

Earth Science Partnership
Consulting Engineers | Geologists | Environmental Scientists

Consulting Engineers | Geologists | Environmental Scientists

Start date:	09/05/2022
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Driller: APEX

End date: 13/05/2022

Logged by: ESP

Backfill date: 13/05/2022

Date logged: 13/05/2022

Project Name:

Afan Valley Resort

Site Location:

Cymmer

Client:

Wildfox Resorts - A

Project No:

8053

Drilling method

Rotary cored

Equipment

KLEMM

RECEIVED	

Ground Level: 304.07 mC

Easting: 286352 m

Northing: 195365 m

BH08

Core Details and SPT Data						Strata Details			Water	Depth		Backfill/ Install- ations
Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	SPT-N	Depth	Description	Legend	Strikes/ Standing	Depth (Thickness)	mOD	
					34 (6,7/8,7,7,1 2)		Black to very dark brown clayey SILT with numerous fine roots. (TOPSOIL)			(0.30)	303.77	
						0.5	Orange brown very sandy very gravelly SILT with low to medium cobble content. Gravel is fine to coarse angular to subangular sandstone. Cobbles are angular to subangular sandstone. (GRADE VI RHONDDA MEMBER)		0.30			
						1.0	Loose light greyish brown silty very gravelly fine to coarse SAND with low to medium cobble content. Gravel is fine to coarse angular to subangular sandstone. Cobbles are angular to subangular sandstone. (GRADE VI RHONDDA MEMBER)		0.60			
1.20 - 2.70 (1.50)	100				50 (25 for 75mm/50 for 83mm)	1.5	Very stiff greyish brown slightly sandy gravelly slightly clayey SILT. Gravel is fine to coarse angular to subangular sandstone. (GRADE VI RHONDDA MEMBER)			(1.20)	302.27	
2.70 - 3.40 (0.70)	93				50 (25 for 25mm/50 for 5mm)	2.0	Very dense dark greyish brown with black mottling fine to coarse SAND and GRAVEL. Gravel is medium to coarse angular to subangular sandstone. Moderately weathered. (GRADE IV RHONDDA MEMBER)		1.80			
						2.5	below 2.5m: becoming predominantly GRAVEL.		2.30			
3.40 - 4.20 (0.80)	38	0	0	NR		3.0	Bedrock recovered as: coarse angular strong to very strong sandstone GRAVEL/COBBLES. Moderately weathered. (GRADE IV RHONDDA MEMBER)			(1.10)	300.67	
4.20 - 5.70 (1.50)	20	0	0	NR		3.5			3.40			
						4.0						
5.70 - 7.20 (1.50)	73	47	0	6		4.5				(2.30)	298.37	
						5.0						
						5.5						
7.20 - 8.40 (1.20)	83	50	0	NR		6.0	Strong to very strong medium bedded dark brownish grey medium to coarse SANDSTONE. Bedding fractures dipping 5 - 10° planar, undulating and rough with black and orange brown staining. Subvertical 70° fractures medium spaced undulating rough with black and orange brown staining. Slightly weathered. (GRADE III RHONDDA MEMBER)					
						6.5	between 6.6 - 6.8m: recovered as GRAVEL. between 7.2 - 7.5m: recovered as GRAVEL.					
						7.0	between 7.2 - 8.4m fractures becoming closely to very closely spaced, planar, stepped and undulating, rough with black and orange brown staining.					
8.40 - 9.90 (1.50)	100	90	10	7		7.5						
						8.0						
						8.5						
						9.0	between 8.4 - 8.7 m : recovered as slightly silty very sandy fine to coarse angular GRAVEL. below 8.7m: becoming light brownish grey. between 8.4 - 9.9m: fractures are widely spaced, undulating, rough with a little orange brown staining.					
						9.5						

Progress & Standing Water Levels					Water Strikes										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				Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
09-05-2022	05:00	1.50	1.50	Dry											52.50	78	152	2.70
10-05-2022	08:00	1.50	1.50	Dry														
10-05-2022	05:00	20.50	2.70	Dry														
11-05-2022	08:00	20.50	2.70	Dry														
11-05-2022	05:00	33.40	2.70	Dry														
12-05-2022	08:00	33.40	2.70	28.3														
12-05-2022	05:00	51.00	2.70	36.7														

General Remarks	
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1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <30cm. Vertical accuracy <50cm.
2. Service plans inspected and borehole position scanned with CAT & Genny prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.
3. See separate detailed remarks sheet for further borehole information.

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Cymmer

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Wildfox Resorts - Afan Valley

Project No:

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Equipment

KLEMM

Ground Level:

304.07 mOD

Easting:

286352 m

Northing:

195365 m

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Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	SPT-N	Depth	Description	Legend	Strikes/Standing	Depth (Thickness)	mOD	
20.10 - 20.50 (0.40)	100	0	0	NI		20.5	Moderately weak to medium strong thinly to medium bedded grey SANDSTONE. Bedding fractures dipping 10 - 20° planar, rough and smooth with dark orange staining. Secondary fractures dipping at 30 - 35° very closely to closely spaced planar, rough and smooth with black and orange brown penetrative staining (<5mm). Moderately weathered. (GRADE III RHONDDA MEMBER).			20.50	283.57	
20.50 - 22.00 (1.50)	60	10	0	6		21.0				(1.50)		
				NR		21.5	between 18.6 - 20.1m: containing thin (<1cm) black laminations					
22.00 - 23.50 (1.50)	40	13	13	NI		22.0	between 18.6 - 20.1m fractures are very closely to closely spaced, planar and undulating, rough and smooth with black and orange brown staining.			22.00	282.07	
				1		22.5	at 19.4m: thin (1cm) coal bed					
				NR		23.0	Weak grey thinly laminated MUDSTONE. Bedding fractures dipping 5 - 20° planar and smooth. Secondary fractures dipping 35° closely spaced undulating rough with clay infill up to 200mm. Moderately weathered. (GRADE III RHONDDA MEMBER).			(1.50)		
23.50 - 24.20 (0.70)	57	28	6	NI		23.5				23.50	280.57	
24.20 - 24.50	100	0	0	NR		24.0	Medium strong thinly bedded grey SANDSTONE. Bedding fractures dipping 10 - 20° planar, rough and smooth with dark orange staining. Secondary fractures dipping at 30 - 40° very closely to closely spaced planar, rough and smooth with black and orange brown surface staining. Slightly weathered. (GRADE II RHONDDA MEMBER).			(0.70)		
				NI		24.5	between 22.0 - 22.9m: zone of no recovery			24.20	279.87	
24.50 - 26.00 (1.50)	100	53	51			25.0				(0.40)		
						25.5	Moderately weak grey mottled brown thinly to medium bedded fine SANDSTONE. Bedding fractures dipping 10 - 20° planar rough with dark orange staining. Secondary fractures dipping at 40 - 50° very closely to closely spaced undulating rough with black and orange brown penetrative staining (<5mm). Moderately weathered. (GRADE II RHONDDA MEMBER).			24.60	279.47	
26.00 - 27.50 (1.50)	100	63	56			26.0				(1.40)		
						26.5	between 23.5 and 23.7m depth: brown fine to medium sand infill.					
27.50 - 29.00 (1.50)	100	65	59			27.0	Brown gravelly fine to coarse SAND. Gravel is fine to coarse angular sandstone. Completely weathered. (POSSIBLE BACKFILLED WORKINGS - FIELD VEIN SEAM).			26.00	278.07	
						27.5				(3.00)		
						28.0	Moderately weak to medium strong thinly bedded grey SANDSTONE. Bedding fractures dipping 10 - 20° planar rough with dark orange staining. Secondary fractures dipping at 45 - 50° very closely to closely spaced undulating rough with black and orange brown penetrative staining (<5mm). Moderately weathered. (GRADE III RHONDDA MEMBER).					
29.00 - 30.50 (1.50)	60	22	20			28.5						
						29.0	Moderately strong grey medium bedded grey SANDSTONE. Bedding fractures dipping 10 - 20° stepped rough with dark orange staining. Secondary fractures dipping at 40 - 50° closely spaced undulating rough with black and orange brown penetrative staining (<5mm). Slightly			29.00	275.07	
						29.5				(0.80)		
										29.80	274.27	

