



# **GLJ Recycling Ltd**

## **Permit application supporting documents**

### **1 - Site Condition Report**

22 August 2019

# Issue and Revision Record

Revision	Date	Originator	Approver	Description
1	22/08/2019	M.tuckey	G Davies	Issued to client for review

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**Information class: Standard**

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# 1 Introduction

A site condition report, has been produced:

Terra Firma (Wales) Limited has been commissioned by Mr Gareth Jones (Managing Director of GLJ), to undertake a ground investigation at the proposed position of heavy recycling plant, at GLJ Limited, Chapel Farm Industrial Estate, Cwmcarn, Newport, NP11 7NL

The main objectives of the ground investigation were to:

- Determine the type, strength and bearing characteristics of the shallow superficial deposits and underlying solid geology.
- Provide recommendations for a suitable and economic foundation/floor slab solution for the development.
- Obtain samples for chemical testing.

In order to achieve the above objectives, Terra Firma (Wales) Limited carried out an assessment programme including a borehole to determine the prevailing ground conditions and also to collect and analyse soil samples from selected locations around the site.

(see document reference 15390/let2 & 19-13968 -1, dated 26th April 2019, dated 29<sup>th</sup> April 2019). These document has been submitted with this application( Apeendix A, Page 6)

Figure 1 and Figure 2 show the condition of the land that is to be excavated. The land currently consists of a permeable concrete slab, graded to ensure that any leaks or spillages of potentially polluting liquids flow east, back into the adjacent metal recycling yard and its sealed drainage system. An oil-water separator and underground storage tanks are sited as per drainage plan.

**Figure 1: Typical Concrete layer illustrating permeable layer.**



**Figure 2: Consistency of ground make up**



This concrete has been in place since the commencement of the adjacent metal recycling activities and there has been no history of any leakages in this area. We considered it

appropriate to carry out an intrusive investigation of this land. The general site investigation carried out is considered to provide a representative indication of the current site condition.

## 1.1 Trial Investigation Area

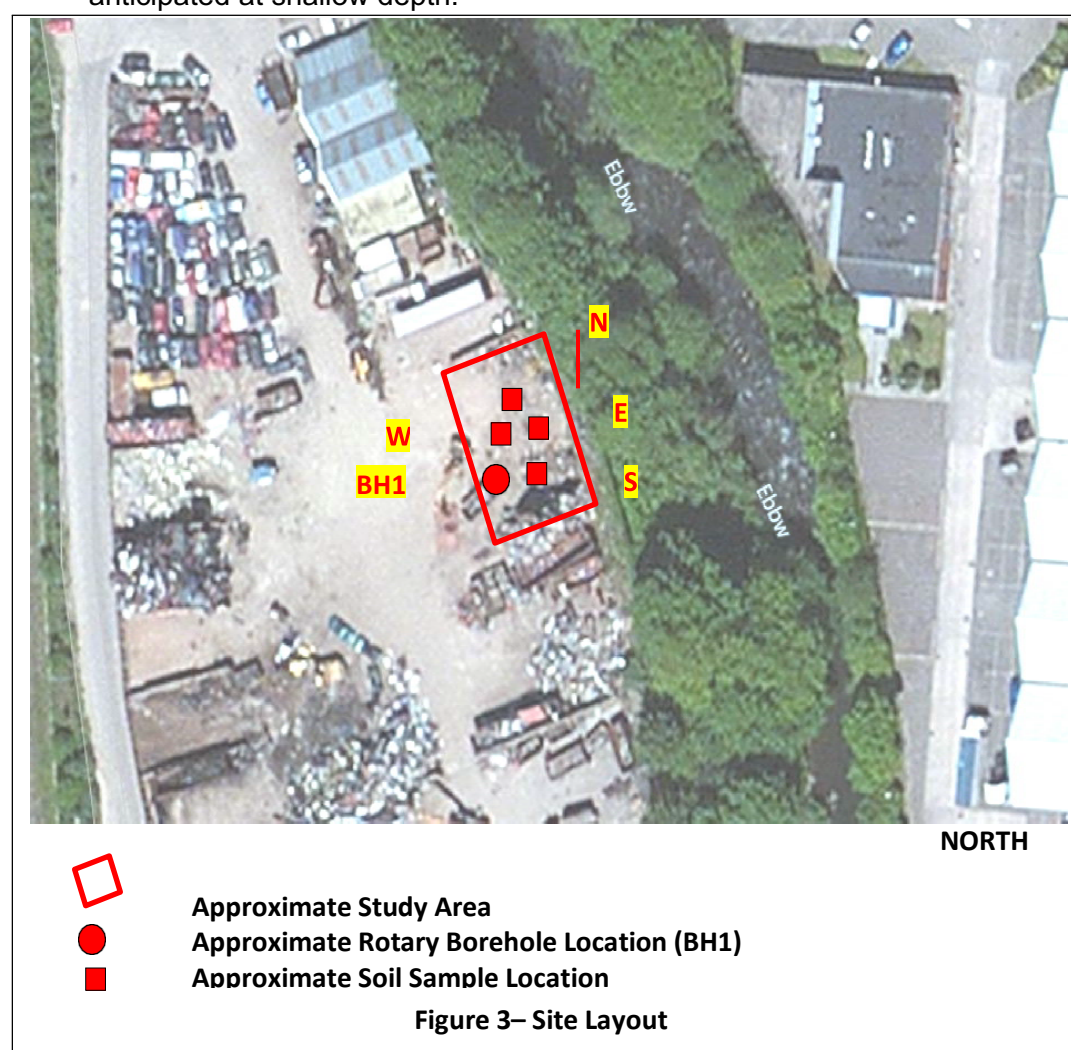
The area outlined in Figure 3 – Site Layout is where the proposed Metal shredding plant will be located.

