

Appendix J Windowless Sampler Borehole Records

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:

Afan Valley Resort

Site Location:

Cymmer

Client:

Wildfox Resorts - Afan Valley

Project No:

8053

Drilling method

Windowless Sampling

Equipment

Terrier Rig

Ground Level:

251.53 mOD

Easting:

284973 m

Northing:

195822 m

Start date:

27/04/2022

End date:

27/04/2022

Backfill date:

27/04/2022

Driller:

SWGT

Logged by:

ESP-AB

Date logged:

27/04/2022

WS01

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Install- ations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.10	D							Grass over, loose, light brown gravelly silty fine to coarse SAND with low cobble content. Gravel is fine to coarse angular to subangular consisting of sandstone. Sandstone cobbles are subangular measuring up to 95mm. (GRADE IV RHONDDA MEMBER).			(0.20)		
0.40	ES										0.20	251.33	
0.60	D							Loose, yellowish brown gravelly silty fine to coarse SAND with low cobble content. Gravel is fine to coarse angular to subangular consisting of sandstone. Sandstone cobbles are angular measuring up to 130mm. (GRADE IV RHONDDA MEMBER).			(0.60)		
			SPT	48 (9,8/48 for 225mm)				End of Borehole at 0.800m			0.80	250.73	
											1		
											2		
											3		

Progress & Standing Water Levels					Water Strikes						Chiselling			Hole Diameter		Casing Diameter		
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
																120		

General Remarks

1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <50cm. Vertical accuracy <100cm.

2. Service plans inspected and trial pit position scanned with CAT & Genny prior to breaking ground.

3. Windowless sample concluded at 0.8m on bedrock.

4. 50mm gas and groundwater monitoring well installed to 0.8m with a response zone with filter gravel surround located between 0.3-0.8m.

5. Groundwater not encountered.

Consulting Engineers | Geologists | Environmental Scientists

Client: Wildfox Resorts - Afan Valley
Project No: 8053

Ground Level:	303.00 mOD
Easting:	285140 m
Northing:	195417 m

WS02

Driller:	SWGT
Logged by:	ESP-AB
Date logged:	27/04/2022

[illegible][illegible]

General Remarks	
-----------------	--

1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <50cm. Vertical accuracy <100cm.
2. Service plans inspected and trial pit position scanned with CAT & Genny prior to breaking ground.
3. Windowless sample concluded at 2.8m on bedrock.
4. 50mm gas and groundwater monitoring well installed to 2.8m with a response zone with filter gravel surround located between 0.3-2.8m.
5. Groundwater not encountered.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:

Afan Valley Resort

Site Location:

Cymmer

Client:

Wildfox Resorts - Afan Valley

Project No:

8053

Drilling method

Windowless Sampling

Equipment

Terrier Rig

Ground Level:

302.79 mOD

Easting:

285401 m

Northing:

195445 m

Start date:

26/04/2022

End date:

26/04/2022

Backfill date:

26/04/2022

Driller:

SWGT

Logged by:

ESP-AB

Date logged:

26/04/2022

WS03

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Legend	Water Strikes/ Standing	Depth		Backfill/ Install- ations
	Type	Class	Type	Result				Description	Depth (Thickness)			mOD		
0.20	ES							Grass over; soft, dark grey clayey SILT with abundant rootlets. Slightly compressible with no water released on compression. Weak to no odour. (ORGANIC RICH TOPSOIL)				(0.10) 0.10	302.69	
0.60	D		SPT	50 (11,13/50 for 170mm)				Loose, yellowish brown slightly gravelly silty clayey fine to coarse SAND. Gravel is fine to coarse angular to subrounded consisting of sandstone and mudstone. (GRADE IV RHONDDA MEMBER).				(0.30) 0.40	302.39	
								Very dense brown mottled dark grey sandy silty fine to coarse angular to subangular sandstone GRAVEL with low cobble content. Sand is fine to coarse. Sandstone cobbles are angular to subangular measuring up to 125mm. (GRADE IV RHONDDA MEMBER).				(0.30) 0.70	302.09	
								End of Borehole at 0.700m				1		
												2		
												3		

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
																120	115	1.00

General Remarks

1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <50cm. Vertical accuracy <100cm.