Progress & Standing Water Levels					Water Strikes								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		Hole Depth	Hole Diameter	Casing Diameter	Casing Depth	
09-05-2022	05:00	1.50	1.50	Dry									52.50	78	152	2.70	
10-05-2022	08:00	1.50	1.50	Dry													
10-05-2022	05:00	20.50	2.70	Dry													
11-05-2022	08:00	20.50	2.70	Dry													
11-05-2022	05:00	33.40	2.70	Dry													
12-05-2022	08:00	33.40	2.70	28.3													
12-05-2022	05:00	51.00	2.70	36.7													

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Core Details and SPT Data						Strata Details			Water	Depth		Backfill/Installations
Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	SPT-N	Depth	Description	Legend	Strikes/ Standing	Depth (Thickness)	mOD	
							Moderately weak to medium strong thinly laminated dark grey MUDSTONE. Bedding fractures dipping 5 - 10° planar and smooth with dark orange penetrative staining (<5mm) and occasional clay infill (<100mm). Moderately weathered. (GRADE III LLYNFI MEMBER).					
40.70 - 42.20 (1.50)	100	95	91	3		40.5				(10.30)		
						41.0						
42.20 - 43.50 (1.30)	100	62	46	7		41.5						
						42.0						
43.50 - 45.00 (1.50)	100	48	46	18		42.5						
						43.0						
45.00 - 46.50 (1.50)	100	38	28	10		43.5						
						44.0						
46.50 - 48.00 (1.50)	73	48	39	NR		44.5						
						45.0						
48.00 - 49.50 (1.50)	100	28	24	12		45.5						
						46.0						
						46.5	Weak to medium strong thinly laminated dark grey MUDSTONE. Bedding fractures dipping 0 - 5° planar and rough with dark orange penetrative staining (<5mm) and occasional clay infill (<50mm). Moderately weathered locally grading to highly weathered. (GRADE III/IV LLYNFI MEMBER).			46.50	257.57	
						47.0						
						47.5						
						48.0						
						48.5						
						49.0						
						49.5				(6.00)		

Progress & Standing Water Levels					Water Strikes						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				
09-05-2022	05:00	1.50	1.50	Dry											
10-05-2022	08:00	1.50	1.50	Dry											
10-05-2022	05:00	20.50	2.70	Dry											
11-05-2022	08:00	20.50	2.70	Dry											
11-05-2022	05:00	33.40	2.70	Dry											
12-05-2022	08:00	33.40	2.70	28.3											
12-05-2022	05:00	51.00	2.70	36.7											

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Site Location:

Cymmer

Client:

Wildfox Resorts - Afan Valley

Project No:

8053

Drilling method

Rotary cored

Equipment

KLEMM

Ground Level:

298.71 mOD

Easting:

285801 m

Northing:

195502 m

Start date:

27/05/2022

End date:

07/06/2022

Backfill date:

09/06/2022

Driller:

APEX

Logged by:

ESP

Date logged:

09/06/2022

BH09

Core Details and SPT Data						Strata Details			Water	Depth		Backfill/Installations
Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	SPT-N	Depth	Description	Legend	Strikes/Standing	Depth (Thickness)	mOD	
					50 (8,9/50 for 105mm)		Dark brown very sandy slightly clayey SILT. (TOPSOIL)			(0.05)	298.66	
						0.5	Orange brown slightly sandy very gravelly SILT. Gravel is fine to coarse angular to subangular sandstone. (GRADE VI RHONDDA MEMBER)			0.05	298.46	
						1.0	Brown silty fine to coarse SAND and GRAVEL with low cobble content. Gravel is fine to coarse angular to subangular sandstone. (GRADE VI RHONDDA MEMBER)			(0.20)		
						1.5	Strong to very strong thinly bedded light brownish grey medium grained SANDSTONE. Bedding fractures dipping at 5 - 20° planar smooth and rough fractures with a orange brown and black (occasionally red-brown) staining. Subvertical fractures dipping 60° and 80° closely spaced planar undulating and rough with orange brown surface staining. Moderately to slightly weathered. (GRADE III/II RHONDDA MEMBER)			0.25		
						2.0				(0.85)		
						2.5				1.10	297.61	
						3.0						
						3.5						
						4.0						
						4.5						
1.70 - 3.20 (1.50)	47	20	0	NI		5.0						
				NR		5.5						
						6.0						
3.20 - 4.70 (1.50)	100	87	0	>15		6.5						
						7.0						
4.70 - 5.30 (0.60)	83	42	0	NI		7.5						
						8.0						
5.30 - 6.20 (0.90)	100	11	0	NI		8.5						
				NR		9.0						
6.20 - 7.70 (1.50)	83	40	27	12		9.5						
				NI								
7.70 - 8.70 (1.00)	100	10	0	NI			between 8.05 - 8.6m: highly fractured with numerous thin black laminations (possible coal)					
							below 8.7m: no subhorizontal factures					
8.70 - 9.20 (0.50)	70	0	0	NI								
9.20 - 9.70 (0.50)	100	0	0				Bedrock recovered as; very dark brown to black slightly silty fine to coarse SAND and GRAVEL. Gravel is fine angular to subangular sandstone.			9.35	289.36	
9.70 - 10.20	100	70	0							(0.25)	289.11	
										9.60		

