HORIZON NUCLEAR POWER

WYLFA NEWYDD

ENERGY WORKING FOR BRITAIN

Wylfa Newydd Project

6.4.28 ES Volume D - WNDA Development App D8-3 - Groundwater Baseline Report (Part 2/3)

PINS Reference Number: EN010007

Application Reference Number: 6.4.28

June 2018

Revision 1.0

Regulation Number: 5(2)(a)

Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Horizon Internal DCRM Number: WN0902-JAC-PAC-APP-00014

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Appendix D Selected Borehole Logs

STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00005

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH535R

Contract Ref:	Start: 08.06.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 22.06.11	32.485	E:235086.6 N:392893.2	1 of 17

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00					Air	(01:30:00)				Grass over TOPSOIL consisting of soft dark brown sandy gravelly CLAY. (Topsoil)		32.235	0.25	
										Soft dark brown sandy gravelly CLAY. (Drift Deposits - Unit B1)		32	(0.55)	
												31.685	0.80	
1.00										Stiff orange brown to light grey sandy gravelly CLAY. (Drift Deposits - Unit B1)		31	1	
2.00													(2.50) 2	
												30		
3.00									1				3	
												29.185	3.30	
										Stiff dark grey silty gravelly CLAY. (Drift Deposits - Unit B1)		29		
4.00													4	
												28		
													5	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/06/11		3.00	None	101	3.00
02/06/11	08:30	14.63	14.63	101	13.00
02/06/11	17:30	28.13	14.63	101	24.40
03/06/11		28.13	14.00	101	15.00
03/06/11		34.40	14.00	101	30.40
07/06/11	11:00	34.50	14.00	101	11.90
07/06/11	17:45	39.00	14.00	101	27.40
08/06/11	08:30	39.00	14.00	101	2.47

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Rig (Beretta T44) breakdown at 64.50m depth, unable to effect repair on site. Beretta T44 pulled off hole and replaced with Comacchio 405 to complete the borehole.
3. 50mm standpipe installed to 32.30m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44 + Comacchio MC405	CG + CG/SP + SP	GSherwood + JWickenden	GS+BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00005

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Mechanical Log													
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
5.00					Air	(01:30:00)						27	(4.70)	
6.00												26		6
7.00												25		7
8.00										Stiff dark grey silty slightly gravelly CLAY. (Drift Deposits - Unit C)		24.485	8.00	8
9.00												24		9
												23		10

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
09/06/11	08:30	44.90	14.00	101	2.63
21/06/11	08:30	69.70	15.00	101	17.30
21/06/11	17:20	77.50	15.00	101	20.80

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3. 50mm standpipe installed to 32.30m depth.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
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10.00												22	(5.80)	
11.00												21	11	
12.00					Air	(01:30:00)						20	12	
13.00												19	13	
14.00										Weathered phyllite/psammite recovered as coarse angular slightly weathered GRAVEL of psammite and phyllite. (New Harbour Group - Psammite)		18.685	13.80	
												18	14 (0.83)	
				NI 590 770	Mist					Strong very narrow to very thin bands of dark green blue fine to medium grained fresh to locally slightly weathered PSAMMITE with extremely closely to		17.855	14.63	
													15	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

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15.00										closely spaced very narrow to narrow slightly indistinct bands of very narrowly foliated light purple to purple phyllite. (New Harbour Group - Psammite)		17		
16.00				NI 590 770	Mist							16	(4.37)	
17.00												15		
18.00												14		
19.00				30 180 1780						Strong very narrow to very thin bands of green blue fine grained fresh to slightly weathered PSAMMITE with extremely closely to closely spaced very narrow very poorly defined bands of light purple-green very narrowly foliated phyllite. (New Harbour Group - Psammite)		13.485	19.00	
												13	(1.45)	
													20	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

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3. 50mm standpipe installed to 32.30m depth.

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Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
20.00												12.035	20.45	
										Strong very narrow to very thin bands of dark green fine grained fresh to locally slightly weathered PSAMMITE with extremely closely to closely spaced very narrow to narrow bands of very narrowly foliated green and rarely light purple locally interbanded phyllite. (New Harbour Group - Psammite)		12		
21.00				30 180 1780								11	21 (2.60)	
22.00				NI 140 300	Mist							10	22	
23.00										Strong very narrow to thin bands of very narrowly foliated light purple-green slightly weathered to fresh PHYLLITE with extremely closely to closely spaced very narrow lenticular bands of green fine grained psammite. (New Harbour Group - Phyllite)		9.435	23.03 (1.00)	
24.00				60 130 560						Strong very narrow to narrow bands of blue-green fine grained fresh to slightly weathered PSAMMITE with extremely closely to very closely spaced occasionally poorly defined very narrow bands of very narrowly foliated light purple-brown phyllite. (New Harbour Group - Psammite)		8.435	24.03 (1.89)	
				180 360 750								8	25	

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3. 50mm standpipe installed to 32.30m depth.

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25.00				180 360 750	Mist							7		
												6.545	25.94	
26.00				20 30 40						Strong to locally medium strong very narrow to very thin bands of very narrowly foliated light purple-brown slightly weathered to fresh PHYLLITE with extremely closely to closely spaced very narrow lenticular bands of green fine grained psammite. (New Harbour Group - Phyllite)		6	26 (0.70)	
												5.845	26.64	
				20 110 170						Strong very narrow to very thin bands of green blue fine grained slightly weathered to fresh PSAMMITE with extremely closely to closely spaced very narrow to narrow bands of very narrowly foliated light brown-purple phyllite with foliation dipping 30-40°. (New Harbour Group - Psammite)			(0.49)	
27.00												5.355	27 27.13	
										Strong very narrow to thin bands of very narrowly foliated red to locally purple fresh to slightly weathered PHYLLITE with extremely closely to closely spaced very narrow to rarely thin slightly to moderately disturbed bands of dark green fine to medium grained psammite. (New Harbour Group - Phyllite)		5	(1.49)	
28.00													28	
				150 730 1550								4		
												3.865	28.62	
29.00										Strong very narrow to very thin slightly disturbed bands of very narrowly foliated dark purple-red and dark purple-blue fresh to locally slightly weathered PHYLLITE with very narrow lenticular slightly disturbed bands of dark green blue fine grained psammite. (New Harbour Group - Phyllite)			29	
												3		
													30	

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Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

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Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
30.00														
												2	(3.62)	
31.00				150 730 1550									31	
												1		
32.00					Mist								32	
												0.245	32.24	
										Strong very narrowly foliated red fresh to locally slightly weathered PHYLLITE with extremely closely to very closely spaced very narrow (<0.5mm) irregular lenticular ptygmatic bands of fine grained dark green blue randomly orientated psammite. (New Harbour Group - Phyllite)		0		
33.00				3110									33	
													(1.92)	
												-1		
34.00													34	
												-1.675	34.16	
										Strong very narrow lenticular bands of dark-green to green fine grained fresh to locally slightly weathered PSAMMITE with extremely closely spaced very narrow bands of very narrowly foliated light brown-green phyllite. (New Harbour Group - Psammite)		-2	(0.66)	
												-2.335	34.82	
										Strong very narrow to very thin slightly disturbed bands of very narrowly foliated			35	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

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Mechanical Log													
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
35.00				3110	Mist					green fresh to locally slightly weathered PHYLLITE with closely to locally extremely closely spaced very narrow to narrow slightly disturbed bands of green fine grained psammite. (New Harbour Group - Phyllite)		-3	(1.71)	
36.00				490 860 1430						Strong very narrow to very thin bands of dark green to green fine grained fresh PSAMMITE with extremely closely to closely spaced slightly poorly defined very narrow to narrow bands of very narrowly foliated purple to brown phyllite. (New Harbour Group - Psammite)		-4.045	36 (0.53)	
37.00												-5	37 (1.24)	
38.00				50 60 100						Strong very thin to narrow moderately disturbed bands of green fine grained fresh PSAMMITE interbanded with very thin to narrow slightly disturbed bands of very narrowly foliated light green brown fresh PHYLLITE. (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)		-5.285	37.77	
39.00				240 990 1860								-6	38 (1.46)	
										Strong very thin to occasionally very narrow bands of very narrowly foliated purple to locally light brown-grey fresh PHYLLITE with closely to extremely closely spaced very narrow to narrow occasionally very thin bands of green fine grained psammite. (New Harbour Group - Phyllite)		-6.745	39 39.23	
												-7	40	

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40.00														
												-8		
41.00													41	
												-9		
													(5.29)	
42.00													42	
				240 990 1860	Mist							-10		
43.00													43	
												-11		
44.00													44	
										Strong very narrow to very thin bands of green fine grained fresh PSAMMITE with extremely closely to very closely spaced very narrow to narrow slightly disturbed bands of very narrowly foliated		-12.035	44.52	
													(0.45)	
												-12.485	44.97	
													45	

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Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
45.00					Mist					light green phyllite. (New Harbour Group - Psammite)				
										Strong very narrow to very thin bands of very narrowly foliated dark purple fresh PHYLLITE with extremely closely to very closely spaced very narrow lenticular bands of dark green fine grained psammite. (New Harbour Group - Phyllite)		-13.035	(0.55) 45.52	
										Strong very thin to very narrow slightly disturbed bands of green fine grained fresh PSAMMITE with extremely closely to closely spaced very narrow to narrow undulating bands of slightly disturbed light green-purple phyllite. (New Harbour Group - Psammite)		-13.915	(0.88) 46 46.40	
46.00				240 990 1860						Strong very narrow to narrow bands of very narrowly foliated purple to light purple fresh PHYLLITE with extremely closely spaced very narrow lenticular bands of green fine grained psammite. (New Harbour Group - Phyllite)		-14	(0.57) 46.97	
										Strong very thin to very narrow bands of green fine grained fresh PSAMMITE interbanded with very narrow to very thin bands of very narrowly foliated purple PHYLLITE. (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)		-14.485	47 (0.98)	
47.00												-15		
										Strong very thin to very narrow lenticular bands of green fine grained fresh PSAMMITE with extremely closely to closely spaced very narrow lenticular slightly disturbed bands of undulating very narrowly foliated purple phyllite. (New Harbour Group - Psammite)		-15.465	47.95	
48.00												-16	48 (1.65)	
				NI 220 660									49	
49.00												-17		
										Strong very narrow to very thin bands of very narrowly foliated purple fresh PHYLLITE with extremely closely to very closely spaced very narrow		-17.115	49.60	
				3300									50	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Rig (Beretta T44) breakdown at 64.50m depth, unable to effect repair on site. Beretta T44 pulled off hole and replaced with Comacchio 405 to complete the borehole.
3. 50mm standpipe installed to 32.30m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44 + Comacchio MC405	CG + CG/SP + SP	GSherwood + JWickenden	GS+BNS

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WYL-SSL-SDT-LOG-00005

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH535R

Contract Ref:	Start: 08.06.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 22.06.11	32.485	E:235086.6 N:392893.2	11 of 17

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
50.00										lenticular occasionally slightly disturbed bands of light green and green fine grained psammite. (New Harbour Group - Phyllite)		-18	(2.00)	
51.00				3300	Mist							-19	51	
										Strong very narrow to thin bands of green to dark green fine grained fresh PSAMMITE with extremely closely to closely spaced very narrow to narrow bands of narrowly foliated light green and purple phyllite. (New Harbour Group - Psammite)		-19.115	51.60	
52.00												-20	52	
53.00												-21	53	
54.00				20 170 460								-22	(4.96) 54	
													55	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Rig (Beretta T44) breakdown at 64.50m depth, unable to effect repair on site. Beretta T44 pulled off hole and replaced with Comacchio 405 to complete the borehole.
3. 50mm standpipe installed to 32.30m depth.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Beretta T44 + Comacchio MC405**	CG + CG/SP + SP	**GSherwood + JWickenden**	**GS+BNS**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH535R

Contract Ref:	Start: 08.06.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 22.06.11	32.485	E:235086.6 N:392893.2	12 of 17

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
55.00				10 80 130	Mist							-23		
56.00				100 450 990								-24	56	
										Strong very narrow to very thin bands of very narrowly foliated purple fresh PHYLLITE with extremely closely spaced very narrow to narrow lenticular bands of green fine grained psammite. (New Harbour Group - Phyllite)		-24.075	56.56 (1.04)	
57.00												-25	57	
				10 40 60	Water					Strong massive dark green-brown fine grained slightly weathered DOLERITE with grading to light green at contacts (possible chilled margins?). (Dolerite)		-25.116	57.60	
58.00				210 340 510								-26	58 (1.24)	
										Strong thin to narrow bands of green to dark green fine to medium grained fresh to slightly weathered PSAMMITE with extremely closely to closely spaced very thin to very narrow slightly disturbed slightly poorly defined bands of undulating very narrowly foliated light green to occasionally purple-brown phyllite. (New Harbour Group - Psammite)		-26.355	58.84	
59.00				10 40 90									59	
				80 140 370								-27	(1.30)	
				20 260 470									60	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Rig (Beretta T44) breakdown at 64.50m depth, unable to effect repair on site. Beretta T44 pulled off hole and replaced with Comacchio 405 to complete the borehole.
3. 50mm standpipe installed to 32.30m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44 + Comacchio MC405	CG + CG/SP + SP	GSherwood + JWickenden	GS+BNS

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH535R

Contract Ref:	Start: 08.06.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 22.06.11	32.485	E:235086.6 N:392893.2	13 of 17

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
60.00												-27.655	60.14	
				20 260 470						Strong massive dark green locally light green locally at contact fine grained slightly weathered DOLERITE (with possible chilled margins?) with very closely spaced fine (<0.5mm) white circular mineral growths of possible calcite replacement of primary mineral growth. (Dolerite)		-28	(1.16)	
61.00												-28.815	61.30	
				110 200 350	Water					Strong very narrow to very thin highly disturbed bands of green-blue fine grained fresh to locally slightly weathered PSAMMITE with extremely closely to very closely spaced very narrow to narrow highly disturbed bands of very narrowly foliated brown to green-blue phyllite. (New Harbour Group - Psammite)		-29 -30	(1.51)	
62.00												-30.325	62.81	
				30 110 410						Strong to very strong massive dark green-brown to locally brown discolouration/staining fine grained possibly slightly weathered DOLERITE. (Dolerite)		-31	(1.16)	
63.00				NI								-31.485	63.97	
				60 80 110						Strong blue-green fine grained fresh to locally slightly weathered PSAMMITE recovered as fine to coarse gravel of psammite. (New Harbour Group - Psammite)		-32	(0.93)	
64.00				NI								-32.415	64.90	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Rig (Beretta T44) breakdown at 64.50m depth, unable to effect repair on site. Beretta T44 pulled off hole and replaced with Comacchio 405 to complete the borehole.
3. 50mm standpipe installed to 32.30m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44 + Comacchio MC405	CG + CG/SP + SP	GSherwood + JWickenden	GS+BNS

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH535R

Contract Ref:	Start: 08.06.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 22.06.11	32.485	E:235086.6 N:392893.2	14 of 17

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
65.00					Water					Strong very narrow to very thin bands of very narrowly foliated purple fresh PHYLLITE with extremely closely to very closely spaced very narrow lenticular occasionally slightly disturbed bands of light green and green fine grained psammite. (New Harbour Group - Phyllite)		-33	(0.90)	
												-33.315	65.80	
66.00				100 600 1400						Strong to locally medium strong thin to very narrow bands of very narrowly foliated red fresh PHYLLITE with extremely closely to closely spaced very narrow to narrow lenticular occasionally slightly ptygmatic bands of blue fine to medium grained psammite. (New Harbour Group - Phyllite)		-34	66 (2.45)	
67.00												-35	67	
68.00				30 150 810								-35.765	68 68.25	
										Strong very narrow to very thin occasionally lenticular bands of green to dark green fine grained fresh PSAMMITE with extremely closely to closely spaced very narrow to narrow bands of undulating very narrowly foliated purple and locally green phyllite with foliation dipping 20-40°. (New Harbour Group - Psammite)		-36	(1.61)	
69.00				50 240 860								-37	69	
										Description on next sheet		-37.375	69.86	
													70	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Rig (Beretta T44) breakdown at 64.50m depth, unable to effect repair on site. Beretta T44 pulled off hole and replaced with Comacchio 405 to complete the borehole.
3. 50mm standpipe installed to 32.30m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44 + Comacchio MC405	CG + CG/SP + SP	GSherwood + JWickenden	GS+BNS

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH535R

Contract Ref:	Start: 08.06.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 22.06.11	32.485	E:235086.6 N:392893.2	15 of 17

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
70.00					Water					Strong medium strong very narrow to very thin bands of very narrowly foliated purple fresh PHYLLITE interbanded with extremely closely to closely spaced very narrow to very thin bands of green to locally purple-green fine grained PSAMMITE. (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)		-38	(1.75)	
71.00				50 240 860								-39 -39.125	71 71.61	
72.00										Strong very narrow to thin bands of very narrowly foliated green grading to light purple fresh PHYLLITE with extremely closely to closely spaced very narrow to narrow lenticular bands of green to dark green fine grained psammite. (New Harbour Group - Phyllite)		-40	72 (1.92)	
73.00										Strong to very strong massive dark brown fine grained fresh to slightly weathered DOLERITE. (Dolerite)		-41 -41.045	73 73.53	
74.00				30 320 1350						Strong very narrow to very thin bands of green fine grained fresh PSAMMITE with extremely closely to very closely spaced very narrow bands of very narrowly foliated light green and purple phyllite. (New Harbour Group - Psammite)		-41.325 -42 -42.345	73.81 74 (1.02) 74.83	
				2320						Strong very narrow to very thin bands of very narrowly foliated interbanded			75	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Rig (Beretta T44) breakdown at 64.50m depth, unable to effect repair on site. Beretta T44 pulled off hole and replaced with Comacchio 405 to complete the borehole.
3. 50mm standpipe installed to 32.30m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44 + Comacchio MC405	CG + CG/SP + SP	GSherwood + JWickenden	GS+BNS

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH535R

Contract Ref:	Start: 08.06.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 22.06.11	32.485	E:235086.6 N:392893.2	16 of 17

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
75.00					Water					purple and green fresh PHYLLITE with extremely closely to very closely spaced very narrow lenticular bands of green to dark green fine grained psammite. (New Harbour Group - Phyllite)		-43	76	
76.00				2320									(2.82)	
77.00												-44	77	
												-45		
												-45.165	77.65	
										Strong locally medium strong thin to narrow moderately disturbed bands of very narrowly foliated green fresh PHYLLITE with very closely to closely spaced narrow to thin bands of dark green fine grained psammite. (New Harbour Group - Phyllite)			78	
78.00				250 870 1890								-46		
													(2.55)	
79.00													79	
												-47		
													80	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Rig (Beretta T44) breakdown at 64.50m depth, unable to effect repair on site. Beretta T44 pulled off hole and replaced with Comacchio 405 to complete the borehole.
3. 50mm standpipe installed to 32.30m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44 + Comacchio MC405	CG + CG/SP + SP	GSherwood + JWickenden	GS+BNS

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BOREHOLE LOG

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Contract Ref:	Start: 08.06.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 22.06.11	32.485	E:235086.6 N:392893.2	17 of 17

Mechanical Log					Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
Depth	TCR %	SCR %	RQD %	If (mm)										
80.00					↓							-47.715	80.20	
										Rotary borehole terminated at 80.20m depth.				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Rig (Beretta T44) breakdown at 64.50m depth, unable to effect repair on site. Beretta T44 pulled off hole and replaced with Comacchio 405 to complete the borehole.
3. 50mm standpipe installed to 32.30m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44 + Comacchio MC405	CG + CG/SP + SP	GSherwood + JWickenden	GS+BNS

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH536R

Contract Ref:	Start: 26.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 30.05.11	16.732	E:234707.7 N:393238.2	1 of 11

Depth	TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00								Grass over TOPSOIL consisting of soft dark brown sandy slightly gravelly CLAY. (Topsoil)		16.432	(0.30) 0.30	
								Soft dark brown to dark grey sandy gravelly CLAY. (Drift Deposits - Unit B1)		16	(0.90) 1	
1.00										15.532	1.20	
								Dark brown sandy clayey fine to medium subangular to angular GRAVEL of phyllite (description from drilled cuttings). (Drift Deposits)		15.132	(0.40) 1.60	
								Strong to medium strong bluish grey fine to coarse medium grained slightly weathered to fresh PSAMMITE with closely to very closely spaced narrow to very thin bands of very narrowly foliated reddish purple phyllite. (New Harbour Group - Psammite)		15	(0.42) 2.02 2	
2.00				50 140 350				Medium strong to strong narrowly foliated light green locally pink and brown fresh to slightly weathered PHYLLITE with very closely to closely spaced narrow bands of green fine and medium grained psammite. (New Harbour Group - Phyllite)		14.712	(0.63) 2.65	
								Medium strong to strong narrow to very thin bands of green grey fine grained fresh to slightly weathered PSAMMITE with extremely closely to very closely spaced narrow to very thin bands of very narrowly foliated greenish grey phyllite. (New Harbour Group - Psammite)		14.082		
3.00										14	(0.55) 3	
								Medium strong to strong narrow to very thin bands of reddish brown and purplish brown very narrowly foliated fresh to slightly weathered PHYLLITE with extremely to very closely spaced narrow to very thin bands of green grey fine grained psammite. (New Harbour Group - Phyllite)		13.532	3.20	
				20 390 1080						13	4	
4.00											(2.33)	
										12	5	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
26/05/11	17:20	3.50	1.30	101	1.60
27/05/11	08:15	3.50	1.30	101	1.71
27/05/11	18:00	25.80	1.30	101	14.50
28/05/11	09:00	25.80	1.30	101	3.30
28/05/11	16:02	33.85	1.30	101	12.00
29/05/11	08:45	33.85	1.30	101	3.20
29/05/11	16:00	42.50	1.30	101	8.80
30/05/11	09:00	42.50	1.30	101	3.20

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 10.50m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Comacchio MC405	SP	ADingle + JWickenden	GS+BNS

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH536R

Contract Ref:	Start: 26.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 30.05.11	16.732	E:234707.7 N:393238.2	2 of 11