2. Service plans inspected and trial pit position scanned with CAT & Genny prior to breaking ground.

3. Windowless sample concluded at 0.7m on bedrock.

4. 50mm gas and groundwater monitoring well installed to 0.7m with a response zone with filter gravel surround located between 0.3-0.7m.

5. Groundwater not encountered.

Earth Science Partnership Consulting Engineers Geologists Environmental Scientists					Project Name: Afan Valley Resort		Drilling method Windowless Sampling		WS04									
					Site Location: Cymmer		Equipment Terrier Rig											
Start date: 27/04/2022					Driller: SWGT		Ground Level: 277.70 mOD											
End date: 27/04/2022					Logged by: ESP-AB		Client: Wildfox Resorts - Afan Valley		Easting: 285407 m									
Backfill date: 27/04/2022					Date logged: 27/04/2022		Project No: 8053		Northing: 195806 m									
Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details			Water Strikes/ Standing	Depth		Backfill/ Install- ations				
	Type	Class	Type	Result				Description	Legend	Depth (Thickness)		mOD						
0.30	ES							Loose, light brown gravelly silty SAND. Sand is fine to coarse. Gravel is fine to coarse angular to subangular consisting of sandstone. (GRADE V RHONDDA MEMBER).				(0.10)	277.60					
0.60	D							Dense yellowish brown slightly gravelly silty fine to coarse SAND with low cobble content. Gravel is fine to coarse angular to subangular consisting of sandstone. Sandstone cobbles are angular measuring up to 170mm. (GRADE V RHONDDA MEMBER).				(0.90)						
			SPT	46 (4,4/46 for 200mm)				End of Borehole at 1.000m				1.00	276.70					
												2						
												3						
Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
																120	115	1.00

General Remarks

1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <50cm. Vertical accuracy <100cm.
2. Service plans inspected and trial pit position scanned with CAT & Genny prior to breaking ground.
3. Windowless sample concluded at 1.0m on bedrock.
4. 50mm gas and groundwater monitoring well installed to 1.0m with a response zone with filter gravel surround located between 0.3-1.0m.
5. Groundwater not encountered.

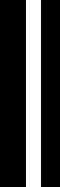
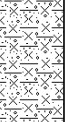
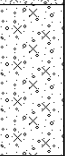
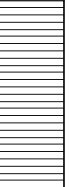
Consulting Engineers | Geologists | Environmental Scientists

Client: Wildfox Resorts - Afan Valley
Project No: 8053

Ground Level:	283.33 mOD
Easting:	285461 m
Northing:	195667 m

WS05

Driller:	SWGT
Logged by:	ESP-AB
Date logged:	26/04/2022

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Installations	
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD		
0.30 0.40	D ES		SPT	6 (1,2/1,2,1,2)				Loose, grey very sandy very silty clayey fine to coarse angular to subangular sandstone GRAVEL with low cobble and boulder content. Sand is fine to coarse. Sandstone cobbles are angular measuring up to 190mm. Sandstone boulders are subangular with low sphericity measuring up to 290mm. (GRADE VI RHONDDA MEMBER).			(0.80)	282.53		
0.90	D							Firm yellowish brown very sandy very silty clayey fine to coarse angular to subrounded sandstone GRAVEL with low cobble content. Sand is fine to coarse. Sandstone cobbles are angular measuring up to 190mm. (GRADE V RHONDDA MEMBER).			0.80			
								Firm brown gravelly sandy CLAY. Sand is fine to coarse. Gravel is fine to coarse angular to subrounded consisting of sandstone. (GRADE V RHONDDA MEMBER).			1.20			
1.60	D			SPT				16 (4,4/4,4,4,4)				(0.70)		281.43
									Medium dense black sandy fine to coarse angular coal GRAVEL. Sand is fine to coarse. (GRADE V RHONDDA MEMBER COAL).			1.90		
2.20	D											2		
2.50	B		SPT	50 (14,16/50 for 190mm)			Light grey mottled white very sandy very silty clayey fine to coarse angular to subangular mudstone GRAVEL. (GRADE IV RHONDDA MEMBER).		2.30	281.03	(0.50)			
							End of Borehole at 2.800m			2.80	280.53	3		

