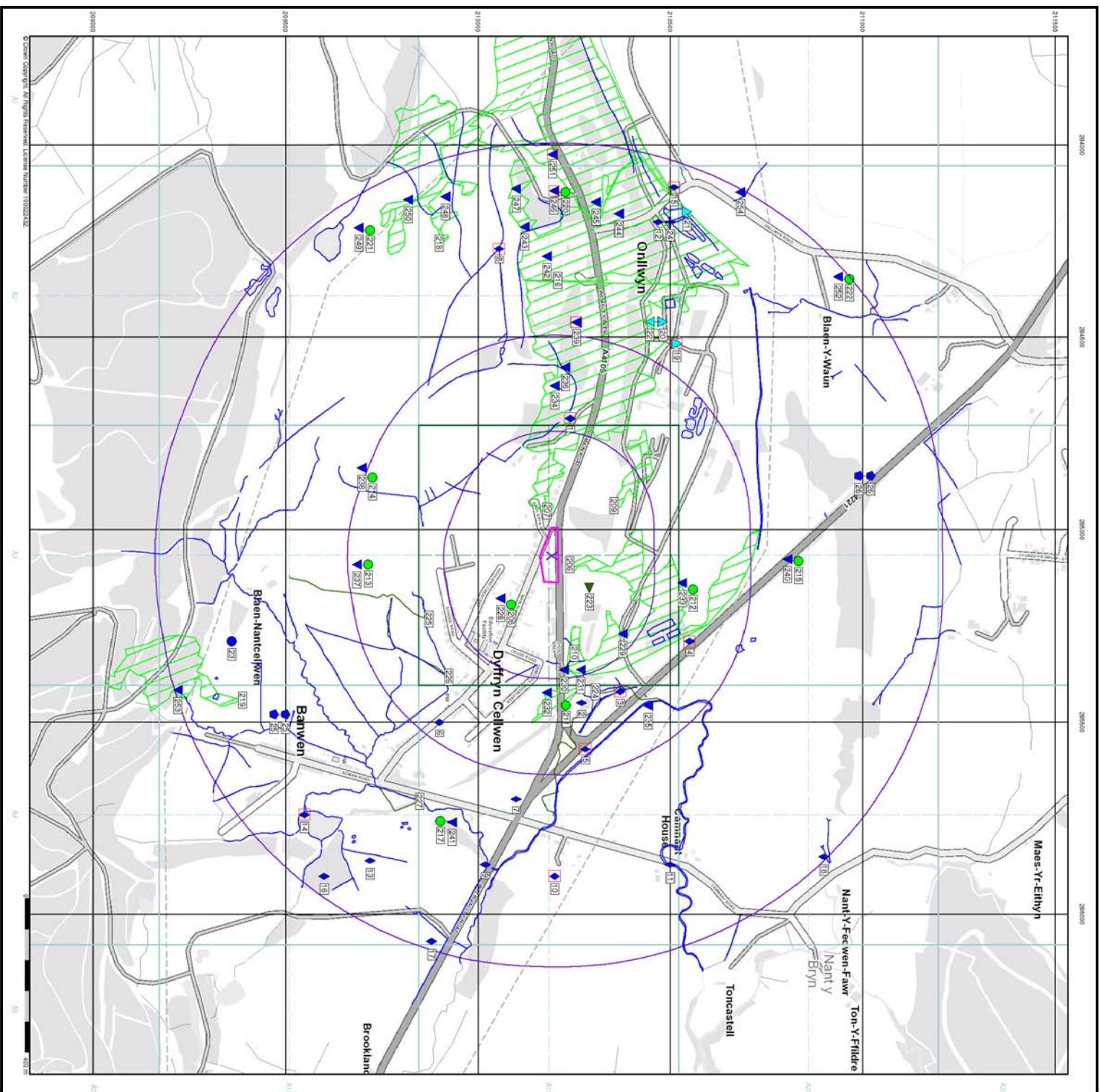




General
 Specified Site
 Specified Butter(s)

- Specified Site
 Specified Buffer(s)
 Bearing Reference Point
 Map ID

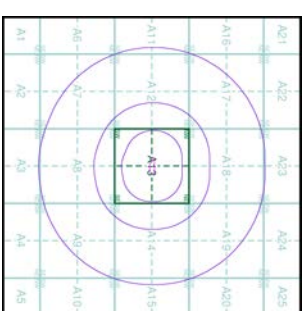
Agency and Hydrological

- Contaminated Land Register Entry or Notice
(Location)

Contaminated Land Register Entry or Notice

- | | | | | | |
|---|--|---|--|---|---|
|  | Local Authority |  | Enforcement or Prohibition Notice |  | EA Historic Landfill (pre-1990) |
|  | Integrated Pollution Control |  | Integrated Pollution Control |  | Integrated Pollution Control Registered |
|  | Integrated Pollution Prevention and Control |  | Integrated Pollution Prevention and Control |  | Licensed Waste Management Facility |
|  | Local Authority Pollution Prevention and Control |  | Local Authority Pollution Prevention and Control |  | Licensed Waste Management Facility (Laxton) |
|  | Local Authority Pollution Prevention and Control Enforcement |  | Local Authority Recorded Landfill Site (Laxton) |  | Local Authority Recorded Landfill Site (Laxton) |
|  | Prosecution Relating to Authorised Processes |  | Prosecution Relating to Controlled Waters |  | Local Authority Recorded Landfill Site |
|  | Registered Radioactive Substance |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Non-water) |
|  | River Network or Water Feature |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Non-water) |
|  | River Quality Sampling Point |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Water) |
|  | Substantiated Pollution Incident Register |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Water) |
|  | Water Abstraction |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Water) |
|  | Water Industry and General |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Water) |
|  | Water Industry and General |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Water) |
|  | Water Industry and General |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Water) |
|  | Water Industry and General |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Water) |
|  | Water Industry and General |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Water) |
|  | Water Industry and General |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Water) |
|  | Water Industry and General |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Water) |
|  | Water Industry and General |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Water) |
|  | Water Industry and General |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Water) |
|  | Water Industry and General |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Water) |
|  | Water Industry and General |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Water) |
|  | Water Industry and General |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Water) |
|  | Water Industry and General |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Water) |
|  | Water Industry and General |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Water) |
|  | Water Industry and General |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Water) |
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|  | Water Industry and General |  | Registration of Potentially Polluting Activities |  | Potentially infilled land (Water) |
|  | Water Industry and General |  | Registration of Potentially Polluting Activities | | |

