

Our Ref: MW/17400/Validation Report

Your Ref:

Contact: Michael Watkins

28th November 2025

Castell Construction Limited
Unit 5 Dyffryn Court
Riverside Business Park
Swansea
SA70AP

For the attn. of Mr Kevin Roberts

Dear Kevin

CAPPING LAYER VALIDATION REPORT: EAGLE HOUSE, PORT TALBOT

Section 1 Introduction

TFW Group Limited has been retained by Castell Construction Limited to validate soil imported into the raised plant bed and a SuDS basin at Eagle House, Port Talbot. The locations of the SuDS basin and plant bed are indicated on **Figure 1.1**.

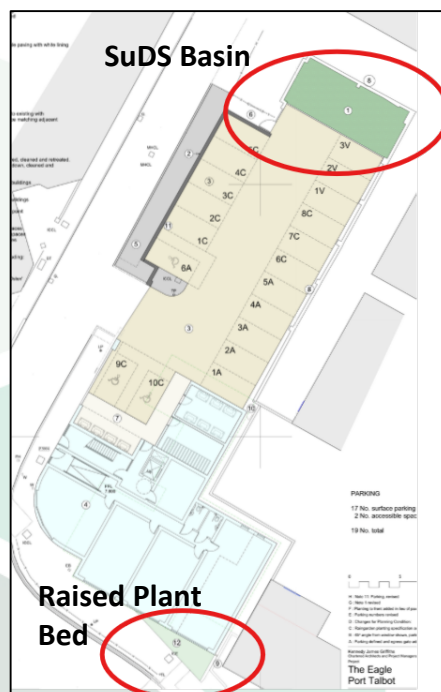
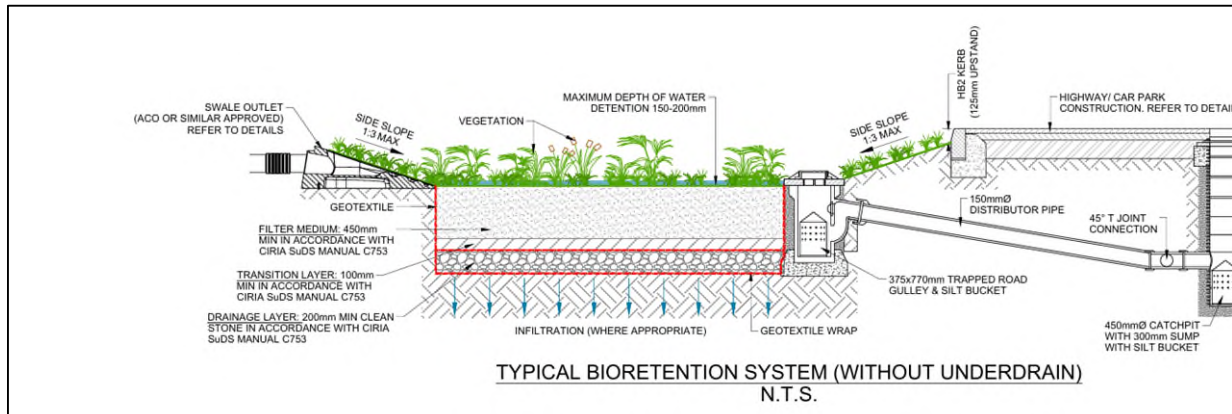


Figure 3.1: Landscaping Areas

The raised plant bed is 450mm deep and has a concrete base. As detailed in **Figure 1.2**, the SuDS basin is constructed (from base to top) Terram geotextile, 200mm clean stone, Terram geotextile, transition layer (sharp sand), 450mm filter medium (imported soil).



Imported soil is dark brown, organic-rich silty gravelly **SAND**. A total of 56.2 tonnes (approximately 30m³) of soil was imported. Delivery tickets are presented in **Annex A**.

Section 2 Soil Chemical Testing of Imported Soils

A TFW Group Limited engineer visited the site on 7th of October and 10th of November 2025 to collect samples for chemical analysis. Three samples of imported soil were taken as per the guidance 'Requirements for the Chemical Testing of Imported Materials for Various End Uses and Validation of Cover Systems' prepared by the Welsh Land Contamination Working Group.

Samples were taken and despatched to the laboratories of Eurofins Chemtest for chemical testing of a broad pathfinder suite of metals, inorganics, speciated polycyclic aromatic hydrocarbons and petroleum hydrocarbons. The samples were also screened for asbestos.

