



Tier 2 Geotechnical and Geoenvironmental Report

Site: Unit D, North Bank Road, Port
Talbot, SA13 1RE

Prepared For: CRS Pizzas Ltd

Issue Date: May 2026

Job No: 18045

REPORT TITLE : **Geoenvironmental and Geotechnical Report:
Proposed MOT Centre, Unit D, North Bank
Road, Port Talbot, SA13 1RE**

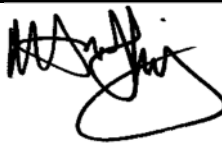
JOB NUMBER : **18045**

ISSUE DATE : **May 2026**

REPORT REFERENCE : **GGR-260526-18045-03**

Document Revision Record

Issue No.	Date	Revision Details	Initials
1	12.05.2026	Draft	FL
2	21.05.2026	Report with updated gas monitoring results	FL
3	26.05.2026	Final Report Issue	FL

	Name	Signature
Prepared	Florence Linklater BSC (Hons), FGS Engineering Geologist	
Checked	Michael Watkins MESci, FGS, CGeol Principal Engineering Geologist	
Approved	Gwyn Lake BSc (Hons). PhD, CGeol, FGS Director	



Executive Summary

Site Location and Proposed Development	PTB Properties Limited (the Client) is proposing the development of a MOT Centre at Unit D, North Bank Road, Port Talbot SA13 1RE.				
	The site is located on the east side of the Port Talbot dock feeder, on the west side of North Bank Road (NGR 275930, 189560). It is a proposed commercial development of a MOT Centre, Unit D, North Bank Road, Port Talbot, SA13 1RE.				
Ground Conditions	Depth (m)			Thickness (m)	Stratum
	0.00	-	0.30/4.00	0.30/4.00	MADEGROUND Black/dark grey sandy slightly gravelly SILT. Gravels are medium to coarse angular to sub rounded brick, concrete, slag. Rare cobbles of slag. Frequent rounded to sub rounded cobbles and gravels of yellow sandstone. Rare timber fragments.
	0.30/4.00	-	8.00	0.00/4.00	Stiff bluish grey sandy SILT
	8.00	-	14.50	6.50/11.20	Very dense grey silty sandy sub angular to sub rounded coarse GRAVELS and COBBLES of sandstone.
Coal Mining Risk Assessment	The CON29M Report records that the property is not within a surface area that could be affected by past recorded underground workings. Given the site setting we do not consider unrecorded mining likely and conclude the risk from coal mining is negligible.				
Contamination of Concern	Location	Depth		Contaminant	Source
	TP01	0.4		Asbestos observed on site	Historic development of site pre-1999.
	BH03	Groundwater		Hydrocarbons observed to be present in groundwater.	Potentially associated with the industrial surrounding of the site.
Ground Gas Risk Assessment	Although the peak carbon dioxide has regularly risen above the 5% screening threshold level, the ternary gas plot has shown this to be as a result of microbial respiration, for that reason it is recommended that the site is given gas characteristic situation to CS1.				
	This may change following the successive round of monitoring.				
Foundation Solution	It is recommended that piles are utilised for foundations on site. A pilling risk assessment should be carried out.				
Recommended Further Works	Geotechnical Recommendations				
	Due to the requirement for a piled foundation solution deeper investigations will be required to facilitate pile design. This will comprise the sinking of rotary boreholes which should be drilled to bedrock. The boreholes must be sunk to a depth of 5m below the anticipated pile depth to allow rock cores to be recovered for geotechnical testing.				
	Standard penetration tests should be undertaken through the soils at regular intervals.				
	Samples of the rock should be taken and subject to point load testing and uniaxial compressive strength testing.				
	Deeper soils samples can also be recovery using dynamic sampling techniques.				
	Geoenvironmental Recommendations				
	Soil				
	Due to the presence of made ground and building rubble encountered beneath the site further chemical samples should be taken and frequent asbestos samples across the site.				
Groundwater					
Due to the presence of significant hydrocarbon contamination encountered in the groundwater during the drilling, it is recommended that an assessment of the risk to the aquatic environment is carried out. Following an initial generic assessment, it is expected that a detailed quantitative risk assessment will be required.					
An assessment of the risk to human health from hydrocarbon vapours should also be carried out.					
The large tidal range of the Bristol Channel is likely to have a significant influence on the groundwater table. Therefore, a period of groundwater level monitoring using a groundwater level data logger should be carried out prior to the installation of additional monitoring wells. The groundwater level monitoring data will help determine the appropriate depths of the monitoring well response zones.					

This monitoring should be carried out before during and after piling operations to confirm no deuteriation in groundwater quality as a result of the works.

A piling risk assessment should also be carried out prior to piling.

TABLE OF CONTENTS

SECTION 1 Introduction & Proposed Development	1
1.1 Background	1
1.2 Objectives	1
1.2.1 Tier 2	2
1.3 Geotechnical Category	2
1.4 Information Sources	2
1.5 Roles & Responsibilities	2
1.6 Limitations & Exceptions of Investigation	3
1.7 Quality Assurance	3
SECTION 2 Tier 1 Assessment	4
2.1 Summary of Tier 1 Assessment	4
SECTION 3 Field Investigation	5
3.1 Site Works	5
3.1.1 General	5
3.1.2 First Phase 2025	5
3.1.3 Second Phase 2026	5
3.2 Ground Conditions	6
3.2.1 Miscellaneous Ground Conditions	6
3.3 Groundwater	7
3.4 Stability & Obstructions	8
3.5 Installation Well Construction	8
3.6 Laboratory Chemical Testing	8
3.6.1 Sampling Strategy	8
3.7 Monitoring	9
SECTION 4 Evaluation of Geoenvironmental Analytical Results	10
4.1 Assessment Methodology	10
4.1.1 Soils	10
4.2 Soil Test Results	10
4.2.1 Inorganics	10
4.2.2 Organics	12
4.2.3 Asbestos Testing	14
4.2.4 Leachate Test Results	15
SECTION 5 Ground Gas Risk Assessment	18
5.1 Gas Risk Characterisation	18
5.1.1 Gas Sources	18
5.2 Gas Screening Value	18
5.3 Conclusion	19
SECTION 6 Generic Quantitative Risk Assessment	20
6.1 Contaminants of Concern	20
6.2 Remediation Options Appraisal	20
6.2.1 Human Health	20
6.2.1.1 Contaminated Soils	21
6.2.1.2 Ground Gas/Radon	21

6.2.2	Aquatic Environment	21
-------	---------------------	----

SECTION 8 Engineering Recommendations 22

8.1	Preparation of Site	22
8.2	Foundation & Floor Slab Solution	22
8.3	Excavations & Formations	23
8.4	Access Roads & Car Parking Areas	23

SECTION 9 Recommended Works 24

9.1	Geotechnical Recommendations	24
9.2	Geoenvironmental Recommendations	24
9.2.1	Soil	24
9.2.2	Groundwater	24

Tables

Table 1.1	Roles and Responsibilities	2
Table 2.1	Summary of Tier 1 Assessment	4
Table 3.1	Summary of Typical Ground Conditions	6
Table 3.2	Groundwater Summary	7
Table 3.3	Installation Well Summary	8
Table 3.4	Sample Locations and Targets	8
Table 3.5	Summary of Groundwater Levels	9
Table 4.1	Summary of Soil Chemical Test Results – Inorganics	11
Table 4.2	Summary of Soil Chemical Test Results – Speciated PAH	12
Table 4.3	Summary of Soil Chemical Test Results – Petroleum Hydrocarbons	13
Table 4.4	Summary of Soil Chemical Test Results – Phenols, BTEX & MTBE	13
Table 4.5	Summary of Soil Chemical Test Results – Noteworthy VOC & SVOC	14
Table 4.6	Summary of Soil Chemical Test Results – PCB	14
Table 4.7	Summary of Leachate Chemical Test Results – Inorganics & Miscellaneous	16
Table 4.8	Summary of Leachate Chemical Test Results – Speciated PAH	17
Table 5.1	Measured Gas Concentration Summary	18
Table 6.1	Contaminants of Concern	20

Figures

Figure 1.1	Proposed site plan.	1
Figure 3.1	Groundwater collected from BH03 during drilling showing thin-film interference due to the presence of hydrocarbons.	7
Figure 4.1	Segment of asbestos pipe located at a depth of 0.4m in TP03.	15
Figure 5.1	Ternary gas plot showing the methane, carbon dioxide and oxygen/nitrogen readings from the first three rounds of monitoring.	19

Annexes

ANNEX A	Geological Logs
ANNEX B	Soakaway Results
ANNEX C	Gas Monitoring Results
ANNEX D	Laboratory Soil Chemical Test Results

Drawings

Drawing 01	Proposed Site Layout
------------	----------------------

SECTION 1 Introduction & Proposed Development

1.1 Background

CRS Pizzas Ltd (the Client) is proposing the development of a MOT Centre at Unit D, North Bank Road, Port Talbot, SA13 1RE. The proposed development can be seen in **Figure 1.1**.

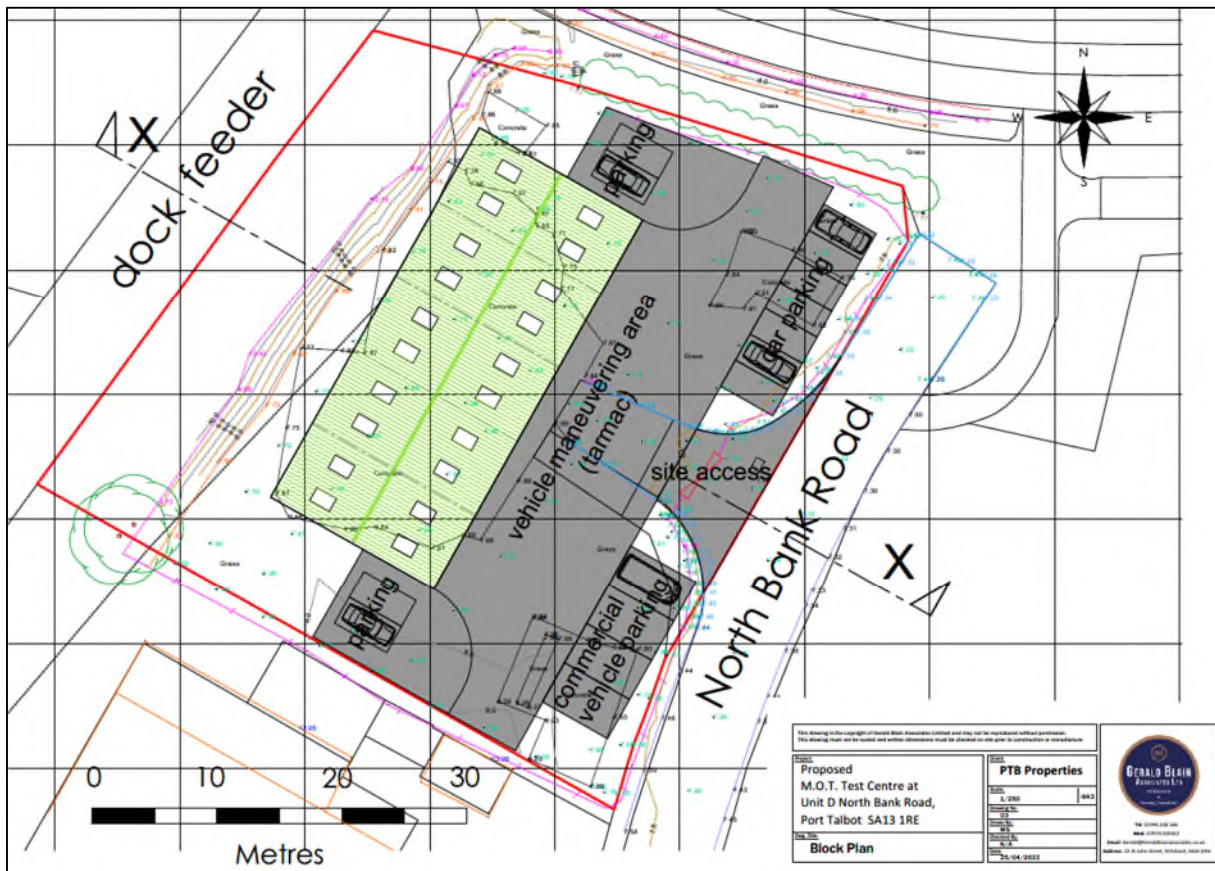


Figure 1.1 Proposed site plan.

TFW Group Ltd (Terra Firma) have been commissioned by the Client to undertake a Geotechnical and Geoenvironmental Report

A Tier 1 (Desk Study) including a Preliminary Geoenvironmental, Geotechnical and Coal Mining Risk Assessment was completed by Terra Firma. The findings of the Tier 1 Assessment are summarised in Section 2 of this report.

TFW Group Ltd. undertook the first phase of investigation on the 18th of March 2025. The exploratory investigation was undertaken for the purpose of soakaway testing.

This report contains a Tier 2 assessment (Site Investigation) including a Generic Quantitative Geoenvironmental Risk Assessment and Geotechnical Ground Investigation.

1.2 Objectives

Land Contamination Risk Management (LCRM) guidance provided by the Environment Agency advocates using a tiered approach. This comprises Tier 1; the Preliminary Risk Assessment, Tier 2; the Generic Quantitative Risk Assessment and Tier 3; the Detailed Quantitative Risk Assessment. As each tier is completed a decision is made whether it is necessary to advance to the next tier.

In addition to LCRM, geotechnical aspects of the development also need to be considered and are approached in a similar manner, with the risks identified in the preliminary assessment, and then investigated through subsequent phase of investigation.

1.2.1 Tier 2

The main objectives of the Tier 2 Generic Quantitative Geoenvironmental Risk Assessment programme are:

- investigate the potential human health and environmental liabilities at the site associated with any contamination; and
- provide a summary of the human health and environmental conditions at the site, together with any necessary further intrusive works and / or remediation works to render the site fit for its intended use.

The main objectives of the Geotechnical Site Investigation are:

- investigate the type, strength and bearing characteristics of the shallow superficial and underlying solid geology;
- provide engineering foundation and floor slab recommendations for the proposed development;
- provide recommendations regarding any other geotechnical aspects pertaining to the development.

In order to achieve the above objectives, Terra Firma carried out an assessment programme a review of existing data, followed by a field investigation to collect geotechnical and geoenvironmental data from selected locations.

1.3 Geotechnical Category

In accordance with BS EN 1997-1:2004+A1:2013, the proposed development comprises the following geotechnical category:

Geotechnical Category 2: conventional types of structures and foundation with no exceptional risk of difficult soil or loading conditions (e.g., spread, raft & pile foundations; retaining structures; excavations; earthworks and ground anchors).