[illegible]

General Remarks	
-----------------	--

1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <50cm. Vertical accuracy <100cm.
2. Service plans inspected and trial pit position scanned with CAT & Genny prior to breaking ground.
3. Windowless sample concluded at 2.8m on bedrock.
4. 50mm gas and groundwater monitoring well installed to 2.8m with a response zone with filter gravel surround located between 0.5-2.8m.
5. Groundwater not encountered.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:

Afan Valley Resort

Site Location:

Cymmer

Client:

Wildfox Resorts - Afan Valley

Project No:

8053

Drilling method

Windowless Sampling

Equipment

Terrier Rig

Ground Level:

292.62 mOD

Easting:

285524 m

Northing:

195527 m

Start date:

26/04/2022

End date:

26/04/2022

Backfill date:

26/04/2022

Driller:

SWGT

Logged by:

ESP-AB

Date logged:

26/04/2022

WS06

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Legend	Water Strikes/ Standing	Depth		Backfill/ Install- ations
	Type	Class	Type	Result				Description	Depth (Thickness)			mOD		
0.40	ES							Grass over; soft, brown sandy clayey SILT. Sand is fine to coarse. (TOPSOIL).				(0.10)	292.52	
0.50	D		SPT	50 (7,7/50 for 160mm)				Dense to very dense dark brown very sandy silty clayey fine to coarse angular to subangular sandstone GRAVEL with medium cobble and low boulder content. Sand is fine to coarse. Sandstone cobbles are angular to subangular measuring up to 170mm. Sandstone boulders are subangular with low sphericity measuring up to 210mm. (GRADE V RHONDDA MEMBER).				(0.60)		
								End of Borehole at 0.700m				0.70	291.92	
												1		
												2		
												3		

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
																120	115	1.00

General Remarks

1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <50cm. Vertical accuracy <100cm.

2. Service plans inspected and trial pit position scanned with CAT & Genny prior to breaking ground.

3. Windowless sample concluded at 0.7m on bedrock.

4. 50mm gas and groundwater monitoring well installed to 0.7m with a response zone with filter gravel surround located between 0.3-0.7m.

5. Groundwater not encountered.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:

Afan Valley Resort

Site Location:

Cymmer

Client:

Wildfox Resorts - Afan Valley

Project No:

8053

Drilling method

Windowless Sampling

Equipment

Terrier Rig

Ground Level:

291.60 mOD

Easting:

285586 m

Northing:

195515 m

Start date:

26/04/2022

End date:

26/04/2022

Backfill date:

26/04/2022

Driller:

SWGT

Logged by:

ESP-AB

Date logged:

26/04/2022

WS07

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Legend	Water Strikes/ Standing	Depth		Backfill/ Install- ations
	Type	Class	Type	Result				Description	Depth (Thickness)			mOD		
0.20	ES							Grass over; soft, grey slightly gravelly clayey SILT with abundant rootlets. Gravel is fine to coarse angular to subangular consisting of sandstone. (TOPSOIL).				(0.30)		
0.40	D							Very stiff to hard brown mottled dark grey sandy gravelly SILT with low cobble content. Sand is fine to coarse. Gravel is fine to coarse angular to subangular consisting of sandstone. Sandstone cobbles are angular to subangular measuring up to 85mm. (GRADE V RHONDDA MEMBER).				0.30	291.30	
			SPT	50 (6,10/50 for 155mm)				End of Borehole at 0.700m				(0.40)		
												0.70	290.90	
												1		
												2		
												3		

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
																120	115	1.00

General Remarks

1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <50cm. Vertical accuracy <100cm.