Depth	TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
5.00										11.202	5.53	
								Strong medium bands of green grey fine to coarse grained fresh to slightly weathered METACONGLOMERATE. (New Harbour Group - METACONGLOMERATE)		11	(0.47)	
6.00				20 390 1080				Strong disturbed narrow to very thin bands of green grey fine to coarse grained fresh PSAMMITE with extremely closely spaced highly disturbed narrow bands of very narrowly foliated reddish brown phyllite. (New Harbour Group - Psammite)		10.732	6.00	6
										10.282	(0.45) 6.45	
								Medium strong narrow to very thin bands of reddish brown very narrowly foliated fresh PHYLLITE interbanded with extremely closely to closely spaced narrow to thin bands of green grey and red-brown fine to medium grained PSAMMITE. (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)		10	(0.47)	
										9.812	6.92	
7.00								Medium strong to strong narrow to very thin lenticular bands of green grey fine to coarse grained fresh PSAMMITE with extremely closely to very closely spaced narrow to very thin bands of very narrowly foliated greenish grey and greenish brown disturbed phyllite. (New Harbour Group - Psammite)		9	(1.08)	7
8.00				3600				Strong thin to medium bands of green grey fine to coarse grained fresh PSAMMITE with locally moderately disturbed very narrow lenticular bands of brown phyllite. (New Harbour Group - Psammite)		8.732	8.00	8
										8	(1.32)	
9.00										7.412	9.32	9
								Strong very thin to thin lenticular bands of green grey fine to coarse grained fresh PSAMMITE with very closely to medium spaced narrow disturbed bands of very narrowly foliated green grey and green brown phyllite. (New Harbour Group - Psammite)		7	(0.72)	
												10

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
30/05/11	16:00	50.40	1.30	101	15.00

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 10.50m depth.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Comacchio MC405**	**SP**	**ADingle + JWickenden**	**GS+BNS**

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WYL-SSL-SDT-LOG-00005

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH536R

Contract Ref:	Start: 26.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 30.05.11	16.732	E:234707.7 N:393238.2	3 of 11

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
10.00				3600				Strong narrow to thin lenticular bands of green grey fine to coarse grained fresh PSAMMITE with extremely closely to closely spaced narrow disturbed bands of very narrowly foliated purple-brown and green brown phyllite. (New Harbour Group - Psammite)		6.692	10.04	
11.00											(2.04) 11	
12.00				60 1350 1670				Medium strong to strong narrow to very thin bands of green grey fine to coarse grained fresh PSAMMITE with extremely closely to very closely spaced narrow to very thin bands of very thinly foliated purplish grey and purplish brown phyllite. (New Harbour Group - Psammite)		4.652	12.08 12	
13.00											(1.72) 13	
14.00								Strong thin to medium bands of greenish grey fine to coarse grained fresh PSAMMITE. (New Harbour Group - Psammite)		2.932	13.80 14	
											(0.76)	
								Medium strong to strong narrow bands of very narrowly foliated light green fresh PHYLLITE with extremely closely spaced narrow lenticular bands of greenish grey fine to medium grained psammite. (New Harbour Group - Phyllite)		2.172	14.56	
											(0.39) 2	
										1.782	14.95 15	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 10.50m depth.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Comacchio MC405**	**SP**	**ADingle + JWickenden**	**GS+BNS**

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BOREHOLE LOG

Contract:	Client:	Borehole:
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Contract Ref:	Start: 26.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 30.05.11	16.732	E:234707.7 N:393238.2	4 of 11

Depth	TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
15.00								Medium strong to strong narrow to thin bands of greenish grey fine to coarse grained fresh PSAMMITE with extremely closely to very closely spaced narrow to very thin disturbed bands of very narrowly foliated greenish grey and greenish brown phyllite. (New Harbour Group - Psammite)		1	(1.35)	
				20 480 1090								
16.00										16		
										0.432	16.30	
								Medium strong to strong narrow disturbed bands of purplish brown very narrowly foliated fresh PHYLLITE with extremely closely spaced narrow to very thin lenticular bands of locally disturbed greenish grey fine to medium grained psammite. (New Harbour Group - Phyllite)			(0.53)	
										0		
										-0.098	16.83	
								Medium strong to strong narrow to very thin bands of greenish grey fine to coarse grained fresh PSAMMITE with extremely closely to very closely spaced narrow bands of very narrowly foliated green grey and purplish grey phyllite. (New Harbour Group - Psammite)		17		
17.00											(1.22)	
										-1		
										-1.318	18.05	
18.00								Medium strong to strong narrow to very thin bands of purplish grey very narrowly foliated fresh PHYLLITE with extremely closely to very closely spaced narrow lenticular bands of greenish grey fine grained psammite. (New Harbour Group - Phyllite)			(0.55)	
				3330						-1.868	18.60	
								Medium strong to strong very thin to thin bands of greenish grey fine to medium grained fresh PSAMMITE with very closely to closely spaced narrow to very thin bands of very narrowly foliated greenish grey phyllite. (New Harbour Group - Psammite)		-2	(0.36)	
										-2.228	18.96	
19.00								Medium strong narrow bands of very narrowly foliated purple fresh PHYLLITE with extremely closely spaced very narrow to narrow lenticular and locally very thin bands of bluish grey fine to medium grained psammite. (New Harbour Group - Phyllite)		19	(0.50)	
										-2.728	19.46	
								Medium strong to strong thin to narrow bands of greenish grey fine to medium grained fresh PSAMMITE with extremely closely to very closely spaced very narrow to narrow bands of		-3		
											20	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 10.50m depth.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Comacchio MC405**	**SP**	**ADingle + JWickenden**	**GS+BNS**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH536R

Contract Ref:	Start: 26.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 30.05.11	16.732	E:234707.7 N:393238.2	5 of 11

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
20.00								purplish-brown, green and brown phyllite. (New Harbour Group - Psammite)		-3.888	(1.16) 20.62	
								Medium strong narrow to very thin bands of grey-green fine to medium grained fresh PSAMMITE with extremely closely to very closely spaced very narrow to narrow bands of very narrowly foliated green-brown and occasional brownish purple phyllite. (New Harbour Group - Psammite)		-4	21 (1.07)	
21.00				370 480 840						-4.958	21.69	
								Medium strong very narrow to thin bands of very narrowly foliated purple fresh PHYLLITE with extremely closely to very closely spaced very narrow to narrow lenticular bands of green-grey fine grained psammite. (New Harbour Group - Phyllite)		-5 -5.208	21.94	
22.00								Medium strong very narrow to very thin bands of grey-green fine to medium grained fresh PSAMMITE with extremely closely to very closely spaced very narrow to narrow bands of cream, green-brown and purplish-brown narrowly foliated phyllite. (New Harbour Group - Psammite)		-6 -6.218	22 (1.01) 22.95	
23.00								Medium strong to strong very narrow to very thin bands of very narrowly foliated purple locally greyish-purple fresh PHYLLITE with closely to locally extremely closely spaced very narrow to narrow bands and lenticular blue-grey fine to coarse grained psammite. (New Harbour Group - Phyllite)		-7	23 (1.81) 24	
24.00				3200						-8.0288	24.76	
								Strong very narrow to thin bands of grey fine to coarse grained fresh PSAMMITE with extremely closely to			(0.50) 25	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 10.50m depth.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Comacchio MC405**	**SP**	**ADingle + JWickenden**	**GS+BNS**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH536R

Contract Ref:	Start: 26.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 30.05.11	16.732	E:234707.7 N:393238.2	6 of 11

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
25.00								very closely spaced very narrow bands of very narrowly foliated brownish-purple and green-brown phyllite. (New Harbour Group - Psammite)		-8.528	25.26	
				3200				Strong very narrow to very thin bands of grey-green fine to locally coarse grained fresh PSAMMITE with a highly disturbed extremely closely to very closely spaced narrowly foliated green and locally brownish-purple phyllite. (New Harbour Group - Psammite)		-9	26 (2.03)	
26.00										-10	27	
27.00										-10.558	27.29	
				310 620 1700				Medium strong very narrow to thin bands of very narrowly foliated purple fresh PHYLLITE interbanded with extremely closely to very closely spaced very thin bands of dark grey fine to coarse grained PSAMMITE. (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)		-11	(1.04) 28	
28.00										-11.598	28.33	
								Strong narrow to thin bands of greenish-dark grey fine to coarse grained fresh PSAMMITE with closely to locally very closely spaced narrow to very thin bands of very narrowly foliated brownish purple phyllite. (New Harbour Group - Psammite)		-12	29	
29.00										-13	(2.73) 30	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 10.50m depth.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Comacchio MC405**	**SP**	**ADingle + JWickenden**	**GS+BNS**

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Contract Ref:	Start: 26.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
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Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
30.00												
				310 620 1700						-14		
31.00								Strong very thin to thin bands of green-grey fine to medium to locally coarse grained fresh PSAMMITE with closely spaced narrow to very thin bands of very narrowly foliated purple phyllite. (New Harbour Group - Psammite)		-14.328	31.06 (0.66)	
								Medium very narrow to very thin bands of strong very narrowly foliated brownish purple fresh PHYLLITE with extremely closely spaced very narrow occasionally narrow lenticular bands of grey fine to medium grained psammite. (New Harbour Group - Phyllite)		-14.988	31.72 (0.41)	
32.00								Strong very narrow to very thin bands of grey-green fine to locally coarse fresh PSAMMITE with extremely closely to closely spaced very narrow bands of very narrowly foliated purple and green phyllite. (New Harbour Group - Psammite)		-15.398	32.13 (0.62)	
								Medium strong very narrow to very thin bands of very narrowly foliated purple fresh PHYLLITE with extremely closely to very closely spaced very narrow lenticular bands of grey fine grained psammite. (New Harbour Group - Phyllite)		-16.018	32.75 (0.51)	
33.00				300 1100 1340				Medium strong to strong greyish green fine grained fresh PSAMMITE breccia with a white calcite matrix. (New Harbour Group - Psammite)		-16.258	32.99 (0.90)	
								Strong very narrow to very thin bands of greenish-grey fine to medium, locally coarse grained fresh PSAMMITE with extremely closely to closely spaced narrow to very thin bands of very narrowly foliated purple phyllite. (New Harbour Group - Psammite)		-16.768	33.50 (0.90)	
34.00										-17	34	
								Medium strong greenish grey and diffuse purple fine grained weakly foliated fresh PSAMMITE. (New Harbour Group - Psammite)		-17.668	34.40 (0.41)	
								Medium strong to strong very narrow to very thin bands of very narrowly foliated purplish-greyish		-18.078	34.81	
										-18	35	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 10.50m depth.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Comacchio MC405**	**SP**	**ADingle + JWickenden**	**GS+BNS**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH536R

Contract Ref:	Start: 26.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
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Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
35.00								becoming purple fresh PHYLLITE with extremely closely to very closely spaced very narrow lenticular bands of grey fine grained psammite. (New Harbour Group - Phyllite)			(0.76)	
										-18.838	35.57	
								Strong very narrow to very thin bands of greenish grey fine to medium to locally coarse grained fresh PSAMMITE with extremely closely to closely spaced very narrow to very thin bands of brown-green and brownish-purple very narrowly foliated phyllite. (New Harbour Group - Psammite)		-19	(0.65)	
36.00											36	
										-19.488	36.22	
								Strong very thin to thin bands of grey locally greenish grey fine to coarse grained fresh PSAMMITE with closely to medium spaced very narrow to narrow bands of very narrowly foliated purple phyllite. (New Harbour Group - Psammite)		-20	(1.32)	
37.00											37	
				300 1100 1340						-20.808	37.54	
								Medium strong to strong very narrow to very thin bands of very narrowly foliated purple fresh PHYLLITE with extremely closely to very closely spaced very narrow to very thin lenticular bands of grey fine to medium grained psammite. (New Harbour Group - Phyllite)		-21	(0.57)	
38.00											38	
								Strong disturbed and brecciated green fine grained fresh PSAMMITE with irregularly spaced very narrow to narrow clasts of green phyllite, locally set within a matrix of calcite and quartz. (New Harbour Group - Psammite)		-21.378	38.11	
											(0.93)	
										-22		
39.00										-22.308	39.04	
								Medium strong to strong narrow to very thin bands of very narrowly foliated greyish purple to purple fresh PHYLLITE with extremely closely to very closely spaced very narrow to narrow lenticular bands of grey fine to medium grained psammite. (New Harbour Group - Phyllite)			(0.55)	
										-22.858	39.59	
								Strong thin bands of green fine grained fresh PSAMMITE with rare very narrow bands of green-brown poorly foliated phyllite. (New Harbour Group - Psammite)		-23		
											40	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 10.50m depth.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Comacchio MC405**	**SP**	**ADingle + JWickenden**	**GS+BNS**

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BOREHOLE LOG

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Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH536R

Contract Ref:	Start: 26.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 30.05.11	16.732	E:234707.7 N:393238.2	9 of 11

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
40.00										-24	41	
41.00				300 1100 1340							(3.76)	
42.00										-25	42	
43.00										-26	43	
								Strong very narrow to very thin bands of bluish grey fine to coarse grained fresh PSAMMITE with extremely closely to closely spaced very narrow to narrow bands of very narrowly foliated purple phyllite. (New Harbour Group - Psammite)		-26.618	43.35	
44.00				4050						-27	44	
											(2.03)	
										-28	45	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 10.50m depth.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Comacchio MC405**	**SP**	**ADingle + JWickenden**	**GS+BNS**

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BOREHOLE LOG

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Contract Ref:	Start: 26.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 30.05.11	16.732	E:234707.7 N:393238.2	10 of 11

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
45.00										-28.648	45.38	
				4050				Strong very thin to thin bands of grey fine to coarse grained fresh PSAMMITE with medium to locally very closely spaced very narrow to narrow bands of narrowly foliated purple phyllite. (New Harbour Group - Psammite)		-29	46 (1.72)	
46.00										-30		
47.00										-30.368	47.10	
								Strong to medium strong disturbed very narrow to thin bands of green-grey fine to medium grained fresh PSAMMITE with very closely spaced very narrow to narrow lenticular bands of very narrowly foliated purple phyllite. (New Harbour Group - Psammite)		-30.808	47.54 (0.44)	
				NI 960 1480				Medium strong to strong very narrow to very thin bands of greenish grey fine to locally coarse grained fresh PSAMMITE with extremely closely to closely spaced very narrow to narrow bands of very narrowly foliated purple and brownish-purple phyllite. (New Harbour Group - Psammite)		-31	48 (1.20)	
48.00										-32.008	48.74	
								Strong narrow to thin bands of greyish green fine to medium grained fresh PSAMMITE with closely to medium spaced narrow to very thin bands of green-brown and red-brown phyllite. (New Harbour Group - Psammite)			49 (0.76)	
49.00										-32.768	49.50	
								Medium strong to strong very thin to thin bands of greyish green fine to coarse grained fresh PSAMMITE with rare very narrow bands of purple phyllite. (New Harbour Group - Psammite)		-33	(0.90) 50	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 10.50m depth.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Comacchio MC405**	**SP**	**ADingle + JWickenden**	**GS+BNS**

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00005

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH536R

Contract Ref:	Start: 26.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 30.05.11	16.732	E:234707.7 N:393238.2	11 of 11

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
50.00				NI 960 1480								
										-33.668	50.40	
								Rotary borehole terminated at 50.40m depth.				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 10.50m depth.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Comacchio MC405**	**SP**	**ADingle + JWickenden**	**GS+BNS**

GINT_LIBRARY_V8_04.GLB!XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 22:46 | MJB
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **05.11.09**	**34.32**	**E:235104.02 N:393020.49**	**1** of **2**

Samples and In-situ Tests				Water	Backfill & Instru-mentation	Description of Strata	Reduced Level	Depth (Thick ness)	Material Graphic Legend
Depth	No	Type	Results						
						Dark brown friable slightly gravelly TOPSOIL. Gravel is subangular to subrounded fine to medium of psammite and phyllite.	34.02	0.30	
0.30-0.80	1	B							
0.50-1.00	4	B				Firm brown mottled orange brown grey slightly sandy to sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse of mixed lithologies of psammite and phyllite with rare slate and quartzite. (Glacial Deposits)		(1.20)	
0.80	2	D							
1.20	3	D					32.82	1.50	
1.40	5	D		1					
1.50-1.95	6	SPT	N=21			Stiff dark grey slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse of mixed lithology including, sandstone, psammite and slate. (Glacial Deposits)			
1.50-1.95	7	B		1					
2.00	8	W							
2.40	9	D							
2.50-2.95	10	SPT(c)	N=17						
2.50-2.95	10	B							
3.40	11	D							
3.50-3.95	12	U	47 blows						
4.40	13	D							
4.50-4.95	11	SPT	N=19						
4.50-4.95	15	B							
5.90	16	D							
6.00-6.45	17	U	53 blows			Below 6.00m becoming bluish grey.			
7.40	18	D							
7.50-7.95	19	SPT	N=23						
7.50-7.95	20	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
04/11/09	09:00	0.00	-	150	
04/11/09	09:40	2.00	1.50	150	2.00
04/11/09	17:00	3.20	3.00	150	Dry
05/11/09	08:00	3.20	3.00	150	Dry
05/11/09	17:00	16.95	16.95	150	Dry

Chiselling

From	To	Duration (hh:mm)
12.60	12.80	00:20
14.75	15.00	00:30

General Remarks

1. Machine dug inspection pit to 1.20m depth.
2. Inspection pit stable during excavation.
3. No groundwater encountered during excavation.
4. Excavation easy to moderate.
5. Inspection pit backfilled with arisings on completion
6. Borehole drilled from 1.20m to16.95m.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	**Dando 2000**	**SP**	**NFowler**	**MD**

AGS

STRUCTURAL_SOILS_GINT_LIBRARY.GLB|CABLE PERCUSSION LOG | 761404 WYLFA LOGS ONLY.GPJ - v8_02 | 18/05/10 - 10:06 ★ = datamarker used throughout reporting for current exploratory position.
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **05.11.09**	**34.32**	**E:235104.02 N:393020.49**	**2** of **2**

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
8.90	21	D				Stiff dark grey slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse of mixed lithology including, sandstone, psammite and slate. (Glacial Deposits)		(15.45)	
9.00-9.45	22	U	87 blows						
10.40	23	D							
10.50-10.95	24	SPT	N=43			Below 10.50m becoming very stiff.			
10.50-10.95	25	B							
						Foreman notes boulders below 11.00m.			
11.90	26	D							
12.00-12.45	28	SPT	N=43						
12.00-12.45	28	B							
13.40	29	D							
13.50-13.95	29	$SPT_{(NR)}$	N=46						
13.50-13.95	30	B							
14.90	31	D							
15.00-15.45	32	SPT	N=41						
15.00-15.45	33	B							
16.40	34	D							
16.50-16.95	35	SPT	N=45						
16.50-16.95	36	B							
							17.37	16.95	
						Borehole terminated at 16.95m on client's instruction.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling		
From	To	Duration (hh:mm)

General Remarks

7. Groundwater encountered at 2.00m rising to 1.70m after 20 minutes.
8. Water added from 1.20m to 16.95m, 70 litres.
9. 50mm diameter HDPE monitoring well installed on completion.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	**Dando 2000**	**SP**	**NFowler**	**MD**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**1** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
										Dark brown gravelly TOPSOIL. Gravel is subangular to subrounded fine to medium of psammite and phyllite.			(0.30)	
												34.04	0.30	
										Firm brown mottled orange brown grey slightly sandy to sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse of mixed lithologies of psammite and phyllite with rare slate and quartzite. (Glacial Deposits)		34		
													(0.90)	
												33.14	1.20	
										Grey boulder CLAY (Foreman's description).		33		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
11/12/09	10:00	4.00	None	99	4.00
11/12/09	17:00	21.90	19.60	99	None
12/12/09	08:00	21.90	19.60	99	None
12/12/09	17:00	29.00	19.60	99	13.70
13/12/09	08:00	29.00	19.60	99	None
13/12/09	17:00	35.40	19.60	99	13.90
14/12/09	08:00	35.40	19.60	99	None
14/12/09	17:00	42.90	19.60	99	13.70

General Remarks

1. Machine dug inspection pit to 1.20m depth. (see log IP303)
2. Rotary open hole drilling from ground level to 19.60m using Odex system.
3. Rotary core drilling from 19.60m to 100.00m using T6H core barrel, impregnated core bits, and air/mist flush.
4. Water encountered at 4.00m on 11/12/2009.
5. 50mm diameter HDPE water monitoring well installed on completion.

