Phase 2
Ground Investigation

Client: Lidl Great Britain Ltd

Aberystwyth Road, Cardigan

Report No: 941.02.01

December 2025

REMADA GEO CONSULTANTS

Executive Summary

Remada Ltd was commissioned by Lidl Great Britain Ltd to conduct a Phase 2 Ground Investigation at the site of the existing B&M store and Garden Centre, Aberystwyth Road, Cardigan. This report follows a Phase 1 Preliminary Risk Assessment (Remada report reference 941.01.01 dated January 2022).

Summary of Phase 1 Desk Study

The earliest available historical map dated 1888 records a small building and a water works within the site boundary. By 1965 a garage was constructed in the eastern zone of site and by 1980 a depot was constructed in the western zone. It is understood that the existing retail unit was constructed in 2007 as a Focus DIY and subsequently became occupied as B&M store in 2016.

Published geological maps record that the site is underlain by Devensian Till, a Secondary (Undifferentiated) Aquifer Dinas Sand Formation designated as a Secondary (B) Aquifer.

Intrusive Investigation

The investigation comprised the drilling of nine (9 No) window sample holes (WS01 – WS09) and execution of four (4 No) CBR tests at locations indicated on Figure 2 between 22nd and 23rd October 2025. Due to the B&M store and Garden Centre being fully operational during the day, investigation was carried out during a night shift, with majority of the works being completed after daylight.

Made Ground was encountered in all the exploratory holes from surface level to a maximum depth of 3.2m.

Natural deposits were encountered within boreholes WS01-WS03 and WS06-WS09. The material was generally described as a stiff, slightly sandy to sandy slightly gravelly to gravelly locally silty CLAY or a sandy clayey GRAVEL. Gravel was recorded as mudstone, sandstone and quartzite. Natural deposits were encountered to the base of all exploratory holes where encountered to a maximum depth of 7.0m.

Human Health Assessment

The results of soil chemical analysis were compared to Human Health Generic Assessment Criteria for commercial land use. None of the analytes tested were detected at concentrations that exceeded the human health GAC protective of on-site workers.

Water Resources Assessment

The results of the soil chemical analysis undertaken has identified that concentrations of metals and inorganic contaminants are within the range of typical Made Ground. Detectable concentrations of TPH and PAHs were encountered in some samples. However, the contaminants identified are of low solubility and mobility and as such are unlikely to present a risk to groundwater beneath the site. In addition, it should be noted that the site will be predominantly covered with the building and areas of hardstanding. Therefore, the risk of leaching of contaminants as a result of infiltration of groundwater is likely to be limited. Therefore, the risk to groundwater from contaminants within the Made Ground at the site is considered to be low and does not warrant further consideration.

Waste Classification

In general, the results of the chemical analysis indicates that the material would be classified as non hazardous waste.

Waste Acceptance Criteria (WAC) analysis was undertaken on three samples of Made Ground. Within the samples from WS01 at 0.70m bgl and WS08 at 0.60m bgl, the concentration of total sulphate (1500mg/kg and 2100mg/kg respectfully) exceeded the 1000mg/kg threshold for acceptance as Inert Waste. Consequently, the material represented by these samples would likely be classified as non-hazardous waste. The samples from WS04 at 1.70m would potentially be classified as suitable for disposal at an Inert Waste Landfill.

Two samples of bituminous surfacing were analysed for concentrations of PAH compounds. The results indicated that the concentrations of PAHs were generally low (total PAH concentration of 1,000mg/kg) and the concentration of benzo(a)pyrene of < 0.05mg/kg was well below the 50mg/kg limit defined in WM3. Therefore, the bituminous surfacing represented by these samples (WS05 and WS06) would be classified as non hazardous waste and assigned the List of Wastes code 17 03 02 for bituminous mixtures other than those mentioned in 17 03 01.

Geotechnical Assessment

In order for pad foundations for the proposed store to bear on natural soils, the formation level would be approximately 3.2m bgl in the western part of the site. In order for to construct shallow foundations it would be necessary to improve the ground.

The existing Made Ground and fill material is variable in terms of SPT N values and the advice of a specialist ground improvement contractor should be obtained with regard to achieving a suitable minimum bearing capacity for the proposed development. Alternatively, following demolition and site clearance it may be possible to excavate and recompact the existing Made Ground to a minimum specified bearing capacity. If the existing Made Ground is not recompacted to a suitable bearing capacity for either a raft or ground bearing floor slab, it will be necessary to suspend the floor slab on piled foundations.

CBR values estimated from the DCP tests indicated that near surface, the CBR values recorded were >80%. Poorly compacted Made Ground backfill resulting from the demolition works should be excavated, processed as necessary to produce a 6F2 material and replaced in compacted layers in

A Design Sulphate Class DS-2 is considered appropriate for buried concrete and an ACEC Class of AC-1s is considered appropriate for the location.

Ground Gas

The results of four rounds of gas monitoring visits placed the site into Characteristic Situation 1 and therefore ground gas protection measures for methane and carbon dioxide will not be required within the proposed buildings.

The site is in a higher radon probability area and as such full Radon protection measures will be required.

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Issue No	*Date*	*Prepared By*	*Technical Review*	*Authorised*
01	*04.12.2025*	*J Hughes*	*P Searing*	*G Jones*

1 INTRODUCTION

Remada Ltd was commissioned by Lidl Great Britain Ltd (hereafter 'the Client') to undertake a Phase 2 Ground Investigation of the existing B&M store and Garden Centre, Aberystwyth Road, Cardigan, **SA43 1NA** at the location indicated in **Figure 1.**

1.1 Objectives

The objectives of this assessment are as follows:

- to examine whether there have been any potentially contaminative uses on the site or nearby land;
- to develop a conceptual model of the site to identify plausible pollutant linkages;
- to assess ground conditions in relation to the proposed development in relation to construction design issues including the presence, nature, likely severity and extent of soil and groundwater contamination, which may be present, its potential environmental impact and likely requirement for further work; and
- Provide preliminary foundation design recommendations for the proposed development.

1.2 Scope of Work

The scope and layout of this investigation and report is generally in accordance with BS10175:2011+A2 2017 and the Environment Agency's Land Contamination Risk Management guidance for land contamination reports.

The scope of work comprised:

- 5 No window samples with SPTs at 1m intervals to a target depth of 7.0m within the footprint of the store and delivery pod area to prove competent natural strata
- 4 No Window samples including SPTs at 1m intervals to a minimum depth of 5.0m within the car park / delivery bay area to prove natural strata.
- 3 No gas / groundwater monitoring wells.
- 4 No rounds of gas/groundwater monitoring at different atmospheric pressures.
- 4 No CBR tests within the car park area on Made Ground or natural soil that will be at the development formation level. In the absence of any specific information the pavement formation level shall be considered to be a maximum of 500mm below the existing ground level or below organic topsoil.
- Suite of geotechnical classification and strength tests as appropriate to the soils and 4 No BRE Sulphate suites in accordance with BRE SD1.
- 5 No Chemical Analysis for asbestos (quantitative), pH, Arsenic, Beryllium, Cadmium, Chromium (trivalent & hexavalent), Copper, Mercury, Nickel, Lead, Selenium, Vanadium, Zinc, Fraction of Organic Carbon, TPHCWG, PAH(16) and Phenol.
- 3 No WAC tests
- 2 No bitumen suites on asphalt samples for waste classification.; and
- Combined Factual & Interpretative Geoenvironmental Report.

The investigation methodology is presented in Section 4, Findings in Section 55 and the Exploratory Locations are indicated in **Figure 2.**

1.3 Proposed Development

It is understood that the proposed site use for the majority of the site will be a Lidl retail store with associated car park and soft landscaping as shown in **Figure 3**.

1.4 Previous Reports

The following Phase 1 Desk Study had been previously prepared for the site:

- Phase 1 Site Investigation & Preliminary Risk Assessment. Remada Ltd Report ref: 941.01.01, issued in January 2022.

1.5 Limitations

The comments given in this report and the opinions expressed are based on the information reviewed and observations during site work. However, there may be conditions pertaining to the site that have not been disclosed by this assessment and therefore could not be taken into account.

2 SUMMARY OF PHASE 1 DESK STUDY

The Executive Summary and Conceptual Site Model presented within the Phase 1 Desk Study are reproduced below:

Site Setting

The site comprises an operational B&M store and Garden Centre with its associated car park, occupying a roughly rectangular plot to the north of B4548 Aberystwyth Road, Cardigan as indicated in ***Figure 2****. The existing store's footprint is rectangular and is in the north of the site, and to the west of the store there is a separate fenced off area for the garden centre which occupies the north-west and south-west sections of the site. The remainder of the site area forms the store's associated car park and soft landscaping. The existing car park is formed from level bituminous surfacing with a kerb edge.*

It is understood that the proposed site use of the site will be a Lidl retail store with associated car park and soft landscaping. This development will comprise a site area of 7500m^2 fronting onto B4548 Aberystwyth Road, as shown in ***Figure 3****.*

Site History

The earliest available historical map dated 1888 records a small building and a water works within the site boundary. By 1965 a garage was constructed in the eastern zone of site and by 1980 a depot was constructed in the western zone. It is understood that the existing retail unit was constructed in 2007 as a Focus DIY and subsequently became occupied as B&M store in 2016.

Geology / Hydrogeology

Published geological maps record that the site is underlain by Devensian Till, a Secondary (Undifferentiated) Aquifer Dinas Sand Formation designated as a Secondary (B) Aquifer.

Mining

The site is not located within an area which may be affected by coal mining activity.

Radon

The site is located in Higher Probability Radon Area as 10 to 30% of homes are estimated to be at or above the Action Level. Full radon protective measures are necessary.

Environmental Risk Assessment

The desk study has identified a number of on-site and off-site potential sources of contamination that would require further investigation. The following is recommended:

- *Investigation of the lateral and vertical extent of Made Ground/fill beneath the proposed store;*
- *Collection of soil and groundwater samples from the areas identified above for contaminants of concern; and*
- *Ground gas monitoring.*

Geotechnical Assessment

It is recommended that a ground investigation is undertaken to enable preliminary foundation design.

Potential Source Areas	Potential Contaminant of Concern	Pathways	Potential Receptor	Exposure Route (Human unless otherwise stated)	Potential Identified Linkage (unmitigated)	Findings of Ground investigation	Risk (Un-mitigated)	Proposed Remediation (Mitigation) Measures	Residual Risk Estimation
<u>On-site Sources</u> **Water Works** **Covered reservoir tank** **Garage Depot** **Operational B&M store and car parking** ***<u>Off-site Sources</u>*** **Petrol filling station**	Asbestos / Metals As, Be, Cd, Cu, Cr (VI), Cr (III) Hg, Ni, Se, Va, Zn, *Boron, TPH /PAH / BTEX/ MTBE / VOCs/sVOCs*	Disturbance due to construction plant causing direct contact, dusts, vapours. Direct Contact with occupants of the proposed development Inhalation of fibres / vapours / gases by occupants of proposed development Permeation of water supply pipework Leachate	Occupants of the development / building fabric Adjacent residents during construction Secondary (undifferentiated) Aquifer & secondary (B) aquifer	Direct Soil Ingestion	Yes	To be assessed (TBA)	Potential risk	(To be assessed (TBA)	(To be assessed (TBA)
				Indoor Dust ingestion	Yes	As above	Potential risk	TBA	TBA
				Skin Contact with Soils	Yes	As above	Potential risk	TBA	TBA
				Skin Contact with Dust	Yes	As above	Potential risk	TBA	TBA
				Inhalation of Outdoor Dust	Yes	As above	Potential risk	TBA	TBA
				Inhalation of Outdoor Vapours	Yes	As above	Potential risk	TBA	TBA
				Inhalation of Indoor Vapours	Yes	As above	Potential risk	TBA	TBA
				Inhalation of ground gas	Yes	As above	Potential risk	TBA	TBA
				Inhalation of radon gas	Yes	N/A	Higher probability radon area	Full radon protective measures are necessary.	Negligible
				Ingestion via permeated water supply pipework	Yes	As above	Potential risk	TBA	TBA
				Direct contact with Secondary (undifferentiated) Aquifer in Superficial Deposits	Yes	As above	Potential risk	TBA	TBA
				In-direct contact with Secondary (B) Aquifer in bedrock	Yes	As above	Potential risk	TBA	TBA

Table 1: Outline Conceptual Site Model

Direct contact with subsurface soil and/or groundwater during redevelopment works are not assessed as part of the CSM. It is considered that risks to workers will be managed as part of any the redevelopment works at the site through the application of health and safety procedures, where required.

3 SITE WALKOVER

The opportunity was taken to inspect the existing B&M store and Garden Centre at the site for the proposed Lidl store on 23rd October 2025 by Joseph Hughes of Remada Ltd during the intrusive works, as recorded in the photographs below. There were no visual or olfactory indicators of contamination.

Photo 1: The southwestern site boundary with a gated entrance to the courtyard and storage area of the B&M store and Garden Centre.

Photo 2: A view towards the south of the site, showing the carpark entrance from B4548 Aberystwyth Road and showing the height difference between the car park and service yard.

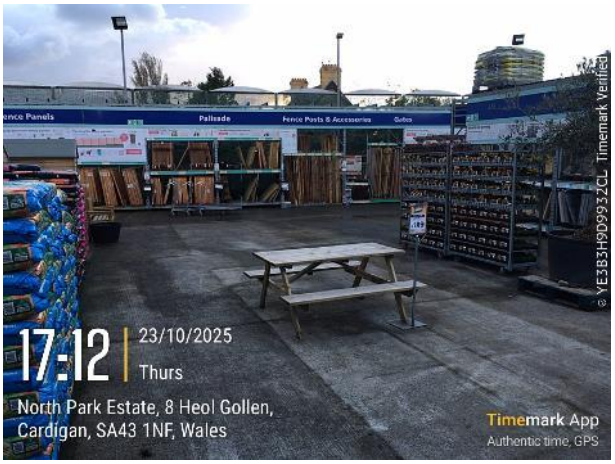


Photo 3: A view of the Garden Centre where window sample (WS01) is located.

Photo 4: A view towards the north showing the existing carpark and B&M store.

Photo 5: A view towards the south-east

Photo 6: A view towards the north-east corner of the site

4 ENVIRONMENTAL & GEOTECHNICAL INVESTIGATION METHODOLOGY

4.1 Investigation Strategy

In accordance with Lidl Ground Investigation standard 05.2023, five (5 No). window sample holes were required beneath the proposed store footprint to a depth of 7m or refusal, and four (4 No) beneath the delivery bay, HGV access and car park to a depth of 5m or refusal. Four (4 No) CBR tests were conducted in the proposed car park. Four (4 No) ground gas monitoring visits were scheduled for the site to provide the minimum required by C665.

The investigation comprised the drilling of nine (9 No) window sample holes (WS01 – WS09) and execution of four (4 No) CBR tests at locations indicated on **Figure 2** between 22nd and 23rd October 2025. Due to the B&M store and Garden Centre being fully operational during the day, investigation was carried out during a night shift, with majority of the works being completed after daylight.

Exploratory locations were selected to enable an investigation of ground conditions beneath the proposed retail store and car park. With the site comprising a B&M store and Garden Centre, it was anticipated that there would be a variable thickness of Made Ground at the site.

Due to the existing store being operational at the time of the Investigation no boreholes could be drilled within the footprint of the existing building however under the proposed plans the existing footprint Is to largely to become car parking

All exploratory holes were logged by a suitably qualified Geo-environmental Engineer in general accordance with the recommendations of BS5930:2015+A1:2020. Detailed descriptions, together with relevant comments, are given in the **Exploratory Hole Logs**.

4.2 Intrusive Investigation

4.2.1 Window Sample Holes

Two of the window samples (WS02 - WS03) were advanced to a target depth of 7m within the proposed store footprint, with WS01 to a depth of 6m and WS04 to 2.2m. Four window samples (WS06 - WS09) in the proposed car park were advanced to a depth of 3m. WS05 refused at 0.7m so it was moved slightly north but refused again at 0.6m, and due to time restraints of work, wasn't moved again. In addition borehole WS06 to WS09 where advanced past 3m bgl by continuous SPT with no sample recovery made due to time constraints. Combined Groundwater and Ground Gas monitoring standpipes were installed in WS01 and WS02, however due to shallow refusal in WS05, a standpipe was unable to be installed.

4.3 In-Situ Testing

4.3.1 Standard Penetration Tests

Standard Penetration Tests (SPTs) in the window samples were carried out at 1.0m intervals as recorded on the borehole logs to assess the relative density and consistency of soils. Within boreholes WS06-WS09 once 3m was reach SPTs were carried out every 0.5m until refusal.

SPTs were conducted in accordance with BS EN ISO 22476-3 and the recorded SPT N-values are summarised on the borehole logs.

The SPT N-values have been corrected based on the Energy Ratio of 96% for the SPT hammer on the window sampling rig. The SPT Hammer Energy Test Report, undertaken in accordance with BS EN ISO 22476-3:2005 is presented in **Appendix A.**

4.3.2 Hand Shear Vane

Hand shear vane tests were undertaken using an Impact SL810 and in general accordance with the manufacturer's instructions on selected samples of cohesive soils.

4.3.3 Dynamic Cone Penetrometer (DCP) Tests

Four DCP tests were conducted in order to determine California Bearing Ratio (CBR) values for near surface soils, at the locations in **Figure 2**. A known mass is dropped through a known distance to drive a cone into the ground. The penetration distance per blow is recorded in order to enable the CBR value to be calculated. Test results are presented in **Appendix B.**

4.4 Soil Sampling

4.4.1 Environmental

Made Ground and natural soils were selected by visual and olfactory means for subsequent analysis. Samples for chemical laboratory testing purposes were collected in amber glass jars, amber glass vials and plastic tubs and retained in a cool box for transport to the laboratory.

4.4.2 Geotechnical

Geotechnical samples were collected at depths indicated on the window sample logs with samples retrieved from within a sleeve line. The disturbed samples were placed in sealed and correctly labelled plastic tubs or bags as appropriate. All geotechnical samples were dispatched to the laboratory for testing with a completed chain of custody.

4.5 Gas & Groundwater

4.5.1 Installations

Combined ground gas and groundwater monitoring standpipes were installed in selected wells with a 50mm diameter slotted HDPE pipe and packed with gravel surround as recorded on the exploratory logs. Wells were completed with 1.0 – 2.0m of plain HDPE pipe and bentonite seal, with a gas bung and tap being installed at the top of the pipe.

4.5.2 Monitoring

Ground gas monitoring was undertaken using a GasData GFM436 gas analyser for the parameters reported below. Groundwater levels were measured with a GeoSense OWP30 oil water interface probe.

Permanent ground gas monitoring involved the measurement of the following in the prescribed order:

- Pressure difference between the monitoring well and the atmosphere,
- Peak and steady flow rates of gas into or out of the monitoring well;
- Peak and steady concentrations of carbon dioxide, methane, oxygen (minimum and steady recorded), carbon monoxide, hydrogen sulphide; and
- Depth to groundwater.

Four ground gas monitoring visits were undertaken as a minimum required for a commercial development in accordance with CIRIA C665. Ground gas concentrations were recorded on 31st October and 7th,12th and 21st November 2025 at WS01 and WS02, and the results are presented in **Table 2**. The corresponding Calibration Certificate for the GFM436 gas analyser is presented in **Appendix C**.

4.6 Quality Assurance and Quality Control

All samples were submitted to a United Kingdom Accredited Laboratory (UKAS) under a completed chain of custody. The laboratory carried out its own QA/QC programme to ensure that the quality of the analytical data conformed to the appropriate test method protocols.

4.7 Laboratory Analysis & Testing

4.7.1 Chemical Analysis – Soil

Five (5 No) soil samples were scheduled for the analysis of asbestos, arsenic, barium, beryllium, cadmium, chromium (III & VI), copper, mercury, nickel, lead, selenium, zinc, fraction of organic carbon, Total Petroleum Hydrocarbons (TPHCWG), Polyaromatic Hydrocarbons (PAH), BTEX compounds (benzene, toluene, ethylbenzene and xylene) and phenols.

In addition, two (2 No) samples of bituminous surfacing were analysed for PAH compounds.

The results of laboratory chemical analyses are presented in **Appendix D.**

4.7.3 Geotechnical

Samples recovered from the boreholes were submitted to an accredited laboratory for the following tests in general accordance with BS1377:1990:

- 5 No Natural Moisture Contents
- 5 No Plasticity Indices
- 3 No Particle Size Distribution tests; and
- 4 No BRE SD1 suites

The results of the geotechnical testing are presented in **Appendix E.**

5 GEOTECHNICAL & ENVIRONMENTAL INVESTIGATION FINDINGS

5.1 Ground Conditions

A brief description of the published geology is provided together with a summary of the ground conditions encountered during the intrusive investigation. Exploratory logs are presented at the end of the report.

5.1.1 Published Geology

The geological mapping indicates that the superficial deposits underlying the site are indicated to comprise Devensian Till (Irish Sea ice). The BGS describe Devensian Till as typically comprising '*unsorted and unstratified drift, generally overconsolidated, deposited directly by and underneath a glacier without subsequent reworking by water from the glacier. It consists of a heterogenous mixture of clay, sand, gravel, and boulders varying widely in size and shape (diamicton)*'.

Bedrock directly underlying the site is formed of the Dinas Island Formation separated from the Nantmel Mudstones Formation by two broadly parallel fault lines situated a short distance the north and south of the site. The BGS describes the Dinas Island Formation as '*Mudstone and sandstone. Stratified bedrock. Occurs onshore. Deposited during the Caradoc Series (Ordovician Period)'.*

The superficial deposits of Devensian Till are designated as secondary (undifferentiated) Strata. The Dinas Island Formation is classified as a Secondary (B) Aquifer. The site is not located within a Source Protection Zone.

5.1.2 Made Ground

Exploratory holes within the garden centre area/service yard (WS01 to WS04) encountered a concrete surface with rebar to a maximum depth of 0.23m bgl (WS03) with an average thickness of 0.22m. A membrane was encountered at the base of each concrete core. Below the concrete surface, Made Ground was recorded as either a gravelly slightly clayey sand, a slightly sandy gravelly clay, a sandy slightly clayey gravel or a gravelly sand to a maximum depth of 3.20m bgl, though the base of the Made Ground was not encountered within borehole WS04, with an average thickness of 2.08m. Gravel was recorded as concrete, brick, mudstone, slate, and asphalt

Exploratory holes located in the existing car park area (WS05 - WS09) encountered bituminous surfacing at ground level to a maximum depth of 0.27m bgl (WS05a), though the base of the Made Ground was not encountered within boreholes WS05 and WS05a, with an average thickness of 0.18m, overlying a layer either slightly sandy to very sandy slightly clayey to clayey gravel, gravelly sand or sandy gravelly clay to a maximum depth of 2.1m (WS06) with an average thickness of 0.93m. Gravel was recorded as concrete, brick, sandstone, mudstone, slate and porcelain.

