.7
WS06	60.159	1	40	2 / 2	---	2.67	---	06/08/2025 09:41	1.01	59.15	6.44	212	405	2019	27.1	3.6
WS06	60.159	1	40	2 / 2	---	2.67	---	06/08/2025 09:44	1.01	59.15	6.36	252	446	1889	27.1	2.3
WS06	60.159	1	40	2 / 2	---	2.67	---	06/08/2025 09:47	1.01	59.15	6.31	283	477	1805	27.1	1.3
WS06	60.159	1	40	2 / 2	---	2.67	---	06/08/2025 09:50	1.01	59.15	6.29	308	501	1745	27.1	1.0
WS06	60.159	1	40	2 / 2	---	2.67	---	06/08/2025 09:53	1.01	59.15	6.27	328	522	1698	27.1	0.8
WS06	60.159	1	40	2 / 2	---	2.67	---	06/08/2025 09:56	1.01	59.15	6.25	345	538	1653	27.1	0.6
WS06	60.159	1	40	2 / 2	---	2.67	---	06/08/2025 09:59	1.01	59.15	6.24	358	551	1621	27.1	0.5
WS06	60.159	1	40	2 / 2	---	2.67	---	06/08/2025 10:02	1.01	59.15	6.24	368	561	1594	27.1	0.4
WS06	60.159	1	40	2 / 2	---	2.67	---	06/08/2025 10:05	1.01	59.15	6.23	378	571	1561	27.1	0.3
WS06	60.159	1	40	2 / 2	---	2.67	---	06/08/2025 10:08	1.01	59.15	6.24	384	577	1505	27.2	0.3
General Remarks: Standpipe micropurged and water sample taken. Water clear, no odour, no sheen.																
WS06	60.159	1	40	3 / 1	2.50	2.67	1.00 to 2.50	11/08/2025 15:25	1.08	59.08	---	---	---	---	---	---
WS06	60.159	1	40	4 / 1	2.50	2.67	1.00 to 2.50	19/08/2025 11:28	1.14	59.02	---	---	---	---	---	---

Key: NDA denotes 'no data available'.



STRUCTURAL SOILS
The Old School
Stillhouse Lane
Bedminster
Bristol BS3 4EB

Checked By		Date	Contract Ref: 738355
Contract: 		21/08/25	
Bluemay Park Phase 3, Bidmead Park, Melksham			Page 2 of 2



APPENDIX G - BACKGROUND TO GEOENVIRONMENTAL ASSESSMENT

- (i) Generic Assessment Criteria (GAC)
- (ii) Risk Assessment Methodology



Summary of Generic Assessment Criteria (GAC) for Human Health Risk Assessment			
Commercial Land Use			
General notes:			
SOM Soil Organic Matter Content			
GAC assume that free phase contamination is not present			
vap: GAC exceeds the vapour saturation limit (given as superscript)			
sol: GAC exceeds the solubility saturation limit (given as superscript)			
dir: for direct skin contact (guideline for long-term exposure shown in brackets)			
Source: ¹ LQM CIEH Suitable For Use Levels (S4UL, 2015) ² DEFRA Category 4 Screening Levels (C4SL, 2013)			
Metals	GAC (mg kg ⁻¹ DW)		
Inorganic arsenic ¹	640		
Beryllium ¹	12		
Cadmium ¹	190		
Chromium III ¹	8600		
Chromium VI ¹	33		
Copper ¹	68000		
Elemental mercury ¹	58 ^{vap (25.8)}		
Inorganic Mercury ²	5100		
Methylmercury ¹	320		
Nickel ¹	980		
Selenium ¹	12000		
Vanadium ¹	9000		
Zinc ¹	730000		
Lead ²	2330		
Based on a sandy loam and 6% SOM			
BTEX	GAC (mg kg ⁻¹ DW)		
	1% SOM	2.5% SOM	6% SOM
Benzene ¹	27	47	90
Toluene ¹	56000 ^{vap (869)}	110000 ^{vap (1920)}	180000 ^{vap (4360)}
Ethylbenzene ¹	5700 ^{vap (518)}	13000 ^{vap (1220)}	27000 ^{vap (2840)}
o-xylene ¹	6600 ^{sol (478)}	15000 ^{sol (1120)}	33000 ^{sol (2620)}
m-xylene ¹	6200 ^{vap (625)}	14000 ^{vap (1470)}	31000 ^{vap (3460)}
p-xylene ¹	5900 ^{sol (576)}	14000 ^{sol (1350)}	30000 ^{sol (3170)}
Petroleum hydrocarbons	GAC (mg kg ⁻¹ DW)		
	1% SOM	2.5 %SOM	6% SOM
Ali EC 5-C6 ¹	3200 ^{(304)sol}	5900 ^{(558)sol}	12000 ^{(1150)sol}
Ali EC >6-8 ¹	7800 ^{(144)sol}	17000 ^{(322)sol}	40000 ^{(736)sol}
Ali EC >8-10 ¹	2000 ^{(78)sol}	4800 ^{(190) vap}	11000 ^{(451)vap}
Ali ED >10-12 ¹	9700 ^{(48)sol}	23000 ^{(118)vap}	47000 ^{(283)vap}
Ali EC >12-16 ¹	59000 ^{(24)sol}	82000 ^{(59)sol}	90000 ^{(142)sol}
Ali EC >16-35 ¹	1600000	1700000	1800000
Ali EC >35-44 ¹	1600000	1700000	1800000
Aro EC 5-7 (benzene) ¹	26000 ^{(1220)sol}	46000 ^{(2260)sol}	86000 ^{(4710)sol}
Aro EC >7-8 (toluene) ¹	56000 ^{(869)vap}	110000 ^{(1920)sol}	180000 ^{(4360)vap}
Aro EC >8-10 ¹	3500 ^{(613)vap}	8100 ^{(1500)vap}	17000 ^{(3580)vap}
Aro EC >10-12 ¹	16000 ^{(364)sol}	28000 ^{(899)sol}	34000 ^{(2150)sol}
Aro EC >12-16 ¹	36000 ^{(169)sol}	37000	38000
Aro EC >16-21 ¹	28000	28000	28000
Aro EC >21-35 ¹	28000	28000	28000