Comparison of the analytical results has been made with the 2015 Suitable 4 Use Levels (S4UL) provided by Land Quality Management (LQM) Limited and the Chartered Institute of Environmental Health (CIEH) or provisional Category 4 Screening Levels (pC4SL).

A summary of the chemical test results which include the regulatory soil guideline values used in the Tier 1 assessment are given in **Tables 2.1 to 2.3** and can be found in **Annex B**.

Table 2.1 Summary of Soil Chemical Test Results – Inorganics & Miscellaneous

Substance	Threshold Value (mg/kg)	Source	Measured Concentrations (mg/kg)		Number of Exceedances
			Min	Max	
Arsenic	37	LQM/CIEH	4.7	6.9	0
Cadmium	11	LQM/CIEH	<1.0	0.2	0
Chromium III	910	LQM/CIEH	11	14	0
Chromium VI	6	LQM/CIEH	<0.5	<0.5	0
Copper	2400	LQM/CIEH	3.1	25	0
Lead	200	pC4SL	12	42	0
Mercury (inorganic)	40	LQM/CIEH	<0.05	0.06	0
Nickel	180	LQM/CIEH	16	25	0
Selenium	250	LQM/CIEH	<0.25	<0.25	0
Zinc	3700	LQM/CIEH	70	180	0
Cyanide	-	-	<0.50	<0.50	0
Phenols	120	LQM/CIEH	<0.1	0.19	0
Boron	290	LQM/CIEH	0.53	1.9	0
Organic Matter (%)	-	-	0.4	1.7	0
pH	-	-	8.3	9.4	0
Asbestos	-	-	Not Detected	Not Detected	0
Notes: - No available guideline					

Table 2.2 Summary of Soil Chemical Test Results – Speciated PAH

Substance	Threshold Value (mg/kg)	Source	Measured Concentrations (mg/kg)	Number of Exceedances
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			Min	Max	
Naphthalene	2.3	LQM/CIEH	< 0.10	< 0.10	0
Acenaphthylene	170	LQM/CIEH	< 0.10	< 0.10	0
Acenaphthene	210	LQM/CIEH	< 0.10	< 0.10	0
Fluorene	170	LQM/CIEH	< 0.10	< 0.10	0
Phenanthrene	95	LQM/CIEH	< 0.10	0.77	0
Anthracene	2400	LQM/CIEH	< 0.10	0.11	0
Fluoranthene	280	LQM/CIEH	< 0.10	1.1	0
Pyrene	620	LQM/CIEH	< 0.10	1.2	0
Benzo(a)anthracene	7.2	LQM/CIEH	< 0.10	0.45	0
Chrysene	15	LQM/CIEH	< 0.10	0.44	0
Benzo(b)fluoranthene	2.6	LQM/CIEH	< 0.10	0.84	0
Benzo(k)fluoranthene	77	LQM/CIEH	< 0.10	0.64	0
Benzo(a)pyrene	2.2	LQM/CIEH	< 0.10	0.55	0
Indeno(123cd)pyrene	27	LQM/CIEH	< 0.10	0.26	0
Dibenzo(ah)anthracene	0.24	LQM/CIEH	< 0.10	0.23	0
Benzo(ghi)perylene	320	LQM/CIEH	< 0.10	1.2	0
Total PAH	-	-	< 2.0	7.8	-
Notes:					
Thresholds based on 1.0% soil organic matter					
- No available guidelines					

Table 2.3 Summary of Soil Chemical Test Results – Petroleum Hydrocarbons

Substance	Threshold Value (mg/kg)	Source	Measured Concentrations		Number of Exceedances
			Min	Max	
Aliphatic					
PH C5 – C6 Ali	42	LQM/CIEH	<0.05	<0.05	0
PH C6 – C8 Ali	100	LQM/CIEH	< 0.1	< 0.1	0
PH C8 – C10 Ali	27	LQM/CIEH	<0.05	<0.05	0
PH C10 – C12 Ali	130	LQM/CIEH	< 2.0	3.0	0
PH C12 – C16 Ali	1100	LQM/CIEH	< 1.0	< 1.0	0
PH C16 – C21 Ali	65000*	LQM/CIEH	3.4	11	0
PH C21 – C35 Ali	65000*	LQM/CIEH	8.5	34	0
PH C35 – C44 Ali	65000	LQM/CIEH	< 10	15	0
Aromatic					
PH C5 – C7 Arom	70	LQM/CIEH	<0.05	<0.05	0
PH C7 – C8 Arom	130	LQM/CIEH	<0.05	<0.05	0
PH C8 – C10 Arom	34	LQM/CIEH	<0.05	<0.05	0
PH C10 – C12 Arom	74	LQM/CIEH	< 1.0	8.6	0
PH C12 – C16 Arom	140	LQM/CIEH	< 1.0	3.7	0
PH C16 – C21 Arom	260	LQM/CIEH	4.9	8.1	0

