

RIDGE

GROUND CONDITION ASSESSMENT
SOUTHERN POLICING HUB – OLD SARUM

POLICE & CRIME COMMISSIONER FOR WILTSHIRE

February 2025

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RIDGE

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RIDGE

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1. INTRODUCTION

1.1. Brief

Ridge and Partners LLP (Ridge) was commissioned by the Police and Crime Commissioner for Wiltshire (the Client) to undertake an intrusive Ground Investigation and compile a Ground Condition Assessment (GCA) for a site comprising land north-west of Mitre Way, Old Sarum, Wiltshire (hereafter referred to as 'the site'). A location plan is included as Figure 1.

The brief was to undertake a combined Contamination and Geotechnical Ground Investigation to investigate the nature of the soils underlying the site, provide additional assessment of the materials present beneath the site and present characteristic geotechnical parameters to be used in design of the proposed development.

A Desk Top Study (Ref: 5021146-RDG-XX-ST-DOC-C-00DTS01) was issued by Ridge on 8 September 2023 and should be read in conjunction with this report for completeness. The Desk Top Study summarises previous investigations completed on site or in the vicinity.

The Ridge Ground Investigation comprised the following:

- Three days machine trial pitting and soakage testing (5no.). Trial pits were advanced using a tracked 5t machine, with water supply for the soakage tests from a towable bowser.
- Two days windowless sample borehole drilling (10no.) with a tracked dynamic sampling rig. Three boreholes were installed with a 50mm diameter standpipe to allow groundwater gauging and gas monitoring.
- One day in-situ California Bearing Ratio (CBR) testing, comprising Plate Load testing (7no.) and Dynamic Cone Penetrometer testing (6no.).
- Geotechnical and contamination laboratory analysis.
- Subsequent monitoring of groundwater levels and gas monitoring in installed wells.

1.2. Proposals

Proposals for the site are not yet finalised but understood to comprise the construction of a three-storey Policing Hub building in the centre of the site, with associated outbuildings including a workshop, vehicle wash, and storerooms. Access roadways are proposed to link the development via Mitre Way and Castle Well Drive, with a large car park to the north and west of the site. It is also understood that space is being reserved for future additional development at the site.

Proposed site plans are included within Figure 2.

1.3. Investigation Area

The **investigation boundary** of the site is defined within Image 1 below.

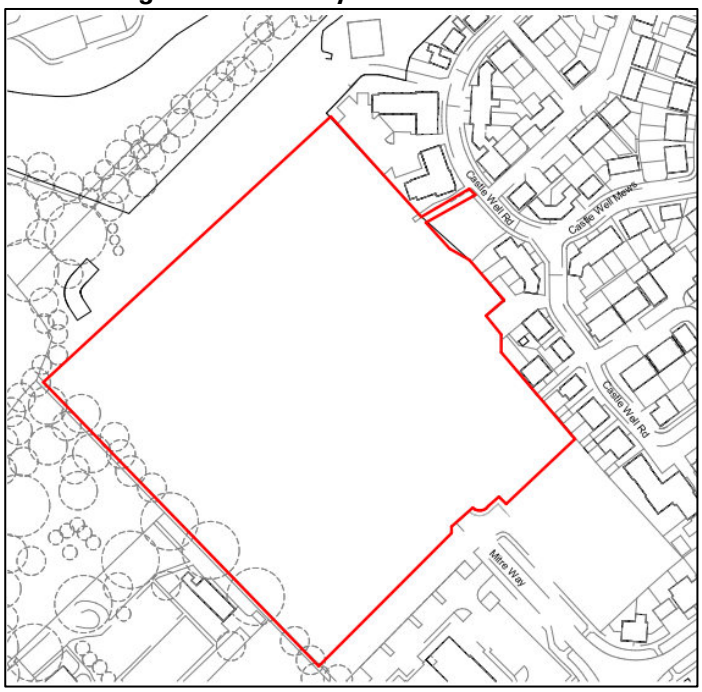


Image 1: Investigation Area of Site

1.4. Report Scope and Limitation

This report is based upon a review of readily available information and the recent Ground Investigation data detailed herein. The report presents an interpretation of the exploratory holes and laboratory data provided by the Ridge Ground Investigation undertaken 09 to 16 January 2025, outlines the basic ground conditions encountered and the results of monitoring of installed wells.

This information has been collated, processed and used to provide an interpretation of the ground conditions, with recommendations on any contamination issues and geotechnical-related design.

The recommendations and opinions expressed in this report are based on the strata observed in the exploratory holes, the results of the site and laboratory tests, and information obtained as part of the desk study or provided by others. Ridge takes no responsibility for conditions that have not been revealed by the exploratory holes, or which occur between them or for features which may be more widespread to those found.

Whilst efforts have been made to interpret the conditions between investigation locations, such information is only indicative, and liability cannot be accepted for its accuracy. Information provided from other sources is taken in good faith and Ridge cannot guarantee its accuracy.

The information contained in this report is intended for the use of the **Police and Crime Commissioner for Wiltshire** and Ridge can take no responsibility for the use of this information by any other party or for uses other than that described in this report.

2. SITE SETTING

2.1. Site Description

The site is centred on easting 414690 and northing 133575, on the western side of Old Sarum. The centre of the site is situated at approximately 73m AOD (Above Ordnance Datum).

The site is a rough rectangular shape. The site has maximum dimensions of 260m north-west to south-east and 130m north-east to south-west. The site has an approximate area of around 3.60ha.

The site is currently seeing no particular use, being an open grassy field with no built structures on it. During investigations the site was being occasionally used by the public as recreational space for activities such as dog-walking, with access to a skatepark to the north also being gained through the site.

The south-eastern and north-eastern borders both directly back onto a residential development, car parks, and roads, and are typically separated by wooden garden fencing, or in some cases a brick wall or metal fencing. Midway through the north-eastern boundary there is a large gap in the fencing. The south-western and north-western borders are marked by a similar tree line.

The site gently slopes downhill to the north, with the northern corner being 68mAOD and the southern and eastern corners being 74mAOD. To the immediate north-west of the site there is a retention basin, which was dry at the time of the investigation.

2.2. Site History

A full site history is featured within the Ridge Desk Top Study.

The earliest available historical maps, dating to 1880, show that the site comprised undeveloped open land, with no significant development on-site to note. Several phases of development in the area surrounding the site occurred across the 20th and 21st centuries, including a sewage works and isolation hospital recorded adjacent to the site 1923 - 1975, and substantial residential development from 2010 to present.

3. PHYSICAL SETTING

3.1. Geology and Hydrogeology

The following observations are taken from the British Geological Survey (BGS) GeoIndex (Onshore)[1] (2025). The Geology of Britain Viewer indicates that the site is likely underlain directly by three Bedrock Geologies of the White Chalk Subgroup, namely the Seaford Chalk Formation, Stockbridge Rock Member, and Newhaven Chalk Formation. No superficial deposits are recorded. The table below identifies the expected composition of the published strata and associated aquifer classification.

BEDROCK GEOLOGY	
Unit Name	Seaford Chalk Formation
Geology Description	Firm white chalk with semi-continuous nodular and tabular flint seams. Some large to very large flint nodules. The upper boundary into the Newhaven Chalk Formation is marked by the incoming of common Zoophycos flints and crinoids at the base of the Newhaven Chalk. This formation is the parent unit of the Stockbridge Rock Member.
Aquifer Classification	Principal
Aquifer Description	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale.
BEDROCK GEOLOGY	
Unit Name	Stockbridge Rock Formation
Geology Description	A very hard, locally porcelaneous, creamy white chalk, which is grainy in parts with abundant sponge spicules, and forms a conformable lower boundary into the softer Seaford Chalk Formation.
Aquifer Classification	Principal
Aquifer Description	Description as above.
BEDROCK GEOLOGY	
Unit Name	Newhaven Chalk Formation
Geology Description	Soft to medium hard, smooth white chalks with numerous marl seams and flint bands, including abundant Zoophycos flints (notably at levels near the base). The formation is known to contain distinct phosphatic chalks of limited lateral extent.
Aquifer Classification	Principal
Aquifer Description	Description as above.

Table 3.1: Geology and Hydrogeology

3.2. Unexploded Ordnance (UXO)

The site is not considered to be in an area at risk from UXO, as per publicly available online resources[2].

[1] GeoIndex (onshore) - British Geological Survey. Accessed 06 February 2025.
[2] Zetica UXO. https://zeticauxo.com/guidance/risk-maps. Accessed 06 February 2025.

3.3. Radon

The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level. No Radon Protective Measures are considered necessary for new properties or extensions to existing ones.

3.4. Hydrology

3.4.1. Flooding

The site is located in an Environment Agency Flood Zone 1 (land having a less than 1 in 1,000 annual probability of river or sea flooding). Furthermore, the risk of flooding from rivers and sea (RoFRaS) is classified as Very Low. There are no flood defences or areas benefiting from flood defences within 250m of the site.

3.4.2. Source Protection Zones

The site is located within a Type 1 Source Protection Zone, which is inner catchment.

3.5. Designated Environmentally Sensitive Sites

There are no designated features within proximity of the site.

4. PREVIOUS REPORTS

Ridge produced a Desk Top Study report in September 2023 (Ref: 5021146-RDG-XX-ST-DOC-C-00DTS01) in relation to the site.

4.1. Desk Top Study (2023)

Ridge were briefed to use information provided to obtain an environmental database search relating to the site and carry out a walkover survey to assess and report on the findings with respect to potential ground contamination and potential associated future liabilities in accordance with the Preliminary Risk Assessment procedure outlined in LCRM (2020), published by the Environment Agency. The report provided the following conclusions and recommendations:

4.1.1. Contamination

Following site reconnaissance and a review of available records, the following contaminations source were considered to be potentially present:

- Regarding activities and processes at Old Sarum Airfield.
- Regarding sewage works and water pumping stations around the site and their associated tanks.

Risk levels were considered to be **Low/Moderate** as a worst case.

This risk level is defined as 'It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation is normally required to clarify risks and to determine potential liability. Some remedial works may be required in the long term'.

Based on the risk rating above, Ridge considered a contamination specific ground investigation to be necessary to further refine risk rating assessed.

A summary of recommended works was provided:

- Trial pits across the site for coverage.
- Boreholes for increased depth and to allow installation of monitoring wells.
- Soil analysis across the site and targeting identified contamination sources.
- Installation of monitoring wells for ground gas/soil vapour and groundwater monitoring.

4.2. Geotechnical

It was not expected to encounter any Made Ground or superficial geology over the site. Bedrock across the site was expected to comprise various chalk, predominantly very hard and locally porcelaneous but also soft and smooth in the south-eastern areas. With reference to the published geology and the proposed development, it was thought traditional foundations could be utilised for low-rise buildings of the proposed development.

An intrusive investigation was noted as being required to identify the geotechnical properties of the underlying soils to determine outline design parameters for proposed foundations.

5. FIELDWORK SUMMARY OF SCOPE AND RATIONALE

5.1. Site Management and Preparation

Suitably experienced Ridge staff supervised the intrusive investigation, which was undertaken between 09 and 16 January 2025. Methods employed during the investigation were carried out in general accordance with statutory guidance including BS5930: 2015 + A1:2020 *Code of Practice for Site Investigations* and BS10175:2011+A1:2013 *Investigation of Potentially Contaminated Sites: Code of Practice*.

A photographic log is included as Appendix 2.

5.2. Rationale and Summary of Scope

The Site Investigation scope was devised by Ridge, based on information collated to date, and comprised the following:

- Three days machine trial pitting and soakage testing (SA01to SA05). Trial pits were advanced to a maximum depth of 2.05mbgl, variably targeting depths of 1.20mbgl and 2.00mbgl. Trial pits were advanced using a tracked 5t machine, with water supply for the soakage tests from a towable bowser to assess the possibility of utilising traditional soakaways on site.

- Two days windowless sample borehole drilling (WS01 to WS10) was undertaken to a maximum depth of 5.45mbgl using a tracked dynamic sampling rig. The primary objective of these boreholes was to assess typical ground conditions across the site, facilitate sampling for laboratory testing and allow the completion of SPTs. Three boreholes (WS01, WS04, and WS09) were installed with a 50mm diameter standpipe to allow groundwater gauging and gas monitoring.

- One day of Plate Load testing (CBR01 – CBR07) was undertaken. Utilising a 5T tracked excavator to advance a trial pit to depths of circa 0.30mbgl, a hydraulic jack used the excavator as kentledge to apply pressure to a 454mm diameter steel plate. This was measured for settlement, providing parameters from which a CBR percentage could be calculated. At each location, Topsoil was stripped away, and the test undertaken on shallow natural soil, targeting the formation level of the proposed buildings.

- One day Dynamic Cone Penetrometer testing (DCP01 – DCP06) completed to depths ~1.00mbgl, by means of a TRL DCP, for subsequent conversion into CBR. These tests were completed across the site for coverage.

- Geotechnical and contamination laboratory analysis.

- Three rounds of subsequent monitoring of groundwater levels and gas monitoring in installed wells.

The layout of the exploratory positions is presented in Figure 3. Engineering Logs are presented in Appendix 3.

5.3. Soil Sampling

All intrusive locations were logged, and visual or olfactory evidence of contamination noted in accordance with best practice.

Soil sampling of the near surface materials was undertaken to assess the contamination risks to human health and controlled waters. Samples were also removed at varying depth for geotechnical testing.

Samples were handled using a fresh pair of nitrile gloves. Equipment was cleaned between use at different test locations and different sampling depths to prevent cross-contamination. Selected samples were placed in sealable bags, sealed glass jars or plastic tubs (dependent on the exact laboratory requirement and analysis to be undertaken) and stored in a temperature-controlled environment before transit.

5.4. Ground Gas Monitoring

Three rounds of ground gas monitoring were conducted on the following dates: 21 January, 28 January and 06 February.

Gas monitoring was conducted in accordance with BS8576:2013 *Guidance on investigations for ground gas – permanent gases and volatile organic compounds.* Atmospheric pressure was noted to be decreasing during monitoring rounds one and three and increasing during monitoring round two – further details are provided in later sections.

All newly installed monitoring wells (WS01, WS04, and WS09) were monitored for the presence of soil gases including methane, carbon dioxide, oxygen, carbon monoxide and hydrogen sulphide. In addition, gas flow rates, downhole pressure were also measured using a GA5000 Geotech Gas Analyser.

Gas monitoring was conducted for at least three minutes, with readings taken at 30 second intervals.

Monitoring sheets are presented in Appendix 6.

5.5. Groundwater Gauging

All newly installed monitoring wells (WS01, WS04, and WS09) were gauged on three occasions during the ground gas monitoring to enable assessment of groundwater levels and the presence of any visual/ olfactory evidence of contamination.

6. GROUND CONDITIONS ENCOUNTERED

6.1. Soil Conditions

6.1.1. Topsoil

Topsoil was encountered from surface in all exploratory locations to depths between 0.23mbgl and 0.33mbgl, with an average thickness of 0.27m. Topsoil typically comprised a dark brown slightly sandy slightly gravelly Clay, with frequent rootlets. Gravels comprised of chalk and flint.

6.1.2. White Chalk Subgroup

Soils interpreted to be of the White Chalk Subgroup were observed in all intrusive locations from depths between 0.23mbgl and 0.33mbgl, to a maximum proven depth of 5.45mbgl. The White Chalk Subgroup was encountered predominantly in two soil types: a granular (*CIRIA* Grade Dc) Chalk, underlain by a cohesive (*CIRIA* Grade Dm) Chalk.

The Grade Dc Chalk was encountered underlying the Topsoil in all locations, to a maximum of depth of 3.55mbgl. The average thickness across the site for these soils was 2.64m. These soils are interpreted as Seaford Chalk Formation and comprise an off-white structureless chalk composed of slightly sandy silty Gravel and Cobbles, with rare gravels and cobbles of flint.

Underlying this, the Grade Dm Chalk was encountered in all windowless boreholes at depths ranging between 1.45mbgl and 3.90mbgl, at an average depth of 2.91mbgl. These soils were proven to a maximum depth of 5.45mbgl, with the base of the unit not encountered during the investigation. These soils comprise a softer cream coloured structureless chalk composed of silty Clay. It is possible these soils belong to the Newhaven Chalk Formation based on their reduced firmness compared to the Grade Dc chalk observed, or that they are transitional soils of the Seaford Chalk Formation, although it is noted that flints were largely absent within these soils. It is possible that recovery of these deeper soils was impacted by the percussive drilling technique utilised on site, resulting in sample disturbance.

6.2. Groundwater Conditions

6.2.1. Groundwater Strikes during Drilling

No groundwater strikes were observed during the investigation.

6.2.2. Groundwater Levels during Monitoring

Results of the three rounds of groundwater level monitoring are detailed in the table below.

LOCATION	21/01/2025 (MBGL)	28/01/2025 (MBGL)	06/02/2025 (MBGL)
WS01	Dry	Dry	Dry
WS04	Dry	Dry	Dry
WS09	Dry	Dry	Dry

Table 6.1: Groundwater Levels

6.3. Visual/ Olfactory Evidence of Contamination

6.3.1. Soils

There was no visual/ olfactory evidence of contamination noted.

6.4. In Situ Testing

6.4.1. Infiltration Testing

Infiltration testing was conducted in SA01 – SA05 within the underlying soils in accordance with BRE Digest 365. The tests comprised excavation of the trial pits to a maximum depth, squaring of the pit sides and the subsequent rapid filling with potable water. The fall in water level was monitored over a nominal period. The soil infiltration rate is calculated by the rate of outflow from 75% to 25% effective fill depth.

HOLE ID	TEST	PIT DEPTH (MBGL)	STRATA TESTED	TIME AT 75% (MINS)	TIME AT 25% (MINS)	TOTAL TEST TIME (MINS)	PERCENTAGE DROP OF WATER COLUMN	TOTAL DROP (M)	INFILTRATION RATE (M/S)
SA01	1	1.65	Chalk (Grade Dc)	22	162	240	90.1	0.69	$1.92x10^{-5}$
SA01	2	1.65	Chalk (Grade Dc)	24	208	240	80.0	0.69	$1.61 x10^{-5}$
SA01	3	1.57	Chalk (Grade Dc)	20	181	210	81.1	0.77	$1.74x10^{-5}$
SA02	1	1.08	Chalk (Grade Dc)	2	12	15	83.5	0.76	$2.49x10^{-4}$
SA02	2	1.08	Chalk (Grade Dc)	4	27	30	79.1	0.72	$1.08 x10^{-4}$
SA02	3	1.08	Chalk (Grade Dc)	7	29	30	75.9	0.63	$1.10 x10^{-4}$
SA03	1	1.72	Chalk (Grade Dc)	9	44	60	97.4	0.76	$7.22 x10^{-5}$
SA03	2	1.66	Chalk (Grade Dc)	10	50	90	100	0.95	$6.79 x10^{-5}$
SA03	3	1.66	Chalk (Grade Dc)	13	67	90	93.7	0.89	$5.03 x10^{-5}$
SA04	1	1.82	Chalk (Grade Dc)	6	22	40	100	0.77	$1.58 x10^{-4}$
SA04	2	1.82	Chalk (Grade Dc)	7	38	40	76.1	0.70	$8.71 x10^{-5}$
SA04	3	1.82	Chalk (Grade Dc)	11	47	60	92.9	0.73	$7.26 x10^{-5}$

HOLE ID	TEST	PIT DEPTH (MBGL)	STRATA TESTED	TIME AT 75% (MINS)	TIME AT 25% (MINS)	TOTAL TEST TIME (MINS)	PERCENTAGE DROP OF WATER COLUMN	TOTAL DROP (M)	INFILTRATION RATE (M/S)
SA05	1	1.17	Chalk (Grade Dc)	4	24	30	83.1	0.74	1.35×10^{-4}
SA05	2	1.17	Chalk (Grade Dc)	9	40	50	80.6	0.75	8.86×10^{-5}
SA05	3	1.17	Chalk (Grade Dc)	10	50	60	82.3	0.79	6.94×10^{-5}

Table 6.2: Infiltration Testing Results

Infiltration testing within the shallow granular soils of the White Chalk Subgroup returned infiltration rates between 1.61×10^{-5}m/s and 2.49×10^{-4}m/s, indicative of 'Good' drainage conditions[3].

Infiltration testing results can be found in full in Appendix 4.

6.4.2. Plate Load Testing

Testing across the site was completed to determine an equivalent in-situ CBR value using Plate Load testing between depths of 0.25mbgl and 0.35mbgl, targeting the shallow natural soils at formation level. Plate Load test results are summarised in the table below.

LOCATION	DEPTH (MBGL)	MATERIAL	MAXIMUM SETTLEMENT (MM)	CBR (%)	MODULUS OF SUBGRADE REACTION ($MM/M^2/M$)
CBR01	0.35	Seaford Chalk Fm.	0.72	>28	101
CBR02	0.30	Seaford Chalk Fm.	6.41	9	50
CBR03	0.30	Seaford Chalk Fm.	3.33	17	74
CBR04	0.30	Seaford Chalk Fm.	2.29	15	70
CBR05	0.25	Seaford Chalk Fm.	3.15	8	47
CBR06	0.30	Seaford Chalk Fm.	4.84	5	38
CBR07	0.25	Seaford Chalk Fm.	4.40	8	49

Table 6.3: Plate Load Testing Results

Plate Load testing returned CBR values between 5% and >28% at depths between 0.25mbgl and 0.35mbgl.

[3] Soil Mechanics in Engineering Practice (1996). 3rd Edition. Terzaghi, K., Peck, R.B., Mesri, G. Table 14.1 Permeability and drainage characteristics of soils.

6.4.3. Dynamic Cone Penetrometer Testing

Testing was completed to determine an equivalent in-situ CBR value using a TRL DCP to a maximum depth of circa 1.00mbgl. All tests were undertaken from surface. Results are summarised in the table below.

LOCATION	DEPTH TO LAYER BOTTOM (M)	CBR %	LOCATION	DEPTH TO LAYER BOTTOM (M)	CBR %	LOCATION	DEPTH TO LAYER BOTTOM (M)	CBR %
DCP01	0.368	7	**DCP02**	0.248	6	**DCP03**	0.345	6
	0.471	12		0.541	21		0.528	13
	0.706	28		0.601	55		0.609	33
	0.877	45		0.886	19		0.891	44

LOCATION	DEPTH TO LAYER BOTTOM (M)	CBR %	LOCATION	DEPTH TO LAYER BOTTOM (M)	CBR %	LOCATION	DEPTH TO LAYER BOTTOM (M)	CBR %
DCP04	0.265	4	**DCP05**	0.057	9	**DCP06**	0.166	4
	0.345	9		0.287	6		0.288	13
	0.439	14		0.598	12		0.486	20
	0.473	23		0.869	14		0.690	14
	0.603	31					0.854	22
	0.875	26						

Table 6.3: DCP Testing Results

DCP testing returned results between 4 – 21% at 0.25mbgl, 12 – 55% at 0.50mbgl, and 12 – 45% at 0.75mbgl. Average CBR values across the site at were 9% at 0.25mbgl, 25% at 0.50mbgl and 28% at 0.75mbgl.

7. CONTAMINATION ASSESSMENT

7.1. Soil Assessment Methodology

Specific soil sample location and depth was chosen based on site coverage, targeting shallow soils, and based on the potential sources of contamination identified in previous reports.

7.1.1. Generic Assessment Criteria

Ridge have undertaken a screen of the soil laboratory results using generic assessment criteria. Generic Assessment Criteria (GAC) are conservative contaminant concentration values used for comparison purposes to assess the risk associated with contaminant concentrations found on site and are derived using non-site-specific information.

In order to assess the soil analyses results with regard to potential human health risks, Ridge has adopted published guidance criteria widely referred to by professionals within the industry, which include the following:

- Suitable 4 Use Levels (S4ULs) Generic Assessment Criteria (GAC) developed by the Chartered Institute of Environmental Health (CIEH) in partnership with Land Quality Management Ltd. (LQM) (2015);
- Category 4 Screening Levels (C4SL) for lead, produced by CL:AIRE (2014); and
- The UK Soil Guideline Values (SGVs) for selected metals, BTEX and phenols, produced by the EA and Department of Environment, Food and Rural Affairs (2009).

Based on the proposed development for the site, we have adopted the 'commercial' land use setting as the most appropriate option. In accordance with the CLEA model, this land use setting is defined as:

- Occupants will not be on the site for prolonged periods
- Interaction with soils is less likely to occur

Results were compared to the conservative 1% soil organic matter value unless otherwise stated.

With regard to human health, the CLEA model states that, 'the contamination is assumed to be at or within 1.00m of the surface' (CLR10 pg10). It is considered that at depths greater than 1m, the probability of human exposure via the direct contact pathways are significantly reduced, leaving inhalation of volatile compounds as the dominant pathway with regard to human health risks. Typically, volatile compounds only significantly affect the indoor inhalation pathway. Therefore, for the purposes of statistical analysis, data from the top 1.0m to 1.5m is used for assessment of risks to human health via direct contact pathways in accordance with the CLEA model, dependant on proposed future site levels.

7.2. Soil Assessment

7.2.1. General

Six soil samples collected during the Ridge site investigation from shallow natural soils at various depths and locations were submitted to a UKAS accredited laboratory for analysis for a suite of asbestos, heavy metals, Polycyclic Aromatic Hydrocarbons (PAH), Total Petroleum Hydrocarbons (TPH CWG), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) and Methyl tert-butyl ether (MTBE).

Laboratory analysis certificates are included as Appendix 5.

The range of potentially hazardous contaminants present on the site can be wide and varied and the suite has been chosen to reflect commonly found contaminants and others indicated by review of the previous reports to have a chance of being present.

7.2.2. Organic Matter

Organic matter ranged from 2.50 – 6.40% in natural soils.

7.2.3. Asbestos

All six samples were tested for asbestos. None of the samples returned a positive identification of asbestos.

7.2.4. Heavy Metals and Phenols

A summary of results is presented in the table below.

DETERMINAND	COMMERCIAL			
	Max. Conc. (mg/kg)	GAC (mg/kg)	Source	Exceedances of Screening Value
Arsenic	8.00	640	S4UL	None
Cadmium	1.10	190	S4UL	None
Chromium	16.00	8600	S4UL	None
Chromium VI	2.00	33	S4UL	None
Copper	52.00	68000	S4UL	None
Lead	56.00	1100	C4SL	None
Mercury	1.10	1100	S4UL	None
Nickel	12.00	980	S4UL	None
Selenium	2.00	12000	S4UL	None
Zinc	60.00	730000	S4UL	None
Total Phenols	2.00	760	S4UL	None

Table 7.1: Heavy Metals & Phenols Results

All results were below the GAC, with many below the laboratory limit of detection (LOD). All results for chromium VI, mercury, selenium and total phenols were below the LOD.

7.2.5. Polycyclic Aromatic Hydrocarbons (PAHs)

A summary of results is presented in the table below.

DETERMINAND	COMMERCIAL			
	Max. Conc. (mg/kg)	GAC (mg/kg)	Source	Exceedances of Screening Value
Naphthalene	0.10	190	S4UL	None
Acenaphthylene	0.10	83000	S4UL	None
Acenaphthene	0.10	84000	S4UL	None
Fluorene	0.10	63000	S4UL	None
Phenanthrene	0.10	22000	S4UL	None
Anthracene	0.10	520000	S4UL	None
Fluoranthene	0.10	23000	S4UL	None
Pyrene	0.10	54000	S4UL	None
Benzo(a)anthracene	0.10	170	S4UL	None
Chrysene	0.10	350	S4UL	None
Benzo(b)fluoranthene	0.10	44	S4UL	None
Benzo(k)fluoranthene	0.10	1200	S4UL	None
Benzo(a)pyrene	0.10	35	S4UL	None
Indeno(1,2,3-cd)pyrene	0.10	500	S4UL	None
Dibenz(a,h)anthracene	0.10	3.5	S4UL	None
Benzo(ghi)perylene	0.10	3900	S4UL	None

Table 7.2: PAH Results

There were no exceedances of the GAC, with results for all determinands below the LOD.

7.2.6. Total Petroleum Hydrocarbons (TPH)

A summary of results is presented in the table below.

DETERMINAND	COMMERCIAL			
	Max. Conc. (mg/kg)	GAC (mg/kg)	Source	Exceedances of Screening Value
Ali >C5-C6	0.01	3200	S4UL	None
Ali >C6-C8	0.05	7800	S4UL	None
Ali >C8-C10	2.00	2000	S4UL	None
Ali >C10-C12	2.00	9700	S4UL	None
Ali >C12-C16	3.00	59000	S4UL	None
Ali >C16-C21	3.00	65000	S4UL	None
Ali >C21-C34	10.00	65000	S4UL	None
Aro >C5-C7	0.01	26000	S4UL	None
Aro >C7-C8	0.05	56000	S4UL	None
Aro >C8-C10	2.00	3500	S4UL	None
Aro >C10-C12	2.00	16000	S4UL	None
Aro >C12-C16	2.00	36000	S4UL	None
Aro >C16-C21	3.00	28000	S4UL	None
Aro >C21-C35	10.00	28000	S4UL	None

Table 7.3: TPH Results

There were no exceedances of the GAC and all results for all determinands were below the LOD.

7.2.7. BTEX and MTBE

A summary of results is presented in the table below.

DETERMINAND	COMMERCAIL			
	Max. Conc. (mg/kg)	GAC (mg/kg)	Source	Exceedances of Screening Value
Benzene	0.002	27	S4UL	None
Toluene	0.005	56000	S4UL	None
Ethylbenzene	0.002	5700	S4UL	None
Xylenes	0.002	5900	S4UL	None
MTBE	0.005	7900	S4UL	None

Table 7.4: BTEX/ MTBE Results

There were no exceedances of GAC, and furthermore all results were below LOD.

7.2.8. Discussion of Results

Results across the site appear to reflect observations made in the field i.e., there were no signs of contamination noted in shallow soils. Considering the history of the site and results of the investigation, the presence of Made Ground is not to be expected.

No exceedances of the adopted GAC were observed. Furthermore, no exceedances were observed when results were compared with the more conservative 'Residential without homegrown produce' GAC, meaning the site would be suitable for any potential end use.

7.3. Waste Material

The following section provides classification of typical soil materials identified on site during the recent Ground Investigation.

Waste classification should be based on analyses that are representative of the particular waste load, so it is normally not possible to classify the soils at the investigation stage, since the materials that will become waste have generally not been defined yet. Ground investigation data can however provide a useful guide to the likely waste classification and can indicate the scale of the classification analyses that will be required after the waste has been defined and before it is generated.

7.3.1. Identification of Hazardous Properties

Results from all soil samples that underwent the full contamination suite were input into a Soils Characterisation Assessment Tool (HazWaste Online) to identify whether soils on site had hazardous properties.

None of the six samples, all taken from natural soils, returned any hazardous properties.

The Haz-Waste Online output sheet is included as Appendix 5.

7.3.2. Waste Acceptance Criteria

The second part of the assessment process is a review of Waste Acceptance Classification (WAC) testing, which was carried out on two samples (WS04 – 0.10m [typical of Topsoil], and WS08 – 0.40m [typical of shallow Chalk]).

Both Topsoil and shallow Chalk soils were classified as suitable for disposal in Inert landfill.

It is recommended that further WAC testing is undertaken during groundworks to target specific waste being removed from site. Waste classification should be based on analyses that are representative of the particular waste load.

WAC testing certificates are included within Appendix 5.

7.4. Controlled Waters Assessment

No elevated contaminants were observed within the laboratory assessment of shallow natural soils. Groundwater was not observed to depth of 5.45mbgl through the ground investigation and subsequent monitoring rounds. Therefore, it is concluded that groundwater bodies are unlikely to be in direct contact with any potential unencountered anthropogenic materials within shallow soils and potential risks to controlled waters are considered to be very low. As a result, no further controlled waters risk assessment is considered to be necessary.

7.5. Ground Gas Assessment

7.5.1. Design of Monitoring Programme

In accordance with BS8576:2013 *Guidance on investigations for ground gas – permanent gases and volatile organic compounds*, the extent of monitoring deemed necessary to assess the ground gas and vapour regime is determined by the generation potential of the source, i.e. what is the risk that large volumes of gas can be generated and can plausibly migrate to pose a credible hazard to the identified receptors. This is known as a multiple-lines-of-evidence approach.

Factors detailed in the table below were pertinent in the design of the gas monitoring programme. Information detailed in the table has either been taken from the previous reports or interpreted from the intrusive investigation conducted.

FACTOR	MORE MONITORING REQUIRED	LESS MONITORING REQUIRED
Landfills and waste sites	-	No records of any active or historical landfill or other potentially gas generating waste sites recorded within 250m of the site.
Ground workings	-	No records within 250m of the site boundary.
Artificial Ground	-	No records within 250m of the site.
Made Ground Organic Content	-	No Made Ground soils encountered on site.
Natural Soils Organic Content	-	There was no evidence of degradable organic material in logged soils. Following laboratory analysis average TOC was 2.6%.
Volatiles	-	No evidence of petroleum hydrocarbons in soils. Maximum of 0.7ppm observed during soil vapour monitoring from installed wells.

Table 7.5: Factors influencing design of Gas Monitoring Programme

7.5.2. Generation Potential of Source

Based on the information within the above table, the generation potential is considered to be **Very Low** and according to guidance this would equate to 'gas monitoring might not be necessary'.

As a precaution, we programmed in three rounds of monitoring, to confirm low levels of risk as assessed above.

7.5.3. Monitoring Programme

Gas monitoring was conducted by Ridge on three occasions between 21 January and 06 February, in accordance with BS8576:2013 *Guidance on investigations for ground gas – permanent gases and volatile organic compounds.* Boreholes (WS01, WS04 and WS09) were monitored for the presence of soil gases including methane, carbon dioxide, oxygen, carbon monoxide and hydrogen sulphide. In addition, gas flow rates and downhole pressure were also measured using a GA5000 Geotech Gas Analyser. Gas monitoring was conducted for at least three minutes, with readings taken at 30 second intervals.