Aro EC >35-44 ¹	28000	28000	28000
Aliphatic + Aromatic EC >44-70 ¹	28000	28000	28000
PAHs	GAC (mg kg⁻¹ DW)		
	1% SOM	2.5 %SOM	6% SOM
Acenaphthene ¹	84000 ^{(57)sol}	97000 ^{(141)sol}	100000
Acenaphthylene ¹	83000 ^{(86.1)sol}	97000 ^{(212)sol}	100000
Anthracene ¹	520000	540000	540000
Benz(a)anthracene ¹	170	170	180
Benzo(a)pyrene ¹	35	35	36
Benzo(b)fluoranthene ¹	44	44	45
Benzo(ghi)perylene ¹	3900	4000	4000
Benzo(k)fluoranthene ¹	1200	1200	1200
Chrysene ¹	350	350	350
Dibenzo(ah)anthracene ¹	3.5	3.6	3.6
Fluoranthene ¹	23000	23000	23000
Fluorene ¹	63000 ^{(30.9)sol}	68000	71000
Indeno(123-cd)pyrene ¹	500	510	510
Naphthalene ²	1600 ^{(76)sol}	3700 ^{(183)sol}	8400 ^{(432)sol}
Phenanthrene ¹	22000	22000	23000
Pyrene ¹	54000	54000	54000
Coal Tar (BaP as surrogate marker) ¹	15	15	15
Chloroalkanes & alkenes	GAC (mg kg⁻¹ DW)		
	1% SOM	2.5 %SOM	6% SOM
1,2-Dichloroethane ¹	0.67	0.97	1.7
1,1, 1-Trichloroethane ¹	660	1300	3000
1,1,2,2 Tetrachloroethane ¹	270	550	1100
1,1,1,2 Tetrachloroethane ¹	110	250	560
Tetrachloroethene ¹	19	42	95
Tetrachloromethane (Carbon Tetrachloride) ¹	2.9	6.3	14
Trichloroethene ¹	1.2	2.6	5.7
Trichloromethane (chloroform) ¹	99	170	350
Chloroethene (vinyl chloride) ¹	0.059	0.077	0.12

Chlorobenzenes	GAC (mg kg ⁻¹ DW)		
	1% SOM	2.5% SOM	6 % SOM
Chlorobenzene ¹	56	130	290
1,2-dichlorobenzene ¹	2000 ^{(571)sol}	4800 ^{(1370)sol}	11000 ^{(3240)sol}
1,3-dichlorobenzene ¹	30	73	170
1,4-dichlorobenzene ¹	4400 ^{f (224)vap}	10000 ^{f (540)vap}	25000 ^{f (1280)vap}
1,2,3-trichlorobenzene ¹	102	250	590
1,2,4-trichlorobenzene ¹	220	530	1300
1,3,5-trichlorobenzene ¹	23	55	130
1,2,3,4 Tetrachlorobenzene ¹	1700 ^{(122)vap}	3080 ^{(304)vap}	4400 ^{(728)vap}
1,2,3,5 Tetrachlorobenzene ¹	49 ^{(39.4)vap}	120 ^{(98.1)vap}	240 ^{(235)vap}
1,2,4,5 Tetrachlorobenzene ¹	42 ^{(19.7)sol}	72 ^{(49.1)sol}	96
Pentachlorobenzene ¹	640 ^{(43)sol}	770 ^{(107)sol}	830
Hexachlorobenzene ¹	110 ^{(0.2)vap}	120	120

GENERIC ASSESSMENT CRITERIA FOR CONTROLLED WATERS

Protection of the water environment

The water environment in the United Kingdom is protected under a number of regulatory regimes. The relevant environmental regulator is consulted where there may be a risk that pollution of 'controlled waters' may occur or may have occurred in the past.

The term 'controlled waters' refers to coastal waters, inland freshwaters and groundwater. The EU Water Framework Directive (WFD) (2000/60/EC) is implemented via domestic regulations and guidance, covering aspects of groundwater and surface water protection as well as drinking water supply policy. Domestic legislation and guidance will vary across the United Kingdom. Therefore, the relevant legislation for England, Wales, Northern Ireland and Scotland should be reviewed, alongside guidance provided by the Environment Agency (EA), Natural Resource Wales (NRW), the Scottish Environmental Protection Agency (SEPA) or the Northern Ireland Environment Agency (NIEA), as appropriate.

The main objectives of the protection and remediation of groundwater under threat from land contamination are set out within "The Environment Agency's approach to groundwater protection", version 1.0 (March 2017)⁽¹⁾ and the associated guidance "Land contamination groundwater compliance points: quantitative risk assessments (March 2017)^(1a) that have replaced the previous guidance document "Groundwater Principles and Practice (GP3)". When assessing risks to groundwater, the following need to be considered:

- Where pollutants have not yet entered groundwater, all necessary and reasonable measures must be taken to:
 - **prevent** the input of **hazardous** substances into groundwater (see description of hazardous substances below)
 - **limit** the entry of other (non-hazardous) pollutants into groundwater to avoid pollution, deterioration in the status of groundwater bodies and to prevent sustained, upward trends in pollutant concentrations in groundwater.
- Where pollutants have already entered groundwater, the priority is to take all necessary and reasonable measures to:
 - **minimise** further entry of "contaminants" where there is a defined source
 - **limit the pollution** of groundwater or any effect on the status of the groundwater body from the future expansion of the 'plume', if necessary, by actively reducing its extent.

Within the context of groundwater risk assessments on sites affected by land contamination, "reasonable" means feasible without involving disproportionate costs. What costs are "disproportionate" depends on site-specific circumstances, which may include:

- Considerations of technical feasibility such as identified by the remedial options appraisal, this may be due to the distribution or nature of the contamination and the available remedial methods to treat the identified contamination;
- Sustainability considerations.

DEFINITIONS AND SUBSTANCE CLASSIFICATIONS

Risks to surface waters:

When assessing risks to surface waters, the following list of definitions should be understood:

Priority substances (PS) are harmful substances originally identified under the Water Framework Directive (WFD) 2000/60/EC as substances ‘presenting a significant risk to or via the aquatic environment’ at a European level. Member States are required to incorporate the identified **PS** into their country-wide monitoring programmes. There are currently 33 **PS** defined within the Priority Substances Directive (2013/39/EU; Annex 1), with a further 12 additional substances due to come into force from 22 December 2018. Directive 2013/39/EU has been transposed into domestic legislation for England and Wales by The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.

Under the umbrella of **PS**, there is a sub-set of substances identified as being “hazardous”, and these are referred to as **Priority hazardous substances (PHS)**. The list of **PHS** is defined at EU level within the Priority Substances Directive (2013/39/EU). The WFD defines hazardous substances as ‘substances (or groups of substances) that are toxic, persistent and liable to bio-accumulate, and other substances or groups of substances that give rise to an equivalent level of concern.’ There are currently **21 PHS** (previously 15 PHS, with a further 6 substances added in 22 December 2018).

There is also another group of substances defined at EU level and which are referred to as **other pollutants (OP)** in Directive 2013/39/EU. These are additional substances which although not **priority substances**, have EQS which are identical to those laid down in the legislation which applied prior to 13 January 2009 (Directive 2008/105/EU). The **OP** are listed along with the **priority substance (PS)** within the Priority Substances Directive (2013/39/EU), and their associated EQS are also listed therein. There are 6 **OP** defined within the Priority Substances Directive (2013/39/EU).

In addition to the EU level substances, there are also a group of pollutants defined at a Member State level, referred to as **Specific pollutants (SP)**. These substances are pollutants which are released in significant quantities into water bodies in each of the individual European Member States. Under the WFD, Member States are required to set their own EQS for these substances. An indicative list of **SP** is given in Annex VIII of the WFD. Many of the substances categorised as **SP** in the UK were formerly List 2 substances under the old Groundwater Directive (80/68/EEC). The **SP** are defined within Part 2 (Table 1) of The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.