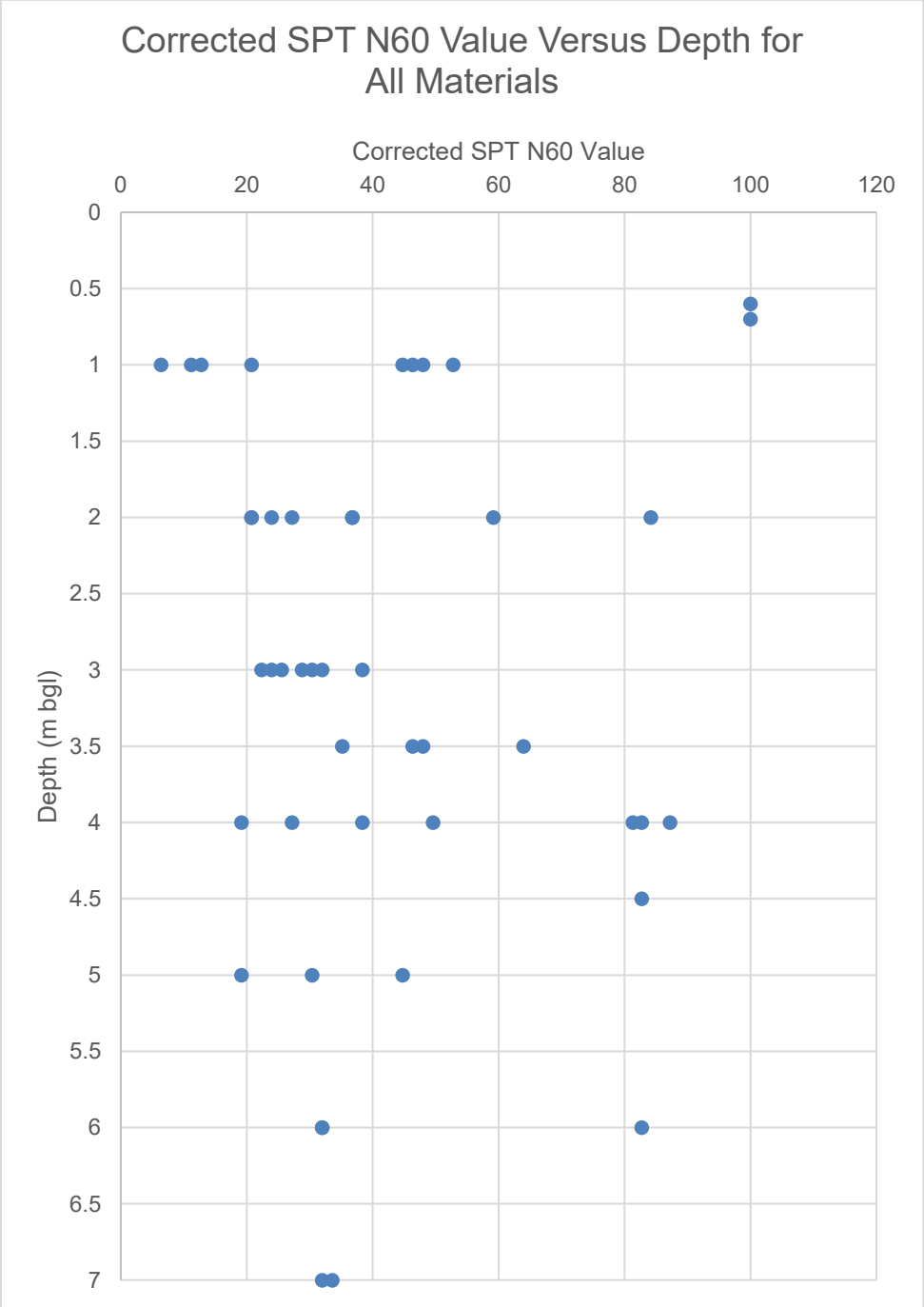
5.1.3 Natural Deposits

Natural deposits were encountered within boreholes WS01-WS03 and WS06-WS09. The material was generally described as a stiff, slightly sandy to sandy slightly gravelly to gravelly locally silty CLAY or a sandy clayey GRAVEL. Gravel was recorded as mudstone, sandstone and quartzite. Natural deposits were encountered to the base of all exploratory holes where encountered to a maximum depth of 7.0m.

5.2 In-situ Testing

5.2.1 Standard Penetration Tests (SPTs)

In-situ SPTs were undertaken to assist with the interpretation of strata encountered. The results of corrected N-values versus depth are plotted in the graph below. Where the corrected N-value >100, the plotted value = 100



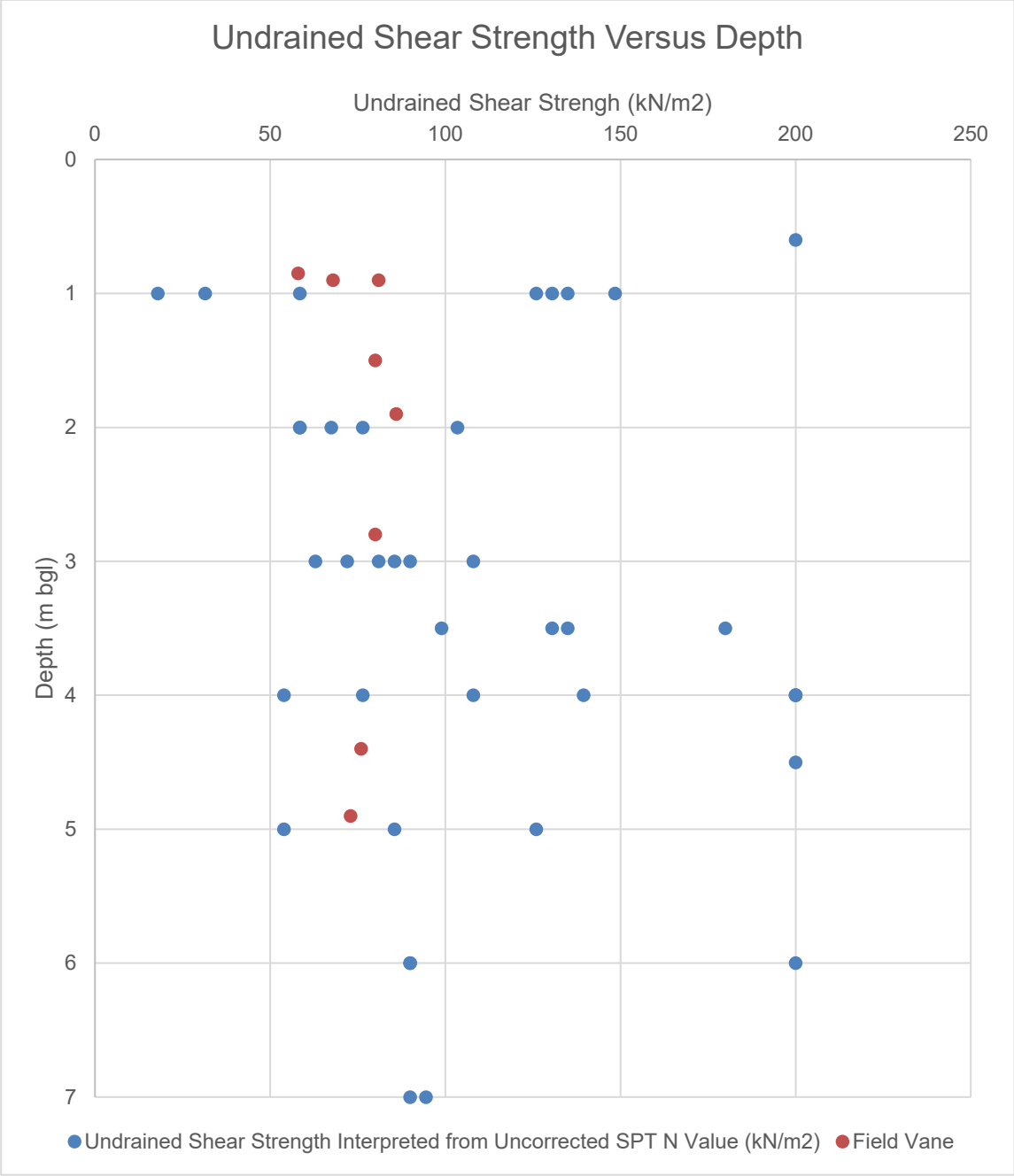
Graph 1: Plot of Corrected SPT N-Values Versus Depth

Undrained shear strengths have been estimated from SPT N values using the relationship developed by Stroud (*The standard penetration test in incentive clays and soft rocks*) and summarised in Tomlinson where:

$$\text{Mass shear strength} = f_1 \times N$$

Where f_1 is based on the plasticity index.

A Plasticity Index of 35% has been assumed (based on geotechnical laboratory testing) which equates to an f_1 factor of 4.5. Where the calculated sheer strength is >200kN/m^2 then the plotted number = 200



Graph 2: Plot of Mass Shear Strength Versus Depth With Remada's Design Lines

The Coefficient of Consolidation, Mv, of the cohesive soils can be estimated from the correlation between Plasticity Indices (PI) and SPT N values (Ref. 12) described by Equation 2.

$$Mv = 1/(f_2 \times SPT\ N) \qquad \textbf{Equation 2}$$

Where:

Mv is the coefficient of consolidation

f_2 is the Stroud Factor determined from Figure 1.5

SPT N is Characteristic Standard Penetration Test Result

5.2.2 Hand Shear Vane

The results ranged between 39kPa (in WS02 at 2.9m bgl) and 106kPa (in WS04 at 1.1m bgl). The hand shear vane test results have been plotted along with the results interpreted from the SPT N values in **Graph 2**.

5.2.3 CBR Tests

The results of the four DCP tests within the proposed car park area produced values of between 11.5% and >100% within the upper 500mm.

5.3 Soil Observations

Made Ground was recovered at all locations as a heterogeneous granular material containing a variety of man-made materials including brick, concrete, asphalt and porcelain.

There were no visible or olfactory indicators of contamination within the sampled soils.

5.4 Groundwater Observations

Groundwater seepages were noted in three of the window samples (WS02, WS03 and WS09) at depths of between 3.9, 3.8 and 1.65m bgl respectively. Groundwater levels were also recorded in the monitoring wells installed in two of the window sample holes at depths of between 1.32 and 2.95m bgl.

5.5 Chemical Analysis

5.5.1 Soils

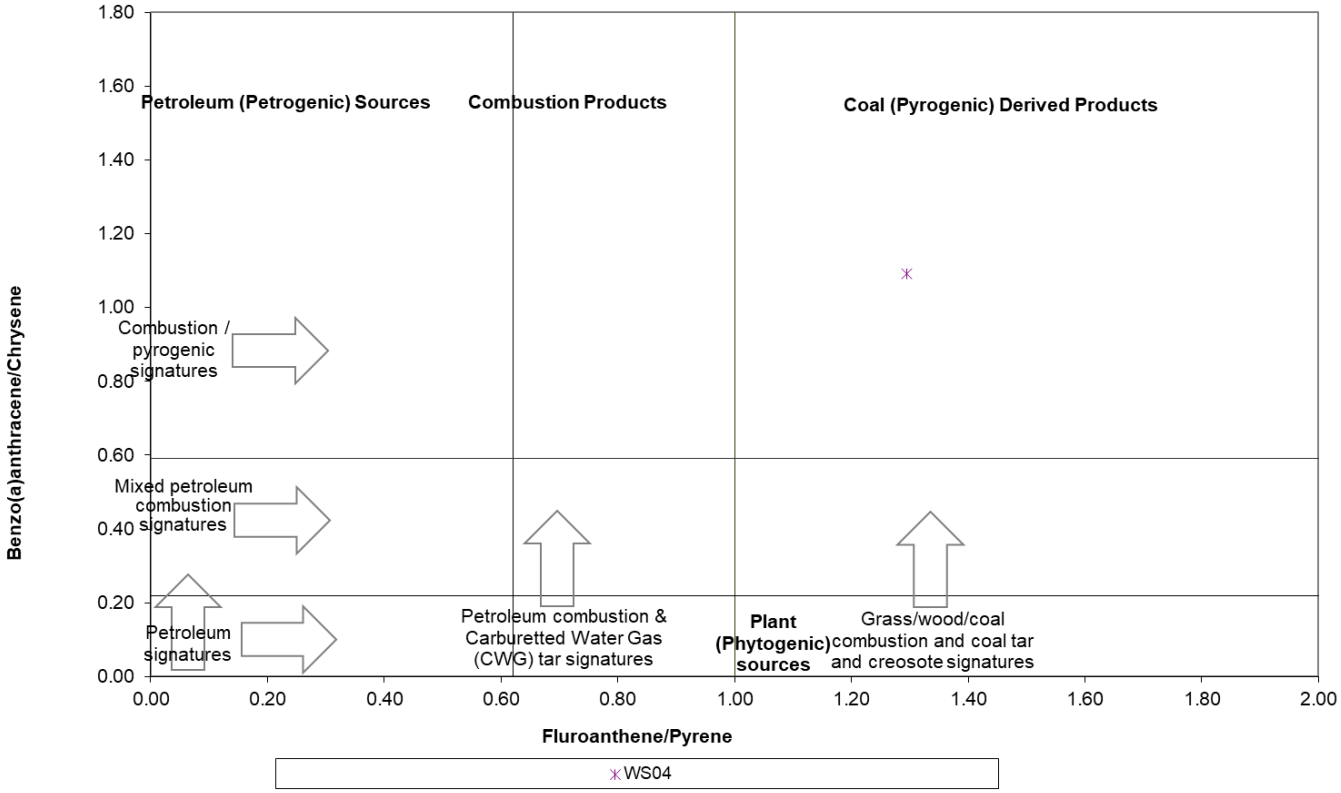
Results of the soil chemical analysis are presented in **Table 3** and summarised as follows.

The average FOC and pH was 0.003 and 8.8, respectively. Asbestos was not detected in the samples analysed. Detectable concentrations of metals were identified, although these are generally within the range that would typically be expected for Made Ground.

Concentrations of TPH were detected above method detection limit (MDL) in three of the samples analysed (from WS01, WS03 and WS04). The hydrocarbons were generally heavy end hydrocarbons within the range C21 to C35 carbon range.

Concentrations of PAHs were generally low (2 mg/kg). A maximum concentration (excluding bituminous surfacing sample) of 11.5 mg/kg was encountered in WS04 at 1.7m.

In addition, the PAH concentrations have been plotted on a double ratio plot to provide an indication of the likely source of the PAHs. All of the samples that had detections of the four PAHs used have been plotted and all are indicated to be coal derived product related PAHs which could be associated with urban background sources.



Graph 4: PAH Double Ratio Plot

Two samples of the asphalt surfacing taken from WS05 and WS06 were tested for the presence of PAH 17. These samples recorded a total PAH 17 concentration less than the method of detection limit of <0.85mg/kg.

5.6 Geotechnical Testing

Results of the geotechnical testing are summarised below.

5.6.1 Plasticity Testing

Plasticity testing was undertaken on five (5 No.) samples of cohesive soils recovered from the window sample boreholes, with the results ranging between 28% and 44%. These indicate the soils to be of high (CH) plasticity, and medium to high volume change potential as summarised in **Table 5** below:

Location	Depth (m)	Plasticity Index (%)	Passing .425mm (%)	Modified Plasticity Index	Volume Change Potential
WS02	2.9	37	85	31.5	Medium
WS03	5.8	31	88	27.3	Medium
WS04	1.2	38	86	32.7	Medium
WS06	2.7	28	100	28	Medium
WS07	1.6	41	100	41	High

Table 5: Plasticity Indices and Volume Change Potentials of the Cohesive Strata

5.6.2 Particle Size Distribution (PSD) Analysis

The PSD tests revealed the following:

- Natural deposits in WS01 at 4.0 – 5.0m comprised brown slightly fine to medium gravelly, fine to coarse sandy, silty CLAY.
- Natural deposits in WS02 at 4.0 – 5.0m comprised brown slightly fine gravelly, slightly fine to coarse sandy, silty CLAY.
- Natural deposits in WS03 at 2.0 – 3.0m comprised grey silty, fine to coarse sandy, fine to coarse GRAVEL.

5.6.3 BRE SD1 Analysis

The water-soluble sulphate contents varied from 114 to 1460 mg/l in the four soil samples analysed with pH varying from 7.6 to 8.3. The total sulphur content varied from 0.026 to 0.13% and acid soluble sulphate varied from 0.037 to 0.243%.

5.7 Ground Gas Monitoring Results

The results of the ground gas and groundwater monitoring programme are summarised below:

- A maximum steady state concentration of methane was recorded as of 0.3% v/v in both WS01 and WS02 on 12th November 2025 and in WS01 on 21st November 2025;
- A maximum steady state concentration of Carbon Dioxide was recorded as 1.1% v/v in WS02 on 21st November 2025. Detectable concentrations of carbon dioxide were recorded in both the monitoring wells;
- A minimum steady stated concentration of Oxygen was recorded 19.2% v/v in WS02 on 31st October 2025;
- Ground gas flow rates were recorded at a maximum of 0.6 litres per hour (l/hr) in WS02 on 21st November 2025;
- Groundwater was encountered within all standpipes over the course of the monitoring programme at depths between 1.32 to 2.95m bgl; and,
- Atmospheric pressure at the time of sampling varied between a high of 1023 millibar (mbar) on 21st November 2025 and a low of 988 mbar on 31st October 2025. The monitoring visits were undertaken during periods of rising and falling pressure trends over the preceding forty-eight hours.

6 GENERIC QUANTITATIVE RISK ASSESSMENT

6.1 Human Health Risk Assessment

In order to provide an up to date assessment of the risks to human health, Remada has adopted the most recent Generic Assessment Criteria (GAC) published by LQM/CIEH (S4ULs) and CL:AIRE/EIC/AGS for the assessment of potential risks to human health. The derivation of GAC, methodology, input parameters and technical guidance (CLEA) may be obtained upon request.

The proposed site layout retail store and car park is presented in **Figure 3.**

Default parameters have been adopted for sandy loam of pH 7 and commercial land use. FOC ranged from less than method of detection limit of <0.001 to 0.013 giving a Soil Organic Matter (SOM) content range of between 0.17 to 2.24% with an average result of 0.58%. In order to present a conservative assessment, the SOM content of 1% has been adopted for the assessment.

The depth to potential sources of contamination for indoor air pathways has been assumed to be 0.5m below building foundation level. The source has been conservatively assumed to be at ground level for outdoor air and direct contact pathways.

For commercial land use the CLEA version 1.06 critical receptor is conservatively modelled as a female working adult with an exposure duration of 49 years. In accordance with the default parameters, it was assumed that employees spend most of their time indoors and that 80% of outdoor area is covered by hardstanding. As such, the potential exposure pathways have been assumed to be:

- Direct Soil and Indoor Dust Ingestion;
- Skin contact with soils and dusts;
- Inhalation of indoor and outdoor dusts and vapours.

Where GAC values for individual TPH fractions are not exceeded, the potential additive effect has been assessed by calculating overall TPH hazard index for each sample.

6.2 Comparison of Soil Analysis Results with Human Health GAC

A comparison of soil chemical analysis with GAC is presented as **Table 3**.

TPH, PAH & BTEX

None of the analytes tested were detected at concentrations that exceeded the human health GAC protective of on-site workers.

Metals & Inorganics Excluding Asbestos

None of the analytes tested were detected at concentrations that exceeded the human health GAC protective of on-site workers.

Asbestos

There was no asbestos detected in the samples selected for analysis.

6.3 Controlled Waters Risk Assessment

6.3.1 Sensitivity – Groundwater

The site is not indicated to be within a Groundwater Source Protection Zone. The superficial deposits of Devensian Till underlying the site is designated as Secondary Undifferentiated Aquifer, where it is not possible to designate it as 'A' or 'B'. The Dinas Island Formation underlaying the site is designated as a Secondary 'B' Aquifer. There are no groundwater abstractions recorded within 1km of the site.

6.3.2 Sensitivity – Surface Waters

The nearest surface water feature is located 88m to the east of the site boundary. There is a surface water abstraction recorded within 965m west of the site.

6.3.3 Risk Assessment

The results of the soil chemical analysis undertaken has identified that concentrations of metals and inorganic contaminants are within the range that would be expected for 'typical' Made Ground. Detectable concentrations of TPH and PAHs were encountered in some samples. However, the contaminants identified are of low solubility and mobility and as such are unlikely to present a risk to groundwater beneath the site.

The groundwater was encountered at depths of between 1.32m and 2.95m bgl within Remada's standpipes across the area of the site during the monitoring programme.

Post-development, the site will continue to be predominantly covered by a retail building and areas of hardstanding. Consequently, the risk of leaching of contaminants as a result of infiltration of groundwater is limited. Therefore, the risk to controlled waters from contaminants within the Made Ground at the site is considered to be low and does not warrant further consideration at this stage.

6.4 Ground Gas Assessment

In order to understand the gassing regime at the site, a Characteristic Situation (as defined in CIRIA C665 and BS8576:2013) is determined for the site. CIRIA C665 and BS8576 provides definitions for each Characteristic Situation based on Gas Screening Values (GSV) which are calculated as follows:

- GSV = Gas Concentration (% v/v) x Measured Borehole Flow Rate (l/hr)

BS8576 makes a distinction between the GSV and the Hazardous Gas Flow Rate (Q_{hg}) which is also calculated using the above calculation. BS8576 states that Q_{hg} is calculated for each individual borehole for each monitoring visit, whereas the GSV is taken as the representative value for the site or site zone.

As a worst case assessment, the GSV for the site is therefore taken as the maximum steady-state carbon dioxide/methane concentration recorded in the boreholes which is multiplied by the maximum flow rate recorded during the same monitoring event.

- Methane GSV = 0.3 % x 0.6 l/hr = 0.0018 l/hr
- Carbon Dioxide GSV = 1.1 % x 0.6 l/hr = 0.0066 l/hr

The calculated GSV of less than 0.07 l/hr for methane and carbon dioxide places the site into Characteristic Situation 1. BS 8485:2015+A1:2019 states that for Characteristic Situation 1 the methane concentration would typically be less than 1% and carbon dioxide less than 5% and that if concentrations are above these limits then consideration should be given to placing the site into Characteristic Situation 2. As the concentrations of methane and carbon dioxide were both within these typical limits it is considered that the Characteristic Situation 1 classification is appropriate for the site. Therefore, gas protection measures are not deemed necessary for the proposed development.

6.5 Revised Conceptual Site Model

A revised Conceptual Site Model is presented as **Table 4** below.

6.6 Waste Classification & Waste Acceptance

Waste classification has been undertaken following guidance set out in WM3 EA Technical Guidance 'Guidance on the classification and assessment of waste', 1st Edition, Version 1.2GB, October 2021. The results of this assessment determine the appropriate List of Waste (LoW) Code and whether the waste should be classified as hazardous or non-hazardous. Classification is undertaken using the results of solid (total) analyses and not on the results of the WAC analyses.

Once the waste has been classified as either hazardous or non-hazardous then the WAC testing determines if the waste meets the requirements for disposal in the required landfill. Therefore, If the waste is classified as hazardous

waste, then the waste would also need to meet the hazardous waste WAC requirements to be disposed of in a hazardous waste landfill. However, if the final destination of the waste is not to landfill then WAC analysis is not required.

The WAC testing also allows for a distinction to be made between inert and non-hazardous waste. Waste that does not fall within the hazardous waste category and meets the requirements for disposal in an inert landfill can therefore be disposed of in an inert landfill. However, waste that does not meet the requirements for inert landfill will need to be disposed of in a non-hazardous landfill. In certain circumstances hazardous waste can be disposed of in a designated cell within a non-hazardous landfill. In this case the waste would need to meet more stringent leachate requirements for stable non-reactive hazardous waste.

6.6.1 Waste Classification

The results of the assessment indicated that contaminant concentrations within the Made Ground, topsoil and natural soils were generally low and would classify the soils as non-hazardous with LoW Code 17 05 04 (soils and stones other than those mentioned in 17 05 03).

pH

With respect to Ph there is no limit for inert waste but for non-hazardous waste pH >6.

TOC

The assessment has included determination of the fraction of organic carbon (foc) which can be converted to TOC by multiplying the result by 100. A TOC limit of 3% is placed on waste destined for disposal in an inert landfill. None of the soil samples displayed values exceeding the TOC limit.

Asbestos

Asbestos was not detected.

Metals

A full assessment of metal concentrations has not been undertaken however the results of the chemical analysis indicate that the Made Ground would be classified as non-hazardous waste.

PAHs/Hydrocarbons

The concentration of hydrocarbons in all were less than the hazardous waste threshold of 0.1%.

Bitumen / Coal Tars

The results indicated that the concentrations of PAHs were generally low (total PAH concentration of 1,000mg/kg) and the concentration of benzo(a)pyrene of < 0.05mg/kg was well below the 50mg/kg limit defined in WM3. Therefore, the bituminous surfacing represented by these samples (WS05 and WS06) would be classified as non hazardous waste and assigned the List of Wastes code 17 03 02 for bituminous mixtures other than those mentioned in 17 03 01.

6.6.2 Waste Acceptance

Waste Acceptance Criteria (WAC) analysis was undertaken on three samples of Made Ground. Within the samples from WS01 at 0.70m bgl and WS08 at 0.60m bgl, the concentration of total sulphate (1500mg/kg and2100mg/kg respectively) exceeded the 1000mg/kg threshold for acceptance as Inert Waste. Consequently, the material represented by these samples would likely be classified as non-hazardous waste. The samples from WS04 at 1.70m would potentially be classified as suitable for disposal at an Inert Waste Landfill.

The final disposal classification should however be confirmed by the receiving site operator

6.7 Health & Safety Considerations

To ensure direct exposure of construction workers involved in the site redevelopment to any impacted contaminated shallow soils is minimised, the guidance stated in HSG 66 “Protection of Workers and the General Public During Redevelopment of Contaminated Land” should be followed.