2. Service plans inspected and trial pit position scanned with CAT & Genny prior to breaking ground.

3. Windowless sample concluded at 0.7m on bedrock.

4. 50mm gas and groundwater monitoring well installed to 0.7m with a response zone with filter gravel surround located between 0.3-0.7m.

5. Groundwater not encountered.

[illegible]

Consulting Engineers | Geologists | Environmental Scientists

Client: Wildfox Resorts - Afan Valley
Project No: 8053

Ground Level:	294.50 mOD
Easting:	285782 m
Northing:	195523 m

WS09

Driller:	SWGT
Logged by:	ESP-AB
Date logged:	27/04/2022

[illegible][illegible]

General Remarks	
-----------------	--

1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <50cm. Vertical accuracy <100cm.
2. Service plans inspected and trial pit position scanned with CAT & Genny prior to breaking ground.
3. Windowless sample concluded at 0.6m on bedrock.
4. 50mm gas and groundwater monitoring well installed to 0.6m with a response zone with filter gravel surround located between 0.3-0.6m.
5. Groundwater not encountered.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:

Afan Valley Resort

Site Location:

Cymmer

Client:

Wildfox Resorts - Afan Valley

Project No:

8053

Drilling method

Windowless Sampling

Equipment

Terrier Rig

Ground Level:

298.81 mOD

Easting:

285955 m

Northing:

195429 m

Start date:

26/04/2022

End date:

26/04/2022

Backfill date:

26/04/2022

Driller:

SWGT

Logged by:

ESP-AB

Date logged:

26/04/2022

WS10

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Install- ations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.10	D							Grass over; soft, dark grey clayey SILT with abundant rootlets. Slightly compressible with no water released on compression. Weak to no odour. (ORGANIC RICH TOPSOIL)			(0.10)	298.71	
0.30	D							Medium dense yellowish brown gravelly very silty clayey fine to coarse SAND. Gravel is fine to coarse angular to subrounded consisting of sandstone. (GRADE VI RHONDDA MEMBER).			(0.70)		
0.50	D												
1.00	ES		SPT	19 (3,4/4,6,4,5)				Medium dense grey very sandy very silty clayey fine to coarse angular to subrounded sandstone GRAVEL. Sand is fine to coarse. (GRADE V RHONDDA MEMBER).			0.80	298.01	
1.50	D							Dense to very dense grey gravelly silty clayey fine to coarse SAND with low cobble content. Gravel is fine to coarse angular to subrounded consisting of sandstone. Sandstone cobbles are angular to subangular measuring up to 75mm. (GRADE IV RHONDDA MEMBER).			1.20	297.61	
			SPT	50 (12,23/50 for 95mm)									
								End of Borehole at 2.000m			2.00	296.81	
											3		

Progress & Standing Water Levels					Water Strikes						Chiselling			Hole Diameter		Casing Diameter		
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
																120	115	1.00

General Remarks

1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <50cm. Vertical accuracy <100cm.

2. Service plans inspected and trial pit position scanned with CAT & Genny prior to breaking ground.

3. Windowless sample concluded at 2.0m on bedrock.

4. 50mm gas and groundwater monitoring well installed to 2.0m with a response zone with filter gravel surround located between 0.5-2.0m.