The site appears to be underlain by a significant thickness of made ground, evident by the site being risen above the Ebbw River to the east of the site. Mr Gareth Jones has previously excavated up to 8mbgl beneath the proposed formation without proving natural ground.

The geological map of the area shows the site to be underlain by superficial deposits of alluvium typically consisting Clays, Silts, Sands and Gravels.

The bedrock appears to be the Sandstones of the Rhondda Member of Carboniferous Age. These rocks consist green-grey, lithic arenites ("Pennant sandstones") with thin mudstone/siltstone and seatearth interbeds and mainly thin coals.

The Brithdir Coal Seam is conjectured to outcrop to the west of the site and not present beneath the site. The Number 1 Rhondda Rider Coal Seam is conjectured to underlie the Brithdir Coal Seam by ~70m and therefore not anticipated at shallow depth.



# Appendices

A      Site Condition report 15390/let2



Our Ref: 15390/let2  
Your Ref:  
Contact: Tom Walby

**Terra Firma (Wales) Ltd.**  
Consulting Geotechnical & Geo-Environmental Engineers  
Site Investigation Contractors  
5 Deryn Court, Wharfedale Road,  
Pentwyn, Cardiff CF23 7HA  
Tel: 029 2073 5354 Fax: 029 2073 5433  
Email: info@terrafirmawales.co.uk  
www.terrafirmawales.co.uk

26<sup>th</sup> April 2019

Mr Gareth Jones,  
GLJ Recycling,  
Chapel Farm Industrial Estate,  
Cwmcarn,  
Newport,  
NP11 7NL

Dear Mr Jones,

## **GROUND INVESTIGATION: GLJ RECYCLING, CWMCARN**

### **1.0 Introduction**

Mr Gareth Jones of GLJ Recycling, is proposing the construction of a foundation to site new heavy recycling plant at GLJ Recycling, Cwmcarn.

Terra Firma (Wales) Limited has been commissioned by Mr Gareth Jones, to undertake a ground investigation at the proposed position of heavy recycling plant.

The main objectives of the ground investigation were to:

- Determine the type, strength and bearing characteristics of the shallow superficial deposits and underlying solid geology.
- Provide recommendations for a suitable and economic foundation/floor slab solution for the development.
- Obtain samples for chemical testing.

In order to achieve the above objectives, Terra Firma (Wales) Limited carried out an assessment programme including a borehole to determine the prevailing ground conditions and also to collect and analyse soil samples from selected locations around the site.

Registered in Wales No: 4013230 VAT No: 753 2566 25  
Registered Office: 5 Deryn Court,  
Wharfedale Road, Pentwyn, Cardiff CF23 7HA





## 1.1 Limitations and Exceptions of Investigation

Mr Gareth Jones on behalf of GLJ Recycling has requested that a Ground Investigation (GI) be performed in order to determine the suitability of a proposed raft foundation solution for the development. The Ground Investigation was limited to the agreed scope of works and it was beyond the scope of Terra Firma's brief to undertake a desk study including coal mining risk assessment of the site.