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**2** of **56**

Mechanical Log: Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										(strata continues from previous page)		32		
												31		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
15/12/09	08:00	42.90	19.60	99	None
15/12/09	17:00	50.40	19.60	99	13.70
16/12/09	08:00	50.40	19.60	99	None
16/12/09	17:00	51.90	19.60	99	13.70
17/12/09	08:00	51.90	19.60	99	None
17/12/09	17:00	56.95	19.60	99	13.70
18/12/09	08:00	56.95	19.60	99	None
18/12/09	17:00	59.05	19.60	99	13.90

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**3** of **56**

Mechanical Log: Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
									1	*(strata continues from previous page)*		30 29		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
21/12/09	08:00	59.05	19.60	99	None
21/12/09	17:00	63.70	19.60	99	13.90
22/12/09	08:00	63.70	19.60	99	None
22/12/09	17:00	69.30	19.60	99	13.90
04/01/10	08:00	69.30	19.60	99	None
04/01/10	17:00	72.00	19.60	99	13.90
05/01/10	08:00	72.00	19.60	99	None
05/01/10	17:00	79.00	19.60	99	13.90

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**4** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
										(strata continues from previous page)		28		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
06/01/10	08:00	79.00	19.60	99	None
06/01/10	17:00	80.50	19.60	99	13.90
07/01/10	08:00	80.50	19.60	99	None
07/01/10	17:00	81.30	19.60	99	13.90
08/01/10	08:00	81.30	19.60	99	None
08/01/10	17:00	84.80	19.60	99	13.90
11/01/09	08:00	84.80	19.60	99	None
11/01/09	17:00	87.80	19.60	99	13.90

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**5** of **56**

Mechanical Log: Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										(strata continues from previous page)		27		
												26		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
12/01/10	08:00	87.80	19.60	99	None
12/01/10	17:00	90.80	19.60	99	13.90
13/01/10	08:00	90.80	19.60	99	None
13/01/10	17:00	94.85	19.60	99	13.90
14/01/10	08:00	94.85	19.60	99	None
14/01/10	17:00	100.00	19.60	99	None

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**6** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
										(strata continues from previous page)		25	(16.80)	
												24		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**AFoss + NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**7** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
										(strata continues from previous page)		23		
												22		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**8** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
										(strata continues from previous page)				
												21		
												20		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

AGS

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**9** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
										(strata continues from previous page)		19		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**10** of **56**

Mechanical Log: Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										(strata continues from previous page)		18		
												17		
												16.34	18.00	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**11** of **56**

Mechanical Log: Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										Broken ground with clay bands (Foreman's description) *(strata continues from previous page)*		16	(1.60)	
19.60-21.00	83	54	16		(00:35)					Medium strong to strong thin to thickly laminated narrowly foliated bluish grey and purple PSAMMITE and purple PHYLLITE. Discontinuities:-		14.74	19.60	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**12** of **56**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										Set 1:- 15-20 degrees, medium spaced, planar rough, open with slight orange staining, clean. (The New Harbour Group) 19.60m to 20.20m - NI.				
	83	54	16		(00:35)							14	(1.46)	
										20.47m to 20.70m frequent sub-vertical white calcite veining (2-5mm)				
										20.7m to 21.00m - AZCL.				
21.00-21.90 21.00-26.00												13.28	21.06	
	100	100	72		(00:35)		9.52E-06m/s			Strong thin to thickly laminated to thinly bedded narrowly foliated bluish grey and purple fine grained PSAMMITE and of purple PHYLLITE. Discontinuities:- Set 1:- 10-20 degrees, closely to medium spaced, planar rough to smooth, open, clean. (The New Harbour Group)		13	(1.09)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**13** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)	1[i]			
	100	100	72		(00:35)									
21.90-23.30												12.19	22.15	
										Medium strong very narrowly foliated bluish grey fine grained PSAMMITE with frequent ptygmatic chloritic veining. Discontinuities:- Set 1:- 10-20 degrees, closely to medium spaced, planar rough to smooth, open, clean. (The New Harbour Group) 22.30m to 23.60m frequent sub vertical white calcite veining (3-15mm) and 1 No. 10-20 degree stepped rough tight fracture, roughly oriented with veining	2[i]	12	(0.55)	
	100	100	57	170 340 690	(01:15)		9.52E-06m/s					11.64	22.70	
										Medium strong to strong thinly interbedded narrowly foliated bluish grey fine grained PSAMMITE and narrowly foliated purple PHYLLITE with frequent ptygmatic chloritic and quartz veining. Discontinuities:- Set 1:- 10-20 degree, closely to medium spaced, planar rough to smooth, tight to open, clean. Set 2:- 50-60 degree, widely spaced, planar rough, tight to open with some orange brown staining, calcite and quartz mineralisation. (The New Harbour Group)	3[i] 4[i]			
23.30-24.80												11		
	100	100	76		(01:20)									

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

STRUCTURAL_SOILS_GINT_LIBRARY.GLBIXCUSTOM - WYLFA - DETAIL LOG | 761404 WYLFA LOGS ONLY.GPJ - v8_02 | 18/05/10 - 13:43.⊙ = datamarker used throughout reporting for current exploratory position.
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**14** of **56**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
				170 340 690						*(strata continues from previous page)*	5[i] 6[i]			
	100	100	76	440 2000 2975	(01:20)		9.52E-06m/s			23.79m to 23.79m 1 No. sub horizontal (10-20 degrees degree) white calcite vein (1-4mm) oriented with laminae.		10		
24.80-26.10	100	100	90		(01:00)					24.80m to 26.25m zone of much ptygmatic chloritic veining and veinlets, generally in psammite, occasionally oriented with foliations.				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**AFoss + NFowler**	Checked By:	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**15** of **56**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)				
												9		
											7[i]			
	100	100	90		(01:00)		9.52E-06m/s							
26.00-31.00														
26.10-27.60				440 2000 2975										
												8		
													(7.55)	
							2.52E-07m/s				8[i]			
	100	100	93		(01:20)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**AFoss + NFowler**	Checked By:	**MDolby**

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BOREHOLE LOG

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Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**16** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	100	93		(01:20)					*(strata continues from previous page)*		7		
27.60-29.00				440 2000 2975			2.52E-07m/s				9[i]			
	100	100	60		(01:10)					28.60m to 29.70m zone of frequent ptygmatic chloritic and quartz veining and veinlets		6		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

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Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**17** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
					(01:10)					*(strata continues from previous page)*				
	100	100	60											
29.00-29.50														
					(00:15)									
	90	90	62											
												5		
29.50-31.00														
				440 2000 2975			2.52E-07m/s							
										29.90m to 29.95m zone of frequent ptygmatic chloritic and quartz veining and veinlets				
					(01:15)									
	93	85	44											
												4.09	30.25	
										Strong locally very strong very narrowly foliated bluish grey fine grained PSAMMITE with occasional thin laminations of purple phyllite and 50-60 degree, upto 15mm, calcite; randomly oriented, upto 2mm, ptygmatic chlorite, quartz veins. Discontinuities:- Set 1:- 10-20 degree, medium occasionally very closely spaced,	10[i]	4		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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BOREHOLE LOG

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Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**18** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
31.00-32.40 31.00-36.00	93 100	85 93	44 93	440 2000 2975	(01:15) (01:20)		2.52E-07m/s 4.35E-06m/s			planar rough, closed to open with occasional orange brown staining, clean. Set 2:- 50-60 degree, widely spaced, planar rough, clean. (The New Harbour Group) 30.27m to 30.35m - AZCL in a thin band of very weak highly fractured narrowly foliated purple phyllite. 30.46m to 30.53m - AZCL in a thin band of very weak highly fractured narrowly foliated purple Phyllite.		3 2		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**AFoss + NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

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Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**19** of **56**

Depth	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
32.40-33.90	100	93	74	440 2000 2975	(01:15)		4.35E-06m/s			*(strata continues from previous page)*	11[i] 12[i]	1	(6.83)	
33.90-35.40	100	100	100	50 1000 2625	(01:10)									

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**20** of **56**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)		0		
	100	100	100		(01:10)									
				50 1000 2625			4.35E-06m/s					-1		
35.40-36.85														
	100	100	96		(00:55)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**AFoss + NFowler**	Checked By:	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**21** of **56**

Depth	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
36.00-41.00										*(strata continues from previous page)*				
	100	100	96		(00:55)						13[i]	-2		
											16[i] 14[i] 15[i]			
36.85-38.30				50 1000 2625			8.30E-08m/s					-2.74	37.08	
										Medium strong locally weak very narrowly foliated reddish brown and purple PHYLLITE with occasional extremely closely spaced very thin laminae of bluish grey and purple fine grained Psammite. Discontinuities:- Set 1:- 10-20 degree,closely spaced, planar smooth, closed to tight, clean. Set 2:- 50-60 degree, closely spaced, planar rough, open, with calcitic mineralisation. (The New Harbour Group)	17[i]	-2.93	(0.19) 37.27	
	100	90	69		(00:50)						18[i]	-3		
										Medium strong to strong narrowly foliated bluish grey and purple PHYLLITE with extremely closely spaced lenticular blue grey fine grained psammite fabric. Discontinuities:- Set 1:- 10-20 degree, medium				

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**22** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
	100	90	69		(00:50)					spaced to widely spaced, planar smooth, closed to open with occasional orange brown staining, clean. Set 2:- (to 50.40m only) 50-60 degree, widely spaced, planar rough, tight with much orange brown staining, calcite and quartz mineralisation. (The New Harbour Group)	19[i]			
38.30-39.90				50 1000 2625			8.30E-08m/s					-4		
	100	100	77		(01:00)							-5		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**23** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
39.90-41.40	100	100	77	50 1000 2625	(01:00)		8.30E-08m/s			*(strata continues from previous page)*	20[i]	-6		
	100	93	87		(00:50)							-7		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

STRUCTURAL_SOILS_GINT_LIBRARY.GLBIXCUSTOM - WYLFA - DETAIL LOG | 761404 WYLFA LOGS ONLY.GPJ - v8_02 | 18/05/10 - 13:43.⊙ = datamarker used throughout reporting for current exploratory position.
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**24** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
41.40-42.90	100	93	66	50 1000 2625	(00:45)					*(strata continues from previous page)*	21[i]	-8		
42.90-43.15	88	80	0		(00:10)					42.90m to 42.93m - AZCL.				
43.15-44.50	100	93	34											

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**25** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)		-9		
											22[i]			
	100	93	34	50 1000 2625	(00:30)									
44.50-46.00												-10		
	100	96	76		(00:40)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**AFoss + NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**26** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)				
												-11		
	100	96	76		(00:40)								(16.53)	
											23[i]			
				50 1000 2625										
46.00-47.50														
											24[i]			
												-12		
	100	100	0.7		(00:40)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**AFoss + NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**27** of **56**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
47.50-49.00	100	100	0.7	50 1000 2625	(00:40)					*(strata continues from previous page)*	26[i] 27[i] 25[i] 28[i] 29[i]	-13 -14		
	100	84	56		(00:45)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**AFoss + NFowler**	Checked By:	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**28** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)				
	100	84	56		(00:45)									
49.00-50.40														
				50 1000 2625						49.40m to 49.85m predominantly bluish grey in colour		-15		
	100	100	82		(00:40)						30[i]	-16		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**29** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
50.40-51.70	100	100	100	50 1000 2625	(00:40)					*(strata continues from previous page)*	31[i] 32[i]	-17		
51.70-53.10	100	100	93		(00:40)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**AFoss + NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**30** of **56**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)				
												-18		
	100	100	93		(00:40)									
53.10-54.50				50 1000 2625							33[i]			
												-19		
	100	100	66		(00:35)									
												-19.46	53.80	
										Strong greenish grey very fine grained PSAMMITE with frequent ptygmatic quartz veining and veinlets. Discontinuities:- Set 1:- 5-15 degree, very closely				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**AFoss + NFowler**	Checked By:	**MDolby**

STRUCTURAL_SOILS_GINT_LIBRARY.GLBIXCUSTOM - WYLFA - DETAIL LOG | 761404 WYLFA LOGS ONLY.GPJ - v8_02 | 18/05/10 - 13:43.⊙ = datamarker used throughout reporting for current exploratory position.
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**31** of **56**

Depth	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										spaced, planar rough, tight to partially open with occasional orange brown staining, clean. (The New Harbour Group) 53.80m Engineer notes strata change very abrupt, no graduation, approximately horizontal (0 degree)			(0.50)	
	100	100	66		(00:35)							-19.96	54.30	
54.50-55.40	100	100	87	50 1000 2625	(00:35)					Strong locally medium strong bluish grey and purple narrowly foliated PHYLLITE with extremely closely spaced lenticular bluish grey fine grained psammite fabric and occasional ptygmatic quartz and calcitic veining. Discontinuities:- Set 1:- 20-30 degree, widely spaced, planar smooth, open with occasional orange brown staining, clean. (The New Harbour Group)	34[i]	-20		
55.40-56.50	100	86	53		(00:45)					55.55m to 55.62m - AZCL.	35[i]	-21	(1.85)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**32** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
										(strata continues from previous page)				
	100	86	53		(00:45)					56.11m to 56.15m becoming locally weak moderately fractured oriented with foliation (20-30 degrees) 56.13m to 56.17m fault.	36[i]	-21.81	56.15	
56.50-56.80	83	77	0	50 1000 2625	(00:15)					Medium strong purple and occasionally bluish grey very narrowly foliated PHYLLITE with extremely closely spaced lenticular bluish grey fine grained psammite fabric and occasional ptygmatic quartz veining. (The New Harbour Group) 56.36m to 56.50m becoming highly fractured, partially NI.		-22	(0.65)	
56.80-57.20	75	75	32		(00:20)					Medium strong bluish and purplish grey occasionally purple narrowly foliated PHYLLITE with extremely closely spaced lenticular bluish grey very fine grained psammite fabric and occasional ptygmatic quartz, chloritic and calcitic veining and veinlets. Discontinuities:- Set 1:- 20-30 degree, widely spaced, planar smooth, open, clean. Set 2:- (from 69.0m to 83.08m only) 40-50 degree, widely spaced, stepped rough, tight to open with occasional orange brown staining. (The New Harbour Group) 56.55m driller notes broken ground 56.95m to 57.05m - AZCL. 57.10m to 57.20m - AZCL. 57.20m to 57.35m zone of highly fractured, partially NI. 57.30m driller notes broken bands 57.35m to 57.40m - AZCL.		-22.46	56.80	
57.20-57.50	67	47	33		(00:15)						38[i]	-23		
57.50-57.90	100	88	70		(00:25)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**33** of **56**

Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)				
	100	88	70		(00:25)									
57.90-58.50											37[i]			
	100	100	100		(00:30)					58.13m to 58.37m highly fractured, partially NI.		-24		
				50 1000 2625										
58.50-59.00										58.50m to 58.75m - AZCL				
	50	0	0		(00:15)					58.75m to 59.00m - NI.				
59.00-60.10										59.00m to 59.65m moderately fractured.				
	100	95	95		(00:50)							-25		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**34** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
60.10-61.60	100 100	95 100	95 100	50 1000 2625 320 1000 2000	(00:50) (00:55)					*(strata continues from previous page)*	39[i]	-26		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**AFoss + NFowler**	Checked By:	**MDolby**

STRUCTURAL_SOILS_GINT_LIBRARY.GLBIXCUSTOM - WYLFA - DETAIL LOG | 761404 WYLFA LOGS ONLY.GPJ - v8_02 | 18/05/10 - 13:43.⊙ = datamarker used throughout reporting for current exploratory position.
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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**35** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
61.60-63.10	100 100	100 100	100 100	320 1000 2000	(00:55) (00:55)					*(strata continues from previous page)*		-27 -28	(12.40)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**36** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	100	100		(00:55)					*(strata continues from previous page)*				
63.10-64.60														
												-29		
	100	100	88	320 1000 2000	(00:45)									
												-30		
64.60-66.10														
	100	100	90		(00:55)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**AFoss + NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**37** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)				
												-31		
	100	100	90	320 1000 2000	(00:55)									
66.10-67.20														
	100	100	69		(00:45)						40[i]	-32		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**AFoss + NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**38** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)				
	100	100	69		(00:45)						41[i]			
67.20-68.60														
												-33		
				320 1000 2000						67.43m to 67.53m thin band of moderately fractured, partially NI.	42[i]			
	100	96	86		(00:55)									
											43[i]			
												-34		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**39** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)				
68.60-70.10	100	96	86		(00:55)									
	100	100	100	320 1000 2000	(00:40)					Medium strong thinly interbedded green grey fine to medium grained PSAMMITE and very narrowly foliated purple PHYLLITE and randomly oriented, upto 2mm, ptygmatic quartz, chlorite and calcite. Discontinuities:- Set 1:- 40-50 degree, medium to very widely spaced, stepped rough locally planar smooth, open brown stained, clean. (The New Harbour Group)	44[i] 46[i]	-34.86 -35	69.20	
70.10-71.30	100	100	84		(00:40)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**40** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)	47[i]			
												-36		
	100	100	84		(00:40)						45[i]			
				320 1000 2000										
71.30-72.60												-37		
	100	100	100		(00:45)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**41** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	100	100		(00:45)					*(strata continues from previous page)*				
												-38		
72.60-73.90				320 1000 2000									(7.35)	
	100	100	100		(00:50)							-39		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**42** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	100	100		(00:50)					*(strata continues from previous page)*				
73.90-75.30														
												-40		
	100	100	100	320 1000 2000	(00:50)					74.45m to 75.95m 1 no. 120mm x 200m quartz vein. 74.46m to 74.55m moderately fractured, roughly oriented with foliations (20-30 degrees).				
75.30-76.70												-41		
	100	96	96		(00:50)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**43** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	96	96	320 1000 2000	(00:50)					*(strata continues from previous page)*		-42		
												-42.21	76.55	
76.70-78.00	100	98	77		(00:55)					Medium strong thinly interbedded very narrowly foliated purple red PHYLLITE and strong grey fine grained PSAMMITE with randomly oriented, upto 3mm, very closely spaced, ptygmatic, quartz, calcite and chlorite veins. Discontinuities:- Set 1:- 20-50 degree, medium to widely spaced, planar, rough to smooth, open, clean. (The New Harbour Group)	48[i]	-43		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**44** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)	49[i]			
	100	98	77		(00:55)									
78.00-79.50														
				320 1000 2000								-44		
	100	100	100		(00:35)						50[i]			
													(5.20)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**AFoss + NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**45** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	100	100		(00:35)					*(strata continues from previous page)*	51[i]	-45		
79.50-80.30														
	100	88	52	320 1000 2000	(00:20)						53[i]			
80.30-81.00											52[i]	-46		
	71	50	29		(00:50)					80.50m to 80.60m highly fractured, partially NI. 80.50m to 81.90m becoming light brown and bluish grey in colour with frequent chloritic veining. 80.50m driller notes broken ground 80.70m to 80.75m highly fractured, partially NI.	54[i]			

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**AFoss + NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**46** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
81.00-82.50										*(strata continues from previous page)* 81.20m to 81.45m zone of highly fractured, partially NI with - AZCL within. 81.30m driller notes broken ground.		-47		
	97	93	83	320 1000 2000	(00:55)							-47.41	81.75	
										Medium strong thinly interbedded very narrowly foliated purple red PHYLLITE and strong grey fine grained PSAMMITE and randomly oriented, upto 3mm, ptygmatic, calcite, quartz and chlorite veins. (The New Harbour Group) 81.8m to 81.85m - AZCL.	55[i]		(0.50)	
												-47.91	82.25	
82.50-84.00										Strong locally medium strong bluish grey narrowly laminated very fine to coarse grained PSAMMITE with occasional narrowly foliated purple thin laminae of PHYLLITE and frequent ptygmatic chloritic veining. Discontinuities:- Set 1:- 20-30 degree, medium spaced, planar smooth to rough, open, clean. Set 2:- 40-50 degree, closely spaced, planar rough, open with occasional orange brown staining, calcite mineralisation. (The New Harbour Group)		-48		
	100	100	100		(00:45)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**47** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)				
											56[i]	-49		
	100	100	100		(00:45)						57[i]			
											58[i]		(2.64)	
				320 1000 2000										
84.00-84.20										84.03m driller notes broken ground 84.03m to 84.09m - AZCL.				
	100	70	50		(00:10)									
84.20-85.50												-50		
	100	100	100		(00:50)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**48** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page) 84.80m to 84.90m highly fractured, partially NI.		-50.55	84.89	
85.50-87.00	100	100	100	320 1000 2000	(00:50)					Strong purple very narrowly foliated PHYLLITE with occasional thin lenticular laminae of bluish grey very fine grained psammite and occasional ptygmatic pinkish white quartz veining. Discontinuities:- Set 1:- 10-20 degree, medium spaced, planar smooth, open, clean. (The New Harbour Group)	59[i] 60[i]	-51 -52	(1.79)	
	100	100	100		(01:10)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**49** of **56**

Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)		-52.34	86.68	
	100	100	100		(01:10)					Medium strong greenish grey very fine grained PSAMMITE with frequent ptygmatic chloritic and quartz veining. Discontinuities:- Set 1:- 40-50 degree, closely to medium spaced, planar rough, open with occasional orange brown staining, calcite mineralisation. (The New Harbour Group)	61[i] 63[i]		(0.58)	
87.00-88.50												-52.92	87.26	
				320 1000 2000						Medium strong purplish and bluish grey narrowly foliated PHYLLITE with some lenticular laminae of very fine grained bluish grey Psammite, frequent ptygmatic calcitic veining and some quartz veining and mineralisation (3-40mm) Discontinuities:- Set 1:- 45-55 degree, closely spaced, planar smooth, open, clean. (The New Harbour Group)	62[i]	-53	(0.98)	
	100	100	100		(00:01)									

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**50** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)		-53.90	88.24	
	100	100	100		(00:01)					Medium strong to strong very narrowly foliated purple PHYLLITE with some lenticular bluish grey very fine grained psammite fabric and occasional ptygmatic chloritic and quartz veining. Discontinuities:- Set 1:- 20-30 degree, widely spaced, planar smooth, tight to open with occasional orange brown staining, clean (The New Harbour Group)		-54		
88.50-90.00														
				320 1000 2000										
	100	100	100		(01:05)						64[i]	-55		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**51** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
90.00-91.30	100	100	94	320 1000 2000	(01:00)					*(strata continues from previous page)*			(3.84)	
												-56		
91.30-92.50	100	100	100		(01:00)							-57		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

STRUCTURAL_SOILS_GINT_LIBRARY.GLBIXCUSTOM - WYLFA - DETAIL LOG | 761404 WYLFA LOGS ONLY.GPJ - v8_02 | 18/05/10 - 13:43.⊙ = datamarker used throughout reporting for current exploratory position.
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**52** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)				
											65[i]	-57.74	92.08	
	100	100	100		(01:00)					Medium strong bluish and greenish grey very narrowly foliated PHYLLITE with frequent thin lenticular bluish grey very fine grained psammite fabric and frequent ptygmatic chloritic and quartz veining. Discontinuities:- Set 1:- 10-20 degree, planar rough, tight to open, clean (The New Harbour Group)	66[i]	-58		
92.50-93.90				320 1000 2000									(1.42)	
	100	100	100		(00:55)							-59		
											67[i]	-59.16	93.50	
										Medium strong to strong very narrowly foliated PHYLLITE with some lenticular bluish grey very				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**53** of **56**

Depth	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
93.90-95.40	100	100	100		(00:55)					fine grained psammite fabric and occasional ptygmatic chloritic and quartz veining. Discontinuities:- Set 1:- 20-30 degree, widely spaced, planar smooth, closed to open, clean. (The New Harbour Group)				
				320 1000 2000								-60		
	100	100	93		(01:00)					94.40m to 94.40m strata change noted as 50 degree.				
												-61	(3.65)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**54** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
95.40-96.90	100	100	87	320 1000 2000	(00:55)					*(strata continues from previous page)*	68[i]			
96.90-97.40	80	70	20		(00:55)					97.05m to 97.15m - AZCL. *Description on next sheet*	69[i]	-62 -62.81	97.15	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**55** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	80	70	20	320 1000 2000	(00:55)					Medium strong to strong bluish and greenish grey very narrowly foliated PHYLLITE with frequent thin lenticular bluish grey very fine grained psammite fabric and some ptygmatic chloritic and quartz veining. Discontinuities:- Set 1:- 30-40 degree, widely spaced, planar rough, open, clean. (The New Harbour Group)		-63		
												-64	(2.85)	
98.90-100.00	18	18	12		(00:10)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 303R**

Contract Ref:	Start: **11.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **15.01.10**	**34.34**	**E:235102.34 N:393018.68**	**56** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	18	18	12		(00:10)					*(strata continues from previous page)* 99.10m to 100.00m - AZCL.	70[i]	-65		
										Borehole terminated at 100.00m.		-65.66	100.00	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**AFoss + NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	**06.11.09** End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**1** of **56**

Mechanical Log: Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										MADE GROUND: Brown TOPSOIL.			(0.15)	
												16.42	0.15	
										MADE GROUND: Firm brown friable slightly sandy to locally sandy slightly gravelly CLAY with rare angular to subangular boulders of phyllite. Gravel is angular to subangular tabular fine to coarse of phyllite and rare psammite.			(0.30)	
												16.12	0.45	
										Stiff orangish brown mottled grey slightly sandy slightly gravelly to gravelly CLAY with frequent cobbles and boulders. Gravel is subangular fine to subrounded fine to coarse of phyllite, psammite, sandstone, mudstone and quartzite with possible glacial coal and limestone. (Glacial Deposits)		16	(1.05)	
												15.07	1.50	
										Gravel with clay bands (Foreman's description)		15		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
06/11/09	08:00	0.00	None	N/R	
06/11/09	10:00	3.00	0.00	107	3.00
06/11/09	17:00	4.90	4.90	107	None
06/11/09	08:00	4.90	4.90	107	0.70
06/11/09	17:00	9.80	4.90	107	None
11/11/09	08:00	9.80	4.90	107	0.50
11/11/09	17:00	13.00	4.90	107	None
12/11/09	08:00	13.00	4.90	107	0.60

General Remarks

1. Machine dug inspection pit to 1.50m depth. (see log IP305)
2. Rotary open hole drilling from ground level to 4.90m using odex system.
3. Rotary core drilling from 4.90m to 13.90m using 412 core barrel and PCD bit, then from 13.90 to 100.00m T6H core barrel and impregnated bit, using air/mist flush.
4. DTH used between 13.90 and 22.00m to open the borehole in an attempt to improve flush returns.