Progress & Standing Water Levels					Water Strikes								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		Hole Depth	Hole Diameter	Casing Diameter	Casing Depth	
27-05-2022	05:00	7.70	1.70	Dry	06/06/2022	12:00	44.00	1.70	20.00	42.00			53.70	78	152	1.70	
30-05-2022	08:00	7.70	1.70	Dry													
30-05-2022	05:00	22.20	1.70	Dry													
31-05-2022	08:00	22.20	1.70	Dry													
31-05-2022	05:00	31.70	1.70	Dry													
01-06-2022	08:00	31.70	1.70	Dry													
01-06-2022	05:00	38.70	1.70	Dry													

General Remarks

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KLEMM

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298.71 mOD

Easting:

285801 m

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09/06/2022

Driller:

APEX

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ESP

Date logged:

09/06/2022

BH09

Core Details and SPT Data

Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	SPT-N				
20.70 - 22.20 (1.50)	93	60	27	10					
				NR					
				NI					
				4					
22.20 - 22.70 (0.50)	70	70	70	NR					
3									
NR									
NI									
22.70 - 24.20 (1.50)	100	80	57	11					
				24.20 - 25.00 (0.80)		87	44	25	NI
									NR
									NI
25.00 - 25.70 (0.70)	100	79	79						5
				25.70 - 27.20 (1.50)		100	57	37	4
									NI
									30
27.20 - 28.70 (1.50)	100	33	0		NI				
				28.70 - 30.20 (1.50)	100	57	7	13	
								NI	
								16	

Strata Details

Depth	Description	Legend		
20.5	Strong to very strong medium bedded very dark grey fine grained SANDSTONE. Bedding fractures dipping 0 - 10° planar smooth and rough with orange surface staining. Secondary fractures dipping 30 - 35° closely spaced planar smooth and rough with orange brown staining. Subvertical fractures dipping 80° closely to medium spaced undulating smooth and rough with orange/brown and black staining. Slightly weathered. (GRADE II RHONDDA MEMBER)			
21.0				
21.5				
22.0				
22.5				
23.0				
23.5			below 23m depth: medium grained	
24.0			between 22.95 - 23.15 and 24.1 - 24.2m: with numerous thin (<1cm) black laminations	
24.5				
25.0			between 24.6 - 24.75m: conglomerate bed	
25.5				
26.0				
26.5			Medium strong to strong thinly bedded dark brownish grey SILTSTONE. Bedding fractures dipping 0 - 10° planar smooth and rough with orange surface staining. Subvertical fractures dipping 70 - 80° closely to medium spaced undulating smooth and rough with orange/brown and black staining. Slightly weathered. (GRADE III RHONDDA MEMBER)	
27.0				
27.5				
28.0				
28.5	Strong to very strong medium bedded dark grey fine to medium SANDSTONE. Bedding fractures dipping 0 - 10° planar smooth and rough with orange surface staining. Subvertical fractures dipping 80° closely to medium spaced undulating smooth and rough with reddish brown and black staining. Slightly weathered. (GRADE II RHONDDA MEMBER)			
29.0				
29.5				
29.5			between 28.9 - 29.9m: with occasional thin (<1cm) black laminations	

Water

Strikes/ Standing

Depth

Depth (Thickness)	mOD
(6.65)	
26.45	272.26
(1.55)	
28.00	270.71

Backfill/
Install-
ations

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Progress & Standing Water Levels

Date	Time	Hole Depth	Casing Depth	Water Depth
27-05-2022	05:00	7.70	1.70	Dry
30-05-2022	08:00	7.70	1.70	Dry
30-05-2022	05:00	22.20	1.70	Dry
31-05-2022	08:00	22.20	1.70	Dry
31-05-2022	05:00	31.70	1.70	Dry
01-06-2022	08:00	31.70	1.70	Dry
01-06-2022	05:00	38.70	1.70	Dry

Water Strikes

Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed
06/06/2022	12:00	44.00	1.70	20.00	42.00	

Hole Diameter

Hole Depth	Hole Diameter
53.70	78

Casing Diameter

Casing Diameter	Casing Depth
152	1.70

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Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	SPT-N	Depth	Description	Legend	Strikes/ Standing	Depth (Thickness)	mOD	
				10		50.5	Strong thinly laminated very dark grey MUDSTONE. Bedding fractures dipping at 10-20° planar and undulating rough and smooth. Slightly weathered. (GRADE II LLYNFI MEMBER)			(1.25)		
				NI		51.0	between 51 - 51.1m: recovered as gravel			51.10	247.61	
50.70 - 52.20 (1.50)	80	70	50	4		51.5	Strong to very strong medium bedded dark grey fine SANDSTONE. Bedding fractures dipping 10° planar smooth and rough with orange surface staining. Secondary fractures dipping 30° closely spaced planar rough with orange brown staining. Subvertical fractures dipping 80° closely spaced undulating smooth and rough with orange/brown and black staining. Slightly weathered. (GRADE II LLYNFI MEMBER)			(2.60)		
				NR		52.0						
52.20 - 53.70 (1.50)	73	53	0	>15		52.5						
				NR		53.0	between 52.65 - 53.7m: highly fractured					
						53.5				53.70	245.01	
						54.0	End of Borehole at 53.700m					
						54.5						
						55.0						
						55.5						
						56.0						
						56.5						
						57.0						
						57.5						
						58.0						
						58.5						
						59.0						
						59.5						

Progress & Standing Water Levels					Water Strikes							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	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
27-05-2022	05:00	7.70	1.70	Dry	06/06/2022	12:00	44.00	1.70	20.00	42.00		53.70	78	152	1.70
30-05-2022	08:00	7.70	1.70	Dry											
30-05-2022	05:00	22.20	1.70	Dry											
31-05-2022	08:00	22.20	1.70	Dry											
31-05-2022	05:00	31.70	1.70	Dry											
01-06-2022	08:00	31.70	1.70	Dry											
01-06-2022	05:00	38.70	1.70	Dry											