Risks to groundwater:

When assessing risks to groundwater, the following definitions should be understood:

Under the requirements of the Groundwater Daughter Directive (2006/118/EU), the UK has published a list of substances it considers to be **hazardous substances** with respect to groundwater. In their advisory capacity to the government, this list has been derived by the UK Joint Agencies Groundwater Directive Advisory Group (JAGDAG), of which the Environment Agency is a member. The latest JAGDAG list of **hazardous substances** was published in January 2019 and the Environment Agency will use the updated list of hazardous substances from this date for all new activities that may lead to the discharge of hazardous substances to groundwater. The list is extensive and can be found in full at:

<https://www.wfduk.org/stakeholders/jagdag>

Selecting the appropriate assessment criteria

When assessing the risks to controlled waters, various assessment criteria apply, depending on the nature of the assessment and the conceptual site model.

Where a surface water body is involved, then Environmental Quality Standards (EQS) are the relevant assessment criteria as they are designed to be protective of surface water ecology.

Where a public water supply or a Principal aquifer is involved, then the standards defined in The Water Supply (Water Quality) Regulations⁽²⁾ are the primary source of assessment criteria. The Private Water Supplies Regulations⁽³⁾ may also be applicable in some cases. For instances where there are no UK assessment criteria, then the World Health Organisation (WHO) drinking water guidelines⁽⁴⁾ may be used.

This appendix presents the generic assessment criteria (GAC) that RSK considers suitable for assessing risks to controlled waters for our most commonly encountered determinants. A full list of EQS for England and Wales are included in The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.

The RSK GAC for controlled waters are presented in **Table 1** and **Table 2**. In line with the Environment Agency's Remedial Targets Methodology, the GAC for controlled waters are termed 'target concentrations'.

The appropriate target concentrations should be selected with consideration to:

- the site conceptual model (i.e. the receptor at potential risk);
- whether the substance is already present in groundwater at the site;
- whether or not the substance is classified as a priority hazardous substance under the Priority Substances Directive (2013/39/EC) (see above), or as a hazardous substance according to the current list of JAGDAG determinations⁽⁵⁾; and
- background concentrations in the aquifer (if applicable).

It is important to remember that the WFD and Environment Agency guidance^(1 & 1a) support a sustainable, risk-based approach be applied to groundwater contamination. Exceedance of any target concentration does not necessarily imply that an unacceptable risk exists or that remediation is inevitably required.

Target concentrations shaded in green are <u>statutory values</u>	Target concentrations shaded in orange are <u>non-statutory values</u>
---	--

Note: Units µg/l throughout (unless otherwise stated)

Table 1: Target concentrations for controlled waters (excluding TPH CWG fractions)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Metals & other inorganics						
Hazardous substance	Specific pollutant	Arsenic	-	10 ⁽²⁾	50 ^(6a)	25 ^(6a)
Non-hazardous pollutant	Priority substance	Cadmium	0.1 ⁽⁷⁾	5 ⁽²⁾	≤0.08, 0.08, 0.09, 0.15, 0.25 ^(6b)	0.2 ^(6a)
(Not determined)	-	Chromium (total)	-	50 ⁽²⁾	8.1 Sum values for chromium III and VI	-
(Not determined)	Specific pollutant	Chromium (III)	-	Use value for total chromium	4.7 ^(6a)	-
Hazardous substance	Specific pollutant	Chromium (VI)			3.4 ^(6a)	0.6 ^(6a)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
(Not determined)	Specific pollutant	Copper	-	2,000 ⁽²⁾	1 bioavailable ^(6a)	3.76 dissolved, where DOC ≤1mg/l ^(6a)
						3.76µg/l + (2.677µg/l x ((DOC/2) – 0.5µg/l)) dissolved, where DOC >1mg/l ^(6a)
Hazardous substance	Priority substance	Lead	-	10 ⁽²⁾	1.2 bioavailable ^(6a)	1.3 ^(6a)
Hazardous substance	Priority hazardous substance	Mercury	0.01 ⁽⁷⁾	1 ⁽²⁾	0.07 ^(6c)	0.07 ^(6c)
Non-hazardous pollutant	Priority substance	Nickel	-	20 ⁽²⁾	4.0 bioavailable ^(6a)	8.6 ^(6a)
Non-hazardous pollutant	-	Selenium	-	10 ⁽²⁾	-	-
Non-hazardous pollutant	Specific pollutant	Zinc	-	3,000 ⁽⁸⁾	10.9 bioavailable ^(6a)	6.8 dissolved ^(6a)
(Not determined)	Specific pollutant	Iron	-	200 ⁽²⁾	1000 ^(6a) *1	1000 ^(6a))*1
(Not determined)	Specific pollutant	Manganese	-	50 ⁽²⁾ (0.05mg/l)	123 bioavailable ^(6a) (0.123mg/l)	-
(Not determined)	-	Aluminium	-	200 ⁽²⁾	-	-

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Hazardous substance	Priority hazardous substance	Tributyltin compounds (Tributyltin-cation)	0.001 ⁽⁷⁾	-	0.0002 ^(6a)	0.0002 ^(6a)
(Not determined)	-	Sodium	-	200,000 ⁽²⁾ (200 mg/l)	-	-
Non-hazardous pollutant	Specific pollutant	Cyanide (Hydrogen cyanide)	-	50 ⁽²⁾ (0.05 mg/l)	1 ^(6a) (0.001 mg/l)	1 ^(6a) (0.001 mg/l)
Non-hazardous pollutant	-	Total ammoniacal nitrogen [§]	-	500 ⁽²⁾ (0.5 mg/l) as NH ₄ (472 expressed as NH ₃ ; 389 expressed as N)	300 ^(6f) (0.3 mg/l) as N (364 expressed as NH ₃ ; 386 expressed as NH ₄)	-
Non-hazardous pollutant	Specific pollutant	Ammonia un-ionised (equilibrium ratio calculated) (NH ₃)	-	-	-	21 ^(6a) (0.021 mg/l)
Non-hazardous pollutant	Specific pollutant	Chlorine	-	-	2 ^(6a) (0.002 mg/l)	10 ^(6d) (0.01 mg/l)
(Not determined)	-	Chloride	-	250,000 ⁽²⁾ (250 mg/l)	-	-
(Not determined)	-	Sulphate	-	250,000 ⁽²⁾ (250 mg/l)	-	-
(Not determined)	-	Nitrate (as NO ₃)	-	50,000 ⁽²⁾ (50 mg/l)	-	-