Potential Source Areas	Potential Contaminant of Concern	Pathways	Potential Receptor	Exposure Route (Human unless otherwise stated)	Potential Identified Linkage (unmitigated)	Findings of Ground investigation	Risk (Unmitigated)	Proposed Remediation (Mitigation) Measures	Residual Risk Estimation
On-site Sources **Water Works** **Covered reservoir tank** **Garage Depot** **Operational B&M store and car parking** ***Off-site Sources*** **Petrol filling station**	Asbestos / Metals As, Be, Cd, Cu, Cr (VI), Cr (III) Hg, Ni, Se, Va, Zn, *Boron, TPH /PAH / BTEX/ MTBE / VOCs/sVOCs*	Disturbance due to construction plant causing direct contact, dusts, vapours. Direct Contact with occupants of the proposed development Inhalation of fibres / vapours / gases by occupants of proposed development Permeation of water supply pipework Leachate	Occupants of the development / building fabric Adjacent residents during construction Secondary (undifferentiated) Aquifer & secondary (B) aquifer	Direct Soil Ingestion	Yes	No exceedance of GAC.	Very low	Hardstanding to cover retail site minimising direct contact.	Negligible
				Indoor Dust ingestion	Yes	As above	As above	As above	Negligible
				Skin Contact with Soils	Yes	As above	As above	As above	Negligible
				Skin Contact with Dust	Yes	As above	As above	As above	Negligible
				Inhalation of Outdoor Dust	Yes	As above	As above	As above	Negligible
				Inhalation of Outdoor Vapours	Yes	As above	As above	As above	Negligible
				Inhalation of Indoor Vapours	Yes	As above	As above	As above	Negligible
				Inhalation of ground gas	Yes	CS1	Low	As above	Negligible
				Inhalation of radon gas	Yes	Higher probability radon area	High	Full radon protective measures are necessary.	Negligible
				Ingestion via permeated water supply pipework	Yes	No exceedance of GAC.	Very Low	Hardstanding to prevent precipitation, infiltration and leaching.	Negligible
				Direct contact with Secondary (undifferentiated) Aquifer in Superficial Deposits	Yes	As above	As above	As above	Negligible
				In-direct contact with Secondary (B) Aquifer in bedrock	Yes	As above	As above	As above	Negligible

Table 4: Refined Conceptual Site Model

Direct contact with subsurface soil and/or groundwater during redevelopment works are not assessed as part of the CSM. It is considered that risks to workers will be managed as part of any the redevelopment works at the site through the application of health and safety procedures, where required.

7 GEOTECHNICAL SITE ASSESSMENT

7.1 Geotechnical Considerations

Historical maps within Remada's Phase 1 Desk Study record a ground level of 39.3 m AOD at the southwestern corner of the site, adjacent to the Aberystwyth Road and a ground level of 46.6m AOD at the southeastern corner of the site. At this time, the eastern part of the site was occupied by a garage, but the western part was vacant. A depot was subsequently constructed in the western part of the site. EDI's topographical survey reference 20203/T&S/01-01 records an existing finished road level at the south-eastern corner of the site of 39.3 m AOD and level of 45.77 m AOD just to east of the site, but existing car park levels of 42.9 m AOD in the east and 41.26 in the west. Consequently, the eastern part of the site has been reduced in level by up to 4m and the western part raised by approximately 2m.

Remada's boreholes record Made Ground to a depth 0.75m in the eastern part of the site and to a maximum depth of 3.2m in the western part. Made Ground in the described as slightly clayey gravel of mudstone and concrete indicative of a construction layer beneath the existing car park. Made Ground in the western part consists of similar clayey gravel overlying cohesive soil to to a maximum depth of 2m overlying granular Made Ground at 39.6 mAOD which is consistent with historical ground level at the time of the depot.

In order for pad foundations for the proposed store to bear on natural soils, the formation level would be approximately 3.2m bgl in the western part of the site. In order for to construct shallow foundations it would be necessary to improve the ground.

Details of the proposed permanent and variable design loads (actions) are not currently known although an indicative column load of 400kN has been provided.

7.2 Foundations

The existing Made Ground and fill material is variable in terms of SPT N values and the advice of a specialist ground improvement contractor should be obtained with regard to achieving a suitable minimum bearing capacity for the proposed development.

Alternatively, following demolition and site clearance it may be possible to excavate and recompact the existing Made Ground fill to a minimum specified bearing capacity.

7.3 Shrinkage and Swelling

All samples of CLAY were reported as being HIGH plasticity with between 85% and 100% passing a 0.425mm sieve. The modified plasticity index equates at High Volume Change Potential.

BRE 412 states that where the natural moisture content is less than 0.4 times the Liquid Limit ($w < 0.4\ wL$) it is indicative of desiccation. None of the samples show evidence of this occurring.

The minimum foundation depths outside the zone of tree influence as specified by the NHBC have been reproduced in **Table 5** below;

Volume Change Potential	A) Minimum foundation depth (m) (allowing for restricted new planting)	B) Minimum foundation depth (m) (where planting is outside the zone of influence of trees)
High	1.50	1.0
Medium	1.25	0.9
Low	0.9	0.75

Table 5: NHBC 2025 Minimum Foundation Depths

7.4 Floor Slab

If the existing Made Ground is not recompacted to a suitable bearing capacity for either a raft or ground bearing floor slab, it will be necessary to suspend the floor slab on piled foundations.

7.5 Imported Fill

All imported fill material should comply with an earthworks specification to be prepared by the engineer and not contain concentrations of contaminants at greater than the Generic Assessment Criteria (GAC) presented in **Table 3.**

7.6 Excavations and Temporary Works

Side slopes within the Made Ground are unlikely to remain stable even in the short term without support or without being battered back to a safe slope gradient. A detailed inspection of the side slopes should be made during excavation and a risk assessment carried out to fully assess the support measures required.

Groundwater seepages were noted in the window samples at depths of 1.65m, 3.8m and 3.9m with resting groundwater within the monitoring wells standing at depths of between 1.32 and 2.95m bgl.

7.7 External Car Park Construction

CBR values estimated from the DCP tests indicated that near surface, the CBR values recorded were between 11.5 and >100%. Poorly compacted Made Ground backfill resulting from the demolition works should be excavated, processed as necessary to produce a 6F2 material and replaced in compacted layers in accordance with an engineering specification.

7.8 Protection of Buried Concrete

In accordance with BRE SD1 for buried concrete in a brownfield site with mobile groundwater, analyse of selected samples for water soluble sulphate returned values of up to 1460 mg/l and pH >7.6. A total potential sulphate value of 0.104% was also calculated from the total sulphur results. Therefore, a Design Sulphate Class DS-2 is considered appropriate for buried concrete and an ACEC Class of AC-1s is considered appropriate for the location.

7.9 General Construction Advice

Topsoil should be stripped from proposed zones of construction.

All formations should be cleaned, and subsequently inspected, by a suitably qualified engineer prior to placing concrete. Should any soft, compressible or otherwise unsuitable materials be encountered they should be removed and replaced by blinding concrete.

Foundation concrete, or alternatively, a blinding layer of concrete, should be placed immediately after excavation and inspection in order to protect the formation against softening and disturbance.

Generally, all formations should be placed wholly within the same material type, unless specific geotechnical inspection and assessment have been undertaken.

Where applicable ground beneath the proposed building footprint and potentially car parking may require to be stripped to reveal localised areas of Made Ground and structures. Excavations should be backfilled with suitably re-compacted materials to achieve formation level.

During foundation excavation works arisings should be constantly monitored for the presence of contamination.

8 CONCLUSIONS & RECOMMENDATIONS

8.1 Conclusions

The following conclusions have been made based on the findings of this investigation.

8.1.1 Phase 2 Site Investigation

The earliest available historical map dated 1888 records a small building and a water works within the site boundary. By 1965 a garage was constructed in the eastern zone of site and by 1980 a depot was constructed in the western zone. It is understood that the existing retail unit was constructed in 2007 as a Focus DIY and subsequently became occupied as B&M store in 2016.

Made Ground was encountered in all the exploratory holes from surface level to a maximum depth of 3.2m.

Natural deposits were encountered within boreholes WS01-WS03 and WS06-WS09. The material was generally described as a stiff, slightly sandy to sandy slightly gravelly to gravelly locally silty CLAY or a sandy clayey GRAVEL. Gravel was recorded as mudstone, sandstone and quartzite. Natural deposits were encountered to the base of all exploratory holes where encountered to a maximum depth of 7.0m.

8.1.2 Human Health Risk Assessment

The results of soil chemical analysis were compared to Human Health Generic Assessment Criteria for commercial land use. None of the analytes tested were detected at concentrations that exceeded the human health GAC protective of on-site workers.

8.1.3 Water Resources Risk Assessment

The results of the soil chemical analysis undertaken has identified that concentrations of metals and inorganic contaminants are within the range of typical Made Ground. Detectable concentrations of TPH and PAHs were encountered in some samples. However, the contaminants identified are of low solubility and mobility and as such are unlikely to present a risk to groundwater beneath the site. In addition, it should be noted that the site will be predominantly covered with the building and areas of hardstanding. Therefore, the risk of leaching of contaminants as a result of infiltration of groundwater is likely to be limited. Therefore, the risk to groundwater from contaminants within the Made Ground at the site is considered to be low and does not warrant further consideration.

8.1.4 Waste Classification and Acceptance

In general, the results of the chemical analysis indicates that the material would be classified as non hazardous waste.

Waste Acceptance Criteria (WAC) analysis was undertaken on three samples of Made Ground. Within the samples from WS01 at 0.70m bgl and WS08 at 0.60m bgl, the concentration of total sulphate (1500mg/kg and 2100mg/kg respectfully) exceeded the 1000mg/kg threshold for acceptance as Inert Waste. Consequently, the material represented by these samples would likely be classified as non-hazardous waste. The samples from WS04 at 1.70m would potentially be classified as suitable for disposal at an Inert Waste Landfill.

Two samples of bituminous surfacing were analysed for concentrations of PAH compounds. The results indicated that the concentrations of PAHs were generally low (total PAH concentration of 1,000mg/kg) and the concentration of benzo(a)pyrene of < 0.05mg/kg was well below the 50mg/kg limit defined in WM3. Therefore, the bituminous surfacing represented by these samples (WS05 and WS06) would be classified as non hazardous waste and assigned the List of Wastes code 17 03 02 for bituminous mixtures other than those mentioned in 17 03 01.

8.2 Recommendations

In order for pad foundations for the proposed store to bear on natural soils, the formation level would be approximately 3.2m bgl in the western part of the site. In order for to construct shallow foundations it would be necessary to improve the ground.

The existing Made Ground and fill material is variable in terms of SPT N values and the advice of a specialist ground improvement contractor should be obtained with regard to achieving a suitable minimum bearing capacity for the proposed development. Alternatively, following demolition and site clearance it may be possible to excavate and

recompact the existing Made Ground to a minimum specified bearing capacity. If the existing Made Ground is not recompacted to a suitable bearing capacity for either a raft or ground bearing floor slab, it will be necessary to suspend the floor slab on piled foundations.

CBR values estimated from the DCP tests indicated that near surface, the CBR values recorded were >80%. Poorly compacted Made Ground backfill resulting from the demolition works should be excavated, processed as necessary to produce a 6F2 material and replaced in compacted layers in

A Design Sulphate Class DS-2 is considered appropriate for buried concrete and an ACEC Class of AC-1s is considered appropriate for the location.

8.3 Ground Gas

The results of four rounds of gas monitoring visits placed the site into Characteristic Situation 1 and therefore ground gas protection measures for methane and carbon dioxide will not be required within the proposed buildings.

The site is in a higher radon probability area and as such full Radon protection measures will be required.

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STUDY LIMITATIONS

IMPORTANT. This section should be read before reliance is placed on any of the information, opinions, advice, recommendations or conclusions contained in this report.

1. This report has been prepared by Remada, Ltd with all reasonable skill, care and diligence within the terms of the Appointment and with the resources and manpower agreed with (the 'Client'). Remada does not accept responsibility for any matters outside the agreed scope.

2. This report has been prepared for the sole benefit of the Client unless agreed otherwise in writing.

3. Unless stated otherwise, no consultations with authorities or funders or other interested third parties have been carried out. Remada is unable to give categorical assurance that the findings will be accepted by these third parties as such bodies may have published, more stringent objectives. Further work may be required by these parties.

4. All work carried out in preparing this report has used, and is based on, Remada' professional knowledge and understanding of current relevant legislation. Changes in legislation or regulatory guidance may cause the opinion or advice contained in this report to become inappropriate or incorrect. In giving opinions and advice pending changes in legislation, of which Remada is aware, have been considered. Following delivery of the report Remada has no obligation to advise the Client or any other party of such changes or their repercussions.

5. This report is only valid when used in its entirety. Any information or advice included in the report should not be relied upon until considered in the context of the whole report.

6. Whilst this report and the opinions made are to the best of Remada' belief, Remada cannot guarantee the accuracy or completeness of any information provided by third parties.

7. This report has been prepared based on the information reasonably available during the project programme. All information relevant to the scope may not have received.

8. 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 changes in the condition of the site since the time of the investigation.

9. The content of this report represents the professional opinion of experienced environmental consultants. Remada does not provide specialist legal or other professional advice. The advice of other professionals may be required.

10. Where intrusive investigation techniques have been employed they have been designed to provide a reasonable level of assurance on the conditions. Given the discrete nature of sampling, no investigation technique is capable of identifying all conditions present in all areas. In some cases the investigation is further limited by site operations, underground obstructions and above ground structures. Unless otherwise stated, areas beyond the boundary of the site have not been investigated.

11. If below ground intrusive investigations have been conducted as part of the scope, service tracing for safe location of exploratory holes has been carried out. The location of underground services shown on any drawing in this report has been determined by visual observations and electromagnetic techniques. No guarantee can be given that all services have been identified. Additional services, structures or other below ground obstructions, not indicated on the drawing, may be present on site.

12. Unless otherwise stated the report provides no comment on the nature of building materials, operational integrity of the facility or on any regulatory compliance issues.

13. Unless otherwise stated, samples from the site (soil, groundwater, building fabric or other samples) have NOT been analysed or assessed for waste classification purposes.

TABLES (not presented within text).

Table 2: Gas Groundwater Monitoring Data

SITE	Cardigan																							
PROJECT No.	941.02		**Atmospheric & Ground Conditions**																					
Visit 1 of 4			**Atmospheric Pressure Variations During Visit**														**Ground Surface Conditions**							
Carried Out by:	Megan Bell		988														Wet							
Date:	31.10.25																							
Instrument Details	GFM436 14048		**Atmospheric Pressure Trend Over Previous 48hrs**														**Weather Conditions**							
			Falling														Raining and damp							
Well No.	**Cover Height (m AOD)**	**Well Diameter (mm)**	**CH_4 (%v/v)**		**CH_4 Steady LEL (%)**	**CO_2 (%v/v)**		**O_2 (%v/v)**		**H2S (ppm)**		**CO (ppm)**		**Duration (secs)^**	**Flow Rate (l/hr)**	**Relative Pressure (mb)**	**PID (ppm)**		**Atmospheric Pressure (mb)**	**Water Level (m bgl)**	**Water Level (m AoD)**	**Depth of Pipe (m bgl)**	**Comments**	
			Peak	**Steady**		**Peak**	**Steady**	**Minimum**	**Steady**	**Peak**	**Steady**	**Peak**	**Steady**				**Peak**	**Steady**						
WS01	41.120	50	0.0	0.0	0.0	1.1	0.2	19.6	19.6	0.0	0.0	0.0	0.0	60	0.0		NR	NR	987	2.910	38.210	2.920		
WS02	41.120	50	1.5	0.0	0.0	0.0	0.0	19.2	19.2	0.0	0.0	0.0	0.0	60	0.0		NR	NR	988	1.320	39.800	1.930	Water covering flush cover and bung	

NR = Not Recorded ^ For measurement of gas concentrations > = Above LEL WST = Water Sample Taken GL = Ground Level

GAS & GROUNDWATER MONITORING DATA

SITE	Cardigan																							
PROJECT No.	941.02		**Atmospheric & Ground Conditions**																					
Visit 2 of 4			**Atmospheric Pressure Variations During Visit**														**Ground Surface Conditions**							
Carried Out by:	Megan Bell		996														Wet							
Date:	07.11.25																							
Instrument Details	GFM436 14048		**Atmospheric Pressure Trend Over Previous 48hrs**														**Weather Conditions**							
			Rising														Raining and damp							
Well No.	**Cover Height (m AOD)**	**Well Diameter (mm)**	**CH_4 (%v/v)**		**CH_4 Steady LEL (%)**	**CO_2 (%v/v)**		**O_2 (%v/v)**		**H2S (ppm)**		**CO (ppm)**		**Duration (secs)^**	**Flow Rate (l/hr)**	**Relative Pressure (mb)**	**PID (ppm)**		**Atmospheric Pressure (mb)**	**Water Level (m bgl)**	**Water Level (m AoD)**	**Depth of Pipe (m bgl)**	**Comments**	
			Peak	**Steady**		**Peak**	**Steady**	**Minimum**	**Steady**	**Peak**	**Steady**	**Peak**	**Steady**				**Peak**	**Steady**						
WS01	41.120	50	0.0	0.0	0.0	0.9	0.9	19.4	19.5	0.0	0.0	0.0	0.0	60	0.0		NR	NR	996	2.950	38.170	2.950		
WS02	41.120	50	0.0	0.0	0.0	0.0	0.0	19.7	19.8	0.0	0.0	0.0	0.0	60	0.0		NR	NR	996	2.010	39.110	2.010		

Notes: NR = Not Recorded ^ For measurement of gas concentrations > = Above LEL WST = Water Sample Taken GL = Ground Level

GAS & GROUNDWATER MONITORING DATA

SITE	Cardigan																							
PROJECT No.	941.02		**Atmospheric & Ground Conditions**																					
Visit 2 of 4			**Atmospheric Pressure Variations During Visit**														**Ground Surface Conditions**							
Carried Out by:	Vince Williams		994mb														Wet							
Date:	12-Nov-25																							
Instrument Details	Model №=GA5000 - Serial №=G508646		**Atmospheric Pressure Trend Over Previous 48hrs**														**Weather Conditions**							
			Falling														Raining							
Well No.	**Cover Height (m AOD)**	**Well Diameter (mm)**	**CH_4 (%v/v)**		**CH_4 Steady LEL (%)**	**CO_2 (%v/v)**		**O_2 (%v/v)**		**H2S (ppm)**		**CO (ppm)**		**Duration (secs)^**	**Flow Rate (l/hr)**	**Relative Pressure (mb)**	**PID (ppm)**		**Atmospheric Pressure (mb)**	**Water Level (m bgl)**	**Water Level (m AoD)**	**Depth of Pipe (m bgl)**	**Comments**	
			Peak	**Steady**		**Peak**	**Steady**	**Minimum**	**Steady**	**Peak**	**Steady**	**Peak**	**Steady**				**Peak**	**Steady**						
WS01	41.120	50	0.3	0.3	0.3	0.5	0.5	20.1	20.1	0.0	0.0	0.0	0.0	60	-0.1		NR	NR	994	2.920	38.200	2.930	BAL=79.1	
WS02	41.120	50	0.3	0.3	0.1	0.2	0.1	21.6	21.4	0.0	0.0	0.0	0.0	60	-0.2		NR	NR	994	2.020	39.100	2.080	BAL=78.0	
																							Levels taken @ T.O.C.	

Notes: NR = Not Recorded ^ For measurement of gas concentrations > = Above LEL WST = Water Sample Taken GL = Ground Level

GAS & GROUNDWATER MONITORING DATA

SITE	Cardigan																							
PROJECT No.	941.02																							
Visit 3 of 4			**Atmospheric Pressure Variations During Visit**														**Ground Surface Conditions**							
Carried Out by:	Vince Williams		1023mb														Wet							
Date:	21-Nov-25																							
Instrument Details	Model №=GA5000 - Serial №=G508646		**Atmospheric Pressure Trend Over Previous 48hrs**														**Weather Conditions**							
			Rising														Overcast							
Well No.	**Cover Height (m AOD)**	**Well Diameter (mm)**	**CH_4 (%v/v)**		**CH_4 Steady LEL (%)**	**CO_2 (%v/v)**		**O_2 (%v/v)**		**H2S (ppm)**		**CO (ppm)**		**Duration (secs)^**	**Flow Rate (l/hr)**	**Relative Pressure (mb)**	**PID (ppm)**		**Atmospheric Pressure (mb)**	**Water Level (m bgl)**	**Water Level (m AoD)**	**Depth of Pipe (m bgl)**	**Comments**	
			Peak	**Steady**		**Peak**	**Steady**	**Minimum**	**Steady**	**Peak**	**Steady**	**Peak**	**Steady**				**Peak**	**Steady**						
WS01	41.120	50	0.3	0.3	0.3	1.0	1.0	20.6	20.6	0.0	0.0	0.0	0.0	60	0.4	0.04	NR	NR	1023	2.930	38.190	3.000	Bal=78.2/Cover and bento. sunk	
WS02	41.120	50	0.2	0.2	0.2	1.1	1.1	20.2	20.2	0.0	0.0	51.0	40.0	60	0.6	-0.05	NR	NR	1023	2.000	39.120	2.080	Bal=78.4/Over swelling of Bento.in BH,Bung/tap	
																							Levels taken @ T.O.C.	