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Project No:
8053

Drilling method
Rotary open hole

Equipment
KLEMM

Ground Level: 299.22 mOD

Easting: 285797 m

Northing: 195500 m

BH09a

Start date: 09/06/2022

Driller: APEX

End date: 10/06/2022

Logged by: ESP

Backfill date: 13/06/2022

Date logged: 11/06/2022

Core Details and SPT Data						Strata Details			Water	Depth		Backfill/ Install- ations
Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	SPT-N	Depth	Description	Legend	Strikes/ Standing	Depth (Thickness)	mOD	
							Dark brown very sandy slightly clayey SILT. (TOPSOIL)			(0.05)	299.17	
						0.5	Orange brown sandy very gravelly SILT. Gravel is fine to coarse angular to subangular sandstone. (GRADE VI RHONDDA MEMBER)			0.05	298.92	
						1.0	Brown silty fine to coarse SAND and GRAVEL with low cobble content. Gravel is fine to coarse angular to subangular sandstone. (GRADE VI RHONDDA MEMBER)			0.25		
						1.5	Fractured SANDSTONE. (PROBABLE RHONDDA MEMBER)			0.30		
						2.0				(0.70)	298.22	
						2.5						
						3.0						
						3.5						
						4.0						
						4.5						
						5.0						
						5.5				(8.50)		
						6.0						
						6.5						
						7.0						
						7.5						
						8.0						
						8.5						
						9.0						
						9.5	SANDSTONE. (PROBABLE RHONDDA MEMBER)			9.50	289.72	

Progress & Standing Water Levels					Water Strikes							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	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
09-06-2022	05:00	1.00			10/06/2022	12:00	44.00	2.50	20.00	40.00		50.00	110	152	2.50
10-06-2022	08:00	1.00													
10-06-2022	12:00	48.00	2.50	Dry											
10-06-2022	05:00	48.00	2.50	40											
13-06-2022	08:00	37.00	2.50	37											

General Remarks

1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <50cm. Vertical accuracy <55cm.

2. Service plans inspected and borehole position scanned with CAT & Genny prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. See separate detailed remarks sheet for further borehole information.

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
Rotary open hole

Equipment
KLEMM

Ground Level: 299.22 mOD

Easting: 285797 m

Northing: 195500 m

BH09a

Start date: 09/06/2022

End date: 10/06/2022

Backfill date: 13/06/2022

Driller: APEX

Logged by: ESP

Date logged: 11/06/2022

Core Details and SPT Data						Strata Details			Water	Depth		Backfill/ Install- ations
Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	SPT-N	Depth	Description	Legend	Strikes/ Standing	Depth (Thickness)	mOD	
							SANDSTONE. (PROBABLE RHONNDA MEMBER)					
						10.5						
						11.0						
						11.5						
						12.0						
						12.5						
						13.0						
						13.5						
						14.0						
						14.5						
						15.0						
						15.5						
						16.0						
						16.5						
						17.0						
						17.5				(15.70)		
						18.0						
						18.5						
						19.0						
						19.5						

Progress & Standing Water Levels					Water Strikes							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	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
09-06-2022	05:00	1.00			10/06/2022	12:00	44.00	2.50	20.00	40.00		50.00	110	152	2.50
10-06-2022	08:00	1.00		Dry											
10-06-2022	12:00	48.00	2.50												
10-06-2022	05:00	48.00	2.50	40											
13-06-2022	08:00	37.00	2.50	37											

General Remarks

1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <50cm. Vertical accuracy <55cm.

2. Service plans inspected and borehole position scanned with CAT & Genny prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

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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
Rotary open hole

Equipment
KLEMM

Ground Level: 299.22 mOD

Easting: 285797 m

Northing: 195500 m

BH09a

Start date: 09/06/2022

Driller: APEX

End date: 10/06/2022

Logged by: ESP

Backfill date: 13/06/2022

Date logged: 11/06/2022

Core Details and SPT Data						Strata Details			Water	Depth		Backfill/ Install- ations
Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	SPT-N	Depth	Description	Legend	Strikes/ Standing	Depth (Thickness)	mOD	
						20.5	SANDSTONE. (PROBABLE RHONNDA MEMBER)					
						21.0						
						21.5						
						22.0						
						22.5						
						23.0						
						23.5						
						24.0						
						24.5						
						25.0						
						25.5	SANDSTONE with mudstone. (PROBABLE RHONNDA MEMBER)			25.20	274.02	
						26.0				(1.80)		
						26.5						
						27.0	SANDSTONE. (PROBABLE RHONNDA MEMBER)			27.00	272.22	
						27.5				(0.60)		
						28.0	MUDSTONE. (PROBABLE RHONNDA MEMBER)			27.60	271.62	
						28.5				(0.70)		
						29.0	SANDSTONE. (PROBABLE RHONNDA MEMBER)			28.30	270.92	
						29.5				(1.20)		
						29.90	MUDSTONE. (PROBABLE RHONNDA MEMBER)			29.50	269.72	
										(0.40)		
										29.90	269.32	

Progress & Standing Water Levels					Water Strikes							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	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
09-06-2022	05:00	1.00			10/06/2022	12:00	44.00	2.50	20.00	40.00		50.00	110	152	2.50
10-06-2022	08:00	1.00													
10-06-2022	12:00	48.00	2.50	Dry											
10-06-2022	05:00	48.00	2.50	40											
13-06-2022	08:00	37.00	2.50	37											

General Remarks

1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <50cm. Vertical accuracy <55cm.

2. Service plans inspected and borehole position scanned with CAT & Genny prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. See separate detailed remarks sheet for further borehole information.