1.4 Information Sources

The following sources of information have been referenced in support of this assessment:

- client provided information, plans etc. (**Figure 1.1**);
- TFW Group Tier 1 Assessment (111023-18045-ISSUE-1);and
- TFW Group Soakaway Report (140425-TF-24-587-CA)

1.5 Roles & Responsibilities

Table 1.1 Roles and Responsibilities

Role	Organisation
Client/Developer	CRS Pizzas Ltd
Geotechnical Engineer	TFW Group Ltd
Local Authority	Neath Port Talbot County Borough Council

1.6 Limitations & Exceptions of Investigation

The Client has requested that a Tier 2 Geoenvironmental and Geotechnical Report (GGR) be undertaken to enable the outlined main objectives.

The GGR was conducted, and this report has been prepared for the sole internal reliance of the Client and their design and construction team. This report shall not be relied upon or transferred to any other parties without the express written authorisation of TFW Group Ltd. If an unauthorised third party comes into possession of this report, they rely on it at their peril and the authors owe them no duty of care and skill. The report represents the findings and opinions of experienced geoenvironmental and geotechnical consultants. TFW Group Ltd does not provide legal advice and the advice of lawyers may be required.

The subsurface geological profiles, any contamination and other plots are generalised by necessity and have been based on the information found at the locations of the exploratory holes and depths sampled and tested.

Human health and environmental risk assessment outcomes may not take into account the potential for the creation of new contaminant linkages as a result of variation to the proposed development and recommended engineering solutions. It is therefore imperative that the Client engages a geoenvironmental consultant to re-visit the conceptual site model and potential risks upon completion of final designs, prior to development.

Whilst this report assesses the suitability of soils in respect to human health and the environment, it is beyond the scope of this report to determine the legal status of imported and re-used soils/aggregates. It is the responsibility of the Client to confirm imported and re-used soils/aggregates have reached 'Non-Waste' status.

The investigation was limited by the following site constraints:

- the presence of unexpected ground conditions.

1.7 Quality Assurance

The quality, health, safety and environmental aspects of the assessment comply with Terra Firma business management system which is UKAS accredited and complies with the requirements of BS EN ISO 9001:2015, BS EN ISO 14001:2015 and BS EN ISO 45001:2018 standards.



SECTION 2 Tier 1 Assessment

The site has been the subject of a previous Tier1 Geoenvironmental Desk Study:

- *Terra Firma, Tier 1 Geoenvironmental & Geotechnical Report 111023-18045-ISSUE-1 dated October 2023.*

The salient points of the Tier 1 Assessment are summarised in **Section 2.1**.

2.1 Summary of Tier 1 Assessment

The findings of the Tier 1 Assessment are summarised in **Table 2.1**.

Table 2.1 Summary of Tier 1 Assessment

Site History	<i>The site was originally part of the dock and was 'recovered' by filling. The site was located on the periphery of Port Talbot Docks and located in the vicinity of various metal works and associated railway sidings. The site has also been occupied by a 'Ready Mixed Cement Works'.</i>
Geology	<i>The site is shown to be underlain by rocks of the Llynfi Member (Pennant Sandstone Formation) of the Upper Coal Measures. Bedrock is shown to have a superficial cover of Marine and Estuarine Alluvium.</i>
Radon	<i>The Envirocheck report concludes no radon protection is required in new Development at the site.</i>
Coal Mining Risk Assessment	<i>The CON29M Report records that the property is not within a surface area that could be affected by past recorded underground workings. Given the site setting we do not consider unrecorded mining likely and conclude the risk from coal mining is negligible</i>
Potential Sources of Contamination	<i>The site has been recovered from the dock by filling and is located in an industrial setting. We would recommend an intrusive investigation with chemical testing to assess the Human Health and Environmental Risks associated with the site. Much filling of land has occurred in the area and as a consequence gas monitoring is recommended.</i>



SECTION 3 Field Investigation

3.1 Site Works

3.1.1 General

The fieldwork was supervised by Terra Firma, who logged the exploratory holes to the requirements of BS 5930:2015+A1:2020. The proposed locations of the exploratory holes were determined by Terra Firma in general accordance with BS 10175:2011+A2:2017 in order to assess the findings of the preliminary conceptual site model.

3.1.2 First Phase 2025

A geotechnical and geoenvironmental site investigation comprising three trial pits and two soakaway tests was undertaken on the 18th of March 2025.

Trial pits referenced SA01 to SA03, were formed using a JCB 3CX excavator with a 0.60m wide bucket.

Representative disturbed samples were taken and retained in airtight containers for environmental testing.

On completion all trial pits were backfilled with materials arisings compacted in layers using the excavator bucket. The ground surface was left proud to accommodate future settlement of backfilled materials.

The trial pit logs are presented in **Annex A**.

Soakaway tests were carried out in trial pits TP02 and TP03 in general accordance with BRE DG 365:2016. The excavation sides were squared using the excavator bucket and dimensions recorded within the test section. The trial pit was partially filled with clean water using a dedicated bowser with a 75mm diameter outlet and the fall in level recorded against time. The results are presented in **Annex B**.

3.1.3 Second Phase 2026

A geotechnical and geoenvironmental site investigation comprising trial pitting and rotary drilling was undertaken on the 26th and 27th January 2025.

Trial pits referenced TP01 to TP05, were formed using an eight tonne tracked excavator with a 0.60m wide bucket.

Representative disturbed samples were taken and retained in airtight containers for environmental and geotechnical testing.

On completion all trial pits were backfilled with materials arisings compacted in layers using the excavator bucket. The ground surface was left proud to accommodate future settlement of backfilled materials.

The trial pit logs are presented in **Annex A**.

Boreholes reference BH01 to BH03 were formed using a track mounted rotary drilling rig. Dynamic sampling techniques were employed from surface to produce a continuous disturbed sample.

Breaking out of the hardstanding was required at borehole BH03 prior to drilling.



Standard penetration tests (SPT) were carried out at regular intervals in general accordance with BS1377: Part 9:1990:3.3. SPT results summarised as N values are presented on the borehole log.

Boreholes were monitored for groundwater ingress as drilling proceeded.

The borehole logs are presented in **Annex E**.

On completion, boreholes were installed with slotted standpipes consisting of a 50mm ID HDPE slotted tube set in a granular filter zone and sealed above with a bentonite plug. Installations were protected at surface with an upstanding cover. Full installation details are recorded on the relevant logs.

Exploratory hole locations are shown on **Drawing 01**.

3.2 Ground Conditions

The ground conditions encountered by the exploratory holes can in general be summarised as shown in **Table 3.1**.

Table 3.1 Summary of Typical Ground Conditions

Depth (m)			Thickness (m)	Stratum
0.00	-	0.30/4.00	0.30/4.00	MADE GROUND: Black/dark grey slightly sandy slightly gravelly SILT . Gravels are angular to sub rounded fine to coarse brick, concrete, slag. Rare cobbles of angular slag. Frequent rounded to sub rounded cobbles and gravels of yellow sandstone. Rare timber fragments.
0.00	-	0.20/1.10	0.2/1.10	MADE GROUND: Medium dense blackish brown ashy sandy GRAVEL with low cobble content. Gravel is angular fine to coarse of slag, brick and concrete.
0.20	-	>1.15/>1.40	-	MADE GROUND: Loose black ashy gravelly SAND . Gravel is angular fine to coarse of glass, slag, brick and concrete.
0.30/4.00	-	3.20/8.00	01.90/4.00	Stiff bluish grey sandy SILT / Soft bluish grey sandy CLAY
3.20	-	>3.30	-	Very soft fibrous PEAT .
8.00	-	14.50	6.50/11.20	(Recovered as) Dense grey slightly silty slightly sandy sub angular to sub rounded fine to predominantly coarse GRAVEL with high cobble content. Cobbles are sub rounded to sub angular sandstone.

3.2.1 Miscellaneous Ground Conditions

- Peat was encountered in the base of SA01 from 3.20->3.30m.
- A concrete slab was encountered locally at the surface in BH03.
- The Made Ground is variable and contains anthropogenic materials including brick, concrete and slag, with occasional plastic and possible asbestos pipes noted locally in SA01, SA02, SA03TP02 and TP03.
- Organic inclusions are present within the Made Ground, including rare timber fragments and locally frequent timber planks in TP01.

- A strong smell of hydrocarbons was recorded at approximately 0.70 m to 4.00 m depth in TP05, indicating localised contamination.
- Localised sand lenses were encountered at approximately 3.30 m in TP04 and within BH03, indicating variability in the underlying natural deposits.

3.3 Groundwater

Groundwater information recorded during the site investigation period is summarised in **Table 3.2**.

Table 3.2 Groundwater Summary

Location	Depth (m)	Details
SA01	3.20	Water level rose by 20cm in 5 minutes
BH01	3.10	Borehole water depth measured after being left open for 1 hour.
BH02	2.10	Borehole water depth measured after being left open for 1 hour.
BH03	2.70	Strong smell and visible evidence of hydrocarbons during drilling. Drilling stopped due to risk to health and environment.

As drilling progressed, groundwater contaminated with hydrocarbons was encountered and expelled at the surface, identified both visually and by odour. This is illustrated in **Table 3.1** below, where thin-film interference produces a distinct rainbow pattern. The contamination present was first identified at a depth of 8.0m.



Figure 3.1 Groundwater collected from BH03 during drilling showing thin-film interference due to the presence of hydrocarbons.

3.4 Stability & Obstructions

Trial pits remained stable and vertical during excavation.

No obstructions were encountered during the excavation of trial pits or the drilling of the boreholes.

3.5 Installation Well Construction

Groundwater well locations were selected on a targeted basis to investigate suspected contamination.

Groundwater/Gas installation well construction details are summarised in **Table 3.3**.

Table 3.3 Installation Well Summary

Location	Response Zone		Stratum
	From (m)	To (m)	
BH01	1.0	3.0	Made ground
BH02	1.0	3.5	Made ground
BH03	1.0	4.0	Made ground
	8.0	14.50	Natural

A dual monitoring well was constructed in BH03 to target 1] groundwater within the made ground and: 2] groundwater within the natural gravel strata. A 4.0 m bentonite seal was installed between depths of 4.0 m and 8.0 m to create a barrier that would prevent potential contamination from the made ground migrating into the underlying natural strata.

3.6 Laboratory Chemical Testing

3.6.1 Sampling Strategy

Soil sampling locations were selected on a targeted basis to investigate suspected/known sources of contamination or potential contamination migration pathways.

Sample locations, depths and suspected/known contamination source targets are summarised in **Table 3.4**:

Table 3.4 Sample Locations and Targets

Location	Depth (m)	Type	Contamination Targets	Testing Suites
SA02	1.20	Soil	Made ground	TFV, Leachate
SA03	1.10	Soil	Made ground	TFV, Leachate
TP01	0.2	Soil	Railway tracks	TFV, VOC/SVOC, PCB
TP02	0.3	Soil	Made ground	TFV, VOC/SVOC
TP03	0.6	Soil	Railway tracks	TFV, VOC/SVOC, PCB
TP03	1.5	Soil	Railway tracks	TFV, VOC/SVOC
TP04	0.4	Soil	Buildings of associated cement works.	TFV, VOC/SVOC, PCB
TP05	0.3	Soil	Historic location of tank	TFV, VOC/SVOC
TP05	0.8	Soil	Historic location of tank	TFV, VOC/SVOC, PCB
BH03	7.5	Soil	Visual and olfactory evidence of hydrocarbons.	TFV, VOC/SVOC

3.7 Monitoring

Upon completion of site works, installed monitoring wells were visited fortnightly for a period of twelve weeks, to record ground gas and ground water levels. Groundwater levels are summarised in **Table 3.5**.

Table 3.5 Summary of Groundwater Levels

Location	Monitoring Date	Time (GMT)	Ground Water Level (m)
			Below Ground Level
BH01	18/03/2026	10:30:00	1.82
BH02		10:13:00	2.66
BH03 (shallow)		10:00:00	-
BH03 (deep)		09:55:00	0.75
BH01	25/03/2026	09:17:00	1.30
BH02		09:23:00	2.25
BH03 (shallow)		09:35:00	1.70
BH03 (deep)		09:42:00	-
BH01	07/04/2026	11:00:00	0.00
BH02		11:12:00	3.60
BH03 (shallow)		11:23:00	2.78
BH03 (deep)		11:31:00	-

Ground gas and groundwater monitoring results are presented fully in **Annex C**.



SECTION 4 Evaluation of Geoenvironmental Analytical Results

4.1 Assessment Methodology

4.1.1 Soils

An assessment of the analytical results has been made with comparison with the following generic assessment criteria with preference in most onerous order:

- Land Quality Management (LQM) and the Chartered Institute of Environmental Health (CIEH) Suitable 4 Use Levels (S4UL) (Nathanail, CP *et al.*:2015);
- Category 4 Screening Levels (C4SL) provided by the Department for Environment, Food and Rural Affairs (DEFRA:2014);
- Soil Guideline Values (SGV) by the Environment Agency (2009);
- Generic Assessment Criteria (GAC) provided by EIC/AGS/CL:AIRE (2010); and
- Generic Assessment Criteria (GAC) derived in-house.

In the absence of generic assessment criteria, the laboratory limit of detection has been used for comparison, in order to establish the presence/absence of determinants and for initial screening purposes.

An average soil organic matter (SOM) content of 6.57% was determined from laboratory analysis, with a minimum recorded value of 3.3%. In order to avoid overgeneralisation of site conditions and the potential for contaminant concentrations to be underestimated, a precautionary approach has been adopted. Accordingly, assessment of appropriate threshold values for the analysed determinants has been undertaken using a conservative SOM value of 1%. This approach ensures that all samples are evaluated against a worst-case scenario, thereby reducing the risk of potentially significant contamination being overlooked, particularly in the presence of spatial variability across the site.

4.2 Soil Test Results

A summary of the chemical test results which include the regulatory soil guideline values used in a **commercial scenario** are given in the following tables. The complete results can be found in **Annex C**.

4.2.1 Inorganics

Nine samples were tested for a standard suite of inorganics, pH and organic matter. The summarised results are in **Table 4.1**.



Table 4.1 Summary of Soil Chemical Test Results – Inorganics

Determinand	Threshold Value (mg/kg)	Source	Measured Concentrations (mg/kg)		Number of Exceedances
			Minimum	Maximum	
Arsenic	640	LQM/CIEH	10	30	0
Cadmium	190	LQM/CIEH	0.2	1.7	0
Chromium III	8600	LQM/CIEH	12	250	0
Chromium VI	33	LQM/CIEH	<1.0	<1.0	0
Copper	68000	LQM/CIEH	57	660	0
Lead	2330	C4SL	34	150	0
Mercury (inorganic)	1100	LQM/CIEH	<0.05	0.26	0
Nickel	980	LQM/CIEH	13	50	0
Selenium	12000	LQM/CIEH	0.35	2.5	0
Zinc	730000	LQM/CIEH	97	320	0
Cyanide	-	-	<0.1	0.5	-
Boron	290	LQM/CIEH	0.2	1.2	0
Organic Matter (%)	-	-	3.3	11	-
pH	-	-	8.4	11.7	-
Notes:					
- No available guideline					

4.2.2 Organics

Nine samples were tested for speciated polycyclic aromatic hydrocarbons (PAH). The summarised results are in **Table 4.2**.