Site Sensitivity Map - Slice A



Order Details

Order Number:	172176631_1_1
Customer Ref:	14753 dyffryn cellwyn
National Grid Reference:	285070, 210190
Slice:	A
Site Area (ha):	0.52
Search Buffer (m):	1000



A Landmark Information Group Service v50.0 04-Jul-2018 Page 1 of 6

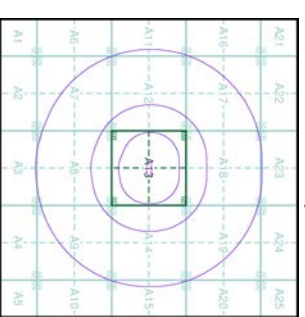
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Site
- Map ID

Industrial Land Use

- Contemporary Trade Directory Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice A



Order Details

Order Number: 17217/631_1.1
Customer Ref: 14753 dyffryn cellwyn
National Grid Reference: 285070, 210190
Slice: A
Site Area (ha): 0.52
Search Buffer (m): 1000

Site Details

Site at: Dyffryn Cellwyn, Neath Port Talbot

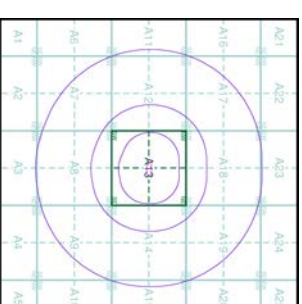
General

- Specified Site
- Specified Buffer(s)
- Beating Reference Point

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice A



Order Details

Order Number: 17217/631_1.1
Customer Ref: 14753 dyffryn celwyn
National Grid Reference: 285070, 210190
Site: A
Site Area (ha): 0.52
Search Buffer (m): 1000

Site Details

Site at: Dyffryn Celwyn, Neath Port Talbot

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Severed or Type at Location

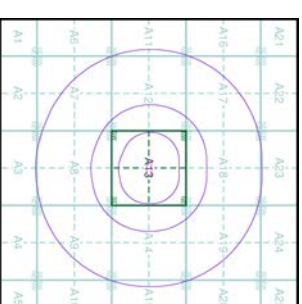
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.environmental.co.uk.

Borehole Map - Slice A



Order Details

Order Number: 17217/631_1.1
Customer Ref: 14753 dyffryn cellwyn
National Grid Reference: 285070, 210190
Slice: A
Site Area (ha): 0.52
Search Buffer (m): 1000

Site Details

Site at: Dyffryn Cellwen, Neath Port Talbot

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

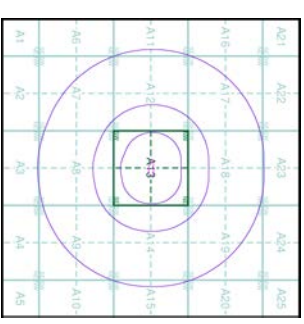
OS Water Network Data

- Canal
- Reservoir
- Foreshore
- Marsh
- Tidal River
- Inland River
- Drain
- Other
- Lake
- Transfer
- Lock Or Flight Of Locks
- Sea

Contours (height in meters)

- Standard Contour
- Master Contour
- Spot Height
- Mean Low Water
- Mean High Water

OS Water Network Map - Slice A



Order Details

Order Number: 17217/631_1.1
 Customer Ref: 14753 dyffryn celwyn
 National Grid Reference: 285070, 210190
 Slice: A
 Site Area (ha): 0.52
 Search Buffer (m): 1000

Site Details

Site at: Dyffryn Celwyn, Neath Port Talbot

General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point

Risk of Flooding from Surface Water

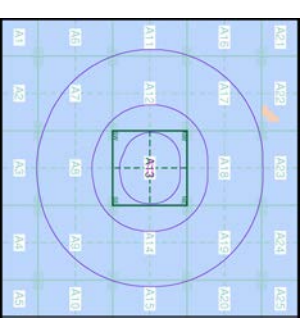
-  High - 30 Year Return
-  Medium - 100 Year Return
-  Low - 1000 Year Return

Suitability

See the suitability map below

-  National to county
-  County to town
-  Town to street
-  Street to parcels of land
-  Property

EANRW Suitability Map - Slice A



Order Details

Order Number: 17217/631_1.1
 Customer Ref: 14753 dyffryn celwyn
 National Grid Reference: 285070, 210190
 Slice: A
 Site Area (ha): 0.52
 Search Buffer (m): 1000

Site Details

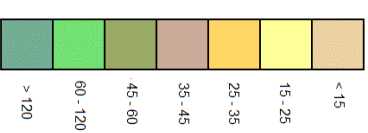
Site at: Dyffryn Celwyn, Neath Port Talbot

General

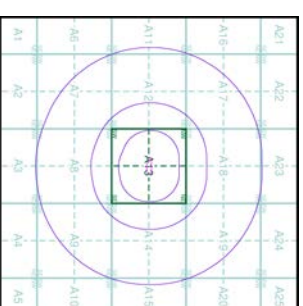
- Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