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

Rotary open hole

Equipment

KLEMM

Ground Level:

299.22 mOD

Easting:

285797 m

Northing:

195500 m

Start date:

09/06/2022

End date:

10/06/2022

Backfill date:

13/06/2022

Driller:

APEX

Logged by:

ESP

Date logged:

11/06/2022

BH09a

Core Details and SPT Data						Strata Details			Water	Depth		Backfill/Installations
Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	SPT-N	Depth	Description	Legend	Strikes/Standing	Depth (Thickness)	mOD	
						30.5	SANDSTONE. (PROBABLE RHONNDA MEMBER)			(0.70)		
						31.0	MUDSTONE. (PROBABLE RHONNDA MEMBER)			30.60	268.62	
						31.5				(1.60)		
						32.0						
						32.5	SANDSTONE with mudstone. (PROBABLE RHONNDA MEMBER)			32.20	267.02	
						33.0						
						33.5				(3.20)		
						34.0						
						34.5						
						35.0						
						35.5	(PROBABLE BACKFILLED MINE WORKINGS - POSSIBLE FIELD VEIN)			35.40	263.82	
						36.0	COAL (POSSIBLE FIELD VEIN)			35.90	263.32	
						36.5	SANDSTONE with mudstone. (POSSIBLE LLYNFI MEMBER)			36.20	263.02	
						37.0						
						37.5						
						38.0						
						38.5						
						39.0						
						39.5						

Progress & Standing Water Levels					Water Strikes							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	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
09-06-2022	05:00	1.00			10/06/2022	12:00	44.00	2.50	20.00	40.00		50.00	110	152	2.50
10-06-2022	08:00	1.00													
10-06-2022	12:00	48.00	2.50	Dry											
10-06-2022	05:00	48.00	2.50	40											
13-06-2022	08:00	37.00	2.50	37											

General Remarks

1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <50cm. Vertical accuracy <55cm.

2. Service plans inspected and borehole position scanned with CAT & Genny prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. See separate detailed remarks sheet for further borehole information.

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

Rotary open hole

Equipment

KLEMM

Ground Level:

299.22 mOD

Easting:

285797 m

Northing:

195500 m

Start date:

09/06/2022

End date:

10/06/2022

Backfill date:

13/06/2022

Driller:

APEX

Logged by:

ESP

Date logged:

11/06/2022

BH09a

Core Details and SPT Data						Strata Details			Water	Depth		Backfill/Installations
Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	SPT-N	Depth	Description	Legend	Strikes/Standing	Depth (Thickness)	mOD	
						40.5	SANDSTONE with mudstone. (POSSIBLE LLYNFI MEMBER)					
						41.0						
						41.5						
						42.0						
						42.5						
						43.0						
						43.5						
						44.0						
						44.5						
						45.0						
						45.5						
						46.0						
						46.5						
						47.0						
						47.5						
						48.0	MUDSTONE. (PROBABLE LLYNFI MEMBER)					
						48.5						
						49.0	Soft drill. No returns. (PROBABLE BACKFILLED WORKINGS - POSSIBLE WERNPISTYLL RIDER SEAM)					
						49.5						

Progress & Standing Water Levels					Water Strikes							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	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
09-06-2022	05:00	1.00			10/06/2022	12:00	44.00	2.50	20.00	40.00		50.00	110	152	2.50
10-06-2022	08:00	1.00													
10-06-2022	12:00	48.00	2.50	Dry											
10-06-2022	05:00	48.00	2.50	40											
13-06-2022	08:00	37.00	2.50	37											

General Remarks

1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <50cm. Vertical accuracy <55cm.

2. Service plans inspected and borehole position scanned with CAT & Genny prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. See separate detailed remarks sheet for further borehole information.

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
Rotary open hole

Equipment
KLEMM

Ground Level: 299.22 mOD

Easting: 285797 m

Northing: 195500 m

BH09a

Start date: 09/06/2022

Driller: APEX

End date: 10/06/2022

Logged by: ESP

Backfill date: 13/06/2022

Date logged: 11/06/2022

Core Details and SPT Data						Strata Details			Water	Depth		Backfill/ Install- ations
Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	SPT-N	Depth	Description	Legend	Strikes/ Standing	Depth (Thickness)	mOD	
							End of Borehole at 50.000m			50.00	249.22	
						50.5						
						51.0						
						51.5						
						52.0						
						52.5						
						53.0						
						53.5						
						54.0						
						54.5						
						55.0						
						55.5						
						56.0						
						56.5						
						57.0						
						57.5						
						58.0						
						58.5						
						59.0						
						59.5						

Progress & Standing Water Levels					Water Strikes										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				Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
09-06-2022	05:00	1.00			10/06/2022	12:00	44.00	2.50	20.00	40.00					50.00	110	152	2.50
10-06-2022	08:00	1.00		Dry														
10-06-2022	12:00	48.00	2.50															
10-06-2022	05:00	48.00	2.50	40														
13-06-2022	08:00	37.00	2.50	37														

General Remarks

1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <50cm. Vertical accuracy <55cm.

2. Service plans inspected and borehole position scanned with CAT & Genny prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. See separate detailed remarks sheet for further borehole information.

BH10

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 Rotary cored Equipment KLEMM Ground Level: 274.08 mOD Easting: 285825 m Northing: 195609 m		BH10									
Start date: 06/06/2022		Driller: APEX																	
End date: 08/06/2022		Logged by: ESP																	
Backfill date: 09/06/2022		Date logged: 09/06/2022																	
Core Details and SPT Data						Strata Details						Water		Depth		Backfill/Installations			
Depth (Length)		TCR (%)	SCR (%)	RQD (%)	FI	SPT-N	Depth	Description			Legend	Strikes/ Standing	Depth (Thickness)	mOD					
9.40 - 10.90 (1.50)		100	31	20	12		10.5	Strong thinly to medium bedded dark grey SANDSTONE. Bedding fractures dipping 5° planar rough with orange staining. Secondary fractures dipping 45° planar rough. Vertical fractures dipping 85 - 90° medium spaced undulating rough smooth with orange staining. Slightly weathered. (GRADE II RHONDDA MEMBER)					10.90	263.18					
10.90 - 12.40 (1.50)		33	0	0	NR		11.0												
12.40 - 13.90 (1.50)		93	27	27	NI		11.5	Strong thinly bedded dark grey SANDSTONE. Bedding fractures dipping 10° planar rough with orange staining and rare black sand infill <10mm. Vertical fractures dipping 80 - 90° closely spaced undulating rough to smooth with orange staining. Slightly weathered. (GRADE II RHONDDA MEMBER)					(4.50)						
					5		12.0												
					NI		12.5	between 10.9 and 12.4m: loss of flush due to back pressure recorded.											
					NR		13.0												
							13.5												
					NI		14.0												
13.90 - 15.40 (1.50)		80	9	0	10		14.5												
					NR		15.0												
							15.5	Strong thinly bedded dark grey SANDSTONE. Bedding fractures dipping 5° planar rough with orange staining. Secondary fractures dipping 45° planar rough with rare staining on fracture surface. Subvertical fractures dipping 80 - 85° closely spaced undulating rough to smooth with orange staining and rare silty fine gravel infill. Slightly weathered. (GRADE II RHONDDA MEMBER)					15.40	258.68					
15.40 - 16.90 (1.50)		53	0	0	12		16.0						(1.50)						
					NR		16.5												
							17.0	Strong medium bedded dark grey SANDSTONE with very closely spaced mudstone laminae ranging in thickness from >1mm to 2mm. Bedding fractures dipping 10° planar rough with minor orange surface staining. Secondary fractures dipping 45° undulating smooth with rare surface staining and rare silt infill. Subvertical fractures dipping 80 - 85° closely to medium spaced undulating rough to smooth with orange staining and rare silty fine gravel infill. Slightly weathered. (GRADE II RHONDDA MEMBER)					16.90	257.18					
16.90 - 18.40 (1.50)		93	66	66	6		17.5												
					NI		18.0												
					NR		18.5												
					16		19.0						(3.60)						
					NI		19.5												
18.40 - 19.90 (1.50)		80	20	7	17														
					NI														
					NR														
Progress & Standing Water Levels						Water Strikes									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				Hole Depth	Hole Diameter	Casing Diameter	Casing Depth	
06-06-2022	05:00	12.40	1.40	Dry											35.70	78	152	1.40	
07-06-2022	08:00	12.40	1.40	Dry															
07-06-2022	05:00	25.90	1.40	Dry															
08-06-2022	08:00	25.90	1.40	Dry															
08-06-2022	05:00	35.70	1.40	Dry															
09-06-2022	08:00	35.70	1.40	Dry															
General Remarks																			
1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <80cm. Vertical accuracy <150cm.																			
2. Service plans inspected and borehole position scanned with CAT & Genny prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.																			
3. See separate detailed remarks sheet for further borehole information.																			