7.5.4. Monitoring Results

The results from the three monitoring rounds are summarised in the table below. Atmospheric pressure was noted to be decreasing during monitoring rounds one and three and increasing during monitoring round two. Monitoring sheets are included in Appendix 6.

Following the six rounds of monitoring the following 'worst-case conditions' were encountered: a maximum flow of 0.2L/hr, a maximum CO_2 concentration of 1.8%, and a maximum CH_4 concentration of 0.4%.

	MONITORING ROUND 1	MONITORING ROUND 2	MONITORING ROUND 3
Max. Flow Rate (L/hr)	0.1	0.2	0.1
Peak CH_4 (%)	0.3	0.3	0.4
Peak CO_2 (%)	0.9	1.8	0.7
Min. O_2 (%)	20.2	19.7	20.0
Max. H_sS (ppm)	0.0	0.0	0.0
Max. CO (ppm)	1.0	0.0	0.0
Max. PID (ppm)	0.7	0.6	n/a

Table 7.6 Monitoring Summary

7.5.5. Gas Screening Value

Worst case gas levels and flow rates identified across the entire programme can be used to calculate a conservative Gas Screening Value (GSV) as defined in CIRIA C665 *Assessing Risks Posed by Hazardous Ground Gases to Buildings* (2002).

GSV = (worst case CO_2 or CH_4 concentration/ 100) x worst case flow rate
GSV = (1.8%/ 100) x 0.2L/hr
GSV = 0.0036

According to the guidance, the GSV equates to Characteristic Situation (CS) 1 as it is below the upper threshold of 0.07.

7.5.6. Characteristic Situation Check

A check can be performed to allow assessment of the likelihood that the upper CS threshold could be met:

- Either the flow or the ground gas % would need to increase by circa 20 times to reach the next threshold. This seems extremely unlikely given consistency of results to date.

7.5.7. Gas Protection

Having classified the site as CS1, no gas protective measures are required in the proposed development.

8. GEOTECHNICAL TESTING AND ASSESSMENT

8.1. Introduction

This geotechnical assessment and the subsequent foundation design recommendations will use the findings of the investigation, and the results of the in-situ and laboratory geotechnical testing carried out in the boreholes, and on representative samples of the materials encountered across the site.

This section discusses the key geotechnical characteristics of each encountered stratum as determined from field observations, in-situ and laboratory geotechnical testing.

8.2. In – Situ Testing

8.2.1. Standard Penetration Testing (SPT)

SPTs were completed throughout the drilling of all boreholes generally at 1.00m centres to a depth of 5.00mbgl. SPTs were undertaken in accordance with BS EN ISO 22476-3:2005+A1:2011: The Standard for Geotechnical Investigation and Testing. Field testing - Standard Penetration Test.

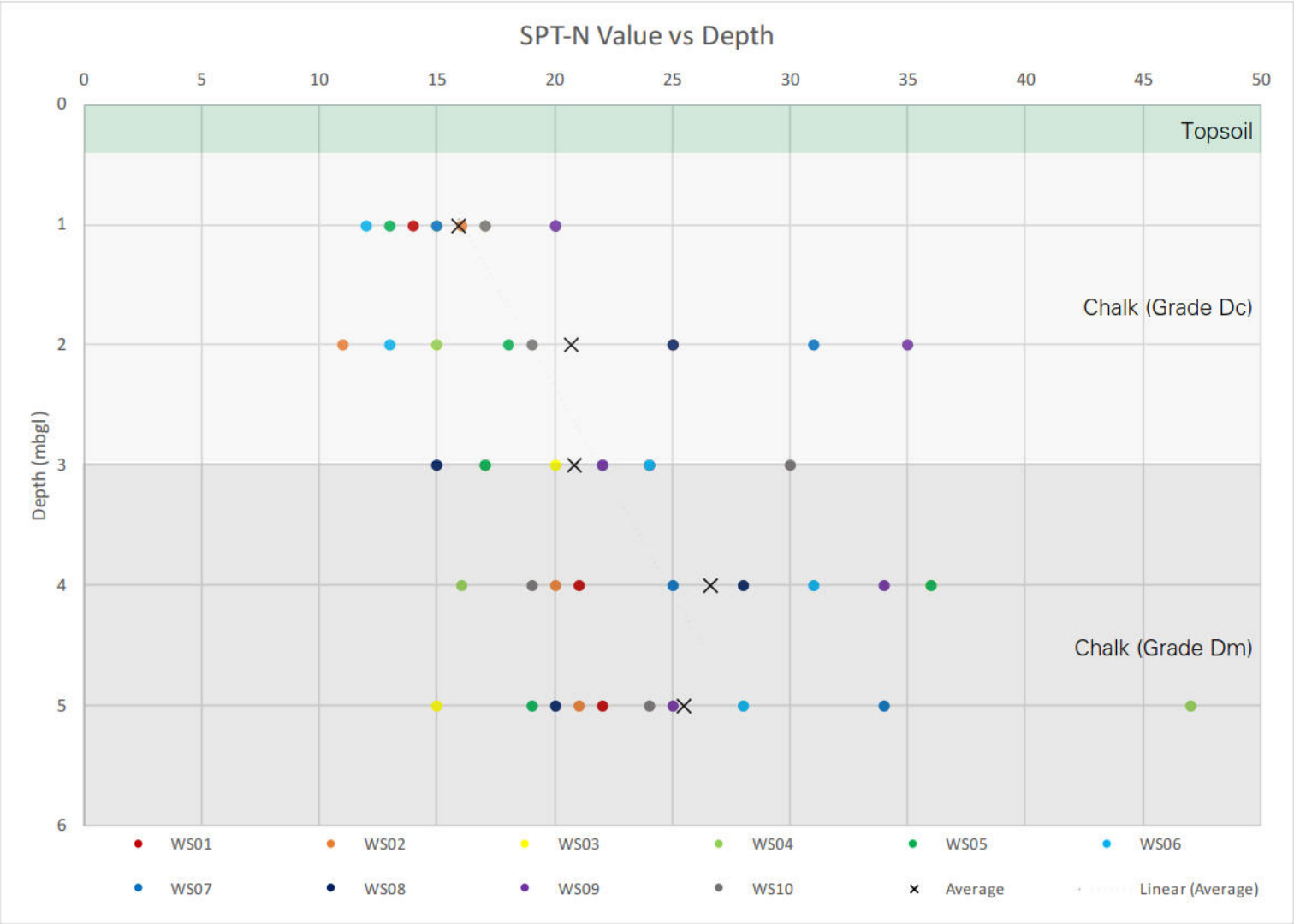
The graph overleaf shows SPT results.

Testing within the shallow granular Grade Dc Chalk, returned N value results ranging between 12 and 35, averaging 15 at 1.00mbgl and 20 at 2.00mbgl. This is indicative of medium dense granular soils.

Testing within the deeper cohesive Grade Dm Chalk, returned N value results ranging between 15 and 47. This is indicative of high strength cohesive soils, although it is noted that recovered samples were generally of soft to medium firmness.

Across site, soils show a generally increasing density within the first five metres below surface, with average N values increasing from 15 at 1.00mbgl, to 20 at 2.00mbgl, followed by a consistent density of 20 at 3.00mbgl, before increasing again to 26 at 4.00mbgl and 25 at 5.00mbgl.

Engineering logs showing the full test results are included in Appendix 3.



Graph 8.1: Standard Penetration Testing Results

8.3. Laboratory Testing

Details of the specific procedure used in each case are shown below in the table below and the geotechnical test certificates are presented in Appendix 7.

TEST	STANDARD (BS1377:1990) UNLESS OTHERWISE INDICATED	SCHEDULED
Moisture Content	Part 2: 3.2	5
Atterberg Limit Test	Part 2: 4.3 & 5.3	5
pH	Part 3: 9.5	5
Sulphate Testing	Part 3: 5.3	5
Saturated Moisture Content of Chalk	Part 2: 3.3	3

Table 8.1: Summary of Geotechnical Testing

8.3.1. Moisture Content & Atterberg Tests

Five samples underwent Moisture Content & Atterberg limits testing to determine consistency limits. The results are presented in the table below.

LOCATION	DEPTH (MBGL)	MOISTURE CONTENT (%)	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	PASSING 425 MICRON SIEVE (%)	MODIFIED PLASTICITY INDEX (%)	CASAGRANDE CLASSIFICATION (PLASTICITY)	VOLUME CHANGE POTENTIAL
WS05	1.00	27	37	19	18	100	18.00	CI Intermediate	Low
WS05	4.00	20	29	18	11	90	9.90	CL Low	Low
WS06	1.50	29	38	23	15	100	15.00	CI Intermediate	Low
WS06	3.50	26	32	21	11	100	11.00	CL Low	Low
WS07	1.20	28	39	24	15	100	15.00	CI Intermediate	Low

Table 8.2: Consistency Limits

Following analysis, testing returned plasticity index values ranging from 11% - 18%, with liquid limits reported as 29% - 39%. These values correspond to a Casagrande classification of CL Low to CI Intermediate Plasticity soils.

Tested samples returned values ranging from 90% - 100% for fines passing a 425µm sieve, thus the modified plasticity index values are calculated to range 9.9% - 18%. In accordance with NHBC the underlying soils are considered to have a Low Volume Change Potential.

8.3.2. pH/ Water Soluble Sulphate 2:1 extract

Five representative samples underwent pH/ Water Soluble Sulphate 2:1 extract testing to determine the pH level and sulphate content of the material. The results are shown in the table below.

LOCATION	DEPTH (MBGL)	PH VALUE	2:1 SULPHATE EXTRACT (MG/L)	CONCRETE CLASSIFICATION DESIGN CLASS	AGGRESSIVE CHEMICAL ENVIRONMENT FOR CONCRETE CLASS
WS01	1.50	9.4	<10	DS-1	AC-1
WS05	2.00	9.4	<10	DS-1	AC-1
WS07	0.50	9.2	<10	DS-1	AC-1
WS08	0.75	9.4	<10	DS-1	AC-1
WS10	1.00	9.4	61	DS-1	AC-1

Table 8.3: pH/Sulphate Results

8.3.3. Saturation Moisture Content of Chalk

Three samples were submitted for determination of saturation moisture content. Results are shown in the table below.

LOCATION	DEPTH (MBGL)	MOISTURE CONTENT (%)	BULK DENSITY (Mg/M^3)	DRY DENSITY (Mg/M^3)	SATURATED MOISTURE CONTENT (%)	CIRIA DENSITY CLASS
SA01	1.00 – 1.50	27	1.99	1.57	27	Medium Density
SA04	1.50 – 2.00	29	1.96	1.52	29	Low Density
SA05	0.50 – 1.00	26	2.00	1.59	26	Medium Density

Table 8.4: Saturation Moisture Content of Chalk Results

Testing indicated dry density to range from 1.52 to 1.59 Mg/m3, and saturation moisture content to range from 26-29%, which is indicative of predominantly low to medium density chalk. These soils are considered representative of the shallow Seaford Chalk (recovered as Grade Dc).

8.4. Characteristic Geotechnical Parameters

Based on the laboratory test results, in-situ testing and subsequent analysis a range of characteristic geotechnical parameters, which should be used in the subsequent geotechnical and foundation design calculations are presented in the table below.

STRATUM	PARAMETER	SOURCE	VALUE
Topsoil	Not used in foundation design		
Seaford Chalk Formation	Bulk Density (Mg/m^3)	SMC	1.96 – 2.00
	Dry Density (Mg/m^3)	SMC	1.52 – 1.59
	Angle of Shearing Resistance φ °	Peck, Hanson & Thorburn	30°

Table 8.5: Characteristic Geotechnical Parameters

8.5. Foundations

The ground investigation proved the expected general strata sequence comprising Topsoil, underlain by soils of the Seaford Chalk Formation. Grade Dc Chalk was observed to maximum depths between 2.45mbgl and 3.90mbgl in the area of the proposed buildings, with Grade Dm Chalk observed to be underlying this to the base of the intrusive investigation at 5.45mbgl.

The selection and design of foundations is beyond the scope of current instructions and is the responsibility of the designers of the proposed building. The following recommendations, deriving from observations made during the investigation and testing are provided to assist the design process.

8.5.1. Traditional foundations

Based on the medium to high SPT-N values recorded in the shallow granular natural materials, it is considered that the ground conditions identified are generally suitable for traditional foundations for the proposed three-storey development. The medium dense granular Chalk soils are the recommended founding stratum across the site.

Based on SPT results an estimated safe bearing pressure of 225kPa is considered appropriate for traditional strip or trench-fill foundations up to 1m wide and pad foundations up to an approximate size of 2x2m.

In all cases foundations should extend through Topsoil to penetrate at least 450mm into the indigenous medium dense Grade Dc Chalk at a minimum depth of 1.00m, below existing levels to account for frost-heave. Where softer soils at foundation depth are identified, foundations should be deepened into denser soils.

8.6. Foundations – General

Other foundation solutions are available, and it will be necessary for a suitable risk assessment to be carried out by the foundation's designers at the appropriate time. If Structural Engineers conclude that a piled foundation solution is suitable for the proposed development, then further ground investigation will be required to investigate the nature and geotechnical properties of deeper soils.

It is noted that trial pits collapsed during the initial filling of the infiltration testing. It is recommended that trench support is provided for all excavations within the Grade Dc Chalk soils on site.

The above recommendations are based on interpolation of ground conditions between exploratory hole locations and interpretation should take the access restrictions at the time of investigation into account.

8.7. Floor slabs

NHBC documentation provides guidance for floor slabs for small scale developments and has been factored in for the following recommendations.

NHBC guidance[4] states that suspended ground floors should be constructed where;

- The depth of fill/Made Ground soils exceeds 600mm.
- The bearing capacity and nature of the ground is variable.
- There are shrinkable soils that could be subject to movement.
- The ground has been subject to vibratory improvement.

[4] NHBC Standards. 2018. Chapter 5.2. Suspended Ground Floors.

- The ground or fill is not suitable to support ground-bearing slabs.

Based on the lack of Made Ground encountered on site and the generally granular nature of shallow soils, a ground bearing slab is considered suitable for the proposed development. Where a ground bearing slab is to be utilised, Topsoil should be removed, and the slab founded on granular natural soils, or imported granular materials provided the depth of infill is less than 600mm deep and properly compacted.

8.8. Earthworks

The site is relatively level and not much re-grading is expected to prepare the site for the proposed development. Ground levels are typically between 68m and 74mAOD.

The in-situ Grade Dc Chalk can be used as fill material, subject to appropriate testing, placement and compaction, following guidance for Class 3 material as per the *Specification for Highways Works Series 600 - Earthworks*. Care should be taken to avoid overworking the material, as well as working it in wet conditions.

8.9. Buried Concrete

Buried concrete should be specified to comply with the findings of the testing carried out, as summarised in Table 8.3. Results returned a Design Sulphate Class of DS-1 for all samples, with ACEC class of AC-1.

8.10. Infiltration Drainage

Infiltration testing within the shallow granular soils of the White Chalk Subgroup returned infiltration rates between 1.61×10^{-5}m/s and 2.49×10^{-4}m/s, indicative of 'Good' drainage conditions. It is expected that traditional soakaways should be suitable for use on site.

Based on the presence of low-density chalk underlying the site, all soakaways should be a minimum of 10m away from foundations to avoid destabilising the founding soils, as outlined in the *CIRIA C574 'Engineering in Chalk'* guidance.

8.11. Further Considerations

Solution features, such as sinkholes, are known to occur in chalk soils which can lead to the formation of natural cavities and subsequent ground collapse. Whilst no evidence of solution features was encountered during the investigation, they may present below the maximum investigated depth or in areas not targeted during the investigation. Should any evidence of these features, such as voids within chalk soils or loose infilled soils, be encountered during the groundworks phase, further ground investigation will be required to refine the potential risk to the development.

8.12. Further Geotechnical Investigation

No further geotechnical investigation is considered necessary at this stage. Should proposed formation levels of the site change, further CBR testing at the new formation levels is recommended during the groundworks or construction phase.

9. CONCEPTUAL SITE MODEL/ RISK ASSESSMENT

Following investigations conducted to date and screening of chemical analysis results, no contaminant sources have been identified. This is in line with the Desk Top Study, which classified potential sources as low to low/moderate risk.

As no source of contamination has been identified by the site investigation, no pollutant linkage is considered to exist, and therefore no risk is considered to be posed to site receptors from ground contamination. No further assessment of pollutant linkages is considered necessary at this stage.

Should any unidentified contaminant sources be encountered during the construction phase, such as large quantities of Made Ground, the risk assessment will require further refinement and Ridge should be contacted to provide further advice and, if necessary, additional testing of soil samples from the affected areas.

10. CONCLUSIONS AND RECOMMENDATIONS

10.1. Contamination

The design of the ground investigation incorporated information from the previously issued reports, with contamination source areas investigated as far as practicable.

Currently, no source of contamination has been identified on-site during investigation works, and therefore no risk is thought to be posed to any present or future receptors at the site.

Any topsoil removed during groundworks is suitable for re-use in areas proposed as soft landscaping.

10.1.1. Further Investigation

It is not expected that further contamination investigation will be required for the proposed development of this site.

10.1.2. Waste Removal

Soils have been classified as suitable for disposal at Inert landfill.

Should these soils be removed from site, we recommend further testing when removing portions of material from the site to allow targeted classification. Site soils are also suitable for re-use on site or alternatively at another site under guidelines laid out in the CL:AIRE Definition of Waste : Code of Practice (DoW CoP).

10.1.3. Ground Gas

The site has been classified as Characteristic Situation 1 and therefore no ground gas protection measures will be required for the proposed development.

10.2. Geotechnical

10.2.1. Foundations

It is anticipated that traditional foundations will be suitable for the proposed three-storey development. The medium dense granular Chalk soils are the recommended founding stratum across the site.

Based on SPT results an estimated safe bearing pressure of 225kPa is considered appropriate for traditional strip or trench-fill foundations up to 1m wide and pad foundations up to an approximate size of 2x2m. The depth to the top of the founding stratum is variable in the range 0.23 – 0.35m.

In all cases foundations should extend through Topsoil to penetrate at least 150mm into the indigenous Grade Dc Chalk at a minimum depth of 1.00m, below existing levels. Where softer soils at foundation depth are identified, foundations should be deepened into denser soils.

10.2.2. Groundwater and Excavations

No groundwater was encountered during the investigation or subsequent monitoring, with groundwater levels expected to lie at >5.00mbgl.

It is noted that trial pits collapsed during the initial filling of the infiltration testing. It is recommended that trench support is provided for all excavations within the Grade Dc Chalk soils on site.

10.2.3. Buried Concrete

Buried concrete should be specified to comply with the findings of the testing carried out, as summarised in Table 8.3. Results returned a Design Sulphate Class of DS-1 for all samples, with an ACEC class of AC-1.

10.2.4. Earthworks

Given the relatively level nature of the site, excessive earthworks are not considered necessary to prepare the site for the proposed development. Arisings from foundations or drainage excavations which comprise clean in situ Grade Dc Chalk may be used for general filling, subject to appropriate testing, placement and compaction, following guidance for Class 3 material as per the *Specification for Highways Works Series 600 - Earthworks*. Care should be taken to avoid overworking the material, as well as working it in wet conditions.

10.2.5. Roadways and Pavements

DCP testing returned results between 4 – 21% at 0.25mbgl, 12 – 55% at 0.50mbgl, and 12 – 45% at 0.75mbgl. Average CBR values across the site at were 9% at 0.25mbgl, 25% at 0.50mbgl and 28% at 0.75mbgl.

Plate Load testing returned CBR values between 5% and >28% at depths between 0.25mbgl and 0.35mbgl.

A recommended design value of 4% should be used by Civil Engineers when designing roadways and pavements.

10.2.6. Soakaways

Infiltration testing within the shallow granular soils of the White Chalk Subgroup returned infiltration rates between 1.61×10^{-5}m/s and 2.49×10^{-4}m/s, indicative of 'Good' drainage conditions. It is expected that traditional soakaways should be suitable for use on site.

Based on the presence of low-density chalk underlying the site, all soakaways should be a minimum of 10m away from foundations to avoid destabilising the founding soils.

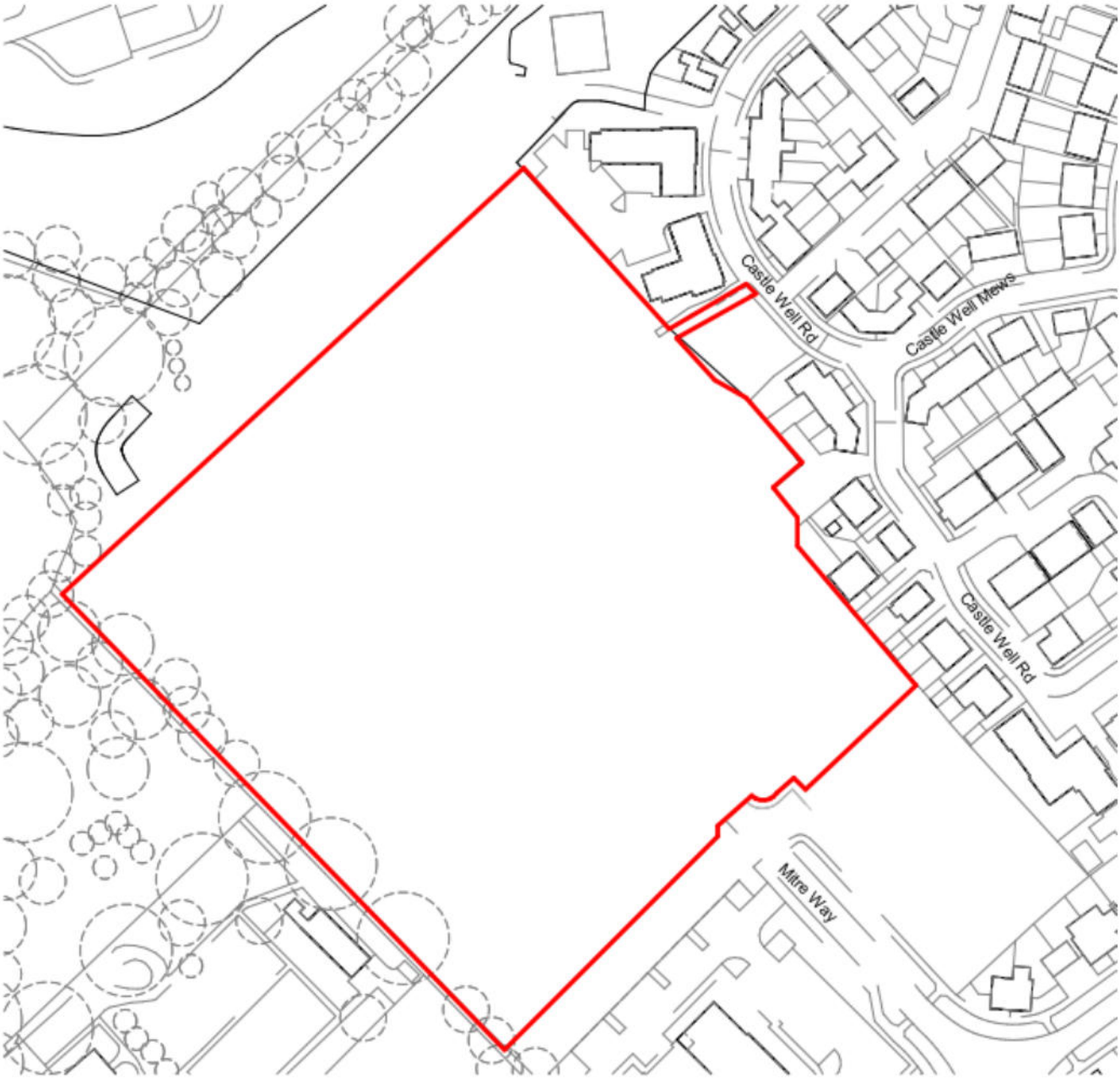
10.2.7. Floor Slabs

Based on the lack of Made Ground encountered on site and the generally granular nature of shallow soils, a ground bearing slab is considered suitable for the proposed development. Where a ground bearing slab is to be utilised, Topsoil should be removed, and the slab founded on Grade Dc Chalk, or imported granular materials provided the depth of infill is less than 600mm deep and properly compacted.

10.2.8. Further Geotechnical Investigation

It is not anticipated that further geotechnical investigation will be required for the proposed development at this stage. Should any evidence of solution features be encountered during groundworks, further investigation will be required.

FIGURE 1 - SITE LOCATION PLAN



Project	Southern Policing Hub – Old Sarum			**Title**	Site Location Plan
Job Number	5021146	**Client**	PCC for Wiltshire	RIDGE PROPERTY & CONSTRUCTION CONSULTANTS	1 Royal Court Kings Worthy Winchester SO23 7TW
Drawing	5021146-Fig1	**Revision**	-		
Drawn	TL	**Date**	February 2025		
Checked by	ME	**Scale**	NTS	Ridge and Partners LLP www.ridge.co.uk	TEL: 01962 834400

FIGURE 2 - DEVELOPMENT PLANS



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KEY

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- PROPOSED GREEN SPACE
- PROPOSED TREES
- PROPOSED CRASH GATE
- EXISTING SKATE PARK
- SECURE LINE
- DESIRE LINE
- EXISTING TREES
- PERSIMMON LAND TRANSFER LINE
- PROPOSED SITE BOUNDARY LINE

N

5 0 5 10 15 20 25

SCALE 500 m
1:

REV	DESCRIPTION	DATE	BY	CHKD
P07	Addition of Proposed New Boundary Line	12/01/2024	HK	EM
P06	First Issue	12/12/2023	HK	EM
P05	Updated footpath & cycleath layout	06/12/2023	CT	EM
P04	Updated land for future development	21/11/2023	HK	EM
P03	Updated following Design Team Meeting on 9/11/23	16/11/2023	CT	EM
P02	Updated following review	08/11/2023	CT	EM
P01	First Issue	01/11/2023	CT	EM

ORIGINATOR:

RIDGE

RIDGE PROJECT No: 5021146

CLIENT:

IN ASSOCIATION WITH:

BNP PARIBAS

STRUTT & PARKER

PROJECT:

PCC Southern Policing hub, Ford Farm, Salisbury, SP4 6BY

TITLE:

Option 5 - Police Hub with space for future Custody Unit

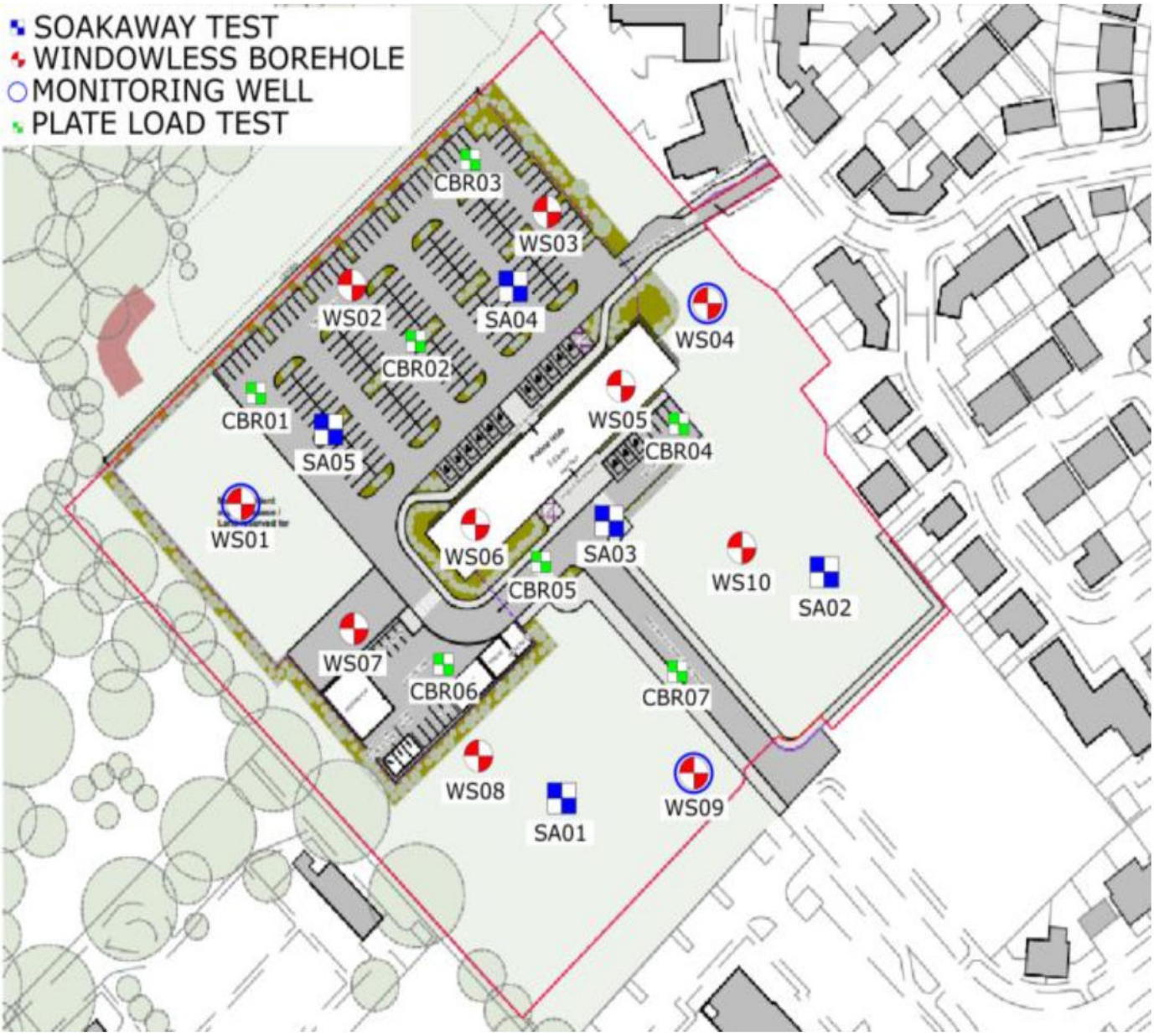
DRAWN BY:	CT	CHECKED BY:	EM	APPROVED BY:	EM
SCALE:	@ A1	DATE:	01/11/2023		

STATUS: S0 DESCRIPTION: PRELIMINARY

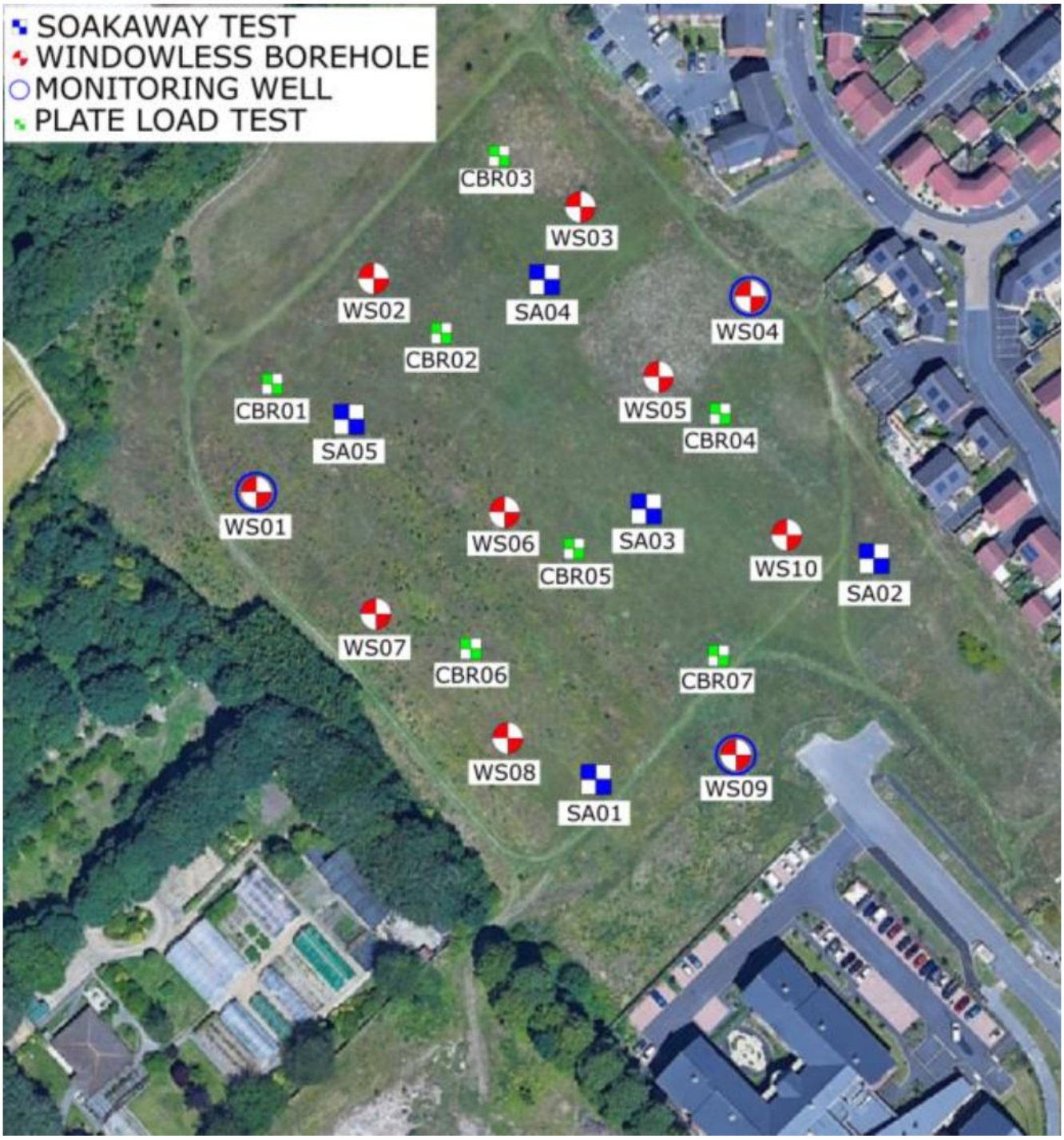
DRAWING No: 5021146 - RDG - XX - XX - D - A - 000010

PROJECT:	ORIGINATOR:	FUNCTION:	SPATIAL:	FORM:	DISCIPLINE:	NUMBER:	REV:
5021146	RDG	XX	XX	D	A	000010	P07

FIGURE 3 - TEST LOCATION PLAN



Project	Southern Policing Hub – Old Sarum			**Title**	Exploratory Hole Location Plan
Job Number	5021146	**Client**	PCC for Wiltshire	RIDGE PROPERTY & CONSTRUCTION CONSULTANTS	1 Royal Court Kings Worthy Winchester SO23 7TW
Drawing	5021146-Fig3a	**Revision**	-		
Drawn	TL	**Date**	February 2025		
Checked by	ME	**Scale**	NTS	Ridge and Partners LLP www.ridge.co.uk	TEL: 01962 834400



Project	Southern Policing Hub – Old Sarum			**Title**	Exploratory Hole Location Plan
Job Number	5021146	**Client**	PCC for Wiltshire	RIDGE PROPERTY & CONSTRUCTION CONSULTANTS	1 Royal Court Kings Worthy Winchester SO23 7TW
Drawing	5021146-Fig3b	**Revision**	-		
Drawn	TL	**Date**	February 2025		
Checked by	ME	**Scale**	NTS	Ridge and Partners LLP www.ridge.co.uk	TEL: 01962 834400

APPENDIX 1 - REPORT CONDITIONS

Report Conditions

This report is produced solely for the benefit of the **Police and Crime Commissioner for Wiltshire** and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.