PH C21 – C35 Arom	1100	LQM/CIEH	2.1	25	0
PH C35 – C44 Arom	1100	LQM/CIEH	3.6	20	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

Section 3 Verification of Capping Thickness and No Dig Barrier

A TFW Group Limited engineer visited the site on the 7th of October 2025 to confirm the presence of at least 600mm capping thickness within the SuDS basin.

A hand dug inspection pit was excavated, inspected, and photographed in the SuDS basin as shown in **Figure 3.1** and **Figure 3.2**.



Figure 3.1: Inspection Pit



Figure 3.2: Inspection Pit Location Within SuDS Basin

Prior to the laying of soil within the raised bed, a photograph was taken to show the concrete base, as shown on **Figure 3.3**.



Figure 3.3: Raised Plant Bed

Section 4 Conclusion

The above sections demonstrate that all substances tested for were below their respective Tier 1 threshold values, and that either sufficient depth of capping soil has been placed above the contaminated soil, or the soil has been placed within a raised plant bed with a concrete base.

It is therefore concluded that the hazard to receptor pathway has been successfully interrupted and, in relation to contamination only, the landscaped area has been made suitable for its intended use.

We trust that the above is to your satisfaction, however, if you have any queries or require any further information, please do not hesitate to contact us.

Yours sincerely

for: TFW Group Limited

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

Michael Watkins

ANNEX A
Delivery Tickets

Account No. CASTELL

Site Address:

CASTELL CONSTRUCTION LTD UNIT 5 DYFFRYN COURT RIVERSIDE BUSINESS PARK SA7 0AP	CASTELL CONSTRUCTION LTD 2 TALBOT ROAD EAGLE HOUSE PORT TALBOT SA13 1DH SITE CONTACT: GARETH	Ticket No: 114168 Ref: 616 SIC Code: 41201 Vehicle Reg: W-CE19 FPZ Vehicle Type: 32T Tipper	Date: 25/09/2025 Order No: PO-6677 Order No:
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Qty	Unit	Product Type	EWC Code	Gross (KG)	Tare (KG)	Net (KG)
19.44	Tonne	RESIDENTIAL BIO SOIL		31940	12500	19440

Weighbridge

Date	KG
Weighbridge Operator	Gross 31940
Ticket No: 114168	Tare 12500
	Net 19440

Producer / Carrier

Customer

Driver Name kelvin

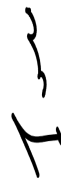
Print Name josk

W/b Op Name shaun

Signature



Signature



Signature



I, the producer/holder/transferor, confirm that I have fulfilled my duty to apply the waste hierarchy as requested by regulation 12 of the Waste (England and Wales) Regulations 2011.



Account No. CASTELL

Site Address:

CASTELL CONSTRUCTION LTD UNIT 5 DYFFRYN COURT RIVERSIDE BUSINESS PARK SA7 0AP	CASTELL CONSTRUCTION LTD 2 TALBOT ROAD EAGLE HOUSE PORT TALBOT SA13 1DH SITE CONTACT: GARETH	Ticket No: 114746 Ref: 616 SIC Code: 41201 Vehicle Reg: WU74 FRO Vehicle Type: 32T Tipper	Date: 29/09/2025 Order No: PO-6677 Order No:
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Qty	Unit	Product Type	EWC Code	Gross (KG)	Tare (KG)	Net (KG)
18.40	Tonne	RESIDENTIAL BIO SOIL		31500	13100	18400

Weighbridge

Date

KG

Weighbridge Operator	Ticket No: 114746	Gross 31500 Tare 13100 Net 18400
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Notes

Collection Ref 272018

Producer / Carrier

Customer

Driver Name

MARTIN DAVIES

Print Name

Josh Stokes

W/b Op Name

Jan Freeman

Signature



Signature



Signature



I, the producer/holder/transferor, confirm that I have fulfilled my duty to apply the waste hierarchy as requested by regulation 12 of the Waste (England and Wales) Regulations 2011.