Table 4.2 Summary of Soil Chemical Test Results – Speciated PAH

Determinand	Threshold Value (mg/kg)	Source	Measured Concentrations (mg/kg)		Number of Exceedances
			Minimum	Maximum	
Naphthalene	190	LQM/CIEH	<0.10	1.1	0
Acenaphthylene	83000	LQM/CIEH	<0.10	0.16	0
Acenaphthene	84000	LQM/CIEH	<0.10	0.40	0
Fluorene	63000	LQM/CIEH	<0.10	0.41	0
Phenanthrene	22000	LQM/CIEH	<0.10	3.7	0
Anthracene	520000	LQM/CIEH	<0.10	0.84	0
Fluoranthene	23000	LQM/CIEH	<0.10	5.0	0
Pyrene	54000	LQM/CIEH	<0.10	4.3	0
Benzo(a)anthracene	170	LQM/CIEH	<0.10	2.4	0
Chrysene	350	LQM/CIEH	<0.10	3.0	0
Benzo(b)fluoranthene	44	LQM/CIEH	<0.10	3.7	0
Benzo(k)fluoranthene	1200	LQM/CIEH	<0.10	1.5	0
Benzo(a)pyrene	35	LQM/CIEH	<0.10	3.7	0
Indeno(123cd)pyrene	500	LQM/CIEH	<0.10	3.0	0
Dibenzo(ah)anthracene	3.5	LQM/CIEH	<0.10	0.55	0
Benzo(ghi)perylene	3900	LQM/CIEH	<0.10	2.7	0
Total PAH	-	-	<2.0	32	-
Notes:					
Thresholds based on 1.0% soil organic matter					
- No available guidelines					

Nine samples were tested for petroleum hydrocarbon. The summarised results are shown in **Table 4.3**.

Table 4.3 Summary of Soil Chemical Test Results – Petroleum Hydrocarbons

Determinand	Threshold Value (mg/kg)	Source	Measured Concentrations (mg/kg)		Number of Exceedances
			Minimum	Maximum	
Aliphatic					
PH C5 – C6 Ali	3200	LQM/CIEH	<0.01	<0.01	0
PH C6 – C8 Ali	7800	LQM/CIEH	<0.01	<0.01	0
PH C8 – C10 Ali	2000	LQM/CIEH	<0.01	<0.01	0
PH C10 – C12 Ali	9700	LQM/CIEH	<1.5	31	0
PH C12 – C16 Ali	59000	LQM/CIEH	<1.2	24	0
PH C16 – C21 Ali	1600000	LQM/CIEH	<1.5	28	0
PH C21 – C35 Ali	1600000	LQM/CIEH	<3.4	82	0
PH C35 – C44 Ali	3200	LQM/CIEH	<3.4	17	0
Aromatic					
PH C5 – C7 Arom	26000	LQM/CIEH	<0.01	<0.01	0
PH C7 – C8 Arom	56000	LQM/CIEH	<0.01	<0.01	0
PH C8 – C10 Arom	3500	LQM/CIEH	<0.01	<0.01	0
PH C10 – C12 Arom	16000	LQM/CIEH	<0.9	<0.9	0
PH C12 – C16 Arom	36000	LQM/CIEH	< 0.5	< 0.5	0
PH C16 – C21 Arom	28000	LQM/CIEH	< 0.6	16	0
PH C21 – C35 Arom	28000	LQM/CIEH	< 1.4	56	0
PH C35 – C44 Arom	28000	LQM/CIEH	< 1.4	40	0
Notes: PH – Petroleum Hydrocarbon Ali – Aliphatic Arom – Aromatic Thresholds based on 1.0% soil organic matter * – Ali C16-21 and C21-C35 based on criteria for Ali EC >16-35					

Seven samples were tested for Phenols, BTEX and MTBE compounds. The summarised results are in **Table 4.4**.

Table 4.4 Summary of Soil Chemical Test Results – Phenols, BTEX & MTBE

Determinand	Threshold Value (mg/kg)	Source	Measured Concentrations (mg/kg)		Number of Exceedances
			Minimum	Maximum	
Benzene	90	LQM/CIEH	< 0.01	< 0.01	0
Toluene	180000	LQM/CIEH	< 0.01	< 0.01	0
Ethylbenzene	27000	LQM/CIEH	< 0.01	< 0.01	0
o- xylene	33000	LQM/CIEH	< 0.01	< 0.01	0
m- xylene	450	LQM/CIEH	< 0.01	< 0.01	0
p- xylene	430	LQM/CIEH	< 0.01	< 0.01	0
MTBE	-	-	< 0.01	< 0.01	-
Notes: - No available guideline					

Seven samples were tested for a full suite of volatile and semi-volatile organic compounds. Noteworthy compounds exceeding laboratory limits of detection are summarised in **Table 4.5**.

Table 4.5 Summary of Soil Chemical Test Results – Noteworthy VOC & SVOC

Determinand	Measured Concentrations (mg/kg)	
	Minimum	Maximum
3&4-Methylphenol	< 0.1	0.1
2-Methylnaphthalene	< 0.1	0.9
Dibenzofuran	< 0.1	2.5
Carbazole	< 0.1	4.0

Four samples were tested for polychlorinated biphenyl (PCB). The summarised results are in **Table 4.6**

Table 4.6 Summary of Soil Chemical Test Results – PCB

Determinand	Threshold Value (mg/kg)	Source	Measured Concentrations (mg/kg)		Number of Exceedances
			Minimum	Maximum	
PCB 28 + PCB 31	-	-	< 0.01	< 0.01	-
PCB 52	-	-	< 0.01	< 0.01	-
PCB 101	-	-	< 0.01	0.02	-
PCB 118	-	-	< 0.01	< 0.01	-
PCB 153	-	-	< 0.01	< 0.01	-
PCB 138	-	-	< 0.01	< 0.01	-
PCB 180	-	-	< 0.01	< 0.01	-
Total PCBs	0.24	SGV	< 0.01	0.02	0
Notes:					
- No available guideline					

4.2.3 Asbestos Testing

All soil samples were scheduled for asbestos screening. Asbestos was not detected although the likely presence of asbestos was observed in TP03 at 0.4m in the form of possible asbestos pipe. **Figure 4.1** shows the segment of asbestos pipe





Figure 4.1 Segment of asbestos pipe located at a depth of 0.4m in TP03.

4.2.4 Leachate Test Results

Two samples were submitted for leachate testing for inorganics. The results are summarised in **Table 4.7**.



Table 4.7 Summary of Leachate Chemical Test Results – Inorganics & Miscellaneous

Substance	Threshold Value (µg/l)	Source	Measured Concentrations (µg/l)		Number of Exceedances
			Minimum	Maximum	
Arsenic	50	WFD2	3.1	7.7	0
Cadmium	0.08	WFD1	<0.11	<0.11	BLDL
Chromium	3.4*	WFD2	0.59	0.69	0
Copper	1.0	WFD2	6.6	9.8	2
Lead	1.2	WFD1	3.8	7.4	2
Mercury	0.07	WFD3	<0.010	<0.010	0
Nickel	4	WFD1	<0.50	<0.50	0
Selenium	10	DWD	<0.50	<0.50	0
Zinc	10.9	WFD2	11	17	2
Cyanide, Total	1.0	WFD2	<0.50	<0.50	0
Phenol	7.7	WFD2	<0.030	<0.030	0
Sulphate (mg/l)	400	BRE	<1.0	1.6	0
TOC (mg/l)			9.9	32	-
pH			8.0	8.2	-

Notes:

WFD1 - Water Framework Directive – Inland Surface Waters (AA)

WFD2 - Water Framework Directive – Freshwater (Long Term Mean)

WFD3 - Water Framework Directive – Inland Surface Waters (MAC)

DWD – Drinking Water Directive

BRE – British Research Establishment

- No available guideline

* Conservative threshold for Chromium VI used

BLDL - Below laboratory detection limit

ALDL - Above laboratory detection limit

Two samples were submitted for leachate testing for speciated polycyclic aromatic hydrocarbons. The results are summarised in **Table 4.8**.

Table 4.8 Summary of Leachate Chemical Test Results – Speciated PAH

Substance	Threshold Value (µg/l)	Source	Measured Concentrations(µg/l)		Number of Exceedances
			Minimum	Maximum	
Naphthalene	2	WFD1	<0.10	<0.10	0
Acenaphthylene	-	-	<0.10	<0.10	BLDL
Acenaphthene	-	-	<0.10	<0.10	BLDL
Fluorene	-	-	<0.10	<0.10	BLDL
Phenanthrene	-	-	<0.10	<0.10	BLDL
Anthracene	0.1	WFD1	<0.10	<0.10	0
Fluoranthene	0.0063	WFD1	<0.10	<0.10	BLDL
Pyrene	-	-	<0.10	<0.10	BLDL
Benzo(a)anthracene	-	-	<0.10	<0.10	BLDL
Chrysene	-	-	<0.10	<0.10	BLDL
Benzo(b)fluoranthene	0.017	WFD3	<0.10	<0.10	0
Benzo(k)fluoranthene	0.017	WFD3	<0.10	<0.10	0
Benzo(a)pyrene	0.00017	WFD1	<0.10	<0.10	BLDL
Indeno(123cd)pyrene	-	-	<0.10	<0.10	BLDL
Dibenzo(ah)anthracene	-	-	<0.10	<0.10	BLDL
Benzo(ghi)perylene	0.0082	WFD3	<0.10	<0.10	BLDL
TPH (C6-C40)	-	-	<0.10	<0.10	BLDL
Phenols	7.7	WFD2	<0.03	<0.03	0

Notes:

WFD1 - Water Framework Directive – Inland Surface Waters (AA)

WFD2 - Water Framework Directive – Freshwater (Long Term Mean)

WFD3 - Water Framework Directive – Inland Surface Waters (MAC)

- No available guideline

ALDL - Above laboratory detection limit

BLDL - Below laboratory detection limit

SECTION 5 Ground Gas Risk Assessment

The following detailed ground gas risk assessment is prepared with reference to information sources identified during the Tier 1 assessment, as well as encountered ground conditions and quantitative data obtained during subsequent phases of site investigation. Where possible, consideration has also been given to the proposed development and its potential influence on ground gas risk.

5.1 Gas Risk Characterisation

5.1.1 Gas Sources

Potential sources of ground gas that have been identified during this study, along with an interpretation of the gas generation potential and lateral migration potential (Wilson S *et al.*:2009) respectively, are as follows:

- natural soil with low degradable organic content (Alluvium) – very low – negligible;
- made ground soils with high degradable organic content (<15%) – low – negligible

5.2 Gas Screening Value

Three ground gas monitoring wells were installed in BH01, BH02 and BH03. Installation details are shown on the relevant log.

Six rounds of gas monitoring have been carried out to date. The installations were tested for carbon dioxide, methane, oxygen, carbon monoxide and hydrogen sulphide using a Gas Analyser GA5000.

Recorded gas concentrations are summarised in **Table 5.1**.

Table 5.1 Measured Gas Concentration Summary

Gas	Minimum (% V/V)	Maximum (% V/V)
Methane	0.0	0.0
Carbon Dioxide	0.2	7.9
Oxygen	8.5	20.3

Methane levels peaked at 0.0% V/V. Carbon dioxide levels varied between 0.2% and 7.9% V/V. Oxygen concentrations varied between 8.5% and 20.3% V/V.

The gas flow rate from the boreholes was also assessed, a maximum flow rate of 0.0l/hr was recorded.

No flow rate was recorded on site, based on a conservative flow rate, the GA5000's detection limit, of 0.1 l/hr and the highest recorded carbon dioxide concentration of 7.9%, a gas screening value of 0.0079 l/hr is calculated, as follows:

$$(7.9/100) \times 0.1 = 0.0079 \text{ l/hr}$$

When monitoring results are compared with BS8576:2013, the site is classified as 'gas characteristic situation 1' (CS1). However, as the peak carbon dioxide has regularly risen above the 5% screening threshold level, it is recommended that consideration be given to elevating the gas characteristic situation to CS2.

The monitoring results are presented in **Annex B**.

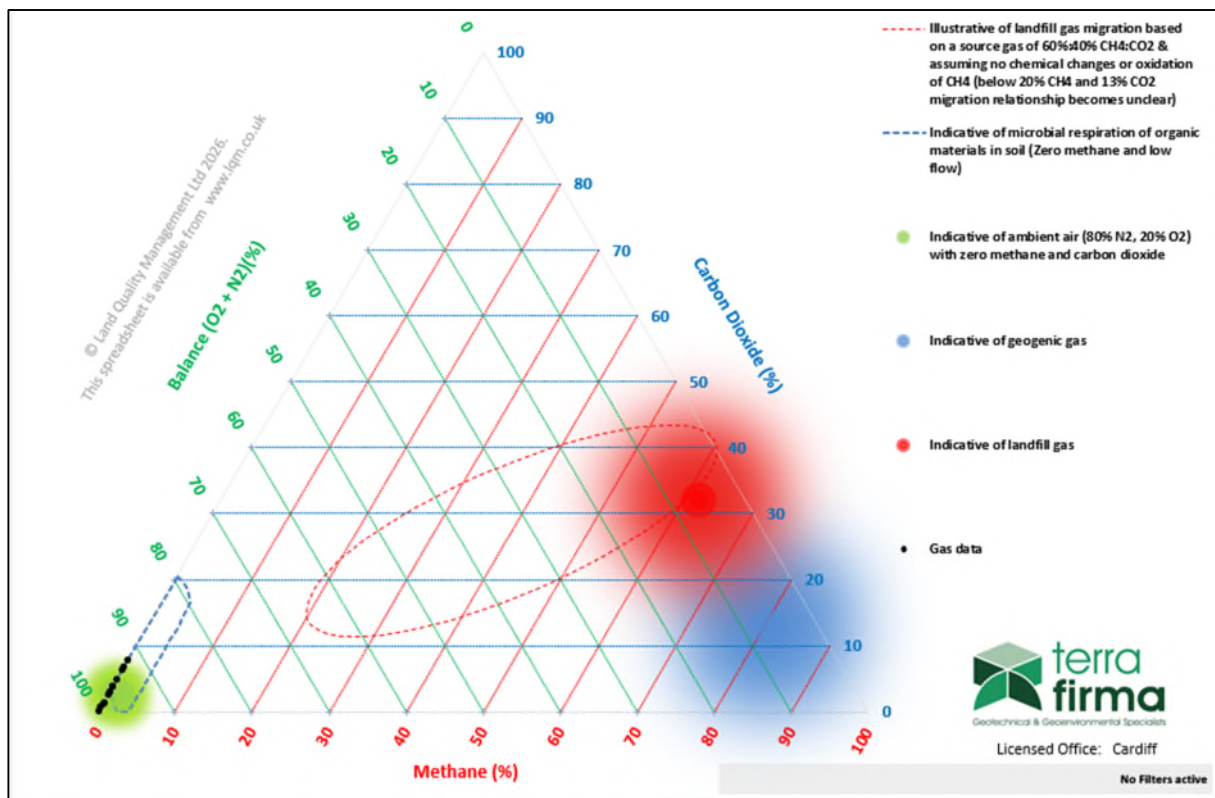


Figure 5.1 Ternary gas plot showing the methane, carbon dioxide and oxygen/nitrogen readings from the first three rounds of monitoring.