This report refers, within the limitations stated, to the condition of the site at the time of the inspections. No warranty is given as to the possibility of future changes in the condition of the Site.

This report is based on a visual Site inspection, study of readily accessible referenced historical records, information supplied by those parties noted in the text and preliminary discussions with local and Statutory Authorities. Some of the opinions are based on unconfirmed data and information and are presented in good faith without exhaustive clarification. Where ground contamination is suspected but no physical Site test results are available to confirm this, the report must be regarded as initial advice only, and further assessment should be undertaken prior to detailed activities related to the Site. Where test results undertaken by others have been made available these can only be regarded as a limited sample. The possibility of the presence of contaminants, not revealed by this research cannot be discounted.

Whilst confident in the findings detailed within this report because there are no exact UK definitions of these matters, being subject to risk analysis, we are unable to give categoric assurances that they will be accepted by Authorities or Funds etc. without question, as such bodies may have unpublished, often more stringent objectives. This report is prepared for the proposed uses stated in the report and should not be used in a different context without reference to Ridge and Partners LLP. In time improved practices or amended legislation may necessitate a re-assessment.

The report is necessarily limited to those aspects of land contamination specifically reported on and no liability is accepted for any other aspect especially concerning gradual or sudden pollution incidents that may occur. The opinions expressed cannot be absolute due to the limitations of time and resources within the context of the agreed brief and the possibility of unrecorded previous use and abuse of the Site and adjacent Sites. The report concentrates on the Site as defined in the report and provides an opinion on surrounding Sites. If migrating pollution or contamination (past or present) exists, this can only practically be better assessed following extensive on and off Site intrusive investigations and monitoring.

APPENDIX 2 – SITE INVESTIGATION PHOTOGRAPHS

PHOTOGRAPHIC LOG

SITE: SOUTHERN POLICING HUB – OLD SARUM
PROJECT NUMBER: 5021146

RIDGE

Photo No.	Date
01	09/01/25

Photo Title
View of the site taken from the south, looking north-west.



Photo No.	Date
02	01/09/25

Photo Title
View of the site taken from the south, looking west.



PHOTOGRAPHIC LOG

SITE: SOUTHERN POLICING HUB – OLD SARUM
PROJECT NUMBER: 5021146

RIDGE

Photo No.	Date
03	09/01/25

Photo Title
View looking east, taken from the centre of the site



Photo No.	Date
04	09/01/25

Photo Title
View of the retention pond to the immediate north-west of site.



PHOTOGRAPHIC LOG

SITE: SOUTHERN POLICING HUB – OLD SARUM
PROJECT NUMBER: 5021146

RIDGE

Photo No.	Date
05	14/01/25

Photo Title
In-situ shallow chalk, as exposed in SA01.



Photo No.	Date
06	14/01/25

Photo Title
Granular chalk arisings from SA03.



PHOTOGRAPHIC LOG

SITE: SOUTHERN POLICING HUB – OLD SARUM
PROJECT NUMBER: 5021146

RIDGE

Photo No.	Date
07	09/01/25

Photo Title
Typical ground profile encountered on site, from WS02.



Photo No.	Date
08	09/01/25

Photo Title
Typical ground profile encountered on site, from WS04.



APPENDIX 3 – ENGINEERING LOGS

RIDGE	Ridge and Partners LLP www.ridge.co.uk	**Trial Pit Log**		Trial Pit No. **SA01** Sheet 1 of 1
Project Name: Southern Policing Hub - Old Sarum		Client: Wiltshire PCC	Contractor: Oakland SI	Logged By: TL
Location: Land at Ramsbury Drive, Old Sarum, Salisbury, SP4 6NZ		Equipment: 5T Tracked Excavator	Depth: 1.95m	Hole Type: TP
Project ID: 5021146	Date: 14/01/2025 - 16/01/2025	Co-ords:	Level:	Scale: 1:25

Depth (m)	Level (mAOD)	Legend	Stratum Description	Water Strikes	Sample and In Situ Testing		
					Depth (m)	Type	Results
			Grass onto dark brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse flint and chalk. (TOPSOIL)				
0.27			Structureless CHALK composed of slightly sandy silty GRAVEL and COBBLES. Clasts are weak white with brown specks in an off-white matrix with rare gravels and cobbles of subangular to subrounded flint. (WHITE CHALK SUBGROUP - Grade Dc)		1.00 - 1.50	B	
1.95			End of Trial Pit at 1.950m				

1 2 3 4 5

Dimensions		Soakage Test Information					Trial Pit Support	
Pit Length	Pit Width	Test Number	Date Test	Depth Start	Depth End	Duration	Pit Stability	Shoring Used
2.30	0.70	1	14/01/2025	0.84	1.57	04:00	Partial collapse upon conducting soakage testing.	
		2	15/01/2025	0.60	1.44	04:00		
		3	16/01/2025	0.67	1.33	03:00		

Remarks

Location cleared of services before excavation. Location then advanced to a depth of 1.95mbgl to perform infiltration testing. No groundwater encountered.

Logged in general accordance with BS 5930: Code of practice for ground investigations.

AGS

RIDGE	Ridge and Partners LLP www.ridge.co.uk	**Trial Pit Log**		Trial Pit No. **SA02** Sheet 1 of 1
Project Name: Southern Policing Hub - Old Sarum		Client: Wiltshire PCC	Contractor: Oakland SI	Logged By: TL
Location: Land at Ramsbury Drive, Old Sarum, Salisbury, SP4 6NZ		Equipment: 5T Tracked Excavator	Depth: 1.20m	Hole Type: TP
Project ID: 5021146	Date: 14/01/2025	Co-ords:	Level:	Scale: 1:25

Depth (m)	Level (mAOD)	Legend	Stratum Description	Water Strikes	Sample and In Situ Testing		
					Depth (m)	Type	Results
			Grass onto dark brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse flint and chalk. (TOPSOIL)				
0.33			Structureless CHALK composed of slightly sandy silty GRAVEL and COBBLES. Clasts are weak white with brown specks in an off-white matrix with rare gravels and cobbles of subangular to subrounded flint. (WHITE CHALK SUBGROUP - Grade Dc)				
1.20			End of Trial Pit at 1.200m				

1 2 3 4 5

Dimensions		Soakage Test Information					Trial Pit Support	
Pit Length	Pit Width	Test Number	Date Test	Depth Start	Depth End	Duration	Pit Stability	Shoring Used
1.40	0.65	1	14/01/2025	0.17	0.93	00:15	Partial collapse upon conducting soakage testing.	
		2	14/01/2025	0.17	0.89	00:30		
		3	14/01/2025	0.25	0.87	00:30		

Remarks

Location cleared of services before excavation. Location then advanced to a depth of 1.20mbgl to perform infiltration testing. No groundwater encountered.

Logged in general accordance with BS 5930: Code of practice for ground investigations.

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RIDGE	Ridge and Partners LLP www.ridge.co.uk	**Trial Pit Log**		Trial Pit No. **SA03** Sheet 1 of 1
Project Name: Southern Policing Hub - Old Sarum		Client: Wiltshire PCC	Contractor: Oakland SI	Logged By: TL
Location: Land at Ramsbury Drive, Old Sarum, Salisbury, SP4 6NZ		Equipment: 5T Tracked Excavator	Depth: 2.02m	Hole Type: TP
Project ID: 5021146	Date: 14/01/2025 - 16/01/2025	Co-ords:	Level:	Scale: 1:25

Depth (m)	Level (mAOD)	Legend	Stratum Description	Water Strikes	Sample and In Situ Testing		
					Depth (m)	Type	Results
			Grass onto dark brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse flint and chalk. (TOPSOIL)				
0.29			Structureless CHALK composed of slightly sandy silty GRAVEL and COBBLES. Clasts are weak white with brown specks in an off-white matrix with rare gravels and cobbles of subangular to subrounded flint. (WHITE CHALK SUBGROUP - Grade Dc)				
2.02			End of Trial Pit at 2.020m				

Dimensions		Soakage Test Information					Trial Pit Support	
Pit Length	Pit Width	Test Number	Date Test	Depth Start	Depth End	Duration	Pit Stability	Shoring Used
1.70	0.70	1	14/01/2025	0.94	1.70	01:00	Partial collapse upon conducting soakage testing.	
		2	15/01/2025	0.71	1.88	01:30		
		3	16/01/2025	0.71	1.60	01:30		

Remarks

Location cleared of services before excavation. Location then advanced to a depth of 2.02mbgl to perform infiltration testing. No groundwater encountered.

Logged in general accordance with BS 5930: Code of practice for ground investigations.

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RIDGE	Ridge and Partners LLP www.ridge.co.uk	**Trial Pit Log**		Trial Pit No. **SA04** Sheet 1 of 1
Project Name: Southern Policing Hub - Old Sarum		Client: Wiltshire PCC	Contractor: Oakland SI	Logged By: TL
Location: Land at Ramsbury Drive, Old Sarum, Salisbury, SP4 6NZ		Equipment: 5T Tracked Excavator	Depth: 2.05m	Hole Type: TP
Project ID: 5021146	Date: 14/01/2025 - 15/01/2025	Co-ords:	Level:	Scale: 1:25

Depth (m)	Level (mAOD)	Legend	Stratum Description	Water Strikes	Sample and In Situ Testing		
					Depth (m)	Type	Results
			Grass onto dark brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse flint and chalk. (TOPSOIL)				
0.24			Structureless CHALK composed of slightly sandy silty GRAVEL and COBBLES. Clasts are weak white with brown specks in an off-white matrix with rare gravels and cobbles of subangular to subrounded flint. (WHITE CHALK SUBGROUP - Grade Dc)		1.50 - 2.00	B	
2.05			End of Trial Pit at 2.050m				

Dimensions		Soakage Test Information					Trial Pit Support	
Pit Length	Pit Width	Test Number	Date Test	Depth Start	Depth End	Duration	Pit Stability	Shoring Used
1.75	0.70	1	14/01/2025	1.05	1.90	00:40	Partial collapse upon conducting soakage testing.	
		2	15/01/2025	0.90	1.60	00:40		
		3	15/01/2025	0.98	1.60	00:45		

Remarks

Location cleared of services before excavation. Location then advanced to a depth of 2.05mbgl to perform infiltration testing. No groundwater encountered.

Logged in general accordance with BS 5930: Code of practice for ground investigations.

AGS

RIDGE	Ridge and Partners LLP www.ridge.co.uk	**Trial Pit Log**		Trial Pit No. **SA05** Sheet 1 of 1
Project Name: Southern Policing Hub - Old Sarum		Client: Wiltshire PCC	Contractor: Oakland SI	Logged By: TL
Location: Land at Ramsbury Drive, Old Sarum, Salisbury, SP4 6NZ		Equipment: 5T Tracked Excavator	Depth: 1.23m	Hole Type: TP
Project ID: 5021146	Date: 14/01/2025 - 15/01/2025	Co-ords:	Level:	Scale: 1:25

Depth (m)	Level (mAOD)	Legend	Stratum Description	Water Strikes	Sample and In Situ Testing		
					Depth (m)	Type	Results
			Grass onto dark brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse flint and chalk. (TOPSOIL)				
0.28			Structureless CHALK composed of slightly sandy silty GRAVEL and COBBLES. Clasts are weak white with brown specks in an off-white matrix with rare gravels and cobbles of subangular to subrounded flint. (WHITE CHALK SUBGROUP - Grade Dc)		0.50 - 1.00	B	
1.23			End of Trial Pit at 1.230m				

1 2 3 4 5

Dimensions		Soakage Test Information					Trial Pit Support	
Pit Length	Pit Width	Test Number	Date Test	Depth Start	Depth End	Duration	Pit Stability	Shoring Used
1.60	0.75	1	16/01/2025	0.28	1.02	00:30	Partial collapse upon conducting soakage testing.	
		2	16/01/2025	0.24	0.94	00:40		
		3	16/01/2025	0.24	1.00	01:00		

Remarks

Location cleared of services before excavation. Location then advanced to a depth of 1.23mbgl to perform infiltration testing. No groundwater encountered.

Logged in general accordance with BS 5930: Code of practice for ground investigations.

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RIDGE	Ridge and Partners LLP www.ridge.co.uk	**WLS Borehole Log**	Borehole No. **WS01** Sheet 1 of 1
Project Name: Southern Policing Hub - Old Sarum		Client: Wiltshire PCC	Contractor: Oakland SI	Logged By: TL
Location: Land at Ramsbury Drive, Old Sarum, Salisbury, SP4 6NZ		Equipment: Dando Tracked Rig	Depth: 5.45m	Hole Type: WS
Project ID: 5021146	Date: 09/01/2025	Co-cords:	Level:	Scale: 1:30

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	ES		0.25			Grass onto dark brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse flint and chalk. (TOPSOIL)
		0.80	D					Structureless CHALK composed of slightly sandy silty GRAVEL and COBBLES. Clasts are weak white with brown specks in an off-white matrix with rare gravels and cobbles of subangular to subrounded flint. (WHITE CHALK SUBGROUP - Grade Dc)
		1.00	SPT	N=14 (1,3/2,3,3,6)				
		1.50	D					
		2.00	SPT	N=25 (2,4/5,7,6,7)				
		3.00	SPT	N=24 (3,5/4,4,6,10)	3.10			Structureless CHALK composed of cream silty CLAY. (WHITE CHALK SUBGROUP - Grade Dm)
		3.50	D					
		4.00	SPT	N=21 (3,5/5,4,4,8)				
		5.00	SPT	N=22 (1,5/4,5,6,7)				
					5.45			End of Borehole at 5.450m

Groundwater Information				Hole Diameter		Casing Diameter	
Date	Depth Strike	Time Elapsed	Depth Water	Depth Base	Diameter	Depth Base	Diameter

Remarks:

Location cleared of services before being advanced to target depth at 5.45mbgl using a dynamic sampling rig. No groundwater encountered.

Logged in general accordance with BS 5930: Code of practice for ground investigations.

AGS

RIDGE	Ridge and Partners LLP www.ridge.co.uk	**WLS Borehole Log**	Borehole No. **WS02** Sheet 1 of 1

Project Name: Southern Policing Hub - Old Sarum	Client: Wiltshire PCC	Contractor: Oakland SI	Logged By: TL
Location: Land at Ramsbury Drive, Old Sarum, Salisbury, SP4 6NZ	Equipment: Dando Tracked Rig	Depth: 5.45m	Hole Type: WS
Project ID: 5021146 Date: 09/01/2025	Co-cords:	Level:	Scale: 1:30

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.27			Grass onto dark brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse flint and chalk. (TOPSOIL)
		0.60	D					Structureless CHALK composed of slightly sandy silty GRAVEL and COBBLES. Clasts are weak white with brown specks in an off-white matrix with rare gravels and cobbles of subangular to subrounded flint. (WHITE CHALK SUBGROUP - Grade Dc)
		1.00	SPT	N=16 (3,2/3,4,4,5)				
		2.00	D					
		2.00	SPT	N=11 (2,4/3,2,3,3)				
		3.00	SPT	N=17 (2,3/4,3,4,6)				
		4.00	D		3.90			Structureless CHALK composed of cream silty CLAY. (WHITE CHALK SUBGROUP - Grade Dm)
		4.00	SPT	N=20 (2,2/2,4,6,8)				
		5.00	SPT	N=21 (2,3/3,5,5,8)				
					5.45			End of Borehole at 5.450m

Groundwater Information				Hole Diameter		Casing Diameter	
Date	Depth Strike	Time Elapsed	Depth Water	Depth Base	Diameter	Depth Base	Diameter

Remarks:

Location cleared of services before being advanced to target depth at 5.45mbgl using a dynamic sampling rig. No groundwater encountered.

Logged in general accordance with BS 5930: Code of practice for ground investigations.

AGS

RIDGE	Ridge and Partners LLP www.ridge.co.uk	**WLS Borehole Log**	Borehole No. **WS03** Sheet 1 of 1
Project Name: Southern Policing Hub - Old Sarum	Client: Wiltshire PCC	Contractor: Oakland SI	Logged By: TL
Location: Land at Ramsbury Drive, Old Sarum, Salisbury, SP4 6NZ	Equipment: Dando Tracked Rig	Depth: 5.45m	Hole Type: WS
Project ID: 5021146 Date: 09/01/2025	Co-cords:	Level:	Scale: 1:30

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.28			Grass onto dark brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse flint and chalk. (TOPSOIL)
		0.50	ES					Structureless CHALK composed of slightly sandy silty GRAVEL and COBBLES. Clasts are weak white with brown specks in an off-white matrix with rare gravels and cobbles of subangular to subrounded flint. (WHITE CHALK SUBGROUP - Grade Dc)
		1.00	SPT	N=15 (2,3/3,4,3,5)				
		1.20	D					
		2.00	SPT	N=15 (2,3/3,4,4,4)				
		3.00	D					
		3.00	SPT	N=20 (3,3/3,4,5,8)	3.05			Structureless CHALK composed of cream silty CLAY. (WHITE CHALK SUBGROUP - Grade Dm)
		4.00	SPT	N=36 (5,6/6,8,10,12)				
		5.00	D					
		5.00	SPT	N=15 (1,4/3,3,4,5)				
					5.45			End of Borehole at 5.450m

1 2 3 4 5 6

Groundwater Information				Hole Diameter		Casing Diameter	
Date	Depth Strike	Time Elapsed	Depth Water	Depth Base	Diameter	Depth Base	Diameter

Remarks:

Location cleared of services before being advanced to target depth at 5.45mbgl using a dynamic sampling rig. No groundwater encountered.

Logged in general accordance with BS 5930: Code of practice for ground investigations.

AGS

RIDGE	Ridge and Partners LLP www.ridge.co.uk	**WLS Borehole Log**	Borehole No. **WS04** Sheet 1 of 1
Project Name: Southern Policing Hub - Old Sarum	Client: Wiltshire PCC	Contractor: Oakland SI	Logged By: TL
Location: Land at Ramsbury Drive, Old Sarum, Salisbury, SP4 6NZ	Equipment: Dando Tracked Rig	Depth: 5.45m	Hole Type: WS
Project ID: 5021146 Date: 09/01/2025	Co-cords:	Level:	Scale: 1:30

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.10	ES		0.23			Grass onto dark brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse flint and chalk. (TOPSOIL)
		0.75	D					Structureless CHALK composed of slightly sandy silty GRAVEL and COBBLES. Clasts are weak white with brown specks in an off-white matrix with rare gravels and cobbles of subangular to subrounded flint. (WHITE CHALK SUBGROUP - Grade Dc)
		1.00	SPT	N=17 (1,2/4,4,4,5)				
		1.50	D					
		2.00	SPT	N=15 (1,4/3,3,4,5)				
		2.50	D					
		3.00	SPT	N=17 (1,5/4,5,4,4)				
					3.30			Structureless CHALK composed of cream silty CLAY. (WHITE CHALK SUBGROUP - Grade Dm)
		4.00	SPT	N=16 (2,4/3,3,4,6)				
		5.00	SPT	N=47 (4,6/10,15,10,12)				
					5.45			End of Borehole at 5.450m

Groundwater Information				Hole Diameter		Casing Diameter	
Date	Depth Strike	Time Elapsed	Depth Water	Depth Base	Diameter	Depth Base	Diameter

Remarks:

Location cleared of services before being advanced to target depth at 5.45mbgl using a dynamic sampling rig. No groundwater encountered.

Logged in general accordance with BS 5930: Code of practice for ground investigations.

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RIDGE	Ridge and Partners LLP www.ridge.co.uk	**WLS Borehole Log**	Borehole No. **WS05** Sheet 1 of 1

Project Name: Southern Policing Hub - Old Sarum	Client: Wiltshire PCC	Contractor: Oakland SI	Logged By: TL
Location: Land at Ramsbury Drive, Old Sarum, Salisbury, SP4 6NZ	Equipment: Dando Tracked Rig	Depth: 5.45m	Hole Type: WS
Project ID: 5021146 Date: 09/01/2025	Co-cords:	Level:	Scale: 1:30

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.40	D		0.33			Grass onto dark brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse flint and chalk. (TOPSOIL)
		1.00 1.00	D SPT	N=13 (1,2/2,2,4,5)				Structureless CHALK composed of slightly sandy silty GRAVEL and COBBLES. Clasts are weak white with brown specks in an off-white matrix with rare gravels and cobbles of subangular to subrounded flint. (WHITE CHALK SUBGROUP - Grade Dc)
		2.00 2.00	D SPT	N=18 (3,3/3,3,6,6)				
		3.00	SPT	N=17 (3,4/4,3,4,6)				
		4.00 4.00	D SPT	N=36 (7,13/8,10,8,10)	3.55			Structureless CHALK composed of cream silty CLAY. (WHITE CHALK SUBGROUP - Grade Dm)
		5.00	SPT	N=19 (2,2/4,5,4,6)				
					5.45			End of Borehole at 5.450m

1 2 3 4 5 6

Groundwater Information				Hole Diameter		Casing Diameter	
Date	Depth Strike	Time Elapsed	Depth Water	Depth Base	Diameter	Depth Base	Diameter

Remarks:

Location cleared of services before being advanced to target depth at 5.45mbgl using a dynamic sampling rig. No groundwater encountered.

Logged in general accordance with BS 5930: Code of practice for ground investigations.

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RIDGE	Ridge and Partners LLP www.ridge.co.uk	**WLS Borehole Log**	Borehole No. **WS06** Sheet 1 of 1

Project Name: Southern Policing Hub - Old Sarum	Client: Wiltshire PCC	Contractor: Oakland SI	Logged By: TL
Location: Land at Ramsbury Drive, Old Sarum, Salisbury, SP4 6NZ	Equipment: Dando Tracked Rig	Depth: 5.45m	Hole Type: WS
Project ID: 5021146 Date: 09/01/2025	Co-cords:	Level:	Scale: 1:30

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.26			Grass onto dark brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse flint and chalk. (TOPSOIL)	
		1.00	SPT	N=12 (1,2/2,2,4,4)				Structureless CHALK composed of slightly sandy silty GRAVEL and COBBLES. Clasts are weak white with brown specks in an off-white matrix with rare gravels and cobbles of subangular to subrounded flint. (WHITE CHALK SUBGROUP - Grade Dc)	1
		1.50	D						
		2.00	SPT	N=13 (1,3/2,3,4,4)					2
		2.50	D						
					2.60			Structureless CHALK composed of cream silty CLAY. (WHITE CHALK SUBGROUP - Grade Dm)	
		3.00	SPT	N=24 (5,5/4,4,8,8)					3
		3.50	D						
		4.00	SPT	N=31 (1,5/6,11,7,7)					4
		5.00	D						
		5.00	SPT	N=28 (1,4/4,6,8,10)					5
					5.45			End of Borehole at 5.450m	
									6

Groundwater Information				Hole Diameter		Casing Diameter	
Date	Depth Strike	Time Elapsed	Depth Water	Depth Base	Diameter	Depth Base	Diameter

Remarks:

Location cleared of services before being advanced to target depth at 5.45mbgl using a dynamic sampling rig. No groundwater encountered.

Logged in general accordance with BS 5930: Code of practice for ground investigations.

AGS

RIDGE	Ridge and Partners LLP www.ridge.co.uk	**WLS Borehole Log**	Borehole No. **WS07** Sheet 1 of 1

Project Name: Southern Policing Hub - Old Sarum	Client: Wiltshire PCC	Contractor: Oakland SI	Logged By: TL
Location: Land at Ramsbury Drive, Old Sarum, Salisbury, SP4 6NZ	Equipment: Dando Tracked Rig	Depth: 5.45m	Hole Type: WS
Project ID: 5021146 Date: 10/01/2025	Co-cords:	Level:	Scale: 1:30

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.24			Grass onto dark brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse flint and chalk. (TOPSOIL)	
		0.50	D					Structureless CHALK composed of slightly sandy silty GRAVEL and COBBLES. Clasts are weak white with brown specks in an off-white matrix with rare gravels and cobbles of subangular to subrounded flint. (WHITE CHALK SUBGROUP - Grade Dc)	
		1.00	SPT	N=15 (1,3/3,4,4,4)					1
		1.20	D						
		2.00	D						
		2.00	SPT	N=31 (3,4/3,8,10,10)					2
					2.45			Structureless CHALK composed of cream silty CLAY. (WHITE CHALK SUBGROUP - Grade Dm)	
		3.00	SPT	N=22 (3,2/4,3,5,10)					3
		4.00	SPT	N=25 (3,3/5,6,6,8)					4
		5.00	SPT	N=34 (1,9/8,6,10,10)					5
					5.45			End of Borehole at 5.450m	
									6

Groundwater Information				Hole Diameter		Casing Diameter	
Date	Depth Strike	Time Elapsed	Depth Water	Depth Base	Diameter	Depth Base	Diameter

Remarks:

Location cleared of services before being advanced to target depth at 5.45mbgl using a dynamic sampling rig. No groundwater encountered.

Logged in general accordance with BS 5930: Code of practice for ground investigations.

AGS

RIDGE	Ridge and Partners LLP www.ridge.co.uk	**WLS Borehole Log**	Borehole No. **WS08** Sheet 1 of 1
Project Name: Southern Policing Hub - Old Sarum	Client: Wiltshire PCC	Contractor: Oakland SI	Logged By: TL
Location: Land at Ramsbury Drive, Old Sarum, Salisbury, SP4 6NZ	Equipment: Dando Tracked Rig	Depth: 5.45m	Hole Type: WS
Project ID: 5021146 Date: 10/01/2025	Co-cords:	Level:	Scale: 1:30

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.23			Grass onto dark brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse flint and chalk. (TOPSOIL)
		0.40	ES					Structureless CHALK composed of slightly sandy silty GRAVEL and COBBLES. Clasts are weak white with brown specks in an off-white matrix with rare gravels and cobbles of subangular to subrounded flint. (WHITE CHALK SUBGROUP - Grade Dc)
		0.75	D					
		1.00	SPT	N=20 (3,6/4,6,5,5)				
		1.50	D					
		2.00	SPT	N=25 (3,5/5,6,8,6)				
		3.00	D					
		3.00	SPT	N=15 (3,3/4,3,4,4)	3.05			Structureless CHALK composed of cream silty CLAY. (WHITE CHALK SUBGROUP - Grade Dm)
		4.00	SPT	N=28 (4,5/6,6,6,10)				
		5.00	SPT	N=20 (3,6/4,4,5,7)				
					5.45			End of Borehole at 5.450m

Groundwater Information				Hole Diameter		Casing Diameter	
Date	Depth Strike	Time Elapsed	Depth Water	Depth Base	Diameter	Depth Base	Diameter

Remarks:

Location cleared of services before being advanced to target depth at 5.45mbgl using a dynamic sampling rig. No groundwater encountered.

Logged in general accordance with BS 5930: Code of practice for ground investigations.

AGS

RIDGE	Ridge and Partners LLP www.ridge.co.uk	**WLS Borehole Log**	Borehole No. **WS09** Sheet 1 of 1

Project Name: Southern Policing Hub - Old Sarum	Client: Wiltshire PCC	Contractor: Oakland SI	Logged By: TL
Location: Land at Ramsbury Drive, Old Sarum, Salisbury, SP4 6NZ	Equipment: Dando Tracked Rig	Depth: 5.45m	Hole Type: WS
Project ID: 5021146 Date: 10/01/2025	Co-cords:	Level:	Scale: 1:30

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.30	ES		0.35			Grass onto dark brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse flint and chalk. (TOPSOIL)
		0.60	D					Structureless CHALK composed of slightly sandy silty GRAVEL and COBBLES. Clasts are weak white with brown specks in an off-white matrix with rare gravels and cobbles of subangular to subrounded flint. (WHITE CHALK SUBGROUP - Grade Dc)
		1.00	SPT	N=20 (4,4/3,4,5,8)				
		2.00	SPT	N=35 (3,10/12,7,8,8)				
		2.50	D		2.65			Structureless CHALK composed of cream silty CLAY. (WHITE CHALK SUBGROUP - Grade Dm)
		3.00	SPT	N=22 (1,4/4,6,6,6)				
		4.00	SPT	N=34 (6,6/6,6,12,10)				
		4.50	D					
		5.00	SPT	N=25 (6,4/6,5,6,8)				
					5.45			End of Borehole at 5.450m

Groundwater Information				Hole Diameter		Casing Diameter	
Date	Depth Strike	Time Elapsed	Depth Water	Depth Base	Diameter	Depth Base	Diameter

Remarks:

Location cleared of services before being advanced to target depth at 5.45mbgl using a dynamic sampling rig. No groundwater encountered.

Logged in general accordance with BS 5930: Code of practice for ground investigations.

AGS

RIDGE	Ridge and Partners LLP www.ridge.co.uk	**WLS Borehole Log**	Borehole No. **WS10** Sheet 1 of 1
Project Name: Southern Policing Hub - Old Sarum	Client: Wiltshire PCC	Contractor: Oakland SI	Logged By: TL
Location: Land at Ramsbury Drive, Old Sarum, Salisbury, SP4 6NZ	Equipment: Dando Tracked Rig	Depth: 5.45m	Hole Type: WS
Project ID: 5021146 Date: 10/01/2025	Co-cords:	Level:	Scale: 1:30

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	ES		0.26			Grass onto dark brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse flint and chalk. (TOPSOIL)	
		1.00 1.00	D SPT	N=17 (2,1/2,4,5,6)				Structureless CHALK composed of slightly sandy silty GRAVEL and COBBLES. Clasts are weak white with brown specks in an off-white matrix with rare gravels and cobbles of subangular to subrounded flint. (WHITE CHALK SUBGROUP - Grade Dc)	1
					1.45			Structureless CHALK composed of cream silty CLAY. (WHITE CHALK SUBGROUP - Grade Dm)	
		2.00 2.00	D SPT	N=19 (2,4/4,4,5,6)					2
		3.00 3.00	D SPT	N=30 (7,7/10,6,6,8)					3
		4.00	SPT	N=19 (1,4/4,5,5,5)					4
		5.00	SPT	N=24 (3,6/4,4,5,11)					5
					5.45			End of Borehole at 5.450m	6

Groundwater Information				Hole Diameter		Casing Diameter	
Date	Depth Strike	Time Elapsed	Depth Water	Depth Base	Diameter	Depth Base	Diameter

Remarks:

Location cleared of services before being advanced to target depth at 5.45mbgl using a dynamic sampling rig. No groundwater encountered.

Logged in general accordance with BS 5930: Code of practice for ground investigations.