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**2** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
										(strata continues from previous page)			(1.50)	
												14		
									1			13.57	3.00	
										Broken PHYLLITE (Foreman's description)			(0.50)	
												13.07	3.50	
										PHYLLITE (Foreman's description)		13		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
12/11/09	17:00	17.30	4.90	99	None
13/11/09	08:00	17.30	4.90	99	None
13/11/09	17:00	18.20	4.90	99	None
16/11/09	08:00	18.20	4.90	99	0.00
16/11/09	17:00	18.90	4.90	99	None
17/11/09	08:00	18.90	4.90	99	0.00
17/11/09	17:00	20.30	4.90	99	None
18/11/09	08:00	20.30	4.90	99	0.00

General Remarks

5. Water encountered at 3.00m on 06/11/2009, standing level 0.70m.
6. 50mm diameter HDPE water monitoring well installed on completion.

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**3** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
										(strata continues from previous page)			(0.40)	
												12.67	3.90	
										Medium strong thinly laminated purple PHYLLITE. Highly weathered with subhorizontal and subvertical fractures with orange brown to dark brown surface staining. (The New Harbour Group)			(1.00)	
												12		
												11.67	4.90	
4.90-6.20	96	71	62	10 210 630	(01:10)					Strong very narrowly foliated purplish red PHYLLITE with very narrow lenticular green grey fine to medium grained psammite fabric and 30 to 80 degree, upto 2mm wide, extremely closely spaced ptygmatic and lenticular quartz, calcite and chlorite veins. Discontinuities:- Set 1:- 15-30 degree medium spaced planar, rough, incipient with dark brown staining, clean. Many drilling induced. Set 2:- 60-85 medium spaced planar, rough, incipient with dark	1[i] 2[i] 3[i]			

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
18/11/09	17:00	23.00	4.90	99	None
23/11/09	08:00	23.00	4.90	99	0.00
23/11/09	17:00	26.00	4.90	99	None
24/11/09	08:00	26.00	4.90	99	0.00
24/11/09	17:00	32.00	4.90	99	None
25/11/09	08:00	32.00	4.90	99	0.00
25/11/09	17:00	42.00	4.90	99	None
26/11/09	08:00	42.00	4.90	99	0.00

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**4** of **56**

Depth	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
5.50-10.50	96	71	62	10 210 630	(01:10)		1.99E-07m/s			brown staining, clean. Many drilling induced. (The New Harbour Group) *(strata continues from previous page)* 6.15m to 6.70m - NI.	4[i] 5[i] 7[i] 8[i] 9[i] 6[i]	11	(1.95)	
6.20-7.50	100	27	27		(00:25)					Strong to very strong thinly interlaminated very narrowly foliated greenish grey fine grained PSAMMITE with strong very narrowly foliated purplish red PHYLLITE. Discontinuities:- Set 1 :- 10-20 degrees closely spaced, planar, smooth, incipient, clean. (The New Harbour Group)	10[i] 11[i] 12[i]	10 9.72 9.42	(0.30) 6.85 7.15	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
26/11/09	17:00	45.50	4.90	99	None
27/11/09	08:00	45.50	4.90	99	0.00
27/11/09	17:00	48.50	4.90	99	None
30/11/09	08:00	48.50	4.90	99	0.00
30/11/09	17:00	53.20	4.90	99	None
02/12/09	08:00	53.20	4.90	99	0.00
02/12/09	17:00	60.50	4.90	99	None
03/12/09	08:00	60.50	4.90	99	0.00

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**5** of **56**

Mechanical Log						Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)											
	100	27	27			(00:25)					Strong very narrowly foliated purplish red PHYLLITE with very narrow lenticular green grey fine grained psammite fabric and 60-70 degree, upto 2mm, extremely closely spaced calcite veins. Discontinuities:- Set 1:- 10 degree planar, smooth, incipient, very tight clean. Many drilling induced. (The New Harbour Group) 7.50m to 7.59m - AZCL.	13[i]		(0.44)	
7.50-8.50													8.98 9	7.59	
												14[i]			
												15[i]			
	91	86	81	10 210 630		(01:30)		1.99E-07m/s			Very strong thickly interlaminated very narrowly foliated (poorly developed) with very narrow lenticular phyllite clasts green grey fine to medium grained PSAMMITE with strong very narrowly foliated purplish red PHYLLITE with very narrow lenticular psammite inclusions and 40-60 degree, upto 1mm wide, extremely closely spaced possible pyrite veins. Discontinuities:- Set 1:- 5 degree, planar, striated, very tight clean, (microfault). (The New Harbour Group)			(0.21)	
													8.77	7.80	
												16[i]			
												17[i]			
												18[i]			
											Strong to very strong very narrowly foliated purplish red PHYLLITE with 30-50 degree, upto 1mm, extremely closely spaced locally closely spaced ptygmatic quartz and calcite veins. Discontinuities:- Set 1:- 10 to 15 degree medium spaced, planar, striated, tight to partly open, clean. Many drilling induced. Set 2:- 60-85 degree medium to widely spaced, planar, rough, incipient with some dark brown staining. Many drilling induced. (The New Harbour Group)	19[i]			
8.50-9.80													8		
	100	62	26			(00:10)									

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
03/12/09	17:00	65.90	4.90	99	None
04/12/09	08:00	65.90	4.90	99	0.00
04/12/09	17:00	67.80	4.90	99	None
07/12/09	08:00	67.80	4.90	99	0.00
07/12/09	17:00	72.30	4.90	99	None
08/12/09	08:00	72.30	4.90	99	0.00
08/12/09	17:00	74.30	4.90	99	None
09/12/09	08:00	74.30	4.90	99	0.00

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**6** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	62	26		(00:10)					*(strata continues from previous page)*		7		
							1.99E-07m/s							
9.80-10.20				10 210 630							20[i]			
	98	75	75		(00:30)									
10.20-11.30										10.20m to 10.30m - AZCL.	21[i]			
					(00:35)							6	(5.64)	
10.50-15.50	91	91	91				6.90E-07m/s							

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
09/12/09	17:00	78.00	4.90	99	None
10/12/09	08:00	78.00	4.90	99	0.00
10/12/09	17:00	84.00	4.90	99	None
11/12/09	08:00	84.00	4.90	99	0.00
11/12/09	17:00	88.50	4.90	99	None
14/12/09	08:00	88.50	4.90	99	0.00
14/12/09	17:00	93.00	4.90	99	None
15/12/09	08:00	93.00	4.90	99	0.00

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**7** of **56**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)	22[i]			
	91	91	91		(00:35)						23[i]			
11.30-12.40										11.30m to 11.40m - AZCL.				
	93	27	0	10 210 630	(00:20)		6.90E-07m/s					5		
											24[i]			
12.40-13.00										12.40m to 12.48m - AZCL.				
	87	77	67		(00:20)							4		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
15/12/09	17:00	99.10	4.90	99	None
16/12/09	08:00	99.10	4.90	99	0.00
16/12/09	17:00	100.60	4.90	99	None

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09** End: **16.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404		**16.57**	**E:235245.20 N:393272.45**	**8** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	87	77	67		(00:20)					*(strata continues from previous page)*	25[i]			
											26[i]			
13.00-13.90										13.00m to 13.06m - AZCL.				
											27[i]			
											28[i]			
	93	89	88	10 210 630	(00:30)		6.90E-07m/s			Very strong bluish grey fine to medium grained PSAMMITE with 65-75 degree, upto 2mm, extremely closely spaced, quartz veins intersected by 20-30 degree lenticular calcite inclusions. (The New Harbour Group)		3.13	13.44	
												3.04	13.53	
													3	
											29[i]			
										Very strong very narrowly foliated purple PHYLLITE with 50- 75 degree, upto 5mm, very closely spaced lenticular locally boudinage of calcite locally quartz. Discontinuities:- Set 1:- 10-25 degrees closely to medium spaced, planar, smooth, very tight orange brown stained, clean. Set 2:- (13.34m-13.41m) 50 degrees, medium spaced, planar, smooth, incipient with occasional orange brown staining. (The New Harbour Group)	30[i]			
13.90-15.00														
	100	100	65		(00:45)								(1.19)	
											31[i]			

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**9** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										(strata continues from previous page)	32[i]-Ci]			
	100	100	65		(00:45)		6.90E-07m/s				33[i]		2	
15.00-15.30											34[i]	1.85	14.72	
	80	70	0	10	(00:15)					Strong to very strong very narrowly foliated purplish grey PSAMMITE with 20-55 degree upto 1mm wide, extremely closely spaced locally lenticular quartz veins intersected by randomly oriented upto 3mm wide, extremely closely spaced, ptygmatic chlorite veins. Discontinuities:- Set 1:- 15-30 degrees closely spaced, planar, smooth, very tight to incipient orange brown stained, clean. (The New Harbour Group) 15.06m to 17.02m - AZCL. Below 15.1m becoming green grey. Below 15.20m becoming bluish grey.				
15.30-15.80				210 630									(1.20)	
15.50-20.50	96	96	68		(00:30)						35[i]		1	
											36[i]			
										Below 15.70m frequent extremely closely spaced narrow lenticular bands of very narrowly foliated purplish red phyllite.	37[i]			
15.80-17.30							3.37E-06m/s					0.65	15.92	
	100	100	95		(01:20)					Strong to very strong thinly interbedded greenish bluish grey fine to medium grained PSAMMITE with narrow very closely to closely spaced lenticular phyllite inclusions and medium strong to strong very narrowly foliated purplish red PHYLLITE				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**10** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	100	95	10 210 630	(01:20)		3.37E-06m/s			and 20-60 degree randomly oriented upto 2mm, extremely closely spaced, lenticular and ptygmatic quartz and calcite veins. Discontinuities:- Set 1:- 15-20 degree medium to medium spaced, planar, striated locally planar smooth, very tight locally incipient orange brown stained, clean. Set 2:- (15.65m to 16.20m) 85 degree, planar, rough, very tight to incipient dark brown stained, clean. (The New Harbour Group)	38[i] 39[i] 41[i] 40[i] 42[i]-VC 43[i]	0	(2.15)	
17.30-17.60	100	100	100		(00:15)					Below 17.20m psammite is fine to coarse grained.		-1		
17.60-18.10	92	90	88		(00:30)						44[i]			

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	**06.11.09** End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**11** of **56**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
18.10-19.10	92	90	88	10 210 630	(00:30)		3.37E-06m/s			18.10m 20.00m - AZCL.		-1.50	18.07	
	100	100	95		(01:00)					Strong to very strong greenish bluish grey fine to coarse grained PSAMMITE with 10-70 degree upto 3mm, extremely closely spaced, ptygmatic chlorite veins and 40-85 degree, upto 30mm wide ptygmatic quartz veins. Discontinuities:- Set 1:-35 degrees microfault, planar, striated, very tight dark brown stained. (The New Harbour Group)	45[i] 46[i]	-2	(0.98)	
19.10-19.80	83	83	71		(00:45)					Strong to very strong very narrowly foliated purplish red PHYLLITE with 20- 40 degree upto 1mm wide, extremely closely spaced, ptygmatic, chlorite veins. Discontinuities:- Set 1:- 10-35 degree medium spaced, very tight to incipient dark brown stained, clean. (The New Harbour Group) 19.32m to 19.44m - AZCL.	47[i] 48[i] 49[i]	-2.48	19.05	
												-2.87	(0.39) 19.44	
										Very strong bluish grey fine to medium grained PSAMMITE with 40-60 degree upto 100mm wide very closely spaced quartz veins and 20-80 degree, upto 1mm, extremely closely spaced chlorite veins; 30-60 degree, upto 10mm, closely to very closely spaced, ptygmatic quartz veins. Discontinuities:- Set 1:- 2 no. 75-80 medium spaced		-3		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09** End: **16.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404		**16.57**	**E:235245.20 N:393272.45**	**12** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
19.80-21.20				10 210 630	(01:55)		3.37E-06m/s			undulating, rough, very tight to incipient localised red brown staining, clean. Set 2:- 1 no 10 degree undulating, rough, very tight to incipient, clean. (The New Harbour Group) 19.95m to 20.20m 5-15 degree upto 10mm pale green bands. Below 20.30m becoming fine to coarse grained.	50[i] 51[i] 52[i]	-4	(1.34)	
20.50-25.50	100	100	100							Below 20.50m occasional subrounded to rounded fine to medium grain sized inclusions of quartz and phyllite.		-4.21	20.78	
21.20-22.20	98	98	98	10 600 2000	(01:30)		2.23E-06m/s			Strong very narrowly foliated purplish red PHYLLITE with extremely closely spaced, narrow lenticular purplish grey fine grained psammite fabric and 10-20 degree, upto 1mm, ptygmatic, chlorite veins. (The New Harbour Group) 21.00m to 21.28m psammite fabric absent. 21.14m to 21.22 veining absent. 21.32m to 21.35m 20 degree, 4mm, quartz vein.		-5	(1.57)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09** End: **16.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404		**16.57**	**E:235245.20 N:393272.45**	**13** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	98	98	98		(01:30)					*(strata continues from previous page)*				
										21.74m to 21.85m strong interlaminated purple grey very narrowly foliated phyllite and fine grained psammite. 21.81m to 21.83m 3 no. 20 degree, semi boulinage, upto 12mm, quartz vein. Below 21.85m chlorite veins absent. Below 21.90m psammite fabric absent. Very closely spaced very narrow, green grey phyllite fabric.	53[i]			
22.20-23.00										22.18m to 22.35m - AZCL.				
												-5.78	22.35	
	81	72	64	10 600 2000	(01:45)		2.23E-06m/s			Extremely strong bluish grey fine grained PSAMMITE with extremely closely spaced, very narrow lenticular pale green phyllite fabric and randomly oriented, upto 2mm, lenticular and ptygmatic, calcite veins. (The New Harbour Group)	54[i]	-6	(0.45)	
										22.63m to 22.70m 40 degree, upto 10mm, quartz vein.	55[i]			
										Below 22.73m extremely closely spaced, very narrow, purple red phyllite.		-6.23	22.80	
23.00-24.00										Strong locally very strong very narrowly foliated purplish red PHYLLITE with extremely closely spaced, very narrow lenticular fine grained psammite fabric and randomly oriented, upto 2mm, ptygmatic, quartz and chlorite veins. (The New Harbour Group)				
	100	100	100		(00:35)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09** End: **16.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404		**16.57**	**E:235245.20 N:393272.45**	**14** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	100	100		(00:35)					*(strata continues from previous page)*		-7		
24.00-25.00	100	95	95	10 600 2000	(01:00)		2.23E-06m/s			24.20m to 24.25m - NI.	57[i] 56[i]	-8	(3.39)	
25.00-25.60	95	78	78		(01:00)					25.00m to 25.05m - AZCL.				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

STRUCTURAL_SOILS_GINT_LIBRARY.GLBIXCUSTOM - WYLFA - DETAIL LOG | 761404 WYLFA LOGS ONLY.GPJ - v8_02 | 19/05/10 - 10:35.△ = datamarker used throughout reporting for current exploratory position.
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	**06.11.09** End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**15** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)				
							2.23E-06m/s							
	95	78	78		(01:00)									
25.50-30.50										25.53m to 25.63m 70 degree upto 8mm, boulinage calcite vein.		-9		
25.60-26.00														
	95	95	95		(01:00)									
26.00-27.50														
				10 600 2000								-9.62	26.19	
							1.66E-07m/s			Very strong very narrowly foliated red PHYLLITE with 20-30 degree, upto 1mm, very closely spaced, lenticular calcite veins and 70-80 degree, upto 1mm, very closely spaced, lenticular, quartz veins. (The New Harbour Group)				
	37	37	37		(01:00)					26.55m to 27.50m - AZCL.		-10		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**16** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)			(1.75)	
	37	37	37		(01:00)									
27.50-29.10												-11		
				10 600 2000			1.66E-07m/s							
										Below 27.91m extremely closely spaced, narrow, lenticular, blue grey fine grained psammite bands.	58[i]	-11.37	27.94	
	100	92	92		(00:50)					Strong to very strong bluish purplish grey fine to medium grained PSAMMITE with extremely closely spaced, narrow, very narrowly foliated, lenticular purple red phyllite fabric and 40 degree, upto 1mm, extremely closely spaced, ptygmatic, chlorite; 10-20 degree, upto 1mm, extremely closely spaced, lenticular, ptygmatic, quartz veins. (The New Harbour Group)			(1.01)	
										28.53m to 28.78m phyllite bands absent.		-12		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**17** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)		-12.38	28.95	
29.10-30.50	100	92	92		(00:50)					Strong very narrowly foliated purplish red PHYLLITE with very closely spaced, very narrow, lenticular, bluish grey psammite fabric and 30-50 degree, upto 1mm, very closely spaced, lenticular, calcite; 70-80 degree, upto 3mm, very closely spaced, lenticular, quartz veins. (The New Harbour Group)				
	100	100	100	10 600 2000	(00:50)		1.66E-07m/s					-13	(2.37)	
30.50-32.00 30.50-35.50	100	99	99		(00:45)		1.61E-07m/s			30.40m to 31.00m psammite fabric absent.		-14		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**18** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										30.57m to 30.62m - NI. *(strata continues from previous page)*	59[i]			
											60[i]			
										Below 31.00m psammite fabric present.				
	100	99	99		(00:45)							-14.75	31.32	
				10 600 2000			1.61E-07m/s			Extremely strong bluish grey fine grained PSAMMITE with extremely closely spaced, narrow, very narrowly foliated, lenticular purple grey phyllite fabric and randomly oriented, upto 2mm, extremely closely spaced, lenticular, ptygmatic, chlorite veins. (The New Harbour Group)	62[i] 61[i]	-15		
32.00-33.40										31.95m to 32.28m 60-70 degree, upto 5mm, ptygmatic chlorite veins.				
	100	100	100		(00:45)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**19** of **56**

Mechanical Log						Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)											
											(strata continues from previous page)			(2.44)	
													-16		
											32.67m to 32.79m 60 degree, upto 5mm, ptygmatic, quartz vein.				
	100	100	100			(00:45)					32.90m becoming dark bluish grey.				
				10 600 2000				1.61E-07m/s							
33.40-34.90													-17		
												63[i]			
													-17.19	33.76	
	100	100	100			(00:45)					Strong very narrowly foliated red purple PHYLLITE with extremely closely spaced, very narrow, lenticular, bluish grey fine grained psammite fabric and 40-60 degree, upto 3mm, lenticular, locally boudinage calcite veins. Discontinuities:- Set 1:- 20 degree, closely to medium spaced, planar smooth, very tight yellow brown stained, clean. Set 2:- 70-80 degree, medium spaced, planar smooth, very tight	64[i] 65[i]			