When the current round of ground gas monitoring data are plotted on a ternary diagram (figure 5.1) comprising methane (CH₄), carbon dioxide (CO₂), and oxygen/nitrogen (O₂/N₂) axes, the resulting distribution indicates a gas regime dominated by microbial respiration processes within the soil profile. The absence of detectable methane concentrations, coupled with relatively low gas flow rates, is consistent with aerobic to mildly anaerobic biodegradation of organic matter rather than active methanogenic conditions.

This interpretation is further supported by laboratory data, which identify elevated organic matter content across portions of the site, with concentrations reaching up to approximately 11%. Such conditions are conducive to microbial activity that preferentially generates carbon dioxide while suppressing methane production due to the presence of oxygen or limited anaerobic zones.

Accordingly, the characteristic gas composition and low flow regime observed are indicative of a low-risk ground gas environment. Based on this evidence, the site is appropriately classified as Characteristic Situation 1 (CS1), reflecting negligible methane generation potential and minimal requirement for gas protection measures.

SECTION 6 Generic Quantitative Risk Assessment

6.1 Contaminants of Concern

All substances tested for, aside from asbestos, were found to be present at concentrations below their respective human health threshold level.

Contaminants of concern identified as part of the investigation are summarised in **Table 6.1**, along with an interpretation of the likely contamination source. Where applicable, the contaminant, source relationship is based on the inferences made in the preliminary conceptual site model.

Table 6.1 Contaminants of Concern

Location	Depth	Contaminant	Source
SA02	1.20	Leachate: Lead, Zinc	Made ground
SA03	1.10	Leachate: Lead, Zinc, Copper	Made ground
TP01	0.4	Asbestos observed on site	Historic development of site pre-1999.
BH03	Groundwater	Hydrocarbons observed to be present in groundwater.	Potentially associated with the industrial surrounding of the site.

6.2 Remediation Options Appraisal

On review of the available data there is currently insufficient information to allow an options appraisal of the possible remediation methodologies to undertaken. It will therefore be necessary to undertake further phases of investigation to collect additional data. Once the additional data has been collected the conceptual site model must be refined. If there is then sufficient information the required remediation measures can be determined.

6.2.1 Human Health

As good practice, construction workers must adhere to good site management, COSHH, good standards of hygiene and appropriate health & safety on site, with personal protection equipment (PPE) and dust suppression where appropriate.

All imported soils must be validated as clean and suitable for use in accordance with 'Requirements for the Chemical Testing of Imported Soils for Various End Uses and Validation Cover Systems'.

For the specification of proposed new supply water pipes, the UK Water Industry Research publication 'Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites, must be consulted.

In accordance with EC Regulation 1272/2008 and Environment Agency Guidance WM3 soils destined for off-site disposal must be classified on the basis of their hazard phrases prior to disposal. Soils are classified as a mirror entry waste and must be classified on the basis of their specific chemical properties.

If during earthworks ground conditions are encountered that are markedly different to those found during the investigation, then the ground must be subject to additional sampling and testing and any necessary remedial measures designed and implemented before continuing with the works.

6.2.1.1 Contaminated Soils

The advice of an asbestos specialist will be required and as a minimum the following precautions must be employed:

- Dust suppression and measures to dampen the material
- Suitable PPE for site workers
- Air monitoring on the site boundary
- Personal air monitors (for a time to determine actual personnel / fibre interaction)

In addition to the above it is best practise to clean down plant and change air filters on any plant used in the works with asbestos contaminated material.

6.2.1.2 Ground Gas/Radon

No radon measures will be required to mitigate against the risk to future site users from radon gas.

6.2 Aquatic Environment

Due to the presence of hydrocarbon contamination in the groundwater, additional investigation shall be required to fully evaluate the risk to the aquatic environment.

During the construction period, there is a risk to the environment/adjacent sites from de-watering, digging foundations, moving contaminated soil, drainage misconnections, discharges to local surface waters or the ground, runoff from construction materials and/or exposed ground, wheel washings and oil or chemical spills.

The risk is considered to be negligible as any adverse effects will be easily preventable by due diligence to good construction practise and housekeeping in preventing surface runoff and the spillage of materials.

The basic measures that must be taken are as follows:

- Prepare a drainage plan and mark the manholes to prevent pollutants accidentally reaching the surface water sewers;
- Carry out any activities that could cause pollution in a designated, bunded area, away from rivers or boreholes. Where possible it should drain to the foul sewer;
- Use settlement ponds to remove silty water;
- Store all oils and chemicals in a fully bunded area to prevent leaks or spills;
- Get advice on whether you need an environmental permit and apply in good time



SECTION 8 Engineering Recommendations

8.1 Preparation of Site

Remaining areas of hard standing must be stripped and removed from beneath the proposed development area.

Areas of vegetation including all roots must be stripped and removed from beneath the proposed development site.

Allowances should be made for any temporary/permanent support works to any existing adjacent structure necessary as a result of the proposed works.

Contingencies should be made for the protection/diversion of any underground/overhead services present beneath/above the site brought about as a result of the proposed works.

Any reduced levels should be brought up to the required levels with suitable inert mainly granular materials. Department for Transport (DfT) type 2 sub-base or similar should be used and compacted in layers to the requirements of the Specification for Highway Works.

Allowances must also be made for the excavation of any soft spots/areas and their replacement with well compacted imported granular materials.

In accordance with EC Regulation 1272/2008 and Environment Agency Guidance WM3 soils and other materials destined for off-site disposal must be classified on the basis of their hazard phrases prior to disposal. Soils are classified as a mirror entry waste and must be classified on the basis of their specific chemical properties. Terra Firma offer this service if required.

8.2 Foundation & Floor Slab Solution

The variable nature of the made ground combined with the depth of the soft underlying marine/estuarine alluvial deposits precludes the use of conventional shallow foundations founded at shallow depth. Such foundations would lead to high and unacceptable total and differential settlements and are therefore not recommended.

It is therefore recommended that a piled foundation is used. A precast concrete driven pile is considered the most appropriate pile type for the development.

For a 250mm square precast concrete pile driven to an appropriate within the underlying dense gravels an allowable safe working load of 350kN should be achieved. Based upon the site investigation information the piles should vary in length between 11 to 12m. Variation in the pile lengths should also be expected.

Settlements should be <10mm with angular distortions of <1:750.

During the piling operations a careful check should be kept on pile vibrations. Should the vibrations exceed acceptable limits then measures should be taken to dampen the vibrations to acceptable levels.

If the vibrations cannot be reduced to acceptable levels then consideration should be given to the use of bored/cfa piles.

The above recommendations are given for guidance only and should be confirmed by the specialist piling contractor.

It should be noted that the piling contractor may require additional deep boreholes to confirm pile lengths and allowable safe working load.



Floor slabs should be designed as suspended. Alternatively the floor slabs should be piled and the floor slab designed as ground bearing upon the piled foundations.

8.3 Excavations & Formations

Most of the shallow excavations will be possible with normal soil excavating machinery.

Allowances for a breaker attachment will be required when dealing with areas of hard standing and buried obstructions.

Shallow perched water and groundwater flows were encountered during the investigation. Any water inflows together with rainwater infiltration should be dealt with by conventional pumping techniques. However, it should be noted that during times of heavy rainfall a higher water table will be encountered.

The sides of any excavations deeper than 1.20m, or shallower if unstable, should be supported by planking and strutting or other proprietary means.

The sub-formations/formations are likely to be susceptible to loosening, softening and deterioration by exposure to weather (rain, frost and drying conditions), the action of water (flood water or removal of groundwater) and site traffic.

Formations should never be left unprotected and continuously exposed to rain causing degradation, or left exposed/uncovered overnight, unless permitted by a qualified engineer.

Construction plant and other vehicular traffic should not be operated on unprotected formations.

As a minimum the formation/excavation surfaces must be protected by blinding concrete immediately after exposure.

Allowances should be made for the removal of soft spots/areas and their replacement with well compacted granular materials.

Allowances should also be made for special precautions to prevent formation deterioration in addition to the above.

8.4 Access Roads & Car Parking Areas

It is recommended that in-situ CBR testing should be performed following earthworks to verify the performance of the engineered fill prior to the construction of roads and car parking areas.

Please note that the Local Council / Highways Authority may require in-situ CBR testing to be undertaken before a road is adopted.



SECTION 9 Recommended Works

9.1 Geotechnical Recommendations

Due to the requirement for a piled foundation solution deeper investigations will be required to facilitate pile design. This will comprise the sinking of rotary boreholes which should be drilled to bedrock. The boreholes must be sunk to a depth of 5m below the anticipated pile depth to allow rock cores to be recovered for geotechnical testing.

Standard penetration tests should be undertaken through the soils at regular intervals.

Samples of the rock should be taken and subject to point load testing and uniaxial compressive strength testing.

Deeper soils samples can also be recovery using dynamic sampling techniques.

9.2 Geoenvironmental Recommendations

9.2.1 Soil

Due to the presence of made ground and building rubble encountered beneath the site further chemical samples should be taken and frequent asbestos samples across the site.

9.2.2 Groundwater

Due to the presence of significant hydrocarbon contamination encountered in the groundwater during the drilling, it is recommended that an assessment of the risk to the aquatic environment is carried out. Following an initial generic assessment, it is expected that a detailed quantitative risk assessment will be required.

An assessment of the risk to human health from hydrocarbon vapours should also be carried out.

The large tidal range of the Bristol Channel is likely to have a significant influence on the groundwater table. Therefore, a period of groundwater level monitoring using a groundwater level data logger should be carried out prior to the installation of additional monitoring wells. The groundwater level monitoring data will help determine the appropriate depths of the monitoring well response zones.

This monitoring should be carried out before during and after piling operations to confirm no deuteriation in groundwater quality as a result of the works.

A piling risk assessment should also be carried out prior to piling.



ANNEX A
Geological Logs





Terra Firma (Wales) Limited
5 Deryn Court, Wharfedale Road
Pentwyn, Cardiff
CF23 7HA

Tel: 02920 735354
info@terrafirmawales.co.uk
www.terrafirmawales.co.uk

Borehole No.

BH01

Sheet 1 of 1

Project Name:	Unit 8, North Banks Road, Port Talbot	Project No.	18045	Co-ords:		Hole Type	RC
Location:	Unit 8, North Banks Road, Port Talbot	Level:		Scale	1:50	Logged By	FL
Client:		Dates:	26/02/2026				

Water Strikes	Depth (m)	Type /FI	Coring			Depth (m)	Level (m)	Well	Legend	Stratum Description	
			TCR	SCR	RQD						
	1.00					N=28 (6,6/7,8,4, 9)				MADE GROUND: Black/dark grey slightly sandy slightly gravelly SILT. Gravels are angular to sub rounded fine to coarse brick, concrete, slag. Rare cobbles of angular slag. Frequent rounded to sub rounded cobbles and gravels of yellow sandstone. Rare timber fragments. MG	1
	2.00					N=5 (2,3/1,1,1, 2)					2
▼	3.00					N=27 (5,6/6,8,6, 7)					3
	4.00					4.00 N=33 (6,6/7,8,9, 9)					4
										End of Borehole at 4.000m	5
											6
											7
											8
											9
											10

Remarks: 1] Borehole terminated on refusal. 2] On completion a 50mm standpipe (50mm) was installed to 4.0m depth. Slotted pipe with granular response zone from 1.0m-4.0m, solid standpipe with bentonite seal GL-1.0m, and a raised cover. 3] Groundwater recorded at 3.10m.



Terra Firma (Wales) Limited
5 Deryn Court, Wharfedale Road
Pentwyn, Cardiff
CF23 7HA

Tel: 02920 735354
info@terrafirmawales.co.uk
www.terrafirmawales.co.uk

Borehole No.

BH02

Sheet 1 of 1

Project Name:	Unit 8, North Banks Road, Port Talbot	Project No.	18045	Co-ords:		Hole Type	RC
Location:	Unit 8, North Banks Road, Port Talbot	Level:		Scale	1:50	Logged By	FL
Client:		Dates:	26/02/2026				

Water Strikes	Depth (m)	Type /FI	Coring			Depth (m)	Level (m)	Well	Legend	Stratum Description	
			TCR	SCR	RQD						
	1.00					N=22 (3,3/4,9,3, 6)				MADE GROUND: Black/dark grey slightly sandy slightly gravelly SILT. Gravels are angular to sub rounded fine to coarse brick, concrete, slag. Rare cobbles of angular slag. Frequent rounded to sub rounded cobbles and gravels of yellow sandstone. Rare timber fragments. MG	1
▼	2.00					N=26 (2,3/3,9,9, 5)					2
	3.00					N=31 (4,6/8,5,6, 12)					3
	3.50					3.50 N=27 (6,6/6,7,7, 7)					4
										End of Borehole at 3.500m	5
											6
											7
											8
											9
											10

Remarks: 1] Borehole terminated on refusal. 2] On completion a 50mm standpipe (50mm) was installed to 3.50m depth. Slotted pipe with granular response zone from 1.0m-3.50m, solid standpipe with bentonite seal GL-1.0m, and a raised cover. 3] Groundwater recorded at 2.10m.

Project Name:	Unit 8, North Banks Road, Port Talbot	Project No.	18045	Co-ords:		Hole Type	RC
Location:	Unit 8, North Banks Road, Port Talbot	Level:		Scale	1:50	Logged By	FL
Client:		Dates:	26/02/2026 - 27/02/2026				

Water Strikes	Depth (m)	Type /FI	Coring			Depth (m)	Level (m)	Well	Legend	Stratum Description	
			TCR	SCR	RQD						
						0.20				MADE GROUND: CONCRETE SLAB	
	1.00					N=26 (2,3/3,9,9, 5)				Black/dark grey slightly sandy slightly slightly gravelly SILT. Gravels are medium to coarse angular to sub rounded brick, concrete, slag. Rare cobbles of angular slag. Frequent rounded to sub rounded cobbles and gravels of yellow sandstone. Rare timber fragments. MG	1
	2.00					N=25 (4,6/8,5,6, 6)					2
	3.00					N=26 (6,6/6,7,6, 7)					3
	4.00					4.00 N=22 (3,7/6,5,6, 5)				Bluish grey sandy SILT	4
	4.50					N=23 (5,7/7,5,6, 5)					5
	6.00					6.00 N=24 (6,7/8,6,5, 5)				Bluish grey silty SAND	6
											7
	8.50					8.00 N=50 (8,9/15,19, 16,0)				(Recovered as) grey slightly silty slightly sandy sub angular to sub rounded fine to predominantly coarse GRAVEL with high cobble content. Cobbles are sub rounded to sub angular sandstone.	8
											9
	10.00										10

Remarks: 1] Borehole terminated due to presence of contamination in groundwater causing risk to human health. 2] On completion, two 50mm standpipe (50mm) was installed to 14.5m and 4.0m depth. Slotted pipe with granular response zone from 1.0m-4.0m and 8.0-14.50m, solid standpipe with bentonite seal GL-1.0m and GL-8.0m, and a raised cover.