The GI was conducted and this report has been prepared for the sole internal reliance of Mr Gareth Jones, GLJ Recycling and their design team. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Terra Firma (Wales) Limited. 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 geotechnical consultants. Terra Firma (Wales) Limited does not provide legal advice and the advice of lawyers may also 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.

## 2.0 Review of Existing Data

### 2.1 Geology

The site appears to be underlain by a significant thickness of made ground, evident by the site being risen above the Ebbw River to the east of the site. Mr Gareth Jones has previously excavated up to 8mbgl beneath the proposed formation without proving natural ground.

The geological map of the area shows the site to be underlain by superficial deposits of alluvium typically consisting Clays, Silts, Sands and Gravels.

The bedrock appears to be the Sandstones of the Rhondda Member of Carboniferous Age. These rocks consist green-grey, lithic arenites ("Pennant sandstones") with thin mudstone/siltstone and seatearth interbeds and mainly thin coals.

The Brithdir Coal Seam is conjectured to outcrop to the west of the site and not present beneath the site. The Number 1 Rhondda Rider Coal Seam is conjectured to underlie the Brithdir Coal Seam by ~70m and therefore not anticipated at shallow depth.

No previous site investigation reports were available at the time of the investigation.

## 3.0 Site Work

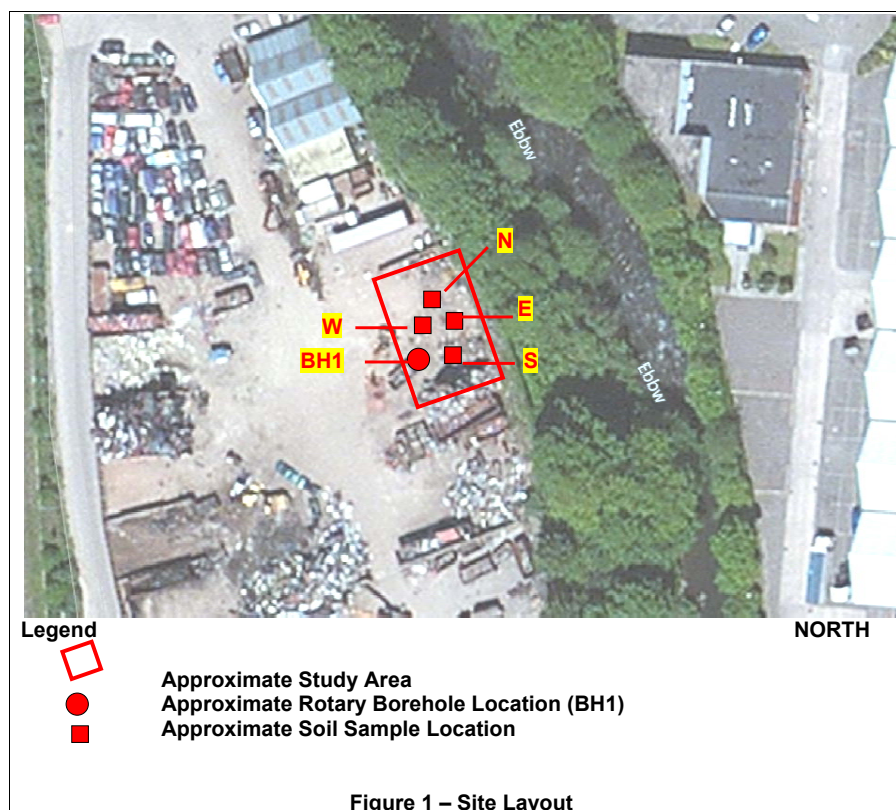
A geotechnical site investigation comprising one rotary borehole was undertaken from the 23<sup>rd</sup> to 24<sup>th</sup> April 2019. Samples of the exposed formation layer beneath the proposed structure were taken for chemical analysis.

The Rotary Openhole borehole was sunk using a Beretta T44 rotary rig.

The fieldworks were also supervised by Terra Firma (Wales) Limited, who logged the exploratory holes based on air blown returns.

The rotary borehole log for BH1 is presented in **Annex A**, and their locations are shown on **Figure 1** overleaf.