BH10

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

Rotary cored

Equipment

KLEMM

Ground Level:

274.08 mOD

Easting:

285825 m

Northing:

195609 m

BH10

Start date:

06/06/2022

End date:

08/06/2022

Backfill date:

09/06/2022

Driller:

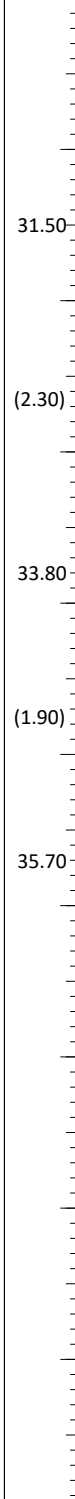
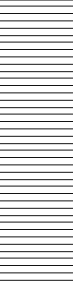
APEX

Logged by:

ESP

Date logged:

09/06/2022

Core Details and SPT Data					Strata Details			Water	Depth		Backfill/ Install- ations			
Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	SPT-N	Depth	Description	Legend	Strikes/ Standing	Depth (Thickness)	mOD			
29.70 - 31.20 (1.50)	93	18	15	15		30.5	Strong thinly to medium bedded dark grey SANDSTONE. Bedding fractures dipping 10°-15° planar rough with orange surface staining and slight silt infill. Secondary fractures dipping 50° planar rough with rare surface staining .							
				31.0		Subvertical fractures dipping 80 - 85° fractures medium spaced undulating smooth with orange staining. Slightly weathered. (GRADE II RHONDDA MEMBER)								
31.20 - 32.70 (1.50)	0	0	0	NI		31.5	Soft dark grey to black gravelly sandy CLAY. Sand is fine to coarse, gravel is fine angular consisting of coal. (POSSIBLE BACKFILLED WORKINGS - WERNPISTYLL RIDER COAL SEAM)						31.50	242.58
				32.0										
				NR		32.5		(2.30)						
				33.0										
32.70 - 34.20 (1.50)	33	13	8	NI		33.5								
				NR		34.0	Strong thickly bedded grey MUDSTONE. Bedding fractures dipping 15° undulating rough with grey clayey gravel infill (<10mm). Secondary fractures dipping 45° planar rough with slight black staining. Moderately weathered. (GRADE III LLYNFI MEMBER BEDROCK)						33.80	240.28
						34.5								
						35.0		(1.90)						
34.20 - 35.70 (1.50)	93	73	69	5		35.5								
						36.0	End of Borehole at 35.700m	35.70					238.38	
						36.5								
						37.0								
						37.5								
						38.0								
						38.5								
						39.0								
						39.5								

Progress & Standing Water Levels					Water Strikes										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				Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
06-06-2022	05:00	12.40	1.40	Dry											35.70	78	152	1.40
07-06-2022	08:00	12.40	1.40	Dry														
07-06-2022	05:00	25.90	1.40	Dry														
08-06-2022	08:00	25.90	1.40	Dry														
08-06-2022	05:00	35.70	1.40	Dry														
09-06-2022	08:00	35.70	1.40	Dry														

General Remarks

1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <80cm. Vertical accuracy <150cm.

2. Service plans inspected and borehole position scanned with CAT & Genny prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. See separate detailed remarks sheet for further borehole information.