Terra Firma (Wales) Limited
5 Deryn Court, Wharfedale Road
Pentwyn, Cardiff
CF23 7HA

Tel: 02920 735354
info@terrafirmawales.co.uk
www.terrafirmawales.co.uk

Borehole No.

BH03

Sheet 2 of 2

Project Name:	Unit 8, North Banks Road, Port Talbot	Project No.	18045	Co-ords:		Hole Type	RC
Location:	Unit 8, North Banks Road, Port Talbot	Level:		Scale	1:50	Logged By	FL
Client:		Dates:	26/02/2026 - 27/02/2026				

Water Strikes	Depth (m)	Type /FI	Coring			Depth (m)	Level (m)	Well	Legend	Stratum Description	
			TCR	SCR	RQD						
	11.50					N=50 (3,4/32,18, 0,0)				(Recovered as) grey slightly silty slightly sandy sub angular to sub rounded fine to predominantly coarse GRAVEL with high cobble content. Cobbles are sub rounded to sub angular sandstone.	11
						N=59 (6,7/9,17,1 8,15)					12
	13.00					N=50 (10,12/16, 34,0,0)					13
	14.50					14.50 N=50 (5,20/26,2 4,0,0)					14
										End of Borehole at 14.500m	15
											16
											17
											18
											19
											20

Remarks: 1] Borehole terminated due to presence of contamination in groundwater causing risk to human health. 2] On completion, two 50mm standpipe (50mm) was installed to 14.5m and 4.0m depth. Slotted pipe with granular response zone from 1.0m-4.0m and 8.0-14.50m, solid standpipe with bentonite seal GL-1.0m and GL-8.0m, and a raised cover.

Trial Pit Log

Trial Pit No:
TP01
 Sheet 1 of 1

Project Name: Unit 8, North Banks Road, Port Talbot

Project No:
 18045

Co-ords: -
 Level:

Date:
 26/02/2026

Location: Unit 8, North Banks Road, Port Talbot

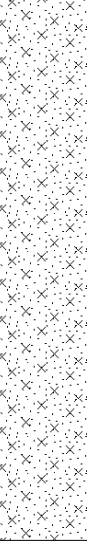
Dimensions:

Depth
 2.30

Scale:
 1:25

Logged:
 FL

Client:

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.30			MADE GROUND: Black slightly sandy slightly gravelly SILT. Gravels are angular to sub rounded fine to coarse brick, concrete and slag. Frequent timber planks present. MG	
				0.50			MADE GROUND: Yellowish brown slightly silty slightly sandy CLAY. Sand is fine to coarse. MG	
							Yellowish brown slightly silty fine to coarse SAND with black fine to coarse sand inclusions.	1
				2.30			End of Pit at 2.300m	2
								3
								4
								5

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated at extent of excavator's reach. 4] Trial pit backfilled with arisings.

Trial Pit Log

Trial Pit No:
 TP02
 Sheet 1 of 1

Project Name: Unit 8, North Banks Road, Port Talbot

Project No:
 18045

Co-ords: -
 Level:

Date:
 26/02/2026

Location: Unit 8, North Banks Road, Port Talbot

Dimensions:

Depth
 2.60

Scale:
 1:25

Logged:
 FL

Client:

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
							MADE GROUND: Dark brown slightly sandy slightly gravelly SILT. Gravels are angular to sub rounded fine to coarse brick, concrete and slag. Frequent plastic bottles and intact brick present. MG <i>Fine to medium roots present from 0.0-0.3m</i>	1
								2
				2.60			End of Pit at 2.600m	3
								4
								5

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated at extent of excavator's reach. 4] Trial pit backfilled with arisings.

Trial Pit Log

Trial Pit No:
TP03
 Sheet 1 of 1

Project Name: Unit 8, North Banks Road, Port Talbot

Project No:
 18045

Co-ords: -
 Level:

Date:
 26/02/2026

Location: Unit 8, North Banks Road, Port Talbot

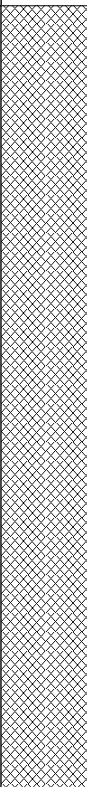
Dimensions:

Depth
 2.60

Scale:
 1:25

Logged:
 FL

Client:

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
▼				2.60			MADE GROUND: Black/dark grey slightly sandy slightly gravelly SILT. Gravels are angular to sub rounded fine to coarse brick, concrete, slag. Rare boulders and cobbles of slag. Frequent rounded to sub rounded cobbles, boulders and gravels of yellow sandstone. Rare timber planks with rare clay and asbestos pipe at 0.4m. MG
							End of Pit at 2.600m

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated at extent of excavator's reach. 4] Trial pit backfilled with arisings.

Trial Pit Log

Trial Pit No:
TP04
 Sheet 1 of 1

Project Name: Unit 8, North Banks Road, Port Talbot

Project No:
 18045

Co-ords: -
 Level:

Date:
 26/02/2026

Location: Unit 8, North Banks Road, Port Talbot

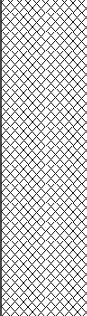
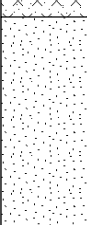
Dimensions:

Depth
 3.30

Scale:
 1:25

Logged:
 FL

Client:

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
▼				1.10			MADE GROUND: Black /dark grey slightly sandy slightly gravelly SILT. Gravels are angular to sub rounded fine to coarse brick, concrete and slag. MG	1
							Orange and grey mottled sandy SILT with rare inclusions of black organic matter.	2
				2.60			Bluish grey silty SAND.	3
				3.30			End of Pit at 3.300m	4
								5

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated at extent of excavator's reach. 4] Trial pit backfilled with arisings.

Trial Pit Log

Trial Pit No:
TP05
 Sheet 1 of 1

Project Name: Unit 8, North Banks Road, Port Talbot

Project No:
18045

Co-ords: -
 Level:

Date:
 26/02/2026

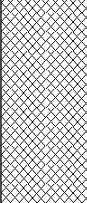
Location: Unit 8, North Banks Road, Port Talbot

Dimensions:

Depth
 4.00

Scale:
 1:25
 Logged:
 FL

Client:

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.70			MADE GROUND: Black/dark grey slightly sandy slightly gravelly SILT. Gravels are angular to sub rounded fine to coarse brick, concrete and slag. MG
							Bluish grey sandy SILT. <i>Strong smell of hydrocarbons</i>
				4.00			End of Pit at 4.000m

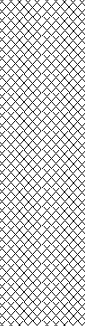
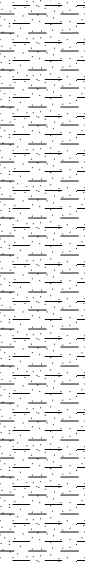
Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated at extent of excavator's reach. 4] Trial pit backfilled with arisings.

Trial Pit Log

Trial Pit No:
SA01
Sheet 1 of 1

Project Name:	Unit D, North Bank Road, Port Talbot	Project No:	TF-24-587-CA	Co-ords:	-	Date:	18/03/2025
Location: Unit D, North Bank Road, Port Talbot				Dimensions:	2.00	Scale:	1:25
Client: Vale				Depth	3.30	Logged:	JA

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				1.10			MADE GROUND: Medium dense blackish brown ashy sandy GRAVEL with low cobble content and slight hydrocarbon odour. Gravel is angular fine to coarse including slag, plastic, concrete and metal. Cobbles are angular of slag and concrete.	1
				1.30			Loose brown clayey SAND. Sand is fine to medium.	
							Soft blueish grey sandy CLAY with cobble sized pockets of sand.	2
				3.20			Very soft brown fibrous PEAT.	3
				3.30			End of Pit at 3.300m	4
								5

Stability:	Stable
Remarks:	1. Groundwater encountered at 3.20m. 2. Trial pit terminated at limit of excavators reach. 3. Trial pit backfilled with arisings.



Geotechnical & Geoenvironmental Specialists

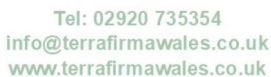
Sheet 1 of 1

18/03/2025

Logged:
JA

- 4 -

Remarks: 1. No groundwater encountered. 2. Trial pit terminated at test depth. 3. Trial pit backfilled with arisings.



Trial Pit No:
SA03
Sheet 1 of 1

Project Name: Unit D, North Bank Road, Port Talbot

Project No:
TF-24-587-CA

Co-ords: -
Level:

Date:
18/03/2025

Location: Unit D, North Bank Road, Port Talbot

Dimensions:

1.30

Depth

1.15

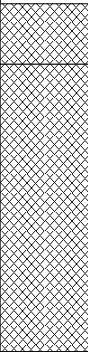
0.60

Scale:

1:25

Logged:
JA

Client: Vale

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.20			MADE GROUND: Medium dense black ashy sandy GRAVEL with low cobble content. Gravel is angular fine to coarse including brick, slag, concrete and glass. Cobbles are angular of brick and concrete. MADE GROUND: Loose black ashy gravelly SAND. Gravel is angular fine to coarse including brick, slag, concrete and glass.
				1.15			End of Pit at 1.150m

Stability:	Stable
------------	--------

Remarks: 1. No groundwater encountered. 2. Trial pit terminated at test depth. 3. Trial pit backfilled with arisings.

ANNEX B
Soakaway Results



SOAKAWAY TEST



Site Name: Unit D, North Bank Road, Port Talbot
Project Number: TF-24-587-CA
Date: 18/02/2025
Engineer: Jamie Alderman

Trial Pit: SA02

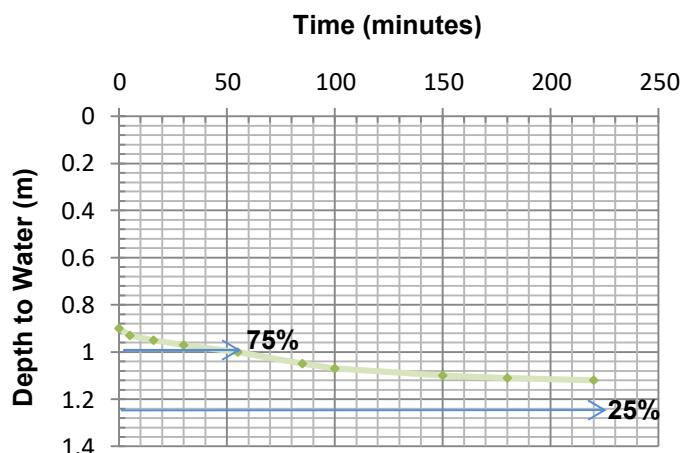
TEST 1

Length
Bredth
Depth
Fill Level

1.60 m
0.60 m
1.40 m
0.90 m

V_{p75-25} 0.24 m³
 a_{p50} 2.06 m²
 t_{p75-25} 0 minutes

Soil Infiltration Rate, f - ms⁻¹
Too little water take to calculate infiltration rate



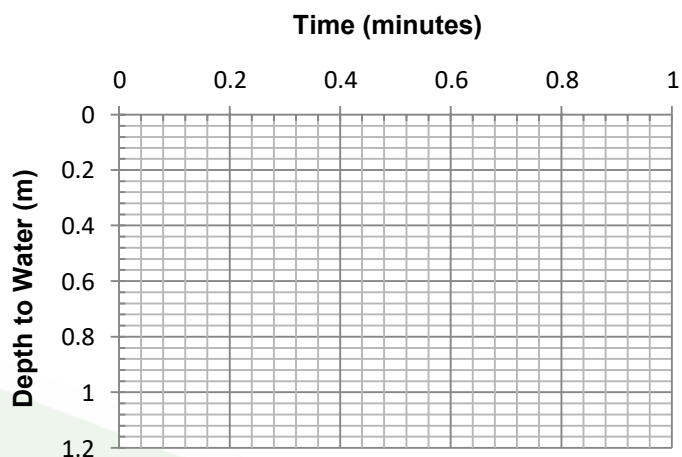
TEST 2

Length
Bredth
Depth
Fill Level

m
m
m
m

V_{p75-25} 0 m³
 a_{p50} 0 m²
 t_{p75-25} 0 minutes

Soil Infiltration Rate, f - ms⁻¹



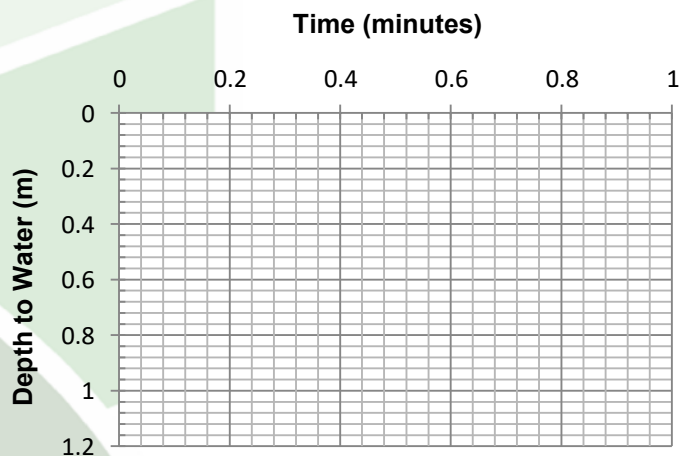
TEST 3

Length
Bredth
Depth
Fill Level

m
m
m
m

V_{p75-25} 0 m³
 a_{p50} 0 m²
 t_{p75-25} 0 minutes

Soil Infiltration Rate, f - ms⁻¹



REMARKS:

Test carried out in genral accordance with BRE DIGEST 365 (2016)

[illegible]

SOAKAWAY TEST



Site Name: Unit D, North Bank Road, Port Talbot
Project Number: TF-24-587-CA
Date: 18/02/2025
Engineer: Jamie Alderman