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**20** of **56**

Mechanical Log: Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
	100	100	100	10 600 2000	(00:45)		1.61E-07m/s			yellow brown stained, clean. (The New Harbour Group) 33.95m calcite veins absent. Below 34.00m occasional narrow blue grey colours. Below 34.05m becoming greyish green and purple grey. 34.40m to 34.50m 40-60 degree, upto 1mm, very closely spaced, lenticular, ptygmatic green mineral veins.		-18	(1.72)	
34.90-36.10										Below 34.80m becoming bluish grey. 34.84m to 35.07m 70 degree, upto 8mm, calcite vein. 35.13m to 35.29m - NI.	66[i] 67[i] 68[i]			
	100	92	87		(00:43)							-18.91	35.48	
35.50-40.50							7.45E-08m/s			Strong greenish grey fine grained PSAMMITE with 10-30 degree, upto 2mm, extremely closely spaced, calcite veins. (The New Harbour Group) 35.59m to 35.84m 70 degree, upto 30mm, quartz and chlorite vein, with inclusions of psammite.	69[i] 70[i]	-19	(0.56)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

STRUCTURAL_SOILS_GINT_LIBRARY.GLBIXCUSTOM - WYLFA - DETAIL LOG | 761404 WYLFA LOGS ONLY.GPJ - v8_02 | 19/05/10 - 10:35.△ = datamarker used throughout reporting for current exploratory position.
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	**06.11.09** End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**21** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
					(00:43)					*(strata continues from previous page)*		-19.47	36.04	
	100	92	87							Strong to very strong very narrowly foliated greyish green and purplish grey PHYLLITE with extremely closely spaced, very narrow, lenticular fine grained psammite fabric and 40-60 degree, upto 3mm, very closely spaced, lenticular, chlorite veins. (The New Harbour Group) Below 36.28m becoming purple.				
36.10-37.60													(0.98)	
												-20		
	100	73	73	10 600 2000	(00:47)		7.45E-08m/s							
												-20.45	37.02	
										Strong bluish green grey fine grained PSAMMITE with 10-20 degree, upto 5mm, extremely closely spaced, ptygmatic, quartz veins. Discontinuities:- Set 1:- 10-20 degree closely spaced, planar smooth, very tight yellow brown stained, clean. (The New Harbour Group) 37.10m to 37.17m 50 degree, upto 10mm, quartz vein. 37.14m to 37.25m 50 degree, upto 2mm, quartz vein.	71[i] 72[i] 73[i]		(0.26)	
												-20.71	37.28	
										Strong very narrowly foliated purple PHYLLITE with extremely closely spaced, very narrow, psammite fabric and randomly oriented, upto 1mm, extremely closely spaced, ptygmatic, calcite veins. (The New Harbour Group) Below 37.38m becoming bluish green and greyish purple.			(0.42)	
37.60-39.10												-21		
	100	100	100		(00:51)							-21.13	37.70	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**22** of **56**

Mechanical Log						Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)											
	100	100	100	10 600 2000		(00:51)		7.45E-08m/s			Strong to very strong thickly interlaminated greenish grey fine grained PSAMMITE with very narrowly foliated greyish purple and green PHYLLITE and 20-70 degree, upto 5mm, lenticular, calcite veins. Discontinuities:- Set 1:- 10-20 degree, medium spaced, planar smooth, very tight pink red stained, clean. (The New Harbour Group) 37.74m to 38.00m 75 degree, upto 25mm, calcite vein.	74[i]	-22	(1.92)	
39.10-40.50												75[i]			
	100	100	100			(00:51)						76[i]	-23		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**23** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										Very strong very narrowly foliated green PHYLLITE with irregular, extremely closely spaced, psammite fabric and 40-60 degree, upto 5mm, lenticular, calcite veins. (The New Harbour Group)		-23.05	39.62	
	100	100	100		(00:51)		7.45E-08m/s						(0.50)	
											77[i]			
												-23.55	40.12	
										Very strong greenish grey fine grained PSAMMITE with very closely spaced, narrow, very narrowly foliated purple phyllite fabric and 50-80 degree, upto 2mm, very closely spaced, lenticular, quartz and calcite veins. Discontinuities:- Set 1:- 10-20 degree, closely spaced, planar smooth, incipient yellow brown stained, clean. (The New Harbour Group)	78[i]			
											79[i]			
40.50-42.00 40.50-45.50				10 600 2000							80[i]	-24		
											81[i]			
	100	96	93		(00:50)		3.22E-08m/s				82[i]		(1.60)	
										Below 40.98m phyllite occasionally green.				
											83[i]			
											84[i]			
											85[i]			

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

STRUCTURAL_SOILS_GINT_LIBRARY.GLBIXCUSTOM - WYLFA - DETAIL LOG | 761404 WYLFA LOGS ONLY.GPJ - v8_02 | 19/05/10 - 10:35.△ = datamarker used throughout reporting for current exploratory position.
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	**06.11.09** End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**24** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)		-25		
	100	96	93		(00:50)							-25.15	41.72	
42.00-43.60										Strong very narrowly foliated purple PHYLLITE with extremely closely spaced, very narrow, lenticular grey fine grained psammite fabric and 10-20 degree, upto 2mm, very closely spaced, lenticular, quartz; 70-80 degree, upto 1mm, very closely spaced, lenticular, calcite veins. (The New Harbour Group) 42.07m to 42.15m - AZCL.			(0.48)	
												-25.63	42.20	
				10 600 2000			3.22E-08m/s			Very strong to extremely strong greenish grey fine grained PSAMMITE with extremely closely spaced, very narrow, lenticular, purplish brown phyllite fabric and randomly oriented, upto 2mm, extremely closely spaced, chlorite veins. (The New Harbour Group) 42.20m to 42.58m 60-70 degree, upto 15mm, closely spaced, quartz veins.		-26		
	95	95	91		(00:51)					*Description on next sheet*			(1.22)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**25** of **56**

Mechanical Log: Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										Below 43.15m chlorite veins absent. *(strata continues from previous page)*				
	95	95	91		(00:51)							-26.85	43.42	
43.60-45.00										Strong to very strong very narrowly foliated reddish purple PHYLLITE with extremely closely spaced, very narrow, lenticular bluish grey psammite fabric and 50-70 degree, upto 2mm, very closely spaced, lenticular, calcite veins. (The New Harbour Group) 43.48m upto 3mm diameter voids. 43.54m to 43.58m bluish grey fine grained psammite band. 43.84m to 43.88m 50 degree, upto 5mm, calcite vein.	86[i] 87[i]	-27	(0.54)	
				10 600 2000			3.22E-08m/s					-27.39	43.96	
										Very strong bluish grey fine grained PSAMMITE with randomly oriented, upto 2mm, lenticular, ptygmatic, chlorite and calcite veins. (The New Harbour Group)	88[i]		(0.29)	
	100	100	100		(00:50)							-27.68	44.25	
										Strong very narrowly foliated purplish red PHYLLITE with extremely closely spaced, irregular bluish grey fine grained psammite fabric and randomly oriented, upto 1mm, extremely closely spaced, ptygmatic, chlorite; 30-60 degree, upto 2mm, lenticular quartz veins. (The New Harbour Group) 44.30m to 44.34m greenish grey fine grained psammite band.		-28		
										44.88m to 44.99m red phyllite.			(1.25)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**26** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
45.00-45.50	76	42	42		(01:00)		3.22E-08m/s			*(strata continues from previous page)* 45.07m to 45.22m bluish grey fine grained psammite band. 45.34m to 45.46m - AZCL.		-28.93	45.50	
45.50-46.90 45.50-50.50	96	81	71	10 600 2000	(00:15)		1.82E-08m/s			Strong bluish grey FAULT BRECCIA comprising angular fine to coarse gravel sized clasts of phyllite, psammite and quartz in a psammitic matrix. (The New Harbour Group) 45.50m to 45.55m - AZCL. 45.68m to 45.78m discontinuous 50 degree, extremely closely spaced, quartz veins. 45.75m to 45.80m 50 degree, chlorite vein.	89[i]	-29 -29.23	(0.30) 45.80	
										Strong very narrowly foliated purplish pale green PHYLLITE with extremely closely spaced, irregular bluish grey fine grained psammite fabric and randomly oriented, upto 2mm, extremely closely spaced, lenticular, ptygmatic, chlorite and chlorite veins. (The New Harbour Group) 45.81m to 45.87m 50 degree, upto 5mm boulinage, calcite vein. 45.83m to 45.93m subvertical, upto 2mm, lenticular calcite vein. Below 46.05m phyllite becoming red purple. 46.25m to 46.44m bluish grey upto 9mm, fine grained psammite bands.		-30 -30.08	(0.85) 46.65	
										Very strong very narrowly foliated bluish grey PHYLLITE with extremely closely spaced, very narrow, irregular greenish grey				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
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Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
46.90-48.50	96	81	71		(00:15)					fine grained psammite fabric and randomly oriented, upto 2mm, extremely closely spaced, lenticular, ptygmatic, chlorite and cacite veins. Discontinuities:- Set 1:- 15-30 degree, closely spaced, planar smooth, very tight, clean. (The New Harbour Group)	90[i] 91[i] 92[i] 93[i]	-30.83	47.40 (0.75)	
	94	89	71	10 600 2000	(01:00)		1.82E-08m/s			Very strong bluish greenish grey fine grained PSAMMITE with 10-30 degree, upto 4mm, lenticular, ptygmatic, chlorite and quartz veins. Discontinuities:- Set 1:- 60-70 degree, closely spaced, planar smooth, very tight, clean. (The New Harbour Group) 47.41m to 47.44m extremely closely spaced, very narrow, lenticular purple phyllite bands.	94[i] 95[i] 96[i] 97[i] 99[i] 98[i]	-31 -31.58	(0.75) 48.15	
48.50-49.10	100	100	88		(01:05)					Very strong very narrowly foliated red PHYLLITE with 30 degree, upto 1mm, very closely spaced, lenticular chlorite veins. (The New Harbour Group) 48.22m to 48.26m - NI. 48.40m to 48.50m - AZCL.		-31.96	(0.38) 48.53	
										Very strong bluish grey fine grained PSAMMITE with		-32		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**28** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										extremely closely spaced, very narrow, lenticular, purple phyllite fabric and 30-50 degree, upto 1mm, extremely closely spaced, lenticular locally ptygmatic, chlorite veins. (The New Harbour Group)			(0.32)	
	100	100	88		(01:05)							-32.28	48.85	
49.10-50.10										Strong to very strong very narrowly foliated purple and blue grey PHYLLITE with extremely closely spaced, very narrow, lenticular, blue grey fine grained psammite fabric and 30-60 degree, upto 5mm, closely spaced, lenticular, quartz and calcite veins. (The New Harbour Group) 48.91m 30 degree, upto 4mm, calcite vein. 48.93m to 48.94m 30 degree bluish grey, fine grained psammite band.	100[i]		(1.12)	
	92	84	84	10 600 2000	(01:20)		1.82E-08m/s					-33		
												-33.40	49.97	
50.10-51.70										Very strong very narrowly foliated bluish green locally purple sheared PHYLLITE with occasional, irregular (disturbed), psammite lenses and 50-80 degree, upto 5mm, lenticular/discontinuous, chlorite veins. (The New Harbour Group) 49.97m to 50.20m subhorizontal to 50 degree, upto 5mm, closely spaced, lenticular calcite veins. Below 50.10m psammite bands absent.				
	100	100	100		(01:00)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**29** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
							1.82E-08m/s			*(strata continues from previous page)*			(0.95)	
												-34		
										Below 50.75m bluish grey fine grained psammite bands. 50.84m to 50.91m 50 degree, upto 20mm, undulating, lenticular, calcite vein. 50.85m to 50.90 brecciated zone.		-34.35	50.92	
	100	100	100		(01:00)					Strong very narrowly foliated purple PHYLLITE with extremely closely spaced, very narrow, blue grey fine grained psammite fabric and 25-35 degree, 1mm, very closely spaced, lenticular, locally ptygmatic chlorite veins. (The New Harbour Group)				
				10 600 2000						51.30m to 51.41m bluish grey fine grained psammite with very narrow, lenticular, purple phyllite fabric, band. Below 51.30m 50-80 degree, upto 3mm, very closely spaced, lenticular chlorite veins.			(0.76)	
												-35		
												-35.11	51.68	
51.70-53.20										Strong to very strong bluish grey fine grained PSAMMITE with very closely spaced, narrow, very narrowly foliated, lenticular, green grey phyllite and 40-70 degree, upto 3mm, very closely spaced, lenticular and ptygmatic calcite and chlorite veins. (The New Harbour Group)			(0.25)	
	100	100	100		(00:50)					Very strong very narrowly foliated purple PHYLLITE with extremely closely spaced, very narrow, lenticular, bluish grey, fine grained psammite fabric. (The New Harbour Group)		-35.36	51.93	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**30** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)				
												-36		
	100	100	100		(00:50)									
										52.86m to 53.60m strong very narrowly foliated bluish grey psammite with extremely closely spaced, very narrow, lenticular, purple blue phyllite fabric.	101[i]		(2.19)	
				10 600 2000										
53.20-54.70														
	100	100	100		(00:50)							-37		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**31** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)		-37.55	54.12	
	100	100	100		(00:50)					Very strong bluish grey fine grained PSAMMITE with closely spaced, very narrow, lenticular, purple and blue phyllite fabric and randomly oriented, upto 3mm, lenticular to ptygmatic chlorite, calcite and quartz. (The New Harbour Group) Below 54.30 calcite and quartz veins absent. 54.37m to 54.42m disturbed structure with concentration of 1mm, ptygmatic, chlorite veins. 54.42m to 54.53m very narrowly foliated bluish green phyllite band. Below 54.45m chlorite veins absent.	102[i]	-38	(0.63)	
54.70-56.10				10 600 2000								-38.18	54.75	
	100	100	100		(00:50)					Strong very narrowly foliated bluish green PHYLLITE with 30-60 degree, upto 1mm, closely spaced, lenticular, ptygmatic, chlorite veins. (The New Harbour Group) 54.85m to 55.02m becoming greyish purple. 55.10m 30 degree, upto 2mm, lenticular, calcite vein.		-38.61	(0.43) 55.18	
										Strong to very strong bluish green fine grained PSAMMITE with extremely closely spaced, narrow, purple phyllite fabric and randomly oriented, upto 1mm, extremely closely spaced, ptygmatic chlorite veins. (The New Harbour Group)		-39	(0.47)	
												-39.08	55.65	
										Strong very narrowly foliated bluish green PHYLLITE with very closely spaced, very narrow, lenticular blue green psammite				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**32** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	100	100		(00:50)					fabric and randomly oriented, upto 2mm, ptygmatic, chlorite veins. (The New Harbour Group) *(strata continues from previous page)*	103[i]		(0.65)	
56.10-57.60												-39.73	56.30	
	100	100	100	10 600 2000	(00:45)					Very to extremely strong bluish green fine grained PSAMMITE with extremely closely spaced, narrow, irregular, green purple phyllite fabric and 40-70 degree, upto 2mm, very closely spaced, ptygmatic chlorite veins. (The New Harbour Group)		-40		
										Below 56.70m phyllite fabric becoming irregular.				
										Below 56.80m 50-70 degree, upto 4mm, very closely spaced, lenticular quartz veins.			(1.70)	
										57.03m to 57.18m very narrowly foliated blue green phyllite band.		-41		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**33** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
57.60-59.00	100	100	100	10 600 2000	(00:45)					*(strata continues from previous page)* Below 57.75m chlorite veins absent.		-41.43	58.00	
										Strong to very strong very narrowly foliated bluish green locally purple PHYLLITE with extremely closely spaced, very narrow, lenticular, blue green psammite fabric and randomly oriented, upto 2mm, lenticular, ptygmatic chlorite veins. Discontinuities:- Set 1:- 50-70 degree, medium spaced, planar to undulating, very tight local yellow brown stained, clean. (The New Harbour Group) Below 58.15m psammite fabric absent. 58.60m to 58.80m disturbed structure. 58.70m to 58.92m 50 degree, semi boulinaged, upto 20mm, quartz vein. 58.73m to 58.92m 70 degree brecciated zone.	104[i] 105[i] 106[i]	-42	(1.20)	
59.00-60.50	100	80	80		(00:45)					59.07m to 59.10m - NI. 59.17m to 59.26m 50 degree upto 3mm, boulinaged pyrite vein. Strong to very strong very narrowly foliated purple grey PHYLLITE with extremely closely spaced, very narrow, lenticular bluish grey fine grained		-42.63	59.20	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**34** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										psammite fabric and 40-50 degree, upto 2mm, closely spaced, lenticular calcite and quartz veins. (The New Harbour Group) *(strata continues from previous page)* Below 59.50m purple.		-43	(0.98)	
	100	80	80		(00:45)					60.08m to 60.18m brecciated phyllite. 60.13m to 60.21m 50 degree, upto 10mm boulinaged, quartz vein.	107[i]	-43.61	60.18	
60.50-62.10				10 600 2000						Very strong bluish grey fine grained PSAMMITE with extremely closely spaced, very narrow, lenticular, purple phyllite fabric and randomly oriented, upto 4mm, ptygmatic quartz and chlorite. Discontinuities:- Set 1:- 60 degree closely to medium spaced, planar smooth, very tight pink red stained, clean. (The New Harbour Group) 60.25m to 60.30m - NI. 60.56m pale yellow phyllite band.	108[i]	-44	(0.62)	
	94	84	76		(00:45)					Very strong very narrowly foliated reddish purple PHYLLITE with extremely closely spaced, very narrow, lenticular, bluish grey fine grained psammite fabric and 40-70 degree, upto 2mm, extremely closely to closely spaced, lenticular, chlorite and calcite veins. (The New Harbour Group) *Description on next sheet*		-44.23	60.80	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**35** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
					(00:45)					61.15m to 61.19m greenish grey fine grained psammite band.			(1.44)	
	94	84	76									-45		
										61.72m to 61.82m - AZCL.				
										61.82m to 61.84m - NI.				
62.10-63.60				10 600 2000								-45.67	62.24	
					(00:50)					Very to extremely strong greenish grey fine to coarse grained PSAMMITE with 50-70 degree, upto 10mm, very closely spaced calcite veins and randomly oriented, upto 2mm, ptygmatic, chlorite veins. (The New Harbour Group) 62.28m to 62.32m extremely closely spaced, very narrow, purple phyllite bands. 62.46m to 62.70m extremely closely spaced, very narrow, purple phyllite bands.				
	100	100	100									-46		
										62.92m to 63.08m strong to very strong, very narrowly foliated				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09** End: **16.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404		**16.57**	**E:235245.20 N:393272.45**	**36** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
63.60-65.00	100 100	100 97	100 97	10 600 2000	(00:50) (00:48)					purple phyllite with very narrow, lenticular, bluish grey fine grained psammite fabric. 63.28m to 63.55m 40-70 degree, upto 1mm, ptygmatic black mineral veins.	109[i] 110[i]	-47 -47.67	(2.00) 64.24	
										Very strong dark bluish grey fine grained PSAMMITE with very closely spaced, very narrow, lenticular purple phyllite fabric and 70-80 degree, upto 3mm, very closely spaced, lenticular quartz veins. Discontinuities:- Set 1:- 80 degree, medium spaced, planar rough, very tight, clean. (The New Harbour Group) Below 64.50m fine to medium grained.	111[i]	-48	(0.66)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09** End: **16.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
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Mechanical Log						Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)									
										(strata continues from previous page)		-48.33	64.90	
	100	97	97		(00:48)					Very strong very narrowly foliated purplish red PHYLLITE with extremely closely spaced very narrow, lenticular, bluish grey fine grained psammite fabric and randomly oriented upto 3mm, ptygmatic, calcite and chlorite veins. (The New Harbour Group)			(0.93)	
65.00-65.90														
	100	89	89	10 600 2000	(00:45)							-49		
65.90-66.30												-49.26	65.83	
	100	100	100		(00:35)					Very strong greenish grey PSAMMITE with 20-60 degree, very closely spaced, lenticular, ptygmatic, chlorite veins and 50-80 degree upto 10mm, closely spaced, lenticular, calcite veins. (The New Harbour Group)				
66.30-67.80														
	100	100	100		(00:50)							-50		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

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761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**38** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	100	100	10 600 2000	(00:50)					*(strata continues from previous page)*				
67.80-69.30	100	91	91		(00:15)							-51	(4.37)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

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Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)				
												-52		
	100	91	91		(00:15)						112[i]			
											113[i]			
69.30-70.80				10 600 2000										
										Below 69.54m occasional randomly oriented, upto 20mm, irregular chlorite veins.		-53		
	100	100	100		(00:50)									
												-53.63	70.20	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09** End: **16.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404		**16.57**	**E:235245.20 N:393272.45**	**40** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
70.80-72.30	100	100	100	10 600 2000	(00:50)					Strong to very strong very narrowly foliated purple red PHYLLITE with extremely closely spaced very narrow, bluish grey fine to medium grained psammite fabric and 50-70 degree, upto 4mm, lenticular locally ptygmatic, chlorite, quartz and calcite veins. Discontinuities:- Set 1:- 70-80 degree, widely spaced, planar smooth, highly disturbed. (The New Harbour Group) 70.22m to 70.26m disturbed blue grey fine grained psammite band with fine to medium grain sized clasts of phyllite. 71.00m to 71.26m structure of rock highly disturbed	114[i] 115[i] 116[i]	-54 -55	(1.84)	
	100	100	100		(00:50)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

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761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**41** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
												-55.47	72.04	
	100	100	100		(00:50)					Strong to very strong highly disturbed and sheared bluish grey locally pale purple fine grained PSAMMITE and red purple PHYLLITE with 20-80 degree, upto 20mm, lenticular, disturbed, calcite veins. Discontinuities:- (The New Harbour Group)			(0.24)	
												-55.71	72.28	
72.30-72.70										Extremely strong brecciated bluish grey fine grained PSAMMITE with extremely closely spaced, very narrow, brecciated, phyllite fabric and 40-60 degree, upto 8mm, very closely spaced, lenticular, calcite vein. (The New Harbour Group)		-56		
	100	100	100		(00:49)									
72.70-72.80										72.70m to 72.94m extremely strong very narrowly foliated red orange phyllite band. 72.73m to 72.87m - AZCL.				
	30	30	30		(00:30)									
72.80-74.30				10 600 2000						72.94m to 73.04m pale purple band.			(1.72)	
	95	95	95		(00:15)									
										73.57m to 73.67m phyllite fabric absent. 73.62m 20 degree, upto 15mm, calcite vein.		-57		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