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APPENDIX 4 – IN SITU TESTING RESULTS

Soakaway Test Results & Soil Infiltration Rate

Southern Policing Hub, Old Sarum

Project: 5021146 **Hole ID: SA01** **Test 1**

Pit collapsed from 1.95m to 1.65m

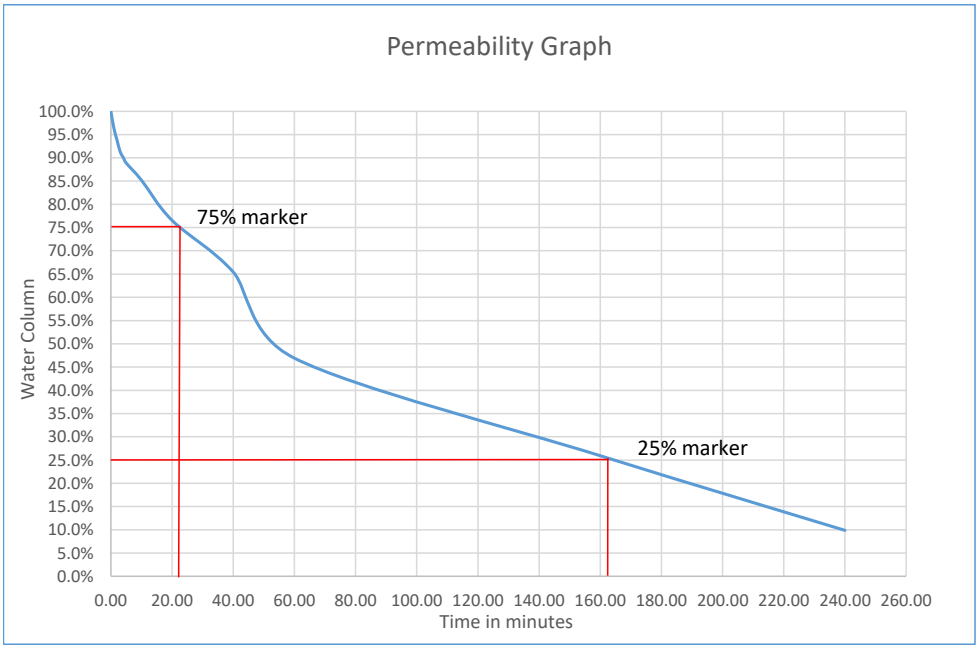
Date: 14/01/25

Time in minutes	Depth in metres to water surface	Depth in metres of water	Percentage of water depth at start
0.00	0.840	0.81	100.0%
1.00	0.870	0.78	96.3%
2.00	0.890	0.76	93.8%
3.00	0.910	0.74	91.4%
4.00	0.920	0.73	90.1%
5.00	0.930	0.72	88.9%
10.00	0.960	0.69	85.2%
20.00	1.030	0.62	76.5%
40.00	1.120	0.53	65.4%
60.00	1.270	0.38	46.9%
160.00	1.440	0.21	25.9%
240.00	1.570	0.08	9.9%

Pit Size	
Length	2.30
Width	0.70
Depth	1.65

Time in mins	
22	75%
162	25%

Infiltration Rate from75%-25% **1.92E-05 m/s**



Soakaway Test Results & Soil Infiltration Rate

Southern Policing Hub, Old Sarum

Project: 5021146 **Hole ID: SA01** **Test 2**

Pit collapsed from 1.95m to 1.65m

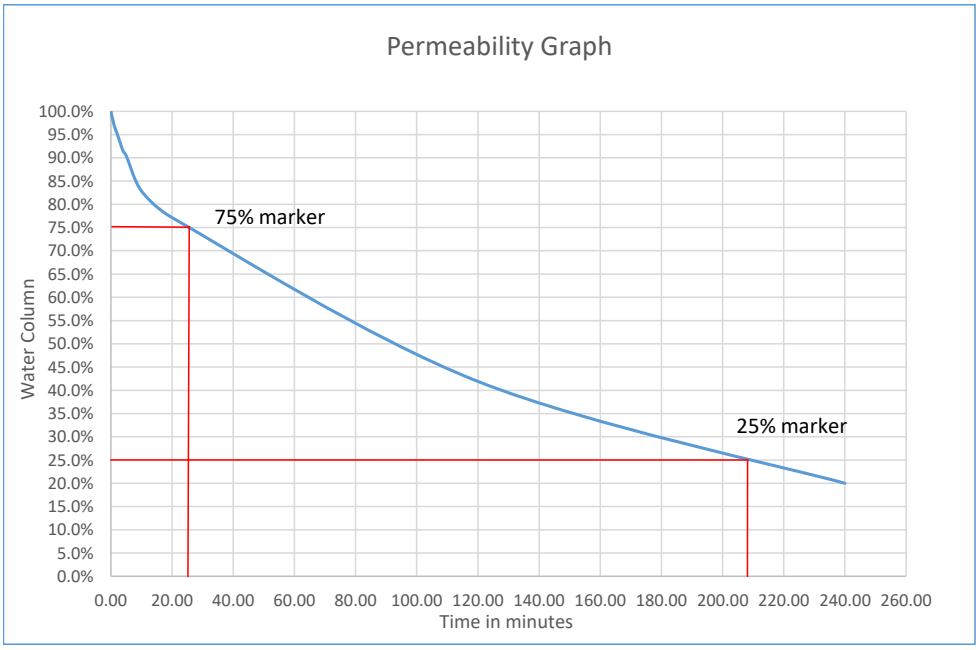
Date: 15/01/25

Time in minutes	Depth in metres to water surface	Depth in metres of water	Percentage of water depth at start
0.00	0.600	1.05	100.0%
1.00	0.630	1.02	97.1%
2.00	0.650	1.00	95.2%
3.00	0.670	0.98	93.3%
4.00	0.690	0.96	91.4%
5.00	0.700	0.95	90.5%
10.00	0.780	0.87	82.9%
20.00	0.840	0.81	77.1%
120.00	1.210	0.44	41.9%
240.00	1.440	0.21	20.0%

Pit Size	
Length	2.30
Width	0.70
Depth	1.65

Time in mins	
24	75%
208	25%

Infiltration Rate from75%-25% **1.61E-05 m/s**



Soakaway Test Results & Soil Infiltration Rate

Southern Policing Hub, Old Sarum

Project: 5021146 **Hole ID: SA01** **Test 3**

Pit collapsed from 1.95m to 1.57m

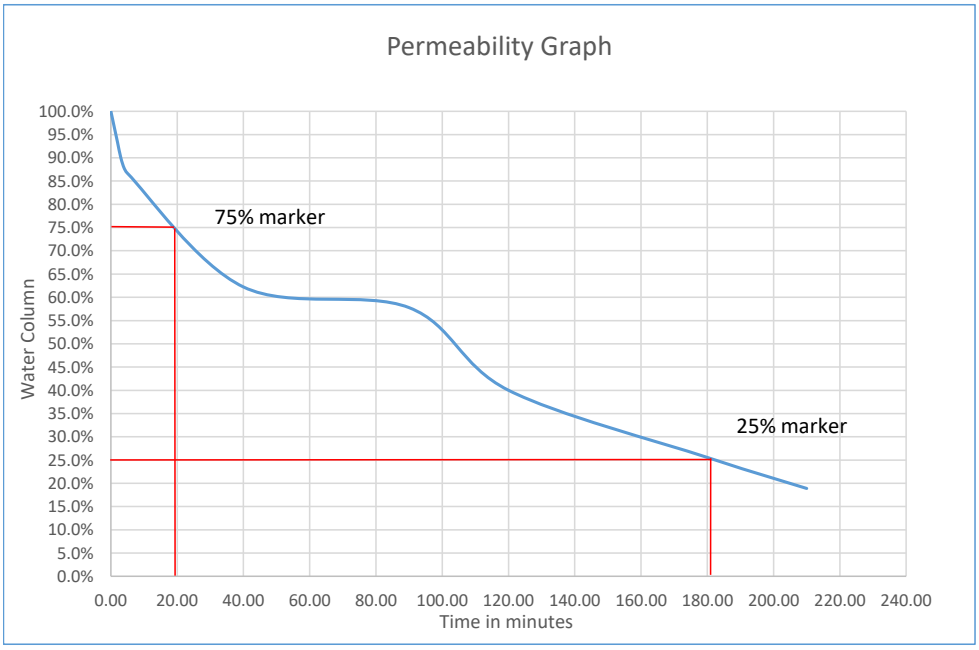
Date: 16/01/25

Time in minutes	Depth in metres to water surface	Depth in metres of water	Percentage of water depth at start
0.00	0.670	0.90	100.0%
1.00	0.700	0.87	96.7%
2.00	0.730	0.84	93.3%
3.00	0.760	0.81	90.0%
4.00	0.780	0.79	87.8%
5.00	0.790	0.78	86.7%
40.00	1.010	0.56	62.2%
90.00	1.050	0.52	57.8%
120.00	1.210	0.36	40.0%
180.00	1.340	0.23	25.6%
210.00	1.400	0.17	18.9%

Pit Size	
Length	2.30
Width	0.70
Depth	1.57

Time in mins	
20	75%
181	25%

Infiltration Rate from75%-25% **1.74E-05 m/s**



Soakaway Test Results & Soil Infiltration Rate

Southern Policing Hub, Old Sarum

Project: 5021146 **Hole ID: SA02** **Test 1**

Pit collapsed from 1.20m to 1.08m

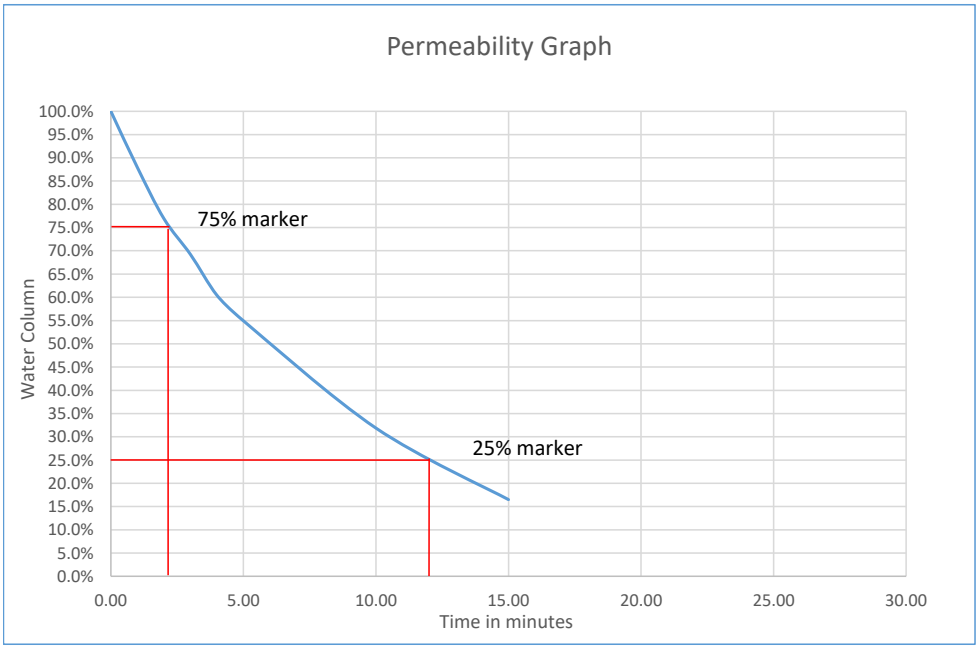
Date: 14/01/25

Time in minutes	Depth in metres to water surface	Depth in metres of water	Percentage of water depth at start
0.00	0.170	0.91	100.0%
1.00	0.280	0.80	87.9%
2.00	0.380	0.70	76.9%
3.00	0.450	0.63	69.2%
4.00	0.530	0.55	60.4%
5.00	0.580	0.50	54.9%
10.00	0.790	0.29	31.9%
15.00	0.930	0.15	16.5%

Pit Size	
Length	1.40
Width	0.65
Depth	1.08

Time in mins	
2	75%
12	25%

Infiltration Rate from75%-25% **2.49E-04 m/s**



Soakaway Test Results & Soil Infiltration Rate

Southern Policing Hub, Old Sarum

Project: 5021146 **Hole ID: SA02** **Test 2**

Pit collapsed from 1.20m to 1.08m

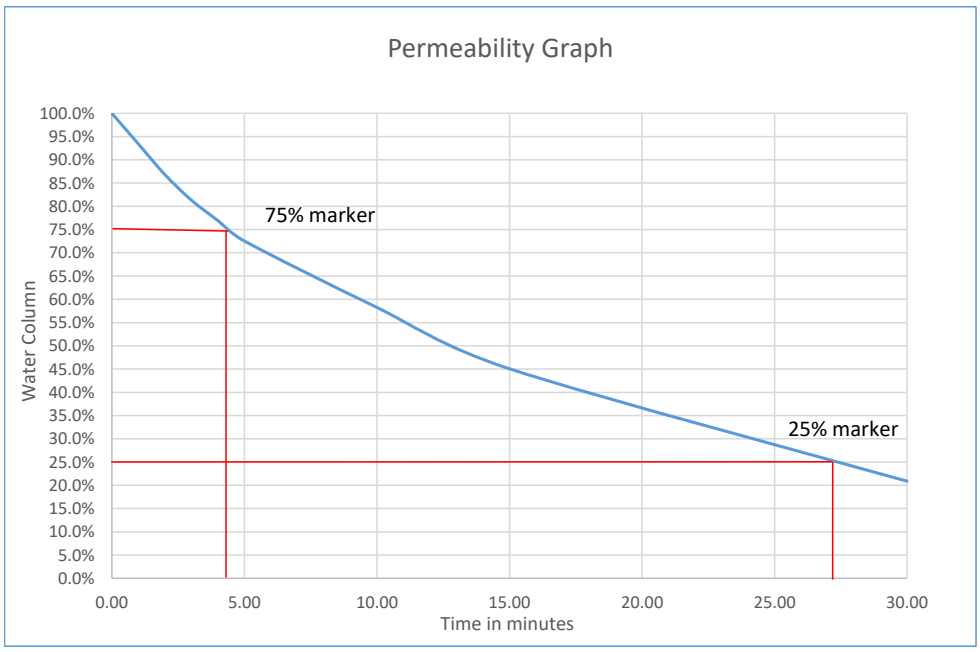
Date: 14/01/25

Time in minutes	Depth in metres to water surface	Depth in metres of water	Percentage of water depth at start
0.00	0.170	0.91	100.0%
1.00	0.230	0.85	93.4%
2.00	0.290	0.79	86.8%
3.00	0.340	0.74	81.3%
4.00	0.380	0.70	76.9%
5.00	0.420	0.66	72.5%
10.00	0.550	0.53	58.2%
15.00	0.670	0.41	45.1%
30.00	0.890	0.19	20.9%

Pit Size	
Length	1.40
Width	0.65
Depth	1.08

Time in mins	
4	75%
27	25%

Infiltration Rate from75%-25% **1.08E-04 m/s**



Soakaway Test Results & Soil Infiltration Rate

Southern Policing Hub, Old Sarum

Project: 5021146 **Hole ID: SA02** **Test 3**

Pit collapsed from 1.20m to 1.08m

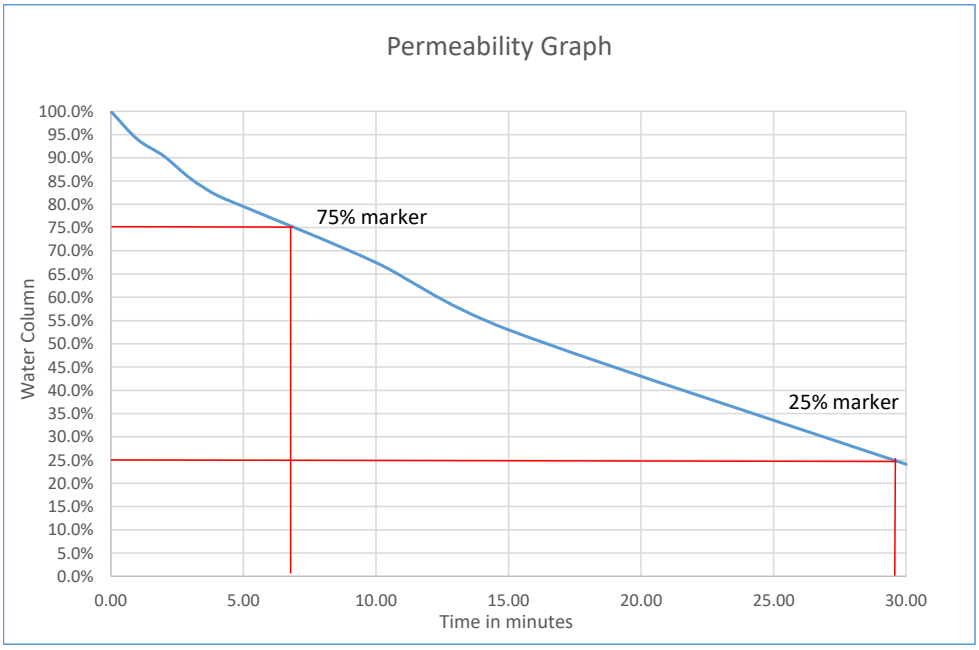
Date: 14/01/25

Time in minutes	Depth in metres to water surface	Depth in metres of water	Percentage of water depth at start
0.00	0.250	0.83	100.0%
1.00	0.300	0.78	94.0%
2.00	0.330	0.75	90.4%
3.00	0.370	0.71	85.5%
4.00	0.400	0.68	81.9%
5.00	0.420	0.66	79.5%
10.00	0.520	0.56	67.5%
15.00	0.640	0.44	53.0%
30.00	0.880	0.20	24.1%

Pit Size	
Length	1.40
Width	0.65
Depth	1.08

Time in mins	
7	75%
29	25%

Infiltration Rate from75%-25% **1.10E-04 m/s**



Soakaway Test Results & Soil Infiltration Rate

Southern Policing Hub, Old Sarum

Project: 5021146 **Hole ID: SA03** **Test 1**

Pit collapsed from 2.02m to 1.72m

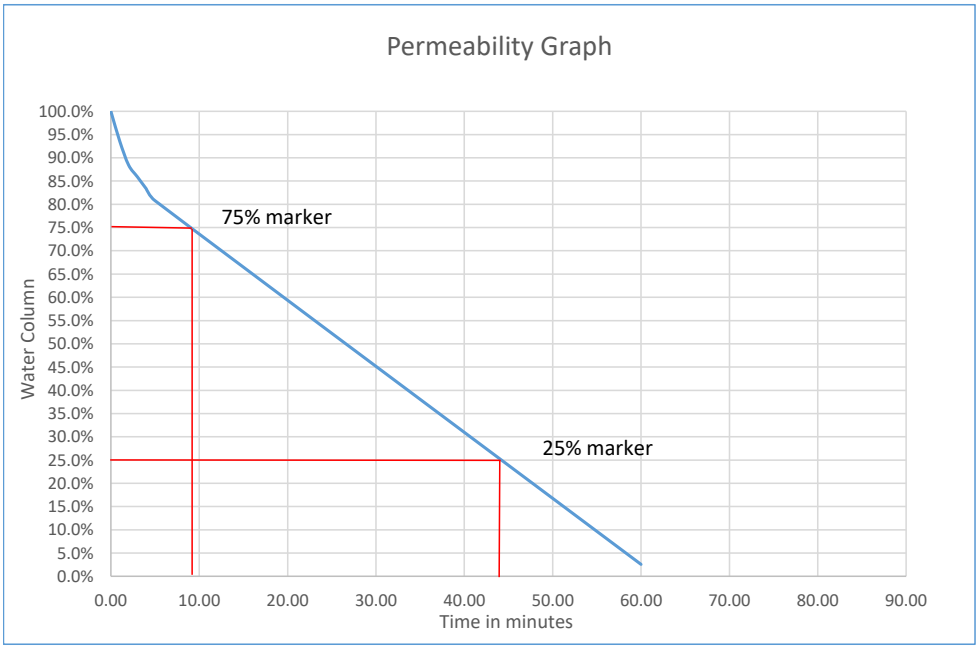
Date: 14/01/25

Time in minutes	Depth in metres to water surface	Depth in metres of water	Percentage of water depth at start
0.00	0.940	0.78	100.0%
1.00	0.990	0.73	93.6%
2.00	1.030	0.69	88.5%
3.00	1.050	0.67	85.9%
4.00	1.070	0.65	83.3%
5.00	1.090	0.63	80.8%
60.00	1.700	0.02	2.6%

Pit Size	
Length	1.70
Width	0.70
Depth	1.72

Time in mins	
9	75%
44	25%

Infiltration Rate from75%-25% **7.22E-05 m/s**



Soakaway Test Results & Soil Infiltration Rate

Southern Policing Hub, Old Sarum

Project: 5021146 **Hole ID: SA03** **Test 2**

Pit collapsed from 2.02m to 1.66m

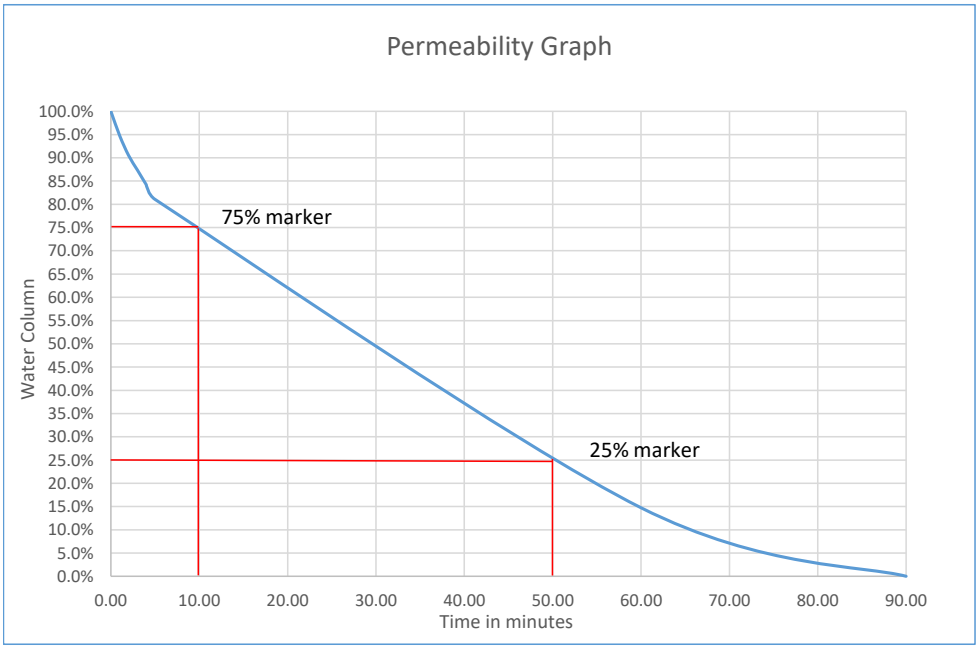
Date: 15/01/25

Time in minutes	Depth in metres to water surface	Depth in metres of water	Percentage of water depth at start
0.00	0.710	0.95	100.0%
1.00	0.760	0.90	94.7%
2.00	0.800	0.86	90.5%
3.00	0.830	0.83	87.4%
4.00	0.860	0.80	84.2%
5.00	0.890	0.77	81.1%
60.00	1.520	0.14	14.7%
90.00	1.660	0.00	0.0%

Pit Size	
Length	1.70
Width	0.70
Depth	1.66

Time in mins	
10	75%
50	25%

Infiltration Rate from75%-25% **6.79E-05 m/s**



Soakaway Test Results & Soil Infiltration Rate

Southern Policing Hub, Old Sarum

Project: 5021146 **Hole ID: SA03** **Test 3**

Pit collapsed from 2.02m to 1.66m

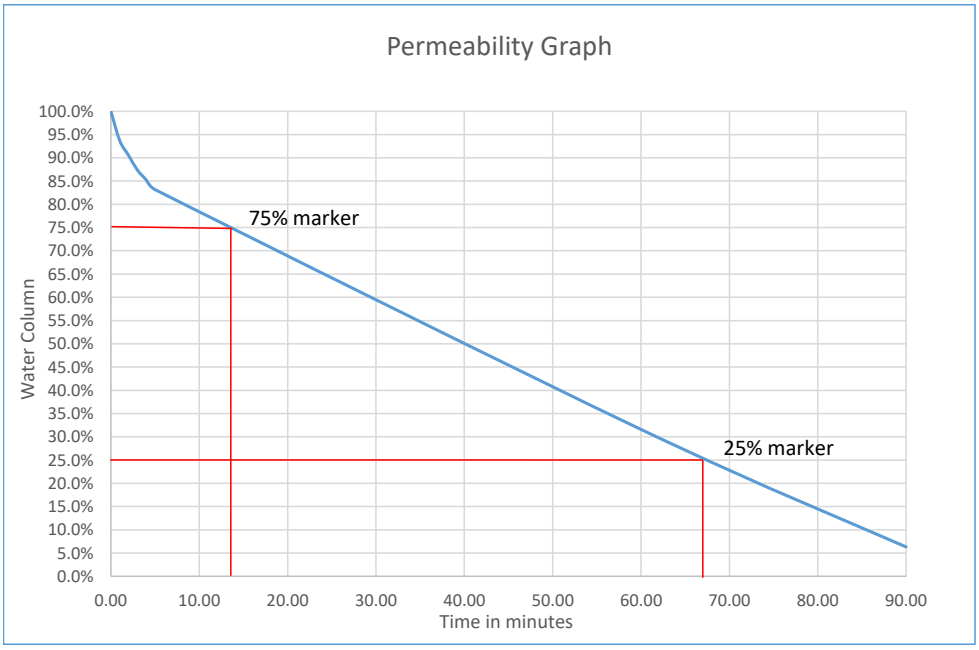
Date: 16/01/25

Time in minutes	Depth in metres to water surface	Depth in metres of water	Percentage of water depth at start
0.00	0.710	0.95	100.0%
1.00	0.770	0.89	93.7%
2.00	0.800	0.86	90.5%
3.00	0.830	0.83	87.4%
4.00	0.850	0.81	85.3%
5.00	0.870	0.79	83.2%
60.00	1.360	0.30	31.6%
90.00	1.600	0.06	6.3%

Pit Size	
Length	1.70
Width	0.70
Depth	1.66

Time in mins	
13	75%
67	25%

Infiltration Rate from75%-25% **5.03E-05 m/s**



Soakaway Test Results & Soil Infiltration Rate

Southern Policing Hub, Old Sarum

Project: 5021146 **Hole ID: SA04** **Test 1**

Pit collapsed from 2.02m to 1.82m

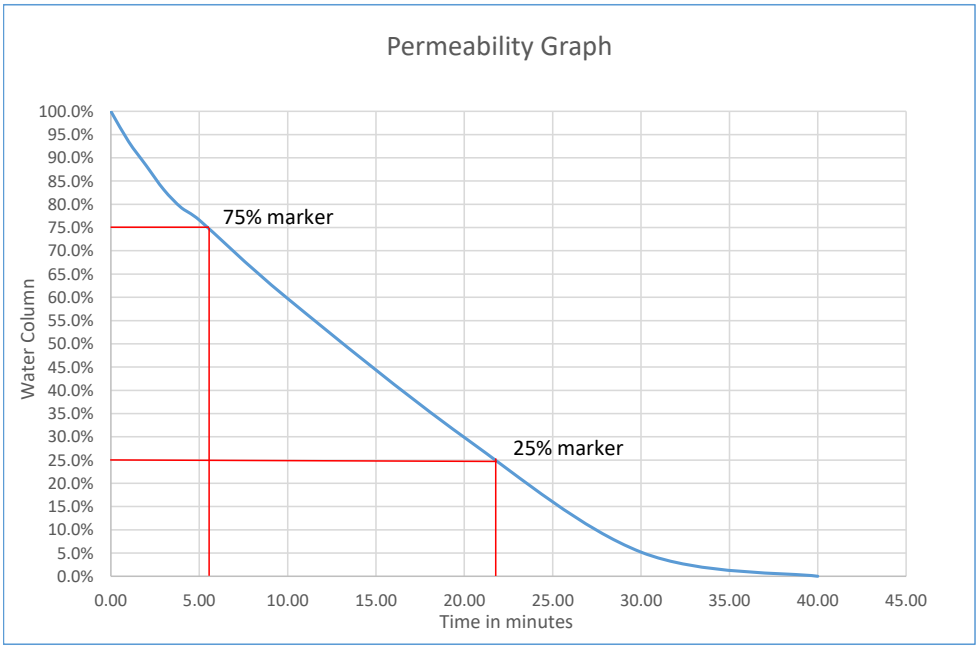
Date: 14/01/25

Time in minutes	Depth in metres to water surface	Depth in metres of water	Percentage of water depth at start
0.00	1.050	0.77	100.0%
1.00	1.100	0.72	93.5%
2.00	1.140	0.68	88.3%
3.00	1.180	0.64	83.1%
4.00	1.210	0.61	79.2%
5.00	1.230	0.59	76.6%
10.00	1.360	0.46	59.7%
20.00	1.590	0.23	29.9%
30.00	1.780	0.04	5.2%
40.00	1.820	0.00	0.0%

Pit Size	
Length	1.75
Width	0.70
Depth	1.82

Time in mins	
6	75%
22	25%

Infiltration Rate from75%-25% **1.58E-04 m/s**



Soakaway Test Results & Soil Infiltration Rate

Southern Policing Hub, Old Sarum

Project: 5021146 **Hole ID: SA04** **Test 2**

Pit collapsed from 2.02m to 1.82m

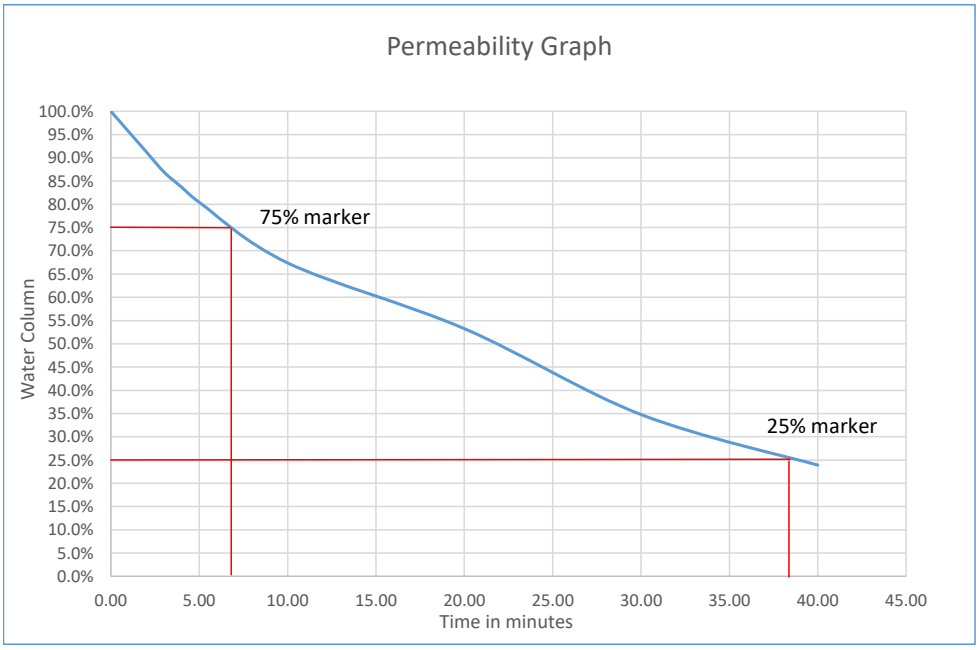
Date: 15/01/25

Time in minutes	Depth in metres to water surface	Depth in metres of water	Percentage of water depth at start
0.00	0.900	0.92	100.0%
1.00	0.940	0.88	95.7%
2.00	0.980	0.84	91.3%
3.00	1.020	0.80	87.0%
4.00	1.050	0.77	83.7%
5.00	1.080	0.74	80.4%
10.00	1.200	0.62	67.4%
20.00	1.330	0.49	53.3%
30.00	1.500	0.32	34.8%
40.00	1.600	0.22	23.9%

Pit Size	
Length	1.75
Width	0.70
Depth	1.82

Time in mins	
7	75%
38	25%

Infiltration Rate from75%-25% **8.71E-05 m/s**



Soakaway Test Results & Soil Infiltration Rate

Southern Policing Hub, Old Sarum

Project: 5021146 **Hole ID: SA04** **Test 3**

Pit collapsed from 2.02m to 1.82m

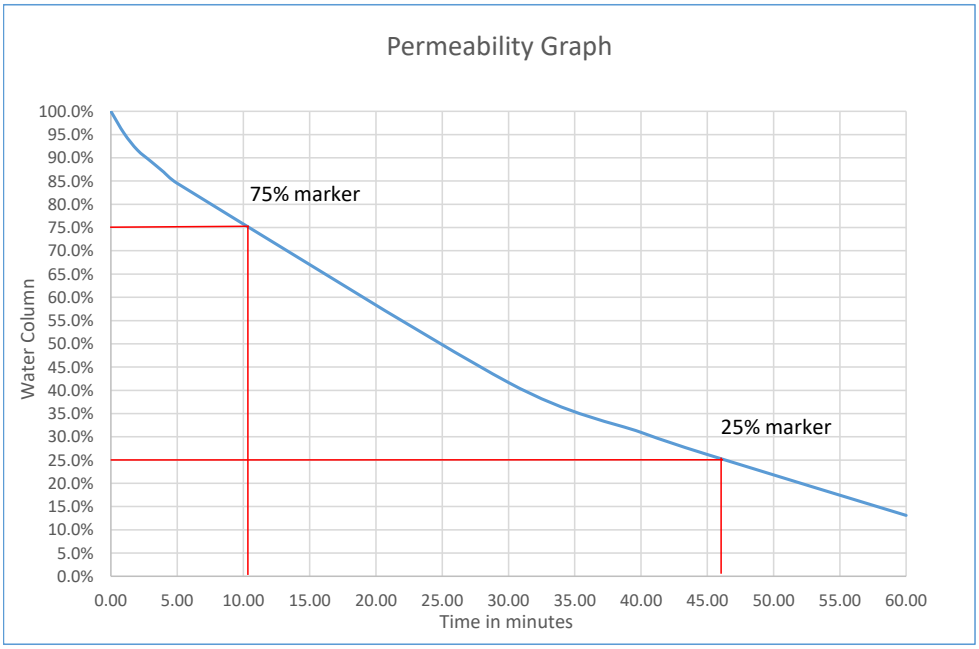
Date: 15/01/25

Time in minutes	Depth in metres to water surface	Depth in metres of water	Percentage of water depth at start
0.00	0.980	0.84	100.0%
1.00	1.020	0.80	95.2%
2.00	1.050	0.77	91.7%
3.00	1.070	0.75	89.3%
4.00	1.090	0.73	86.9%
5.00	1.110	0.71	84.5%
30.00	1.470	0.35	41.7%
40.00	1.560	0.26	31.0%
45.00	1.600	0.22	26.2%
60.00	1.710	0.11	13.1%