Estimated Soil Chemistry Arsenic - Slice A



Order Details

Order Details: 17217/631_1.1
Customer Ref: 14753 dyffryn cellwyn
National Grid Reference: 285070, 210190
Slice: A
Site Area (ha): 0.52
Search Buffer (m): 1000

Site Details

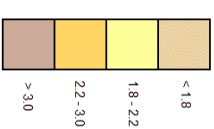
Site at: Dyffryn Cellwen, Neath Port Talbot

General

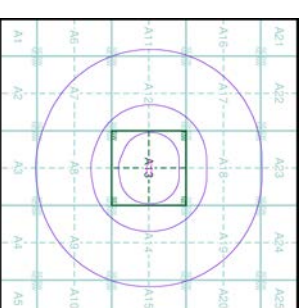
- Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



Estimated Soil Chemistry Cadmium - Slice A



Order Details

Order Details: 17217/631_1.1
Customer Ref: 14753 dyffryn cellwyn
National Grid Reference: 285070, 210190
Slice: A
Site Area (ha): 0.52
Search Buffer (m): 1000

Site Details

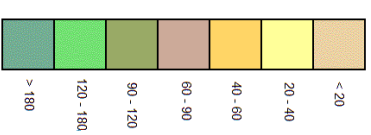
Site at: Dyffryn Cellwen, Neath Port Talbot

General

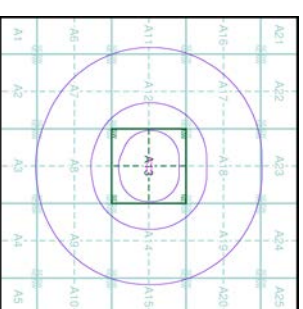
- Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



Estimated Soil Chemistry Chromium - Slice A



Order Details

Order Details: 17217/631_1.1
Customer Ref: 14753 dyffryn cellwyn
National Grid Reference: 285070, 210190
Slice: A
Site Area (ha): 0.52
Search Buffer (m): 1000

Site Details

Site at: Dyffryn Cellwen, Neath Port Talbot

General

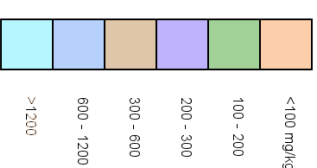
Specified Site

Specified Buffer(s)

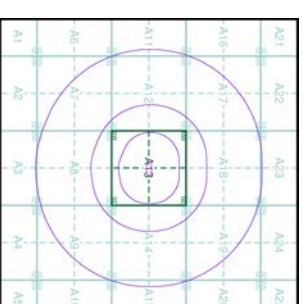
Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



Estimated Soil Chemistry Lead - Slice A



Order Details

Order Details: 17217/631_1_1
 Customer Ref: 14753 dyffryn cellwyn
 National Grid Reference: 285070, 210190
 Slice: A
 Site Area (ha): 0.52
 Search Buffer (m): 1000

Site Details

Site at: Dyffryn Cellwen, Neath Port Talbot

General

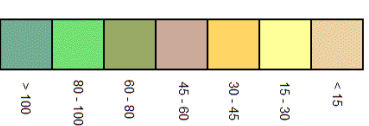
Specified Site

Specified Buffer(s)

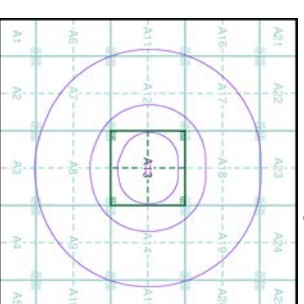
Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



Estimated Soil Chemistry Nickel - Slice A



Order Details

Order Details: 17217/631_1.1
Customer Ref: 14753 dyffryn cellwyn
National Grid Reference: 285070, 210190
Slice: A
Site Area (ha): 0.52
Search Buffer (m): 1000

Site Details

Site at: Dyffryn Cellwen, Neath Port Talbot

Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice

A slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline) that are referenced by letters of the alphabet starting from the bottom left corner of the slice 'grid'. This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment

A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant

A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the dashpans to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:



Envirocheck reports are compiled from 136 different sources of data.

Client Details

Mr I Brookes, Terra Firma (Wales) Ltd, 5 Deryn Court,
Wharfedale Road, Penryn, Cardiff, CF23 7HB

Order Details

Order Number: 17217/631_11
Customer Ref: 14753 dyffryn celiwyn
National Grid Reference: 285070, 210190
Site Area (Ha): 0.52
Search Buffer (m): 1000

Site Details

Site at, Dyffryn Celiwyn, Neath Port Talbot

Full Terms and Conditions can be found on the following link:

<http://www.terramarkinfo.co.uk/Terms/Show515>

ANNEX C
Mining Report



The Coal
Authority

Resolving the **impacts** of mining

CON29M Non-Residential Mining Report

SITE AT, DYFFRYN CELLWEN
NEATH PORT TALBOT

Date of enquiry: 04 July 2018
Date enquiry received: 04 July 2018
Issue date: 04 July 2018

Our reference: 51001873311001
Your reference: 172177631_2|



CON29M Non-Residential Mining Report

This report is based on, and limited to, the records held by the Coal Authority, at the time we answer the search.