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Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)		-57.43	74.00	
74.30-75.80	95	95	95	10 600 2000	(00:15)					Strong very narrowly foliated green and pale purple PHYLLITE with extremely closely spaced, very narrow, lenticular, greenish grey fine grained psammite fabric and 50-80 degree, upto 3mm, extremely closely spaced, lenticular chlorite and calcite; 10-20 degree, upto 2mm, extremely closely spaced, lenticular calcite veins. (The New Harbour Group) 74.51m to 74.52m - NI.		-58	(0.78)	
	96	95	95		(00:50)					Strong to very strong greenish grey fine grained PSAMMITE with 30-50 degree, upto 5mm, very closely spaced, discontinuous quartz veins and 80 degree, upto, 3mm, very closely spaced, locally discontinuous calcite and quartz veins. Discontinuities:- Set 1:- 15-45 degree, closely to widely spaced, planar smooth, clean. (The New Harbour Group) 75.01m to 75.17m extremely closely spaced, very narrow, lenticular, reddish pink phyllite fabric.		-58.21 -59	74.78	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	96	95	95		(00:50)					75.62m to 75.70m strong very narrowly foliated, greyish green and purple grey phyllite with extremely closely spaced, very narrow, greenish grey psammite fabric; band.			(1.87)	
75.80-76.50										75.75m to 75.80m strong very narrowly foliated, greyish green and pinkish green phyllite band. 75.80m to 75.86m - AZCL. 75.86m to 75.92m - NI.				
	100	91	84		(00:45)					76.29m to 76.35m 30 degree, upto 25mm, rounded lenticular, quartz inclusion.	117[i]			
76.50-78.00				10 600 2000						76.50m to 76.62m - AZCL.	118[i]	-60		
												-60.08	76.65	
	92	92	92		(01:00)					Very strong greenish grey fine grained PSAMMITE with disturbed, brecciated purple red phyllite fabric and 30-40 degree, 5mm-40mm, extremely closely spaced, undulating locally lenticular, quartz veins. (The New Harbour Group) 76.65m to 76.68m 60 degree, upto 20mm, chlorite vein. 76.80m to 76.89m predominantly quartz matrix with inclusions of psammite. 76.89m to 76.93m randomly oriented, upto 5mm, extremely closely spaced, lenticular, chlorite veins.	119[i]	-60.38	(0.30) 76.95	
										Very strong dark greenish grey fine grained PSAMMITE with extremely to very closely spaced, very narrow, lenticular, red phyllite fabric and randomly oriented, upto 5mm, extremely	120[i]	-60.71	(0.33) 77.28	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

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Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
					(01:00)					closely spaced, lenticular, calcite veins. Discontinuities:- Set 1:- 40 degree, medium spaced, planar smooth, tight to very tight, clean. (The New Harbour Group) Below 77.15m, 40-50 degree, upto 15mm, very closely spaced, lenticular, chlorite veins.		-61	(0.62)	
	92	92	92							Strong very narrowly foliated greyish purple and greyish green PHYLLITE with extremely to very closely spaced, very narrow, lenticular red phyllite fabric and randomly oriented, upto 3mm, very closely spaced, lenticular, calcite and chlorite veins. (The New Harbour Group)		-61.33	77.90	
78.00-79.50										Very strong green grey fine grained PSAMMITE with extremely closely spaced, very narrow, lenticular, purple phyllite fabric and randomly oriented, upto 1mm, very closely spaced, lenticular to ptygmatic chlorite; 70-80 degree, upto 2mm, closely spaced, lenticular, calcite veins. (The New Harbour Group) 78.19m to 78.30m strong very narrowly foliated red phyllite with extremely closely spaced, very narrow, greenish grey psammite fabric; band.				
				10 600 2000										
	97	97	97		(01:10)					78.87m phyllite fabric predominantly green.		-62	(1.55)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**45** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	97	97	97		(01:10)					79.18m to 79.39m phyllite fabric absent.		-62.88	79.45	
79.50-81.00	97	97	97	10 600 2000	(00:40)					Medium strong locally weak very narrowly foliated greyish green to purple PHYLLITE with extremely closely spaced, very narrow, greenish grey fine grained psammite fabric and 20 -30 degree, upto 2mm, very closely spaced, lenticular, calcite veins. Discontinuities:- Set 1:- 45 -70 degree, undulating rough, very tight, clean. (The New Harbour Group) 79.45m to 79.55m - AZCL.	121[i] 122[i]	-63	(1.83)	
										Below 80.55m becoming bluish grey.	123[i] 124[i]	-64		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09** End: **16.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404		**16.57**	**E:235245.20 N:393272.45**	**46** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
81.00-81.50	100	92	88		(00:40)					*(strata continues from previous page)* 81.10m reddish purple fabric.		-64.71	81.28	
81.50-82.50	100	100	100	10 600 2000	(00:15)					Very strong dark greenish grey fine grained PSAMMITE with extremely closely spaced, very narrow, disturbed, brecciated, greyish green phyllite fabric with 10 degree, upto 3mm, extremely closely spaced, lenticular calcite and quartz veins. (The New Harbour Group) 81.44m to 81.48m - NI.		-65 -65.05	(0.34) 81.62	
										Strong disturbed and brecciated very narrowly foliated, greyish green PHYLLITE with extremely closely spaced, very narrow, irregular, dark green grey, fine grained, psammite fabric and 20 degree, upto 1mm locally 5mm, quartz veins. (The New Harbour Group)		-65.29	(0.24) 81.86	
										Strong very narrowly foliated greyish green PHYLLITE and 30-40 degree, upto 3mm, very closely locally extremely closely spaced, calcite and quartz veins. (The New Harbour Group) 82.10m purple colouring.		-65.65	(0.36) 82.22	
82.50-84.00	100	100	100		(00:30)					Strong to very strong very narrowly foliated purple PHYLLITE with extremely closely spaced, very narrow, lenticular bluish grey fine grained psammite fabric and randomly oriented, upto 6mm, extremely closely spaced, lenticular calcite, chlorite and quartz veins. Discontinuities:- Set 1:- 45 -70 degree, cliosely to medium spaced, undulating rough, very tight, clean. (The New Harbour Group) 82.64m to 82.73m band of blue grey fine grained psammite. 82.75m to 82.83m greyish green.		-66		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09** End: **16.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404		**16.57**	**E:235245.20 N:393272.45**	**47** of **56**

Mechanical Log: Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										(strata continues from previous page)				
											125[i]			
										83.04m to 83.10m band of bluish grey fine grained psammite.	127[i] 126[i]			
										83.21m to 83.31m band of bluish grey fine grained psammite.	128[i]			
	100	100	100		(00:30)					83.41m to 83.46m band of bluish grey fine grained psammite.			(2.50)	
												-67		
				10 600 2000										
										83.87m to 83.92m band of bluish grey fine grained psammite.				
84.00-85.50														
	100	100	100		(00:45)									
										Description on next sheet		-68		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09** End: **16.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404		**16.57**	**E:235245.20 N:393272.45**	**48** of **56**

Mechanical Log: Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										84.55m to 84.60m band of bluish grey fine grained psammite.		-68.15	84.72	
	100	100	100		(00:45)					Very strong greenish grey fine grained PSAMMITE with very closely spaced, very narrow, lenticular, purple phyllite fabric and randomly oriented, upto 2mm, extremely closely spaced, quartz veins. Discontinuities:- Set 1:- 10 -60 degree, medium spaced, planar smooth, very tight, clean. (The New Harbour Group)			(0.64)	
												-68.79	85.36	
85.50-87.00	100	100	100	10 600 2000	(00:40)					Strong to very strong very narrowly foliated purple green PHYLLITE with very closely spaced, very narrow, lenticular, greenish grey fine grained psammite fabric with randomly oriented, upto 2mm, extremely closely spaced, calcite, quartz and chlorite veins. (The New Harbour Group)	129[i]	-69		
										85.86m to 85.94m band of bluish grey fine grained psammite.	130[i]		(1.76)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09** End: **16.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404		**16.57**	**E:235245.20 N:393272.45**	**49** of **56**

Mechanical Log: Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										(strata continues from previous page)				
	100	100	100		(00:40)							-70		
										Below 86.90m purple.				
87.00-88.50												-70.55	87.12	
				10 600 2000						Very strong thickly interlaminated to thinly bedded greenish grey fine grained PSAMMITE with very narrowly foliated green PHYLLITE and randomly oriented, upto 10mm, chlorite, quartz and calcite veins. (The New Harbour Group)	131[i]	-71		
	100	100	100		(00:40)								(1.84)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**50** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
					(00:40)					*(strata continues from previous page)*				
88.50-90.00	100	100	100									-72		
												-72.39	88.96	
	99	99	94	10 600 2000	(00:40)					Strong very narrowly foliated greyish green locally purple PHYLLITE with extremely closely, greenish grey fine grained psammite fabric and 30-40 degree, upto 3mm, extremely closely spaced, calcite and upto 8mm, quartz veins. (The New Harbour Group) 89.11m to 89.19m purple.			(0.59)	
												-72.98	89.55	
										Strong to very strong very narrowly foliated purple PHYLLITE with extremely closely space, very narrow, lenticular, bluish grey fine grained psammite fabric and randomly oriented upto 5mm, quartz and calcite veins. (The New Harbour Group) 89.87m to 89.83m band of bluish grey fine grained psammite. 89.93m to 89.95m - AZCL.		-73		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**51** of **56**

Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
90.00-91.50	100	100	100	10 600 2000	(00:45)					89.95m to 90.00m band of bluish grey fine grained psammite. Very strong very thinly interbedded dark greenish grey fine grained PSAMMITE and purple grey PHYLLITE with 30 degree, upto 1mm, lenticular calcite and quartz veins. (The New Harbour Group) 90.95m to 91.00m band of very narrowly foliated purple phyllite with extremely closely spaced, very narrow, lenticular psammite fabric. 91.00m to 91.10m thinly inerlaminated. Below 91.10m randomly oriented, upto 1mm, ptygmatic chlorite veins.	132[i] 133[i]	-74 -74.18	(1.20) 90.75	
91.50-93.00	100	97	97		(00:45)					91.45m to 91.50m band of very narrowly foliated purple phyllite with extremely closely spaced, very narrow, lenticular psammite fabric. Strong very narrowly foliated purple locally dark grey PHYLLITE with extremely closely spaced, very narrowly, lenticular, greenish grey, fine		-74.98 -75	(0.80) 91.55	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**52** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	97	97	10 600 2000	(00:45)					grained psammite fabric and 25-60 degree, upto 3mm, lenticular calcite and quartz veins. Discontinuities:- Set 1:- 80 degree, extremely closely to medium spaced, planar smooth, very tight, clean. (The New Harbour Group) 91.85m to 91.90m band of greenish grey fine grained psammite.	134[i] 135[i]	-75.93	92.50 (0.95)	
										Strong to very strong greenish grey fine grained PSAMMITE with extremely closely spaced, very narrow, purple phyllite fabric. (The New Harbour Group)		-76 -76.13	92.70 (0.20)	
93.00-93.60	100	100	100		(00:45)					Strong very narrowly foliated greenish purple PHYLLITE with extremely closely spaced, very narrowly foliated, lenticular, greenish grey fine grained psammite fabric and rare 10-50 degree, upto 1mm, calcite veins. (The New Harbour Group)	136[i]	-76.63	93.20 (0.50)	
										Very strong green grey fine grained PSAMMITE with very closely spaced, very narrow, purple phyllite fabric with randomly oriented, upto 5mm, extremely closely spaced, lenticular, ptygmatic chlorite veins. (The New Harbour Group)		-77		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**53** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
93.60-94.60	100	100	100	10 600 2000	(00:20)					*(strata continues from previous page)* 94.29m to 94.31m band of purple phyllite. 94.55m to 94.60m band of purple phyllite.		-78	(2.39)	
94.60-96.10	100	100	100		(00:35)					95.15m to 95.30m band of very narrowly foliated purple phyllite with extremely closely spaced, very narrow, lenticular psammite fabric.				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**54** of **56**

Depth	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										(strata continues from previous page)		-79.02	95.59	
	100	100	100		(00:35)					Strong disturbed and irregular very narrowly foliated purple PHYLLITE with extremely closely spaced, disturbed, irregular, lenticular, grey fine grained psammite fabric and randomly oriented, upto 1mm, lenticular, ptygmatic, calcite veins. (The New Harbour Group)		-79.31	(0.29) 95.88	
										Below 95.73m not disturbed and brecciated.				
96.10-97.60										Very strong very narrowly foliated (poorly developed) green grey fine grained PSAMMITE with extremely closely spaced, very narrow, lenticular, purple grey phyllite fabric. and 20-40 degree, upto 2mm, extremely closely spaced, lenticular, ptygmatic, calcite and chlorite veins. (The New Harbour Group)		-79.65	(0.34) 96.22	
				10 600 2000						Strong very narrowly foliated purple PHYLLITE with extremely closely spaced, very narrow, lenticular, greenish grey psammite fabric and 10-30 degree, upto 1mm, extremely closely spaced, calcite veins. (The New Harbour Group) 96.22m to 96.26m band of green grey fine grained psammite. 96.44m to 96.50m band of greenish grey fine to medium grained psammite.	137[i]	-80	(0.46)	
	96	96	96		(00:40)							-80.11	96.68	
										Very strong greenish grey fine grained PSAMMITE with extremely closely spaced, very narrow, purple phyllite fabric with randomly oriented, upto 5mm, extremely closely spaced, ptygmatic calcite, chlorite and quartz veins. (The New Harbour Group)			(0.97)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**55** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)				
	96	96	96		(00:40)					97.54m to 97.65m - AZCL.		-81		
97.60-99.10												-81.08	97.65	
										Very strong dark greenish grey fine grained PSAMMITE with extremely closely spaced, very narrow, irregular, lenticular, greyish green phyllite fabric and randomly oriented, upto 1mm, extremely closely to closely spaced, lenticular, ptygmatic, chlorite veins. Discontinuities:- Set 1:- 15-65 degree, medium spaced, planar smooth, tight, clean. (The New Harbour Group) 97.77m to 97.84m band of very narrowly foliated purple phyllite with extremely closely spaced very narrow lenticular, green grey fine grained psammite fabric.	138[i] 139[i]			
				10 600 2000										
	97	97	97		(00:35)							-82	(1.91)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Gryphon**	Drilled By:	**RP**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 305aR**

Contract Ref:	Start: **06.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **16.12.09**	**16.57**	**E:235245.20 N:393272.45**	**56** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	97	97	97		(00:35)					*(strata continues from previous page)*				
99.10-100.60										99.17m subhorizontal, upto 15mm, lenticular, quartz vein. Below 99.30m phyllite becoming grey green.	141[i] 140[i]	-82.99	99.56	
	93	93	93	10 600 2000	(00:35)					Strong to very strong very narrowly foliated purple PHYLLITE with extremely closely spaced very narrow dark green grey fine grained psammite fabric and randomly oriented, upto 1mm, lenticular, ptygmatic, chlorite veins. (The New Harbour Group) 100.10m to 100.20m band of very strong dark greenish grey fine grained psammite with very closely spaced, purple phyllite fabric 100.50m to 100.60m - AZCL.		-83 -84.03	(1.04) 100.60	
										Borehole terminated at 100.60m.				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Gryphon**	**RP**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**1** of **56**

Mechanical Log: Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										MADE GROUND: Dark brown slightly gravelly TOPSOIL. Gravel is very angular to rounded sandstone, quartzite and rare ceramic fragments.		16 15.96	(0.28) 0.28	
										Pale greenish grey slightly clayey very sandy angular to subrounded fine to coarse GRAVEL of phyllite and rare psammite.		15.59	(0.37) 0.65	
									1	Purplish brown BOULDER of phyllite. Recovered as slightly clayey very angular to angular fine to coarse sand and gravel.		15.34	(0.25) 0.90	
										Boulder clay (Foreman's description). (Glacial Deposits)		15		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
03/11/09	08:00	0.00	None	N/R	
03/11/09	17:00	10.50	9.50	107	
04/11/09	08:00	10.50	9.50	107	1.10
04/11/09	17:00	17.50	17.50	107	None
06/11/09	08:00	0.00	17.50	107	None
06/11/09	17:00	7.50	17.50	107	None
02/12/09	08:00	7.50	17.50	107	0.70
02/12/09	17:00	18.90	17.50	107	None

General Remarks

1. Machine dug inspection pit to 0.90m depth. (see log IP307)
2. Rotary open hole drilling from ground level to 7.40m using Odex system.
3. Rotary core drilling from 9.50m to 100.00m using T6H barrel, impregnated bit and air/mist flush.
4. Fractured/broken ground encountered between 14.00m and 17.50m. Fraste XL used to case off broken ground to 17.50m.
5. Water encountered at 1.20m on 03/11/2009, overnight standing level.

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**2** of **56**

Mechanical Log: Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										(strata continues from previous page)			(2.10)	
												14		
												13.24	3.00	
										Boulders (Foreman's description). (The New Harbour Group)				
												13		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
03/12/09	08:00	18.90	17.50	107	0.70
03/12/09	17:00	24.50	17.50	107	None
04/12/09	08:00	24.50	17.50	107	0.70
04/12/09	17:00	31.00	17.50	107	None
07/12/09	08:00	31.00	17.50	107	0.50
07/12/09	17:00	38.00	17.50	107	None
08/12/09	08:00	38.00	17.50	107	0.40
08/12/09	17:00	43.30	17.50	107	None

General Remarks

6. 50mm diameter HDPE water monitoring well installed on completion.

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**3** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
										(strata continues from previous page)		12		
												11		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
09/12/09	08:00	43.30	17.50	107	0.50
09/12/09	17:00	47.00	17.50	107	None
10/12/09	08:00	47.00	17.50	107	0.50
10/12/09	17:00	54.10	17.50	107	None
11/12/09	08:00	54.10	17.50	107	None
11/12/09	17:00	62.00	17.50	107	2.80
12/12/09	08:00	62.00	17.50	107	None
12/12/09	17:00	70.50	17.50	107	1.90

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**4** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
										(strata continues from previous page)				
												10	(6.50)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
13/12/09	08:00	70.50	17.50	107	None
13/12/09	17:00	75.20	17.50	107	2.30
14/12/09	08:00	75.20	17.50	107	4.00
14/12/09	17:00	79.80	17.50	107	None
15/12/09	08:00	79.80	17.50	107	3.90
15/12/09	17:00	84.80	17.50	107	None
16/12/09	08:00	84.80	17.50	107	3.80
16/12/09	17:00	90.50	17.50	107	None

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**5** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
										(strata continues from previous page)		9		
												8		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
17/12/09	08:00	90.50	17.50	107	4.00
17/12/09	17:00	99.50	17.50	107	None
18/12/09	08:00	99.50	17.50	107	4.10
18/12/09	17:00	100.00	17.50	107	None