Freeland

HORTICULTURE LIMITED

Rosedale Nursery
College Road
Heathfield
Kent
BR8 7LT

Tel: 01322 619161

Customer/Delivery Address

ORDER NOTE

RMR Transport Limited
Delivery To
Collection

Customer Order No

Delivery Ticket No

272018

Vehicle Registration

WU74 FKO

Driver

MARTIN

Special Instructions

Delivery Date & Time Required

29/09/2025

QTY	Unit	Description
20.00	Tonne	Tn Bio Retention Soil - Forest Wood

Gross: 31500kg
Tare: 13100kg
Nett: 18400kg

Weightbridge Signature

Readers Signature

Revdge Company

Received the above in good order and condition
Signed _____

Print Name _____

Customer ordering Vehicle off the Public Road do
so entirely at their Own risk and will be liable
for any damages incurred



Account No. CASTELL

Site Address:

CASTELL CONSTRUCTION LTD UNIT 5 DYFFRYN COURT RIVERSIDE BUSINESS PARK SA7 0AP	CASTELL CONSTRUCTION LTD 2 TALBOT ROAD EAGLE HOUSE PORT TALBOT SA13 1DH SITE CONTACT: GARETH	Ticket No: 114746 Ref: 616 SIC Code: 41201 Vehicle Reg: WU74 FRO Vehicle Type: 32T Tipper	Date: 29/09/2025 Order No: PO-6677 Order No:
---	---	--	---

Qty	Unit	Product Type	EWC Code	Gross (KG)	Tare (KG)	Net (KG)
18.40	Tonne	RESIDENTIAL BIO SOIL		31500	13100	18400

Weighbridge

Date

KG

Weighbridge Operator	Ticket No: 114746	Gross 31500 Tare 13100 Net 18400
-----------------------------	--------------------------	---

Notes

Collection Ref 272018

Producer / Carrier

Customer

Driver Name

MARTIN DAVIES

Print Name

Josh Stokes

W/b Op Name

Jan Freeman

Signature



Signature



Signature



I, the producer/holder/transferor, confirm that I have fulfilled my duty to apply the waste hierarchy as requested by regulation 12 of the Waste (England and Wales) Regulations 2011.

Freeland

HORTICULTURE LIMITED

Rosedale Nursery
College Road
Heathfield
Kent
BR8 7LT

Tel: 01322 619161

Customer/Delivery Address

ORDER NOTE

RMR Transport Limited
Delivery To
Collection

Customer Order No

Delivery Ticket No

272018

Vehicle Registration

WU74 FKO

Driver

MARTIN

Special Instructions

Delivery Date & Time Required

29/09/2025

QTY	Unit	Description
20.00	Tonne	Tn Bio Retention Soil - Forest Wood

Gross: 31,500kg
Tare: 13,100kg
Nett: 18,400kg

Weightbridge Signature

Readers Signature

Revdge Company

Received the above in good order and condition
Signed _____

Print Name _____

Customer ordering Vehicle off the Public Road do
so entirely at their Own risk and will be liable
for any damages incurred



ANNEX A
Soil Laboratory Chemical Test Results



Final Report

Report No.: 25-36340-1

Initial Date of Issue: 17-Nov-2025

Re-Issue Details:

Client Terra Firma

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

Contact(s): michael@terrafirmawales.co.uk;
c.blackman@tfwgroup.co.uk

Project Eagle House

Quotation No.: Q25-37254 **Date Received:** 12-Nov-2025

Order No.: 17400-MW **Date Instructed:** 12-Nov-2025

No. of Samples: 1

Turnaround (Wkdays): 5 **Results Due:** 18-Nov-2025

Date Approved: 17-Nov-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 - Soil