Consulting Engineers | Geologists | Environmental Scientists

Afan Valley Resort

Cymmer

Wildfox Resorts Afan Valley

8053

Rotary cored

KLEMM

Fasting: 285986 m

Fasting: 285986 m

Northings: 195508 m

Driller: APEX

Logged by: ESP

Date logged: 10/06/2022

BH11

Core Details and SPT Data						Strata Details			Water	Depth		Backfill/ Installations		
Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	SPT-N	Depth	Description	Legend	Strikes/ Standing	Depth (Thickness)	mOD			
				NI	50 (7,14/50 for 195mm)		Soft, black organic sandy SILT (ORGANIC RICH TOPSOIL)			(0.10)	290.81			
						0.5	Brown mottled orange gravelly sandy CLAY. Sand is fine to coarse, gravel is fine to coarse angular and subangular sandstone. (GRADE VI RHONDDA MEMBER)		0.10	290.41				
						1.0	Bedrock recovered as; coarse subangular grey medium strong sandstone GRAVEL. (GRADE VI RHONDDA MEMBER)		0.40	290.41				
2.00 - 3.50 (1.50)	87	13	0	NI		1.5				(1.50)				
						2.0	Medium strong thinly bedded grey SANDSTONE. Primary fractures dipping 50° planar rough with penetrative (5mm) orange staining. Subvertical fractures dipping 85° closely spaced planar rough surface with surface orange staining. Moderately weathered. (GRADE III RHONDDA MEMBER)		2.00	288.91				
						2.5								
3.50 - 5.00 (1.50)	93	17	10	9		3.0								
						3.5							(3.00)	
						4.0								
5.00 - 6.50 (1.50)	100	53	21	19		4.5								
						5.0	Medium strong grey thinly bedded SANDSTONE. Bedding fractures dipping 10° planar rough with orange staining. Vertical fractures dipping 85 - 90° closely spaced planar rough with orange staining. Moderately weathered. (GRADE III RHONDDA MEMBER)		5.00	285.91				
						5.5							(0.50)	285.41
6.50 - 7.80 (1.30)	73	43	25	15		6.0	Medium strong thinly bedded dark grey SANDSTONE with 1 - 3mm mudstone laminae. Bedding fractures dipping 10° planar rough with orange surface staining. Subvertical fractures dipping 75° closely spaced planar rough with orange staining. Slightly weathered. (GRADE II RHONDDA MEMBER)			(1.35)				
						6.5							6.85	284.06
						7.0							(1.15)	
7.80 - 8.30 (0.50)	100	19	0	NI		7.5	Strong medium bedded grey SANDSTONE. Bedding fractures dipping 10° planar rough with orange staining. Secondary fractures dipping 35° planar rough with orange staining. Subvertical fractures dipping 70° medium spaced planar rough with orange staining. Slightly weathered. (GRADE II RHONDDA MEMBER)			8.00	282.91			
						8.0							(0.40)	
						8.5							8.40	282.51
8.30 - 9.60 (1.30)	96	27	19	10		9.0	Medium strong dark grey thinly bedded SANDSTONE with 1 - 3mm undulating mudstone laminae. Bedding fractures dipping 10° planar rough with orange staining. Secondary fractures dipping 35 - 55° planar smooth. Slightly weathered. (GRADE II RHONDDA MEMBER)			(0.10)	282.41			
						9.5							8.50	
													(1.10)	
9.60 - 10.10 (0.50)	60	0	0	NI			Bedrock recovered as; coarse subangular grey medium strong sandstone GRAVEL with sandy silt			9.60	281.31			
													(0.50)	

[illegible]

General Remarks	
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1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <30cm. Vertical accuracy <50cm.
2. Service plans inspected and borehole position scanned with CAT & Genny prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.
3. See separate detailed remarks sheet for further borehole information.

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

Rotary cored

Equipment

KLEMM

Ground Level:

290.91 mOD

Easting:

285986 m

Northing:

195508 m

Start date:

06/06/2022

End date:

10/06/2022

Backfill date:

10/06/2022

Driller:

APEX

Logged by:

ESP

Date logged:

10/06/2022

BH11

Core Details and SPT Data

Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	SPT-N
10.10 - 10.60 (0.50)	90	20	20	NR	
				30	
				NI	
				25	
10.60 - 12.10 (1.50)	93	12	8	24	
				NI	
12.10 - 13.40 (1.30)	92	28	25	12	
				NI	

Strata Details

Depth	Description	Legend
10.5	Bedrock recovered as; coarse subangular grey medium strong sandstone GRAVEL with sandy silt matrix. Highly weathered. (GRADE IV RHONDDA MEMBER)	
11.0	Medium strong medium bedded grey SANDSTONE. Bedding fractures dipping 10° undulating rough with slight orange surface staining. Subvertical fractures dipping 80° closely spaced planar rough with penetrative orange staining (<10mm). Moderately weathered. (GRADE III RHONDDA MEMBER)	
12.0	Bedrock recovered as; coarse subangular grey medium strong sandstone GRAVEL with sandy silt matrix. Highly weathered. (GRADE IV RHONDDA MEMBER)	
12.5	Medium strong medium bedded dark grey SANDSTONE with 1 - 3mm subhorizontal mudstone laminae. Bedding fractures dipping 10° undulating rough with orange surface staining. Secondary fractures dipping 45° planar smooth with slight orange staining. Moderately weathered. (GRADE III RHONDDA MEMBER)	
13.0	Medium strong grey medium bedded SANDSTONE. Bedding fractures dipping 15° planar rough with orange staining. Secondary fractures dipping 45° planar rough with orange staining. Subvertical fractures dipping 85° closely spaced planar rough with orange staining (GRADE II RHONDDA MEMBER)	
13.5	End of Borehole at 13.400m	
15.0		
15.5		
16.0		
16.5		
17.0		
17.5		
18.0		
18.5		
19.0		
19.5		

Water

Strikes/ Standing

Depth

Depth (Thickness)	mOD
10.10	280.81
(2.00)	
12.10	278.81
(1.30)	
13.40	277.51

Backfill/ Install- ations

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Progress & Standing Water Levels

Date	Time	Hole Depth	Casing Depth	Water Depth
26-05-2022	05:00	1.20	1.20	Dry
27-05-2022	08:00	1.20	1.20	Dry
28-05-2022	05:00	6.50	1.20	Dry
30-05-2022	08:00	6.50	1.20	Dry
30-05-2022	05:00	13.40	1.20	Dry

Water Strikes

Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed

Hole Diameter

Hole Depth	Hole Diameter
13.40	78

Casing Diameter

Casing Diameter	Casing Depth
152	1.20

General Remarks

1. Coordinates and ground levels obtained using Geode GNS2 - Horizontal accuracy <30cm. Vertical accuracy <50cm.

2. Service plans inspected and borehole position scanned with CAT & Genny prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. See separate detailed remarks sheet for further borehole information.

Afan Valley Resort

Continued General remarks for Boreholes

The numeration continues from the notes on the individual borehole logs:

BH01

3. Dual gas and groundwater monitoring well installed on completion. 50mm monitoring well installed with a response zone and gravel filter surround between 9.0 and 21.0m depth. 25mm monitoring well installed with a response zone and gravel filter surround between 1.0 and 4.0m depth. Borehole backfilled with bentonite between 30.60 to 21.0m. Gas tap and upright lockable cover installed on completion.
4. Gas monitoring indicated levels of hazardous ground gas below detection levels.
5. Windowless sampling undertaken from base of hand pit to refusal at 2.9m, whereupon borehole advanced with rotary coring to base at 30.6m.
6. SPT Hammer Ref. D112. Energy Ratio E_r = 60%.
7. Comments on flush loss provided in log where applicable.

BH02

3. 50mm gas and groundwater monitoring well installed on completion with a response zone and gravel filter surround between 9.0 and 24.0m depth. Borehole backfilled with bentonite between 31.2 and 24.0m depth. Gas tap and upright lockable cover installed on completion.
4. Gas monitoring indicated levels of hazardous ground gas below detection levels.
5. Windowless sampling undertaken from base of hand pit to refusal at 2.0m, whereupon borehole advanced with rotary coring to base at 31.2m.
6. SPT Hammer Ref. D113. Energy Ratio E_r = 59%.
7. Comments on flush loss provided in log where applicable.