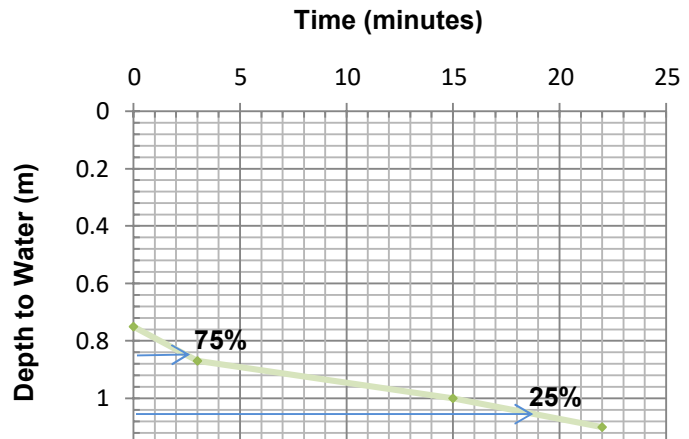
Trial Pit: **SA03**

TEST 1

Length 1.30 m
Bredth 0.60 m
Depth 1.15 m
Fill Level 0.75 m

V_{p75-25} 0.156 m³
 a_{p50} 1.54 m²
 t_{p75-25} 16 minutes

Soil Infiltration Rate, f 1.06E-04 ms⁻¹

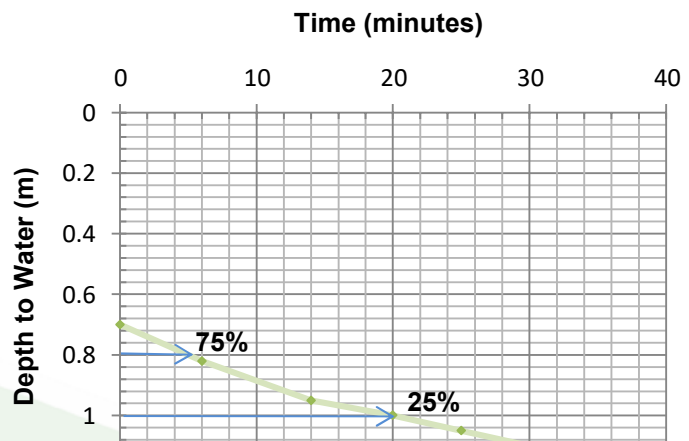


TEST 2

Length 1.30 m
Bredth 0.60 m
Depth 1.10 m
Fill Level 0.70 m

V_{p75-25} 0.156 m³
 a_{p50} 1.54 m²
 t_{p75-25} 15 minutes

Soil Infiltration Rate, f 1.13E-04 ms⁻¹

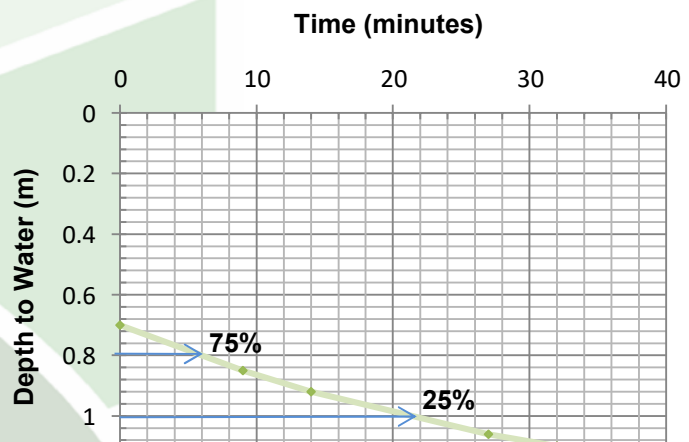


TEST 3

Length 1.30 m
Bredth 0.60 m
Depth 1.10 m
Fill Level 0.70 m

V_{p75-25} 0.156 m³
 a_{p50} 1.54 m²
 t_{p75-25} 15 minutes

Soil Infiltration Rate, f 1.13E-04 ms⁻¹



REMARKS:

Test carried out in accordance with BRE Digest 365 (2016)

[illegible][illegible][illegible]

ANNEX C
Gas Monitoring Results



In-Situ Gas Monitoring Results

Job Number 18045

Job Name Unit D, North Bank Road



Round 1

Date: 18.03.2026

Barometric Pressure: 1015mb

Gas Monitoring Well Number	Methane (CH ₄) (%)	Oxygen (O ₂) (%)	Carbon Dioxide (CO ₂) (%)	Flow (l/hr)	Water Level (m)
BH01	0.0	19.0	1.2	No Flow	1.8
BH02	0.0	8.5	3.8	No Flow	
BH03	0.7	10.5	6.3	No Flow	2.7

Round 2

Date: 25.03.2026

Barometric Pressure: 1012mb

Gas Monitoring Well Number	Methane (CH ₄) (%)	Oxygen (O ₂) (%)	Carbon Dioxide (CO ₂) (%)	Flow (l/hr)	Water Level (m)
BH01	0.0	18.6	2.6	No Flow	1.3
BH02	0.0	19.9	0.7	No Flow	2.3
BH03	0.0	10.7	7.9	No Flow	1.7

Round 3

Date: 07.04.2026

Barometric Pressure: 1015mb

Gas Monitoring Well Number	Methane (CH ₄) (%)	Oxygen (O ₂) (%)	Carbon Dioxide (CO ₂) (%)	Flow (l/hr)	Water Level (m)
BH01	0.0	1.5	1.5	No Flow	Dry
BH02	0.0	0.2	0.2	No Flow	3.6
BH03	0.0	9.9	1.5	No Flow	2.8

Notes:

In-Situ Gas Monitoring Results

Job Number 18045

Job Name Unit D, North Bank Road



Round 4

Date: 22.04.2026

Barometric Pressure: 1020mb

Gas Monitoring	Methane (CH ₄)	Oxygen (O ₂)	Carbon Dioxide (CO ₂)	Flow	Water Level
Well Number	(%)	(%)	(%)	(l/hr)	(m)
BH01	0.0	18.1	1.4	No Flow	3.6
BH02	0.0	11.0	4.5	No Flow	2.7
BH03	0.0	20.3	0.3	No Flow	2.4

Round 5

Date: 05.05.2026

Barometric Pressure: 1015mb

Gas Monitoring	Methane (CH ₄)	Oxygen (O ₂)	Carbon Dioxide (CO ₂)	Flow	Water Level
Well Number	(%)	(%)	(%)	(l/hr)	(m)
BH01	0.0	18.2	2.4	No Flow	3.6
BH02	0.0	20.3	0.3	No Flow	2.7
BH03	0.0	10.2	6.2	No Flow	2.4

Round 6

Date: 19.09.2026

Barometric Pressure: 1020

Gas Monitoring	Methane (CH ₄)	Oxygen (O ₂)	Carbon Dioxide (CO ₂)	Flow	Water Level
Well Number	(%)	(%)	(%)	(l/hr)	(m)
BH01	0.0	18.0	0.8	No Flow	2.3
BH02	0.0	16.7	2.7	No Flow	2.1
BH03	0.0	12.3	4.9	No Flow	2.5

ANNEX D
Laboratory Soil Chemical Test Results



Certificate of Analysis

Certificate Number 26-04860

Issued: 12-Mar-26

Client Terra Firma Group
5 Deryn Court
Wharfedale Road
Pentwyn
Cardiff
CF23 7HA

Our Reference 26-04860

Client Reference ~ 18045

Order No ~ 18045

Contract Title ~ 18045

Description 6 Soil samples.

Date Received 02-Mar-26

Date Started 02-Mar-26

Date Completed 12-Mar-26

Test Procedures Identified by prefix DETSn (details on request).

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

Approved By

A handwritten signature in black ink, appearing to read "Louise".

Louise Cook
Contracts Manager



Summary of Chemical Analysis

Soil Samples

Our Ref 26-04860

Client Ref ~ 18045

Contract Title ~ 18045

Lab No	2649197	2649198	2649199	2649200	2649201	2649202
Sample ID ~	TP03	TP04	TP03	TP05	TP01	TP02
Depth ~	1.50	0.40	0.60	0.30	0.20	0.30
Other ID ~						
Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date ~	26/02/2026	26/02/2026	26/02/2026	26/02/2026	26/02/2026	26/02/2026
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Preparation									
Stones Removed	DETSC 1003*	0	%	0.0	0.0	0.0	0.0	0.0	0.0
Moisture Content	DETSC 1004	0.1	%	23	13	12	15	15	13
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	26	21	10	17	30	15
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.5	0.2	0.5	0.3	1.2	0.4
Cadmium	DETSC 2301#	0.1	mg/kg	0.9	0.5	0.4	0.5	0.4	1.7
Chromium	DETSC 2301#	0.15	mg/kg	23	22	88	22	23	250
Chromium III	DETSC 2301*	0.15	mg/kg	23	22	88	22	23	250
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	170	230	57	97	660	120
Lead	DETSC 2301#	0.3	mg/kg	150	74	51	86	130	79
Mercury	DETSC 2325#	0.05	mg/kg	0.17	0.09	< 0.05	0.26	0.09	0.09
Nickel	DETSC 2301#	1	mg/kg	35	26	13	22	50	19
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	2.5
Zinc	DETSC 2301#	1	mg/kg	190	130	97	160	170	320
Inorganics									
pH	DETSC 2008#		pH	8.6	8.4	11.7	8.8	8.8	10.2
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1	0.2	0.5	0.1	0.2	0.1
Organic matter	DETSC 2002#	0.1	%	11	6.1	5.9	4.9	11	3.8
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.04	0.05	0.09	0.04	0.06	0.18
Petroleum Hydrocarbons									
Aliphatic C5-C6: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12: EH_CU_1D_AL	DETSC 3072#	1.5	mg/kg	< 1.5	31	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16: EH_CU_1D_AL	DETSC 3072#	1.2	mg/kg	< 1.2	24	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21: EH_CU_1D_AL	DETSC 3072#	1.5	mg/kg	< 1.5	28	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35: EH_CU_1D_AL	DETSC 3072#	3.4	mg/kg	< 3.4	82	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C35-C40: EH_CU_1D_AL	DETSC 3072*	3.4	mg/kg	< 3.4	17	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C5-C40: EH_CU+HS_1D_AL	DETSC 3072*	10	mg/kg	< 10	180	< 10	< 10	< 10	< 10
Aromatic C5-C7: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12: EH_CU_1D_AR	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16: EH_CU_1D_AR	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21: EH_CU_1D_AR	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35: EH_CU_1D_AR	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C35-C40: EH_CU_1D_AR	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C5-C40: EH_CU+HS_1D_AR	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
TPH Ali/Aro C5-C40: EH_CU+HS_1D_Total	DETSC 3072*	10	mg/kg	< 10	180	< 10	< 10	< 10	< 10

Summary of Chemical Analysis

Soil Samples

Our Ref 26-04860

Client Ref ~ 18045

Contract Title ~ 18045

Lab No	2649197	2649198	2649199	2649200	2649201	2649202
Sample ID ~	TP03	TP04	TP03	TP05	TP01	TP02
Depth ~	1.50	0.40	0.60	0.30	0.20	0.30
Other ID ~						
Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date ~	26/02/2026	26/02/2026	26/02/2026	26/02/2026	26/02/2026	26/02/2026
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
PAHs									
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.10	0.17	0.12	< 0.10	0.10	< 0.10
Fluorene	DETSC 3301	0.1	mg/kg	< 0.10	0.24	< 0.10	< 0.10	0.12	0.24
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.10	1.8	0.63	< 0.10	0.85	1.8
Anthracene	DETSC 3301	0.1	mg/kg	< 0.10	0.58	0.30	< 0.10	0.24	0.47
Fluoranthene	DETSC 3301	0.1	mg/kg	< 0.10	3.5	1.3	< 0.10	0.79	3.9
Pyrene	DETSC 3301	0.1	mg/kg	< 0.10	3.2	1.1	< 0.10	0.75	4.3
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.10	2.3	0.76	< 0.10	0.34	2.4
Chrysene	DETSC 3301	0.1	mg/kg	< 0.10	2.4	0.81	< 0.10	0.25	3.0
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.10	2.0	1.1	< 0.10	0.31	2.9
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.10	0.89	0.58	< 0.10	0.17	1.5
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.10	2.0	1.3	< 0.10	0.37	3.7
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.10	1.5	1.1	< 0.10	< 0.10	3.0
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.10	0.27	0.14	< 0.10	< 0.10	0.43
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.10	0.91	0.79	< 0.10	0.21	2.7
PAH 16 Total	DETSC 3301	1.6	mg/kg	< 1.6	22	10	< 1.6	4.4	30
PCBs									
PCB 28 + PCB 31	DETSC 3401#	0.01	mg/kg		< 0.01	< 0.01		< 0.01	
PCB 52	DETSC 3401#	0.01	mg/kg		< 0.01	< 0.01		< 0.01	
PCB 101	DETSC 3401#	0.01	mg/kg		< 0.01	< 0.01		< 0.01	
PCB 118	DETSC 3401#	0.01	mg/kg		< 0.01	< 0.01		< 0.01	
PCB 153	DETSC 3401#	0.01	mg/kg		< 0.01	< 0.01		< 0.01	
PCB 138	DETSC 3401#	0.01	mg/kg		< 0.01	< 0.01		< 0.01	
PCB 180	DETSC 3401#	0.01	mg/kg		< 0.01	< 0.01		< 0.01	
PCB 7 Total	DETSC 3401#	0.01	mg/kg		< 0.01	< 0.01		< 0.01	

Summary of Chemical Analysis

Soil Samples

Our Ref 26-04860
Client Ref ~ 18045
Contract Title ~ 18045

Lab No	2649197	2649198	2649199	2649200	2649201	2649202
Sample ID ~	TP03	TP04	TP03	TP05	TP01	TP02
Depth ~	1.50	0.40	0.60	0.30	0.20	0.30
Other ID ~						
Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date ~	26/02/2026	26/02/2026	26/02/2026	26/02/2026	26/02/2026	26/02/2026
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
VOCs									
Vinyl Chloride	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Summary of Chemical Analysis

Soil Samples

Our Ref 26-04860

Client Ref ~ 18045

Contract Title ~ 18045

Lab No	2649197	2649198	2649199	2649200	2649201	2649202
Sample ID ~	TP03	TP04	TP03	TP05	TP01	TP02
Depth ~	1.50	0.40	0.60	0.30	0.20	0.30
Other ID ~						
Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date ~	26/02/2026	26/02/2026	26/02/2026	26/02/2026	26/02/2026	26/02/2026
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
sec-butylbenzene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Hexachlorobutadiene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
TAME	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
SVOCs									
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	0.2	0.2	0.1	0.1	0.9	0.2
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	0.1	0.2	< 0.1	< 0.1	2.5	0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Summary of Chemical Analysis

Soil Samples

Our Ref 26-04860

Client Ref ~ 18045

Contract Title ~ 18045

Lab No	2649197	2649198	2649199	2649200	2649201	2649202
Sample ID ~	TP03	TP04	TP03	TP05	TP01	TP02
Depth ~	1.50	0.40	0.60	0.30	0.20	0.30
Other ID ~						
Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date ~	26/02/2026	26/02/2026	26/02/2026	26/02/2026	26/02/2026	26/02/2026
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	0.2	0.3	< 0.1	< 0.1	4.0	0.4