Pit Size	
Length	1.75
Width	0.70
Depth	1.82

Time in mins	
11	75%
47	25%

Infiltration Rate from75%-25% **7.26E-05 m/s**



Soakaway Test Results & Soil Infiltration Rate

Southern Policing Hub, Old Sarum

Project: 5021146 **Hole ID: SA05** **Test 1**

Pit collapsed from 1.23m to 1.17m

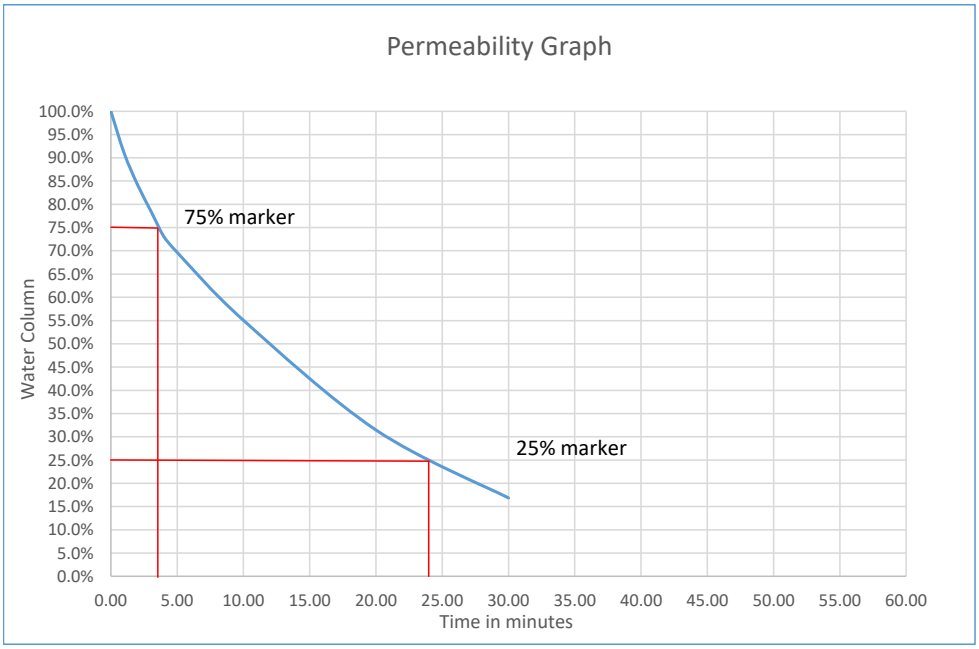
Date: 15/01/25

Time in minutes	Depth in metres to water surface	Depth in metres of water	Percentage of water depth at start
0.00	0.280	0.89	100.0%
1.00	0.360	0.81	91.0%
2.00	0.420	0.75	84.3%
3.00	0.470	0.70	78.7%
4.00	0.520	0.65	73.0%
5.00	0.550	0.62	69.7%
10.00	0.680	0.49	55.1%
20.00	0.890	0.28	31.5%
30.00	1.020	0.15	16.9%

Pit Size	
Length	1.60
Width	0.75
Depth	1.17

Time in mins	
4	75%
24	25%

Infiltration Rate from75%-25% **1.35E-04 m/s**



Soakaway Test Results & Soil Infiltration Rate

Southern Policing Hub, Old Sarum

Project: 5021146 **Hole ID: SA05** **Test 2**

Pit collapsed from 1.23m to 1.17m

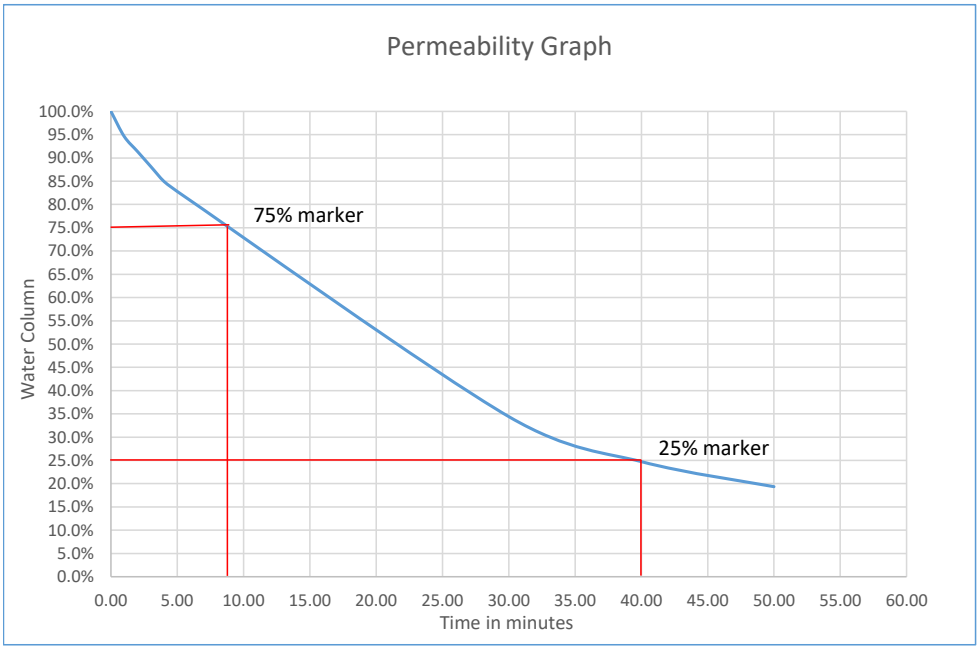
Date: 15/01/25

Time in minutes	Depth in metres to water surface	Depth in metres of water	Percentage of water depth at start
0.00	0.240	0.93	100.0%
1.00	0.290	0.88	94.6%
2.00	0.320	0.85	91.4%
3.00	0.350	0.82	88.2%
4.00	0.380	0.79	84.9%
5.00	0.400	0.77	82.8%
30.00	0.850	0.32	34.4%
40.00	0.940	0.23	24.7%
50.00	0.990	0.18	19.4%

Pit Size	
Length	1.60
Width	0.75
Depth	1.17

Time in mins	
9	75%
40	25%

Infiltration Rate from75%-25% **8.86E-05 m/s**



Soakaway Test Results & Soil Infiltration Rate

Southern Policing Hub, Old Sarum

Project: 5021146 **Hole ID: SA05** **Test 3**

Pit collapsed from 1.23m to 1.17m

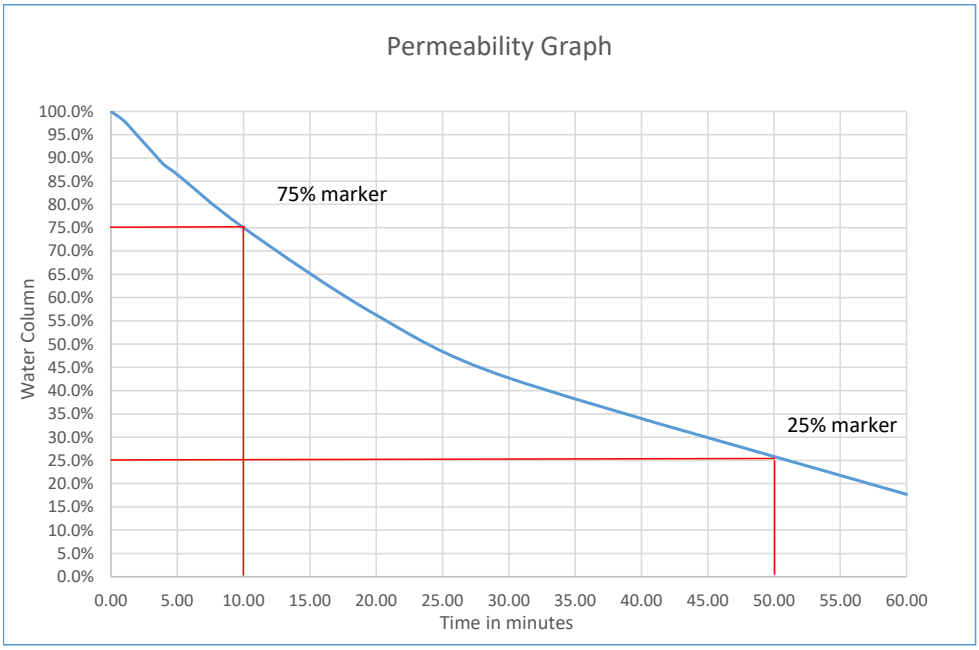
Date: 15/01/25

Time in minutes	Depth in metres to water surface	Depth in metres of water	Percentage of water depth at start
0.00	0.210	0.96	100.0%
1.00	0.230	0.94	97.9%
2.00	0.260	0.91	94.8%
3.00	0.290	0.88	91.7%
4.00	0.320	0.85	88.5%
5.00	0.340	0.83	86.5%
10.00	0.450	0.72	75.0%
20.00	0.630	0.54	56.3%
30.00	0.760	0.41	42.7%
60.00	1.000	0.17	17.7%

Pit Size	
Length	1.60
Width	0.75
Depth	1.17

Time in mins	
10	75%
50	25%

Infiltration Rate from75%-25% **6.94E-05 m/s**



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Unit 103, Caxton Court
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Milton Keynes
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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377: Part 9: 1990

Report No: 12988-1
Report Date: 13/01/2025
Client: Ridge and Partnership LLP
Address: The Cowyards, Blenheim Park
Oxford Road
Woodstock, Oxfordshire
OX20 1QR
Site: Land at Ramsbury Drive, Old Sarum, SP4 6NZ

Test Details

Test Location: 1
Date of Test: 13/01/2025
Description: Brown chalky CLAY
Reaction Load: 5 Tonne Excavator
Material Class: Footpath
Weather: Overcast
Layer: 0.35mm
Plate Diameter (mm): 454
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

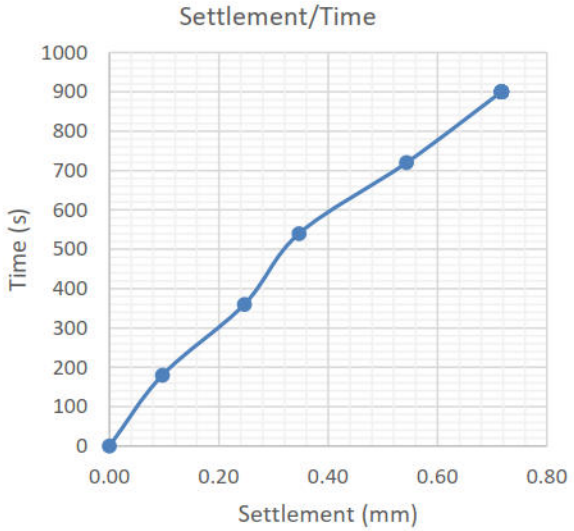
Test Results

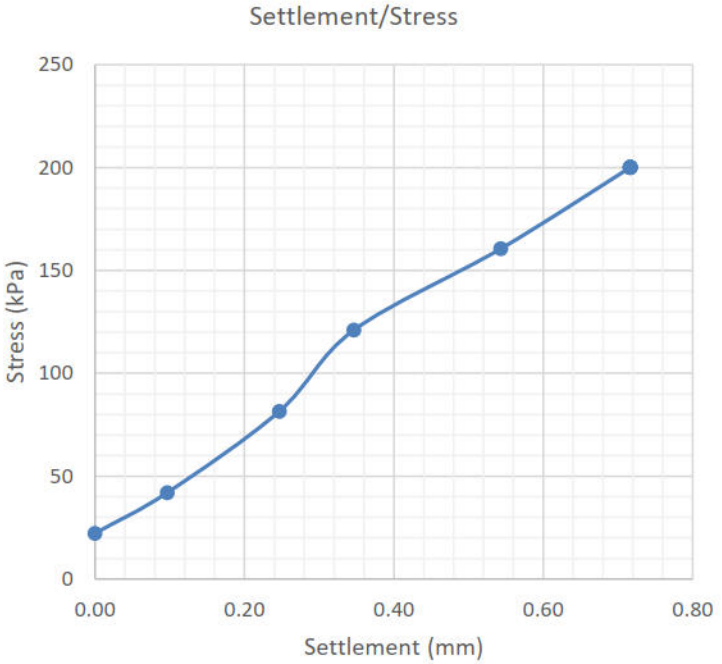
Deviation: Settlement of ≥1.25mm was not achieved so reported CBR is calculated at the maximum plate stress

Time, s	Settlement, mm	Plate Stress, kPa
0	0.00	22
180	0.10	42
360	0.25	82
540	0.35	121
720	0.54	161
900	0.72	200

Maximum Applied Stress (kPa):	200
Maximum Settlement (mm):	0.72
Equivalent CBR Value (%):	> 28
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	101

Note: Supplemental test method, calculation of Nominal CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)





For and on behalf of Hixtra Ltd

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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377: Part 9: 1990

Report No: 12988-2
Report Date: 13/01/2025
Client: Ridge and Partnership LLP
Address: The Cowyards, Blenheim Park
Oxford Road
Woodstock, Oxfordshire
OX20 1QR
Site: Land at Ramsbury Drive, Old Sarum, SP4 6NZ

Test Details

Test Location: 2
Date of Test: 13/01/2025
Description: Brown chalky CLAY
Reaction Load: 5 Tonne Excavator
Material Class: Footpath
Weather: Overcast
Layer: 0.35mm
Plate Diameter (mm): 454
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

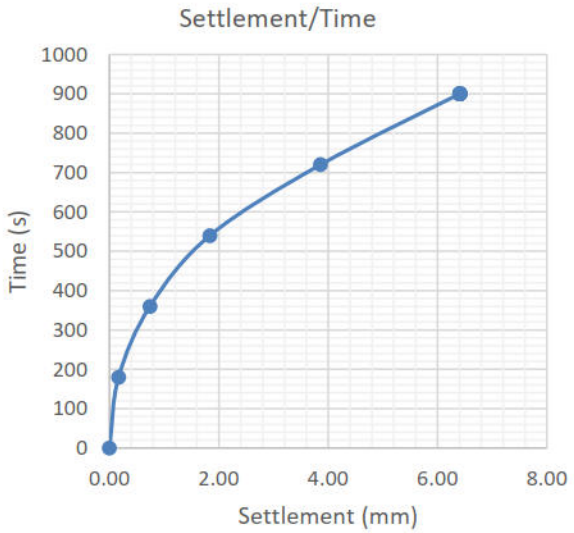
Test Results

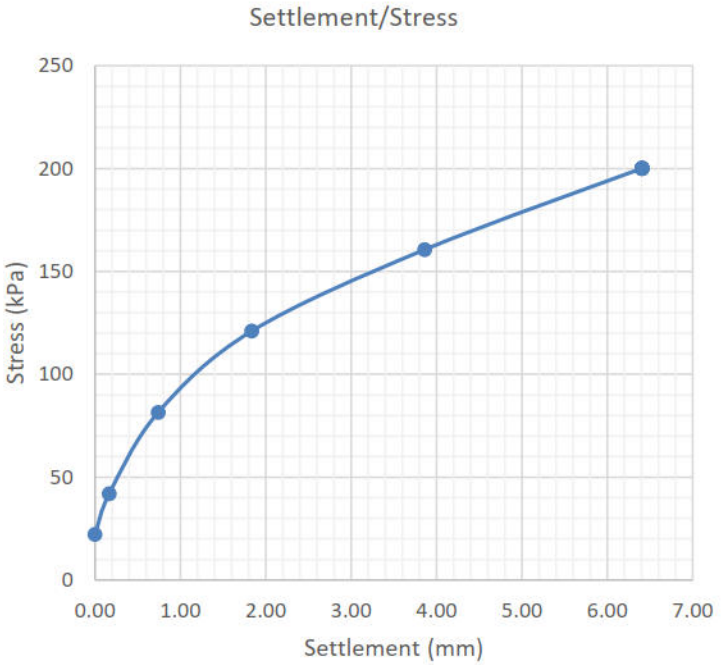
Deviations: No deviations from the test method were employed.

Time, s	Settlement, mm	Plate Stress, kPa
0	0.00	22
180	0.17	42
360	0.74	82
540	1.84	121
720	3.86	161
900	6.41	200

Maximum Applied Stress (kPa):	200
Maximum Settlement (mm):	6.41
Equivalent CBR Value (%):	9
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	50

Note: Supplemental test method, calculation of Nominal CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)





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[redacted]

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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377: Part 9: 1990

Report No: 12988-3
Report Date: 13/01/2025
Client: Ridge and Partnership LLP
Address: The Cowyards, Blenheim Park
Oxford Road
Woodstock, Oxfordshire
OX20 1QR
Site: Land at Ramsbury Drive, Old Sarum, SP4 6NZ

Test Details

Test Location: 3
Date of Test: 13/01/2025
Description: Brown chalky CLAY
Reaction Load: 5 Tonne Excavator
Material Class: Footpath
Weather: Overcast
Layer: 0.30mm
Plate Diameter (mm): 454
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

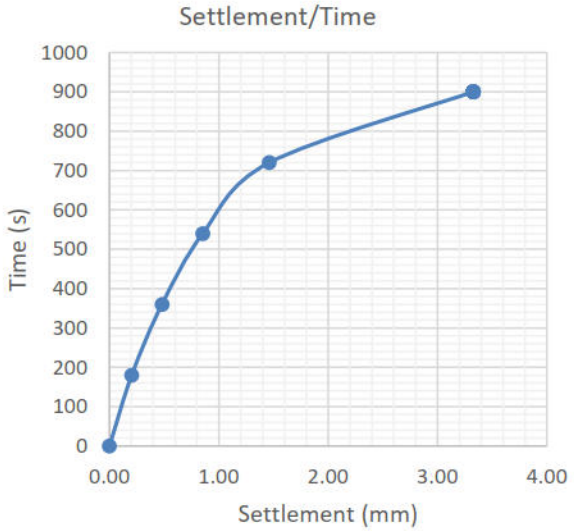
Test Results

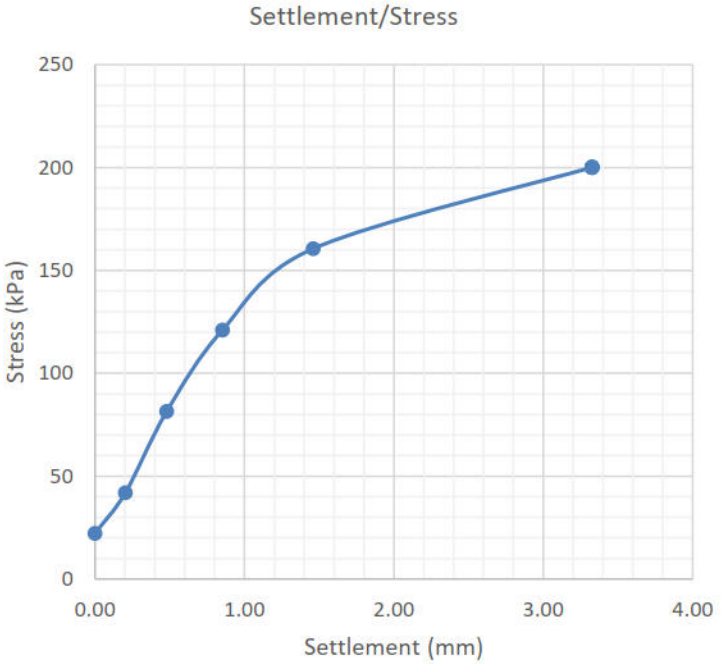
Deviations: No deviations from the test method were employed.

Time, s	Settlement, mm	Plate Stress, kPa
0	0.00	22
180	0.20	42
360	0.48	82
540	0.85	121
720	1.46	161
900	3.33	200

Maximum Applied Stress (kPa):	200
Maximum Settlement (mm):	3.33
Equivalent CBR Value (%):	17
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	74

Note: Supplemental test method, calculation of Nominal CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)





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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377: Part 9: 1990

Report No: 12988-4
Report Date: 13/01/2025
Client: Ridge and Partnership LLP
Address: The Cowyards, Blenheim Park
Oxford Road
Woodstock, Oxfordshire
OX20 1QR
Site: Land at Ramsbury Drive, Old Sarum, SP4 6NZ

Test Details

Test Location: 4
Date of Test: 13/01/2025
Description: Brown chalky CLAY
Reaction Load: 5 Tonne Excavator
Material Class: Footpath
Weather: Overcast
Layer: 0.35mm
Plate Diameter (mm): 454
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

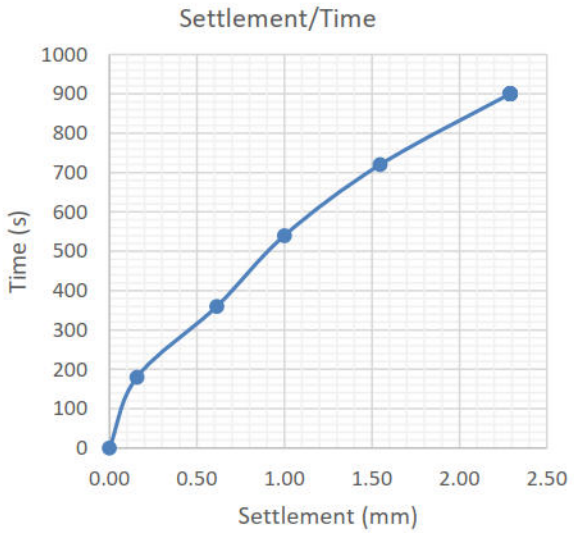
Test Results

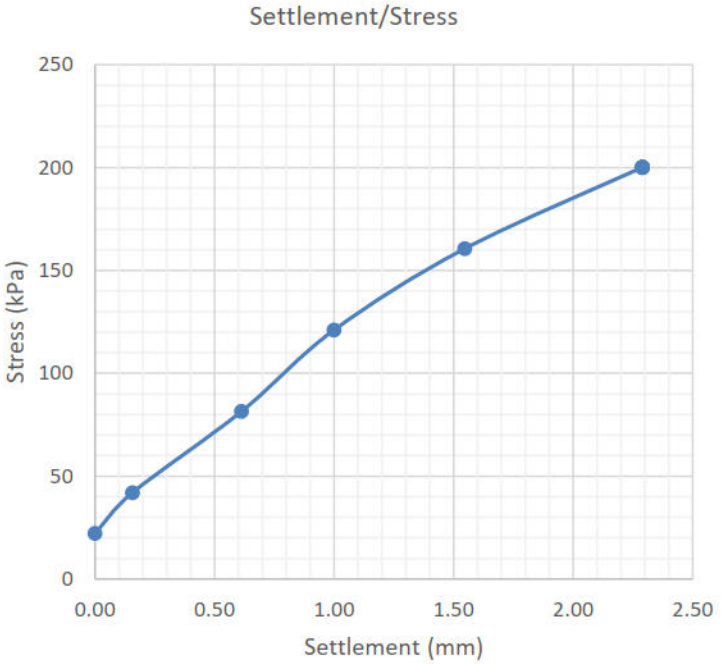
Deviations: No deviations from the test method were employed.

Time, s	Settlement, mm	Plate Stress, kPa
0	0.00	22
180	0.16	42
360	0.61	82
540	1.00	121
720	1.55	161
900	2.29	200

Maximum Applied Stress (kPa):	200
Maximum Settlement (mm):	2.29
Equivalent CBR Value (%):	15
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	70

Note: Supplemental test method, calculation of Nominal CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)





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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377: Part 9: 1990

Report No: 12988-5
Report Date: 13/01/2025
Client: Ridge and Partnership LLP
Address: The Cowyards, Blenheim Park
Oxford Road
Woodstock, Oxfordshire
OX20 1QR
Site: Land at Ramsbury Drive, Old Sarum, SP4 6NZ

Test Details

Test Location: 5
Date of Test: 13/01/2025
Description: Brown chalky CLAY
Reaction Load: 5 Tonne Excavator
Material Class: Footpath
Weather: Overcast
Layer: 0.35mm
Plate Diameter (mm): 454
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

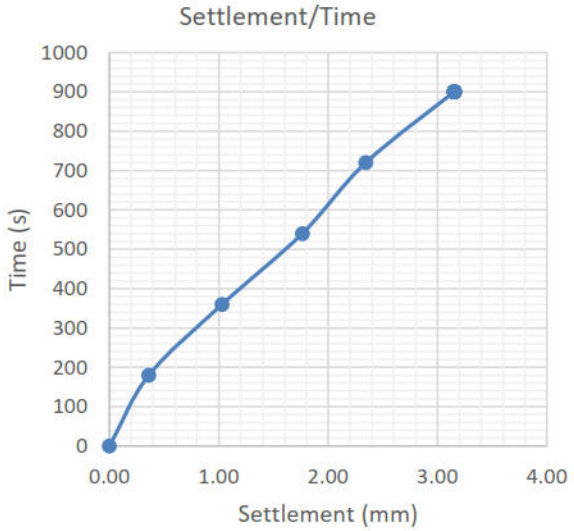
Test Results

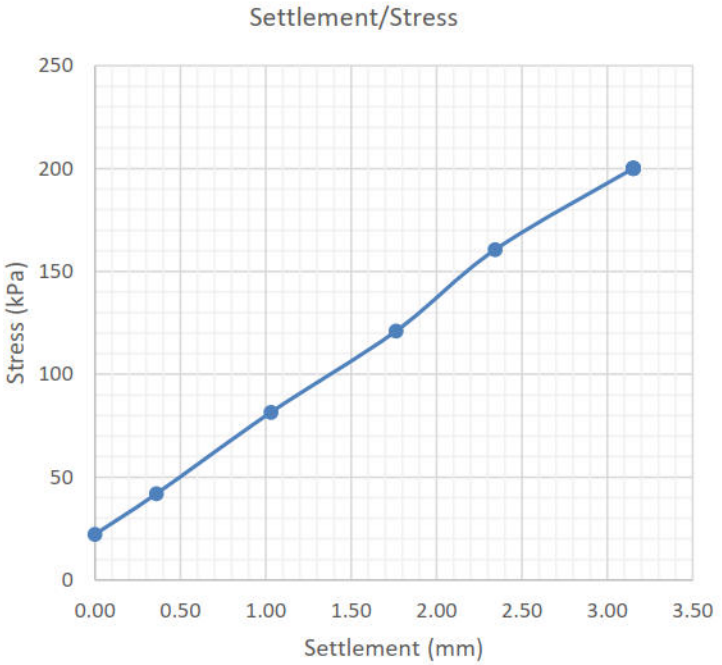
Deviations: No deviations from the test method were employed.

Time, s	Settlement, mm	Plate Stress, kPa
0	0.00	22
180	0.36	42
360	1.03	82
540	1.76	121
720	2.34	161
900	3.15	200

Maximum Applied Stress (kPa):	200
Maximum Settlement (mm):	3.15
Equivalent CBR Value (%):	8
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	47

Note: Supplemental test method, calculation of Nominal CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)





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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377: Part 9: 1990

Report No: 12988-6
Report Date: 13/01/2025
Client: Ridge and Partnership LLP
Address: The Cowyards, Blenheim Park
Oxford Road
Woodstock, Oxfordshire
OX20 1QR
Site: Land at Ramsbury Drive, Old Sarum, SP4 6NZ

Test Details

Test Location: 6
Date of Test: 13/01/2025
Description: Brown chalky CLAY
Reaction Load: 5 Tonne Excavator
Material Class: Footpath
Weather: Overcast
Layer: 0.35mm
Plate Diameter (mm): 454
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

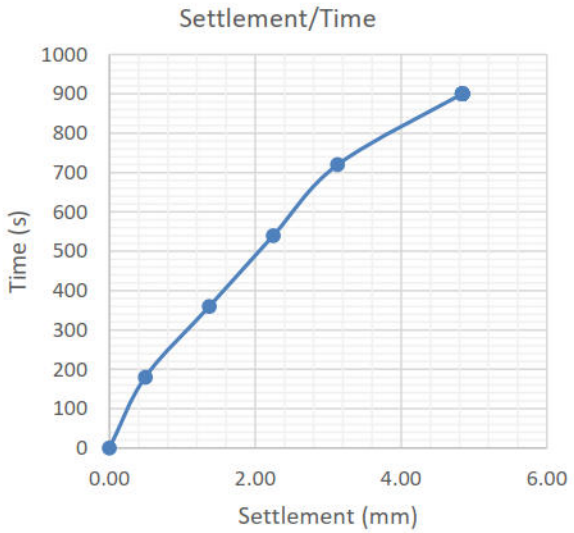
Test Results

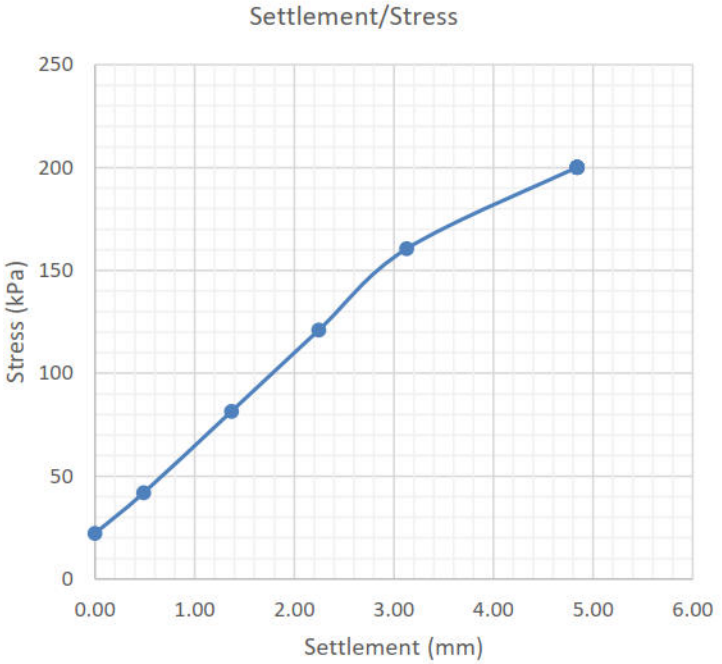
Deviations: No deviations from the test method were employed.

Time, s	Settlement, mm	Plate Stress, kPa
0	0.00	22
180	0.49	42
360	1.37	82
540	2.25	121
720	3.13	161
900	4.84	200

Maximum Applied Stress (kPa):	200
Maximum Settlement (mm):	4.84
Equivalent CBR Value (%):	5
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	38

Note: Supplemental test method, calculation of Nominal CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)





For and on behalf of Hixtra Ltd

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Milton Keynes
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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377: Part 9: 1990

Report No: 12988-7
Report Date: 13/01/2025
Client: Ridge and Partnership LLP
Address: The Cowyards, Blenheim Park
Oxford Road
Woodstock, Oxfordshire
OX20 1QR
Site: Land at Ramsbury Drive, Old Sarum, SP4 6NZ

Test Details

Test Location: 7
Date of Test: 13/01/2025
Description: Brown chalky CLAY
Reaction Load: 5 Tonne Excavator
Material Class: Footpath
Weather: Overcast
Layer: 0.35mm
Plate Diameter (mm): 454
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

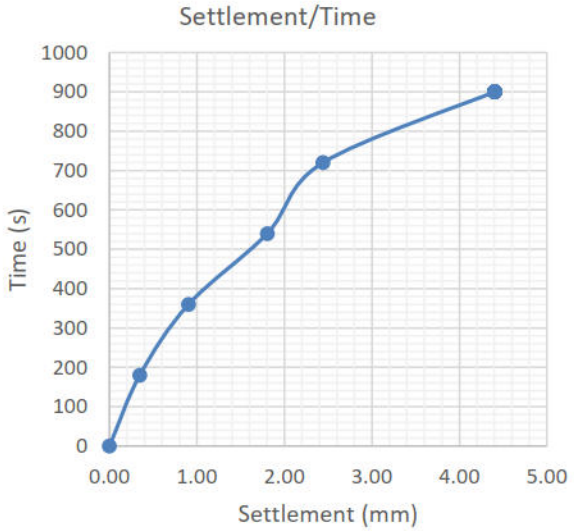
Test Results

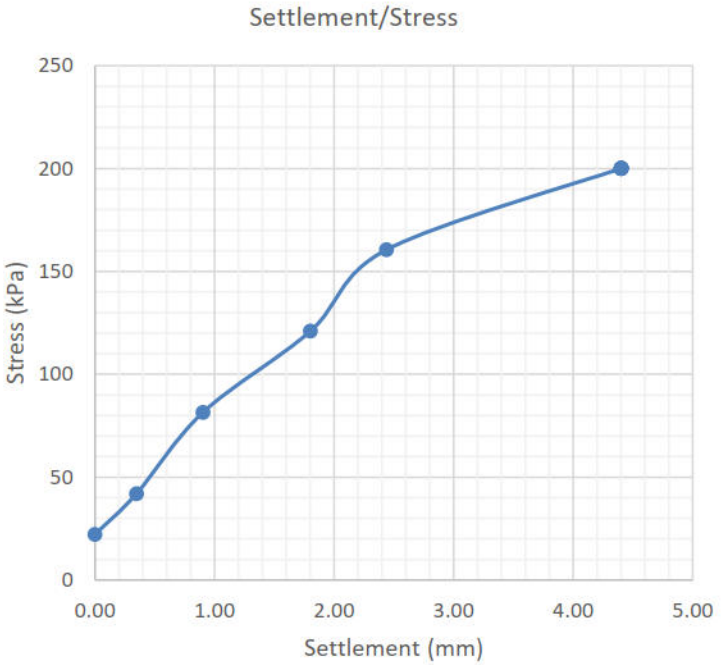
Deviations: No deviations from the test method were employed.