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
(Not determined)	-	Nitrite (as NO ₂)	-	500 ⁽²⁾ (0.5 mg/l)	10 ⁽⁹⁾ (0.01 mg/l)	-
Volatile organic compounds (VOC)						
Non-hazardous pollutant	Other pollutant	Tetrachloroethene (tetrachloroethylene; PCE)	0.1 ⁽⁷⁾	10 ⁽²⁾ sum of TCE and PCE	10 ^(6a)	10 ^(6a)
Hazardous substance	Other pollutant	Trichloroethene (trichloroethylene; TCE)	0.1 ⁽⁷⁾		10 ^(6a)	10 ^(6a)
Hazardous substance (1,1,2,2-tetra - chloroethane)	Specific pollutant	Tetrachloroethane	-	-	140 ^(6a)	-
Hazardous substance	Other pollutant	Carbon tetrachloride (tetrachloromethane)	0.1 ⁽⁷⁾	3.0 ⁽²⁾	12 ^(6a)	12 ^(6a)
Non-hazardous pollutant	Priority substance	1,2-Dichloroethane	1.0 ⁽⁷⁾	3.0 ⁽²⁾	10 ^(6a)	10 ^(6a)
Non-hazardous pollutant	-	1.2-Dichloroethene (DCE) sum of cis and trans	-	50.0 ⁽⁴⁾	-	-
Hazardous substance	-	Vinyl chloride (chloroethene, chloroethylene)	-	0.5 ⁽²⁾	-	-
Non-hazardous pollutant	Priority substance	Dichloromethane	-	20 ⁽⁴⁾	20 ^(6a)	20 ^(6a)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Non-hazardous pollutant	Priority substance	Trichlorobenzenes	0.01 ⁽⁷⁾	-	0.4 ^(6a)	0.4 ^(6a)
Hazardous substance	Priority substance	Trichloromethane (Chloroform)	0.1 ⁽⁷⁾	100 ^(2a) (sum of trihalomethanes – chloroform, bromform, dibromochloromethane, bromodichloromethane)	2.5 ^(6a)	2.5 ^(6a)
(Not determined)	-	Bromoform	-		-	-
(Not determined)	-	Dibromochloromethane	-		-	-
(Not determined)	-	Bromodichloromethane	-		-	-
Non-hazardous pollutant	Priority hazardous substance	Di(2-ethylhexyl) phthalate (bis(2-ethylhexyl) phthalate, DEHP)	-	8 ⁽⁴⁾	1.3 ^(6a)	1.3 ^(6a)
(Not determined)	Specific pollutant	Benzyl butyl phthalate	-	-	7.5 ^(6a)	0.75 ^(6e)
Hazardous substance	Priority hazardous substance	Hexachlorobutadiene (as a pesticide, but reported in a VOC suite)	0.005 ⁽⁷⁾	0.1 ⁽²⁾	0.6 ^(6c)	0.6 ^(6c)
Semi-volatile organic compounds (SVOC)						
(Not determined) Not to be confused with acenaphthene, which is a hazardous substance	-	Acenaphthylene (Aro EC12-EC16)	-	-	5.8 ⁽¹⁰⁾	
Hazardous substance	Priority hazardous substance	Anthracene (Aro EC16-EC21)	-	-	0.1 ^(6a)	0.1 ^(6a)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Non-hazardous pollutant	Priority substance	Naphthalene (Aro EC10-EC12)	-	-	2 ^(6a)	2 ^(6a)
Hazardous substance	Priority substance	Fluoranthene (Aro EC21-EC35) not used as an indicator for this EC band	-	-	0.0063 ^(6a)	0.0063 ^(6a)
Hazardous substance(s)	Priority hazardous substance(s)	Benzo(a)pyrene (Aro EC21-EC35)	-	0.01 ⁽²⁾	0.00017 ^(6a)	0.00017 ^(6a)
		Benzo(b)fluoranthene (Aro EC21-EC35)	-	0.1 ⁽²⁾ sum of the concentration of the four specified compounds	No EQS for these substances. B(a)P should be used as the indicator compound instead.	
		Benzo(k)fluoranthene (Aro EC21-EC35)	-			
		Benzo(g,h,i)perylene (Aro EC21-EC35)	-			
		Indeno(1,2,3-cd) pyrene (Aro EC21-EC35)	-			
Non-hazardous pollutant	Specific pollutant	Phenol	-	-	7.7 ^(6a)	7.7 ^(6a)
Hazardous substance	Specific pollutant	2,4-Dichlorophenol	0.1 ⁽⁷⁾	-	4.2 ^(6a)	0.42 ^(6a)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Hazardous substance	Priority substance	Pentachloro-phenol (PCP) (as a pesticide, but reported in an SVOC suite)	0.1 ⁽⁷⁾	0.1 ⁽²⁾	0.4 ^(6a)	0.4 ^(6a)
Petroleum hydrocarbons						
Hazardous substance	-	Total petroleum hydrocarbons	-	See Table 2 for individual (non-statutory) TPH CWG fractions with respect to drinking water receptors	See individual risk driving compounds (i.e. BTEX and PAH) for specific EQS	
Hazardous substance	Priority substance	Benzene (Aro EC5-EC7)	1 ⁽⁷⁾	1 ⁽²⁾	10 ^(6a)	8 ^(6a)
Hazardous substance	Specific pollutant	Toluene (Aro EC7-EC8)	4 ⁽⁷⁾	700 ⁽⁴⁾	74 ^(6a)	74 ^(6a)
Hazardous substance	-	Ethylbenzene (Aro EC8-EC10)	-	300 ⁽⁴⁾	300 ⁽¹¹⁾	-
Hazardous substance	-	Xylenes (Aro EC8-EC10)	3 ⁽⁷⁾	500 ⁽⁴⁾	30 ⁽¹¹⁾	-
Non-hazardous pollutant	-	Methyl tertiary butyl ether (MTBE)	-	15 ⁽¹²⁾	-	-

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Pesticides, fungicides, insecticides and herbicides						
(Not determined) – assume to be Hazardous Substance as per below	-	Total pesticides	-	0.5 ⁽²⁾	-	-
(Not determined) - assume to be Hazardous Substance as per below	-	Other individual pesticides (unless otherwise detailed below)	-	0.1 ⁽²⁾	-	-
Hazardous substance(s)	Other pollutant (Cyclodiene pesticides)	Aldrin	0.003 ⁽⁷⁾	0.03 ⁽²⁾	0.01 ^(6a) (sum of all four)	0.005 ^(6a) (sum of all four)
		Dieldrin	0.003 ⁽⁷⁾	0.03 ⁽²⁾		
		Endrin	0.003 ⁽⁷⁾	0.1 ^(2b) ('other individual pesticide')		
		Isodrin*2	0.003 ⁽⁷⁾	0.1 ^(2b) ('other individual pesticide')		
Hazardous substance	Other pollutant	DDT (total)	0.002 ⁽⁷⁾	0.1 ⁽²⁾ ('other individual pesticide')	0.025 ^(6a)	0.025 ^(6a)
Hazardous substance	Specific pollutant	Carbendazim	-	0.1 ⁽²⁾ ('other individual pesticide')	0.15 ^(6a)	-

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Hazardous substance	Specific pollutant	Chlorothalonil	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.035 ^(6a)	-
Hazardous substance	Priority substance	Cypermethrin	-	0.1 ⁽²⁾ (‘other individual pesticide’)	8.0E ^{-5(6a)}	8.0E ^{-6(6a)}
Hazardous substance	Specific pollutant	Dimethoate	0.01 ⁽⁷⁾	0.1 ⁽²⁾ (‘other individual pesticide’)	0.48 ^(6a)	0.48 ^(6a)
(Not determined)	Specific pollutant	Glyphosate	-	0.1 ⁽²⁾ (‘other individual pesticide’)	196 ^(6a)	196 ^(6a)
Hazardous substance	Specific pollutant	Linuron	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.5 ^(6a)	0.5 ^(6a)
Non-hazardous pollutant	Specific pollutant	Mecoprop	0.04 ⁽⁷⁾	0.1 ⁽²⁾ (‘other individual pesticide’)	18 ^(6a)	18 ^(6a)
Non-hazardous pollutant	Specific pollutant	Methiocarb	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.01 ^(6a)	-
Non-hazardous pollutant	Specific pollutant	Pendimethalin	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.3 ^(6a)	-