### 3.1 Ground Conditions

Borehole BH1 was drilled immediately west of the proposed foundations. It is considered that the thickness of made ground increases towards the Ebbw River. At Borehole BH1 natural ground was encountered at 7.1mbgl.

Dense greenish brown silty sandy gravels were encountered at BH1 from 7.5mbgl.

Blowing sands were encountered between 21 and 26mbgl. Blowing sands or running sands result from sand leaching out of a borehole under the influence of water/seepage. Running sands are often saturated clean sands that are unstable and collapse / flow. During collapse a significant amount of sand may move allowing more sand to flow into the hole. The deposits may be susceptible to changes in pore water pressure. Running / blowing sand may complicate piling operations.

Sandstones of the Rhondda Member were proven at borehole BH1 at 27.6mbgl.



#### **4.0 Engineering Recommendations**

##### **4.1 Preparation of Site**

It is recommended that prior to any work taking place, a structural survey of nearby structures be undertaken. Pictorial evidence should be compiled throughout the piling and construction works in order to monitor any damage resulting from vibrations.

All areas of hardstanding should be excavated out and removed. It is understood that this stage has already been completed.

Allowances should be made for removing any 'soft spots/areas' as well as any buried obstructions that may remain such as old foundations and infilled basement structures.

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

Contingencies should also be made for the protection and any necessary temporary/permanent support of structures on neighbouring sites.

Any reduced levels should be brought up to the required levels with well compacted imported granular materials. Department of Transport (DoT) Type 2 sub-base or similar may be used and should be compacted in layers, in accordance with the Specification for Highway Works.

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

##### **4.2 Foundation and Floor Slab Solution**

Due to the depth at which a suitable founding strata is located beneath the site traditional shallow foundations in the form of traditional or raft foundations are not considered suitable for the site for reasons including the following,

- The depth of fill is considered to preclude the practical / economical use of strip or trench fill foundations.
- The current proposed raft foundation is relatively large and considered to be greater than a typical one or two-storey domestic construction. When combined with the structural loadings, this will stress a greater depth of fill below the structure.
- Whilst the made ground appears to be relatively consistent, the in-situ strength tests identify the layer of fill to be very loose. The fill is expected to compact under loading. Such settlement may exceed structural tolerances of the proposed structure.
- Settlement and differential settlement is anticipated due to a variable thickness of very loose fill. The potential for differential settlement may exceed structural tolerances of the proposed structure.

A piled foundation is considered a viable alternative foundation solution.

We would expect that piles could be installed into the dense greenish brown sand & gravel at depths of typically 15m below current ground level. It is considered that 250mm<sup>2</sup> precast concrete driven piles with a 400kN working load could be suitable.



#### **4.2 Foundation and Floor Slab Solution (continued)**

The working loads, type and length of piles should be confirmed by the specialist piling contractor. Deeper piles to be socketed into the underlying bedrock may be an alternative piling option.

Due to the close proximity of the nearby structures if vibrations generated by installing pre-cast concrete piles are unacceptable, consideration should be given to the use of continuous flight auger (CFA) piles.

The floor slab should be designed as suspended.

#### **4.3 Excavations and Formations**

Most shallow excavations should be possible with normal soil excavating machinery. However, allowances should be made for the use of hydraulic breaker attachment if excavating areas of hard standing or buried obstructions.

Shallow excavations are considered unlikely to encounter water/groundwater inflows and the made ground appears to be free draining. Any inflows together with rainwater infiltration should be dealt with by conventional pumping techniques.

The sides of any excavations deeper than 1.00m should be supported by planking and strutting or other proprietary means.

The sub-formations/formations will 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 and as a minimum the formation/excavation surfaces must be protected by a minimum thickness of 200mm of hard cover immediately after exposure.

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

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

It is recommended that approval be gained from a qualified engineer of the formation condition before covering them with any subsequent construction.

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: Terra Firma (Wales) Ltd**

A handwritten signature in black ink that reads 'Tom Walby'.