BH03

3. 50mm gas and groundwater monitoring well installed on completion with a response zone and gravel filter surround between 1.0 and 10.0m depth. Borehole backfilled with bentonite between 30.7 to 10.0m. Gas tap and upright lockable cover installed on completion.
4. Gas monitoring indicated levels of hazardous ground gas below detection levels.
5. Borehole advanced using rotary coring from base of hand pit at 1.2m, to final depth at 30.7m.
6. SPT Hammer Ref. D112. Energy Ratio E_r = 60%.
7. Comments on flush loss provided in log where applicable.

BH04

3. Dual gas and groundwater monitoring well installed on completion. 50mm monitoring well installed with a response zone and gravel filter surround and gravel filter surround between 24.0 and 27.0m depth. 25mm monitoring well installed with a response zone and gravel filter surround and gravel filter surround between 1.0 and 3.0m depth. Borehole backfilled with bentonite between 30.9 and 27.0m depth. Gas tap and upright lockable cover installed on completion.
4. Gas monitoring indicated levels of hazardous ground gas below detection levels.
5. Windowless sampling undertaken from base of hand pit to refusal at 1.8m, whereupon borehole advanced with rotary coring to base at 30.9m.
6. SPT Hammer Ref. D112. Energy Ratio E_r = 60%.
7. Comments on flush loss provided in log where applicable.

BH05

3. Dual gas and groundwater monitoring well installed on completion. 50mm monitoring well installed with a response zone and gravel filter surround between 9.0 and 40.2m depth. 25mm monitoring well installed with a response zone and gravel filter surround between 1.0 and 4.0m depth. Gas tap and upright lockable cover installed on completion.
4. Gas monitoring indicated levels of hazardous ground gas below detection levels.
5. Windowless sampling undertaken from base of hand pit to refusal at 1.7m, whereupon borehole advanced with rotary coring to base at 40.2m.
6. SPT Hammer Ref. D113. Energy Ratio E_r = 59%.
7. Comments on flush loss provided in log where applicable.

BH06

3. Dual gas and groundwater monitoring well installed on completion. 50mm monitoring well installed with a response zone and gravel filter surround between 30.0 and 33.0m. 25mm monitoring well installed with a response zone and gravel filter surround between 1.0 and 4.0m depth. Borehole backfilled with bentonite between 46.7 and 33.0m depth. Gas tap and upright lockable cover installed on completion.
4. Gas monitoring indicated levels of hazardous ground gas below detection levels.
5. Windowless sampling undertaken from base of hand pit to refusal at 1.7m, whereupon borehole advanced with rotary coring to base at 46.7m.
6. SPT Hammer Ref. D113. Energy Ratio E_r = 59%.
7. Comments on flush loss provided in log where applicable.

BH07

3. Borehole terminated at 26.2 m depth due to repeated collapse of borehole to 16.5m depth. 4. 50mm gas and groundwater monitoring well installed on completion to 16.5m depth with a response zone and gravel filter surround between 3.0 and 16.5m depth. Gas tap and upright lockable cover installed on completion.
5. Gas monitoring indicated levels of hazardous ground gas below detection levels.
6. Windowless sampling undertaken from base of hand pit to refusal at 6.5m, whereupon borehole advanced with rotary coring to base at 26.2m.
6. SPT Hammer Ref. D113. Energy Ratio E_r = 59%.
7. Comments on flush loss provided in log where applicable.

BH08

3. Dual gas and groundwater monitoring well installed on completion. 50mm monitoring well installed with a response zone and gravel filter surround between 22.0 and 31.0m depth. 25mm monitoring well installed with a response zone and gravel filter surround between 2.0 and 5.0m depth. Borehole backfilled with bentonite between 52.5 and 31.0m depth. Gas tap and upright lockable cover installed on completion.
4. Gas monitoring indicated levels of hazardous ground gas below detection levels.
5. Windowless sampling undertaken from base of hand pit to refusal at 3.4m, whereupon borehole advanced with rotary coring to base at 52.5m.
6. SPT Hammer Ref. D112. Energy Ratio E_r = 60%.
7. Comments on flush loss provided in log where applicable.

BH09

3. Borehole complete at 53.7m depth and collapsed back to 49m depth on following morning, open-holed to 53.7m depth twice in an attempt to clear out borehole collapse.
4. 70 mm inclinometer casing installed to 35.5m depth, unable to install below due to borehole collapse.
5. Gas monitoring indicated levels of hazardous ground gas below detection levels.
6. Rotary Coring undertaken from base of hand dug service pit at 1.1m where rock encountered, coring advanced to base of hole at 53.7m.
7. SPT Hammer Ref. D113. Energy Ratio E_r = 59%.
8. Barometric logger installed at borehole position.
9. Comments on flush loss provided in log where applicable.

BH09A

3. Gas and groundwater monitoring well installed on completion. 50mm monitoring well installed with a response zone and gravel filter surround between 28.0 and 49.0m depth. Borehole collapsed and backfilled between 50.0 and 49.0m depth. Gas tap and upright lockable cover installed on completion.
4. Gas monitoring indicated levels of hazardous ground gas below detection levels.
5. Borehole drilled using openhole methods to 50m.
6. Strata descriptions are those of driller only.
7. Comments on flush loss provided in log where applicable.

BH10

3. 70 mm inclinometer casing installed to 34.0 m depth, unable to progress installation deeper due to borehole collapse.
4. Gas monitoring indicated levels of hazardous ground gas below detection levels.
5. Windowless sampling undertaken from base of hand pit to refusal at 1.4m, whereupon borehole advanced with rotary coring to base at 35.7m.
6. SPT Hammer Ref. D112. Energy Ratio E_r = 60%.
7. Vibrating Wire Piezometer installed at a depth of 13.5m with logger box.
8. Comments on flush loss provided in log where applicable.

BH11

3. 70 mm inclinometer casing installed to 13.4 m depth.
4. Gas monitoring indicated levels of hazardous ground gas below detection levels.
5. Windowless sampling undertaken from base of hand pit to refusal at 2.0m, whereupon borehole advanced with rotary coring to base at 13.4m.
6. SPT Hammer Ref. D112. Energy Ratio E_r = 60%.
7. Vibrating Wire Piezometer installed at a depth of 32.8m with logger box.
8. Comments on flush loss provided in log where applicable.