Summary of Asbestos Analysis

Soil Samples

Our Ref 26-04860

Client Ref ~ 18045

Contract Title ~ 18045

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2649197	TP03 1.50	SOIL	NAD	none	James Heath
2649198	TP04 0.40	SOIL	NAD	none	James Heath
2649199	TP03 0.60	SOIL	NAD	none	James Heath
2649200	TP05 0.30	SOIL	NAD	none	James Heath
2649201	TP01 0.20	SOIL	NAD	none	James Heath
2649202	TP02 0.30	SOIL	NAD	none	James Heath

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 26-04860
Client Ref ~ 18045
Contract ~ 18045

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2649197	TP03 1.50 SOIL	26/02/26	GJ 250ml, PT 1L		
2649198	TP04 0.40 SOIL	26/02/26	GJ 250ml, GJ 60ml x2, PT 1L		
2649199	TP03 0.60 SOIL	26/02/26	GJ 250ml, GJ 60ml x2, PT 1L		
2649200	TP05 0.30 SOIL	26/02/26	GJ 250ml, GJ 60ml x2, PT 1L		
2649201	TP01 0.20 SOIL	26/02/26	GJ 250ml, GJ 60ml x2, PT 1L		
2649202	TP02 0.30 SOIL	26/02/26	GJ 250ml, GJ 60ml x2, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Information in Support of the Analytical Results

List of HWOL Acronyms and Operators

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

Det	Acronym
Aliphatic C5-C6	HS_1D_AL
Aliphatic C6-C8	HS_1D_AL
Aliphatic C8-C10	HS_1D_AL
Aliphatic C10-C12	EH_CU_1D_AL
Aliphatic C12-C16	EH_CU_1D_AL
Aliphatic C16-C21	EH_CU_1D_AL
Aliphatic C21-C35	EH_CU_1D_AL
Aliphatic C35-C40	EH_CU_1D_AL
Aliphatic C5-C40	EH_CU+HS_1D_AL
Aromatic C5-C7	HS_1D_AR
Aromatic C7-C8	HS_1D_AR
Aromatic C8-C10	HS_1D_AR
Aromatic C10-C12	EH_CU_1D_AR
Aromatic C12-C16	EH_CU_1D_AR
Aromatic C16-C21	EH_CU_1D_AR
Aromatic C21-C35	EH_CU_1D_AR
Aromatic C35-C40	EH_CU_1D_AR
Aromatic C5-C40	EH_CU+HS_1D_AR
TPH Ali/Aro C5-C40	EH_CU+HS_1D_Total

Key:

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

* -not accredited.

-MCERTS (accreditation only applies if report carries the MCERTS logo).

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report Ver 25.10.03

Certificate of Analysis

Certificate Number 26-05011

Issued: 12-Mar-26

Client Terra Firma Group
5 Deryn Court
Wharfedale Road
Pentwyn
Cardiff
CF23 7HA

Our Reference 26-05011

Client Reference ~ 18045

Order No ~ 18045

Contract Title ~ 18045

Description 1 Soil sample.

Date Received 03-Mar-26

Date Started 03-Mar-26

Date Completed 12-Mar-26

Test Procedures Identified by prefix DETSn (details on request).

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

Approved By



Louise Cook
Contracts Manager



Summary of Chemical Analysis

Soil Samples

Our Ref 26-05011

Client Ref ~ 18045

Contract Title ~ 18045

Lab No	2649996
Sample ID ~	TP05
Depth ~	0.80
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	26/02/2026
Sampling Time ~	n/s

Test	Method	LOD	Units	
Preparation				
Stones Removed	DETSC 1003*	0	%	0.0
Moisture Content	DETSC 1004	0.1	%	17
Metals				
Arsenic	DETSC 2301#	0.2	mg/kg	19
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	1.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.2
Chromium	DETSC 2301#	0.15	mg/kg	14
Chromium III	DETSC 2301*	0.15	mg/kg	14
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	66
Lead	DETSC 2301#	0.3	mg/kg	34
Mercury	DETSC 2325#	0.05	mg/kg	0.13
Nickel	DETSC 2301#	1	mg/kg	17
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5
Zinc	DETSC 2301#	1	mg/kg	110
Inorganics				
pH	DETSC 2008#		pH	8.4
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1
Organic matter	DETSC 2002#	0.1	%	3.3
Sulphate as SO ₄ , Total	DETSC 2321#	0.01	%	0.09
Petroleum Hydrocarbons				
Aliphatic C5-C6: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 0.01
Aliphatic C6-C8: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 0.01
Aliphatic C8-C10: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 0.01
Aliphatic C10-C12: EH_CU_1D_AL	DETSC 3072#	1.5	mg/kg	< 1.5
Aliphatic C12-C16: EH_CU_1D_AL	DETSC 3072#	1.2	mg/kg	< 1.2
Aliphatic C16-C21: EH_CU_1D_AL	DETSC 3072#	1.5	mg/kg	< 1.5
Aliphatic C21-C35: EH_CU_1D_AL	DETSC 3072#	3.4	mg/kg	< 3.4
Aliphatic C35-C40: EH_CU_1D_AL	DETSC 3072*	3.4	mg/kg	< 3.4
Aliphatic C5-C40: EH_CU+HS_1D_AL	DETSC 3072*	10	mg/kg	< 10
Aromatic C5-C7: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 0.01
Aromatic C7-C8: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 0.01
Aromatic C8-C10: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 0.01
Aromatic C10-C12: EH_CU_1D_AR	DETSC 3072#	0.9	mg/kg	< 0.9
Aromatic C12-C16: EH_CU_1D_AR	DETSC 3072#	0.5	mg/kg	< 0.5
Aromatic C16-C21: EH_CU_1D_AR	DETSC 3072#	0.6	mg/kg	< 0.6
Aromatic C21-C35: EH_CU_1D_AR	DETSC 3072#	1.4	mg/kg	< 1.4
Aromatic C35-C40: EH_CU_1D_AR	DETSC 3072*	1.4	mg/kg	< 1.4
Aromatic C5-C40: EH_CU+HS_1D_AR	DETSC 3072*	10	mg/kg	< 10
TPH Ali/Aro C5-C40: EH_CU+HS_1D_Total	DETSC 3072*	10	mg/kg	< 10

Summary of Chemical Analysis

Soil Samples

Our Ref 26-05011

Client Ref ~ 18045

Contract Title ~ 18045

Lab No	2649996
Sample ID ~	TP05
Depth ~	0.80
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	26/02/2026
Sampling Time ~	n/s

Test	Method	LOD	Units	
PAHs				
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.10
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.10
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.10
Fluorene	DETSC 3301	0.1	mg/kg	< 0.10
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.10
Anthracene	DETSC 3301	0.1	mg/kg	< 0.10
Fluoranthene	DETSC 3301	0.1	mg/kg	< 0.10
Pyrene	DETSC 3301	0.1	mg/kg	< 0.10
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.10
Chrysene	DETSC 3301	0.1	mg/kg	< 0.10
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.10
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.10
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.10
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.10
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.10
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.10
PAH 16 Total	DETSC 3301	1.6	mg/kg	< 1.6
PCBs				
PCB 28 + PCB 31	DETSC 3401#	0.01	mg/kg	< 0.01
PCB 52	DETSC 3401#	0.01	mg/kg	< 0.01
PCB 101	DETSC 3401#	0.01	mg/kg	0.02
PCB 118	DETSC 3401#	0.01	mg/kg	< 0.01
PCB 153	DETSC 3401#	0.01	mg/kg	< 0.01
PCB 138	DETSC 3401#	0.01	mg/kg	< 0.01
PCB 180	DETSC 3401#	0.01	mg/kg	< 0.01
PCB 7 Total	DETSC 3401#	0.01	mg/kg	0.02

Summary of Chemical Analysis

Soil Samples

Our Ref 26-05011

Client Ref ~ 18045

Contract Title ~ 18045

Lab No	2649996
Sample ID ~	TP05
Depth ~	0.80
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	26/02/2026
Sampling Time ~	n/s

Test	Method	LOD	Units	
VOCs				
Vinyl Chloride	DETSC 3431*	0.01	mg/kg	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01

Summary of Chemical Analysis

Soil Samples

Our Ref 26-05011

Client Ref ~ 18045

Contract Title ~ 18045

Lab No	2649996
Sample ID ~	TP05
Depth ~	0.80
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	26/02/2026
Sampling Time ~	n/s

Test	Method	LOD	Units	
sec-butylbenzene	DETSC 3431*	0.01	mg/kg	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
Hexachlorobutadiene	DETSC 3431*	0.01	mg/kg	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01
TAME	DETSC 3431*	0.01	mg/kg	< 0.01
SVOCs				
Phenol	DETSC 3433	0.1	mg/kg	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1

Summary of Chemical Analysis

Soil Samples

Our Ref 26-05011

Client Ref ~ 18045

Contract Title ~ 18045

Lab No	2649996
Sample ID ~	TP05
Depth ~	0.80
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	26/02/2026
Sampling Time ~	n/s

Test	Method	LOD	Units	
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1

Summary of Asbestos Analysis

Soil Samples

Our Ref 26-05011

Client Ref ~ 18045

Contract Title ~ 18045

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2649996	TP05 0.80	SOIL	NAD	none	Jason Barsby

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 26-05011
 Client Ref ~ 18045
 Contract ~ 18045

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date		Containers Received	Holding time exceeded for tests	Incorrect container for tests
		Sampled ~				
2649996	TP05 0.80 SOIL	26/02/26		GJ 250ml, GJ 60ml x2, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Information in Support of the Analytical Results

List of HWOL Acronyms and Operators

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

Det	Acronym
Aliphatic C5-C6	HS_1D_AL
Aliphatic C6-C8	HS_1D_AL
Aliphatic C8-C10	HS_1D_AL
Aliphatic C10-C12	EH_CU_1D_AL
Aliphatic C12-C16	EH_CU_1D_AL
Aliphatic C16-C21	EH_CU_1D_AL
Aliphatic C21-C35	EH_CU_1D_AL
Aliphatic C35-C40	EH_CU_1D_AL
Aliphatic C5-C40	EH_CU+HS_1D_AL
Aromatic C5-C7	HS_1D_AR
Aromatic C7-C8	HS_1D_AR
Aromatic C8-C10	HS_1D_AR
Aromatic C10-C12	EH_CU_1D_AR
Aromatic C12-C16	EH_CU_1D_AR
Aromatic C16-C21	EH_CU_1D_AR
Aromatic C21-C35	EH_CU_1D_AR
Aromatic C35-C40	EH_CU_1D_AR
Aromatic C5-C40	EH_CU+HS_1D_AR
TPH Ali/Aro C5-C40	EH_CU+HS_1D_Total

Key:

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

* -not accredited.

-MCERTS (accreditation only applies if report carries the MCERTS logo).

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report Ver 25.10.03



Final Report

Report No.: 25-10098-1

Initial Date of Issue: 02-Apr-2025

Re-Issue Details:

Client Terra Firma

Client Address: 5 Deryn Court
Wharfedale Road
Pentwyn
Cardiff
CF23 7HA

Contact(s): Jamie Alderman

Project TF-24-587-CA Unit D, Port Talbot

Quotation No.: Q25-37003

Date Received: 25-Mar-2025

Order No.:

Date Instructed: 25-Mar-2025

No. of Samples: 2

Turnaround (Wkdays): 5

Results Due: 31-Mar-2025

Date Approved: 02-Apr-2025

Approved By:

Details: David Smith, Technical Director

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Leachate

Project: TF-24-587-CA Unit D, Port Talbot

Client: Terra Firma	Chemtest Job No.:					25-10098	25-10098
Quotation No.: Q25-37003	Chemtest Sample ID.:					1951782	1951783
	Sample Location:					SA02	SA03
	Sample Type:					SOIL	SOIL
	Top Depth (m):					1.20	1.10
	Date Sampled:					21-Mar-2025	21-Mar-2025
Determinand	Accred.	SOP	Type	Units	LOD		
pH at 20C	U	1010	10:1		4.0	8.2	8.0
Sulphate	U	1220	10:1	mg/l	1.0	< 1.0	1.6
Cyanide (Total)	U	1300	10:1	mg/l	0.050	< 0.050	< 0.050
Cyanide (Free)	U	1300	10:1	mg/l	0.050	< 0.050	< 0.050
Cyanide (Complex)	U	1300	10:1	mg/l	0.050	< 0.050	< 0.050
Arsenic (Dissolved)	U	1455	10:1	µg/l	0.20	3.1	7.7
Boron (Dissolved)	U	1455	10:1	µg/l	10.0	< 10	< 10
Beryllium (Dissolved)	U	1455	10:1	µg/l	1.00	< 1.0	< 1.0
Cadmium (Dissolved)	U	1455	10:1	µg/l	0.11	< 0.11	< 0.11
Chromium (Dissolved)	U	1455	10:1	µg/l	0.50	0.59	0.69
Copper (Dissolved)	U	1455	10:1	µg/l	0.50	6.6	9.8
Manganese (Dissolved)	U	1455	10:1	µg/l	0.50	12	15
Molybdenum (Dissolved)	U	1455	10:1	µg/l	0.20	2.6	2.2
Nickel (Dissolved)	U	1455	10:1	µg/l	0.50	< 0.50	< 0.50
Lead (Dissolved)	U	1455	10:1	µg/l	0.50	3.8	7.4
Antimony (Dissolved)	U	1455	10:1	µg/l	0.50	< 0.50	0.84
Selenium (Dissolved)	U	1455	10:1	µg/l	0.50	< 0.50	< 0.50
Zinc (Dissolved)	U	1455	10:1	µg/l	2.5	17	11
Mercury Low Level	U	1460	10:1	µg/l	0.010	< 0.010	< 0.010
Chromium (Trivalent)	N	1490	10:1	µg/l	20	< 20	< 20
Chromium (Hexavalent)	U	1490	10:1	µg/l	20	< 20	< 20
Total Organic Carbon	U	1610	10:1	mg/l	2.0	9.9	32
Aliphatic TPH >C5-C6	N	1675	10:1	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C6-C8	N	1675	10:1	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C8-C10	N	1675	10:1	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	10:1	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	10:1	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	10:1	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	10:1	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C35-C44	N	1675	10:1	µg/l	0.10	< 0.10	< 0.10
Total Aliphatic Hydrocarbons	N	1675	10:1	µg/l	5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	1675	10:1	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C7-C8	N	1675	10:1	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C8-C10	N	1675	10:1	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	10:1	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C12-C16	N	1675	10:1	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C16-C21	N	1675	10:1	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C21-C35	N	1675	10:1	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C35-C44	N	1680	10:1	µg/l	50.00	< 50	< 50
Total Aromatic Hydrocarbons	N	1675	10:1	µg/l	5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	1675	10:1	µg/l	10	< 10	< 10
Naphthalene	U	1700	10:1	µg/l	0.10	< 0.10	< 0.10
Acenaphthylene	U	1700	10:1	µg/l	0.10	< 0.10	< 0.10