Client name

LANDMARK INFORMATION GROUP LIMITED

Enquiry address

SITE AT, DYFFRYN CELLWEN, NEATH PORT TALBOT

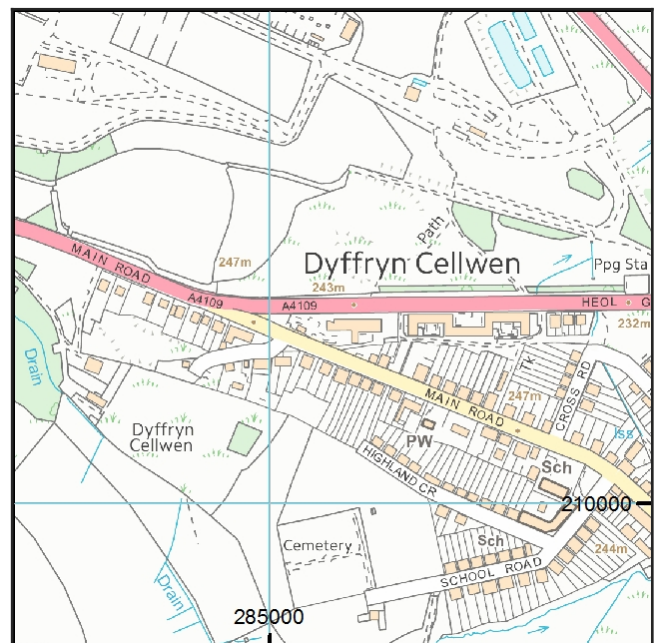
How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

 /company/the-coal-authority
 /thecoalauthority
 /coalauthority



Approximate position of property



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Summary

Has the search report highlighted evidence or potential of		
1	Past underground coal mining	Yes
2	Present underground coal mining	No
3	Future underground coal mining	Yes
4	Mine entries	No
5	Coal mining geology	No
6	Past opencast coal mining	No
7	Present opencast coal mining	No
8	Future opencast coal mining	No
9	Coal mining subsidence	No
10	Mine gas	No
11	Hazards related to coal mining	No
12	Withdrawal of support	No
13	Working facilities order	No
14	Payments to owners of former copyhold land	No

For detailed findings, please go to page 4.

Detailed findings

1. Past underground coal mining

The property is not within a surface area that could be affected by recorded past underground mining.

However the property is in an area where the Coal Authority believe there is coal at or close to the surface. This coal may have been worked at some time in the past. The potential presence of coal workings at or close to the surface should be considered prior to any site works or future development activity. Please refer to the Comments section of this report for further information.

2. Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

3. Future underground coal mining

The property is not in an area where the Coal Authority has plans to grant a licence to remove coal using underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

4. Mine entries

There are no known coal mine entries within, or within 20 metres of, the boundary of the property.

5. Coal mining geology

The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

6. Past opencast coal mining

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

7. Present opencast coal mining

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

8. Future opencast coal mining

There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

9. Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31st October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

10. Mine gas

The Coal Authority has no record of a mine gas emission requiring action.

11. Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Authority, under its Emergency Surface Hazard Call Out procedures.

12. Withdrawal of support

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

13. Working facilities order

The property is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

14. Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Comments on the Coal Authority information

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In view of the mining circumstances a prudent developer would seek appropriate technical advice before any works are undertaken.

Therefore if development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply good engineering practice developed for mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or mines of coal without the permission of the Coal Authority. Developers should be aware that the investigation of coal seams/former mines of coal may have the potential to generate and/or displace underground gases and these risks both under and adjacent to the development should be fully considered in developing any proposals. The need for effective measures to prevent gases entering into public properties either during investigation or after development also needs to be assessed and properly addressed. This is necessary due to the public safety implications of any development in these circumstances.

Additional remarks

Information provided by the Coal Authority in this report is compiled in response to the Law Society's Con29M Coal Mining enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL. This report is prepared in accordance with the Law Society's Guidance Notes 2006, the User Guide 2006 and the Coal Authority's Terms and Conditions applicable at the time the report was produced.

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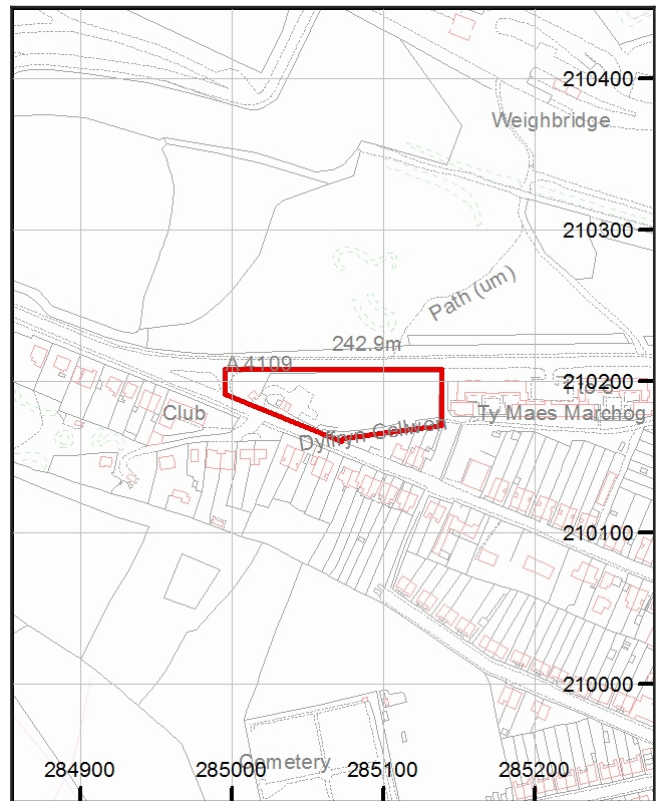
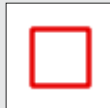
Alternative formats

If you would like this report in an alternative format, please contact our communications team.