**Mr Tom Walby**



**ANNEX A**  
**Rotary Borehole Log**

		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. <b>BH1</b> Sheet 1 of 1	
Project Name: Chapel Farm Industrial Estate		Project No: 15390		Co-ords:		Hole Type RO	
Location: Cwmcarn		Level:		Dates: 23/04/2019 - 24/04/2019		Scale 1:150	
Client: GLJ Recycling		Logged By					

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
	1.00	SPT	N=1 (1,0/0,1,0,0)	0.20				Reinforced CONCRETE	1
	2.50	SPT	N=1 (0,1/0,0,1,0)					MADE GROUND: Very loose black very silty ashy gravelly fine to coarse SAND. Gravels of clinker, slag and rare glass.	2
	4.00	SPT	N=1 (1,0/1,0,0,0)						3
	5.50	SPT	N=1 (1,0/0,0,1,0)						4
	7.00	SPT	N=7 (1,1/1,2,2,2)	7.10 7.50					5
	8.50	SPT	50 (25 for 75mm/50 for 30mm)					Loose grey silty SAND.	6
	10.00	SPT	50 (25 for 120mm/50 for 160mm)					Dense greenish brown silty sandy fine to coarse GRAVELS with suspected rounded cobbles.	7
	11.50	SPT	50 (25 for 100mm/50 for 170mm)						8
	13.00	SPT	N=35 (6,8/7,10,11,7)						9
	14.40	SPT	50 (5,6/50 for 280mm)						10
	17.20	SPT	50 (25 for 140mm/50 for 100mm)						11
	19.60	SPT	50 (10,14/50 for 170mm)	21.00					12
									13
									14
									15
									16
									17
									18
									19
									20
									21
								Blowing sand. Brown silty SAND.	22
									23
									24
									25
	26.50	SPT	50 (25 for 130mm/50 for 110mm)	26.00				Dense brown silty sandy fine to coarse GRAVEL with suspected cobbles.	26
									27
	28.00	SPT	50 (25 for 20mm/50 for 0mm)	27.60 28.10				Light grey SANDSTONE.	28
								End of Borehole at 28.100m	29
									30

Remarks:

B Site Condition (Chemical comp) report 19-13968-1



**Chemtest Ltd.**  
Depot Road  
Newmarket  
CB8 0AL  
Tel: 01638 606070  
Email: info@chemtest.com

## Final Report

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<b>Report No.:</b>	19-13968-1	
<b>Initial Date of Issue:</b>	29-Apr-2019	
<b>Client</b>	Terra Firma (Wales) Ltd	
<b>Client Address:</b>	5 Deryn Court Wharfedale Road Pentwyn Cardiff CF23 7HA	
<b>Contact(s):</b>	Tom Walby	
<b>Project</b>	15390 GLJ Recycling, Cwmcarn	
<b>Quotation No.:</b>		<b>Date Received:</b> 25-Apr-2019
<b>Order No.:</b>		<b>Date Instructed:</b> 25-Apr-2019
<b>No. of Samples:</b>	4	
<b>Turnaround (Wkdays):</b>	3	<b>Results Due:</b> 29-Apr-2019
<b>Date Approved:</b>	29-Apr-2019	
<b>Approved By:</b>		
<b>Details:</b>	Robert Monk, Technical Manager	

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Project: 15390 GLJ Recycling, Cwmnam

## Results - Soil

Client: Terra Firma (Wales) Ltd		Chemtest Job No.:		19-13968	19-13968	19-13968	19-13968
Quotation No.:	Chemtest Sample ID.:	815828	815829	815830	815831		
Order No.:	Client Sample Ref.:	1	2	3	4		
	Sample Location:	N	S	E	W		
	Sample Type:	SOIL	SOIL	SOIL	SOIL		
	Top Depth (m):	1.0	1.0	1.0	1.0		
	Date Sampled:	23-Apr-2019	23-Apr-2019	23-Apr-2019	23-Apr-2019		
	Asbestos Lab:	COVENTRY	COVENTRY	COVENTRY	COVENTRY		
Determinand	Accred.	SOP	Units	LOD			
ACM Type	U	2192	N/A	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	11	18	19
Soil Colour	N	2040	N/A		Brown.	Brown.	Brown.
Other Material	N	2040	N/A		Stones.	Stones.	Stones.
Soil Texture	N	2040	N/A		Sand.	Sand.	Sand.
pH	M	2010	N/A		8.3	7.9	7.6
Gyranide (Total)	M	2300	mg/kg	0.50	0.90	0.50	0.50
Sulphate (Acid Soluble)	M	2430	%	0.010	0.18	0.080	0.11
Arsenic	M	2450	mg/kg	1.0	47	110	190
Cadmium	M	2450	mg/kg	0.10	7.5	11	0.98
Chromium	M	2450	mg/kg	1.0	83	35	28
Mercury Low Level	M	2450	mg/kg	0.05	1.2	0.38	0.44
Copper	M	2450	mg/kg	0.50	290	650	160
Nickel	M	2450	mg/kg	0.50	92	410	94
Lead	M	2450	mg/kg	0.50	460	1500	130
Selenium	M	2450	mg/kg	0.20	1.2	3.0	1.7
Zinc	M	2450	mg/kg	0.50	4600	42000	1400
Chromium (Trivalent)	N	2490	mg/kg	1.0	83	35	28
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	7.7	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	26	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	37	< 1.0	< 1.0