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**6** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)		7		
9.50-10.50	90	40	19	0 110 560	(01:00)					Very strong purple green and greenish grey METABRECCIA comprising angular to subround medium to coarse gravel sized clasts of green grey psammite and green phyllite in very narrowly foliated (poorly developed) purple phyllite matrix with randomly oriented, upto 5mm, extremely closely spaced, ptygmatic, calcite and chlorite veins. Discontinuities:- Set 1:- Subhorizontal, closely spaced, planar rough, tight orange brown stained, clean. (The New Harbour Group) 9.50m to 9.60m - AZCL. 9.60m to 9.82m - NI. 9.88m to 10.00m - NI. 10.20m to 10.30m - NI.		6.74	9.50	
10.50-12.00	93	85	71		(00:20)					10.50m to 10.60m - AZCL. 10.60m to 10.66m - NI.		6		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Beretta T44 + Fraste**	Drilled By:	**GF**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**7** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
12.00-13.50	93 100	85 100	71 97	0 110 560	(00:20) (00:30)					*(strata continues from previous page)*	1[i] 2[i] 3[i] 4[i] 5[i] 6[i] 7[i] 8[i] 9[i] 10[i] 11[i]	5 4	(4.70)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**8** of **56**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	100	97		(00:30)					*(strata continues from previous page)*	12[i] 13[i] 14[i] 15[i]			
13.50-14.00	100	80	68	0 110 560	(00:30)						16[i]	3		
14.00-14.20	100	0	0		(00:30)						17[i] 18[i]			
14.20-15.00	94	50	14		(00:50)					Medium strong to strong very narrowly foliated (poorly developed) blue grey fine grained PSAMMITE with narrow, lenticular purple phyllite fabric with subvertical, upto 2mm,		2.04	14.20	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**9** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	94	50	14		(00:50)					extremely closely spaced calcite veins. Discontinuities:- Set 1:- Subhorizontal, extremely closely spaced, planar rough, incipient to tight dark brown stained, clean. Set 2:- Subvertical, very closely spaced, undulating rough, tight dark brown stained, clean. (The New Harbour Group) 14.20m to 14.25m - AZCL. 14.25m to 14.40m - NI. 14.80m to 15.00m - NI.	19[i] 20[i] 21[i] 22[i] 23[i] 24[i] 26[i] 25[i] 27[i] 28[i] 29[i] 30[i] 31[i]		(1.20)	
15.00-15.50	80	0	0	0 110 560	(00:50)					15.00m to 15.10m - AZCL. 15.10m to 15.40m - NI.		1 0.84	15.40	
15.50-16.50	60	21	0		(00:50)					Strong red PHYLLITE with occasional very narrow, lenticular green grey fine to medium grained psammite fabric and occasional randomly oriented, upto 3mm, calcite veins. Discontinuities:- Set 1:- 10-35 degree, extremely closely spaced, planar smooth, very tight black stained, clean. Set 2:- 80-90 degree, extremely closely spaced, planar smooth, very tight black stained, clean. (The New Harbour Group) 15.40m to 15.50m - NI. 15.50m to 15.90m - AZCL. 15.90m to 16.16m - NI.			(1.36)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Beretta T44 + Fraste**	Drilled By:	**GF**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**10** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)	32[i] 33[i]	0		
	60	21	0		(00:50)						34[i] 35[i] 36[i] 37[i] 38[i] 39[i] 40[i]			
16.50-17.50										16.50m to 16.76m - NI.				
												-0.52	16.76	
										Strong bluish grey and purple grey METABRECCIA comprising angular to subangular fine to coarse gravel sized clasts of phyllite and psammite in a psammitic matrix with randomly oriented, upto 3mm, lenticular calcite inclusions. Discontinuities:- Set 1:- 10-20 degree, extremely closely spaced, planar smooth, very tight, clean. (The New Harbour Group)	41[i] 43[i] 42[i] 44[i]	-0.66	16.90	
	100	64	33	0 110 560	(00:50)						45[i] 46[i] 47[i] 48[i] 50[i] 49[i]		(0.17)	
											51[i]	-0.83	17.07	
										Very strong very narrowly foliated (poorly developed) bluish grey fine grained PSAMMITE with extremely closely spaced, very narrow, irregular, lenticular phyllite fabric and occasional subrounded to subangular fine gravel sized calcite inclusions. Discontinuities:- Set 1:- 35 degree, very closely spaced, planar rough, tight dark brown stained, clean. Set 2:- 85-90 degree, very closely spaced, planar rough, very tight, clean. Set 3:- 20 degree, very closely spaced, planar rough, very tight, clean. (The New Harbour Group)	52[i] 53[i] 54[i] 55[i] 56[i] 57[i]	-1	(0.89)	
17.50-18.90														
	93	68	47		(00:36)						59[i] 58[i]			
										Very strong red PHYLLITE with occasional randomly oriented, very narrow, irregular, lenticular blue grey psammite inclusions and subhorizontal to 25 degree, upto 2mm, very closely spaced,	60[i] 63[i] 61[i] 64[i] 62[i]	-1.72	17.96	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**11** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	93	68	47	0	(00:36)					ptygmatic, chlorite, calcite and quartz veins. Discontinuities:- Set 1:- 10-20 degree, very closely spaced, planar smooth, very tight dark brown stained, clean. (The New Harbour Group) 17.07m to 17.15m - NI. 17.50m to 17.60m - AZCL. Below 17.60m Discontinuities:- Set 2:- 70-80 degree, extremely closely spaced, planar smooth, very tight dark brown stained, clean.	65[i] 66[i] 68[i] 67[i] 69[i] 70[i] 71[i]	-2	(0.94)	
18.90-19.15	80	60	60	110	(00:24)					Very strong locally extremely strong very narrowly foliated (poorly developed) bluish grey fine grained PSAMMITE with extremely closely spaced, very narrow, lenticular, purple phyllite fabric and 30 degree, upto 5mm, extremely closely spaced, quartz and chlorite veins. Discontinuities:- Set 1:- 10-30 degree, closely spaced, planar smooth, very tight to tight dark brown stained, clean. (The New Harbour Group) 17.96m to 18.45m frequent coarse gravel sized voids. *(strata continues from previous page)* 18.06m to 18.21m band of red non foliated phyllite. Below 18.47 structure and fabric highly disturbed and irregular.	72[i]	-2.66	18.90	
19.15-20.00	100	100	100	560	(00:51)					Very strong red PHYLLITE with 40-80 degree, upto 5mm, extremely closely spaced, lenticular quartz and calcite veins. (The New Harbour Group) 19.05m to 19.10m - AZCL. Below 19.20m 30-40 degree, upto 1mm, extremely closely spaced, ptygmatic chlorite veins.	73[i] 74[i]	-3 -3.06	(0.40) 19.30	
										Strong to very strong thickly interlaminated blue green grey fine grained PSAMMITE and very narrowly foliated purple grey PHYLLITE with 25-70 degree, upto 1mm, extremely closely spaced, lenticular, chlorite veins. Discontinuities:- Set 1:- 30-40 degree, closely to medium spaced, planar smooth, very tight yellow brown stained,	75[i] 76[i] 77[i]			

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**12** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	100	100		(00:51)					clean. (The New Harbour Group) *(strata continues from previous page)*				
20.00-21.50 20.00-25.00	100	95	95	0 110 560	(00:57)		6.08E-07m/s				78[i]	-4 -4.58	(1.52) 20.82	
										Strong to very strong very narrowly foliated greyish purple PHYLLITE with extremely closely spaced, very narrow, lenticular, greenish grey psammite fabric and randomly oriented upto 1mm, extremely closely spaced, ptygmatic, chlorite veins. (The New Harbour Group) 20.97m to 21.01m band of green grey fine grained psammite. 21.03m to 21.06m band of green grey fine grained psammite. 21.10m to 21.20m band of green grey fine grained psammite. 21.35m to 21.50m band of green grey fine grained psammite.	79[i] 80[i]	-5		
21.50-23.00	93	92	87		(00:55)					21.50m to 21.55m band of green grey fine grained psammite.			(1.50)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**13** of **56**

Depth	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										21.55m to 21.65m - AZCL. *(strata continues from previous page)* Below 21.70m purple green.	81[i] 82[i] 83[i] 84[i]	-6.08	22.32	
	93	92	87	0 110 560	(00:55)		6.08E-07m/s			Very strong thinly interbedded greenish grey fine grained PSAMMITE and very narrowly foliated greenish grey PHYLLITE with randomly oriented, upto 1mm, ptygmatic chlorite veins. (The New Harbour Group)	85[i] 86[i] 87[i]	-6.71	(0.63) 22.95	
23.00-24.50	100	100	97		(00:55)					Strong very narrowly foliated greyish green and purple grey PHYLLITE with extremely closely spaced, very narrow, lenticular greenish grey fine grained psammite fabric and randomly oriented, upto 1mm, extremely closely spaced, ptygmatic chlorite veins. Discontinuities:- Set 1:-30-40 degree, closely to medium spaced, planar smooth, very tight orange brown, clean. (The New Harbour Group)	88[i] 89[i]	-7		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**14** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page) 23.42m to 23.53m band of green grey fine grained psammite.	90[i] 91[i] 92[i]		(0.95)	
												-7.66	23.90	
	100	100	97		(00:55)					Very strong greenish grey fine grained PSAMMITE with very closely spaced, very narrow, greyish purple phyllite fabric and randomly oriented, upto 1mm, extremely closely spaced, ptygmatic chlorite and quartz veins. (The New Harbour Group)	93[i]			
				0 110 560			6.08E-07m/s					-8	(0.88)	
24.50-26.00											94[i]			
												-8.54	24.78	
	100	100	95		(00:55)					Strong to very strong thinly interbedded very narrowly foliated green purple PHYLLITE and very strong greenish grey fine grained PSAMMITE with randomly oriented, extremely closely spaced, ptygmatic chlorite and occasional quartz veins. (The New Harbour Group)				
25.00-30.00							1.16E-06m/s						(0.82)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**15** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)		-9		
				0 110 560										
	100	100	95		(00:55)					Very strong greenish grey fine grained PSAMMITE with very closely spaced, very narrow, lenticular grey green phyllite fabric and randomly oriented, upto 1mm, extremely closely spaced, ptygmatic, chlorite veins. Discontinuities:- Set 1- 30 degree, medium spaced, planar smooth, very tight dark brown stained, clean. (The New Harbour Group)	95[i] 96[i]	-9.36	25.60	
26.00-27.30							1.16E-06m/s			26.02m to 26.06m band of green grey fine grained psammite. 26.07m to 26.12m band of green grey fine grained psammite.	97[i]	-10	(1.10)	
				50 200 420						26.25m to 26.35m 3 no. bands of green grey fine grained psammite. Below 26.25m occasional randomly oriented, upto 3mm, quartz veins.	98[i]			
	88	88	88		(00:49)					Below 26.55m becoming thickly interlaminated with green grey fine grained psammite.	99[i]	-10.46	26.70	
										Very strong thinly to medium interbedded very narrowly foliated (poorly developed) green grey fine grained PSAMMITE with very narrowly foliated grey green PHYLLITE with very narrow, lenticular greenish grey fine grained psammite fabric and 30-50 degree, upto 1mm, ptygmatic,				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

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Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**16** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
27.30-28.80	88 100	88 76	88 62	50 200 420	(00:49) (00:51)		1.16E-06m/s			chlorite veins. Discontinuities:- Set 1:- 20-30 degree, medium to locally closely spaced, planar smooth, very tight dark brown stained, clean. (The New Harbour Group) *(strata continues from previous page)* 27.15m to 27.30m - AZCL. Below 27.88 highly fractured. Strong to very strong very narrowly foliated red PHYLLITE with extremely closely spaced, very narrow, lenticular blue grey fine to medium grained psammite fabric and randomly oriented, upto 5mm, calcite; 30 degree, upto 3mm, lenticular chlorite veins. (The New Harbour Group) 28.35m to 28.40m highly disturbed.	100[i] 101[i] 102[i] 103[i] 105[i] 104[i] 106[i] 107[i] 108[i] 109[i] 110[i] 111[i] 112[i] 113[i]	-11 -12 -12.11 -12.54	(1.65) 28.35 (0.43) 28.78	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Beretta T44 + Fraste**	Drilled By:	**GF**	Logged By:	**NFowler**	Checked By:	**MDolby**

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761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**17** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
28.80-30.30	100	100	100	0 70 2000	(00:50)		1.16E-06m/s			Strong to very strong very narrowly foliated red PHYLLITE with extremely closely spaced very narrow, lenticular, bluish grey fine grained psammite fabric and randomly oriented, upto 15mm, ptygmatic calcite, chlorite and quartz veins. Discontinuities:- Set 1:- 50-70 degree, closely to widely spaced, planar rough, very tight, clean. (The New Harbour Group)		-13		
30.00-35.00										29.85m to 29.90m band of bluish grey fine to medium fine grained psammite with narrow very thin, lenticular, brecciated phyllite fabric.	114[i] 115[i]	-14		
30.30-31.00	100	100	100		(00:45)		8.32E-09m/s			30.48m 31.15m medium interbedded purplish red phyllite band.				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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BOREHOLE LOG

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Wylfa B Power Station	**RWEnpower**	**BH 307R**

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761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**18** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	100	100		(00:45)					*(strata continues from previous page)*				
31.00-32.00											116[i]			
											117[i]			
	100	100	100	0 70 2000	(00:42)		8.32E-09m/s					-15		
32.00-33.50														
	100	100	100		(00:53)							-16	(6.95)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

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Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**19** of **56**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	100	100	0 70 2000	(00:53)		8.32E-09m/s			*(strata continues from previous page)*		-17		
33.50-35.00	100	100	100		(00:55)					33.64m to 33.75m highly disturbed and irregular fabric.	118[i] 119[i] 120[i]			

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**20** of **56**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										34.17m 34.21m band of blue grey brecciated psammite. *(strata continues from previous page)*		-18		
										34.43m, 30mm diameter psammite inclusion.				
	100	100	100		(00:55)		8.32E-09m/s				121[i]			
35.00-36.50 35.00-40.00				0 70 2000										
										35.25m to 35.95m brecciated fine grained psammite and phyllite.		-19		
	100	100	95		(00:53)		2.1E-08m/s					-19.49	35.73	
										Strong to very stong very narrowly foliated purple red PHYLLITE with extremely closely spaced, very narrow, blue grey fine grained psammite fabric and 50-60 degree, upto 3mm, calcite and chlorite veins. Discontinuities:-	122[i] 123[i] 124[i]			

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Beretta T44 + Fraste**	Drilled By:	**GF**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**21** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
36.50-38.00	100 100	100 100	95 100	0 70 2000	(00:53) (00:55)		2.1E-08m/s			Set 1:- 45-60 degree, extremely closely spaced, planar smooth, very tight orange brown stained, clean. (The New Harbour Group) 35.76m to 35.80m brecciated fine grained psammite and phyllite. 35.80m to 35.85m greyish purple band. 36.22m to 36.34m blue grey fine grained psammite band with irregular phyllite fabric.	125[i] 126[i]	-20 -20.44	(0.95) 36.68	
										Strong to very strong very narrowly foliated purplish red PHYLLITE with extremely closely spaced, narrow, lenticular bluish grey fine grained psammite fabric and randomly oriented, upto 3mm, ptygmatic, calcite chlorite and quartz veins. Discontinuities:- Set 1:- 10-20 degree, closely to widely spaced, planar smooth, very tight brown stained, clean. (The New Harbour Group)	127[i] 128[i]	-21	(2.20)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**22** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	100	100		(00:55)					*(strata continues from previous page)*				
38.00-39.50											129[i]	-22		
	100	100	93	0 70 2000	(00:57)		2.1E-08m/s							
												-22.64	38.88	
										Very strong thinly interbedded very narrowly foliated purple and red PHYLLITE with very strong, purplish grey fine to medium grained PSAMMITE and subhorizontal to 40 degree, upto 1mm, extremely closely spaced, ptygmatic chlorite veins. (The New Harbour Group)	130[i]		(0.56)	
											131[i]	-23		
										39.32m 15 degree, upto 10mm, lenticular quartz vein.	132[i]			
											133[i]			
										39.41m 20 degree, planar striated, microfault, 10mm displacement.	134[i]	-23.20	39.44	
39.50-41.00										Very strong very narrowly foliated red locally purple PHYLLITE with extremely closely spaced,				
	100	100	100		(01:01)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**23** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
40.00-45.00	100	100	100	0 70 2000	(01:01)		2.1E-08m/s Shut in			very narrow, lenticular fine grained psammite fabric and randomly oriented, upto 3mm, ptygmatic quartz and chlorite veins. Discontinuities:- Set 1:-20-60 degree, medium to widely spaced, planar rough and smooth, very tight, clean. (The New Harbour Group) 39.72m to 39.76m disturbed band of blue grey fine grained psammite. 40.35m to 40.84m 30-50 degree, upto 1mm, lenticular calcite veins. 40.85m to 41.00m structure and fabric highly disturbed.	135[i] 136[i] 137[i]	-24		
41.00-42.30	100	100	100		(00:57)							-25	(3.74)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**24** of **56**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	100	100		(00:57)					*(strata continues from previous page)*				
42.30-43.10	100	91	88	0 70 2000	(00:47)		Shut in				138[i] 139[i]	-26		
43.10-43.20	60	60	0		(00:20)					43.14m to 43.18m - AZCL.		-26.94	43.18	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09** End: **18.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404		**16.24**	**E:235657.29 N:393296.51**	**25** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (h:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
43.20-43.30	100	100	100		(00:17)					Very strong purple grey fine to coarse grained PSAMMITE with occasional subround to round, fine to medium gravel sized clasts of various lithology and randomly oriented, upto 1mm, extremely closely spaced chlorite locally quartz veins. (The New Harbour Group)		-27		
43.30-44.00														
	100	100	100		(00:47)								(1.10)	
44.00-45.50				0 70 2000			Shut in				140[i]			
	100	100	100		(00:59)					Strong to very strong very narrowly foliated locally irregular red purple PHYLLITE with extremely closely spaced, very narrow, lenticular, blue grey fine grained psammite fabric and randomly oriented, upto 3mm, extremely closely spaced chlorite veins. Discontinuities:- Set 1:-35-80 degree, medium to widely spaced, planar rough and smooth, very tight, clean. (The New Harbour Group)		-28 -28.04	44.28	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**26** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
45.00-50.00	100	100	100	0 70 2000	(00:59)		Shut in			*(strata continues from previous page)*		-29		
45.50-45.70	100	85	85		(00:15)									
45.70-45.85	100	100	100		(00:10)						141[i]			
45.85-47.00	96	93	91		(00:51)					45.89m to 45.94m - AZCL.	142[i]	-30		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**27** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)				
	96	93	91		(00:51)									
47.00-48.50														
												-31		
										47.55m to 47.65m structure and fabric highly disturbed.			(6.67)	
				0						47.66m to 47.84m 70 degree, upto 15mm, ptygmatic chlorite veins.				
	100	100	98	70 2000	(00:57)		Shut in							
										47.85m to 48.30m 45 degree, upto 2mm, extremely closely spaced, lenticular quartz veins.	143[i]			
										48.20m 40-50 degree, upto 10mm, ptygmatic chlorite altered to quartz veins.		-32		
											144[i]			
48.50-49.00														
	100	100	96		(00:25)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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BOREHOLE LOG

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Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**28** of **56**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	100	96		(00:25)					*(strata continues from previous page)*				
49.00-50.00											145[i]			
	100	100	100	0 70 2000	(00:43)		Shut in			49.30m 20-30 degree, upto 15 degree, ptygmatic chlorite veins.		-33		
50.00-51.20 50.00-55.00														
	100	87	78		(00:45)		Shut in					-34		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**29** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
	100	87	78		(00:45)					*(strata continues from previous page)*	146[i] 147[i]			
												-34.71	50.95	
51.20-52.70				0 70 2000			Shut in			Very strong very narrowly foliated (poorly developed) dark blue grey fine grained PSAMMITE with extremely closely spaced, brecciated, red phyllite fabric and randomly oriented, upto 3mm, lenticular calcite veins. Discontinuities:- Set 1:- 40-50 degree, closely spaced, planar smooth, tight with pink brown clay infill. (The New Harbour Group) 51.10m to 51.20m - NI.	148[i] 149[i]		(0.30)	
												-35.01	51.25	
	100	95	95		(01:01)					Strong to very strong very narrowly foliated locally irregular purple red PHYLLITE with extremely closely spaced, very narrow to narrow, lenticular to irregular, blue grey fine grained psammite fabric and randomly oriented, upto 5mm, ptygmatic, calcite, chlorite and locally quartz veins. Discontinuities:- Set 1:- 45-50 degree, very closely to widely spaced, planar smooth, very tight, clean. (The New Harbour Group)	150[i] 151[i] 152[i] 153[i]			

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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BOREHOLE LOG

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Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09** End: **18.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404		**16.24**	**E:235657.29 N:393296.51**	**30** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										52.20m to 52.27m - NI. *(strata continues from previous page)*	154[i]	-36		
	100	95	95		(01:01)									
52.70-54.10										52.80m to 52.83m - NI.				
				0 70 2000			Shut in				156[i] 155[i]	-37		
	100	97	97		(00:53)									
											157[i]			
											158[i]			

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**31** of **56**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
54.10-55.60	100	97	97		(00:53)					53.97m to 54.07m 70 degree, upto 8mm, calcite vein. *(strata continues from previous page)*				
	100	99	99	0 70 2000	(00:53)		Shut in			54.33m to 54.44m - NI. Below 54.35m discontinuities are widely spaced.	159[i]	-38		
55.60-57.00	100	98	95		(00:51)						160[i]	-39		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**32** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
										(strata continues from previous page)				
												-40		
	100	98	95		(00:51)								(10.55)	
				0 70 2000										
										56.83m to 56.88m lenticular band of grey fine grained psammite.				
57.00-58.50														
	100	100	100		(00:55)							-41		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**33** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
	100	100	100		(00:55)					*(strata continues from previous page)*				
											161[i]	-42		
58.50-60.00	100	97	90	0 70 2000	(00:51)					59.20m to 59.35m structure and fabric highly disturbed.		-43		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**34** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	97	90		(00:51)					*(strata continues from previous page)*				
										59.55m to 59.95m discontinuities very closely to closely spaced.	162[i] 163[i] 164[i] 165[i]			
60.00-60.70	100	100	100	0 70 2000	(00:37)					60.37m to 60.54m 80 degree, upto 70mm, lenticular quartz vein.		-44		
										Below 60.55m highly disturbed structure and fabric.				
60.70-62.00	95	71	65		(00:39)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**35** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										61.17m to 61.25m - NI. *(strata continues from previous page)*	166[i]	-45		
										61.37m to 61.43m - AZCL.				
	95	71	65		(00:39)					61.55m to 61.60m - NI.				
												-45.56	61.80	
62.00-63.50				0 70 2000						Strong locally very strong very narrowly foliated (poorly developed) bluish grey PHYLLITE with extremely closely spaced, very narrow, irregular and disturbed, bluish grey fine grained psammite fabric with irregular bands of brecciated red phyllite and 30 to 60 degree, upto 3mm, very closely spaced, lenticular calcite and quartz veins. Discontinuities:- Set 1:- 30-40 degree, closely to medium spaced, planar smooth, very tight orange brown stained, clean. (The New Harbour Group) 62.04m to 62.10m - NI. 62.30m to 62.50m irregular phyllite bands within psammite absent.	167[i] 168[i] 169[i] 170[i]	-46	(1.28)	
	100	95	89		(00:47)						171[i]			
										Below 62.80m irregular phyllite bands within psammite present.	172[i]			

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**36** of **56**

Depth	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										(strata continues from previous page)		-46.84	63.08	
										Very strong bluish grey fine to medium grained PSAMMITE with very narrow, irregular, dark purple green phyllite fabric and randomly oriented, upto 4mm, extremely closely spaced, ptygmatic chlorite; subvertical to 50 degree, upto 100mm, very closely spaced, ptygmatic locally boudinaged, quartz veins. (The New Harbour Group)	173[i]	-47	(0.78)	
63.50-64.40	100	95	89		(00:47)					63.53m to 63.55m - NI.	174[i]	-47.62	63.86	
	100	98	98	0 70 2000	(00:30)					Strong to very strong very narrowly to irregularly foliated purple red PHYLLITE with extremely closely spaced, very narrow, irregular and disturbed bluish grey fine grained psammite fabric and randomly oriented, upto 10mm, lenticular, ptygmatic chlorite and quartz veins. (The New Harbour Group) 64.13m to 64.32m 70 degree, upto 15mm quartz vein.		-48	(0.58)	
64.40-66.00	95	84	84		(00:51)					Very strong purple grey becoming bluish grey fine to medium grained PSAMMITE with extremely closely spaced, lenticular, purple phyllite fabric and 30-45 degree, upto 3mm, extremely closely spaced, lenticular, ptygmatic chlorite; 45-65 degree, upto 8mm, very closely spaced, ptygmatic quartz veins. (The New Harbour Group)		-48.20	64.44	
													(0.44)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**37** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
										Below 64.84m frequent subround to round fine to coarse gravel sized clasts of various lithology.		-48.64	64.88	
										Very strong very narrowly foliated purple PHYLLITE with extremely closely spaced, very narrow, lenticular blue grey fine grained psammite fabric and 25-45 degree, upto 3mm, closely spaced, lenticular calcite veins. Discontinuities:- Set 1:- (64.90m to 65.18m) 5-15 degree, closely spaced, planar smooth, very tight clean. Set 2:- (Below 66.00m) 35-40 degree, medium to widely spaced, planar rough, very tight orange brown stained, clean. (The New Harbour Group) 64.93m to 64.97m - NI. 65.10m to 65.18m - AZCL.	175[i]			
											176[i]			
											177[i]			
												-49		
	95	84	84	0 70 2000	(00:51)					65.60m to 65.90m subvertical, upto 10mm quartz veins.				
										65.71m to 65.77m band of very strong blue grey and orange brown psammite.	178[i]			
66.00-67.60														
												-50		
	100	98	98		(00:51)						179[i]			
											180[i]			