5. Groundwater not encountered.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:

Afan Valley Resort

Site Location:

Cymmer

Client:

Wildfox Resorts - Afan Valley

Project No:

8053

Drilling method

Windowless Sampling

Equipment

Terrier Rig

Ground Level:

301.84 mOD

Easting:

286049 m

Northing:

195279 m

Start date:

25/04/2022

End date:

25/04/2022

Backfill date:

25/04/2022

Driller:

SWGT

Logged by:

ESP-AB

Date logged:

25/04/2022

WS11

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Legend	Water Strikes/ Standing	Depth		Backfill/ Install- ations
	Type	Class	Type	Result				Description	Thickness			mOD		
0.10	D							Grass over; soft, dark grey clayey SILT with abundant rootlets. Slightly compressible with no water released on compression. No odour. (ORGANIC RICH TOPSOIL)				(0.20)		
0.30	D							Loose, yellowish brown slightly gravelly silty clayey fine to coarse SAND. Gravel is fine to coarse angular to subrounded consisting of sandstone and mudstone. (GRADE VI RHONDDA MEMBER).				(0.25)	301.64	
0.60	D		SPT	31 (6,6/7,6,10,8)				Dense becoming very very dense grey sandy silty clayey fine to coarse angular to subangular sandstone GRAVEL with medium cobble and low boulder content. Sand is fine to coarse. Sandstone cobbles are angular to subangular measuring up to 190mm. Sandstone boulders are subangular with low sphericity measuring up to 240mm. (GRADE V RHONDDA MEMBER).				(0.45)	301.39	
			SPT	50 (9,11/50 for 200mm)				End of Borehole at 1.000m				(0.55)		
												1.00	300.84	
												2		
												3		

Progress & Standing Water Levels					Water Strikes						Chiselling			Hole Diameter		Casing Diameter		
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
																120	115	1.00

General Remarks

1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <50cm. Vertical accuracy <100cm.

2. Service plans inspected and trial pit position scanned with CAT & Genny prior to breaking ground.

3. Windowless sample concluded at 1.0m on bedrock.

4. 50mm gas and groundwater monitoring well installed to 1.0m with a response zone with filter gravel surround located between 0.3-1.0m.

5. Groundwater not encountered.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:

Afan Valley Resort

Site Location:

Cymmer

Client:

Wildfox Resorts - Afan Valley

Project No:

8053

Drilling method

Windowless Sampling

Equipment

Terrier Rig

Ground Level:

306.51 mOD

Easting:

286158 m

Northing:

195292 m

Start date:

25/04/2022

End date:

25/04/2022

Backfill date:

25/04/2022

Driller:

SWGT

Logged by:

ESP-AB

Date logged:

25/04/2022

WS12

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Legend	Water Strikes/ Standing	Depth		Backfill/ Install- ations
	Type	Class	Type	Result				Description	Depth (Thickness)			mOD		
0.10	ES							Grass over; soft, dark grey clayey SILT with abundant rootlets. Slightly compressible with no water released on compression. Weak to no odour. (ORGANIC RICH TOPSOIL)				(0.20)		
0.30	D							Medium dense reddish brown very gravelly silty fine to coarse SAND with low cobble content. Gravel is fine to coarse angular to subangular consisting of sandstone.				0.20	306.31	
0.40	ES							Sandstone cobbles are angular to subangular measuring up to 110mm. (GRADE V RHONDDA MEMBER).				(0.35)		
0.60	ES		SPT	49 (8,13/13,12,12,12)				Dense dark brown sandy siltyfine to coarse angular to subangular sandstone GRAVEL with medium cobble and low boulder content. Sand is fine to coarse. Sandstone cobbles are angular to subangular measuring up to 180mm. (GRADE V RHONDDA MEMBER).				0.55 (0.15)	305.96	
								End of Borehole at 0.700m				0.70	305.81	
												1		
												2		
												3		

Progress & Standing Water Levels					Water Strikes						Chiselling			Hole Diameter		Casing Diameter		
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
																120	115	1.00

General Remarks

1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <50cm. Vertical accuracy <100cm.

2. Service plans inspected and trial pit position scanned with CAT & Genny prior to breaking ground.

3. Windowless sample concluded at 0.7m on bedrock.

4. 50mm gas and groundwater monitoring well installed to 0.7m with a response zone with filter gravel surround located between 0.3-0.7m.

5. Groundwater not encountered.