Time, s	Settlement, mm	Plate Stress, kPa
0	0.00	22
180	0.35	42
360	0.90	82
540	1.80	121
720	2.44	161
900	4.40	200

Maximum Applied Stress (kPa):	200
Maximum Settlement (mm):	4.40
Equivalent CBR Value (%):	8
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	49

Note: Supplemental test method, calculation of Nominal CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)





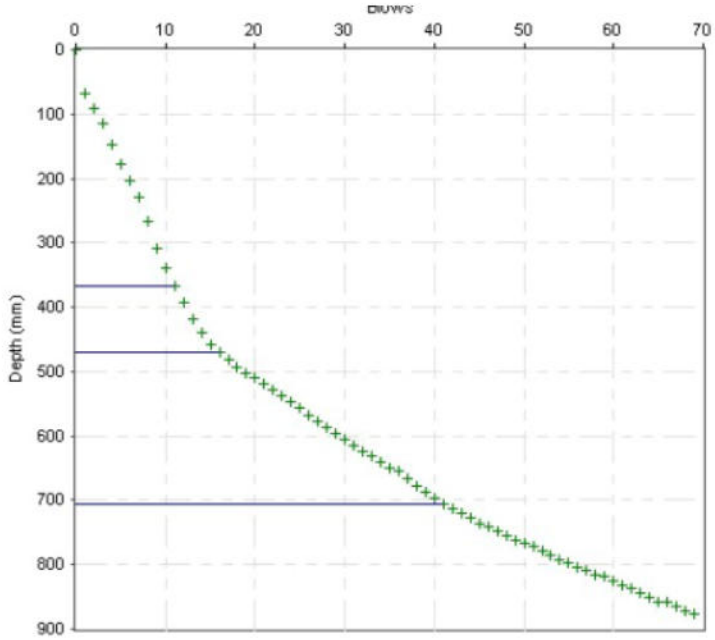
For and on behalf of Hixtra Ltd

[redacted]

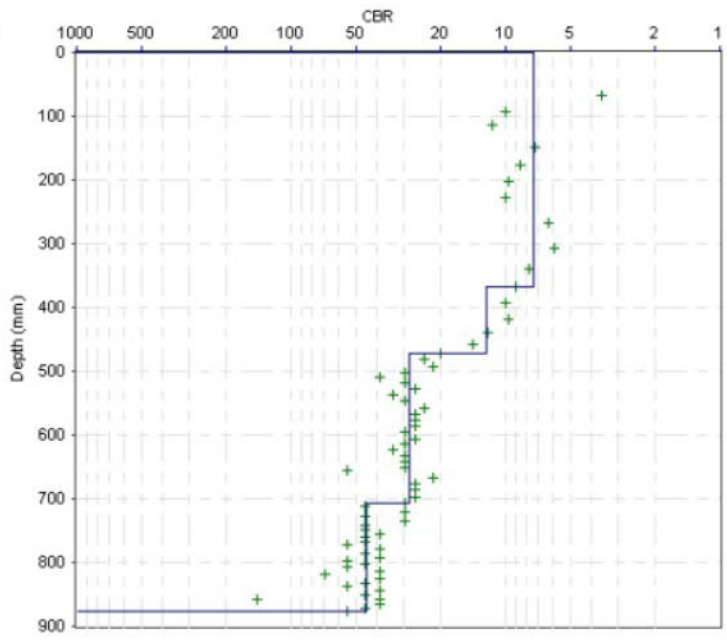
Kevin Shorthouse
Authorised signatory

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Layer Boundaries Chart



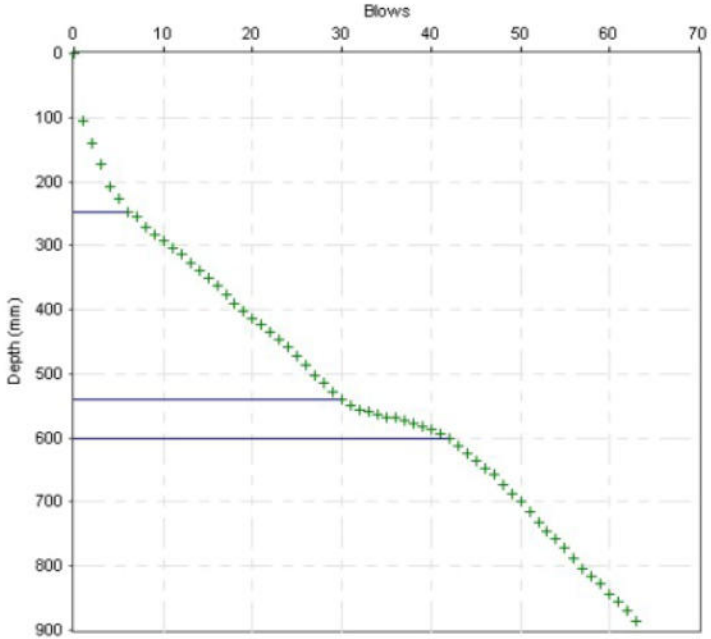
CBR Chart

Layer Properties

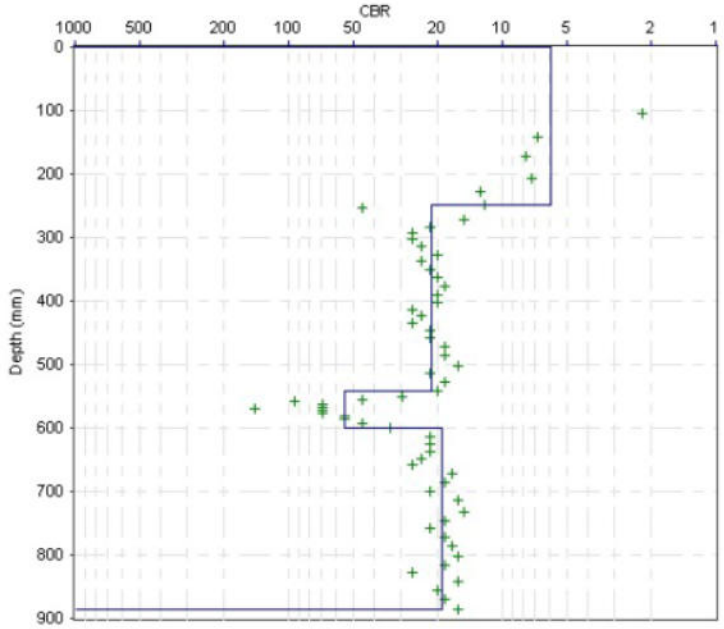
No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)	Position	Strength Coefficient	SN	SNC	SNP
1	33.45	7	368	368	Subgrade	--	--	--	--
2	20.60	12	103	471	Subgrade	--	--	--	--
3	9.40	28	235	706	Subgrade	--	--	--	--
4	6.11	45	171	877	Subgrade	--	--	--	--

Project:	Southern Policing Hub – Old Sarum			**Software:**	UK DCP 3.1 (TRL/ DFID 2006)
Job Number:	5021146	**Client:**	PCC for Wiltshire	Ridge and Partners LLP TEL: 01962 834400 www.ridge.co.uk	1 Royal Court Kings Worthy Winchester SO23 7TW
Test:	DCP01	**Revision:**	-		
Created:	TL	**Date:**	February 2025		
Checked by:	ME	**Scale:**	NTS		

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Layer Boundaries Chart



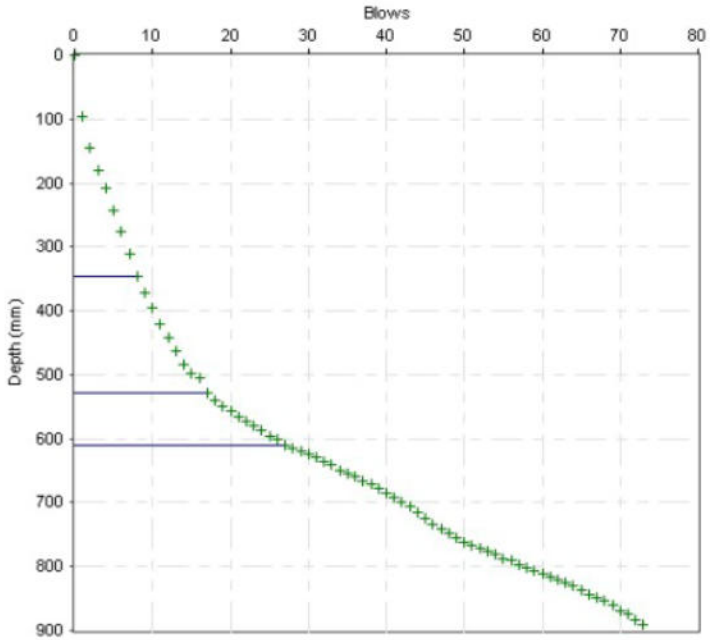
CBR Chart

Layer Properties

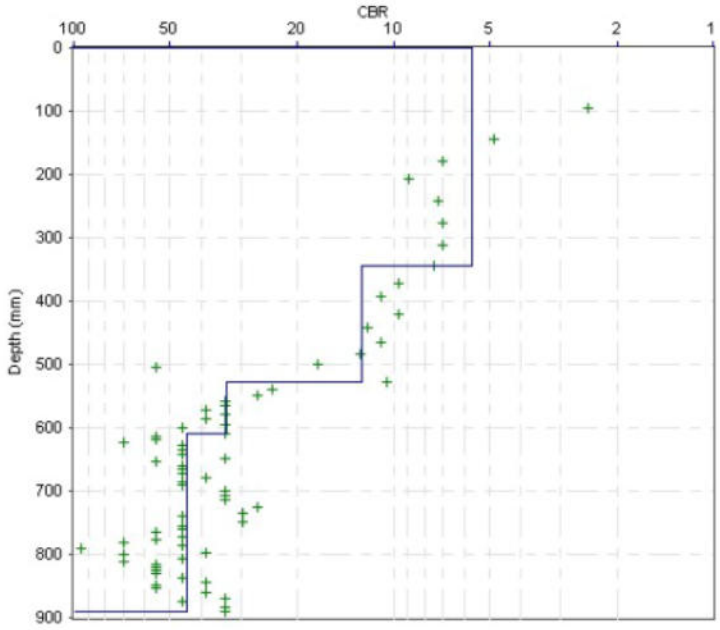
No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)	Position	Strength Coefficient	SN	SNC	SNP
1	41.33	6	248	248	Subgrade	--	--	--	--
2	12.21	21	293	541	Subgrade	--	--	--	--
3	5.00	55	60	601	Subgrade	--	--	--	--
4	13.57	19	285	886	Subgrade	--	--	--	--

Project:	Southern Policing Hub – Old Sarum			**Software:**	UK DCP 3.1 (TRL/ DFID 2006)
Job Number:	5021146	**Client:**	PCC for Wiltshire	Ridge and Partners LLP TEL: 01962 834400 www.ridge.co.uk	1 Royal Court Kings Worthy Winchester SO23 7TW
Test:	DCP02	**Revision:**	-		
Created:	TL	**Date:**	February 2025		
Checked by:	ME	**Scale:**	NTS		

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Layer Boundaries Chart



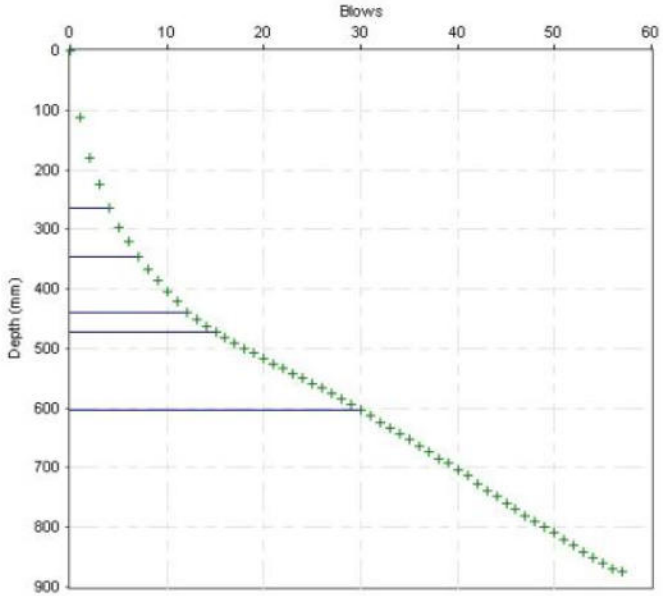
CBR Chart

Layer Properties

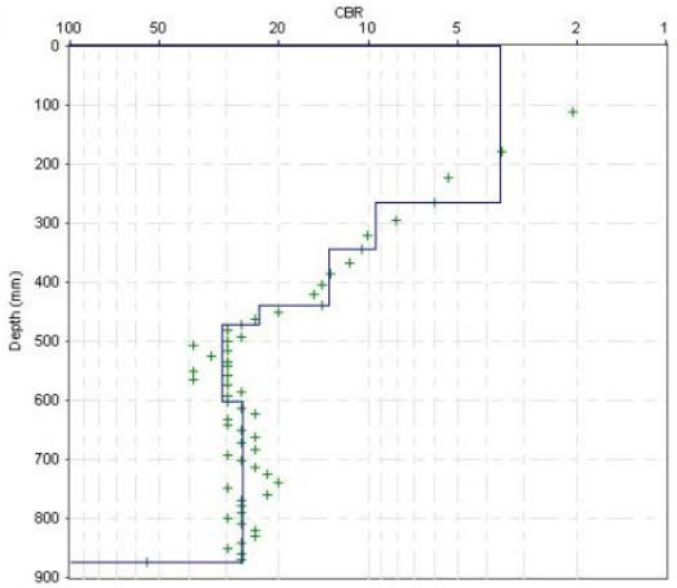
No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)	Position	Strength Coefficient	SN	SNC	SNP
1	43.13	6	345	345	Subgrade	--	--	--	--
2	20.33	13	183	528	Subgrade	--	--	--	--
3	8.10	33	81	609	Subgrade	--	--	--	--
4	6.13	44	282	891	Subgrade	--	--	--	--

Project:	Southern Policing Hub – Old Sarum			**Software:**	UK DCP 3.1 (TRL/ DFID 2006)
Job Number:	5021146	**Client:**	PCC for Wiltshire	Ridge and Partners LLP TEL: 01962 834400 www.ridge.co.uk	1 Royal Court Kings Worthy Winchester SO23 7TW
Test:	DCP03	**Revision:**	-		
Created:	TL	**Date:**	February 2025		
Checked by:	ME	**Scale:**	NTS		

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Layer Boundaries Chart



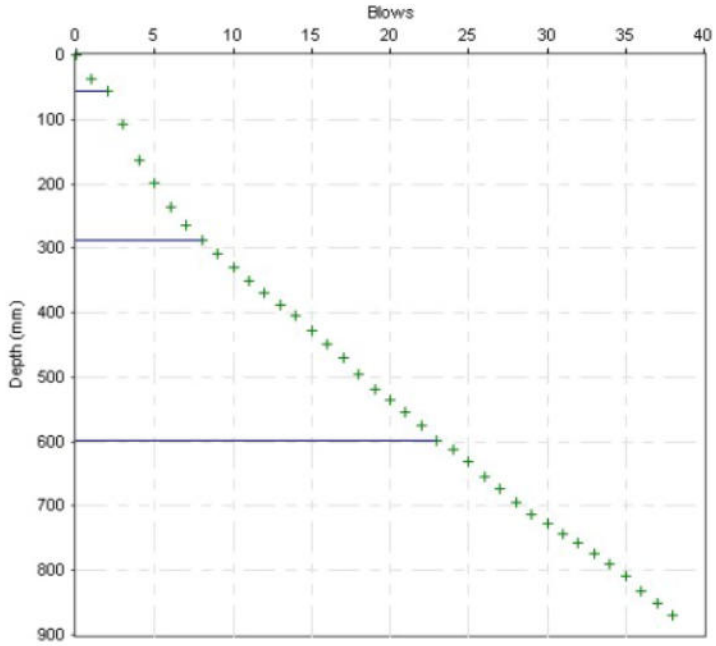
CBR Chart

Layer Properties

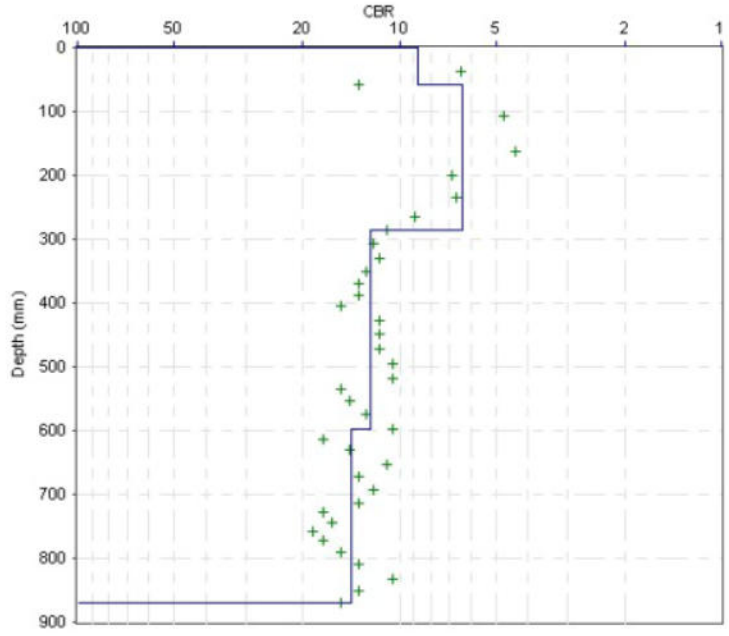
No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)	Position	Strength Coefficient	SN	SNC	SNP
1	66.25	4	265	265	Subgrade	--	--	--	--
2	26.67	9	80	345	Subgrade	--	--	--	--
3	18.80	14	94	439	Subgrade	--	--	--	--
4	11.33	23	34	473	Subgrade	--	--	--	--
5	8.67	31	130	603	Subgrade	--	--	--	--
6	10.07	26	272	875	Subgrade	--	--	--	--

Project:	Southern Policing Hub – Old Sarum			**Software:**	UK DCP 3.1 (TRL/ DFID 2006)
Job Number:	5021146	**Client:**	PCC for Wiltshire	Ridge and Partners LLP TEL: 01962 834400 www.ridge.co.uk	1 Royal Court Kings Worthy Winchester SO23 7TW
Test:	DCP04	**Revision:**	-		
Created:	TL	**Date:**	February 2025		
Checked by:	ME	**Scale:**	NTS		

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Layer Boundaries Chart



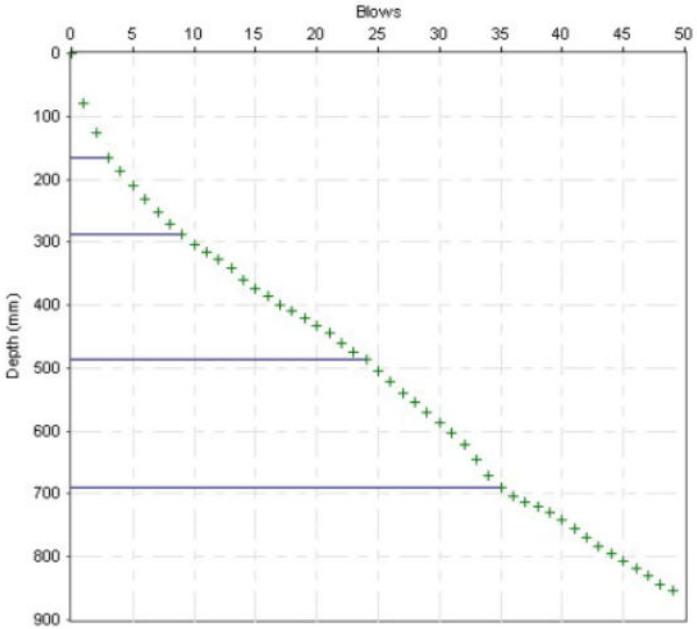
CBR Chart

Layer Properties

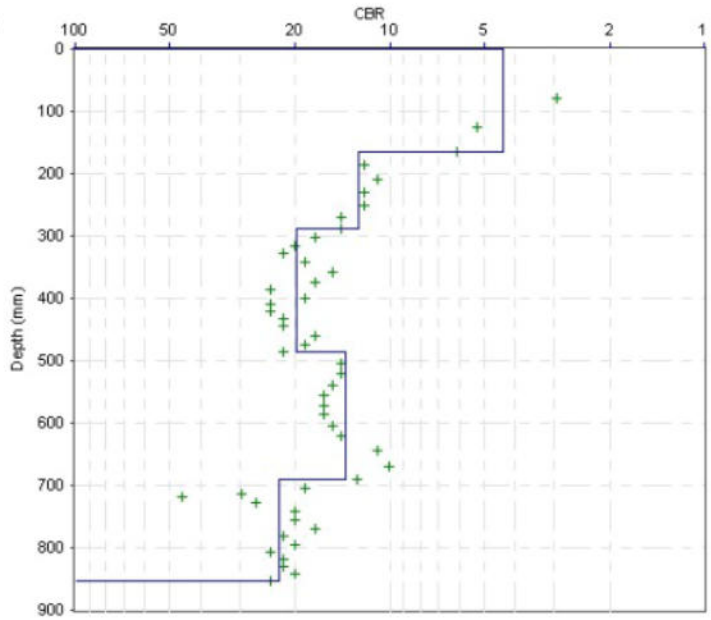
No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)	Position	Strength Coefficient	SN	SNC	SNP
1	28.50	9	57	57	Subgrade	--	--	--	--
2	38.33	6	230	287	Subgrade	--	--	--	--
3	20.73	12	311	598	Subgrade	--	--	--	--
4	18.07	14	271	869	Subgrade	--	--	--	--

Project:	Southern Policing Hub – Old Sarum			**Software:**	UK DCP 3.1 (TRL/ DFID 2006)
Job Number:	5021146	**Client:**	PCC for Wiltshire	Ridge and Partners LLP TEL: 01962 834400 www.ridge.co.uk	1 Royal Court Kings Worthy Winchester SO23 7TW
Test:	DCP05	**Revision:**	-		
Created:	TL	**Date:**	February 2025		
Checked by:	ME	**Scale:**	NTS		

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Layer Boundaries Chart



CBR Chart

Layer Properties

No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)	Position	Strength Coefficient	SN	SNC	SNP
1	55.33	4	166	166	Subgrade	--	--	--	--
2	20.33	13	122	288	Subgrade	--	--	--	--
3	13.20	20	198	486	Subgrade	--	--	--	--
4	18.55	14	204	690	Subgrade	--	--	--	--
5	11.71	22	164	854	Subgrade	--	--	--	--

Project:	Southern Policing Hub – Old Sarum			**Software:**	UK DCP 3.1 (TRL/ DFID 2006)
Job Number:	5021146	**Client:**	PCC for Wiltshire	Ridge and Partners LLP TEL: 01962 834400 www.ridge.co.uk	1 Royal Court Kings Worthy Winchester SO23 7TW
Test:	DCP06	**Revision:**	-		
Created:	TL	**Date:**	February 2025		
Checked by:	ME	**Scale:**	NTS		

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APPENDIX 5 – CONTAMINATION LABORATORY TESTING

Tom Lockwood
Ridge
Partnership House
Moorside Road
Winchester
SO23 7RX

Normec DETS Limited
Unit 1
Rose Lane Industrial Estate
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Lenham Heath
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t: 01622 850410

DETS Report No: 25-00297

Site Reference:	Old Sarum
Project / Job Ref:	5021146
Order No:	DRAFT-34680
Sample Receipt Date:	16/01/2025
Sample Scheduled Date:	16/01/2025
Report Issue Number:	1
Reporting Date:	23/01/2025

Authorised by:

[redacted]

Dave Ashworth
Technical Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

For Topsoil and WAC analysis the expanded uncertainty measurement should be considered while evaluating results against compliance values.

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Soil Analysis Certificate						
DETS Report No: 25-00297	**~Date Sampled**	09/01/25	09/01/25	09/01/25	10/01/25	10/01/25
Ridge	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Old Sarum	**~TP / BH No**	WS01	WS03	WS04	WS08	WS09
~Project / Job Ref: 5021146	**~Additional Refs**	None Supplied	None Supplied	Topsoil	Chalk	None Supplied
~Order No: DRAFT-34680	**~Depth (m)**	0.20	0.50	0.10	0.40	0.30
Reporting Date: 23/01/2025	**DETS Sample No**	759309	759310	759311	759312	759313

Determinand	Unit	RL	Accreditation				(n)	
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	7.8	8.4	7.8	8.6	8.6
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Organic Matter (SOM)	%	< 0.1	MCERTS	5.4	3.2	5	2.5	5.3
Arsenic (As)	mg/kg	< 2	MCERTS	8	4	5	2	8
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.9	0.5	0.8	0.5	1.1
Chromium (Cr)	mg/kg	< 2	MCERTS	12	6	10	< 2	16
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	52	10	10	< 4	18
Lead (Pb)	mg/kg	< 3	MCERTS	51	12	26	4	56
Mercury (Hg)	mg/kg	< 1	MCERTS	1.1	1	1.1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	11	7	8	< 3	12
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Zinc (Zn)	mg/kg	< 3	MCERTS	60	23	38	11	55
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)
~Sample details provided by customer and can affect the validity of results
(n) Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation
Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 25-00297	**~Date Sampled**	10/01/25				
Ridge	**~Time Sampled**	None Supplied				
~Site Reference: Old Sarum	**~TP / BH No**	WS10				
~Project / Job Ref: 5021146	**~Additional Refs**	None Supplied				
~Order No: DRAFT-34680	**~Depth (m)**	0.20				
Reporting Date: 23/01/2025	**DETS Sample No**	759314				

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected				
pH	pH Units	N/a	**MCERTS**	8.0				
Total Cyanide	mg/kg	< 1	NONE	< 1				
Organic Matter (SOM)	%	< 0.1	**MCERTS**	6.4				
Arsenic (As)	mg/kg	< 2	**MCERTS**	7				
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	1				
Chromium (Cr)	mg/kg	< 2	**MCERTS**	15				
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2				
Copper (Cu)	mg/kg	< 4	**MCERTS**	15				
Lead (Pb)	mg/kg	< 3	**MCERTS**	51				
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1				
Nickel (Ni)	mg/kg	< 3	**MCERTS**	11				
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2				
Zinc (Zn)	mg/kg	< 3	**MCERTS**	50				
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2				

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)
~Sample details provided by customer and can affect the validity of results

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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-00297	**~Date Sampled**	09/01/25	09/01/25	09/01/25	10/01/25	10/01/25
Ridge	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Old Sarum	**~TP / BH No**	WS01	WS03	WS04	WS08	WS09
~Project / Job Ref: 5021146	**~Additional Refs**	None Supplied	None Supplied	Topsoil	Chalk	None Supplied
~Order No: DRAFT-34680	**~Depth (m)**	0.20	0.50	0.10	0.40	0.30
Reporting Date: 23/01/2025	**DETS Sample No**	759309	759310	759311	759312	759313

Determinand	Unit	RL	Accreditation				(n)	
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6

~Sample details provided by customer and can affect the validity of results
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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-00297	**~Date Sampled**	10/01/25				
Ridge	**~Time Sampled**	None Supplied				
~Site Reference: Old Sarum	**~TP / BH No**	WS10				
~Project / Job Ref: 5021146	**~Additional Refs**	None Supplied				
~Order No: DRAFT-34680	**~Depth (m)**	0.20				
Reporting Date: 23/01/2025	**DETS Sample No**	759314				

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1				
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1				
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1				
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1				
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1				
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1				
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1				
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1				
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1				
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1				
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1				
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1				
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1				
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1				
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1				
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1				
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6				

~Sample details provided by customer and can affect the validity of results

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Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 25-00297	**~Date Sampled**	09/01/25	09/01/25	09/01/25	10/01/25	10/01/25
Ridge	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Old Sarum	**~TP / BH No**	WS01	WS03	WS04	WS08	WS09
~Project / Job Ref: 5021146	**~Additional Refs**	None Supplied	None Supplied	Topsoil	Chalk	None Supplied
~Order No: DRAFT-34680	**~Depth (m)**	0.20	0.50	0.10	0.40	0.30
Reporting Date: 23/01/2025	**DETS Sample No**	759309	759310	759311	759312	759313

Determinand	Unit	RL	Accreditation				(n)	
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42

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(n) Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation

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Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 25-00297	**~Date Sampled**	10/01/25				
Ridge	**~Time Sampled**	None Supplied				
~Site Reference: Old Sarum	**~TP / BH No**	WS10				
~Project / Job Ref: 5021146	**~Additional Refs**	None Supplied				
~Order No: DRAFT-34680	**~Depth (m)**	0.20				
Reporting Date: 23/01/2025	**DETS Sample No**	759314				

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01				
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05				
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2				
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2				
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3				
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3				
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	< 10				
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21				
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01				
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05				
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2				
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2				
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2				
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	< 3				
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	< 10				
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21				
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 42	NONE	< 42				

~Sample details provided by customer and can affect the validity of results

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 25-00297	**~Date Sampled**	09/01/25	09/01/25	09/01/25	10/01/25	10/01/25
Ridge	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Old Sarum	**~TP / BH No**	WS01	WS03	WS04	WS08	WS09
~Project / Job Ref: 5021146	**~Additional Refs**	None Supplied	None Supplied	Topsoil	Chalk	None Supplied
~Order No: DRAFT-34680	**~Depth (m)**	0.20	0.50	0.10	0.40	0.30
Reporting Date: 23/01/2025	**DETS Sample No**	759309	759310	759311	759312	759313

Determinand	Unit	RL	Accreditation				(n)	
Benzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene : HS_1D_MS	µg/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
p & m-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
o-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
MTBE : HS_1D_MS	µg/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

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(n) Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 25-00297	**~Date Sampled**	10/01/25				
Ridge	**~Time Sampled**	None Supplied				
~Site Reference: Old Sarum	**~TP / BH No**	WS10				
~Project / Job Ref: 5021146	**~Additional Refs**	None Supplied				
~Order No: DRAFT-34680	**~Depth (m)**	0.20				
Reporting Date: 23/01/2025	**DETS Sample No**	759314				

Determinand	Unit	RL	Accreditation					
Benzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2				
Toluene : HS_1D_MS	µg/kg	< 5	MCERTS	< 5				
Ethylbenzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2				
p & m-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2				
o-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2				
MTBE : HS_1D_MS	µg/kg	< 5	MCERTS	< 5				

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Waste Acceptance Criteria Analytical Certificate

DETS Report No: 25-00297	**~Date Sampled**	09/01/25	
Ridge	**~Time Sampled**	None Supplied	
~Site Reference: Old Sarum	**~TP / BH No**	WS04	
~Project / Job Ref: 5021146	**~Additional Refs**	Topsoil	
~Order No: DRAFT-34680	**~Depth (m)**	0.10	
Reporting Date: 23/01/2025	**DETS Sample No**	759311	

Determinand	**Unit**	**MDL**		**Landfill Waste Acceptance Criteria Limits**		
				Inert Waste Landfill	**Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
TOC[MU]	%	< 0.1	2.9	3%	5%	6%
Loss on Ignition[MU]	%	< 0.01	11.90	--	--	**10%**
BTEX[MU]	mg/kg	< 0.05	< 0.05	6	--	--
Sum of PCBs	mg/kg	< 0.1	< 0.1	1	--	--
Mineral Oil[MU]	mg/kg	< 10	< 10	500	--	--
Total PAH[MU]	mg/kg	< 1.7	< 1.7	100	--	--
pH[MU]	pH Units	N/a	7.8	--	>6	--
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	3.8	--	To be evaluated	To be evaluated

Eluate Analysis	**10:1 mg/l**			**Cumulative 10:1 * mg/kg**	**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)**		
Arsenic[U]	0.0005			0.005	0.5	2	25
Barium[U]	0.0051			0.051	20	100	300
Cadmium[U]	< 0.0002			< 0.002	0.04	1	5
Chromium[U]	0.0004			0.004	0.5	10	70
Copper[U]	0.0036			0.036	2	50	100
Mercury[U]	< 0.00004			< 0.0004	0.01	0.2	2
Molybdenum[U]	0.0004			0.004	0.5	10	30
Nickel[U]	0.0004			0.004	0.4	10	40
Lead[U]	0.0004			0.004	0.5	10	50
Antimony[U]	< 0.0002			< 0.002	0.06	0.7	5
Selenium[U]	< 0.0002			< 0.002	0.1	0.5	7
Zinc[U]	0.022			0.22	4	50	200
Chloride[U]	1.4			14	800	15000	25000
Fluoride[U]	< 0.5			< 5	10	150	500
Sulphate[U]	< 1.0			< 10	1000	20000	50000
TDS	75			750	4000	60000	100000
Phenol Index[U]	< 0.01			< 0.1	1	-	-
DOC[U]	5.3			53.4	500	800	1000
Leach Test Information							
Sample Mass (kg)	0.11						
Dry Matter (%)	78.9						
Moisture (%)	26.8						
Stage 1							
Volume Eluate L10 (litres)	0.88						

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
Stated limits are for guidance only and Normec DETS Limited cannot be held responsible for any discrepencies with current legislation
M Denotes MCERTS accredited test
U Denotes ISO17025 accredited test
~Sample details provided by customer and can affect the validity of results
* DETS are accredited for the testing of leachate and not the leachate preparation stage which is unaccredited

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Waste Acceptance Criteria Analytical Certificate

DETS Report No: 25-00297		**~Date Sampled**	10/01/25		**Landfill Waste Acceptance Criteria Limits**	
Ridge		**~Time Sampled**	None Supplied		**Inert Waste Landfill**	**Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
~Site Reference: Old Sarum		**~TP / BH No**	WS08				
~Project / Job Ref: 5021146		**~Additional Refs**	Chalk				
~Order No: DRAFT-34680		**~Depth (m)**	0.40				
Reporting Date: 23/01/2025		**DETS Sample No**	759312				
Determinand	**Unit**	**MDL**					
TOC[MU]	%	< 0.1	1.5		3%	5%	6%
Loss on Ignition[MU]	%	< 0.01	1.10		--	--	10%
BTEX[MU]	mg/kg	< 0.05	< 0.05		6	--	--
Sum of PCBs	mg/kg	< 0.1	< 0.1		1	--	--
Mineral Oil[MU]	mg/kg	< 10	< 10		500	--	--
Total PAH[MU]	mg/kg	< 1.7	< 1.7		100	--	--
pH[MU]	pH Units	N/a	8.6		--	>6	--
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	7.6		--	To be evaluated	To be evaluated