Results - Leachate

Project: TF-24-587-CA Unit D, Port Talbot

Client: Terra Firma	Chemtest Job No.:					25-10098	25-10098
Quotation No.: Q25-37003	Chemtest Sample ID.:					1951782	1951783
	Sample Location:					SA02	SA03
	Sample Type:					SOIL	SOIL
	Top Depth (m):					1.20	1.10
	Date Sampled:					21-Mar-2025	21-Mar-2025
Determinand	Accred.	SOP	Type	Units	LOD		
Acenaphthene	U	1700	10:1	µg/l	0.10	< 0.10	< 0.10
Fluorene	U	1700	10:1	µg/l	0.10	< 0.10	< 0.10
Phenanthrene	U	1700	10:1	µg/l	0.10	< 0.10	< 0.10
Anthracene	U	1700	10:1	µg/l	0.10	< 0.10	< 0.10
Fluoranthene	U	1700	10:1	µg/l	0.10	< 0.10	< 0.10
Pyrene	U	1700	10:1	µg/l	0.10	< 0.10	< 0.10
Benzo[a]anthracene	U	1700	10:1	µg/l	0.10	< 0.10	< 0.10
Chrysene	N	1700	10:1	µg/l	0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	U	1700	10:1	µg/l	0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	1700	10:1	µg/l	0.10	< 0.10	< 0.10
Benzo[a]pyrene	U	1700	10:1	µg/l	0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1700	10:1	µg/l	0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	U	1700	10:1	µg/l	0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	U	1700	10:1	µg/l	0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	1700	10:1	µg/l	2.0	< 2.0	< 2.0
Total Phenols	U	1920	10:1	mg/l	0.030	< 0.030	< 0.030

Results - Soil

Project: TF-24-587-CA Unit D, Port Talbot

Client: Terra Firma		Chemtest Job No.:		25-10098	25-10098
Quotation No.: Q25-37003		Chemtest Sample ID.:		1951782	1951783
		Sample Location:		SA02	SA03
		Sample Type:		SOIL	SOIL
		Top Depth (m):		1.20	1.10
		Date Sampled:		21-Mar-2025	21-Mar-2025
		Asbestos Lab:		DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD
ACM Type		N	2192		N/A
Asbestos Identification		U	2192		N/A
Moisture		N	2030	%	0.020
Soil Colour		N	2040		N/A
Other Material		N	2040		N/A
Soil Texture		N	2040		N/A
pH at 20C		M	2010		4.0
Boron (Hot Water Soluble)		M	2120	mg/kg	0.40
Cyanide (Complex)		M	2300	mg/kg	0.50
Cyanide (Free)		M	2300	mg/kg	0.50
Cyanide (Total)		M	2300	mg/kg	0.50
Sulphate (Acid Soluble)		U	2430	%	0.010
Arsenic		M	2455	mg/kg	0.5
Beryllium		U	2455	mg/kg	0.5
Cadmium		M	2455	mg/kg	0.10
Chromium		M	2455	mg/kg	0.5
Mercury Low Level		N	2450	mg/kg	0.05
Manganese		M	2455	mg/kg	1.0
Molybdenum		M	2455	mg/kg	0.5
Antimony		N	2455	mg/kg	2.0
Copper		M	2455	mg/kg	0.50
Nickel		M	2455	mg/kg	0.50
Lead		M	2455	mg/kg	0.50
Selenium		M	2455	mg/kg	0.25
Zinc		M	2455	mg/kg	0.50
Chromium (Trivalent)		N	2490	mg/kg	1.0
Chromium (Hexavalent)		N	2490	mg/kg	0.50
Aliphatic VPH >C5-C6	HS 2D AL	U	2780	mg/kg	0.05
Aliphatic VPH >C6-C7	HS 2D AL	U	2780	mg/kg	0.05
Aliphatic VPH >C7-C8	HS 2D AL	U	2780	mg/kg	0.05
Aliphatic VPH >C6-C8 (Sum)	HS 2D AL	N	2780	mg/kg	0.10
Aliphatic VPH >C8-C10	HS 2D AL	U	2780	mg/kg	0.05
Total Aliphatic VPH >C5-C10	HS 2D AL	U	2780	mg/kg	0.25
Aliphatic EPH >C10-C12 MC	EH 2D AL #1	M	2690	mg/kg	2.00
Aliphatic EPH >C12-C16 MC	EH 2D AL #1	M	2690	mg/kg	1.00
Aliphatic EPH >C16-C21 MC	EH 2D AL #1	M	2690	mg/kg	2.00
Aliphatic EPH >C21-C35 MC	EH 2D AL #1	M	2690	mg/kg	3.00
Aliphatic EPH >C35-C40 MC	EH 2D AL #1	N	2690	mg/kg	10.00
Total Aliphatic EPH >C10-C35 MC	EH 2D AL #1	M	2690	mg/kg	5.00
Total Aliphatic EPH >C10-C40 MC	EH 2D AL #1	N	2690	mg/kg	10.00
Aromatic VPH >C5-C7	HS 2D AR	U	2780	mg/kg	0.05

Results - Soil

Project: TF-24-587-CA Unit D, Port Talbot

Client: Terra Firma		Chemtest Job No.:				25-10098	25-10098
Quotation No.: Q25-37003		Chemtest Sample ID.:				1951782	1951783
		Sample Location:				SA02	SA03
		Sample Type:				SOIL	SOIL
		Top Depth (m):				1.20	1.10
		Date Sampled:				21-Mar-2025	21-Mar-2025
		Asbestos Lab:				DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD		
Aromatic VPH >C7-C8	HS 2D AR	U	2780	mg/kg	0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS 2D AR	U	2780	mg/kg	0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS 2D AR	U	2780	mg/kg	0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH 2D AR #1	U	2690	mg/kg	1.00	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	EH 2D AR #1	U	2690	mg/kg	1.00	< 1.0	< 1.0
Aromatic EPH >C16-C21 MC	EH 2D AR #1	U	2690	mg/kg	2.00	11	16
Aromatic EPH >C21-C35 MC	EH 2D AR #1	U	2690	mg/kg	2.00	54	56
Aromatic EPH >C35-C40 MC	EH 2D AR #1	N	2690	mg/kg	1.00	18	40
Total Aromatic EPH >C10-C35 MC	EH 2D AR #1	U	2690	mg/kg	5.00	66	74
Total Aromatic EPH >C10-C40 MC	EH 2D AR #1	N	2690	mg/kg	10.00	83	110
Total VPH >C5-C10	HS 2D Total	U	2780	mg/kg	0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH 2D Total #1	U	2690	mg/kg	10.00	82	84
Total EPH >C10-C40 MC	EH 2D Total #1	N	2690	mg/kg	10.00	99	120
Naphthalene		M	2800	mg/kg	0.10	0.40	1.1
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	0.16
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	0.40
Fluorene		M	2800	mg/kg	0.10	< 0.10	0.41
Phenanthrene		M	2800	mg/kg	0.10	0.49	3.7
Anthracene		M	2800	mg/kg	0.10	0.14	0.84
Fluoranthene		M	2800	mg/kg	0.10	0.86	5.0
Pyrene		M	2800	mg/kg	0.10	0.68	3.8
Benzo[a]anthracene		M	2800	mg/kg	0.10	0.46	2.4
Chrysene		M	2800	mg/kg	0.10	0.64	2.8
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	0.83	3.7
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	0.26	1.2
Benzo[a]pyrene		M	2800	mg/kg	0.10	0.38	2.3
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	0.33	1.7
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	0.55
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	0.25	1.6
Total Of 16 PAH's		N	2800	mg/kg	2.0	5.7	32
Total Phenols		M	2920	mg/kg	0.10	< 0.10	< 0.10
Organic Matter BS1377		N	2930	%	0.10	2.9	6.7

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
1010	pH Value of Waters	pH at 20°C	pH Meter	RE PW TE TS PL DW GW
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.	RE PW PL LE DW GW
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.	
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).	RE PW PL SW DW GW
1460	Mercury low-level in Waters by AFS	Mercury	Atomic Fluorescence Spectrometry, with collimated UV source, wavelength 253.7 nm.	PL GW
1490	Hexavalent Chromium in Waters	Chromium [VI]	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazine.	PL GW
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation	PL SW GW
1675	TPH Aliphatic/Aromatic split in Waters by GC-FID(cf. Texas Method 1006 / TPH CWG)	Aliphatics: >C5–C6, >C6–C8, >C8– C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44 Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Pentane extraction / GCxGC FID detection	
1680	Extractable Petroleum Hydrocarbons	Aliphatics: >C5–C6, >C6–C8, >C8– C10*, >C10–C12*, >C12–C16*, >C16–C21*, >C21– C35*, >C35– C44 Aromatics: >C5–C7, >C7–C8, >C8– C10*, >C10–C12*, >C12–C16*, >C16– C21*, >C21– C35*, >C35– C44	Dichloromethane extraction / GCxGC FID detection	
1700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)	GW PL
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.	
2010	pH Value of Soils	pH at 20°C	pH Meter	
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES	
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry	
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.	
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.	
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.	
2455	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.	
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazine.	
2690	EPH A/A Split	Aliphatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40 Aromatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40	Acetone/Heptane extraction / GCxGC FID detection	

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2780	VPH A/A Split	Aliphatics: >C5–C6, >C6–C7,>C7–C8,>C8–C10 Aromatics: >C5–C7,>C7–C8,>C8–C10	Water extraction / Headspace GCxGC FID detection	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Diben[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.	
2930	Organic Matter	Organic Matter	Acid Dichromate digestion/Titration	
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge	

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.

Any comments or interpretations are outside the scope of UKAS accreditation.

The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.

Uncertainty of measurement for the determinands tested are available upon request .

None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

All Asbestos testing is performed at the indicated laboratory .

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

NEW_ASB Eurofins Chemtest Limited, 11 Depot Road, Newmarket, CB8 0AL

DURHAM Eurofins Chemtest Limited, Unit A North Wing, Prospect Business Park, Crookhall Lane, Consett, Co Durham, DH8 7PW

Sample Deviation Codes

As a result of any of the below deviations applying, the test results may be unreliable

A - Date of sampling not supplied

B - Sample age exceeds stability time (sampling to extraction)

C - Sample not received in appropriate containers

D - Broken Container

E - The required amount of sample for analysis was not received

H - Appropriate cooling measures were not taken for sample transportation

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.

All water samples will be retained for 14 days from the date of receipt.

Charges may apply to extended sample storage.

Report Information

Water Sample Category Key for Accreditation

DW - Drinking Water
GW - Ground Water
LE - Land Leachate
NA - Not Applicable
PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

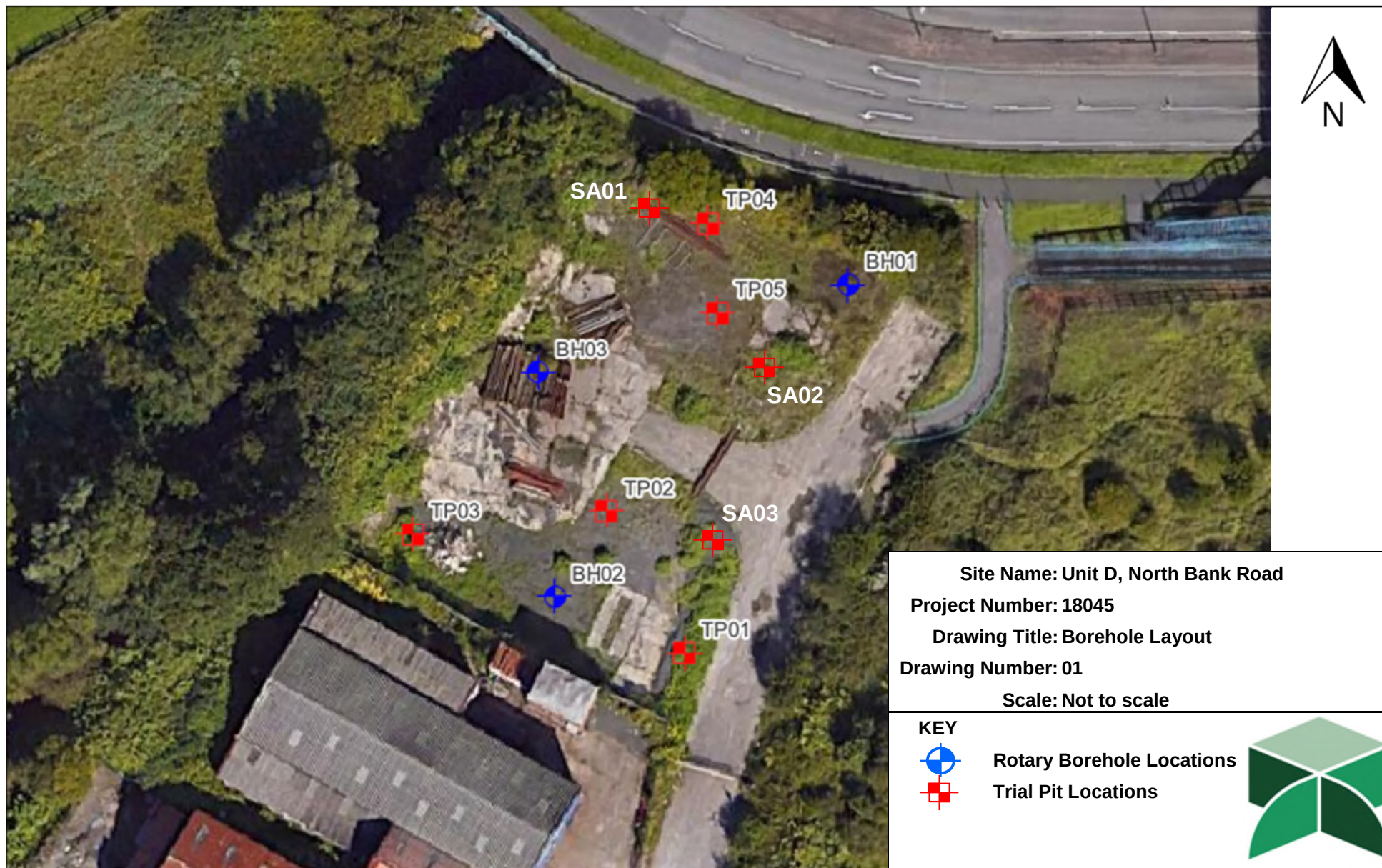
Asbestos Tests LOD = LOQ

Limit of Detection = Limit of Quantification for asbestos results only

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

DRAWINGS







TFW Group Ltd, 5 Deryn Court, Wharfedale Road, Pentwyn, Cardiff. CF23 7HA
Tel: 033 022 36380 Email: hello@tfwgroup.co.uk www.tfwgroup.co.uk