Notes: NR = Not Recorded ^ For measurement of gas concentrations > = Above LEL WST = Water Sample Taken GL = Ground Level

Table 3: Comparison of Soil Chemical Analyses with GAC

Lab Sample Number:				Commercial GAC 1.0% SOM	732028	732029	732030	732031	732032	732033	732034
Sample Reference:					WS01	WS02	WS03	WS04	WS08	WS05	WS06
Top Depth (m):					0.7	0.7	0.5	1.7	0.6	0.07	0.07
Basal Depth (m):					None Supplied	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Strata/Material Type					MADE GROUND	MADE GROUND	MADE GROUND	MADE GROUND	MADE GROUND	Asphalt	Asphalt
Date Sampled:					24/10/2025	24/10/2025	23/10/2025	23/10/2025	23/10/2025	24/10/2025	24/10/2025
Determinand	**Units**	**Limit of detection**	**Accreditation Status**	**[mg/kg unless stated]**							
Stones	**%**	**0.01**	**NONE**		43.60	56.60	89.60	16.80	56.40	< 0.1	< 0.1
Moisture	**%**	**0.01**	**NONE**		3.1	1	1.9	13	3.9	0.2	0.42
Asbestos in Soil	**Type**	**N/A**	**ISO 17025**		Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos % by hand picking/weighing	**%**				-	-	-	-	-	-	-
Asbestos Containing Material Types Detected (ACM Type					-	-	-	-	-	-	-
pH	**pH Units**	**N/A**	**MCERTS**		8.9	8.4	8.4	9.2	7.9	-	-
Arsenic	mg/kg	1.00	MCERTS	640	5.1	3.9	< 1.0	17	3.4	-	-
Beryllium	mg/kg	0.06	MCERTS	12	0.17	0.11	0.23	0.7	0.42	-	-
Boron	mg/kg	0.20	MCERTS	240000	0.4	0.5	0.4	1	0.6	-	-
Cadmium	mg/kg	0.20	MCERTS	190	0.2	< 0.2	0.5	0.2	0.4	-	-
Chromium (Hexavalent)	mg/kg	1.80	MCERTS	33	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	-	-
Chromium (Trivalent)	mg/kg	1.00	NONE	8600	6.5	6.4	5	29	6.9	-	-
Chromium (aqua regia extractable)	mg/kg	1.00	MCERTS	-	6.5	6.4	5	29	6.9	-	-
Copper	mg/kg	1.00	MCERTS	68000	9.4	17	5.1	44	9.6	-	-
Lead	mg/kg	1.00	MCERTS	2330	3.1	4.1	1.5	88	3.5	-	-
Mercury	mg/kg	0.30	MCERTS	58[vap] (25.8)	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	-	-
Nickel	mg/kg	1.00	MCERTS	980	4.7	3.5	3.1	22	6.9	-	-
Selenium	mg/kg	1.00	MCERTS	12000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	-	-
Vanadium	mg/kg	1.00	MCERTS	9000	6	5.4	3.7	37	5.5	-	-
Zinc	mg/kg	1.00	MCERTS	730000	9.1	15	8.2	120	8.3	-	-
Total Cyanide	mg/kg	1.00	MCERTS		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	-	-
Fraction Organic Carbon (FOC)	**N/A**	**0.001**	**MCERTS**		0.001	0.001	0.001	0.013	0.001	-	-
Calculated TOC from FOC	-	-	-		*0.10*	*0.10*	*0.10*	*1.30*	*0.10*	-	-
Calculated SOM from FOC	-	-	-		*0.17*	*0.17*	*0.17*	*2.24*	*0.17*	-	-
Aliphatic TPH >C5-C6	mg/kg	0.01	NONE	3200[sol] (304)	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-	-
Aliphatic TPH >C6-C8	mg/kg	0.01	NONE	7800[sol] (144)	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-	-
Aliphatic TPH >C8-C10	mg/kg	0.01	NONE	2000[sol] (78)	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-	-
Aliphatic TPH >C10-C12	mg/kg	1.00	MCERTS	9700[sol] (48)	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	-	-
Aliphatic TPH >C12-C16	mg/kg	2.00	MCERTS	59000[sol] (24)	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	-	-
Aliphatic TPH >C16-C21	mg/kg	8.00	MCERTS	1600000	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	-	-
Aliphatic TPH >C21-C35	mg/kg	8.00	MCERTS		40	< 8.0	14	< 8.0	< 8.0	-	-
Total Aliphatic Hydrocarbons:	**mg/kg**	**10.00**	**NONE**		**40**	**< 10**	**14**	**< 10**	**< 10**	-	-
Aromatic TPH >C5-C7	mg/kg	0.01	NONE	26000[sol] (1220)	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-	-
Aromatic TPH >C7-C8	mg/kg	0.01	NONE	56000[vap] (869)	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-	-
Aromatic TPH >C8-C10	mg/kg	0.02	NONE	3500[vap] (613)	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	-	-
Aromatic TPH >C10-C12	mg/kg	1.00	MCERTS	16000[sol] (364)	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	-	-
Aromatic TPH >C12-C16	mg/kg	2.00	MCERTS	36000[sol] (169)	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	-	-
Aromatic TPH >C16-C21	mg/kg	10.00	MCERTS	28000	< 10	< 10	< 10	< 10	< 10	-	-
Aromatic TPH >C21-C35	mg/kg	10.00	MCERTS	28000	13	< 10	< 10	24	< 10	-	-
Total Aromatic Hydrocarbons	**mg/kg**	**10.00**	**NONE**		**13**	**< 10**	**< 10**	**24**	**< 10**	-	-
Calculated Sum TPH (sum Aliphatic + sum Aromatic)					**53**	**< 20**	**< 24**	**34**	**< 20**	-	-
Naphthalene	mg/kg	0.05	MCERTS	190[sol] (76.4)	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	83000[sol] (86.1)	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	84000[sol] (57)	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	63000[sol] (30.9)	< 0.05	< 0.05	< 0.05	0.07	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	22000	< 0.05	< 0.05	< 0.05	1.1	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	520000	< 0.05	< 0.05	< 0.05	0.43	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	23000	< 0.05	< 0.05	< 0.05	2.2	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	54000	< 0.05	< 0.05	< 0.05	1.7	< 0.05	< 0.05	< 0.05
Benzo[a]anthracene	mg/kg	0.05	MCERTS	170	< 0.05	< 0.05	< 0.05	1.2	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	350	< 0.05	< 0.05	< 0.05	1.1	< 0.05	< 0.05	< 0.05
Benzo[b]fluoranthene	mg/kg	0.05	ISO 17025	44	< 0.05	< 0.05	< 0.05	1.2	< 0.05	< 0.05	< 0.05
Benzo[k]fluoranthene	mg/kg	0.05	ISO 17025	1200	< 0.05	< 0.05	< 0.05	0.52	< 0.05	< 0.05	< 0.05
Benzo[a]pyrene	mg/kg	0.05	MCERTS	35	< 0.05	< 0.05	< 0.05	0.95	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-c,d)Pyrene	mg/kg	0.05	MCERTS	500	< 0.05	< 0.05	< 0.05	0.42	< 0.05	< 0.05	< 0.05
Dibenz(a,h)Anthracene	mg/kg	0.05	MCERTS	3.5	< 0.05	< 0.05	< 0.05	0.13	< 0.05	< 0.05	< 0.05
Benzo[g,h,i]perylene	mg/kg	0.05	MCERTS	3900	< 0.05	< 0.05	< 0.05	0.45	< 0.05	0.08	0.080
Coronene	mg/kg	0.05	NONE		< 0.05	-	-	0.12	< 0.05	< 0.05	< 0.05
Total Of 16 PAH's	**mg/kg**	**0.8**	**ISO 17025**		**< 0.80**	**< 0.80**	**< 0.80**	**11.4**	**< 0.80**	-	-
Total Of 17 PAH's	**mg/kg**	**0.85**	**ISO 17025**		**< 0.85**	**-**	**-**	**11.5**	**< 0.85**	**< 0.85**	**< 0.85**
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5.00	MCERTS	7900000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	-
Benzene	µg/kg	5.00	MCERTS	27000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	-
Toluene	µg/kg	5.00	MCERTS	56000000[vap] (869000)	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	-
Ethylbenzene	µg/kg	5.00	MCERTS	5700000[vap] (518000)	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	-
p & m-Xylene	µg/kg	8.00	MCERTS	5900000[sol] (576000)	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	-	-
o-Xylene	µg/kg	5.00	MCERTS	6600000[sol] (478000)	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	-
Total Phenols	mg/kg	1.00	MCERTS	440[dir] 26000)	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	-	-

Determinand concentration below the GAC

Determinand concentration in exceedance of GAC

Determinand concentration in exceedance of the vapour/solubility saturation limit.

NC: No published criteria, U/S: Unsuitable sample.

vap: Screening criteria presented exceed the vapour saturation limit, which is presented in brackets.

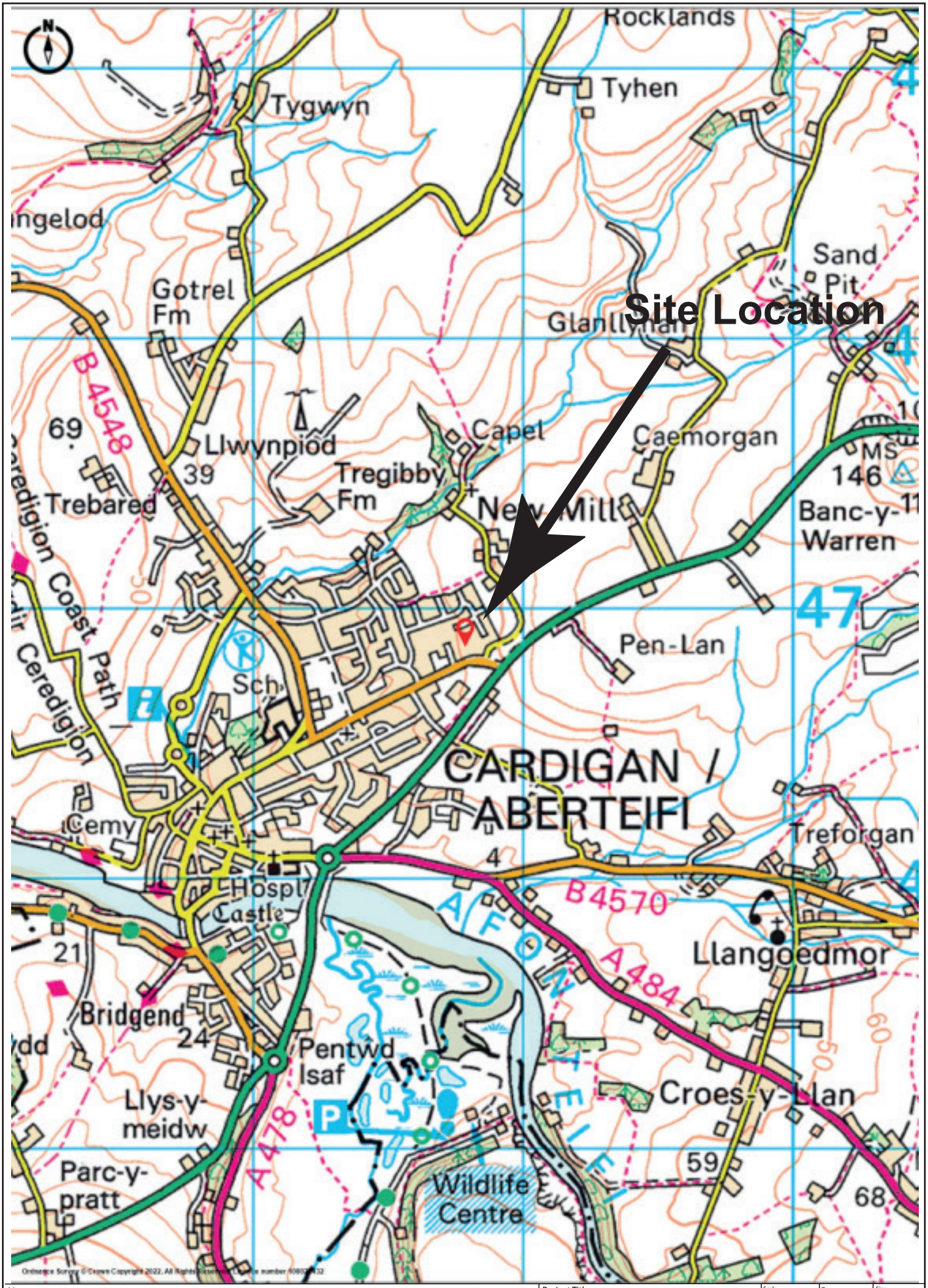
sol: Screening criteria presented exceed the solubility saturation limit, which is presented in brackets.

dir: Screening criteria based on threshold protective of direct skin contact (guideline in brackets based on health effects following long term exposure provided for illustration only).

(1): For assessment based on the use of the surrogate marker approach the GAC for Coal Tar must be used instead of benzo(a)pyrene.

** Value presented in mg/kg*

FIGURES

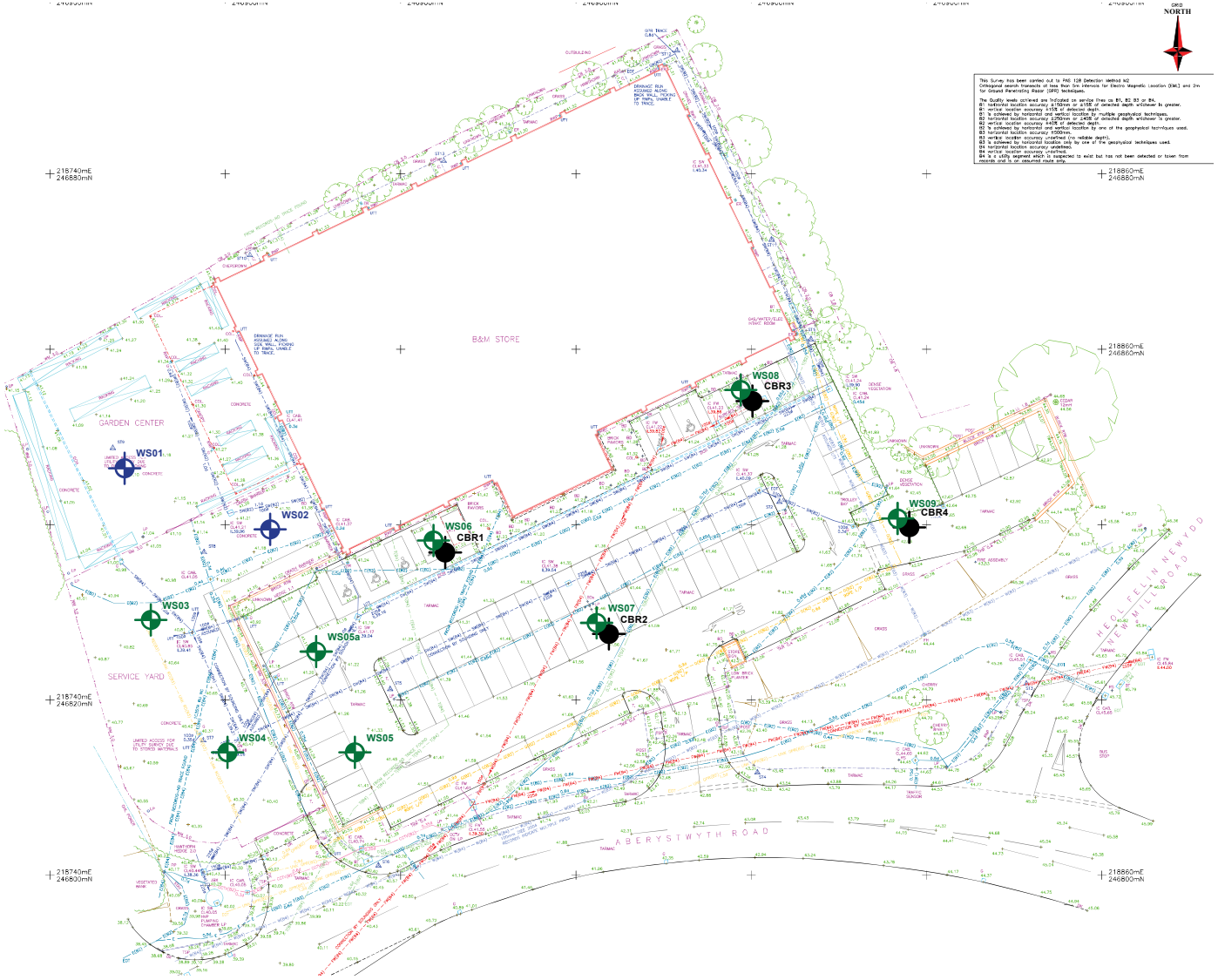


Notes

Promap LANDMARK INFORMATION

Project Title	Scale	Drawn	Size
Aberystwyth Road, Cardigan	as shown	CW	A4
Drawing Title	**Date**	**Job No.**	**Drawing /Rev No.**
Site Location Plan	02.02.22	941	Fig1
Client			
Lidl Great Britain Ltd			

Remada



Legend

WS02 Window Sample

WS01 Window Sample & Installation

CBR1 CBR Test

Notes

Existing site plan taken from EDI Surveys Ltd Topographic and buried utilities survey drawing number 20203/T&S/01-01 dated Jan 2022

Revision	Approved	Date

Project Title: Lidl Cardigan

Drawing Title: Existing site layout and Exploratory Hole Locations

Client: Lidl Great Britain Ltd

Scale	Drawn	Size
NTS	PS	A4
Date	Job No.	Figure No.
05.12.25	941.02	02

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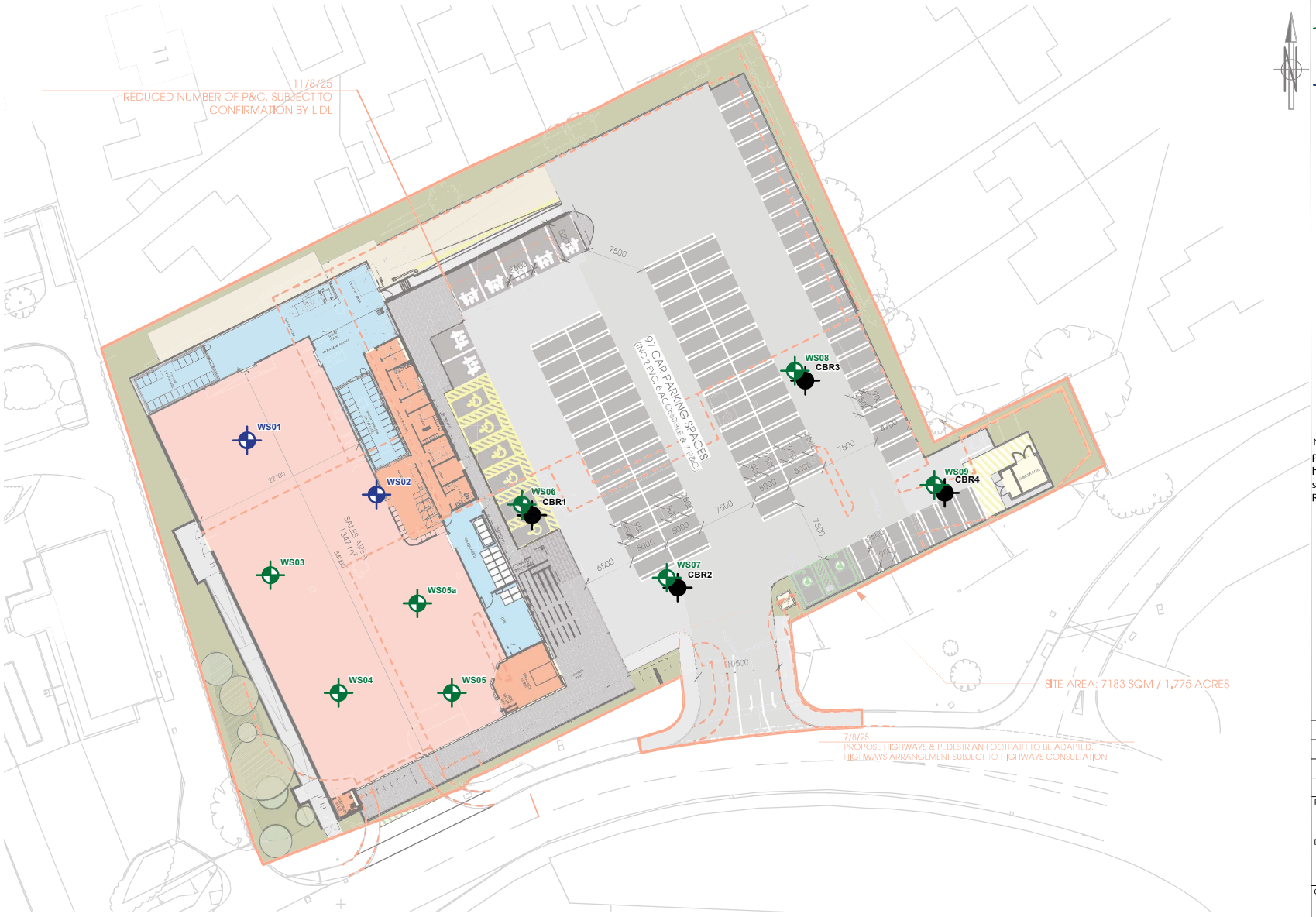

Legend

WS02 Window Sample

WS01 Window Sample & Installation

CBR1 CBR Test

Notes

Proposed site plan reproduced from htc architects proposed setting out site plan drawing number 2806 P412 Rev B dated August 2025

Revision	Approved	Date

Project Title: Lidl Cardigan

Drawing Title: Proposed site layout and Exploratory Hole Locations

Client: Lidl Great Britain Ltd

Scale	Drawn	Size
NTS	PS	A4
Date	Job No.	Figure No.
05.12.25	941.02	03

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EXPLORATORY HOLE LOGS

Key to exploratory hole symbols and abbreviations

SAMPLE TYPES

ACM - Asbestos sample
AMAL - Amalgamated sample
B - Bulk disturbed sample
BLK - Block sample
C - Core sample
CBR - CBR test sample
D - Disturbed sample
ES - Environmental sample
EW - Environmental water sample
G - Gas sample
J - Jar sample
L - Liner sample
TW - Pushed thin wall sample
U - Undisturbed sample
UT - Undisturbed thin wall sample
W - Water sample

IN-SITU TESTS

HV - Hand shear vane
HV(r) - Hand shear vane residual
PID - Photo ionisation detector
PP - Hand penetrometer
SPT - Standard penetration test
SPT(C) - SPT using cone

GROUNDWATER

Groundwater strike
Groundwater rest level

ROTARY CORE DETAILS

TCR - Total core recovery (%)
SCR - Solid core recovery (%)
RQD - Rock quality designation (%)
FI - Fracture index
NI - Non-intact core
AZCL - Assumed zone of core loss

LEGEND

Topsoil
Peat
Made ground [cohesive]
Concrete
Wood
Brick
Bituminous material
Gypsum
Coal
Void
Clay
Silt
Sand
Gravel
Cobbles
Boulders
Mudstone
Siltstone
Sandstone
Limestone
Chalk
Breccia
Conglomerate
Metamorphic
Igneous
Sand backfill
Gravel backfill
Arisings
Bentonite
Concrete
Grout
Plain pipe
Slotted pipe

Dynamic (Windowless) Sampler

WS01
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	218746.00	246855.00	41.12	1:35

Project Name	Project No.	Start Date	End Date
Cardigan	941.02	2025-10-23	2025-10-23

Client
Lidl Great Britain Ltd

Consultant
Remada Ltd

Contractor

Inst/ Backfill	Water Levels	Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Legend	Description
						(0.22)		MADE GROUND: Concrete with rebar.
					40.90	0.22		*rebar encountered. (0.09m)*
								gas membrane. (0.21m)
						(0.58)		MADE GROUND: Grey gravelly slightly clayey sand. Gravel is angular to subangular fine to coarse concrete, brick and mudstone.
		0.70	ES					
		0.70	WAC		40.32	0.80		*small sheet of plastic. (0.50m)*
		1.00	SPT(C)	N=28 (5,6/5,5,10,8) N60=45		(0.50)		MADE GROUND: Firm greyish brown slightly sandy gravelly clay. Gravel is angular to subangular fine to coarse concrete, asphalt, brick and mudstone.
					39.82	1.30		MADE GROUND: Dark grey sandy slightly clayey gravel. Gravel is angular to subangular fine to coarse mudstone, slate and concrete.
		1.80	HV	87 (kPa)				
		2.00	SPT(C)	N=23 (5,5/5,6,5,7) N60=37				*becoming very sandy. (2.00 - 2.60m)*
						(1.90)		
								pocket of slate. (2.80 - 3.00m)
		3.00	SPT(C)	N=15 (6,5/3,4,4,4) N60=24				
					37.92	3.20		Stiff to verystiff brown slightly sandy slightly gravelly silty CLAY. Gravel is subangular to subrounded fine to coarse mudstone.
		3.60	D					
		4.00	SPT(C)	N=24 (3,4/5,6,6,7) N60=38				
		4.00-5.00	B					
						(2.80)		
		4.80	HV	102 (kPa)				
		5.00	SPT(C)	N=28 (4,4/7,6,7,8) N60=45				
		5.00-6.00	B					
		6.00	SPT(C)	N=50 for 290mm (8,8/12,14,13,11 for 65mm) N60=80	35.12	6.00		*End of Borehole at 6.00m*

Remarks
1) Location CAT scanned prior to drilling. 2) No groundwater encountered during drilling. 3) Borehole installation with monitoring well upon completion.

Method, Plant, Stability, Dimensions
0.00 - 6.00m WLS Window Sampler

Logger
JH

Checked By: Peter Searing **Approved By:** Peter Searing **Status:** FINAL

SPT N60 = N(raw) * (Hammer Energy Ratio / 60) to nearest whole number

Dynamic (Windowless) Sampler

WS02
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	218763.00	246844.00	41.20	1:35

Project Name	Project No.	Start Date	End Date
Cardigan	941.02	2025-10-23	2025-10-23

Client
Lidl Great Britain Ltd

Consultant
Remada Ltd

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
						(0.22)		MADE GROUND: Concrete with rebar.
					40.98	0.22		*rebar encountered. (0.08m)*
						(0.38)		*gas membrane. (0.21m)*
								MADE GROUND: Grey gravelly slightly clayey sand. Gravel is angular to subangular fine to coarse concrete, brick and mudstone.
		0.70	ES		40.60	0.60		
		0.70	WAC			(0.40)		MADE GROUND: Light grey sandy gravel. Gravel is angular to subangular fine to coarse concrete and mudstone.
		1.00	SPT(C)	N=29 (6,6/6,9,8,6) N60=46	40.20	1.00		
						(0.40)		MADE GROUND: Firm greyish brown slightly sandy gravelly clay. Gravel is angular to subangular fine to coarse slate, mudstone and brick.
								no recovery. (1.00 - 1.25m)
		1.50	D		39.80	1.40		
						(0.40)		MADE GROUND: Grey gravelly slightly clayey sand. Gravel is angular to subangular fine to coarse slate, concrete and mudstone.
		2.00	SPT(C)	N=17 (6,4/4,4,4,5) N60=27	39.40	1.80		Firm greyish brown slightly sandy gravelly silty CLAY. Gravel is angular to subangular fine to coarse mudstone and slate.
		2.50	D			(1.20)		
		2.90	HV	39 (kPa)				*pocket of slate. (2.80 - 3.00m)*
		2.90	D		38.20	3.00		
		3.00	SPT(C)	N=19 (3,2/5,5,4,5) N60=30				Stiff brown slightly sandy slightly gravelly silty CLAY. Gravel is angular to subangular fine to coarse mudstone.
								no recovery. (3.00 - 3.50m)
	▽	4.00	SPT(C)	N=17 (2,3/3,3,5,6) N60=27				
		4.00-5.00	B					
		4.40	HV	76 (kPa)				
		4.90	HV	73 (kPa)				
		5.00	SPT(C)	N=19 (3,3/4,4,5,6) N60=30		(4.00)		*no recovery. (5.00 - 7.00m)*
		6.00	SPT(C)	N=20 (3,4/4,5,5,6) N60=32				
		7.00	SPT(C)	N=21 (4,4/4,5,5,7) N60=34	34.20	7.00		*End of Borehole at 7.00m*

Remarks
1) Location CAT scanned prior to drilling. 2) Groundwater encountered at 3.9m bgl. 3) Borehole installation with monitoring well upon completion.