Enquiry boundary

Key

Approximate position of enquiry boundary shown



How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

 /company/the-coal-authority

 /thecoalauthority

 /coalauthority



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ANNEX D
Trial Pit Logs



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

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

Trial Pit No:

TP1

Sheet 1 of 1

Project Name: Dyffryn Cellwen

Project No:
14753

Co-ords: -
Level:

Date:
24/05/2018

Location: Dyffryn Cellwen

Dimensions:

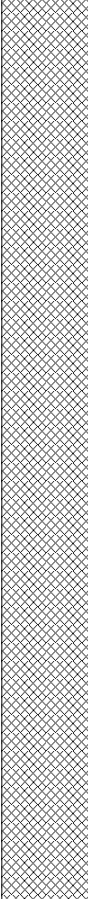
1.80

Depth
3.00

0.80

Scale:
1:25
Logged:

Client:

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				3.00			MADE GROUND: firm brown gravelly CLAY with inclusions of brick and glass	1 2 3 4 5
							End of Pit at 3.000m	

Stability: Trial pit stable

Remarks:



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

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

Trial Pit No:

TP2

Sheet 1 of 1

Project Name: Dyffryn Cellwen

Project No:
14753

Co-ords: -
Level:

Date:
24/05/2018

Location: Dyffryn Cellwen

Dimensions: 1.80

Depth
3.00

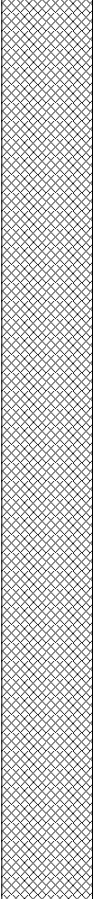
0.80

Scale:

1:25

Logged:

Client:

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				3.00			MADE GROUND: firm brown sandy gravelly CLAY with inclusions of brick and glass
							End of Pit at 3.000m

Stability: Trial pit stable

Remarks:



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

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

Trial Pit No:

TP3

Sheet 1 of 1

Project Name: Dyffryn Cellwen

Project No:
14753

Co-ords: -
Level:

Date:
24/05/2018

Location: Dyffryn Cellwen

Dimensions:

1.80

Depth
3.00

0.80

Scale:

1:25

Logged:

Client:

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				1.20			MADE GROUND: firm brown gravelly CLAY with inclusions of brick and glass	1
							MADE GROUND: firm brown very gravelly CLAY with inclusions of brick and glass	2
				3.00			End of Pit at 3.000m	3
								4
								5

Stability: Trial pit stable

Remarks:



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

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

Trial Pit No:

TP4

Sheet 1 of 1

Project Name: Dyffryn Cellwen

Project No:
14753

Co-ords: -
Level:

Date:
24/05/2018

Location: Dyffryn Cellwen

Dimensions:

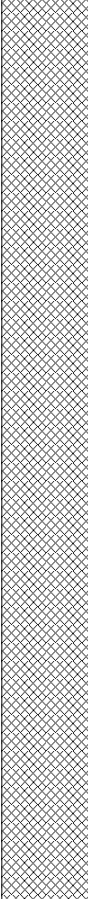
1.80

Depth
3.00

0.80

Scale:
1:25
Logged:

Client:

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				3.00			MADE GROUND: firm brown gravelly CLAY with inclusions of brick and glass
							End of Pit at 3.000m

Stability: Trial pit stable

Remarks:



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Pentwyn, Cardiff
CF23 7HA

Trial Pit No:

TP5

Sheet 1 of 1

Project Name: Dyffryn Cellwen

Project No:
14753

Co-ords: -
Level:

Date:
24/05/2018

Location: Dyffryn Cellwen

Dimensions: 1.80

Depth
3.00

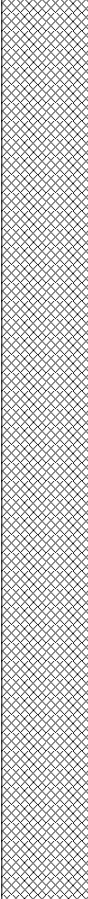
0.80

Scale:

1:25

Logged:

Client:

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				3.00			MADE GROUND: firm brown gravelly CLAY with inclusions of brick and glass
							End of Pit at 3.000m

Stability: Trial pit stable

Remarks:



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Trial Pit No:

TP6

Sheet 1 of 1

Project Name: Dyffryn Cellwen

Project No:
14753

Co-ords: -
Level:

Date:
24/05/2018

Location: Dyffryn Cellwen

Dimensions: 1.80

Depth
3.00

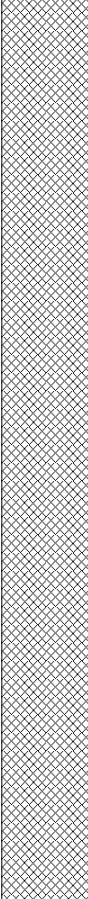
0.80

Scale:

1:25

Logged:

Client:

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				3.00			MADE GROUND: firm brown gravelly CLAY with inclusions of brick and glass
							End of Pit at 3.000m

Stability: Trial pit stable

Remarks:

ANNEX E
Rotary Percussive Borehole
Logs



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Borehole No.

BH01

Sheet 1 of 3

Project Name: Dyffryn Cellwen

Project No:
14753

Co-ords:

Hole Type
BH

Location: Dyffryn Cellwen

Level:

Scale
1:50

Client:

Dates: 26/07/2018 - 26/07/2018

Logged By
ML

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
				2.50				Backfill broken ground (DRILLERS DESCRIPTION)	1
								Weathered mudstone TILL. (DRILLERS DESCRIPTION)	2
									3
									4
									5
									6
									7
				7.30				MUDSTONE. (DRILLERS DESCRIPTION)	8
									9
									10

Remarks:



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Borehole No.

BH01

Sheet 2 of 3

Project Name: Dyffryn Cellwen Project No: 14753 Co-ords: Hole Type BH

Location: Dyffryn Cellwen Level: Scale 1:50

Client: Dates: 26/07/2018 - 26/07/2018 Logged By ML

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
								MUDSTONE. (DRILLERS DESCRIPTION)	
									11
									12
									13
									14
									15
									16
									17
									18
									19
									20

Remarks:



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Borehole No.