Project: Eagle House

Client: Terra Firma		Chemtest Job No.:		25-36340		
Quotation No.: Q25-37254		Chemtest Sample ID.:		2052150		
		Client Sample ID.:		ES1		
		Client Reference:		Imported TS		
		Sample Type:		SOIL		
		Date Sampled:		10-Nov-2025		
		Time Sampled:		12:00		
		Asbestos Lab:		DURHAM		
Determinand	HWOL Code	Accred.	SOP	Units	LOD	
ACM Type		N	2192		N/A	-
Asbestos Identification		U	2192		N/A	No Asbestos Detected
ACM Detection Stage		U	2192		N/A	-
Moisture		N	2030	%	0.020	13
Soil Colour		N	2030		N/A	Brown
Other Material		N	2030		N/A	Stones
Soil Texture		N	2030		N/A	Sand
pH at 20C		M	2010		4.0	8.3
Boron (Hot Water Soluble)		M	2120	mg/kg	0.40	0.53
Cyanide (Total)		M	2300	mg/kg	0.50	< 0.50
Sulphate (Acid Soluble)		U	2430	%	0.010	0.038
Arsenic		M	2455	mg/kg	0.5	6.9
Cadmium		M	2455	mg/kg	0.10	0.20
Chromium		M	2455	mg/kg	0.5	13
Mercury Low Level		N	2450	mg/kg	0.05	< 0.05
Copper		M	2455	mg/kg	0.50	3.1
Nickel		M	2455	mg/kg	0.50	25
Lead		M	2455	mg/kg	0.50	12
Selenium		M	2455	mg/kg	0.25	< 0.25
Zinc		M	2455	mg/kg	0.50	70
Chromium (Trivalent)		N	2490	mg/kg	1.0	13
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	< 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	< 2.0
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	< 1.0
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	3.4
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	9.0
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	12
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	14
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05

Results - Soil

Project: Eagle House

Client: Terra Firma		Chemtest Job No.:		25-36340		
Quotation No.: Q25-37254		Chemtest Sample ID.:		2052150		
		<i>Client Sample ID.:</i>		ES1		
		<i>Client Reference:</i>		Imported TS		
		<i>Sample Type:</i>		SOIL		
		<i>Date Sampled:</i>		10-Nov-2025		
		<i>Time Sampled:</i>		12:00		
		<i>Asbestos Lab:</i>		DURHAM		
Determinand	HWOL Code	Accred.	SOP	Units	LOD	
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	2.6
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	6.9
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	2.1
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	3.6
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	12
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	16
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	24
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	29.66
Naphthalene		M	2700	mg/kg	0.10	< 0.10
Acenaphthylene		M	2700	mg/kg	0.10	< 0.10
Acenaphthene		M	2700	mg/kg	0.10	< 0.10
Fluorene		M	2700	mg/kg	0.10	< 0.10
Phenanthrene		M	2700	mg/kg	0.10	< 0.10
Anthracene		M	2700	mg/kg	0.10	< 0.10
Fluoranthene		M	2700	mg/kg	0.10	< 0.10
Pyrene		M	2700	mg/kg	0.10	< 0.10
Benzo[a]anthracene		M	2700	mg/kg	0.10	< 0.10
Chrysene		M	2700	mg/kg	0.10	< 0.10
Benzo[b]fluoranthene		M	2700	mg/kg	0.10	< 0.10
Benzo[k]fluoranthene		M	2700	mg/kg	0.10	< 0.10
Benzo[a]pyrene		M	2700	mg/kg	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		M	2700	mg/kg	0.10	< 0.10
Dibenz(a,h)Anthracene		M	2700	mg/kg	0.10	< 0.10
Benzo[g,h,i]perylene		M	2700	mg/kg	0.10	< 0.10
Total Of 16 PAH's		M	2700	mg/kg	2.0	< 2.0
Total Phenols		M	2920	mg/kg	0.10	< 0.10
Organic Matter BS1377		N	2930	%	0.10	0.86

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
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.	
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES	
2192	Asbestos Quantification in Soils Sediments Ballast & Aggregate Crushed Concrete & Demolition Rubble	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-diphenylcarbazide.	
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	
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; 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)	
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	
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and Trimethylphenols Note: 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	

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

Text example All items indicated in italic font represent customer-supplied information that may not be independently verified by the laboratory

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.

Where analysis is performed on a dried and crushed sample, it has been prepared by crushing all of the sample. If material has been removed prior to crushing, or by request of the client, this will be stated on the report.

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 (Non-Regulatory)
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:
cs@etuki.eurofins.com



Final Report

Report No.: 25-32642-1

Initial Date of Issue: 16-Oct-2025

Re-Issue Details:

Client Terra Firma

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

Contact(s): c.blackman@tfwgroup.co.uk

Project Eagle House, Port Talbot

Quotation No.: Q25-38938

Date Received: 09-Oct-2025

Order No.: 17400

Date Instructed: 09-Oct-2025

No. of Samples: 2

Turnaround (Wkdays): 5

Results Due: 15-Oct-2025

Date Approved: 16-Oct-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 - Soil