Method, Plant, Stability, Dimensions
0.00 - 7.00m WLS Window Sampler

Logger
JH

Checked By: Peter Searing **Approved By:** Peter Searing **Status:** FINAL

SPT N60 = N(raw) * (Hammer Energy Ratio / 60) to nearest whole number

Dynamic (Windowless) Sampler

WS03
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	218752.00	246828.00	40.96	1:35

Project Name	Project No.	Start Date	End Date
Cardigan	941.02	2025-10-22	2025-10-22

Client Lidl Great Britain Ltd

Consultant Remada Ltd

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
						(0.23)		MADE GROUND: Concrete with rebar.
					40.73	0.23		*rebar encountered. (0.06 - 0.08m)*
								gas membrane. (0.22m)
		0.50	ES			(0.52)		MADE GROUND: Grey sandy slightly clayey gravel. Gravel is angular to subangular fine to coarse mudstone and concrete.
		0.50	WAC					
					40.21	0.75		
		0.90	HV	81 (kPa)				MADE GROUND: Firm yellowish brown slightly sandy gravelly clay. Gravel is angular to subangular fine to coarse brick and mudstone.
		1.00	SPT(C)	N=33 (1,2/4,5,9,15) N60=53		(0.70)		
					39.51	1.45		MADE GROUND: Greyish brown sandy slightly clayey gravel. Gravel is angular to subangular fine to coarse brick, concrete, mudstone and slate.
						(0.55)		
		2.00	SPT(C)	N=37 (10,10/9,10,9,9) N60=59	38.96	2.00		Brownish grey sandy clayey GRAVEL. Gravel is fine to coarse, angular to subangular slate and mudstone.
		2.00-3.00	B			(0.70)		
					38.26	2.70		Firm brown sandy gravelly silty CLAY. Gravel is angular to subrounded fine to coarse mudstone.
		3.00	SPT(C)	N=16 (2,5/7,4,3,2) N60=26				*no recovery. (3.00 - 3.55m)*
	▽							
		4.00	SPT(C)	N=12 (2,2/3,3,3,3) N60=19				*no recovery. (4.00 - 4.80m)*
						(4.30)		
		5.00	SPT(C)	N=12 (2,1/2,3,3,4) N60=19				*no recovery. (5.00 - 5.90m)*
		5.80	D					
		6.00	SPT(C)	N=20 (5,4/4,5,5,6) N60=32				*no recovery. (6.00 - 7.00m)*
		7.00	SPT(C)	N=20 (3,4/4,5,5,6) N60=32	33.96	7.00		*End of Borehole at 7.00m*

Remarks
1) Location CAT scanned prior to drilling. 2) Groundwater encountered at 3.8m bgl. 3) Borehole backfilled with arisings upon completion.

Method, Plant, Stability, Dimensions
0.00 - 7.00m WLS Window Sampler

Logger
JH

Checked By: Peter Searing **Approved By:** Peter Searing **Status:** FINAL

SPT N60 = N(raw) * (Hammer Energy Ratio / 60) to nearest whole number

Dynamic (Windowless) Sampler

WS04

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	218762.00	246820.00	40.45	1:35

Project Name	Project No.	Start Date	End Date
Cardigan	941.02	2025-10-22	2025-10-22

Client
Lidl Great Britain Ltd

Consultant
Remada Ltd

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
						(0.22)		MADE GROUND: Concrete with rebar.
					40.23	0.22		*rebar encountered. (0.05 - 0.11m)*
						(0.40)		*gas membrane. (0.21m)*
					39.83	0.62		MADE GROUND: Grey sandy slightly clayey gravel. Gravel is angular to subangular fine to coarse mudstone and concrete.
						(0.33)		MADE GROUND: Grey gravelly slightly clayey sand. Gravel is angular to subangular fine to coarse mudstone and concrete.
		1.00	SPT(C)	N=13 (1,1/2,3,4,4) N60=21	39.50	0.95		MADE GROUND: Stiff yellowish brown slightly sandy slightly gravelly clay. Gravel is angular to subangular fine to coarse mudstone.
		1.10	HV	106 (kPa)				
		1.20	D			(0.50)		
					39.00	1.45		MADE GROUND: Stiff greyish brown sandy gravelly clay. Gravel is angular to subangular fine to coarse brick, slate, mudstone and concrete.
		1.70	ES					
		1.70	WAC			(0.55)		
		2.00	SPT(C)	N=50 for 285mm (11,13/13,13,13,11 for 60mm) N60=80	38.45	2.00		MADE GROUND: Yellowish brown gravelly very clayey SAND. Gravel is angular to subangular fine to coarse brick, asphalt and mudstone.
						(0.20)		
					38.25	2.20		*End of Borehole at 2.20m*

Remarks
1) Location CAT scanned prior to drilling. 2) No groundwater encountered during drilling. 3) Borehole backfilled with arisings upon completion.

Method, Plant, Stability, Dimensions
0.00 - 2.20m WLS Window Sampler

Logger
JH

Checked By: Peter Searing **Approved By:** Peter Searing **Status:** FINAL

SPT N60 = N(raw) * (Hammer Energy Ratio / 60) to nearest whole number

Created using Pebble Geo

Dynamic (Windowless) Sampler

WS05

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	218781.00	246821.00	41.34	1:35

Project Name	Project No.	Start Date	End Date
Cardigan	941.02	2025-10-23	2025-10-23

Client
Lidl Great Britain Ltd

Consultant
Remada Ltd

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
		0.07	ES		41.20	(0.14) 0.14		MADE GROUND: Asphalt.
						(0.56)		MADE GROUND: Grey gravelly sand. Gravel is angular to subangular fine to coarse concrete, brick, sandstone and mudstone. *no recovery. (0.14 - 0.40m)*
		0.70	SPT(C)	N=50 for 125mm (25 for 60mm/26,24 for 50mm) N60=80	40.64	0.70		*End of Borehole at 0.70m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0

Remarks
1) Location CAT scanned prior to drilling. 2) No groundwater encountered during drilling. 3) Borehole backfilled with arisings upon completion. 4) Termination due to concrete obstruction.

Method, Plant, Stability, Dimensions
0.00 - 0.70m WLS Window Sampler

Logger
JH

Checked By: Peter Searing **Approved By:** Peter Searing **Status:** FINAL

SPT N60 = N(raw) * (Hammer Energy Ratio / 60) to nearest whole number

Dynamic (Windowless) Sampler

WS05a
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	218765.00	246841.00	41.15	1:35

Project Name	Project No.	Start Date	End Date
Cardigan	941.02	2025-10-23	2025-10-23

Client
Lidl Great Britain Ltd

Consultant
Remada Ltd

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(0.27)		MADE GROUND: Asphalt.
					40.88	0.27		MADE GROUND: Stiff grey sandy gravelly clay. Gravel is angular to subangular fine to coarse slate, concrete, mudstone and sandstone.
		0.60	SPT(C)	N=50 for 145mm (25 for 65mm/27,23 for 70mm) N60=80		(0.33)		
		0.60	D		40.55	0.60		*End of Borehole at 0.60m*

Remarks
1) Location CAT scanned prior to drilling. 2) No groundwater encountered during drilling. 3) Borehole backfilled with arisings upon completion. 4) Termination due to concrete obstruction.

Method, Plant, Stability, Dimensions
0.00 - 0.60m WLS Window Sampler

Logger
JH

Checked By: Peter Searing **Approved By:** Peter Searing **Status:** FINAL

SPT N60 = N(raw) * (Hammer Energy Ratio / 60) to nearest whole number

Created using Pebble Geo

Dynamic (Windowless) Sampler

WS06
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	218784.00	246840.00	41.24	1:35

Project Name	Project No.	Start Date	End Date
Cardigan	941.02	2025-10-23	2025-10-23

Client
Lidl Great Britain Ltd

Consultant
Remada Ltd

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
		0.07	ES		41.10	(0.14) 0.14		MADE GROUND: Asphalt.
						(0.56)		MADE GROUND: Grey slightly sandy clayey gravel. Gravel is angular to subangular fine to coarse concrete, slate and mudstone.
					40.54	0.70		
		0.90	HV	68 (kPa)		(0.30)		MADE GROUND: Stiff greyish brown slightly sandy slightly gravelly clay. Gravel is angular to subangular fine to medium slate and mudstone.
		1.00	SPT(C)	N=7 (1,1/1,2,2,2) N60=11	40.24	1.00		MADE GROUND: Firm brown slightly sandy gravelly clay. Gravel is angular to subangular fine to coarse brick, mudstone, slate and porcelain.
						(1.10)		*no recovery. (1.00 - 1.30m)*
		2.00	SPT(C)	N=13 (2,2/2,3,4,4) N60=21	39.14	2.10		Stiff brown slightly sandy silty CLAY.
						(0.90)		
		2.70	D					
		2.80	HV	80 (kPa)				
		3.00	SPT(C)	N=14 (2,2/3,3,4,4) N60=22	38.24	3.00		Borehole advanced by continous SPT with no recovery attempted.
		3.50	SPT(C)	N=22 (4,4/5,5,6,6) N60=35				
						(1.50)		
		4.00	SPT(C)	N=31 (7,7/6,8,8,9) N60=50				
		4.50	SPT(C)	N=50 for 290mm (10,11/12,14,13,11 for 65mm) N60=80	36.74	4.50		*End of Borehole at 4.50m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0

Remarks
1) Location CAT scanned prior to drilling. 2) No groundwater encountered during drilling. 3) Drilling to 3.0m and continuous SPT to 5.0m or refusal because of time restraints due to working at night. 4) Backfilled with arisings.

Method, Plant, Stability, Dimensions
0.00 - 4.50m WLS Window Sampler

Logger
JH

Checked By: Peter Searing **Approved By:** Peter Searing **Status:** FINAL

SPT N60 = N(raw) * (Hammer Energy Ratio / 60) to nearest whole number

Created using Pebble Geo

Dynamic (Windowless) Sampler

WS07
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	218801.00	246831.00	41.50	1:35

Project Name	Project No.	Start Date	End Date
Cardigan	941.02	2025-10-22	2025-10-22

Client
Lidl Great Britain Ltd

Consultant
Remada Ltd

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
						(0.19)		MADE GROUND: Asphalt.
					41.31	0.19		MADE GROUND: Grey slightly sandy slightly clayey gravel. Gravel is angular to subangular fine to coarse mudstone and sandstone.
						(0.31)		
					41.00	0.50		MADE GROUND: Grey slightly sandy gravel. Gravel is angular to subangular fine to coarse slate, mudstone and concrete.
						(0.50)		
		1.00	SPT(C)	N=4 (1,0/1,1,0,2) N60=6	40.50	1.00		Stiff brown slightly sandy silty CLAY.
		1.60	D					
		2.00	SPT(C)	N=13 (1,2/2,3,4,4) N60=21		(2.00)		*no recovery. (2.00 - 3.00m)*
		3.00	SPT(C)	N=20 (3,3/4,5,5,6) N60=32	38.50	3.00		Borehole advanced by continous SPT with no recovery attempted.
		3.50	SPT(C)	N=30 (7,7/7,7,8,8) N60=48		(1.00)		
		4.00	SPT(C)	N=50 for 295mm (9,11/12,13,13,12 for 70mm) N60=80	37.50	4.00		*End of Borehole at 4.00m*

Remarks
1) Location CAT scanned prior to drilling. 2) No groundwater encountered during drilling. 3) Drilling to 3.0m and continuous SPT to 5.0m or refusal because of time restraints due to working at night. 4) Backfilled with arisings.

Method, Plant, Stability, Dimensions
0.00 - 4.00m WLS Window Sampler

Logger
JH

Checked By: Peter Searing **Approved By:** Peter Searing **Status:** FINAL

SPT N60 = N(raw) * (Hammer Energy Ratio / 60) to nearest whole number

Dynamic (Windowless) Sampler

WS08

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	218818.00	246857.00	41.30	1:35

Project Name	Project No.	Start Date	End Date
Cardigan	941.02	2025-10-22	2025-10-22

Client
Lidl Great Britain Ltd

Consultant
Remada Ltd

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
					41.14	(0.16) 0.16		MADE GROUND: Asphalt.
		0.60 0.60	ES WAC			(1.34)		MADE GROUND: Brownish grey very sandy slightly clayey gravel. Gravel is angular to subangular fine to coarse mudstone, sandstone and brick.
		1.00	SPT(C)	N=8 (1,1/2,2,2,2) N60=13				
		1.50	HV	80 (kPa)	39.80	1.50		Stiff greyish brown slightly sandy slghtly gravelly CLAY. Gravel is subangular fine to coarse mudstone.
		2.00	SPT(C)	N=15 (2,2/3,3,4,5) N60=24		(1.50)		*no recovery. (2.60 - 3.00m)*
		3.00	SPT(C)	N=24 (5,5/5,6,6,7) N60=38	38.30	3.00		Borehole advanced by continous SPT with no recovery attempted.
		3.50	SPT(C)	N=40 (7,7/10,10,10,10) N60=64		(1.00)		
		4.00	SPT(C)	N=50 for 275mm (11,12/12,14,15,9 for 50mm) N60=80	37.30	4.00		*End of Borehole at 4.00m*

Remarks
1) Location CAT scanned prior to drilling. 2) No groundwater encountered during drilling. 3) Drilling to 3.0m and continuous SPT to 5.0m or refusal because of time restraints due to working at night. 4) Backfilled with arisings.

Method, Plant, Stability, Dimensions
0.00 - 4.00m WLS Window Sampler

Logger
JH

Checked By: Peter Searing **Approved By:** Peter Searing **Status:** FINAL

SPT N60 = N(raw) * (Hammer Energy Ratio / 60) to nearest whole number

Created using Pebble Geo

Dynamic (Windowless) Sampler

WS09
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	218835.00	246841.00	41.84	1:35

Project Name	Project No.	Start Date	End Date
Cardigan	941.02	2025-10-22	2025-10-22

Client Lidl Great Britain Ltd

Consultant Remada Ltd

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
					41.66	(0.18) 0.18		MADE GROUND: Asphalt.
						(0.57)		MADE GROUND: Grey sandy slightly clayey gravel. Gravel is angular to subangular fine to coarse mudstone and concrete.
		0.85	HV	58 (kPa)	41.09	0.75 (0.25)		Firm brownish grey gravelly sandy CLAY. Gravel is subangular to subrounded fine to coarse mudstone, sandstone and quartz.
		1.00	SPT(C)	N=30 (3,4/5,7,8,10) N60=48	40.84	1.00		Very stiff brownish grey slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse mudstone, sandstone and quartz.
	▽	1.60	D			(1.00)		*no recovery. (1.00 - 1.65m)*
		1.90	HV	86 (kPa)				
		2.00	SPT(C)	N=23 (5,5/5,5,6,7) N60=37	39.84	2.00		Firm brownish grey very gravelly CLAY. Gravel is subangular to subrounded fine to coarse mudstone, sandstone and quartz.
		2.70	D					*no recovery. (2.00 - 2.45m)*
		3.00	SPT(C)	N=18 (4,4/5,4,4,5) N60=29		(2.00)		Borehole advanced by continous SPT with no recovery attempted.
		3.50	SPT(C)	N=29 (5,6/6,6,8,9) N60=46				
		4.00	SPT(C)	N=50 for 290mm (9,10/12,14,13,11 for 65mm) N60=80	37.84	4.00 (1.00) 4.00		*End of Borehole at 4.00m*

Remarks
1) Location CAT scanned prior to drilling. 2) Groundwater encountered at 1.65m bgl. 3) Drilling to 3.0m and continuous SPT to 5.0m or refusal because of time restraints due to working at night. 4) Backfilled with arisings.

Method, Plant, Stability, Dimensions
0.00 - 4.00m WLS Window Sampler

Logger JH

Checked By: Peter Searing **Approved By:** Peter Searing **Status:** FINAL

SPT N60 = N(raw) * (Hammer Energy Ratio / 60) to nearest whole number

Created using Pebble Geo

APPENDIX A

SPT Hammer Energy Test Certificate

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

Socotec uk
Progress close
Binley
Coventry
CV3 2TF

SPT Hammer Ref:	110.80
Test Date:	30/01/2025
Report Date:	30/01/2025
File Name:	110.80.spt
Test Operator:	DP

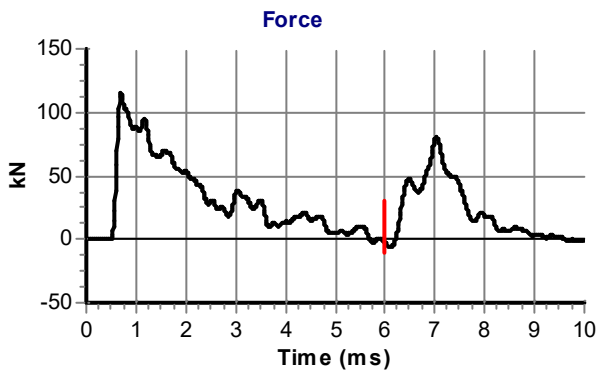
Instrumented Rod Data

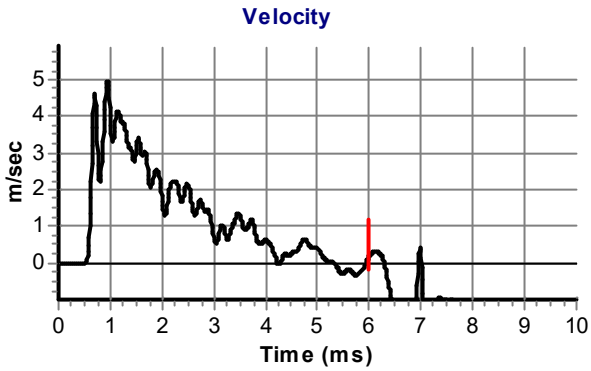
Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.0
Assumed Modulus E_a (GPa):	208
Accelerometer No.1:	72570
Accelerometer No.2:	72571

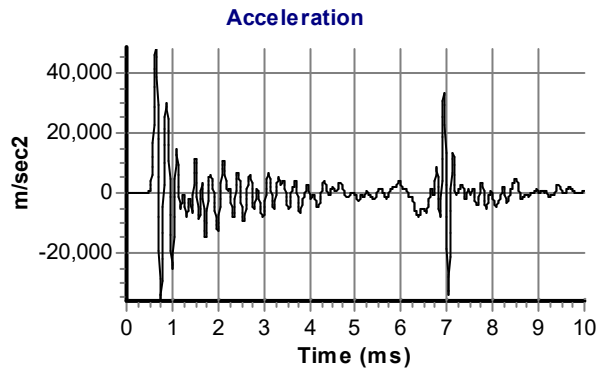
SPT Hammer Information

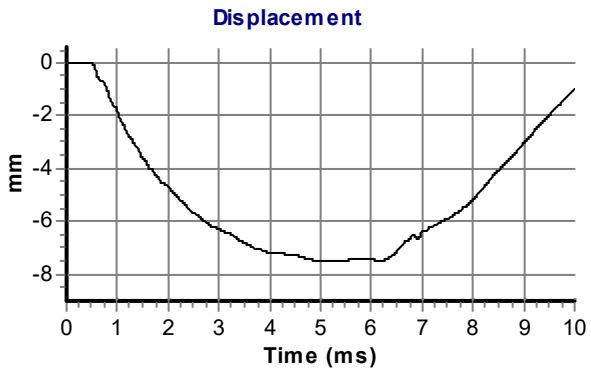
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	12.6

Comments / Location









Calculations

Area of Rod A (mm2):	905
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	453

Energy Ratio E_r (%): **96**

Signed: D Perrett

Title: Drilling Supervisor

APPENDIX B

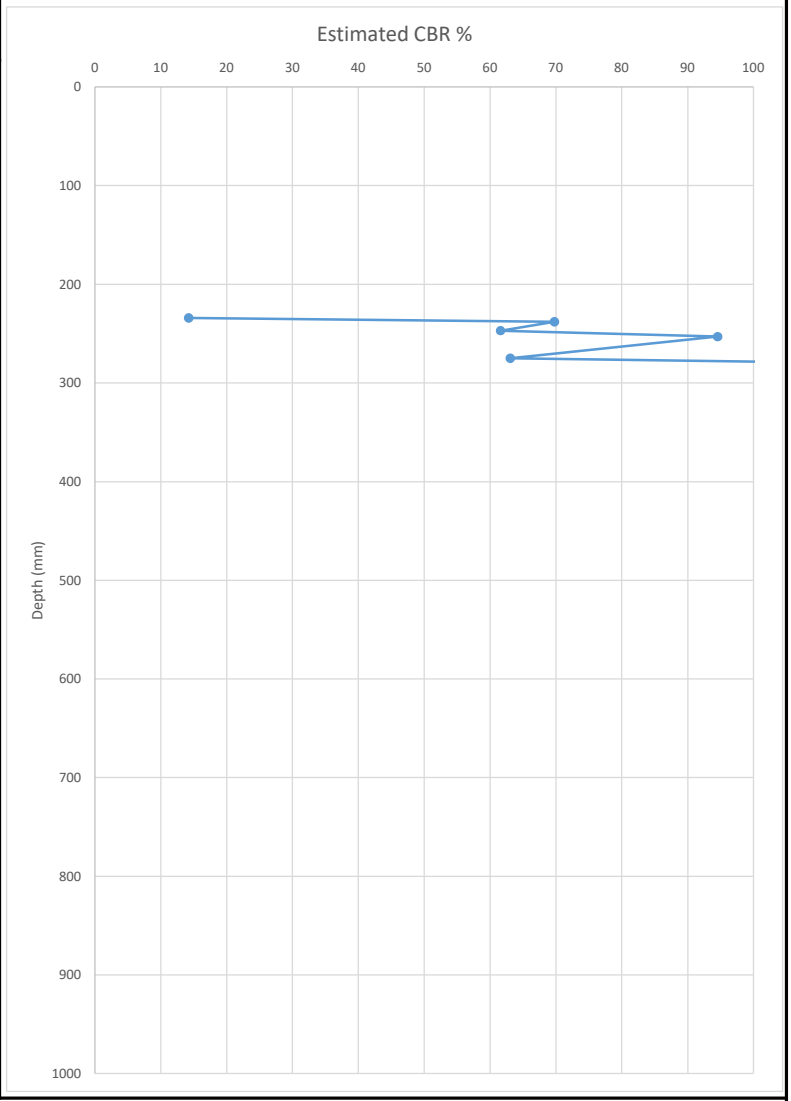
Dynamic Cone Penetrometer (DCP) Test Results

TRL Dynamic Cone Penetrometer Test Results

REMADA GEO CONSULTANTS

Client:	**Lidl Great Britain Ltd**	**Site Location:**	**Cardigan**	**Test No:**	**CBR1**	**Location:**	218784 246840
Project No:	**941.02**	**Date:**	**23.10.2025**	**Start Depth:**	**0.14m bgl**	**Test Strata:**	sandy clayey GRAVEL
Log10(CBR) = 2.480-1.057 x Log10(mm/blow)						**Weather:**	Dry Dark

No of Blows	Depth Reading mm	Penetration/Blow mm	CBR %
0	216	0	
1	234	18.0	14.2
2	238	4.0	69.8
4	247	4.5	61.6
6	253	3.0	94.6
11	275	4.4	63.1
16	284	1.8	162.2
26	295	1.1	273.1
36	305	1.0	302.0
46	314	0.9	337.6



Notes:

Tested by : J Hughes
Date: 23.10.25

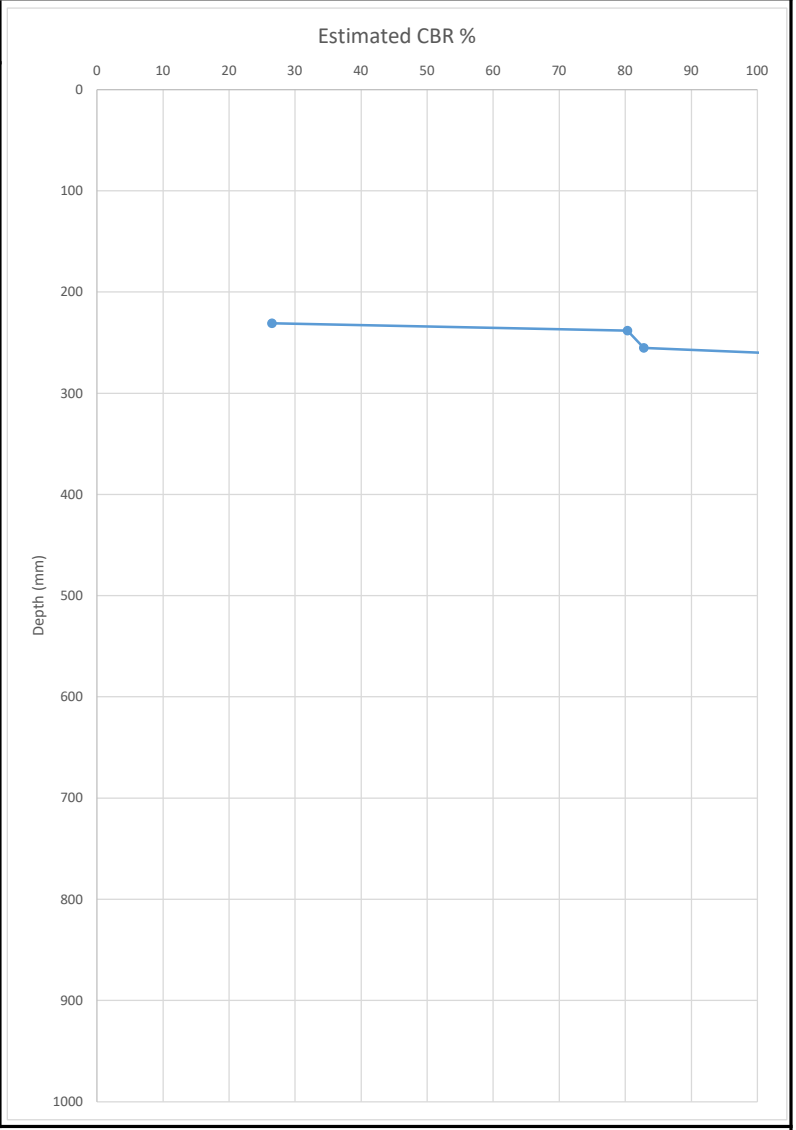
Checked by: P Searing
Date: 05.12.25

TRL Dynamic Cone Penetrometer Test Results

REMADA GEO CONSULTANTS

Client:	**Lidl Great Britain Ltd**	**Site Location:**	**Cardigan**	**Test No:**	**CBR2**	**Location:**	218801 246831
Project No:	**941.02**	**Date:**	**22.10.2025**	**Start Depth:**	**0.19m bgl**	**Test Strata:**	sandy clayey GRAVEL
Log10(CBR) = 2.480-1.057 x Log10(mm/blow)						**Weather:**	Dry Dark

No of Blows	Depth Reading mm	Penetration/Blow mm	CBR %
0	221	0	
1	231	10.0	26.5
3	238	3.5	80.3
8	255	3.4	82.8
18	274	1.9	153.2
28	291	1.7	172.4
38	304	1.3	228.9
48	309	0.5	628.3



Notes:

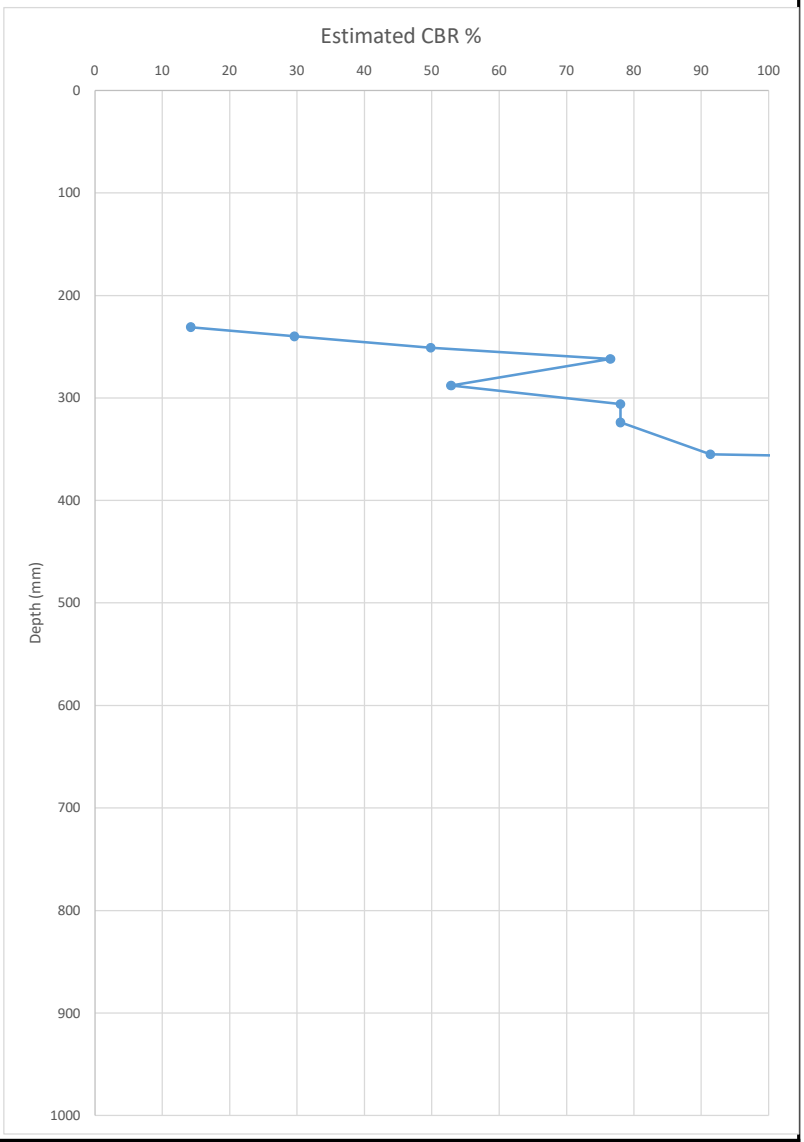
Tested by J Hughes
Date: 22.10.25

Checked by: P Searing
Date: 05.12.25

TRL Dynamic Cone Penetrometer Test Results

Client:	**Lidl Great Britain Ltd**	**Site Location:**	**Cardigan**	**Test No:**	**CBR3**	**Location:**	218818 246857
Project No:	**941.02**	**Date:**	**22.10.2025**	**Start Depth:**	**0.16m bgl**	**Test Strata:**	sandy clayey GRAVEL
Log10(CBR) = 2.480-1.057 x Log10(mm/blow)						**Weather:**	Dry Dark

No of Blows	Depth Reading mm	Penetration/Blow mm	CBR %
0	213	0	
1	231	18.0	14.2
2	240	9.0	29.6
4	251	5.5	49.8
7	262	3.7	76.5
12	288	5.2	52.9
17	306	3.6	78.0
22	324	3.6	78.0
32	355	3.1	91.3
42	369	1.4	211.6



Notes:

Tested by J Hughes
Date: 22.10.25

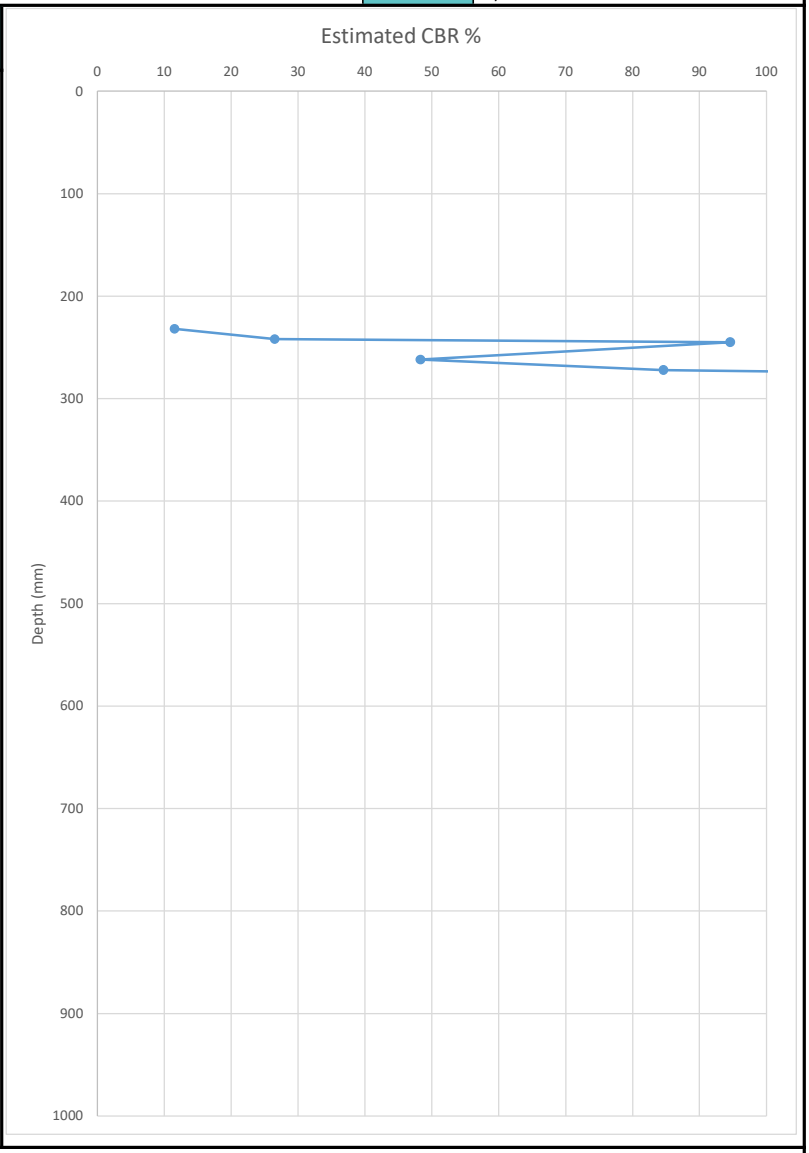
Checked by: P Searing
Date: 05.12.25

TRL Dynamic Cone Penetrometer Test Results

REMADA GEO CONSULTANTS

Client:	**Lidl Great Britain Ltd**	**Site Location:**	**Cardigan**	**Test No:**	**CBR4**	**Location:**	218835 246841
Project No:	**941.02**	**Date:**	**22.10.2025**	**Start Depth:**	**0.18m bgl**	**Test Strata:**	sandy clayey GRAVEL
Log10(CBR) = 2.480-1.057 x Log10(mm/blow)						**Weather:**	Dry Dark

No of Blows	Depth Reading mm	Penetration/Blow mm	CBR %
0	210	0	
1	232	22.0	11.5
2	242	10.0	26.5
3	245	3.0	94.6
6	262	5.7	48.3
9	272	3.3	84.6
14	280	1.6	183.8
19	292	2.4	119.7
24	305	2.6	110.0
34	317	1.2	249.1
44	325	0.8	382.3



Notes:

Tested by J Hughes
Date: 22.10.25

Checked by: P Searing
Date: 05.12.25

APPENDIX C

Gas Analyser Calibration Certificate

TEST DATE AND CONDITIONS		
Date	11/04/2025	
Atmospheric Pressure	1005	mB
Ambient Temperature	21.3	°C
Environics Serial No.	9370	

GFM436 Final Inspection & Calibration Check Certificate

GAS DATA LTD
Unit D
Earlplace Business Park
Fletchamstead Highway
Coventry
CV4 9XL
Tel 02476303311 Fax 02476307711

Customer	Remada Ltd
Certificate Number	126129
Order Number	342447

Serial Number	14048
Software Version	G436-00.0029/0010

Recalibration DUE Date
11/04/26

Instrument Checks					
Keyboard	✓		Display Contrast	✓	
Pump Flow In	500	*Accept > 200 cc/min*	Pump Flow @ -200mB	300	*Accept > 200 cc/min*
Clock Set / Running	✓		Labels Fitted	✓	

Gas Checks						
Sensor	CH_4		CO_2		O_2	
	Instrument Gas Readings %	True Gas Value %	Instrument Gas Readings %	True Gas Value %	Instrument Gas Readings %	True Gas Value %
	59.8 *Accept ±3.0*	*60*	39.5 *Accept ±3.0*	*40*	20.9 *Accept ±0.5*	*20.9*
	5.0 *Accept ±0.3*	*5*	5.0 *Accept ±0.3*	*5*	6.0 *Accept ±0.3*	*6*
Zero Reading 100% N2	0.0 *Accept ±0.0*	*0*	0.0 *Accept ±0.0*	*0*	0.0 *Accept ±0.1*	*0*

Optional Gas Checks						
Applied Gas & Range		Concentration Tested @ (ppm)	Instrument Readings *(ppm)*			
			Zero Reading		Instrument Gas Reading	
Gas Type	Range *(ppm)*					
H2S	5000	*1500*	0	*Accept ±0.0*	1500	*Accept ±5.0%*
CO	2000	*1000*	0	*Accept ±0.0*	1003	*Accept ±5.0%*
Hexane	*2.0%*	2.0%	0	*Accept ±0.0*	1.99	*Accept ±10.0%*

Cross Gas Effects									
Applied Gas *(ppm)*		Instrument Readings *(ppm)*							
Gas Type	Concentration	Toxic 1:	H2S	Toxic 2:	CO	Toxic 3:	HEX		
H2S	*1500*	1500		0		0			
CO	*1000*	90		1003		0			
Hexane	*2.0%*	0		0		1.99			

Pressure Checks			
Atmospheric Pressure [AP] *(mB)*			
Current Atmospheric Pressure (mB)		Instrument Atmospheric Pressure Reading (mB)	
AP Open Ports		1005	*Accept ±2.0*
AP Port (Internal)	*+800 mB*	800	*Accept ±5.0*
	+1200mb	1200	*Accept ±5.0*

Flow Checks					
Borehole Flow			Differential Pressure		
Applied Reading *(l/h)*	Instrument Reading *(l/h)*		Applied Pressure *(Pa)*	Instrument Reading *(Pa)*	
-30	-30.1	*Accept ±3.0*	-391	-397	*Accept ±50*
-3	-3.0	*Accept ±1.0*	-17	-18	*Accept ±6.0*
0	0.0	*Accept ±0.0*	0	0	*Accept ±0.5*
3	3.0	*Accept ±0.5*	15	16	*Accept ±3.0*
30	30.0	*Accept ±3.0*	344	344	*Accept ±50*
60	60.2	*Accept ±6.0*	1081	1098	*Accept ±130*
90	91.6	*Accept ±9.0*	2141	2238	*Accept ±250*

Temperature Checks		
Calibration Temperature Applied Temperature °C	Instrument Temperature Reading °C	
-10	-10.0	*Accept ±2.0*
0	0.0	*Accept ±1.0*
30	30.0	*Accept ±1.0*
60	60.0	*Accept ±1.0*
100	100.0	*Accept ±1.0*

Technician:	Date Tested:
Jack Rutland	*11/04/2025*

The instrument identified by the serial number stated above has been tested by Gas Data personnel for calibration accuracy on the date and under the ambient conditions stated. Gas Data Ltd internal BS EN ISO9001:2015, BS EN ISO14001:2015, BS EN ISO45001:2018 compliant workshop procedures were followed to apply known calibration test gases, gas flow rates, pressures and temperatures of the values stated. The results displayed on the instrument at each stage are recorded above.

Gas Data Ltd is certified to BS EN ISO9001:2015, BS EN ISO14001:2015, BS EN ISO45001:2018.

TEST DATE AND CONDITIONS		
Date	11.4.25	
Atmospheric Pressure	1005	mB
Ambient Temperature	21.3	°C
Environics Serial No.	5089	

GAS DATA LTD
Unit D
Earlplace Business Park
Fletchamstead Highway
Coventry
CV4 9XL
UK +44 (0) 24 7630 3311

GAS DATA
LISTEN · ANALYSE · INFORM

GFM436-1 OUTWARD INSPECTION & QUALITY CHECK SHEET

INSTRUMENT DETAILS			
SO Number	Instrument Type	Instrument Serial Number + SW Version	Job Number(s)
342447	GFM436	140488 G436-29/10	126129

Calibration Technician ..... **Date** 11.4.25

Inspection Technician J. Williams **Date** 15-Ci-23

INSTRUMENT CHECKS		Pass (P), Fail (F) or not applicable (NA)	INSTRUMENT PACKING LIST	Tick if included
Function Tests	Dust Caps Fitted	P	Instrument	✓
	Keyboard Test (All Keys)	P	Leather Case	✓
	Backlight	P	Instrument Strap	✓
	Clock Set / Running	P	AC Battery Charger (UK)	✓
	Comms Test	P	AC Battery Charger (EURO)	X
	Pump Flow Test (In & Out)	P	AC Battery Charger (US)	X
	Overall Leak Test (30mB)	n/a	AC Battery Charger (AUS)	X
	Battery Charge Test	P	Gas Sample Pipe - *(new issue)*	✓
	Service Date set to?	11/04/26	Flow Sample Pipe - *(new issue)*	✓
Channel Tests	Data Logging Enabled?	P	Hard Carry Case	✓
	Verify CH4/LEL/Hexane/PID	P	Spares Pot	✓
	Verify CO2	P	Allen Key	✓
	Verify O2	P	Temperature Probe	X
	Verify H2S	P	Vane Anemometer	X
	Verify CO	P	USB Cable	X
	Verify LEL	P	USB Memory stick	X
	Verify 1st Option Gas	N/A	SM V5 Software Ver 6.05	X
	Verify Atmospheric pressure	P	Internal Filter Pack Qty	X
	Verify differential pressure	P	External Filter Pack Qty	X
	Verify flow	P	Field Guide	X
	Verify temperature probe input	P	**Extra Items:** USED TUBING. TAG.	
	Verify vane anemometer input	P		
DataBase Checks	Jobcard(s) completed and signed	P		
	Jobcard(s) booked off database	P		
	Calibration certificate completed	P		
	Complete & print QI record	n/a		
Label Checks	No. of Calibration label fitted	GDC 13791	**Comments:** N/A	
	MCERTS label displayed	P		
	Warranty label fitted	P		
H2S Range	H2S Range from Sales Order	5000 ppm		
	H2S Range from Cal Cert	5000 ppm		
	Over-range value correct?	P		
QA Cylinders Used	No. of High Range CH4/CO2	SIPLYLIO - 56779		
	No. of Low Range CH4/CO2/O2	" - 69849		
	No. of H2S	" C037295		
	No. of CO	" - 69834		
	No. of Optional Cylinder	N/A		

APPENDIX D

Laboratory Chemical Analysis

Remada Ltd
Forward House
17 High Street
Henley-in-Arden
Warwickshire
B955AA

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joe.hughes@remada.co.uk

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: info-i2analytical@normecgroup.com

Analytical Report Number : 25-058455

Project / Site name:	Cardigan	**Samples received on:**	24/10/2025
Your job number:	941.02	**Samples instructed on/ Analysis started on:**	28/10/2025
Your order number:	941.02	**Analysis completed by:**	07/11/2025
Report Issue Number:	1	**Report issued on:**	07/11/2025
Samples Analysed:	7 soil samples - 3 leachate samples		

Signed:

Dominika Liana
Junior Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting
air	- once the analysis is complete

Excel copies of reports are only valid when accompanied by this PDF certificate.

Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 25-058455
Project / Site name: Cardigan
Your Order No: 941.02

Lab Sample Number				732028	732029	732030	732031	732032
Sample Reference				WS01	WS02	WS03	WS04	WS08
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.70	0.70	0.50	1.70	0.60
Date Sampled				24/10/2025	24/10/2025	23/10/2025	23/10/2025	23/10/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Stone Content	%	0.1	NONE	43.6	56.6	89.6	16.8	56.4
Moisture Content	%	0.01	NONE	3.1	1	1.9	13	3.9
Total mass of sample received	kg	0.1	NONE	2	2	2	2	2

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	KJK	KJK	KJK	KJK	KJK
Analysis completed	N/A	N/A	N/A	05/11/2025	05/11/2025	05/11/2025	05/11/2025	05/11/2025

General Inorganics

pH (L005B)	pH Units	N/A	MCERTS	9.1	-	-	8.3	7.9
pH (L099)	pH Units	N/A	MCERTS	8.9	8.4	8.4	9.2	7.9
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO_4	%	0.005	MCERTS	-	-	-	0.104	-
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-	-	-	440	-
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	218	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	-	-	23	-
Total Sulphur	mg/kg	50	MCERTS	-	-	-	710	-
Total Sulphur	%	0.005	MCERTS	-	-	-	0.071	-
Ammoniacal Nitrogen as NH_4^+	mg/kg	0.5	MCERTS	-	-	-	< 0.5	-
Ammonium as NH_4^+ (10:1 leachate equivalent)	mg/l	0.05	MCERTS	-	-	-	< 0.05	-
Fraction Organic Carbon (FOC) Automated	N/A	0.001	MCERTS	0.001	< 0.0010	< 0.0010	0.013	< 0.0010
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	0.1	-	-	1.3	< 0.1
Loss on Ignition @ 450°C	%	0.2	MCERTS	0.4	-	-	3.7	0.7
Water Soluble Nitrate (2:1) as NO_3	mg/kg	2	NONE	-	-	-	21	-
Water Soluble Nitrate (2:1) as NO_3 (leachate equivalent)	mg/l	5	NONE	-	-	-	10	-
Acid Neutralisation Capacity	+/- mmol/kg	-9999	NONE	51	-	-	16	12

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Analytical Report Number: 25-058455
Project / Site name: Cardigan
Your Order No: 941.02

Lab Sample Number				732028	732029	732030	732031	732032
Sample Reference				WS01	WS02	WS03	WS04	WS08
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.70	0.70	0.50	1.70	0.60
Date Sampled				24/10/2025	24/10/2025	23/10/2025	23/10/2025	23/10/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.07	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.1	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.43	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	2.2	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.7	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.2	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.1	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	1.2	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	0.52	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.95	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.42	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.13	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.45	< 0.05
Coronene	mg/kg	0.05	NONE	< 0.05	-	-	0.12	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	11.4	< 0.80
Total WAC-17 PAHs	mg/kg	0.85	NONE	< 0.85	-	-	11.5	< 0.85
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	5.1	3.9	< 1.0	17	3.4
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.17	0.11	0.23	0.7	0.42
Boron (water soluble)	mg/kg	0.2	MCERTS	0.4	0.5	0.4	1	0.6
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.2	< 0.2	0.5	0.2	0.4
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (III)	mg/kg	1	NONE	6.5	6.4	5	29	6.9
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	6.5	6.4	5	29	6.9
Copper (aqua regia extractable)	mg/kg	1	MCERTS	9.4	17	5.1	44	9.6
Lead (aqua regia extractable)	mg/kg	1	MCERTS	3.1	4.1	1.5	88	3.5
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	4.7	3.5	3.1	22	6.9
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	6	5.4	3.7	37	5.5
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	9.1	15	8.2	120	8.3
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	-	-	3.5	-
Magnesium (water soluble)	mg/kg	5	NONE	-	-	-	6.9	-

Analytical Report Number: 25-058455
Project / Site name: Cardigan
Your Order No: 941.02