Eluate Analysis	**10:1 mg/l**			**Cumulative 10:1 * mg/kg**	**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)**		
Arsenic[U]	< 0.0002			< 0.002	0.5	2	25
Barium[U]	0.0017			0.017	20	100	300
Cadmium[U]	< 0.0002			< 0.002	0.04	1	5
Chromium[U]	< 0.0002			< 0.002	0.5	10	70
Copper[U]	0.0016			0.017	2	50	100
Mercury[U]	< 0.00004			< 0.0004	0.01	0.2	2
Molybdenum[U]	< 0.0002			< 0.002	0.5	10	30
Nickel[U]	< 0.0002			< 0.002	0.4	10	40
Lead[U]	< 0.0002			< 0.002	0.5	10	50
Antimony[U]	< 0.0002			< 0.002	0.06	0.7	5
Selenium[U]	< 0.0002			< 0.002	0.1	0.5	7
Zinc[U]	0.019			0.19	4	50	200
Chloride[U]	< 1.0			< 10	800	15000	25000
Fluoride[U]	< 0.5			< 5	10	150	500
Sulphate[U]	< 1.0			< 10	1000	20000	50000
TDS	24			240	4000	60000	100000
Phenol Index[U]	< 0.01			< 0.1	1	-	-
DOC[U]	2.4			24.4	500	800	1000
Leach Test Information							
Sample Mass (kg)	0.11						
Dry Matter (%)	79.4						
Moisture (%)	26						
Stage 1							
Volume Eluate L10 (litres)	0.88						

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
Stated limits are for guidance only and Normec DETS Limited cannot be held responsible for any discrepencies with current legislation
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Soil Analysis Certificate - Sample Descriptions
DETS Report No: 25-00297
Ridge
~Site Reference: Old Sarum
~Project / Job Ref: 5021146
~Order No: DRAFT-34680
Reporting Date: 23/01/2025

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
759309	WS01	None Supplied	0.20	18.6	Light brown sandy clay with vegetation and chalk
759310	WS03	None Supplied	0.50	17	Light brown sandy clay with chalk
759311	WS04	Topsoil	0.10	21.1	Brown loamy sand with vegetation and chalk
759312	WS08	Chalk	0.40	20.7	White chalk
759313	WS09	None Supplied	0.30	14.3	Brown sandy clay with stones and vegetation
759314	WS10	None Supplied	0.20	15.6	Brown sandy clay with stones and vegetation

Moisture content is part of procedure E003 & is not an accredited test
Insufficient Sample I/S
Unsuitable Sample U/S
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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-00297
Ridge
~Site Reference: Old Sarum
~Project / Job Ref: 5021146
~Order No: DRAFT-34680
Reporting Date: 23/01/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received

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Water Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-00297
Ridge
~Site Reference: Old Sarum
~Project / Job Ref: 5021146
~Order No: DRAFT-34680
Reporting Date: 23/01/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Water	UF	Alkalinity	Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point	E103
Water	F	Ammoniacal Nitrogen	Determination of ammoniacal nitrogen by discrete analyser.	E126
Water	UF	BTEX	Determination of BTEX by headspace GC-MS	E101
Water	F	Cations	Determination of cations by filtration followed by ICP-MS	E102
Water	F	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	UF	Biological Oxygen Demand (BOD)	Determination using BOD sensors measuring the change of pressure	E133
Water	F	Chloride	Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F	Chromium - Hexavalent	Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by	E116
Water	UF	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E115
Water	UF	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through liquid:liquid extraction with cyclohexane	E111
Water	F	Diesel Range Organics (C10 - C24)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Dissolved Organic Content (DOC)	Determination of DOC by filtration followed by low heat with persulphate addition followed by IR dete	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F	EPH (C10 – C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E104
Water	F	Fluoride	Determination of Fluoride by filtration & analysed by ion chromatography	E109
Water	F	Hardness	Determination of Ca and Mg by ICP-MS followed by calculation	E102
Leachate	F	Leachate Preparation - NRA	Based on National Rivers Authority leaching test 1994	E301
Leachate	F	Leachate Preparation - WAC	Based on BS EN 12457 Pt1, 2, 3	E302
Water	F	Metals	Determination of metals by filtration followed by ICP-MS	E102
Water	F	Mineral Oil (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Nitrate	Determination of nitrate by filtration & analysed by ion chromatography	E109
Water	UF	Monohydric Phenol	Determination of phenols by distillation followed by colorimetry	E121
Water	F	PAH - Speciated (EPA 16)	Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E105
Water	F	PCB - 7 Congeners	Determination of PCB compounds by concentration through SPE cartridge, collection in dichlorometha	E108
Water	UF	Petroleum Ether Extract (PEE)	Gravimetrically determined through liquid:liquid extraction with petroleum ether	E111
Water	UF	pH	Determination of pH by electrometric measurement	E107
Water	F	Phosphate	Determination of phosphate by filtration & analysed by ion chromatography	E109
Water	UF	Redox Potential	Determination of redox potential by electrometric measurement	E113
Water	F	Sulphate (as SO4)	Determination of sulphate by filtration & analysed by ion chromatography	E109
Water	UF	Sulphide	Determination of sulphide by distillation followed by colorimetry	E118
Water	F	SVOC	Determination of semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E106
Water	UF	Toluene Extractable Matter (TEM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF	Total Organic Carbon (TOC)	Low heat with persulphate addition followed by IR detection	E110
Water	F	TPH CWG (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C35. C5 to C8 by headspace GC-MS	E104
Water	F	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C44. C5 to C8 by headspace GC-MS	E104
Water	UF	VOCs	Determination of volatile organic compounds by headspace GC-MS	E101
Water	UF	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E101

Key

F Filtered
UF Unfiltered
~Sample details provided by customer and can affect the validity of results

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List of HWOL Acronyms and Operators
DETS Report No: 25-00297
Ridge
~Site Reference: Old Sarum
~Project / Job Ref: 5021146
~Order No: DRAFT-34680
Reporting Date: 23/01/2025

Acronym	Description
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

Benzene - HS_1D_MS
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
Mineral Oil (C10 - C40) (BS EN 12457-2) - EH_CU_1D_AL
TPH CWG - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH CWG - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH CWG - Aliphatic >C16 - C21 - EH_CU_1D_AL
TPH CWG - Aliphatic >C21 - C34 - EH_CU_1D_AL
TPH CWG - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH CWG - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH CWG - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH CWG - Aliphatic C5 - C34 - HS_1D_MS+EH_CU_1D_AL
TPH CWG - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH CWG - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH CWG - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH CWG - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C35 - HS_1D_MS+EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH CWG - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH CWG - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH CWG - Total >C5 - C35 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
Total BTEX (BS EN 12457-2) - HS_1D_MS_Total
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

Parameter	Matrix Type	Expanded Uncertainity Measurement	Unit
TOC	Soil	12.2	%
Loss on Ignition	Soil	22.9	%
BTEX	Soil	11.2	%
Sum of PCBs	Soil	43.4	%
Mineral Oil	Soil	9.0	%
Total PAH	Soil	18.5	%
pH	Soil	0.335	Units
Acid Neutralisation Capacity	Soil	18.0	%
Clay Content	Soil	15.0	%
Silt Content	Soil	14.0	%
Sand Content	Soil	13.0	%
Loss on Ignition	Soil	22.9	%
pH	Soil	0.335	Units
Carbonate	Soil	12.0	%
Total Nitrogen	Soil	12.0	%
Phosphorus (Extractable)	Soil	24.0	%
Potassium (Extractable)	Soil	20.0	%
Magnesium (Extractable)	Soil	26.0	%
Zinc	Soil	21.6	%
Copper	Soil	18.2	%
Nickel	Soil	24.3	%
Available Sodium	Soil	23.0	%
Available Calcium	Soil	23.0	%
Electrical Conductivity	Soil	10.0	%

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Ridge
Partnership House
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Winchester
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DETS Report No: 25-00297

Site Reference:	Old Sarum
Project / Job Ref:	5021146
Order No:	DRAFT-34680
Sample Receipt Date:	16/01/2025
Sample Scheduled Date:	16/01/2025
Report Issue Number:	1
Reporting Date:	23/01/2025

Authorised by:

[redacted]

Dave Ashworth
Technical Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

For Topsoil and WAC analysis the expanded uncertainty measurement should be considered while evaluating results against compliance values.

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Soil Analysis Certificate						
DETS Report No: 25-00297	**~Date Sampled**	09/01/25	09/01/25	09/01/25	10/01/25	10/01/25
Ridge	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Old Sarum	**~TP / BH No**	WS01	WS03	WS04	WS08	WS09
~Project / Job Ref: 5021146	**~Additional Refs**	None Supplied	None Supplied	Topsoil	Chalk	None Supplied
~Order No: DRAFT-34680	**~Depth (m)**	0.20	0.50	0.10	0.40	0.30
Reporting Date: 23/01/2025	**DETS Sample No**	759309	759310	759311	759312	759313

Determinand	Unit	RL	Accreditation				(n)	
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	7.8	8.4	7.8	8.6	8.6
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Organic Matter (SOM)	%	< 0.1	MCERTS	5.4	3.2	5	2.5	5.3
Arsenic (As)	mg/kg	< 2	MCERTS	8	4	5	2	8
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.9	0.5	0.8	0.5	1.1
Chromium (Cr)	mg/kg	< 2	MCERTS	12	6	10	< 2	16
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	52	10	10	< 4	18
Lead (Pb)	mg/kg	< 3	MCERTS	51	12	26	4	56
Mercury (Hg)	mg/kg	< 1	MCERTS	1.1	1	1.1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	11	7	8	< 3	12
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Zinc (Zn)	mg/kg	< 3	MCERTS	60	23	38	11	55
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)
~Sample details provided by customer and can affect the validity of results
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Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 25-00297	**~Date Sampled**	10/01/25				
Ridge	**~Time Sampled**	None Supplied				
~Site Reference: Old Sarum	**~TP / BH No**	WS10				
~Project / Job Ref: 5021146	**~Additional Refs**	None Supplied				
~Order No: DRAFT-34680	**~Depth (m)**	0.20				
Reporting Date: 23/01/2025	**DETS Sample No**	759314				

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected				
pH	pH Units	N/a	**MCERTS**	8.0				
Total Cyanide	mg/kg	< 1	NONE	< 1				
Organic Matter (SOM)	%	< 0.1	**MCERTS**	6.4				
Arsenic (As)	mg/kg	< 2	**MCERTS**	7				
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	1				
Chromium (Cr)	mg/kg	< 2	**MCERTS**	15				
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2				
Copper (Cu)	mg/kg	< 4	**MCERTS**	15				
Lead (Pb)	mg/kg	< 3	**MCERTS**	51				
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1				
Nickel (Ni)	mg/kg	< 3	**MCERTS**	11				
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2				
Zinc (Zn)	mg/kg	< 3	**MCERTS**	50				
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2				

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)
~Sample details provided by customer and can affect the validity of results

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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-00297	**~Date Sampled**	09/01/25	09/01/25	09/01/25	10/01/25	10/01/25
Ridge	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Old Sarum	**~TP / BH No**	WS01	WS03	WS04	WS08	WS09
~Project / Job Ref: 5021146	**~Additional Refs**	None Supplied	None Supplied	Topsoil	Chalk	None Supplied
~Order No: DRAFT-34680	**~Depth (m)**	0.20	0.50	0.10	0.40	0.30
Reporting Date: 23/01/2025	**DETS Sample No**	759309	759310	759311	759312	759313

Determinand	Unit	RL	Accreditation				(n)	
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6

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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-00297	**~Date Sampled**	10/01/25				
Ridge	**~Time Sampled**	None Supplied				
~Site Reference: Old Sarum	**~TP / BH No**	WS10				
~Project / Job Ref: 5021146	**~Additional Refs**	None Supplied				
~Order No: DRAFT-34680	**~Depth (m)**	0.20				
Reporting Date: 23/01/2025	**DETS Sample No**	759314				

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1				
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1				
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1				
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1				
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1				
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1				
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1				
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1				
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1				
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1				
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1				
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1				
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1				
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1				
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1				
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1				
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6				

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Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 25-00297	**~Date Sampled**	09/01/25	09/01/25	09/01/25	10/01/25	10/01/25
Ridge	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Old Sarum	**~TP / BH No**	WS01	WS03	WS04	WS08	WS09
~Project / Job Ref: 5021146	**~Additional Refs**	None Supplied	None Supplied	Topsoil	Chalk	None Supplied
~Order No: DRAFT-34680	**~Depth (m)**	0.20	0.50	0.10	0.40	0.30
Reporting Date: 23/01/2025	**DETS Sample No**	759309	759310	759311	759312	759313

Determinand	Unit	RL	Accreditation				(n)	
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42

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Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 25-00297	**~Date Sampled**	10/01/25				
Ridge	**~Time Sampled**	None Supplied				
~Site Reference: Old Sarum	**~TP / BH No**	WS10				
~Project / Job Ref: 5021146	**~Additional Refs**	None Supplied				
~Order No: DRAFT-34680	**~Depth (m)**	0.20				
Reporting Date: 23/01/2025	**DETS Sample No**	759314				

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01				
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05				
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2				
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2				
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3				
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3				
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	< 10				
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21				
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01				
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05				
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2				
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2				
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2				
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	< 3				
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	< 10				
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21				
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 42	NONE	< 42				

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 25-00297	**~Date Sampled**	09/01/25	09/01/25	09/01/25	10/01/25	10/01/25
Ridge	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Old Sarum	**~TP / BH No**	WS01	WS03	WS04	WS08	WS09
~Project / Job Ref: 5021146	**~Additional Refs**	None Supplied	None Supplied	Topsoil	Chalk	None Supplied
~Order No: DRAFT-34680	**~Depth (m)**	0.20	0.50	0.10	0.40	0.30
Reporting Date: 23/01/2025	**DETS Sample No**	759309	759310	759311	759312	759313

Determinand	Unit	RL	Accreditation				(n)	
Benzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene : HS_1D_MS	µg/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
p & m-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
o-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
MTBE : HS_1D_MS	µg/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 25-00297	**~Date Sampled**	10/01/25				
Ridge	**~Time Sampled**	None Supplied				
~Site Reference: Old Sarum	**~TP / BH No**	WS10				
~Project / Job Ref: 5021146	**~Additional Refs**	None Supplied				
~Order No: DRAFT-34680	**~Depth (m)**	0.20				
Reporting Date: 23/01/2025	**DETS Sample No**	759314				

Determinand	Unit	RL	Accreditation					
Benzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2				
Toluene : HS_1D_MS	µg/kg	< 5	MCERTS	< 5				
Ethylbenzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2				
p & m-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2				
o-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2				
MTBE : HS_1D_MS	µg/kg	< 5	MCERTS	< 5				

~Sample details provided by customer and can affect the validity of results

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Waste Acceptance Criteria Analytical Certificate

DETS Report No: 25-00297	**~Date Sampled**	09/01/25	
Ridge	**~Time Sampled**	None Supplied	
~Site Reference: Old Sarum	**~TP / BH No**	WS04	
~Project / Job Ref: 5021146	**~Additional Refs**	Topsoil	
~Order No: DRAFT-34680	**~Depth (m)**	0.10	
Reporting Date: 23/01/2025	**DETS Sample No**	759311	

Determinand	**Unit**	**MDL**		**Landfill Waste Acceptance Criteria Limits**		
				Inert Waste Landfill	**Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
TOC[MU]	%	< 0.1	2.9	3%	5%	6%
Loss on Ignition[MU]	%	< 0.01	11.90	--	--	**10%**
BTEX[MU]	mg/kg	< 0.05	< 0.05	6	--	--
Sum of PCBs	mg/kg	< 0.1	< 0.1	1	--	--
Mineral Oil[MU]	mg/kg	< 10	< 10	500	--	--
Total PAH[MU]	mg/kg	< 1.7	< 1.7	100	--	--
pH[MU]	pH Units	N/a	7.8	--	>6	--
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	3.8	--	To be evaluated	To be evaluated

Eluate Analysis	**10:1 mg/l**			**Cumulative 10:1 * mg/kg**	**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)**		
Arsenic[U]	0.0005			0.005	0.5	2	25
Barium[U]	0.0051			0.051	20	100	300
Cadmium[U]	< 0.0002			< 0.002	0.04	1	5
Chromium[U]	0.0004			0.004	0.5	10	70
Copper[U]	0.0036			0.036	2	50	100
Mercury[U]	< 0.00004			< 0.0004	0.01	0.2	2
Molybdenum[U]	0.0004			0.004	0.5	10	30
Nickel[U]	0.0004			0.004	0.4	10	40
Lead[U]	0.0004			0.004	0.5	10	50
Antimony[U]	< 0.0002			< 0.002	0.06	0.7	5
Selenium[U]	< 0.0002			< 0.002	0.1	0.5	7
Zinc[U]	0.022			0.22	4	50	200
Chloride[U]	1.4			14	800	15000	25000
Fluoride[U]	< 0.5			< 5	10	150	500
Sulphate[U]	< 1.0			< 10	1000	20000	50000
TDS	75			750	4000	60000	100000
Phenol Index[U]	< 0.01			< 0.1	1	-	-
DOC[U]	5.3			53.4	500	800	1000
Leach Test Information							
Sample Mass (kg)	0.11						
Dry Matter (%)	78.9						
Moisture (%)	26.8						
Stage 1							
Volume Eluate L10 (litres)	0.88						

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
Stated limits are for guidance only and Normec DETS Limited cannot be held responsible for any discrepencies with current legislation
M Denotes MCERTS accredited test
U Denotes ISO17025 accredited test
~Sample details provided by customer and can affect the validity of results
* DETS are accredited for the testing of leachate and not the leachate preparation stage which is unaccredited

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Waste Acceptance Criteria Analytical Certificate

DETS Report No: 25-00297		**~Date Sampled**	10/01/25		**Landfill Waste Acceptance Criteria Limits**	
Ridge		**~Time Sampled**	None Supplied		**Inert Waste Landfill**	**Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
~Site Reference: Old Sarum		**~TP / BH No**	WS08				
~Project / Job Ref: 5021146		**~Additional Refs**	Chalk				
~Order No: DRAFT-34680		**~Depth (m)**	0.40				
Reporting Date: 23/01/2025		**DETS Sample No**	759312				
Determinand	**Unit**	**MDL**					
TOC[MU]	%	< 0.1	1.5		3%	5%	6%
Loss on Ignition[MU]	%	< 0.01	1.10		--	--	10%
BTEX[MU]	mg/kg	< 0.05	< 0.05		6	--	--
Sum of PCBs	mg/kg	< 0.1	< 0.1		1	--	--
Mineral Oil[MU]	mg/kg	< 10	< 10		500	--	--
Total PAH[MU]	mg/kg	< 1.7	< 1.7		100	--	--
pH[MU]	pH Units	N/a	8.6		--	>6	--
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	7.6		--	To be evaluated	To be evaluated

Eluate Analysis	**10:1 mg/l**			**Cumulative 10:1 * mg/kg**	**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)**		
Arsenic[U]	< 0.0002			< 0.002	0.5	2	25
Barium[U]	0.0017			0.017	20	100	300
Cadmium[U]	< 0.0002			< 0.002	0.04	1	5
Chromium[U]	< 0.0002			< 0.002	0.5	10	70
Copper[U]	0.0016			0.017	2	50	100
Mercury[U]	< 0.00004			< 0.0004	0.01	0.2	2
Molybdenum[U]	< 0.0002			< 0.002	0.5	10	30
Nickel[U]	< 0.0002			< 0.002	0.4	10	40
Lead[U]	< 0.0002			< 0.002	0.5	10	50
Antimony[U]	< 0.0002			< 0.002	0.06	0.7	5
Selenium[U]	< 0.0002			< 0.002	0.1	0.5	7
Zinc[U]	0.019			0.19	4	50	200
Chloride[U]	< 1.0			< 10	800	15000	25000
Fluoride[U]	< 0.5			< 5	10	150	500
Sulphate[U]	< 1.0			< 10	1000	20000	50000
TDS	24			240	4000	60000	100000
Phenol Index[U]	< 0.01			< 0.1	1	-	-
DOC[U]	2.4			24.4	500	800	1000
Leach Test Information							
Sample Mass (kg)	0.11						
Dry Matter (%)	79.4						
Moisture (%)	26						
Stage 1							
Volume Eluate L10 (litres)	0.88						

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
Stated limits are for guidance only and Normec DETS Limited cannot be held responsible for any discrepencies with current legislation
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U Denotes ISO17025 accredited test
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* DETS are accredited for the testing of leachate and not the leachate preparation stage which is unaccredited

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Soil Analysis Certificate - Sample Descriptions
DETS Report No: 25-00297
Ridge
~Site Reference: Old Sarum
~Project / Job Ref: 5021146
~Order No: DRAFT-34680
Reporting Date: 23/01/2025

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
759309	WS01	None Supplied	0.20	18.6	Light brown sandy clay with vegetation and chalk
759310	WS03	None Supplied	0.50	17	Light brown sandy clay with chalk
759311	WS04	Topsoil	0.10	21.1	Brown loamy sand with vegetation and chalk
759312	WS08	Chalk	0.40	20.7	White chalk
759313	WS09	None Supplied	0.30	14.3	Brown sandy clay with stones and vegetation
759314	WS10	None Supplied	0.20	15.6	Brown sandy clay with stones and vegetation

Moisture content is part of procedure E003 & is not an accredited test
Insufficient Sample I/S
Unsuitable Sample U/S
~Sample details provided by customer and can affect the validity of results

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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-00297
Ridge
~Site Reference: Old Sarum
~Project / Job Ref: 5021146
~Order No: DRAFT-34680
Reporting Date: 23/01/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received

~Sample details provided by customer and can affect the validity of results

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Water Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-00297
Ridge
~Site Reference: Old Sarum
~Project / Job Ref: 5021146
~Order No: DRAFT-34680
Reporting Date: 23/01/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Water	UF	Alkalinity	Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point	E103
Water	F	Ammoniacal Nitrogen	Determination of ammoniacal nitrogen by discrete analyser.	E126
Water	UF	BTEX	Determination of BTEX by headspace GC-MS	E101
Water	F	Cations	Determination of cations by filtration followed by ICP-MS	E102
Water	F	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	UF	Biological Oxygen Demand (BOD)	Determination using BOD sensors measuring the change of pressure	E133
Water	F	Chloride	Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F	Chromium - Hexavalent	Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by	E116
Water	UF	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E115
Water	UF	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through liquid:liquid extraction with cyclohexane	E111
Water	F	Diesel Range Organics (C10 - C24)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Dissolved Organic Content (DOC)	Determination of DOC by filtration followed by low heat with persulphate addition followed by IR dete	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F	EPH (C10 – C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E104
Water	F	Fluoride	Determination of Fluoride by filtration & analysed by ion chromatography	E109
Water	F	Hardness	Determination of Ca and Mg by ICP-MS followed by calculation	E102
Leachate	F	Leachate Preparation - NRA	Based on National Rivers Authority leaching test 1994	E301
Leachate	F	Leachate Preparation - WAC	Based on BS EN 12457 Pt1, 2, 3	E302
Water	F	Metals	Determination of metals by filtration followed by ICP-MS	E102
Water	F	Mineral Oil (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Nitrate	Determination of nitrate by filtration & analysed by ion chromatography	E109
Water	UF	Monohydric Phenol	Determination of phenols by distillation followed by colorimetry	E121
Water	F	PAH - Speciated (EPA 16)	Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E105
Water	F	PCB - 7 Congeners	Determination of PCB compounds by concentration through SPE cartridge, collection in dichlorometha	E108
Water	UF	Petroleum Ether Extract (PEE)	Gravimetrically determined through liquid:liquid extraction with petroleum ether	E111
Water	UF	pH	Determination of pH by electrometric measurement	E107
Water	F	Phosphate	Determination of phosphate by filtration & analysed by ion chromatography	E109
Water	UF	Redox Potential	Determination of redox potential by electrometric measurement	E113
Water	F	Sulphate (as SO4)	Determination of sulphate by filtration & analysed by ion chromatography	E109
Water	UF	Sulphide	Determination of sulphide by distillation followed by colorimetry	E118
Water	F	SVOC	Determination of semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E106
Water	UF	Toluene Extractable Matter (TEM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF	Total Organic Carbon (TOC)	Low heat with persulphate addition followed by IR detection	E110
Water	F	TPH CWG (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C35. C5 to C8 by headspace GC-MS	E104
Water	F	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C44. C5 to C8 by headspace GC-MS	E104
Water	UF	VOCs	Determination of volatile organic compounds by headspace GC-MS	E101
Water	UF	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E101

Key

F Filtered
UF Unfiltered
~Sample details provided by customer and can affect the validity of results

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List of HWOL Acronyms and Operators
DETS Report No: 25-00297
Ridge
~Site Reference: Old Sarum
~Project / Job Ref: 5021146
~Order No: DRAFT-34680
Reporting Date: 23/01/2025

Acronym	Description
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

Benzene - HS_1D_MS
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
Mineral Oil (C10 - C40) (BS EN 12457-2) - EH_CU_1D_AL
TPH CWG - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH CWG - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH CWG - Aliphatic >C16 - C21 - EH_CU_1D_AL
TPH CWG - Aliphatic >C21 - C34 - EH_CU_1D_AL
TPH CWG - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH CWG - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH CWG - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH CWG - Aliphatic C5 - C34 - HS_1D_MS+EH_CU_1D_AL
TPH CWG - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH CWG - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH CWG - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH CWG - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C35 - HS_1D_MS+EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH CWG - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH CWG - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH CWG - Total >C5 - C35 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
Total BTEX (BS EN 12457-2) - HS_1D_MS_Total
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

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:

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

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

BKBMS-HT6GE-RHVP0

Report is invalid if pages are removed.

Job name

5021146 - Old Sarum

Description/Comments

The following report provides classification of typical soil materials identified on site during the recent Ground Investigation.

Waste classification should be based on analyses that are representative of the particular waste load, so it is normally not possible to classify the soils at the investigation stage, since the materials that will become waste have generally not been defined yet.

Ground investigation data can however provide a useful guide to the likely waste classification and can indicate the scale of the classification analyses that will be required after the waste has been defined and before it is generated.

DETS Lab Files: 25-00297.1

Project

5021146

Site

Old Sarum

Classified by

Name:
Max Smeeth
Date:
06 Feb 2025 17:11 GMT
Telephone:
07824692661

Company:
Ridge & Partners LLP
Ridge and Partners LLP
1 Royal Court
Kings Worthy
SO23 7TW

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	Date
Hazardous Waste Classification	09 Feb 2023

Next 3 year Refresher due by Feb 2026

Purpose of classification

2 - Material Characterisation

Address of the waste

Land at Mitre Way, Old Sarum, Salisbury **Post Code** SP4 6FR

SIC for the process giving rise to the waste

43999 Other specialised construction activities n.e.c.

Description of industry/producer giving rise to the waste

Proposed three-storey policing hub with associated parking, roadways, soft landscaping.

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

Foundation and service excavation.

Description of the waste

Typical topsoil and typical shallow chalk.

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	WAC Results			Page
					Inert	SNRHW	Hazardous	
1	WS01-0.20-09/01/2025	0.20	Non Hazardous		-	-	N/A	3
2	WS03-0.50-09/01/2025	0.50	Non Hazardous		-	-	N/A	6
3	WS04-0.10-09/01/2025	0.10	Non Hazardous		Pass	Pass	N/A	9
4	WS08-0.40-10/01/2025	0.40	Non Hazardous		Pass	Pass	N/A	12
5	WS09-0.30-10/01/2025	0.30	Non Hazardous		-	-	N/A	15
6	WS10-0.20-10/01/2025	0.20	Non Hazardous		-	-	N/A	18

Related documents

#	Name	Description
1	25-00297.1.hwol	DETS South .hwol file used to populate the Job
2	Example waste stream template for contaminated soils	waste stream template used to create this Job

WAC results

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate the samples in this Job: "UK"
The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

Report

Created by: Max Smeeth

Created date: 06 Feb 2025 17:11 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	21
Appendix B: Rationale for selection of metal species	22
Appendix C: Version	23

Classification of sample: WS01-0.20-09/01/2025

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

Sample details

Sample name:
WS01-0.20-09/01/2025
Sample Depth:
0.20 m
Moisture content:
18.6%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 18.6% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		8	mg/kg	1.32	8.598	mg/kg	0.00086 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.9	mg/kg	1.142	0.837	mg/kg	0.0000837 %	✓	
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		12	mg/kg	1.462	14.276	mg/kg	0.00143 %	✓	
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<2	mg/kg	2.27	<4.54	mg/kg	<0.000454 %		<LOD
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		52	mg/kg	1.126	47.657	mg/kg	0.00477 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	51	mg/kg	1.56	64.754	mg/kg	0.00415 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		1.1	mg/kg	1.353	1.212	mg/kg	0.000121 %	✓	
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		11	mg/kg	2.976	26.649	mg/kg	0.00266 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<2	mg/kg	2.554	<5.108	mg/kg	<0.000511 %		<LOD
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		60	mg/kg	2.774	135.489	mg/kg	0.0135 %	✓	
11	TPH (C6 to C40) petroleum group			TPH		<42	mg/kg		<42	mg/kg	<0.0042 %		<LOD
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
13	benzene	601-020-00-8	200-753-7	71-43-2		<0.002	mg/kg		<0.002	mg/kg	<0.0000002 %		<LOD
14	toluene	601-021-00-3	203-625-9	108-88-3		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
15	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.002	mg/kg		<0.002	mg/kg	<0.0000002 %		<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									
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]		<0.004	mg/kg		<0.004	mg/kg	<0.0000004 %		<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 }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		pH				7.8	pH		7.8	pH	7.8 pH		
				PH									
19		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
20		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
21		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
22		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
23		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
24		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
25		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
26		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
27		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
28		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
29		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
30		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
31		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
32		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
33		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
34		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
35		monohydric phenols				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
				P1186									
										Total:	0.0333 %		

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

WAC results for sample: WS01-0.20-09/01/2025

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"
The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample cannot be evaluated against the Inert (Inert waste landfill) criteria because of missing determinand values.

The sample cannot be evaluated against the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria because of missing determinand values.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%		3	5	6
2	LOI (loss on ignition)	%		-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg		6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg		1	-	-
5	Mineral oil (C10 to C40)	mg/kg		500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg		100	-	-
7	pH	pH	7.8	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg		-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg		0.5	2	25
10	barium	mg/kg		20	100	300
11	cadmium	mg/kg		0.04	1	5
12	chromium	mg/kg		0.5	10	70
13	copper	mg/kg		2	50	100
14	mercury	mg/kg		0.01	0.2	2
15	molybdenum	mg/kg		0.5	10	30
16	nickel	mg/kg		0.4	10	40
17	lead	mg/kg		0.5	10	50
18	antimony	mg/kg		0.06	0.7	5
19	selenium	mg/kg		0.1	0.5	7
20	zinc	mg/kg		4	50	200
21	chloride	mg/kg		800	15,000	25,000
22	fluoride	mg/kg		10	150	500
23	sulphate	mg/kg		1,000	20,000	50,000
24	phenol index	mg/kg		1	-	-
25	DOC (dissolved organic carbon)	mg/kg		500	800	1,000
26	TDS (total dissolved solids)	mg/kg		4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Missing WAC determinand value

Classification of sample: WS03-0.50-09/01/2025

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

Sample details

Sample name:
WS03-0.50-09/01/2025
Sample Depth:
0.50 m
Moisture content:
17%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 17% Wet Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4	mg/kg	1.32	4.383	mg/kg	0.000438 %	✓	
2		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.5	mg/kg	1.142	0.474	mg/kg	0.0000474 %	✓	
3		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		6	mg/kg	1.462	7.279	mg/kg	0.000728 %	✓	
4		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<2	mg/kg	2.27	<4.54	mg/kg	<0.000454 %		<LOD
5		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		10	mg/kg	1.126	9.345	mg/kg	0.000934 %	✓	
6		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	12	mg/kg	1.56	15.536	mg/kg	0.000996 %	✓	
7		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		1	mg/kg	1.353	1.123	mg/kg	0.000112 %	✓	
8		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		7	mg/kg	2.976	17.292	mg/kg	0.00173 %	✓	
9		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<2	mg/kg	2.554	<5.108	mg/kg	<0.000511 %		<LOD
10		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		23	mg/kg	2.774	52.958	mg/kg	0.0053 %	✓	
11		TPH (C6 to C40) petroleum group			TPH		<42	mg/kg		<42	mg/kg	<0.0042 %		<LOD
12		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
13		benzene	601-020-00-8	200-753-7	71-43-2		<0.002	mg/kg		<0.002	mg/kg	<0.0000002 %		<LOD
14		toluene	601-021-00-3	203-625-9	108-88-3		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
15		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.002	mg/kg		<0.002	mg/kg	<0.0000002 %		<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									
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]		<0.004	mg/kg		<0.004	mg/kg	<0.0000004 %		<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		8.4	pH		8.4	pH	8.4 pH		
19		naphthalene 601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
20		acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
21		acenaphthene	201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
22		fluorene	201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
23		phenanthrene	201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
24		anthracene	204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
25		fluoranthene	205-912-4	206-44-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
26		pyrene	204-927-3	129-00-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
27		benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
28		chrysene 601-048-00-0	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
29		benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
30		benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
31		benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
32		indeno[123-cd]pyrene	205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
33		dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
34		benzo[ghi]perylene	205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
35		monohydric phenols		P1186		<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
										Total:	0.016 %		

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 Deteminand - 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

WAC results for sample: WS03-0.50-09/01/2025

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"
The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample cannot be evaluated against the Inert (Inert waste landfill) criteria because of missing determinand values.