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Hazardous substance	Specific pollutant	Permethrin	0.001 ⁽⁷⁾	0.1 ⁽²⁾ (‘other individual pesticide’)	0.001 ^(6a)	0.0002 ^(6a)
Hazardous substance	Priority substance	Alachlor	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.3 ^(6a)	0.3 ^(6a)
Hazardous substance	Priority substance	Atrazine	0.03 ⁽⁷⁾	100 ⁽⁴⁾ (‘other individual pesticide’)	0.6 ^(6a)	0.6 ^(6a)
Hazardous substance	Priority substance	Diuron	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.2 ^(6a)	0.2 ^(6a)
Hazardous substance	Priority hazardous substance	Endosulphan	0.005 ⁽⁷⁾	0.1 ⁽²⁾ (‘other individual pesticide’)	0.005 ^(6a)	0.0005 ^(6a)
Non-hazardous pollutant	Priority substance	Isoproturon	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.3 ^(6a)	0.3 ^(6a)
Hazardous substance	Priority substance	Simazine	0.03 ⁽⁷⁾	0.1 ⁽²⁾ (‘other individual pesticide’)	1 ^(6a)	1 ^(6a)
Hazardous substance	Priority hazardous substance	Trifluralin	0.01 ⁽⁷⁾	0.1 ⁽²⁾ (‘other individual pesticide’)	0.03 ^(6a)	0.03 ^(6a)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Hazardous substance	Priority substance	Dichlorvos	-	0.1 ⁽²⁾ (‘other individual pesticide’)	6.0E ^{-4(6a)}	6.0E ^{-5(6a)}
Hazardous substance	Priority substance	Heptachlor and heptachlor epoxide	-	0.03 ⁽²⁾	2.0E ^{-7(6a)}	1.0E ^{-08(6a)}
Miscellaneous						
(Not determined)	Specific pollutant	Triclosan (antibacterial agent)	-	-	0.1 ^(6a)	0.1 ^(6a)
Hazardous substance	Priority hazardous substance	Perfluoro-octane sulfonic acid (and its derivatives) (PFOS)	-	-	6.5E ^{-4(6a)}	1.3E ^{-4(6a)}
Hazardous substance	Priority hazardous substance	Hexabromo cyclododecane (HBCDD)	-	-	0.0016 ^(6a)	0.0008 ^(6a)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Notes: ‘-’ A target concentration is not available. \$Please note that total ammonia (NH ₄ ⁺ and NH ₃) is equivalent to ammoniacal nitrogen in laboratory reports * ¹ Please note that although iron is listed in the 2015 Direction as 1.000 µg/l, the EQS remains at 1mg/l in Scotland and it is assumed this is an error and should read either 1,000 or 1000µg/l. * ² Please note that although Isodrin is not listed in name within the group of “Cyclodiene pesticides” in Table 1 of Schedule 3 Part 3 of the 2015 Direction ⁽⁶⁾ , the CAS number for Isodrin (465-73-6) <u>is</u> listed and therefore it is assumed that it has been missed off the named list of substances. * ³ Total petroleum hydrocarbons is used for consistency, but is an analytical method-defined measurement for a mixture of hydrocarbons subject to environmental analysis ¹¹ . “Bioavailable” in relation to copper, zinc, nickel and manganese (but not lead) is the generic EQSbioavailable ^(6a) derived from the Metal Bioavailability Assessment Tool (M-BAT) developed by the Water Framework Directive UK Technical Advisory Group (WFDTAG). Exceedance of this value should prompt a site-specific assessment using the M-BAT with pH, DOC and Ca to derive a site-specific EQS termed the PNEC _{dissolved} . http://www.wfduk.org/resources/rivers-lakes-metal-bioavailability-assessment-tool-m-bat . For zinc, if there is an exceedance of the EQSbioavailable in an initial GQRA, Tier 2 required that the EQS for zinc should also have the ambient background concentration of zinc added as well						

Table 2: World Health Organization (WHO) guide values for TPH CWG fractions in drinking water⁽¹³⁾ (as referenced in CL:AIRE, 2017⁽¹¹⁾)

TPH CWG fraction	WHO guide value for drinking water ⁽¹³⁾ (µg/l)
Aliphatic fractions:	
Aliphatic EC5-EC6	15,000
Aliphatic >EC6-EC8	15,000
Aliphatic >EC8-EC10	300
Aliphatic >EC10-EC12	300
Aliphatic >EC12-EC16	300
Aliphatic >EC16-EC21	-
Aliphatic >EC21-EC35	-
Aromatic fractions:	
Aromatic EC5-EC6	10 (benzene)
Aromatic >EC6-EC8	700 (toluene)
Aromatic >EC8-EC10	300 (ethyl benzene) 500 (xylenes)
Aromatic >EC10-EC12	90
Aromatic >EC12-EC16	90
Aromatic >EC16-EC21	90
Aromatic >EC21-EC35	90
Reference: World Health Organisation (WHO), 2008. Petroleum products in drinking-water. Background document for development of WHO guidelines for drinking water quality. WHO/SDE/WSH/05.08/123. World Health Organisation, Geneva ⁽¹³⁾ .	