BH01

Sheet 3 of 3

Project Name: Dyffryn Cellwen

Project No:
14753

Co-ords:

Hole Type
BH

Location: Dyffryn Cellwen

Level:

Scale
1:50

Client:

Dates: 26/07/2018 - 26/07/2018

Logged By
ML

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
								MUDSTONE. (DRILLERS DESCRIPTION)	
				21.50					21
				22.20					22
				22.20				COAL. (DRILLERS DESCRIPTION)	
								MUDSTONE. (DRILLERS DESCRIPTION)	
								COAL dark MUDSTONE. (DRILLERS DESCRIPTION)	23
				23.60					
								MUDSTONE and SILTSTONE. (DRILLERS DESCRIPTION)	24
									25
									26
									27
									28
									29
				30.00					30
								End of Borehole at 30.000m	

Remarks:



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Borehole No.

BH02

Sheet 1 of 4

Project Name: Dyffryn Cellwen

Project No:
14753

Co-ords:

Hole Type
BH

Location: Dyffryn Cellwen

Level:

Scale
1:50

Client:

Dates: 26/07/2018 - 26/07/2018

Logged By
ML

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
				2.20				Backfill BROCKEN GROUND. (DRILLERS DESCRIPTION)	1
								Weathered mudstone TILL. (DRILLERS DESCRIPTION)	2
									3
									4
									5
				5.70				MUDSTONE. (DRILLERS DESCRIPTION)	6
									7
									8
									9
									10

Remarks:



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Borehole No.

BH02

Sheet 2 of 4

Project Name: Dyffryn Cellwen	Project No: 14753	Co-ords:	Hole Type BH
Location: Dyffryn Cellwen		Level:	Scale 1:50
Client:		Dates: 26/07/2018 - 26/07/2018	Logged By ML

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
▼				10.50				MUDSTONE. (DRILLERS DESCRIPTION)	
								MUDSTONE and SILTSTONE. (DRILLERS DESCRIPTION)	11
									20

Remarks:



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Borehole No.

BH02

Sheet 3 of 4

Project Name: Dyffryn Cellwen

Project No:
14753

Co-ords:

Hole Type
BH

Location: Dyffryn Cellwen

Level:

Scale
1:50

Client:

Dates: 26/07/2018 - 26/07/2018

Logged By
ML

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
				21.00				MUDSTONE and SILTSTONE. (DRILLERS DESCRIPTION)	
								COAL. (DRILLERS DESCRIPTION)	21
				23.00				MUDSTONE and SILTSTONE. (DRILLERS DESCRIPTION)	23
				24.10				SANDSTONE and SILTSTONE. (DRILLERS DESCRIPTION)	24
									25
									26
									27
									28
									29
				30.00					30

Remarks:



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Borehole No.

BH02

Sheet 4 of 4

Project Name:	Dyffryn Cellwen	Project No:	14753	Co-ords:		Hole Type	BH
Location:	Dyffryn Cellwen	Level:				Scale	1:50
Client:		Dates:	26/07/2018 - 26/07/2018			Logged By	ML

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
				30.50				COAL. (DRILLERS DESCRIPTION)	
				31.00				MUDSTONE. (DRILLERS DESCRIPTION)	
								End of Borehole at 31.000m	31
									32
									33
									34
									35
									36
									37
									38
									39
									40

Remarks:



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Borehole No.

BH03

Sheet 1 of 4

Project Name: Dyffryn Cellwen

Project No:
14753

Co-ords:

Hole Type
BH

Location: Dyffryn Cellwen

Level:

Scale
1:50

Client:

Dates: 25/06/2018 - 26/07/2018

Logged By
ML

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
								Backfill BROCKEN GROUND. (DRILLERS DESCRIPTION)	
									1
									2
				2.50				Weathered mudstone TILL. (DRILLERS DESCRIPTION)	
									3
				4.00				MUDSTONE. (DRILLERS DESCRIPTION)	
									4
									5
									6
									7
									8
									9
				9.50				MUDSTONE and SILTSTONE. (DRILLERS DESCRIPTION)	
									10

Remarks:



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Borehole No.

BH03

Sheet 2 of 4

Project Name: Dyffryn Cellwen	Project No: 14753	Co-ords:	Hole Type BH
Location: Dyffryn Cellwen		Level:	Scale 1:50
Client:		Dates: 25/06/2018 - 26/07/2018	Logged By ML

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
▼								MUDSTONE and SILTSTONE. (DRILLERS DESCRIPTION)	11
				19.50				COAL. (DRILLERS DESCRIPTION)	20

Remarks:



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Borehole No.

BH03

Sheet 3 of 4

Project Name: Dyffryn Cellwen	Project No: 14753	Co-ords:	Hole Type BH
Location: Dyffryn Cellwen		Level:	Scale 1:50
Client:		Dates: 25/06/2018 - 26/07/2018	Logged By ML

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
				20.30				COAL. (DRILLERS DESCRIPTION)	
								MUDSTONE. (DRILLERS DESCRIPTION)	
				21.00				COAL. (DRILLERS DESCRIPTION)	21
				22.00				MUDSTONE and SILTSTONE. (DRILLERS DESCRIPTION)	22
									23
				23.50				SANDSTONE and SILTSTONE. (DRILLERS DESCRIPTION)	24
									25
									26
									27
				28.20				COAL. (DRILLERS DESCRIPTION)	28
				28.70				MUDSTONE and SILTSTONE. (DRILLERS DESCRIPTION)	29
								End of Borehole at 24.000m	
									30

Remarks:



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Borehole No.