The sample cannot be evaluated against the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria because of missing determinand values.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%		3	5	6
2	LOI (loss on ignition)	%		-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg		6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg		1	-	-
5	Mineral oil (C10 to C40)	mg/kg		500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg		100	-	-
7	pH	pH	8.4	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg		-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg		0.5	2	25
10	barium	mg/kg		20	100	300
11	cadmium	mg/kg		0.04	1	5
12	chromium	mg/kg		0.5	10	70
13	copper	mg/kg		2	50	100
14	mercury	mg/kg		0.01	0.2	2
15	molybdenum	mg/kg		0.5	10	30
16	nickel	mg/kg		0.4	10	40
17	lead	mg/kg		0.5	10	50
18	antimony	mg/kg		0.06	0.7	5
19	selenium	mg/kg		0.1	0.5	7
20	zinc	mg/kg		4	50	200
21	chloride	mg/kg		800	15,000	25,000
22	fluoride	mg/kg		10	150	500
23	sulphate	mg/kg		1,000	20,000	50,000
24	phenol index	mg/kg		1	-	-
25	DOC (dissolved organic carbon)	mg/kg		500	800	1,000
26	TDS (total dissolved solids)	mg/kg		4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Missing WAC determinand value

Classification of sample: WS04-0.10-09/01/2025

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

Sample details

Sample name:
WS04-0.10-09/01/2025
Sample Depth:
0.10 m
Moisture content:
21.1%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 21.1% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		5 mg/kg	1.32	5.209 mg/kg	0.000521 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.8 mg/kg	1.142	0.721 mg/kg	0.0000721 %	✓	
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		10 mg/kg	1.462	11.532 mg/kg	0.00115 %	✓	
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		10 mg/kg	1.126	8.883 mg/kg	0.000888 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	26 mg/kg	1.56	31.998 mg/kg	0.00205 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		1.1 mg/kg	1.353	1.175 mg/kg	0.000117 %	✓	
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		8 mg/kg	2.976	18.786 mg/kg	0.00188 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		38 mg/kg	2.774	83.174 mg/kg	0.00832 %	✓	
11	TPH (C6 to C40) petroleum group			TPH		<42 mg/kg		<42 mg/kg	<0.0042 %		<LOD
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
13	benzene	601-020-00-8	200-753-7	71-43-2		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
14	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<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									
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]		<0.004	mg/kg		<0.004	mg/kg	<0.0000004 %		<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		7.8	pH		7.8	pH	7.8 pH		
19		naphthalene 601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
20		acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
21		acenaphthene	201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
22		fluorene	201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
23		phenanthrene	201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
24		anthracene	204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
25		fluoranthene	205-912-4	206-44-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
26		pyrene	204-927-3	129-00-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
27		benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
28		chrysene 601-048-00-0	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
29		benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
30		benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
31		benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
32		indeno[123-cd]pyrene	205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
33		dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
34		benzo[ghi]perylene	205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
35		monohydric phenols		P1186		<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
										Total:	0.0207 %		

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

WAC results for sample: WS04-0.10-09/01/2025

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"
The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample PASSES the Inert (Inert waste landfill) criteria.

The sample PASSES the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%	2.9	3	5	6
2	LOI (loss on ignition)	%	11.9	-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.05	6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.1	1	-	-
5	Mineral oil (C10 to C40)	mg/kg	<10	500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<1.7	100	-	-
7	pH	pH	7.8	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg	3.8	-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg	0.005	0.5	2	25
10	barium	mg/kg	0.051	20	100	300
11	cadmium	mg/kg	<0.002	0.04	1	5
12	chromium	mg/kg	0.004	0.5	10	70
13	copper	mg/kg	0.036	2	50	100
14	mercury	mg/kg	<0.0004	0.01	0.2	2
15	molybdenum	mg/kg	0.004	0.5	10	30
16	nickel	mg/kg	0.004	0.4	10	40
17	lead	mg/kg	0.004	0.5	10	50
18	antimony	mg/kg	<0.002	0.06	0.7	5
19	selenium	mg/kg	<0.002	0.1	0.5	7
20	zinc	mg/kg	0.22	4	50	200
21	chloride	mg/kg	14	800	15,000	25,000
22	fluoride	mg/kg	<5	10	150	500
23	sulphate	mg/kg	<10	1,000	20,000	50,000
24	phenol index	mg/kg	<0.1	1	-	-
25	DOC (dissolved organic carbon)	mg/kg	53.4	500	800	1,000
26	TDS (total dissolved solids)	mg/kg	750	4,000	60,000	100,000

Key

	User supplied data
	Not applicable

Classification of sample: WS08-0.40-10/01/2025

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

Sample details

Sample name:
WS08-0.40-10/01/2025
Sample Depth:
0.40 m
Moisture content:
20.7%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 20.7% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		2 mg/kg	1.32	2.094 mg/kg	0.000209 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.5 mg/kg	1.142	0.453 mg/kg	0.0000453 %	✓	
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		<4 mg/kg	1.462	<5.846 mg/kg	<0.000585 %		<LOD
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		<4 mg/kg	1.126	<4.504 mg/kg	<0.00045 %		<LOD
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	4 mg/kg	1.56	4.948 mg/kg	0.000317 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		<3 mg/kg	2.976	<8.929 mg/kg	<0.000893 %		<LOD
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		11 mg/kg	2.774	24.199 mg/kg	0.00242 %	✓	
11	TPH (C6 to C40) petroleum group			TPH		<42 mg/kg		<42 mg/kg	<0.0042 %		<LOD
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
13	benzene	601-020-00-8	200-753-7	71-43-2		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
14	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<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									
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]		<0.004	mg/kg		<0.004	mg/kg	<0.0000004 %		<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		8.6	pH		8.6	pH	8.6 pH		
19		naphthalene 601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
20		acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
21		acenaphthene	201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
22		fluorene	201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
23		phenanthrene	201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
24		anthracene	204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
25		fluoranthene	205-912-4	206-44-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
26		pyrene	204-927-3	129-00-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
27		benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
28		chrysene 601-048-00-0	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
29		benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
30		benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
31		benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
32		indeno[123-cd]pyrene	205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
33		dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
34		benzo[ghi]perylene	205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
35		monohydric phenols		P1186		<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
										Total:	0.0108 %		

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 Deteminand - 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

WAC results for sample: WS08-0.40-10/01/2025

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"
The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample PASSES the Inert (Inert waste landfill) criteria.

The sample PASSES the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%	1.5	3	5	6
2	LOI (loss on ignition)	%	1.1	-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.05	6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.1	1	-	-
5	Mineral oil (C10 to C40)	mg/kg	<10	500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<1.7	100	-	-
7	pH	pH	8.6	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg	7.6	-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg	<0.002	0.5	2	25
10	barium	mg/kg	0.017	20	100	300
11	cadmium	mg/kg	<0.002	0.04	1	5
12	chromium	mg/kg	<0.002	0.5	10	70
13	copper	mg/kg	0.017	2	50	100
14	mercury	mg/kg	<0.0004	0.01	0.2	2
15	molybdenum	mg/kg	<0.002	0.5	10	30
16	nickel	mg/kg	<0.002	0.4	10	40
17	lead	mg/kg	<0.002	0.5	10	50
18	antimony	mg/kg	<0.002	0.06	0.7	5
19	selenium	mg/kg	<0.002	0.1	0.5	7
20	zinc	mg/kg	0.19	4	50	200
21	chloride	mg/kg	<10	800	15,000	25,000
22	fluoride	mg/kg	<5	10	150	500
23	sulphate	mg/kg	<10	1,000	20,000	50,000
24	phenol index	mg/kg	<0.1	1	-	-
25	DOC (dissolved organic carbon)	mg/kg	24.4	500	800	1,000
26	TDS (total dissolved solids)	mg/kg	240	4,000	60,000	100,000

Key

	User supplied data
	Not applicable

Classification of sample: WS09-0.30-10/01/2025

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

Sample details

Sample name:
WS09-0.30-10/01/2025
Sample Depth:
0.30 m
Moisture content:
14.3%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 14.3% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		8	mg/kg	1.32	9.052	mg/kg	0.000905 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.1	mg/kg	1.142	1.077	mg/kg	0.000108 %	✓	
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		16	mg/kg	1.462	20.041	mg/kg	0.002 %	✓	
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<2	mg/kg	2.27	<4.54	mg/kg	<0.000454 %		<LOD
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		18	mg/kg	1.126	17.368	mg/kg	0.00174 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	56	mg/kg	1.56	74.859	mg/kg	0.0048 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		<LOD
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		12	mg/kg	2.976	30.608	mg/kg	0.00306 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<2	mg/kg	2.554	<5.108	mg/kg	<0.000511 %		<LOD
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		55	mg/kg	2.774	130.759	mg/kg	0.0131 %	✓	
11	TPH (C6 to C40) petroleum group			TPH		<42	mg/kg		<42	mg/kg	<0.0042 %		<LOD
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
13	benzene	601-020-00-8	200-753-7	71-43-2		<0.002	mg/kg		<0.002	mg/kg	<0.0000002 %		<LOD
14	toluene	601-021-00-3	203-625-9	108-88-3		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
15	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.002	mg/kg		<0.002	mg/kg	<0.0000002 %		<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									
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]		<0.004	mg/kg		<0.004	mg/kg	<0.0000004 %		<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 }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		pH				8.6	pH		8.6	pH	8.6 pH		
				PH									
19		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
20		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
21		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
22		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
23		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
24		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
25		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
26		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
27		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
28		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
29		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
30		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
31		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
32		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
33		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
34		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
35		monohydric phenols				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
				P1186									
										Total:	0.0315 %		

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

WAC results for sample: WS09-0.30-10/01/2025

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"
The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample cannot be evaluated against the Inert (Inert waste landfill) criteria because of missing determinand values.

The sample cannot be evaluated against the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria because of missing determinand values.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%		3	5	6
2	LOI (loss on ignition)	%		-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg		6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg		1	-	-
5	Mineral oil (C10 to C40)	mg/kg		500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg		100	-	-
7	pH	pH	8.6	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg		-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg		0.5	2	25
10	barium	mg/kg		20	100	300
11	cadmium	mg/kg		0.04	1	5
12	chromium	mg/kg		0.5	10	70
13	copper	mg/kg		2	50	100
14	mercury	mg/kg		0.01	0.2	2
15	molybdenum	mg/kg		0.5	10	30
16	nickel	mg/kg		0.4	10	40
17	lead	mg/kg		0.5	10	50
18	antimony	mg/kg		0.06	0.7	5
19	selenium	mg/kg		0.1	0.5	7
20	zinc	mg/kg		4	50	200
21	chloride	mg/kg		800	15,000	25,000
22	fluoride	mg/kg		10	150	500
23	sulphate	mg/kg		1,000	20,000	50,000
24	phenol index	mg/kg		1	-	-
25	DOC (dissolved organic carbon)	mg/kg		500	800	1,000
26	TDS (total dissolved solids)	mg/kg		4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Missing WAC determinand value

Classification of sample: WS10-0.20-10/01/2025

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

Sample details

Sample name:
WS10-0.20-10/01/2025
Sample Depth:
0.20 m
Moisture content:
15.6%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 15.6% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		7 mg/kg	1.32	7.8 mg/kg	0.00078 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1 mg/kg	1.142	0.964 mg/kg	0.0000964 %	✓	
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		15 mg/kg	1.462	18.503 mg/kg	0.00185 %	✓	
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		15 mg/kg	1.126	14.254 mg/kg	0.00143 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	51 mg/kg	1.56	67.141 mg/kg	0.0043 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		11 mg/kg	2.976	27.632 mg/kg	0.00276 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		50 mg/kg	2.774	117.069 mg/kg	0.0117 %	✓	
11	TPH (C6 to C40) petroleum group			TPH		<42 mg/kg		<42 mg/kg	<0.0042 %		<LOD
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
13	benzene	601-020-00-8	200-753-7	71-43-2		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
14	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<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									
16		xylene				<0.004	mg/kg		<0.004	mg/kg	<0.0000004 %		<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]									
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 }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		pH				8	pH		8	pH	8pH		
				PH									
19		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
20		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
21		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
22		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
23		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
24		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
25		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
26		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
27		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
28		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
29		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
30		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
31		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
32		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
33		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
34		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
35		monohydric phenols				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
				P1186									
										Total:	0.0288 %		

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 Deteminand - 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

WAC results for sample: WS10-0.20-10/01/2025

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"
The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample cannot be evaluated against the Inert (Inert waste landfill) criteria because of missing determinand values.

The sample cannot be evaluated against the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria because of missing determinand values.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%		3	5	6
2	LOI (loss on ignition)	%		-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg		6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg		1	-	-
5	Mineral oil (C10 to C40)	mg/kg		500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg		100	-	-
7	pH	pH	8	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg		-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg		0.5	2	25
10	barium	mg/kg		20	100	300
11	cadmium	mg/kg		0.04	1	5
12	chromium	mg/kg		0.5	10	70
13	copper	mg/kg		2	50	100
14	mercury	mg/kg		0.01	0.2	2
15	molybdenum	mg/kg		0.5	10	30
16	nickel	mg/kg		0.4	10	40
17	lead	mg/kg		0.5	10	50
18	antimony	mg/kg		0.06	0.7	5
19	selenium	mg/kg		0.1	0.5	7
20	zinc	mg/kg		4	50	200
21	chloride	mg/kg		800	15,000	25,000
22	fluoride	mg/kg		10	150	500
23	sulphate	mg/kg		1,000	20,000	50,000
24	phenol index	mg/kg		1	-	-
25	DOC (dissolved organic carbon)	mg/kg		500	800	1,000
26	TDS (total dissolved solids)	mg/kg		4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Missing WAC determinand value

Appendix A: Classifier defined and non GB MCL determinands

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: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
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

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

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

- **monohydric phenols** (CAS Number: P1186)

Description/Comments: Combined hazards statements from harmonised entries in CLP for phenol, cresols and xylenols (604-001-00-2, 604-004-00-9, 604-006-00-X)
Data source: CLP combined data
Data source date: 26 Mar 2019
Hazard Statements: Muta. 2; H341 , Acute Tox. 3; H331 , Acute Tox. 3; H311 , Acute Tox. 3; H301 , STOT RE 2; H373 , Skin Corr. 1B; H314 , Skin Corr. 1B; H314 >= 3 % , Skin Irrit. 2; H315 1 <= conc. < 3 % , Eye Irrit. 2; H319 1 <= conc. < 3 % , Aquatic Chronic 2; H411

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds (edit as required)

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. (edit as required) Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history (edit as required)

chromium in chromium(III) compounds {chromium(III) oxide (worst case)}

Reasonable case species based on hazard statements/molecular weight. Industrial sources include: tanning, pigment in paint, inks and glass (edit as required)

chromium in chromium(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 (edit as required)

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Industrial sources include: oxidised copper metal, brake pads, pigments, antifouling paints, fungicide. (edit as required) Worse case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected. (edit as required)

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

nickel {nickel chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

selenium {nickel selenate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

zinc {zinc chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

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: 2025.24.6453.11761 (25 Jan 2025)
HazWasteOnline Database: 2025.24.6453.11761 (25 Jan 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

Parameter	Matrix Type	Expanded Uncertainity Measurement	Unit
TOC	Soil	12.2	%
Loss on Ignition	Soil	22.9	%
BTEX	Soil	11.2	%
Sum of PCBs	Soil	43.4	%
Mineral Oil	Soil	9.0	%
Total PAH	Soil	18.5	%
pH	Soil	0.335	Units
Acid Neutralisation Capacity	Soil	18.0	%
Clay Content	Soil	15.0	%
Silt Content	Soil	14.0	%
Sand Content	Soil	13.0	%
Loss on Ignition	Soil	22.9	%
pH	Soil	0.335	Units
Carbonate	Soil	12.0	%
Total Nitrogen	Soil	12.0	%
Phosphorus (Extractable)	Soil	24.0	%
Potassium (Extractable)	Soil	20.0	%
Magnesium (Extractable)	Soil	26.0	%
Zinc	Soil	21.6	%
Copper	Soil	18.2	%
Nickel	Soil	24.3	%
Available Sodium	Soil	23.0	%
Available Calcium	Soil	23.0	%
Electrical Conductivity	Soil	10.0	%

APPENDIX 6 – GROUND GAS MONITORING SHEETS

Ground Gas and Soil Vapour Monitoring

Project Name:	Southern Policing Hub
Project Reference:	5021146

	Date	Personnel	Pressure Trend	Start Pressure (mb)	End Pressure (mb)	Equipment Used	Weather	Max. Flow	Max. CO2	Max. Methane
Round 1	21/01/2025	**EP**	Falling	1013	1012	GA 5000-G505446	Cloudy/Cold/Damp	0.1	0.9	0.3

RIDGE

1 Royal Court
Kings Worthy

ID	Pipe Diameter (mm)	Monitoring Round	Time (elapsed time)	Atmospheric Pressure (mb)	Relative Pressure (mb)	Gas Flow (L/hr) [Max. and Steady]	Methane (%/v)	Carbon Dioxide (%/v)	Oxygen (%/v)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	LEL (%)	PID (ppm)	DTW (mbgl)	DTB (mbgl)	Response Zone (mbgl)	Comments
WS01	50	1	0	997	0.00	0.1	0.3	0.8	20.9	1.0	0.0		0.6	Damp	5.00		
			30				0.3	0.8	20.6	0.0	0.0						
			60				0.3	0.8	21.6	0.0	0.0						
			90				0.3	0.8	22.6	0.0	0.0						No odour, no sheen.
			120				0.3	0.8	23.6	0.0	0.0						
			150				0.3	0.8	24.6	0.0	0.0						
			180				0.3	0.8	25.6	0.0	0.0						
WS04	50	1	0	997	-0.02	0.1	0.2	0.5	20.5	0.0	0.0		0.7	Damp	5.00		
			30				0.3	0.5	20.5	0.0	0.0						
			60				0.3	0.5	20.5	0.0	0.0						
			90				0.3	0.5	20.5	0.0	0.0						No odour, no sheen.
			120				0.3	0.5	20.5	0.0	0.0						
			150				0.3	0.5	20.5	0.0	0.0						
			180				0.3	0.5	20.5	0.0	0.0						
WS09	50	1	0	997	0.02	0.0	0.3	0.7	20.5	0.0	0.0		0.5	Damp	5.00		
			30				0.3	0.8	20.5	0.0	0.0						
			60				0.3	0.8	20.3	0.0	0.0						
			90				0.3	0.9	20.2	0.0	0.0						No odour, no sheen.
			120				0.3	0.9	20.2	0.0	0.0						
			150				0.3	0.9	20.2	0.0	0.0						
			180				0.2	0.9	20.2	0.0	0.0						

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Ground Gas and Soil Vapour Monitoring

Project Name:	Southern Policing Hub
Project Reference:	5021146

	Date	Personnel	Pressure Trend	Start Pressure (mb)	End Pressure (mb)	Equipment Used	Weather	Max. Flow	Max. CO2	Max. Methane
Round 1	21/01/2025	**EP**	Falling	1013	1012	GA 5000-G505446	Cloudy/Cold/Damp	0.1	0.9	0.3
Round 1	28/01/2025	**EP**	Rising	978	979	GA 5000-G505446	Cloudy/Cold/Damp	0.2	1.8	0.3

RIDGE

1 Royal Court
Kings Worthy

ID	Pipe Diameter (mm)	Monitoring Round	Time (elapsed time)	Atmospheric Pressure (mb)	Relative Pressure (mb)	Gas Flow (L/hr) [Max. and Steady]	Methane (%/v)	Carbon Dioxide (%/v)	Oxygen (%/v)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	LEL (%)	PID (ppm)	DTW (mbgl)	DTB (mbgl)	Response Zone (mbgl)	Comments
WS01	50	2	0	965	0.02	0.0	0.2	1.0	20	0.0	0.0		0.5	Damp	5.00		
			30				0.3	1.0	19.9	0.0	0.0						
			60				0.3	1.0	19.9	0.0	0.0						
			90				0.3	1.0	19.9	0.0	0.0						No odour, no sheen.
			120				0.3	1.0	19.9	0.0	0.0						
			150				0.3	1.0	19.9	0.0	0.0						
			180				0.3	1.0	19.9	0.0	0.0						
WS04	50	2	0	965	0.09	0.0	0.3	0.9	20.2	0.0	0.0		0.6	Damp	5.00		
			30				0.3	0.9	20.1	0.0	0.0						
			60				0.3	0.9	20.2	0.0	0.0						
			90				0.3	0.9	20.2	0.0	0.0						No odour, no sheen.
			120				0.3	0.9	20.1	0.0	0.0						
			150				0.3	0.9	20.2	0.0	0.0						
			180				0.3	0.9	20.2	0.0	0.0						
WS09	50	2	0	964	0.02	0.2	0.3	1.4	20.3	0.0	0.0		0.5	Damp	5.00		
			30				0.3	1.4	19.9	0.0	0.0						
			60				0.3	1.5	19.8	0.0	0.0						
			90				0.3	1.6	19.7	0.0	0.0						No odour, no sheen.
			120				0.3	1.6	19.7	0.0	0.0						
			150				0.3	1.7	19.7	0.0	0.0						
			180				0.3	1.8	19.7	0.0	0.0						

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Ground Gas and Soil Vapour Monitoring

Project Name:	Southern Policing Hub
Project Reference:	5021146

	Date	Personnel	Pressure Trend	Start Pressure (mb)	End Pressure (mb)	Equipment Used	Weather	Max. Flow	Max. CO2	Max. Methane
Round 1	21/01/2025	**EP**	Falling	1013	1012	GA 5000-G505446	Cloudy/Cold/Damp	0.1	0.9	0.3
Round 2	28/01/2025	**EP**	Rising	978	979	GA 5000-G505446	Cloudy/Cold/Damp	0.2	1.8	0.3
Round 3	06/02/2025	**EP**	Falling	1027	1026	GA 5000-G505446	Sunny/Cold/Dry	0.1	0.7	0.4

1 Royal Court
Kings Worthy

ID	Pipe Diameter (mm)	Monitoring Round	Time (elapsed time)	Atmospheric Pressure (mb)	Relative Pressure (mb)	Gas Flow (L/hr) [Max. and Steady]	Methane (%/v)	Carbon Dioxide (%/v)	Oxygen (%/v)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	LEL (%)	PID (ppm)	DTW (mbgl)	DTB (mbgl)	Response Zone (mbgl)	Comments
WS01	50	3	0	1027	0.05	0.1	0.2	0.6	20.3	0.0	0.0		n/a	Damp	5.00		
			30				0.2	0.6	20.3	0.0	0.0						
			60				0.2	0.6	20.3	0.0	0.0						
			90				0.2	0.6	20.3	0.0	0.0						No odour, no sheen. PID not available.
			120				0.2	0.6	20.3	0.0	0.0						
			150				0.2	0.6	20.3	0.0	0.0						
			180				0.2	0.6	20.3	0.0	0.0						
WS04	50	3	0	1027	0.12	0.1	0.2	0.3	20.7	0.0	0.0		n/a	Damp	5.00		
			30				0.2	0.5	20.3	0.0	0.0						
			60				0.2	0.5	20.3	0.0	0.0						
			90				0.2	0.5	20.3	0.0	0.0						No odour, no sheen. PID not available.
			120				0.2	0.5	20.3	0.0	0.0						
			150				0.2	0.5	20.3	0.0	0.0						
			180				0.2	0.5	20.3	0.0	0.0						
WS09	50	3	0	1027	0.05	0.0	0.3	0.6	20.8	0.0	0.0		n/a	Damp	5.00		
			30				0.4	0.6	20.2	0.0	0.0						
			60				0.3	0.6	20.1	0.0	0.0						
			90				0.3	0.7	20.1	0.0	0.0						No odour, no sheen. PID not available.
			120				0.2	0.7	20.0	0.0	0.0						
			150				0.2	0.6	20.0	0.0	0.0						
			180				0.2	0.6	20.0	0.0	0.0						

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APPENDIX 7 – GEOTECHNICAL LABORATORY TESTING

Laboratory Report

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES A PHENNA GROUP COMPANY

Contract Number: 76634

Client Ref: **5021146**
Client PO: **632540**

Client: **Ridge**

Contract Title: **5021146 - Old Sarum**
For the attention of: **Tom Lockwood**

Date Received: **21-01-2025**
Date Completed: **05-02-2025**
Report Date: **05-02-2025**

This report has been checked and approved by:

[redacted]

Darren Bourne
Quality Senior Technician

Description	Qty
Moisture Content BS 1377:1990 - Part 2 : 3.2 - * UKAS	5
4 Point Liquid & Plastic Limit BS 1377:1990 - Part 2 : 4.3 & 5.3 - * UKAS	5
Saturated Moisture Content of chalk (SMC) BS 1377:1990 - Part 2 : 3.3 - * UKAS	3
Water Soluble Sulphate 2:1 extract Sub-contracted Test In-house method	5
pH value of soil Sub-contracted Test - In-house method	5

Notes: **Observations and Interpretations are outside the UKAS Accreditation**
*** - denotes test included in laboratory scope of accreditation**
- denotes test carried out by approved contractor
@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This test report/certificate shall not be reproduced except in full, without the approval of GEO Site & Testing Services Ltd. Any opinions or interpretations stated - within this report/certificate are excluded from the laboratories UKAS accreditation.

Approved Signatories:
Brendan Evans (Office Administrator) - Darren Bourne (Quality Senior Technician) - Paul Evans (Director)
Richard John (Quality/Technical Manager) - Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager)
Wayne Honey (HR & HSE Manager)

GEO Site & Testing Services Ltd
Unit 3-4 Heol Aur, Dafen Ind Est, Llanelli, Carmarthenshire SA14 8QN
Tel: 01554 784 040 Fax: 01554 784 040 info@gstl.co.uk https://gstl.co.uk

GSTL
GEOTECHNICAL SITE & TESTING LABORATORIES

NATURAL MOISTURE, LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX
(BS 1377:1990 - Part 2 : 4.3 & 5.3)

Contract Number	76634
Project Name	Old Sarum
Date Tested	23/01/2025

DESCRIPTIONS

Sample/Hole Reference	Sample Number	Sample Type	Depth (m)			Descriptions
WS05	1	D	1.00	-		White CHALK
WS05	1	D	4.00	-		White fine to medium gravelly CHALK
WS06	1	D	1.50	-		White CHALK
WS06	1	D	3.50	-		White CHALK
WS07	1	D	1.20	-		White CHALK
				-		
				-		
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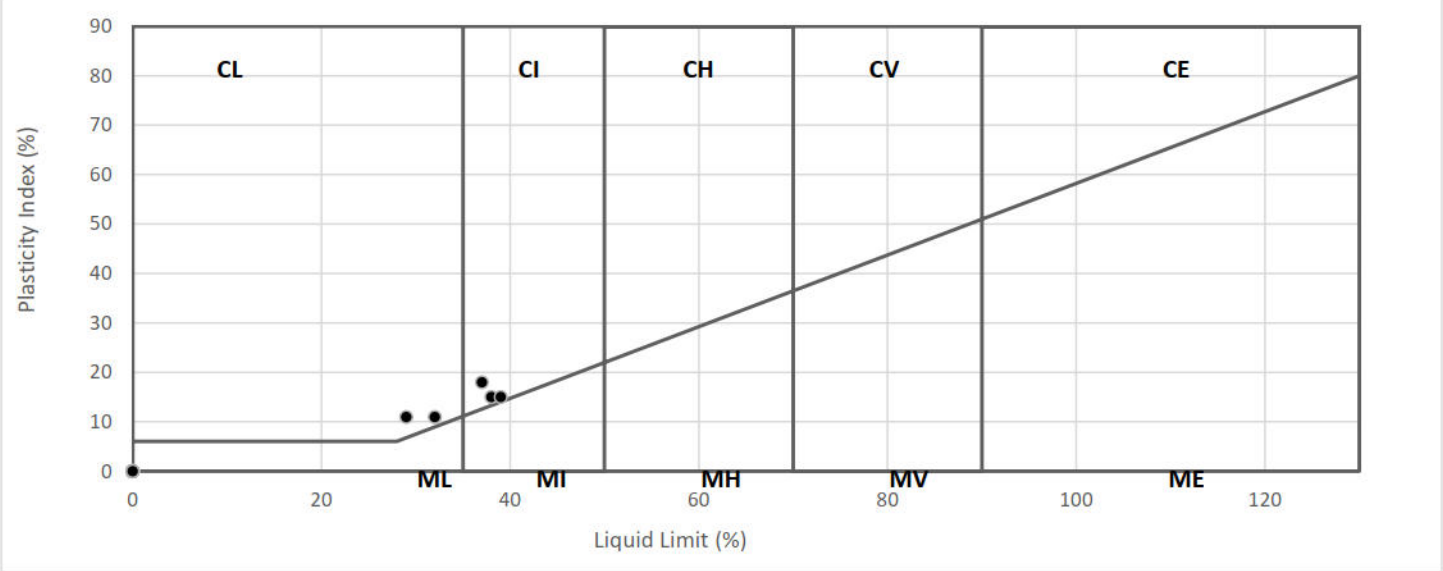
Operator
Aaron Hodge

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	NATURAL MOISTURE, LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX (BS 1377:1990 - Part 2 : 4.3 & 5.3)	
Contract Number	76634	
Project Name	Old Sarum	
Date Tested	23/01/2025	

Sample/Hole Reference	Sample Number	Sample Type	Depth (m)			Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity index %	Passing 0.425mm %	Remarks
WS05	1	D	1.00	-		27	37	19	18	100	CI Intermediate Plasticity
WS05	1	D	4.00	-		20	29	18	11	90	CL Low Plasticity
WS06	1	D	1.50	-		29	38	23	15	100	CI Intermediate Plasticity
WS06	1	D	3.50	-		26	32	21	11	100	CL Low Plasticity
WS07	1	D	1.20	-		28	39	24	15	100	CI Intermediate Plasticity
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Symbols: NP : Non Plastic # : Liquid Limit and Plastic Limit Wet Sieved

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION
BS 5930:2015+A1:2020



Operator
Aaron Hodge

GSTL
GEOTECHNICAL SITE & TESTING LABORATORIES

Saturation Moisture Content of Chalk
BS 1377 : Part 2 : 1990 Section 3.3

Contract Number	76634
Project Name	Old Sarum
Date Tested	24/01/2025

Hole Reference	Sample Number	Sample Type	Depth (m)			Moisture Content	Bulk Density	Dry Density	Saturated Moisture Content	Remarks
SA01	1	D	1.00	-	1.50	27	1.99	1.57	27	
SA04	1	D	1.50	-	2.00	29	1.96	1.52	29	
SA05	1	D	0.50	-	1.00	26	2.00	1.59	26	
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Key	Reported As	Clause
Moisture Content	%	3.2
Bulk Density	Mg/m^3	7.2
Dry Density	Mg/m^3	7.2
SMC	%	3.3.6

If there is a NON-STANDARD in the remarks next to the reported SMC result this means there was no lump of chalk of sufficient volume (300mL-500mL) present in the samples received to meet the testing requirements of the stated standard.

Operator
Julian Jones

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

GSTL
Unit 3-4 Heol Aur
Dafen Ind Estate
Dafen
SA14 8QN

Analytical Test Report:	L25/00720/GSL - 25-55937

Your Project Reference:	**OLD SARUM 5021146**		
Your Order Number:	76634	Samples Received / Instructed:	24/01/2025 / 24/01/2025
Report Issue Number:	1	Sample Tested:	24/01 to 04/02/2025
Samples Analysed:	5 sample(s)	Report issued:	04/02/2025

[redacted]

James Gane
Analytical Services Manager
CTS

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30°C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

This report shall not be reproduce except in full

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 21.01.2025

Issued by: J. Gane

Issue No: 4

Rev No: 23

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

L25/00720/GSL - 25-55937

Project Reference - OLD SARUM 5021146

Analytical Test Results - Chemical Analysis

Lab Reference			440877	440878	440879	440880	440881
Client Sample ID			-	-	-	-	-
Client Sample Location			WS01	WS05	WS07	WS08	WS10
Client Sample Type			D	D	D	D	D
Client Sample Number			-	-	-	-	-
Depth - Top (m)			1.50	2.00	0.50	0.75	1.00
Depth - Bottom (m)			1.50	2.00	0.50	0.75	1.00
Date of Sampling			-	-	-	-	-
Time of Sampling			-	-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay	Clay
Determinant	**Units**	**Accreditation**					
Water soluble sulphate (as SO_4)	(mg/l)	u	< 10	< 10	< 10	< 10	61
pH Value	pH Units	MCERTS	9.4	9.4	9.2	9.4	9.4

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

L25/00720/GSL - 25-55937

Project Reference - OLD SARUM 5021146

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
440877	-	WS01	D	-	White slightly gravelly silty clay with occasional chalk with rare organic matter	-	-	100
440878	-	WS05	D	-	Light brownish white slightly gravelly silty clay with occasional chalk	-	-	100
440879	-	WS07	D	-	Light brownish white slightly gravelly silty clay with occasional chalk with rare organic matter	-	-	100
440880	-	WS08	D	-	White slightly gravelly silty clay with occasional chalk	-	-	100
440881	-	WS10	D	-	Light brownish white slightly gravelly silty clay with occasional chalk	-	-	100

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

L25/00720/GSL - 25-55937

Project Reference - OLD SARUM 5021146

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
440877	-	WS01	D	-	
440878	-	WS05	D	-	
440879	-	WS07	D	-	
440880	-	WS08	D	-	
440881	-	WS10	D	-	

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

L25/00720/GSL - 25-55937

Project Reference - OLD SARUM 5021146

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preperation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

L25/00720/GSL - 25-55937

Project Reference - OLD SARUM 5021146

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided for water sample
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
440877	-	WS01	D	-		A
440878	-	WS05	D	-		A
440879	-	WS07	D	-		A
440880	-	WS08	D	-		A
440881	-	WS10	D	-		A



RIDGE

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