Project: Eagle House, Port Talbot

Client: Terra Firma		Chemtest Job No.:				25-32642	25-32642
Quotation No.: Q25-38938		Chemtest Sample ID.:				2038352	2038353
		Client Sample ID.:				ES1	ES2
		Client Reference:				HDP01	HDP01
		Sample Type:				SOIL	SOIL
		Top Depth (m):				0.10	0.30
		Date Sampled:				07-Oct-2025	07-Oct-2025
		Time Sampled:				12:00	12:00
		Asbestos Lab:				DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD		
ACM Type		N	2192		N/A	-	-
Asbestos Identification		U	2192		N/A	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage		U	2192		N/A	-	-
Moisture		N	2030	%	0.020	9.9	15
Soil Colour		N	2030		N/A	Brown	Brown
Other Material		N	2030		N/A	Stones	Stones and Roots
Soil Texture		N	2030		N/A	Sand	Sand
pH at 20C		M	2010		4.0	9.4	8.7
Boron (Hot Water Soluble)		M	2120	mg/kg	0.40	0.52	1.9
Cyanide (Total)		M	2300	mg/kg	0.50	< 0.50	< 0.50
Sulphate (Acid Soluble)		U	2430	%	0.010	0.022	0.083
Arsenic		M	2455	mg/kg	0.5	4.7	6.1
Cadmium		M	2455	mg/kg	0.10	< 0.10	< 0.10
Chromium		M	2455	mg/kg	0.5	11	14
Mercury Low Level		N	2450	mg/kg	0.05	< 0.05	0.06
Copper		M	2455	mg/kg	0.50	16	25
Nickel		M	2455	mg/kg	0.50	25	16
Lead		M	2455	mg/kg	0.50	15	42
Selenium		M	2455	mg/kg	0.25	< 0.25	< 0.25
Zinc		M	2455	mg/kg	0.50	74	180
Chromium (Trivalent)		N	2490	mg/kg	1.0	11	14
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	< 0.10	< 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	3.0	2.2
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	< 1.0	< 1.0
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	4.7	11
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	8.5	34
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10	15
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	16	48
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	16	63

Results - Soil

Project: Eagle House, Port Talbot

Client: Terra Firma		Chemtest Job No.:				25-32642	25-32642
Quotation No.: Q25-38938		Chemtest Sample ID.:				2038352	2038353
		Client Sample ID.:				ES1	ES2
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		Date Sampled:				07-Oct-2025	07-Oct-2025
		Time Sampled:				12:00	12:00
		Asbestos Lab:				DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD		
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05
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	8.6	7.7
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	3.7
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	4.9	8.1
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	8.2	25
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	6.5	20
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	22	45
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	28	65
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	38	93
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	45	130
Naphthalene		M	2700	mg/kg	0.10	< 0.10	< 0.10
Acenaphthylene		M	2700	mg/kg	0.10	< 0.10	< 0.10
Acenaphthene		M	2700	mg/kg	0.10	< 0.10	< 0.10
Fluorene		M	2700	mg/kg	0.10	< 0.10	< 0.10
Phenanthrene		M	2700	mg/kg	0.10	< 0.10	0.77
Anthracene		M	2700	mg/kg	0.10	< 0.10	0.11
Fluoranthene		M	2700	mg/kg	0.10	< 0.10	1.1
Pyrene		M	2700	mg/kg	0.10	< 0.10	1.2
Benzo[a]anthracene		M	2700	mg/kg	0.10	< 0.10	0.45
Chrysene		M	2700	mg/kg	0.10	< 0.10	0.44
Benzo[b]fluoranthene		M	2700	mg/kg	0.10	< 0.10	0.84
Benzo[k]fluoranthene		M	2700	mg/kg	0.10	< 0.10	0.64
Benzo[a]pyrene		M	2700	mg/kg	0.10	< 0.10	0.55
Indeno(1,2,3-c,d)Pyrene		M	2700	mg/kg	0.10	< 0.10	0.26
Dibenz(a,h)Anthracene		M	2700	mg/kg	0.10	< 0.10	0.23
Benzo[g,h,i]perylene		M	2700	mg/kg	0.10	< 0.10	1.2
Total Of 16 PAH's		M	2700	mg/kg	2.0	< 2.0	7.8
Total Phenols		M	2920	mg/kg	0.10	0.19	0.14
Organic Matter BS1377		N	2930	%	0.10	0.40	1.7

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
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.	
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	
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; 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)	
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	
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	

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

Text example All items indicated in italic font represent customer-supplied information that may not be independently verified by the laboratory

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.

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