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Project: 15390 GLJ Recycling, Cwmcairn

## Results - Soil

Client: Terra Firma (Wales) Ltd		Chemtest Job No.:		19-13968	19-13968	19-13968	19-13968
Quotation No.:	Chemtest Sample ID.:	815828	815829	815830	815831		
Order No.:	Client Sample Ref.:	1	2	3	4		
	Sample Location:	N	S	E	W		
	Sample Type:	SOIL	SOIL	SOIL	SOIL		
	Top Depth (m):	1.0	1.0	1.0	1.0		
	Date Sampled:	23-Apr-2019	23-Apr-2019	23-Apr-2019	23-Apr-2019		
	Asbestos Lab:	COVENTRY	COVENTRY	COVENTRY	COVENTRY		
Determinand	Accred.	SOP	Units	LOD			
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	71	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	71	< 10	< 10
Naphthalene	M	2700	mg/kg	0.10	1.9	< 0.10	1.5
Acenaphthylene	M	2700	mg/kg	0.10	0.68	< 0.10	0.84
Acenaphthene	M	2700	mg/kg	0.10	0.76	< 0.10	0.82
Fluorene	M	2700	mg/kg	0.10	0.99	< 0.10	1.1
Phenanthrene	M	2700	mg/kg	0.10	3.3	< 0.10	2.7
Anthracene	M	2700	mg/kg	0.10	0.31	< 0.10	0.21
Fluoranthene	M	2700	mg/kg	0.10	2.7	0.54	0.46
Pyrene	M	2700	mg/kg	0.10	2.8	0.81	0.73
Benz[a]anthracene	M	2700	mg/kg	0.10	2.1	< 0.10	0.73
Chrysene	M	2700	mg/kg	0.10	2.2	< 0.10	2.2
Benz[b]fluoranthene	M	2700	mg/kg	0.10	2.4	< 0.10	< 0.10
Benz[k]fluoranthene	M	2700	mg/kg	0.10	0.74	< 0.10	< 0.10
Benzo[a]pyrene	M	2700	mg/kg	0.10	1.9	< 0.10	< 0.10
Indeno(1,2,3-cd)Pyrene	M	2700	mg/kg	0.10	3.0	< 0.10	< 0.10
Dibenz[a,h]anthracene	M	2700	mg/kg	0.10	0.67	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	5.5	< 0.10	< 0.10
Total Of 16 PAHs	M	2700	mg/kg	2.0	32	< 2.0	8.2
Total Phenols	M	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30
Organic Matter BS1377	N	2930	%	0.10	4.4	4.4	5.0





## Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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.
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.
2680	TPH A/A Split	Aliphatics: >C5-C6, >C6-C8,>C8-C10, >C10-C12, >C12-C16, >C16-C21, >C21-C35, >C35- C44Aromatics: >C5-C7, >C7-C8, >C8- C10, >C10-C12, >C12-C16, >C16- C21, >C21- C35, >C35- C44	Dichloromethane 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; Dibenzo[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)
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"

Comments or interpretations are beyond the scope of UKAS accreditation  
The results relate only to the items tested  
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols  
For all other tests the samples were dried at < 37°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

### **Sample Deviation Codes**

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- 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 - Insufficient Sample (Applies to LOI in Trommel Fines Only)

### **Sample Retention and Disposal**

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All soil samples will be retained for a period of 45 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

If you require extended retention of samples, please email your requirements to:  
[customerservices@chemtest.com](mailto:customerservices@chemtest.com)