BH03

Sheet 4 of 4

Project Name: Dyffryn Cellwen	Project No: 14753	Co-ords:	Hole Type BH
Location: Dyffryn Cellwen		Level:	Scale 1:50
Client:		Dates: 25/06/2018 - 26/07/2018	Logged By ML

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Well	Legend	Stratum Description	
	Depth (m)	Type	Results						
				31.00				MUDSTONE and SILTSTONE. (DRILLERS DESCRIPTION)	31
									32
									33
									34
									35
									36
									37
									38
									39
									40

Remarks:

ANNEX F
Laboratory Soil Chemical Test Results



Certificate of Analysis

Certificate Number 18-12841

05-Jun-18

Client Terra Firma (Wales) Ltd
5 Deryn Court
Wharfdale Road
Pentwyn
Cardiff
CF23 7HB

Our Reference 18-12841

Client Reference (not supplied)

Order No ML

Contract Title Dyffryn Cellwen

Description 6 Soil samples.

Date Received 30-May-18

Date Started 30-May-18

Date Completed 05-Jun-18

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

Adam Fenwick
Contracts Manager



Summary of Chemical Analysis

Matrix Descriptions

Our Ref 18-12841

Client Ref

Contract Title Dyffryn Cellwen

Sample ID	Depth	Lab No	Completed	Matrix Description
TP1	0.2	1345192	05/06/2018	Dark brown gravelly, sandy CLAY
TP2	0.4	1345193	05/06/2018	Dark brown clayey, sandy GRAVEL (sample matrix outside MCERTS scope of accreditation)
TP3	0.3	1345194	05/06/2018	Dark brown gravelly, sandy CLAY
TP4	0.2	1345195	05/06/2018	Dark brown sandy GRAVEL (sample matrix outside MCERTS scope of accreditation)
TP5	0.6	1345196	05/06/2018	Dark brown sandy, GRAVEL (sample matrix outside MCERTS scope of accreditation)
TP6	0.2	1345197	05/06/2018	Dark brown clayey, sandy GRAVEL including odd rootlets (sample matrix outside MCERTS scope of accreditation)

Summary of Chemical Analysis

Soil Samples

Our Ref 18-12841

Client Ref

Contract Title Dyffryn Cellwen

Lab No	1345192	1345193	1345194	1345195	1345196	1345197
Sample ID	TP1	TP2	TP3	TP4	TP5	TP6
Depth	0.20	0.40	0.30	0.20	0.60	0.20
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	24/05/18	24/05/18	24/05/18	24/05/18	24/05/18	24/05/18
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Preparation									
Moisture Content	DETSC 1004	0.1	%	14	5.1	14	6.0	14	3.1
Metals									
Antimony	DETSC 2301*	1	mg/kg	1.9	< 1.0	< 1.0	< 1.0	4.4	< 1.0
Arsenic	DETSC 2301#	0.2	mg/kg	8.9	3.8	5.9	4.5	9.3	9.2
Beryllium	DETSC 2301#	0.2	mg/kg	1.1	< 0.2	0.7	0.2	0.2	0.4
Boron, Water Soluble	DETSC 2123#	0.2	mg/kg	0.8	1.1	0.7	0.9	1.7	0.9
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	0.2	< 0.1	0.1	0.3	0.2
Chromium	DETSC 2301#	0.15	mg/kg	15	4.6	15	5.9	12	11
Chromium III	DETSC 2301*	0.15	mg/kg	15	4.6	15	5.9	12	11
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	30	4.5	24	12	13	21
Lead	DETSC 2301#	0.3	mg/kg	26	6.7	15	8.1	20	18
Manganese	DETSC 2301#	20	mg/kg	1400	310	220	240	290	400
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Molybdenum	DETSC 2301#	0.4	mg/kg	0.6	1.7	0.4	0.9	0.6	0.9
Nickel	DETSC 2301#	1	mg/kg	30	5.4	22	7.0	7.3	15
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	84	29	56	43	60	95
Inorganics									
pH	DETSC 2008#			8.0	9.3	7.8	10.8	11.2	8.4
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cyanide, Complex	DETSC 2130*	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Organic matter	DETSC 2002#	0.1	%	1.6	0.4	1.1	0.7	1.6	1.7
Sulphate as SO ₄ , Total	DETSC 2321#	0.01	%	0.02	0.07	0.02	0.11	0.29	0.04
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6	4.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	44	< 1.4

Summary of Chemical Analysis

Soil Samples

Our Ref 18-12841

Client Ref

Contract Title Dyffryn Cellwen

Lab No	1345192	1345193	1345194	1345195	1345196	1345197
Sample ID	TP1	TP2	TP3	TP4	TP5	TP6
Depth	0.20	0.40	0.30	0.20	0.60	0.20
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	24/05/18	24/05/18	24/05/18	24/05/18	24/05/18	24/05/18
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	48	< 10
TPH Ali/Aro Total	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	48	< 10
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.04	0.14	0.19
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	0.03	0.04
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.12	0.44	0.49
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.09	0.35	0.38
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.06	0.24	0.28
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.12	0.32	0.42
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.11	0.32	0.57
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.04	0.13	0.19
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.05	0.16	0.37
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.05	0.10	0.27
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	0.05	0.09
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.05	0.10	0.29
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	0.74	2.4	3.6
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

Summary of Asbestos Analysis Soil Samples

Our Ref 18-12841

Client Ref

Contract Title Dyffryn Cellwen

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
1345192	TP1 0.20	SOIL	NAD	none	Michael Rutherford
1345193	TP2 0.40	SOIL	NAD	none	Michael Rutherford
1345194	TP3 0.30	SOIL	NAD	none	Michael Rutherford
1345195	TP4 0.20	SOIL	NAD	none	Michael Rutherford
1345196	TP5 0.60	SOIL	NAD	none	Michael Rutherford
1345197	TP6 0.20	SOIL	NAD	none	Michael Rutherford

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 18-12841
 Client Ref
 Contract Dyffryn Cellwen

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1345192	TP1 0.20 SOIL	24/05/18	GJ 250ml, PT 1L		
1345193	TP2 0.40 SOIL	24/05/18	GJ 250ml, PT 1L		
1345194	TP3 0.30 SOIL	24/05/18	GJ 250ml, PT 1L		
1345195	TP4 0.20 SOIL	24/05/18	GJ 250ml, PT 1L		
1345196	TP5 0.60 SOIL	24/05/18	GJ 250ml, PT 1L		
1345197	TP6 0.20 SOIL	24/05/18	GJ 250ml, PT 1L		

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

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 425µm sieve, in accordance with BS1377.