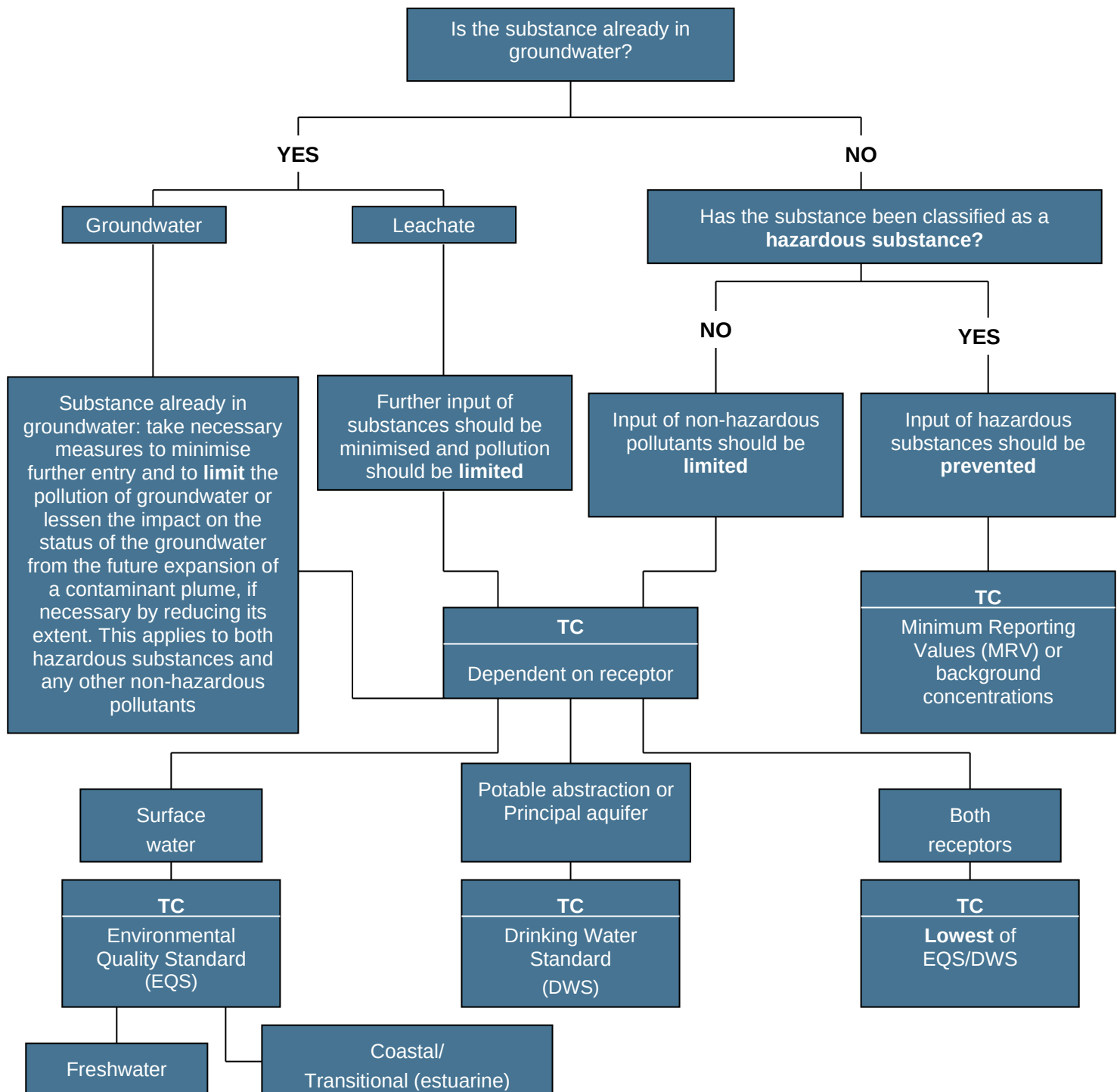
References

1. Environment Agency (2018), 'The Environment Agency's approach to groundwater protection', version 1.2, February 2018 (formerly contained within GP3).
<https://www.gov.uk/government/collections/groundwater-protection>
- 1a. Environment Agency (2017), 'Land contamination groundwater compliance points: quantitative risk assessments', March 2017 (formerly contained within GP3) [accessed 29 March 2017].
<https://www.gov.uk/government/collections/groundwater-protection>
2. The Water Supply (Water Quality) Regulations 2016 (SI 2016/619)
 - 2a. Sum of chloroform, bromoform, dibromochloromethane and bromodichloromethane
 - 2b. Standard applies to individual pesticides except aldrin, dieldrin, heptachlor and heptachlor epoxide, for which a separate standard is defined.
3. The Private Water Supplies (England) Regulations 2016. SI 2016 / 618
4. WHO (2011), *Guidelines for drinking-water quality*, 4th edn
5. JAGDAG hazard substance determinations (January 2019): This list contains substances that are determined to be hazardous substances or non-hazardous pollutants for the purposes of the groundwater directive 2006/118/EC. <https://www.wfduk.org/stakeholders/jagdag> [accessed 1 February 2021]
The absence of an assessment or substance from the list means an assessment has not been completed and is therefore presented as 'Not determined'. For further details on how substances are assessed, see the Joint Agencies Groundwater Directive Advisory Group (JAGDAG) 'Methodology for the determination of hazardous substances in groundwater for the purposes of the groundwater directive 2006/118/EC' which is available from the JAGDAG website. The methodology is a UK –wide framework that sets criteria for how to assess whether a substance is a hazardous substances in groundwater.
6. The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.
 - 6a. The EQS for these substances are based on a "long term mean" or an "annual average (AA)" EQS.
 - 6b. For cadmium and its compounds the EQS values vary depending on the hardness of the water as specified in five class categories (Class 1: < 40 mg CaCO₃/l, Class 2: 40 to < 50 mg CaCO₃/l, Class 3: 50 to < 100 mg CaCO₃/l, Class 4: 100 to < 200 mg CaCO₃/l and Class 5: ≥ 200 mg CaCO₃/l).
 - 6c. The EQS for Mercury and hexachlorobutadiene are based on a "maximum acceptable concentration (MAC)" EQS in absence of an "annual average (AA)" EQS.
 - 6d. The EQS for chlorine in saltwater is based on the 95th percentile concentration of total residual oxidant, which refers to the sum of all oxidising agents existing in water, expressed as available chlorine.
 - 6e. The recommended saltwater standard is derived using a safety factor of 100. Where the standard is failed, it is recommended that supporting evidence of ecological damage should be obtained before committing to expensive action.
 - 6f. EQS for total ammonia is as per Schedule 3, Part 1, Table 7 of of the above directions. EQS applies to river types 1, 2 and 4 and 6 (namely upland and low alkalinity). The EQS for a lowland and high alkalinity rivers (types 3, 5 and 7) is 600µg/l (0.6mg/l).

Additional information on the Metal Bioavailability Assessment Tool (M-BAT) is available at <http://www.wfduk.org/resources/rivers-lakes-metal-bioavailability-assessment-tool-m-bat>

7. Minimum reporting values listed at <https://www.gov.uk/government/publications/values-for-groundwater-risk-assessments/hazardous-substances-to-groundwater-minimum-reporting-values> (updated 13 January 2017; accessed 29 March 2017). Note target concentration for xylenes is 3 µg/l each for o-xylene and m/p xylene as it may not be possible to separate m- and p-xylene; 135 tcb, 124 tcb, 123 tcb each to 0.01 µg/l)
8. The Surface Waters (Abstraction for Drinking Water) (Classification) Regulations 1996 (as amended). SI 1996 / 3001
9. Council Directive on the Quality of Fresh Waters Needing Protection or Improvement in Order to Support Fish Life (Freshwater Fish Directive) (78/659/EEC)
10. WRc plc (2002), R&D Technical Report P45.
11. CL:AIRE, 2017. Petroleum Hydrocarbons in Groundwater: Guidance on assessing petroleum hydrocarbons using existing hydrogeological risk assessment methodologies. V1.1.
12. Drinking Water Inspectorate (London, UK). Environmental Information Request on MTBE in drinking water. Ref. DWI 1/10/18; dated 28 November 2006. Value is based on the odour threshold for MTBE, which is lower than a health-based guideline value
13. World Health Organisation (WHO), 2008. Petroleum products in drinking-water. Background document for development of WHO guidelines for drinking water quality. WHO/SDE/WSH/05.08/123. World Health Organisation, Geneva. [accessed 29 March 2017] http://www.who.int/water_sanitation_health/dwg/chemicals/petroleumproducts_2add_june2008.pdf

FLOW CHART TO ASSIST WITH SELECTION OF TARGET CONCENTRATIONS



TC = Target concentration

When leachate is being assessed the 'compliance point' is the groundwater body. Therefore dilution within the groundwater body may be applied with caution before comparing with the TC.