Lab Sample Number				732028	732029	732030	732031	732032
Sample Reference				WS01	WS02	WS03	WS04	WS08
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.70	0.70	0.50	1.70	0.60
Date Sampled				24/10/2025	24/10/2025	23/10/2025	23/10/2025	23/10/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Petroleum Hydrocarbons								
TPHCWG - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 $_{EH\_CU\_1D\_AL}$	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 $_{EH\_CU\_1D\_AL}$	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >EC21 - EC35 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	40	< 8.0	14	< 8.0	< 8.0
TPHCWG - Aliphatic >EC5 - EC35 $_{EH\_CU+HS\_1D\_AL}$	mg/kg	10	NONE	40	< 10	14	< 10	< 10
TPHCWG - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	mg/kg	0.02	MCERTS	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aromatic >EC10 - EC12 $_{EH\_CU\_1D\_AR}$	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 $_{EH\_CU\_1D\_AR}$	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	13	< 10	< 10	24	< 10
TPHCWG - Aromatic >EC5 - EC35 $_{EH\_CU+HS\_1D\_AR}$	mg/kg	10	NONE	13	< 10	< 10	24	< 10
Mineral Oil (EC10 - EC40) $_{EH\_CU\_1D\_AL}$	mg/kg	10	NONE	62	-	-	< 10	< 10
VOCs								
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total BTEX	µg/kg	10	MCERTS	< 10	-	-	< 10	< 10
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001	< 0.001
PCB Congener 52	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001	< 0.001
PCB Congener 101	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001	< 0.001
PCB Congener 118	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001	< 0.001
PCB Congener 138	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001	< 0.001
PCB Congener 153	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001	< 0.001
PCB Congener 180	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001	< 0.001
Total PCBs	mg/kg	0.007	MCERTS	< 0.007	-	-	< 0.007	< 0.007

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 25-058455
Project / Site name: Cardigan
Your Order No: 941.02

Lab Sample Number				732033	732034
Sample Reference				WS05	WS06
Sample Number				None Supplied	None Supplied
Water Matrix				N/A	N/A
Depth (m)				0.07	0.07
Date Sampled				24/10/2025	24/10/2025
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	0.15	0.42
Total mass of sample received	kg	0.1	NONE	0.4	0.4

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	-	-
Asbestos Analyst ID	N/A	N/A	N/A	-	-
Analysis completed	N/A	N/A	N/A	-	-

General Inorganics

pH (L005B)	pH Units	N/A	MCERTS	-	-
pH (L099)	pH Units	N/A	MCERTS	-	-
Total Cyanide	mg/kg	1	MCERTS	-	-
Total Sulphate as SO_4	%	0.005	MCERTS	-	-
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-	-
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	-
Total Sulphur	mg/kg	50	MCERTS	-	-
Total Sulphur	%	0.005	MCERTS	-	-
Ammoniacal Nitrogen as NH_4^+	mg/kg	0.5	MCERTS	-	-
Ammonium as NH_4^+ (10:1 leachate equivalent)	mg/l	0.05	MCERTS	-	-
Fraction Organic Carbon (FOC) Automated	N/A	0.001	MCERTS	-	-
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	-	-
Loss on Ignition @ 450°C	%	0.2	MCERTS	-	-
Water Soluble Nitrate (2:1) as NO_3	mg/kg	2	NONE	-	-
Water Soluble Nitrate (2:1) as NO_3 (leachate equivalent)	mg/l	5	NONE	-	-
Acid Neutralisation Capacity	+/- mmol/kg	-9999	NONE	-	-

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	-	-

Analytical Report Number: 25-058455
Project / Site name: Cardigan
Your Order No: 941.02

Lab Sample Number				732033	732034
Sample Reference				WS05	WS06
Sample Number				None Supplied	None Supplied
Water Matrix				N/A	N/A
Depth (m)				0.07	0.07
Date Sampled				24/10/2025	24/10/2025
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		
Speciated PAHs					
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	0.09
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.08	0.07
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05
Total PAH					
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	-	-
Total WAC-17 PAHs	mg/kg	0.85	NONE	< 0.85	< 0.85
Heavy Metals / Metalloids					
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-
Chromium (hexavalent)	mg/kg	1.8	MCERTS	-	-
Chromium (III)	mg/kg	1	NONE	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	-
Magnesium (water soluble)	mg/kg	5	NONE	-	-

Analytical Report Number: 25-058455
Project / Site name: Cardigan
Your Order No: 941.02

Lab Sample Number				732033	732034
Sample Reference				WS05	WS06
Sample Number				None Supplied	None Supplied
Water Matrix				N/A	N/A
Depth (m)				0.07	0.07
Date Sampled				24/10/2025	24/10/2025
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		
Petroleum Hydrocarbons					
TPHCWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.01	MCERTS	-	-
TPHCWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.01	MCERTS	-	-
TPHCWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.01	MCERTS	-	-
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	-	-
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	-	-
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	-	-
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	-	-
TPHCWG - Aliphatic >EC5 - EC35 EH_CU+HS_1D_AL	mg/kg	10	NONE	-	-
TPHCWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.01	MCERTS	-	-
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	MCERTS	-	-
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.02	MCERTS	-	-
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	-	-
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	-	-
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	-	-
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	-	-
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_1D_AR	mg/kg	10	NONE	-	-
Mineral Oil (EC10 - EC40) EH_CU_1D_AL	mg/kg	10	NONE	-	-
VOCs					
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	-	-
Benzene	µg/kg	5	MCERTS	-	-
Toluene	µg/kg	5	MCERTS	-	-
Ethylbenzene	µg/kg	5	MCERTS	-	-
p & m-Xylene	µg/kg	8	MCERTS	-	-
o-Xylene	µg/kg	5	MCERTS	-	-
Total BTEX	µg/kg	10	MCERTS	-	-
PCBs by GC-MS					
PCB Congener 28	mg/kg	0.001	MCERTS	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-
Total PCBs	mg/kg	0.007	MCERTS	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 25-058455
Project / Site name: Cardigan

Your Order No: 941.02

Lab Sample Number				732028	732031	732032
Sample Reference				WS01	WS04	WS08
Sample Number				None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A
Depth (m)				0.70	1.70	0.60
Date Sampled				24/10/2025	23/10/2025	23/10/2025
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Test Limit of detection	Test Accreditation Status			

10:1 WAC Leachate

Arsenic	mg/l	0.001	ISO 17025	0.00249	< 0.00100	< 0.00100
Barium	mg/l	0.00005	ISO 17025	0.031	0.0102	0.0262
Cadmium	mg/l	0.0001	ISO 17025	< 0.000100	< 0.000100	< 0.000100
Chromium	mg/l	0.0004	ISO 17025	< 0.00040	0.003	< 0.00040
Copper	mg/l	0.0007	ISO 17025	< 0.00070	0.02	0.024
Mercury	mg/l	0.0005	ISO 17025	< 0.000500	< 0.000500	< 0.000500
Molybdenum	mg/l	0.0004	ISO 17025	0.00315	0.00595	0.00163
Nickel	mg/l	0.0003	ISO 17025	< 0.00030	0.0024	0.00089
Lead	mg/l	0.001	ISO 17025	0.0016	< 0.0010	< 0.0010
Antimony	mg/l	0.0017	ISO 17025	0.0033	< 0.0017	< 0.0017
Selenium	mg/l	0.004	ISO 17025	< 0.0040	< 0.0040	< 0.0040
Zinc	mg/l	0.0004	ISO 17025	0.0084	0.015	0.012
Chloride	mg/l	0.15	ISO 17025	1.4	2.1	1.1
Fluoride	mg/l	0.05	ISO 17025	0.17	0.27	0.1
Sulphate	mg/l	0.045	ISO 17025	150	30	210
Total dissolved solids	mg/l	6	ISO 17025	210	82	280
Total monohydric phenols	mg/l	0.01	ISO 17025	< 0.010	< 0.010	< 0.010
Dissolved organic carbon	mg/l	0.1	NONE	3.54	6.28	4.14

10:1 WAC Leachate

Arsenic	mg/kg	0.01	NONE	0.0249	< 0.0100	< 0.0100
Barium	mg/kg	0.0005	NONE	0.31	0.102	0.262
Cadmium	mg/kg	0.001	NONE	< 0.00100	< 0.00100	< 0.00100
Chromium	mg/kg	0.004	NONE	< 0.0040	0.03	< 0.0040
Copper	mg/kg	0.007	NONE	< 0.0070	0.2	0.24
Mercury	mg/kg	0.005	NONE	< 0.00500	< 0.00500	< 0.00500
Molybdenum	mg/kg	0.004	NONE	0.0315	0.0595	0.0163
Nickel	mg/kg	0.003	NONE	< 0.0030	0.024	0.0089
Lead	mg/kg	0.01	NONE	0.016	< 0.010	< 0.010
Antimony	mg/kg	0.017	NONE	0.033	< 0.017	< 0.017
Selenium	mg/kg	0.04	NONE	< 0.040	< 0.040	< 0.040
Zinc	mg/kg	0.004	NONE	0.084	0.15	0.12
Chloride	mg/kg	1.5	NONE	14	21	11
Fluoride	mg/kg	0.5	NONE	1.7	2.7	1
Sulphate	mg/kg	0.45	NONE	1500	300	2100
Total dissolved solids	mg/kg	60	NONE	2100	820	2800
Total monohydric phenols	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10
Dissolved organic carbon	mg/kg	1	NONE	35.4	62.8	41.4

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

4041

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Waste Acceptance Criteria Analytical Results

Report No:	25-058455						
					Client:	Remada Ltd	
Location	Cardigan						
Lab Reference (Sample Number)	732028				Landfill Waste Acceptance Criteria Limits		
Sampling Date	24/10/2025				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	WS01						
Depth (m)	0.70						
Solid Waste Analysis							
TOC (%)	0.1				3%	5%	6%
Loss on Ignition (%)	0.4				--	--	10%
BTEX (µg/kg)	< 10				6000	--	--
Sum of PCBs (mg/kg)	< 0.007				1	--	--
Mineral Oil (mg/kg) EH_1D_CU_AL	62				500	--	--
Total PAH (WAC-17) (mg/kg)	< 0.85				100	--	--
pH (units)	9.1				--	>6	--
Acid Neutralisation Capacity (mmol / kg)	51				--	To be evaluated	To be evaluated
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.00249			0.0249	0.5	2	25
Barium *	0.031			0.31	20	100	300
Cadmium *	< 0.000100			< 0.00100	0.04	1	5
Chromium *	< 0.00040			< 0.0040	0.5	10	70
Copper *	< 0.00070			< 0.0070	2	50	100
Mercury *	< 0.000500			< 0.00500	0.01	0.2	2
Molybdenum *	0.00315			0.0315	0.5	10	30
Nickel *	< 0.00030			< 0.0030	0.4	10	40
Lead *	0.0016			0.016	0.5	10	50
Antimony *	0.0033			0.033	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0084			0.084	4	50	200
Chloride *	1.4			14	800	15000	25000
Fluoride*	0.17			1.7	10	150	500
Sulphate *	150			1500	1000	20000	50000
TDS*	210			2100	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	3.54			35.4	500	800	1000
Leach Test Information							
Stone Content (%)	43.6						
Sample Mass (kg)	2						
Dry Matter (%)	97						
Moisture (%)	3.1						

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

*= UKAS accredited (liquid eluate analysis only)

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** = MCERTS accredited

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

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Waste Acceptance Criteria Analytical Results

Report No:	**25-058455**						
					Client:	**Remada Ltd**	
Location	**Cardigan**						
Lab Reference (Sample Number)	732031				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	23/10/2025				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	WS04						
Depth (m)	1.70						
Solid Waste Analysis							
TOC (%)**	1.3				3%	5%	6%
Loss on Ignition (%) **	3.7				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg) EH_1D_CU_AL	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	11.5				100	--	--
pH (units)**	8.3				--	>6	--
Acid Neutralisation Capacity (mmol / kg)	16				--	To be evaluated	To be evaluated
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.00100			< 0.0100	0.5	2	25
Barium *	0.0102			0.102	20	100	300
Cadmium *	< 0.000100			< 0.00100	0.04	1	5
Chromium *	0.003			0.03	0.5	10	70
Copper *	0.02			0.2	2	50	100
Mercury *	< 0.000500			< 0.00500	0.01	0.2	2
Molybdenum *	0.00595			0.0595	0.5	10	30
Nickel *	0.0024			0.024	0.4	10	40
Lead *	< 0.0010			< 0.010	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.015			0.15	4	50	200
Chloride *	2.1			21	800	15000	25000
Fluoride*	0.27			2.7	10	150	500
Sulphate *	30			300	1000	20000	50000
TDS*	82			820	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	6.28			62.8	500	800	1000
Leach Test Information							
Stone Content (%)	16.8						
Sample Mass (kg)	2						
Dry Matter (%)	87						
Moisture (%)	13						

Results are expressed on a dry weight basis, after correction for moisture content where applicable. *= UKAS accredited (liquid eluate analysis only)

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This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Waste Acceptance Criteria Analytical Results

Report No:	25-058455						
					Client:	Remada Ltd	
Location	Cardigan						
Lab Reference (Sample Number)	732032				Landfill Waste Acceptance Criteria Limits		
Sampling Date	23/10/2025				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	WS08						
Depth (m)	0.60						
Solid Waste Analysis							
TOC (%)**	< 0.1				3%	5%	6%
Loss on Ignition (%) **	0.7				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg) EH_1D_CU_AL	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	< 0.85				100	--	--
pH (units)**	7.9				--	>6	--
Acid Neutralisation Capacity (mmol / kg)	12				--	To be evaluated	To be evaluated
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.00100			< 0.0100	0.5	2	25
Barium *	0.0262			0.262	20	100	300
Cadmium *	< 0.000100			< 0.00100	0.04	1	5
Chromium *	< 0.00040			< 0.0040	0.5	10	70
Copper *	0.024			0.24	2	50	100
Mercury *	< 0.000500			< 0.00500	0.01	0.2	2
Molybdenum *	0.00163			0.0163	0.5	10	30
Nickel *	0.00089			0.0089	0.4	10	40
Lead *	< 0.0010			< 0.010	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.012			0.12	4	50	200
Chloride *	1.1			11	800	15000	25000
Fluoride*	0.1			1	10	150	500
Sulphate *	210			2100	1000	20000	50000
TDS*	280			2800	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	4.14			41.4	500	800	1000
Leach Test Information							
Stone Content (%)	56.4						
Sample Mass (kg)	2						
Dry Matter (%)	96						
Moisture (%)	3.9						

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

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

** = MCERTS accredited

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

Analytical Report Number : 25-058455
Project / Site name: Cardigan

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
732028	WS01	None Supplied	0.7	Brown gravelly sand with stones
732029	WS02	None Supplied	0.7	Brown gravelly sand with stones
732030	WS03	None Supplied	0.5	Brown clay and sand with gravel and stones
732031	WS04	None Supplied	1.7	Brown clay and sand with gravel
732032	WS08	None Supplied	0.6	Brown clay and sand with gravel and stones
732033	WS05	None Supplied	0.07	Non Soil. *g
732034	WS06	None Supplied	0.07	Non Soil. *g

Analytical Report Number : 25-058455
Project / Site name: Cardigan

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
pH at 20°C in soil	Determination of pH in soil by addition of water followed by electrometric measurement	In-house method	L005B	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with hexane followed by GC-MS	In-house method based on USEPA 8082	L027B	D	MCERTS
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031B	W	ISO 17025
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination	L033B	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved organic carbon in leachate by TOC/DOC NDIR Analyser	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037B	W	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES	In-house method based on Second Site Properties version 3	L038B	D	MCERTS
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	ISO 17025
One stage WAC 10:1 leachate preparation	One stage batch test at a liquid to solid ratio of 10 L/kg	BS EN 12457-2-2002	L043B	W	ISO 17025
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance	L046B	W	NONE
Loss on ignition of soil @ 450°C	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	In-house method	L047-PL	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
TPH Chromatogram in soil	TPH Chromatogram in soil	In-house method	L064B	D	NONE

Analytical Report Number : 25-058455
Project / Site name: Cardigan

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID in soil	Determination of total petroleum hydrocarbons in soil by GC-FID with carbon banding aliphatic and aromatic	In-house method	L076B	D	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil (Summed Bands)	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic (Summed Bands).	Calculation	L076B/L088-PL	D/W	NONE
Total petroleum hydrocarbons by GC-FID in soil	Determination of total petroleum hydrocarbons in soil by GC-FID	In-house method	L076B	D	NONE
Chromium III in soil	In-house method by calculation from total Cr and Cr VI	In-house method by calculation	L080-PL/L130B	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080-PL	W	MCERTS
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser	In-house based on MEWAM Method ISBN 0117516260	L082B	W	ISO 17025
Total petroleum hydrocarbons with carbon banding by HS-GC/MS in soil	Determination of total petroleum hydrocarbons in soil by HS-GC/MS with carbon banding aliphatic and aromatic	In-house method	L088-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS
Fraction Organic Carbon FOC Automated	Determination of fraction of organic carbon in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate	In-house method	L009B	D	MCERTS
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES	In-house method based on TRL 447	L038B	D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS

Analytical Report Number : 25-058455
Project / Site name: Cardigan

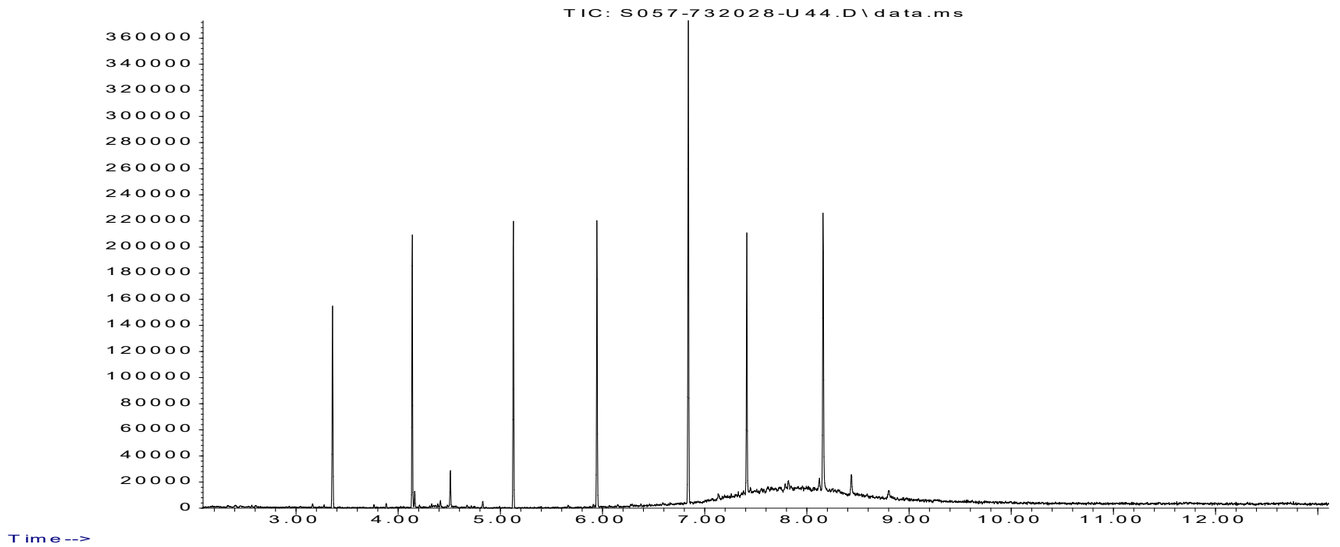
Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES	In-house method	L038B	D	MCERTS
Water Soluble Nitrate (leachate equivalent)	Determination of nitrate by reaction with sodium salicylate and colorimetry	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction	L078-PL	W	NONE
Nitrate, water soluble, in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction	L078-PL	W	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser	In-house method	L082B	D	MCERTS
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082B	W	MCERTS

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

*g - Unaccredited sample matrix.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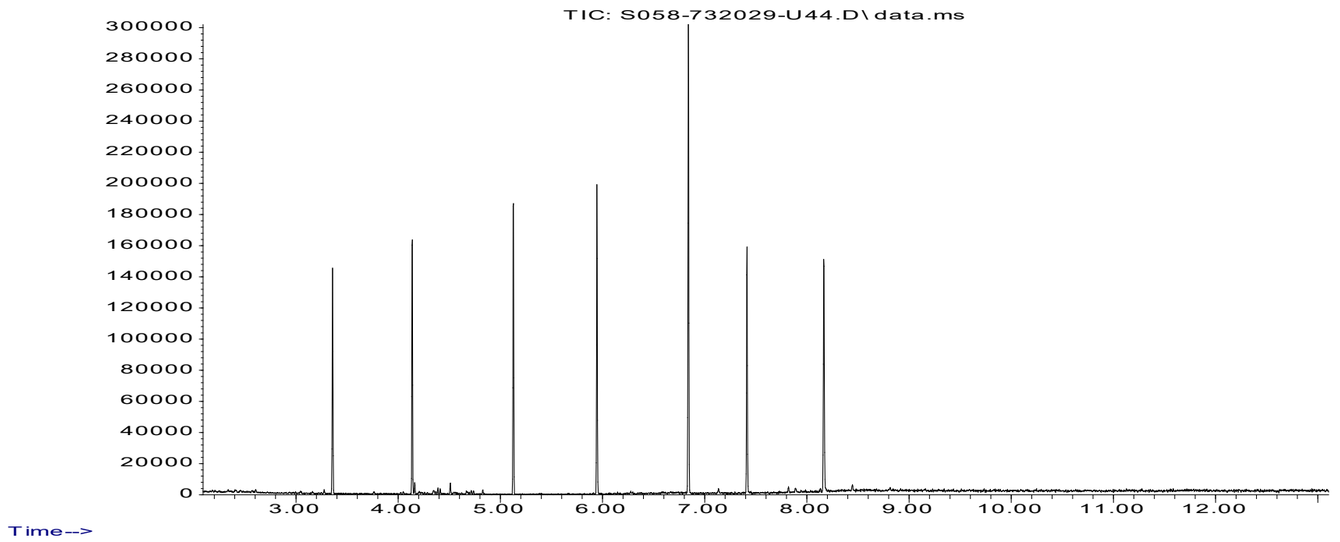
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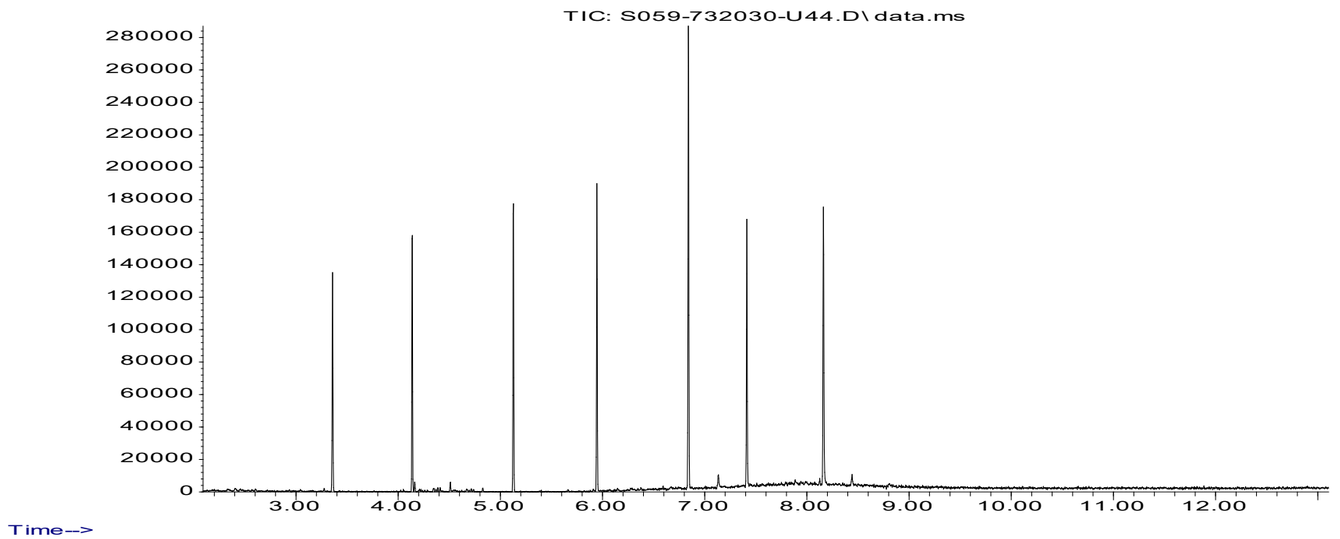
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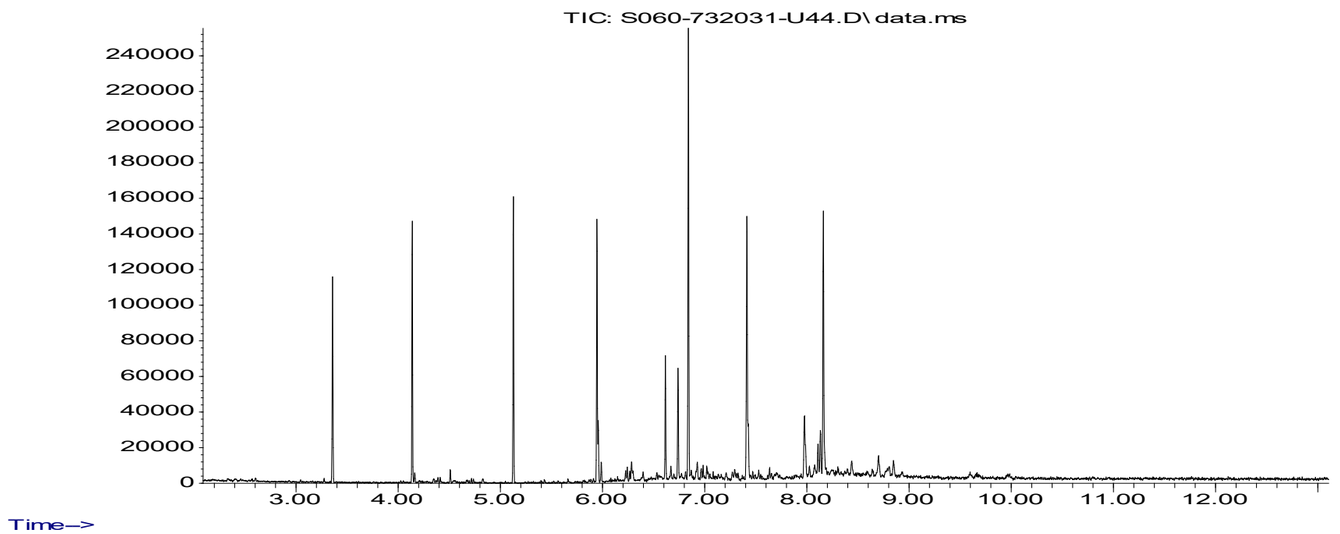
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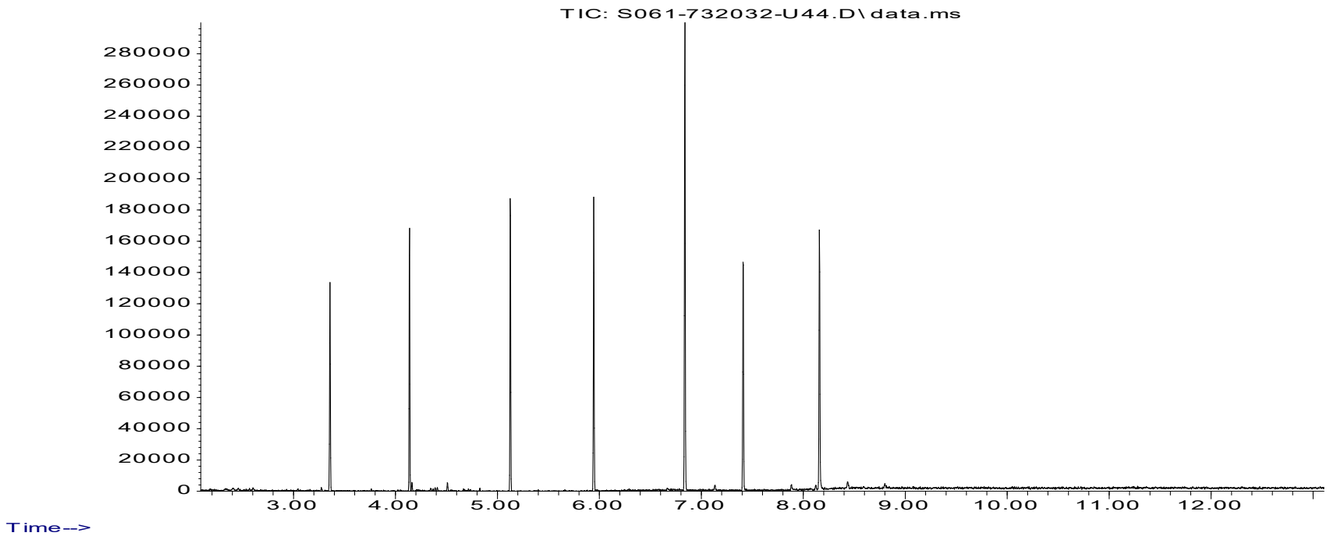
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e: info-i2analytical@normecgroup.com