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

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 2002	Organic matter	%	0.1	Air Dried	No	Yes	Yes
DETSC 2003	Loss on ignition	%	0.01	Air Dried	No	Yes	Yes
DETSC 2008	pH	pH Units	1	Air Dried	No	Yes	Yes
DETSC 2024	Sulphide	mg/kg	10	Air Dried	No	Yes	Yes
DETSC 2076	Sulphate Aqueous Extract as SO ₄	mg/l	10	Air Dried	No	Yes	Yes
DETSC 2084	Total Carbon	%	0.5	Air Dried	No	Yes	Yes
DETSC 2084	Total Organic Carbon	%	0.5	Air Dried	No	Yes	Yes
DETSC 2119	Ammoniacal Nitrogen as N	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide free	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide total	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Phenol - Monohydric	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC 2130	Thiocyanate	mg/kg	0.6	Air Dried	No	Yes	Yes
DETSC 2321	Total Sulphate as SO ₄	%	0.01	Air Dried	No	Yes	Yes
DETSC 2325	Mercury	mg/kg	0.05	Air Dried	No	Yes	Yes
DETSC 3049	Sulphur (free)	mg/kg	0.75	Air Dried	No	Yes	Yes
DETSC2123	Boron (water soluble)	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Arsenic	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Barium	mg/kg	1.5	Air Dried	No	Yes	Yes
DETSC2301	Beryllium	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Cadmium Available	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC2301	Cadmium	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC2301	Cobalt	mg/kg	0.7	Air Dried	No	Yes	Yes
DETSC2301	Chromium	mg/kg	0.15	Air Dried	No	Yes	Yes
DETSC2301	Copper	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Manganese	mg/kg	20	Air Dried	No	Yes	Yes
DETSC2301	Molybdenum	mg/kg	0.4	Air Dried	No	Yes	Yes
DETSC2301	Nickel	mg/kg	1	Air Dried	No	Yes	Yes
DETSC2301	Lead	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC2301	Selenium	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC2301	Zinc	mg/kg	1	Air Dried	No	Yes	Yes
DETSC 3072	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C12	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C12-C16	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C16-C21	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C12	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETSC 3072	Aromatic C12-C16	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETSC 3072	Aromatic C16-C21	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETSC 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETS 062	Benzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Ethylbenzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Toluene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	m+p Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	o Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3311	C10-C24 Diesel Range Organics (DRO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	C24-C40 Lube Oil Range Organics (LORO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	EPH (C10-C40)	mg/kg	10	As Received	No	Yes	Yes

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 3303	Acenaphthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Acenaphthylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(b)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(k)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(g,h,i)perylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Dibenzo(a,h)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Indeno(1,2,3-c,d)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Naphthalene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Phenanthrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3401	PCB 28 + PCB 31	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 52	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 101	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 118	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 153	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 138	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 180	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB Total	mg/kg	0.01	As Received	No	Yes	Yes

Method details are shown only for those determinands listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.

ANNEX G
Plasticity Test Results



Laboratory Report



GEO Site & Testing Services Ltd

Contract Number: 39518

Client Ref: **14753**

Report Date: **19-06-2018**

Client PO:

Client **Terrafirma Wales Ltd**
5 Deryn Court
Wharfedale Road
Pentwyn
Cardiff
CF23 7HB

Contract Title: **Dyffryn Cellwen**
For the attention of: **Matthew Lake**

Date Received: **04-06-2018**
Date Commenced: **04-06-2018**
Date Completed: **19-06-2018**

Test Description	Qty
Moisture Content BS 1377 : Part 2 : 3.2 - * UKAS	3
4 Point Liquid & Plastic Limit (LL/PL) BS 1377 Part 2 : 4.3 & 5.3 - * UKAS	3
Disposal of Samples on Project	1

Notes: **Observations and Interpretations are outside the UKAS Accreditation**

* - denotes test included in laboratory scope of accreditation

- denotes test carried out by approved contractor

@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved Signatories:

Alex Wynn (Associate Director) - Ben Sharp (Contracts Manager) - Emma Sharp (Office Manager)

Paul Evans (Quality/Technical Manager) - Richard John (Advanced Testing Manager) - Sean Penn (Administrative/Accounts Assistant)

Wayne Honey (Administrative/Quality Assistant)

GEO Site & Testing Services Ltd

Unit 3-4, Heol Aur, Dafen Ind Estate, Dafen, Llanelli, Carmarthenshire SA14 8QN

Tel: 01554 784040 Fax: 01554 784041 info@gstl.co.uk gstl.co.uk

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX (BS 1377 : Part 2 : 1990 Method 5)

DESCRIPTIONS

Contract Number	39518	
Site Name	Dyffryn Cellwen	

[illegible]

Operators	Checked	18-06-18	Emma Sharp	
RO/MH	Approved	19-06-18	Paul Evans	

DRAWINGS



Job Number:
14753

Job Title:
Dyffryn Cellwyn

Drawing Title:
Site Location

Drawing Number:
02

Scale:
Not To Scale

- Legend:
-  Borehole Location
 -  Trial Pit Location