When directly assessing a receptor, e.g., a river, the appropriate TC should be selected.

Risk Assessment Methodology

Risk is a combination of the 'likelihood' of an event occurring and the magnitude of its 'consequences'. Therefore, in order to assess risk, both the likelihood and the consequences of an event must be taken into account. RSK Group Plc has adopted guidance provided in CIRIA C552 for use in the production of risk assessments.

The likelihood of an event can be classified on a four point system using the following terms and definitions based on CIRIA C552:

Highly likely: The event appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution;

Likely: It is probable that an event will occur, or circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term;

Low likelihood: Circumstances are possible under which an event could occur, but it is not certain even in the long term that an event would occur and it is less likely in the short term;

Unlikely: Circumstances are such that it is improbable the event would occur even in the long term.

The severity can be classified using a similar system also based on CIRIA C552. The terms and definitions relating to severity are:

Severe: Short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short-term risk of pollution of sensitive water resources. Catastrophic damage to buildings or property. Short term risk to an ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000);

Medium: Chronic damage to human health ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000), pollution of sensitive water resources, significant change in an ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000);

Mild: Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000). Damage to sensitive buildings, structures or the environment; and

Minor: Harm, not necessarily significant, but that could result in financial loss or expenditure to resolve. Non-permanent human health effects easily prevented by use of personal protective clothing. Easily repairable damage to buildings, structures and services.

Once the likelihood of an event occurring and its severity have been classified, a risk category can be assigned the table below.

RISK CLASSIFICATION SYSTEM (CIRIA 552)					
		Consequence			
		Severe	Medium	Mild	Minor
Probability	Highly likely	Very high	High	Moderate	Moderate/Low
	Likely	High	Moderate	Moderate/Low	Low
	Low likelihood	Moderate	Moderate/Low	Low	Very Low
	Unlikely	Moderate/Low	Low	Very Low	Very Low

APPENDIX H - CALIBRATION CERTIFICATES

- (i) SPT Standard Penetration Test (SPT) Hammer Calibration Records
- (ii) Hand Vane (HV) Calibration Records
- (iii) Gas Analyser Calibration Records

Safer Rig Services
Portview Road
Avonmouth
Bristol
BS11 9JE

SPT Hammer Ref: DT15187
Test Date: 14/04/2025
Report Date: 14/04/2025
File Name: DT15187.spt
Test Operator: MS

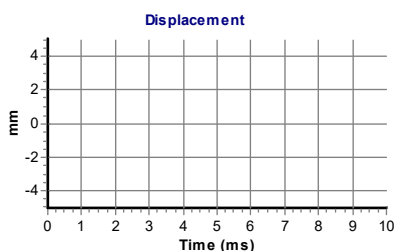
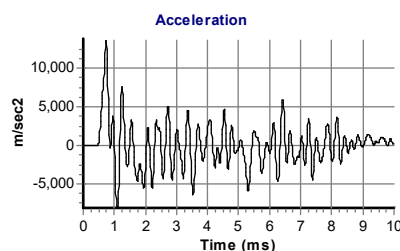
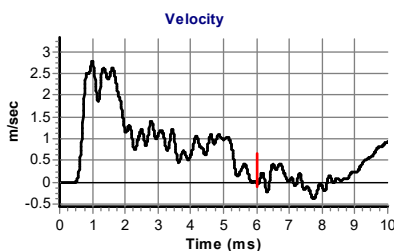
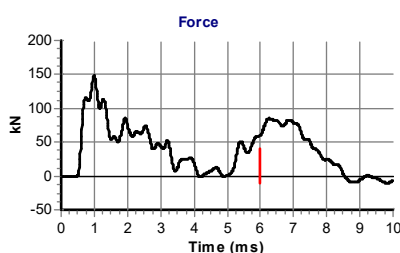
Instrumented Rod Data

Diameter d_r (mm): 54
Wall Thickness t_r (mm): 6.8
Assumed Modulus E_a (GPa): 208
Accelerometer No.1: 73534
Accelerometer No.2: 73538

SPT Hammer Information

Hammer Mass m (kg): 63.5
Falling Height h (mm): 760
SPT String Length L (m): 10.5

Comments / Location



Calculations

Area of Rod A (mm²): 1008
Theoretical Energy E_{theor} (J): 473
Measured Energy E_{meas} (J): 381

Energy Ratio E_r (%): **80**

Signed: MS
Title: Equipment Inspector

CERTIFICATE OF CALIBRATION

BR-13

ISSUED BY: LAMBDA CALIBRATION LTD

DATE OF ISSUE: 20-Jun-25

CERTIFICATE No: 924787



Lambda
CALIBRATION LTD

11-13 Chorley Central
Business Park
Stump Lane
Chorley
PR6 0BL
Tel: 0845 241 1533



W. Pope A. Scurr M. Kenyon
M. Darbyshire K. Quigley

Customer: Stuctural Soils Ltd, Bedminster, BS3 4EB

Item No: 501912

Manufacturer: Geonor

Description: Hand Held Shear Vane

Date of Cal: 19-Jun-25

Basis & Method: The unit under test (UUT) was calibrated by comparison with a digital torque analyser, According to the methodology outlined in BS EN ISO 6789: 2003, at approximately 20%, 60% & 95% of its full scale deflection.
Shear strength was then calculated in accordance with BS 1377: 1990 and is reported in the table at the foot of this certificate.

Equipment Used: LTQA-03, LMB-2A-23

Temperature & RH: Start: 20 degC Finish: 20 degC RH: <90%

Axis of Torque: Vertical Axis of Tool Handle: Vertical

Visual Examination: Vane 2 found to be missing

VANE REPLACED 30 JUNE 2025

Adjustments: None

Measured	Vane 1 (H)	50.9	Vane 1 (D)	25.4
Vane Sizes (mm):	Vane 2 (H)	N/A	Vane 2 (D)	N/A
	Vane 3 (H)	32.1	Vane 3 (D)	16.1

UUT Dial Readings v Torque Analyser Readings:

						Mean Readings	U (+/-) Nm	k
Actual Torque (N·m)	0.667	0.675	0.666	0.671	0.668	0.669	0.01	2.10
UUT Readings 20%	26.0	26.0	26.0	26.0	26.0	26.00		
Actual Torque (N·m)	2.032	2.024	2.008	2.014	2.036	2.023	0.04	2.12
UUT Readings 60%	78.0	78.0	78.0	78.0	78.0	78.00		
Actual Torque (N·m)	3.221	3.190	3.184	3.196	3.176	3.193	0.06	2.10
UUT Readings 95%	122.0	122.0	122.0	122.0	122.0	122.00		

Calculated Shear Strength Values:

UUT Mean Dial Readings	Mean Torque (N·m)	Vane 1 Shear Strength (kPa)	Vane 2 Shear Strength (kPa)	Vane 3 Shear Strength (kPa)
26.00	0.669	11	N/A	44
78.00	2.023	34	N/A	133
122.00	3.193	53	N/A	209

1 kPa = 1kN/m² = 0.101972 tonne/m² (1 tonne/m² = 9.80665 kPa)

The reported expanded uncertainty for torque U, is based on a standard uncertainty multiplied by a coverage factor k, providing a level of confidence of approximately 95%.