Analytical Report Number : 25-058794

Project / Site name:	Cardigan	**Samples received on:**	29/10/2025
Your job number:	941.02	**Samples instructed on/ Analysis started on:**	29/10/2025
Your order number:	941.02	**Analysis completed by:**	07/11/2025
Report Issue Number:	1	**Report issued on:**	07/11/2025
Samples Analysed:	3 soil samples		

Joanna Biolik

Signed:

Joanna Biolik
Senior Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting
air	- once the analysis is complete

Excel copies of reports are only valid when accompanied by this PDF certificate.

Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 25-058794
Project / Site name: Cardigan
Your Order No: 941.02

Lab Sample Number				734276	734277	734278
Sample Reference				WS01	WS02	WS05a
Sample Number				None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A
Depth (m)				3.60	2.50	0.70
Date Sampled				24/10/2025	24/10/2025	24/10/2025
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status			
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	11	20	5.3
Total mass of sample received	kg	0.1	NONE	0.6	0.9	1.4

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	7.8	7.6	8
Total Sulphate as SO_4	%	0.005	MCERTS	0.037	0.058	0.243
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	230	470	2900
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	114	235	1460
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	5.5	9.4	9.5
Total Sulphur	mg/kg	50	MCERTS	260	330	1300
Total Sulphur	%	0.005	MCERTS	0.026	0.033	0.13
Ammoniacal Nitrogen as NH_4^+	mg/kg	0.5	MCERTS	0.7	< 0.5	< 0.5
Ammonium as NH_4^+ (10:1 leachate equivalent)	mg/l	0.05	MCERTS	0.05	< 0.05	< 0.05
Water Soluble Nitrate (2:1) as NO_3	mg/kg	2	NONE	< 2.0	290	< 2.0
Water Soluble Nitrate (2:1) as NO_3 (leachate equivalent)	mg/l	5	NONE	< 5.0	150	< 5.0

Heavy Metals / Metalloids

Magnesium (leachate equivalent)	mg/l	2.5	NONE	7.8	16	40
Magnesium (water soluble)	mg/kg	5	NONE	16	32	81

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 25-058794
Project / Site name: Cardigan

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
734276	WS01	None Supplied	3.6	Brown sandy clay with gravel
734277	WS02	None Supplied	2.5	Brown sandy clay
734278	WS05a	None Supplied	0.7	Brown sandy clay with gravel

Analytical Report Number : 25-058794
Project / Site name: Cardigan

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES	In-house method based on TRL 447	L038B	D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES	In-house method	L038B	D	MCERTS
Water Soluble Nitrate (leachate equivalent)	Determination of nitrate by reaction with sodium salicylate and colorimetry	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction	L078-PL	W	NONE
Nitrate, water soluble, in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction	L078-PL	W	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser	In-house method	L082B	D	MCERTS
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082B	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

APPENDIX E

Laboratory Geotechnical Tests

Laboratory Report

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES A PHENNA GROUP COMPANY

Contract Number: 82174

Client Ref: **941.02**
Client PO: **941.02**

Client: **Remada Limited**

Contract Title: **Cardigan**
For the attention of: **Peter Searing**

Date Received: **31-10-2025**
Date Completed: **14-11-2025**
Report Date: **14-11-2025**

This report has been checked and approved by:

Darren Bourne
Quality Senior Technician

Description	Qty
Determination of water content BS EN ISO 17892-1:2014 - * UKAS	5
1 point Liquid & Plastic Limit.. BS EN ISO 17892-12 - * UKAS	5
Particle Size Distribution BS EN ISO 17892-4 : 5.1 - * UKAS	3

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

Approved Signatories:
Brendan Evans (Business Support Co-ordinator) - Darren Bourne (Quality Senior Technician) - Luke Williams (Senior Laboratory 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

WATER CONTENT, LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX
BS 1377-2:2022 Clause 5.3
BS EN ISO 17892-12:2018+A2:2022 1 Point Liquid Limit
BS EN ISO 17892-1:2014+A1:2022 Determination of Water Content

Contract Number	82174
Project Name	Cardigan
Date Tested	11/11/2025

DESCRIPTIONS

Sample/Hole Reference	Sample Number	Sample Type	Depth (m)			Descriptions
WS02		D	2.90	-		Brown fine to medium gravelly silty CLAY
WS03		D	5.80	-		Brown fine to medium gravelly silty CLAY
WS04		D	1.20	-		Brown fine to medium gravelly silty CLAY
WS06		D	2.70	-		Brown silty CLAY
WS07		D	1.60	-		Brown silty CLAY
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				-		
				-		
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Operator
Clayton Jenkins

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	WATER CONTENT, LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX BS 1377-2:2022 Clause 5.3 BS EN ISO 17892-12:2018+A2:2022 1 Point Liquid Limit BS EN ISO 17892-1:2014+A1:2022 Determination of Water Content	
Contract Number	82174	
Project Name	Cardigan	
Date Tested	11/11/2025	
Test Comments	80g/30° Fall cone used	

Sample/Hole Reference	Sample Number	Sample Type	Depth (m)			Water Content %	Liquid Limit %	Plastic Limit %	Plasticity index %	Passing 0.425mm %	Factor Applied	Remarks
WS02		D	2.90	-		25.6	58	21	37	85	1.010	CH High Plasticity
WS03		D	5.80	-		31.2	58	27	31	88	0.998	CH High Plasticity
WS04		D	1.20	-		25.2	59	21	38	86	1.025	CH High Plasticity
WS06		D	2.70	-		26.7	52	24	28	100	0.976	CH High Plasticity
WS07		D	1.60	-		28.3	66	25	41	100	1.010	CH High Plasticity
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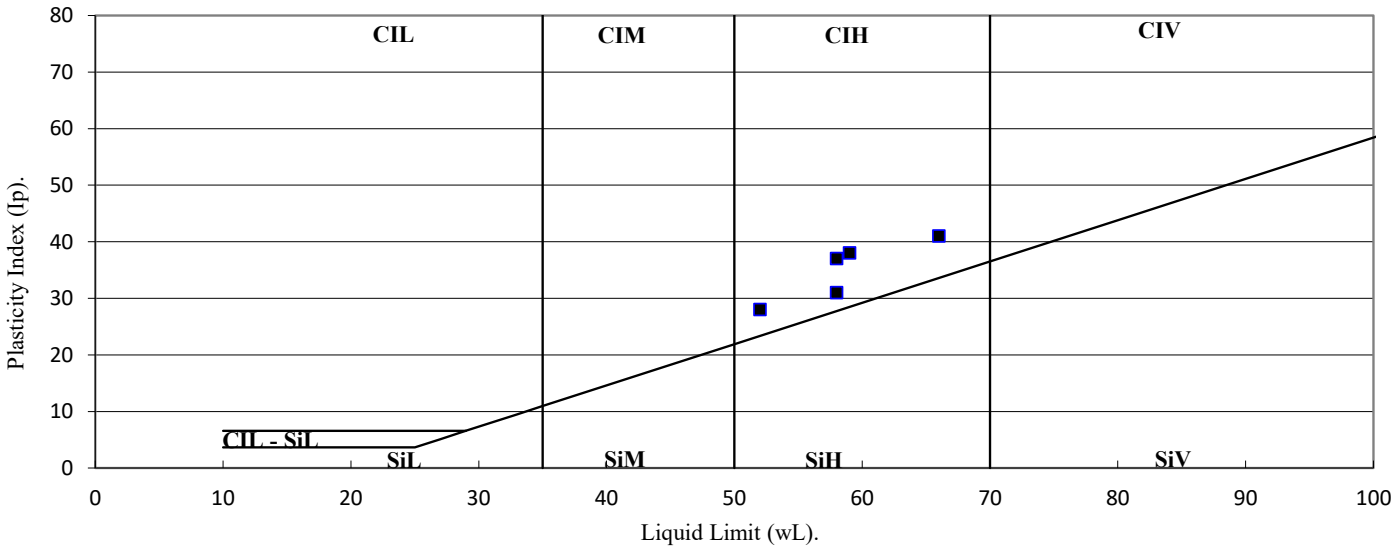
SYMBOLS : NP = Non Plastic

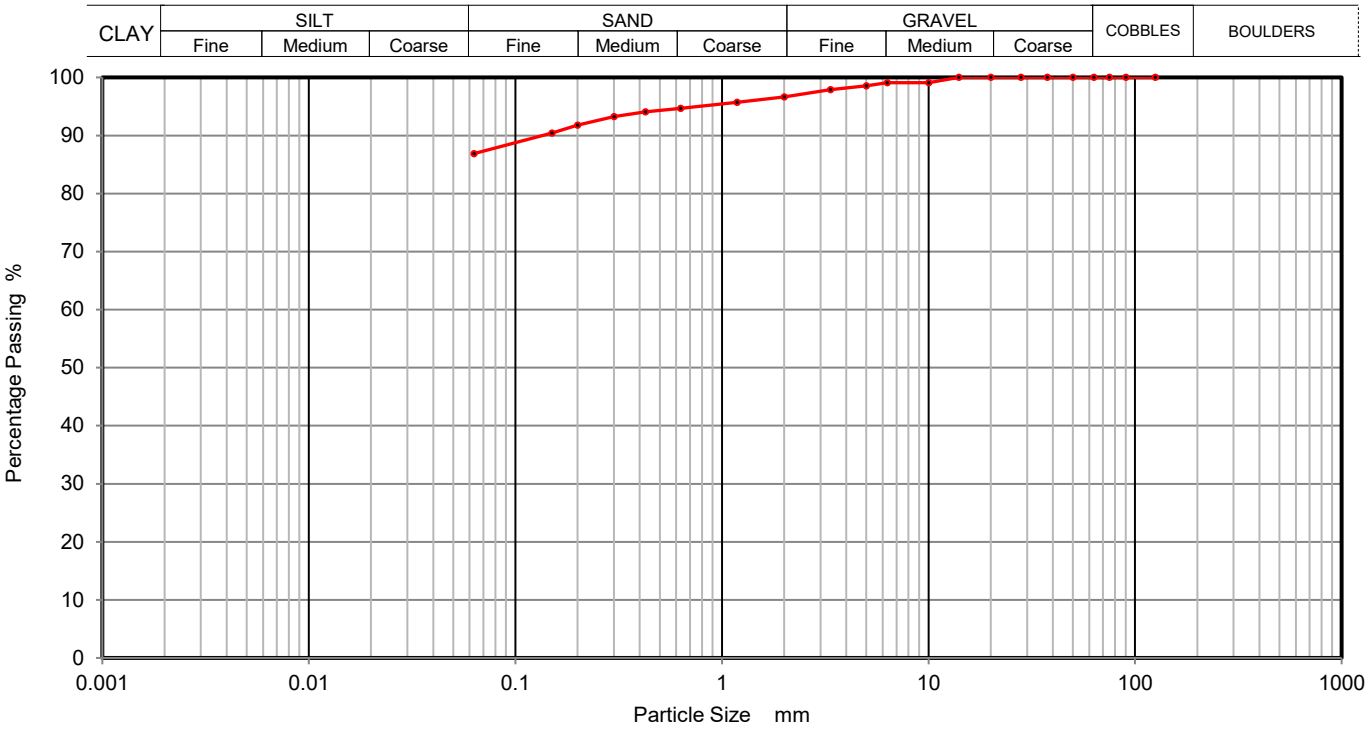
PLASTICITY CHART
BS EN ISO 14688-2:2018 Clause 4.4



***For sample descriptions please see sample descriptions sheet**

Operator
Clayton Jenkins

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**PARTICLE SIZE DISTRIBUTION BS 1377-2:2022 Clause 10 & BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2**	Contract Number	**82174**
		Borehole/Pit No.	**WS01**
Project Name	**Cardigan**	Sample No.	
Sample Description	Brown slightly fine to medium gravelly fine to coarse sandy silty CLAY	Depth Top	**4.00**
		Depth Base	**5.00**
Date Tested	12/11/2025	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	99		
6.3	99		
5	99		
3.35	98		
2	97		
1.18	96		
0.63	95		
0.425	94		
0.30	93		
0.20	92		
0.15	90		
0.063	87		

Sample Proportions	% dry mass
Cobbles	0
Gravel	3
Sand	10
Silt and Clay	87

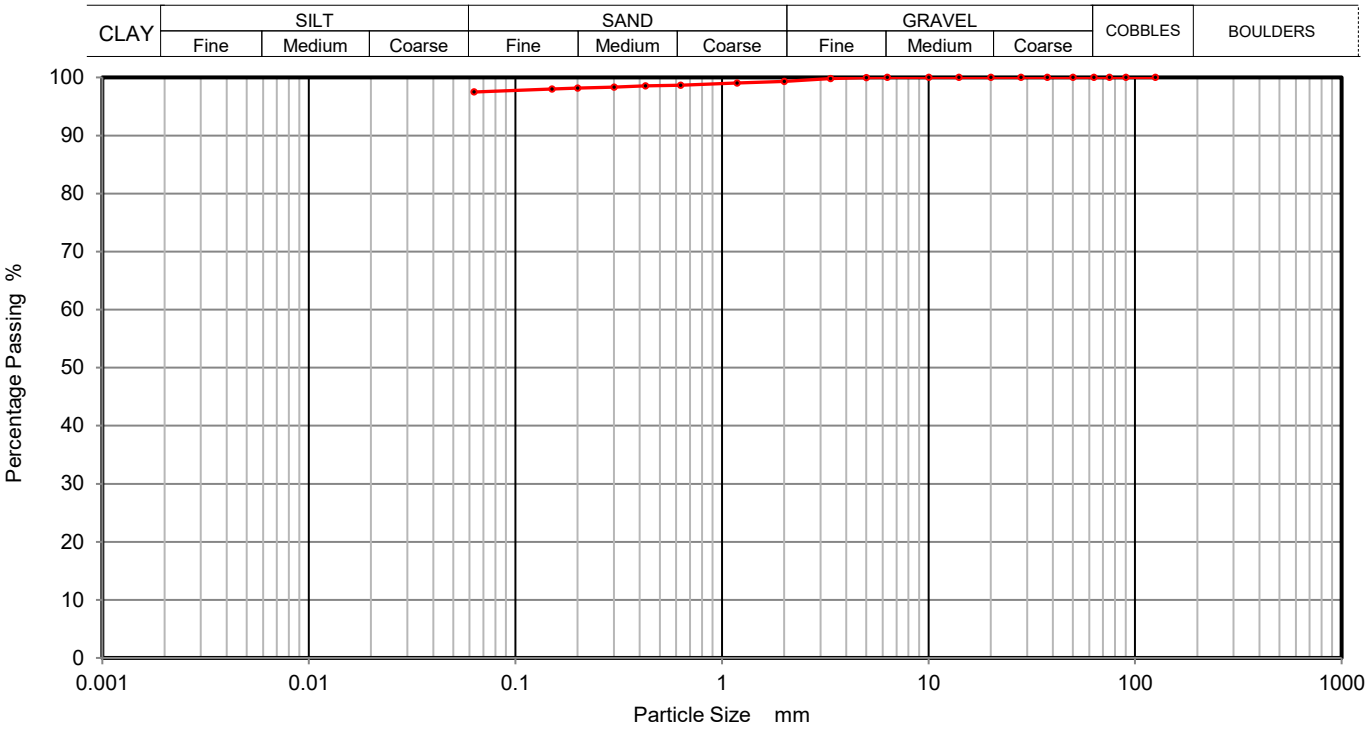
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Jordan Williams

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**PARTICLE SIZE DISTRIBUTION BS 1377-2:2022 Clause 10 & BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2**	Contract Number	**82174**
		Borehole/Pit No.	**WS02**
Project Name	**Cardigan**	Sample No.	
Sample Description	Brown slightly fine gravelly slightly fine to coarse sandy silty CLAY	Depth Top	**4.00**
		Depth Base	**5.00**
Date Tested	12/11/2025	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.63	99		
0.425	99		
0.30	98		
0.20	98		
0.15	98		
0.063	97		

Sample Proportions	% dry mass
Cobbles	0
Gravel	1
Sand	2
Silt and Clay	97

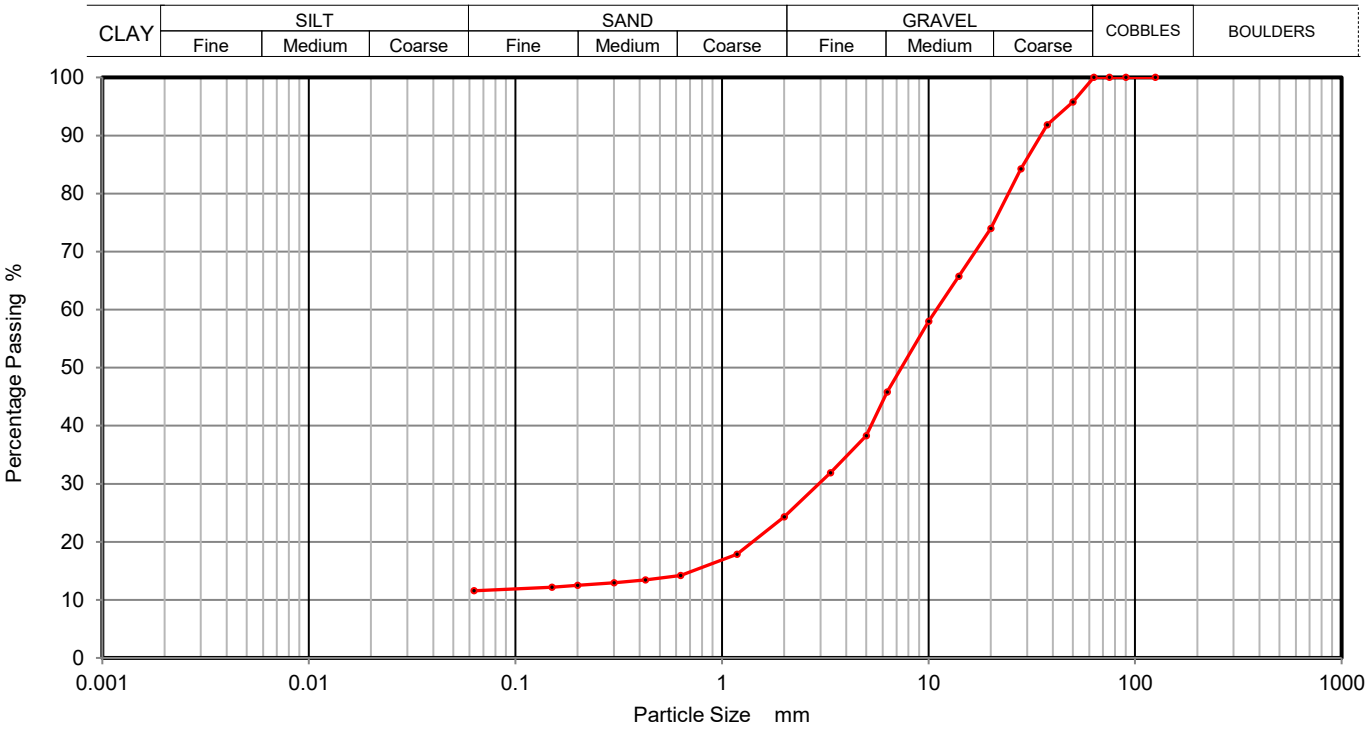
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Jordan Williams

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**PARTICLE SIZE DISTRIBUTION BS 1377-2:2022 Clause 10 & BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2**	Contract Number	**82174**
		Borehole/Pit No.	**WS03**
Project Name	**Cardigan**	Sample No.	
Sample Description	Grey silty/clay fine to coarse sandy fine to coarse GRAVEL	Depth Top	**2.00**
		Depth Base	**3.00**
Date Tested	12/11/2025	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	96		
37.5	92		
28	84		
20	74		
14	66		
10	58		
6.3	46		
5	38		
3.35	32		
2	24		
1.18	18		
0.63	14		
0.425	13		
0.30	13		
0.20	12		
0.15	12		
0.063	12		

Sample Proportions	% dry mass
Cobbles	0
Gravel	76
Sand	12
Silt and Clay	12

Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Jordan Williams