This certificate provides traceability of measurement to recognised national standards, and to the units of measurement realised at the National Physical Laboratory or other recognised national standards laboratories. This certificate may not be reproduced other than in full, without the prior written approval of the issuing laboratory.

CERTIFICATION OF CALIBRATION



No. 66916



Date Of Calibration: 04-Jun-2025

Certificate Number: G503522_9/38692

Issued by: QED Environmental Systems Inc.

Customer: STRUCTURAL SOILS LIMITED
SPRING LODGE 172 CHESTER ROAD HELSBY FRODSHAM, CHESHIRE WA6 0AR

Description:

Model: GA5000
Serial Number: G503522

Accredited Results:

Methane (CH4)		
Certified Gas (%)	Instrument Reading (%)	Uncertainty (%)
5.0	4.9	0.42
15.0	14.9	0.66
60.0	59.8	1.03

Carbon Dioxide (CO2)		
Certified Gas (%)	Instrument Reading (%)	Uncertainty (%)
5.0	5.0	0.43
15.0	15.0	0.71
40.0	40.1	1.19

Oxygen (O2)		
Certified Gas (%)	Instrument Reading (%)	Uncertainty (%)
21.3	21.4	0.25

Gas cylinders are traceable and details can be provided if requested.

CH4, CO2 readings recorded at: 32.4 °C/90.3 °F

Barometric Pressure: 0982 mbar/29.01 "Hg

O2 readings recorded at: 22.8 °C/73.0 °F

Method of Test : The analyzer is calibrated in a temperature controlled chamber using a series of reference gases, in compliance with procedure ISP17.

Instrument has passed calibration as the measurement result is within the specification limit. The specification limit takes into account the measurement uncertainty.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with NIST requirements.

The calibration results published in this certificate were obtained using equipment capable of producing results that are traceable through NIST to the International System of Units (SI). Certification only applies to results shown. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

CERTIFICATION OF CALIBRATION

Date Of Calibration: 04-Jun-2025

Issued by: QED Environmental Systems Inc.



No. 66916



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Calibration Instance: 118

IGC Instance: 118

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QED Environmental Systems Inc. 2355 Bishop Circle West, Dexter, MI 48130

CERTIFICATION OF CALIBRATION



No. 66916



Date Of Calibration: 04-Jun-2025

Certificate Number: G503522_9/38692

Issued by: QED Environmental Systems Inc.

Non Accredited results:

Pressure Transducers (inches of water column)					
Transducer	Certified (Low)	Reading (Low)	Certified (High)	Reading (High)	Accuracy
Relative	0"	0"	40"	40.88"	2.0"

Barometer (mbar)	
Reference	Instrument Reading
0982 mbar / 29.01 "Hg	0983 mbar / 29.03 "Hg

Additional Gas Cells		
Gas	Certified Gas (ppm)	Instrument Reading (ppm)
CO	496	496
H ₂ S	49.9	50

As received gas check readings are only recorded if the instrument is received in a working condition.
Where the instrument is received damaged no reading can be taken.

Date of Issue : 05 Jun 2025

Approved By Signatory

Zach Kilbourne

Laboratory Inspection

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Calibration Instance: 118

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CERTIFICATION OF CALIBRATION



No. 66916



Date Of Calibration: 05-Nov-2024

Certificate Number: G505786_2/37027

Issued by: QED Environmental Systems Inc.

Customer:

STRUCTURAL SOILS LIMITED
SPRING LODGE 172 CHESTER ROAD HELSBY FRODSHAM, CHESHIRE WA6 0AR
GB

Description:

Model:

GAS5000

Serial Number:

G505786

Accredited Results:

Methane (CH4)			
Certified Gas (%)	Instrument Reading (%)	Uncertainty (%)	
5.0	4.9	0.42	
15.0	15.0	0.66	
60.0	59.8	1.03	

Carbon Dioxide (CO2)			
Certified Gas (%)	Instrument Reading (%)	Uncertainty (%)	
5.0	4.9	0.43	
15.0	14.9	0.71	
39.9	39.9	1.19	

Oxygen (O2)			
Certified Gas (%)	Instrument Reading (%)	Uncertainty (%)	
21.6	21.7	0.25	

Gas cylinders are traceable and details can be provided if requested.

CH4, CO2 readings recorded at:

33.0 °C/91.4 °F

Barometric Pressure: 0977 mbar/28.84 "Hg

O2 readings recorded at:

23.2 °C/73.8 °F

Method of Test : The analyzer is calibrated in a temperature controlled chamber using a series of reference gases, in compliance with procedure ISP17.

Instrument has passed calibration as the measurement result is within the specification limit. The specification limit takes into account the measurement uncertainty.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with NIST requirements.

The calibration results published in this certificate were obtained using equipment capable of producing results that are traceable through NIST to the International System of Units (SI). Certification only applies to results shown. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

CERTIFICATION OF CALIBRATION

Date Of Calibration: 05-Nov-2024

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No. 66916



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Calibration Instance: 118

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CERTIFICATION OF CALIBRATION



No. 66916



Date Of Calibration: 05-Nov-2024

Certificate Number: G505786_2/37027

Issued by: QED Environmental Systems Inc.

Non Accredited results:

Pressure Transducers (inches of water column)					
Transducer	Certified (low)	Reading (low)	Certified (High)	Reading (High)	Accuracy
Relative	0"	0"	40"	40.47"	2.0"
Barometer (mbar)					
Reference			Instrument Reading		
0977 mbar / 28.84 "Hg			0977 mbar / 28.85 "Hg		
Additional Gas Cells					
Gas	Certified Gas (ppm)		Instrument Reading (ppm)		
CO	500		500		
H ₂ S	256		256		

Internal Flow	
Applied	Measured
25	25.2
10	10.1
5	5.2

As received gas check readings:

Methane (CH ₄)	
Certified Gas (%)	Instrument Reading (%)
5.0	100.0
15.0	100.0
60.0	100.0
Carbon Dioxide (CO ₂)	
Certified Gas (%)	Instrument Reading (%)
5.0	100.0
15.0	100.0
39.9	100.0
Oxygen (O ₂)	
Certified Gas (%)	Instrument Reading (%)
20.9	20.7

As received Gas readings recorded at: 33.0 °C/91.4 °F

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CERTIFICATION OF CALIBRATION



Date Of Calibration: 05-Nov-2024

No. 66916

Certificate Number: G505786_2/37027

Issued by: QED Environmental Systems Inc.

As received Barometric Pressure recorded at: 23.2 °C/73.8 °F

As received gas check readings are only recorded if the instrument is received in a working condition.
Where the instrument is received damaged no reading can be taken.

Date of Issue : 06 Nov 2024

Approved By Signatory

Linda Ostrowski

Laboratory Inspection

The calibration results published in this certificate were obtained using equipment capable of producing results that are traceable through NIST to the International System of Units (SI). Certification only applies to results shown. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

Calibration Instance: 118

IGC Instance: 118

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