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**38** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
67.60-69.00	100 99	98 96	98 95	0 70 2000	(00:51) (00:47)					*(strata continues from previous page)*	181[i] 182[i]	-51 -52	(3.90)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**39** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	99	96	95		(00:47)					*(strata continues from previous page)*		-52.54	68.78	
69.00-70.50				0 70 2000						Very strong bluish grey fine to medium grained PSAMMITE with 30-90 degree, upto 10mm, very closely spaced, lenticular quartz occasionally calcite, chlorite veins. Discontinuities:- Set 1:- 15-20 degree, closely to medium spaced, planar smooth, very tight, fine sand infill. Set 2:- 35-50 degree, closely to medium spaced, planar rough, very tight to tight orange brown stained, clean. Set 3:- 50-75 degree, medium to widely spaced, planar smooth, very tight, clean. (The New Harbour Group) 68.98m to 69.10m - AZCL.	184[i] 183[i] 185[i] 186[i] 187[i] 188[i] 190[i] 189[i] 191[i] 192[i]	-53		
	93	93	93		(00:43)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**40** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)		-54		
	93	93	93		(00:43)								(3.17)	
70.50-71.50											193[i]			
											194[i]			
											195[i]			
											196[i]			
											198[i]			
											197[i]			
	100	80	60	0 70 2000	(00:36)					71.01m to 71.30m subvertical, upto 25 degree, calcite vein.	199[i]			
											200[i]			
												-55		
											201[i]			
71.50-71.95														
											202[i]			
											203[i]			
										Below 71.60m highly disturbed structure and fabric.				
	100	22	22		(00:39)						204[i]			
										Below 71.80m - NI.				
												-55.71	71.95	
71.95-72.70	93	93	93							*Description on next sheet*				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**41** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	93	93	93	0 70 2000	(00:39)					Strong to very strong blue grey fine grained PSAMMITE with randomly oriented, upto 8mm, extremely closely spaced, ptygmatic chlorite, quartz and calcite veins. Discontinuities:- Set 1:- 10-25 degree, closely to medium spaced, planar smooth and rough, very tight to tight orange brown stained, clean. (The New Harbour Group) 71.95m to 72.00m - AZCL.	205[i] 206[i] 207[i]	-56		
72.70-73.50	96	96	89		(00:42)						208[i]			
										73.45m to 73.48m - AZCL.	209[i]	-57		
73.50-74.50	100	100	100		(00:41)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**42** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	100	100	0 70 2000	(00:41)					*(strata continues from previous page)*	210[i] 211[i]	-58		
74.50-75.20	100	100	87		(00:35)						212[i] 214[i] 213[i]			
75.20-76.70	100	100	96		(00:50)						215[i] 216[i]	-59		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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BOREHOLE LOG

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Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**43** of **56**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)				
											217[i]			
	100	100	96		(00:50)									
											218[i]	-60		
											219[i]			
				0							220[i]			
				70										
				2000						Below 76.60m discontinuities 20-35 degree, closely spaced, medium spaced.	221[i]			
76.70-78.20											222[i]			
											223[i]			
											224[i]			
											225[i]			
	100	97	89		(00:45)						226[i]			
												-61		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**44** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	97	89		(00:45)					*(strata continues from previous page)*	227[i]			
											228[i]			
											229[i]			
78.20-78.80	95	85	75	0 70 2000	(00:30)						231[i]	-62		
											230[i]			
											232[i]			
											233[i]			
78.80-79.80	99	94	94		(00:50)					78.77m to 78.81m - AZCL. Below 78.81m discontinuities very widely spaced.	234[i]			
											235[i] 236[i]			

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**45** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	99	94	94	0 70 2000	(00:50)					*(strata continues from previous page)*		-63		
79.80-80.80	100	90	77		(00:30)						237[i] 238[i]	-64		
80.80-82.30	100	100	100		(01:10)						239[i]		(17.81)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**46** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
	100	100	100	0 70 2000	(01:10)					*(strata continues from previous page)*	240[i]	-65		
82.30-83.30	100	100	100		(01:20)							-66		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**47** of **56**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
83.30-84.80	100 95	100 91	100 83	0 70 2000	(01:20) (01:00)					*(strata continues from previous page)* 83.20m to 83.38m 80 degree, upto 10mm, lenticular quartz veins.	241[i] 242[i] 243[i] 244[i]	-67 -68		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**48** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	95	91	83		(01:00)					*(strata continues from previous page)*	247[i] 245[i] 246[i] 248[i]			
84.80-85.40														
	100	100	93		(00:40)							-69		
85.40-86.80				0 70 2000							249[i]			
	100	100	99		(00:55)							-70		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**49** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
86.80-88.20	100 100	100 99	99 93	0 70 2000	(00:55) (00:55)					88.12m to 88.14m - NI.	250[i] 251[i] 252[i]	-71		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**50** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
88.20-89.00	100	98	98		(00:45)					*(strata continues from previous page)*		-72		
89.00-90.50	98	98	98	0 70 2000	(00:45)					89.05m to 89.08m - AZCL.		-73		
										Strong thinly interbedded very narrowly foliated purple PHYLLITE with extremely closely spaced, very narrow, lenticular bluish grey fine grained psammite fabric and very strong very narrowly foliated (poorly		-73.52	89.76	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**51** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										developed) blue grey fine grained PSAMMITE with extremely closely spaced, very narrowly foliated, purple brown phyllite fabric and 50-65 degree, upto 5mm, very closely spaced, lenticular quartz and calcite veins. (The New Harbour Group)	253[i]	-74	(0.66)	
	98	98	98		(00:45)							-74.18	90.42	
90.50-92.00				0 70 2000						Strong to very strong thickly interlaminated bluish grey fine grained PSAMMITE and very narrowly foliated, lenticular brown PHYLLITE with randomly oriented, upto 3mm, ptygmatic, lenticular, calcite, chlorite and quartz veins. Discontinuities:- Set 1:- 35-40 degree, closely to medium spaced, undulating rough to planar rough, very tight to tight brown stained, clean. (The New Harbour Group)	254[i] 255[i] 256[i] 257[i]		(0.75)	
	93	67	58		(00:45)							-74.93	91.17	
										Medium strong to strong very narrowly foliated purple PHYLLITE with extremely closely spaced, very narrow, lenticular blue grey fine grained psammite fabric and randomly oriented, upto 5mm, lenticular, ptygmatic, calcite, quartz and chlorite veins. Discontinuities:- Set 1:- 50-70 degree, closely to medium spaced, planar smooth to locally rough, very tight, clean. Set 2:0 15-25 degree, closely to medium spaced becoming medium spaced below 92.40m, planar smooth, very tight, clean occasional fine sand infill. (The New Harbour Group)	258[i] 259[i] 260[i]	-75		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	**03.11.09** End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**52** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
92.00-93.50	93	67	58		(00:45)					91.39 to 91.46m - NI. 91.49m to 91.63m band of blue grey fine grained psammite. 91.53m to 91.63m - NI. 91.63m to 91.94m - NI.	261[i] 262[i] 263[i] 264[i] 265[i]	-76		
93.50-95.00	100	90	75	0 70 2000	(00:45)					92.58m to 92.68m band of blue grey fine grained psammite. 92.75m to 92.76m band of blue grey fine grained psammite. 92.79m to 92.85m band of blue grey fine grained psammite. 92.90m to 92.95m band of blue grey fine grained psammite.	266[i] 267[i] 268[i] 269[i]	-77		
	97	94	87		(00:45)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**53** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
										(strata continues from previous page)				
											270[i]			
											271[i]			
												-78		
	97	94	87	0 70 2000	(00:45)									
													(7.28)	
											272[i]			
95.00-96.50										94.95m to 95.00m - AZCL. 95.00m to 95.07m - NI.				
										95.10m discontinuities widely spaced.	273[i]			
	100	91	91		(00:45)							-79		
										95.28m to 95.47m highly disturbed structure and fabric.				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**54** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
	100	91	91	0 70 2000	(00:45)					*(strata continues from previous page)*				
										Below 96.02m subvertical, upto 25mm, calcite vein. Foliation and fabric disturbed.	275[i]	-80		
96.50-98.00										96.50m to 96.56m - NI.				
	100	88	88		(00:45)						274[i] 276[i]			

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**55** of **56**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)		-81		
										97.34m to 97.90m subvertical, upto 50mm, calcite vein.	277[i]			
	100	88	88		(00:45)						278[i]			
											279[i] 280[i]			
98.00-99.50				0 70 2000							281[i]	-82		
												-82.21	98.45	
	100	99	99		(00:45)					Medium strong to strong very narrowly foliated purple red PHYLLITE with extremely closely spaced, very narrow, lenticular, bluish grey fine grained fine grained psammite and randomly oriented, upto 5mm, lenticular, ptygmatic, calcite, quartz and chlorite veins. (The New Harbour Group)	282[i]			

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 307R**

Contract Ref:	Start: **03.11.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **18.12.09**	**16.24**	**E:235657.29 N:393296.51**	**56** of **56**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
	100	99	99	0	(00:45)					*(strata continues from previous page)*		-83	(1.55)	
99.50-100.00	100	90	90	70 2000	(00:15)						283[i]			
										Borehole terminated at 100.00m.		-83.76	100.00	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44 + Fraste**	**GF**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**1** of **23**

Mechanical Log: Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										Dark brown friable TOPSOIL.		9.20	(0.25) 0.25	
										Stiff pale greenish grey sandy slightly gravelly CLAY. Gravel is angular to rounded fine to coarse of phyllite, psammite, sandstone and quartzite. (Glacial Deposits)		9 / 8.85	(0.35) 0.60	
										Greyish orangish brown silty slightly gravelly fine SAND. Gravel is subangular to subrounded fine to medium of phyllite and psammite. (Glacial Deposits)		8.60	(0.25) 0.85	
										Dark orangish brown clayey gravelly to very gravelly fine SAND. Gravel is angular to subrounded fine to coarse of mixed lithologies including phyllite, psammite, sandstone, limestone and quartzite. (Glacial Deposits)		8.25	(0.35) 1.20	
										Sandy Boulder Clay (Foreman's description).		8		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
28/10/09	08:00	0.00	None	N/R	
28/10/09	12:00	8.50	8.50	107	8.50
28/10/09	17:00	14.50	8.50	107	8.50
29/10/09	08:00	14.50	8.50	107	8.50
29/10/09	17:00	24.50	8.50	107	None
30/10/09	08:00	24.50	8.50	107	8.50
30/10/09	17:00	32.00	8.50	107	None
02/11/09	08:00	32.00	8.50	107	8.50

General Remarks

1. Machine dug inspection pit to 1.20m depth (see log IP309).
2. Rotary open hole drilling from ground level to 8.50m using Odex system.
3. Rotary core drilling from 8.50m to 40.00m using 412 core barrel, PCD core bit and air/mist flush.
4. Water encountered at 8.50m on 28/10/2009, standing level 8.50m.
5. Many drilling induced fractures, If not presented on the log.

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44**	**ND**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**2** of **23**

Mechanical Log: Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										strata continues from previous page			(2.20)	
												7		
												6.05	3.40	
										Sandy clay with gravel (Foreman's description)		6		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
02/11/09	12:00	40.00	8.50	107	8.50

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44**	**ND**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**3** of **23**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
										strata continues from previous page		5	(4.00)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44**	**ND**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**4** of **23**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
										strata continues from previous page		4		
												3		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44**	**ND**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**5** of **23**

Mechanical Log: Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										strata continues from previous page		2.05	7.40	
										Weathered broken rock (Foreman's description)			2	
													(1.10)	
									1			0.95	1	
8.50-10.00	92	84	17		(00:35)					Strong very narrowly foliated greenish grey PHYLLITE occasionally discoloured greenish brown. Discontinuities:- Set 1:- 20 degrees very closely locally extremely closely spaced, planar, smooth, tight with some dark brown surface staining, clean. Many drilling induced. Set 2:- 50 degrees very closely locally extremely closely spaced locally intersecting with set 1 planar, smooth, tight with some dark brown surface staining, clean.		8.50	(0.75)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44**	**ND**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**6** of **23**

Depth	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
9.00-13.00										Many drilling induced. (The New Harbour Group) 8.68m to 8.80m - AZCL.		0.20	9.25	
	92	84	17		(00:35)		2.85E-06m/s			Strong very narrowly foliated bluish greenish grey PHYLLITE. Discontinuities:- Set 1:- 10 to 30 degrees very closely spaced planar, smooth and rough tight with dark brown surface staining, clean. Many drilling induced. Set 2:- 40 to 70 degrees closely spaced, planar smooth to rough, tight with dark brown staining, clean. Many drilling induced. (The New Harbour Group) Below 9.25m becoming bluish grey. 9.67m to 9.70m - NI. 9.78m to 9.82m - NI.		0		
10.00-11.50										10.08m to 10.17m - AZCL.				
	94	83	24		(00:40)					Below 10.35m 50 to 70 degree closely spaced upto 5mm wide calcite veins.		-1		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44**	**ND**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**7** of **23**

Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										strata continues from previous page				
	94	83	24		(00:40)									
11.50-13.00										11.50m to 11.61m - AZCL.		-2		
							2.85E-06m/s							
	93	85	30		(00:40)								(5.60)	
												-3		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44**	**ND**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**8** of **23**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										strata continues from previous page 12.59m to 12.60m 20 degree 3mm quartz vein.				
	93	85	30		(00:40)		2.85E-06m/s							
13.00-14.50 13.00-18.00										13.08m to 13.16m - AZCL.				
										13.33m 40 degree lenticular upto 15mm wide quartz vein.				
												-4		
										13.48m to 13.56m - NI.				
	95	85	28		(00:40)		1.14E-06m/s							

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44**	**ND**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**9** of **23**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	95	85	28		(00:40)					*strata continues from previous page*		-5		
14.50-16.00										14.81m to 14.87m - NI.		-5.40	14.85	
	100	83	22		(00:35)		1.14E-06m/s			Strong to very strong thinly to thickly interlaminated greenish grey fine grained PSAMMITE and strong to very strong very narrowly foliated purplish green grey PHYLLITE with 40-70 degree, upto 5mm, closely to medium spaced wide lenticular calcite inclusions. Discontinuities:- Set 1:- 20 to 30 degree medium locally very closely spaced, planar smooth, very tight to incipient dark brown stained, clean. Many drilling induced. Set 2:- 45-50 degree medium spaced, undulating, rough, very tight dark brown stained, clean. Many drilling induced. (The New Harbour Group) 15.45m to 15.55m - NI.		-6	(1.95)	
16.00-17.50	94	77	25		(00:15)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Beretta T44**	Drilled By:	**ND**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**10** of **23**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										strata continues from previous page 16.18m to 16.30m - NI. 16.30m to 16.39m - AZCL.		-7		
												-7.35	16.80	
	94	77	25		(00:15)		1.14E-06m/s			Very strong green grey fine to medium grained PSAMMITE with vein sets, 15-30 degrees, upto 4mm, very closely spaced, lenticular and 60-80 degrees, upto 2mm, extremely closely spaced, lenticular of calcite and occasionally quartz. (The New Harbour Group)			(0.35)	
												-7.70	17.15	
17.50-18.00										Strong very narrowly foliated (poorly developed), psammitic PHYLLITE with 30-70 degree, upto 8mm, very closely to closely spaced, lenticular calcite locally quartz inclusions. Discontinuities:- Set 1: 30-40 degree medium to closely spaced, planar, smooth, incipient dark brown non penetrative stained, clean. Many drilling induced. Set 2:- 50-70 degree medium spaced, planar, rough, incipient to very tight dark brown non penetrative stained, clean. Many drilling induced. (The New Harbour Group) 17.54m to 17.59m - AZCL.		-8		
	90	60	43		(00:15)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Beretta T44**	Drilled By:	**ND**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**11** of **23**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
18.00-18.50 18.00-23.00										*strata continues from previous page*				
	98	98	30		(00:15)					18.30m to 18.36m Very thin bed of strong to very strong green grey fine to medium grained psammite.		-9		
18.50-19.00										18.50m to 18.60m - AZCL.				
	84	84	0		(00:15)		1.30E-06m/s							
19.00-19.50														
	86	38	0		(00:15)					19.20m to 19.35 - NI. 19.35m to 19.41m - AZCL.		-10		
19.50-20.00														
	54	38	0		(00:15)					19.62m to 19.67m - NI. 19.67m to 19.90m - AZCL.				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44**	**ND**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**12** of **23**

Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	54	38	0		(00:15)					*strata continues from previous page*			(5.55)	
20.00-20.50	80	54	0		(00:15)					20.05m to 20.10m - NI. 20.10m to 20.20m - AZCL. 20.40m to 20.50m - NI.		-11		
20.50-21.00	90	18	0		(00:15)		1.30E-06m/s			20.59m to 20.95m - NI. 20.95m to 21.14m - AZCL.				
21.00-21.50	72	26	0		(00:15)					21.27m to 21.50m - NI.		-12		
21.50-22.00	100	40	0		(00:15)									

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44**	**ND**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**13** of **23**

Depth	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										strata continues from previous page 21.63m to 21.80m - NI.				
	100	40	0		(00:15)									
22.00-22.50														
	100	14	0		(00:15)		1.30E-06m/s			22.10m to 22.26m - NI. 22.35m to 22.70m - NI.				
												-13		
22.50-24.00														
												-13.25	22.70	
	92	66	18		(00:45)					Very strong locally extremely strong greenish grey fine to medium grained PSAMMITE with 40-60 degree, upto 50mm, extremely to very closely spaced lenticular locally ptygmatic calcite locally quartz veins and inclusions. Discontinuities:- Set 1:- 10-20 degree medium to closely spaced, planar, rough, incipient with brown to dark brown staining, clean. Many drilling induced. Set 2:- 60-80 degree medium spaced, planar, rough, incipient to very tight with dark brown staining, clean. Many drilling induced. Set 3:- (below 23.50m) 40-50 degree medium spaced, planar, rough, incipient to very tight dark				
23.00-28.00														
							4.33E-07m/s							

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44**	**ND**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**14** of **23**

Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	92	66	18		(00:45)					brown stained, clean. Many drilling induced. (The New Harbour Group) 23.30m to 23.37m - NI. 23.45m to 23.50m - NI.		-14	(2.00)	
24.00-24.50	84	52	0		(00:20)		4.33E-07m/s			23.88m to 24.00m - AZCL. 24.07m to 24.24m band of strong very narrow foliated greyish green PHYLLITE predominantly - NI. 24.42m to 24.59m - AZCL.		-15		
24.50-26.00	94	89	0		(00:30)					Strong very narrowly foliated greyish green PHYLLITE with 50-85 degree, upto 2mm, medium spaced lenticular calcite inclusions. Discontinuities:- Set 1:- 10-30 degree medium to medium spaced, planar, smooth, incipient dark brown non penetrative staining, clean. Many drilling induced. Set 2:- 70-80 degree medium spaced, planar, rough, incipient to very tight dark brown non penetrative staining, clean. Many		-15.25	24.70	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44**	**ND**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**15** of **23**

Depth	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										drilling induced. (The New Harbour Group)				
										25.40m very narrow to narrow purplish green bands.		-16	(1.45)	
	94	89	0		(00:30)									
26.00-27.50							4.33E-07m/s					-16.70	26.15	
										Strong to very strong very narrowly foliated (poorly developed), greyish green fine to medium grained PSAMMITE with 40-80 degree, upto 5mm, extremely closely spaced lenticular locally ptygmatic calcite inclusions. Discontinuities:- Set 1:- 20-40 degrees very closely to closely, planar, smooth, rough, incipient to very tight dark brown staining, clean with occasional clay infill. (The New Harbour Group)		-17		
	98	84	31		(00:30)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44**	**ND**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**16** of **23**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	98	84	31		(00:30)					Below 27.00m with strong very closely to closely spaced, narrowly foliated bands of greyish green PHYLLITE. 27.00m to 27.10m - NI.				
												-18		
27.50-29.00							4.33E-07m/s			27.50m to 27.75m - AZCL.				
										27.75m to 27.80 - NI.				
28.00-33.00														
	83	73	7		(00:30)								(3.95)	
							1.33E-06m/s					-19		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44**	**ND**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**17** of **23**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	83	73	7		(00:30)					*strata continues from previous page*				
29.00-29.50										29.00m to 29.18m - NI.				
	100	58	0		(00:15)							-20		
29.50-31.00										29.50m to 29.65m - AZCL.				
							1.33E-06m/s							
	90	50	0		(00:40)							-20.65	30.10	
										Strong very narrowly foliated greyish green PHYLLITE with 30-50 degree, upto 4mm, extremely closely spaced, lenticular calcite with occasional quartz inclusions. Discontinuities:- Set 1:- 65-80 degree medium to medium spaced, planar, rough, incipient to very tight dark brown stained, clean. Many drilling induced. Set 2:- 10-20 degree close to medium spaced, planar, smooth, incipient dark brown stained,		-21		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Beretta T44**	Drilled By:	**ND**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**18** of **23**

Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
	90	50	0		(00:40)					clean. Many drilling induced. (The New Harbour Group) 30.25m to 30.40m - NI.			(1.80)	
31.00-31.50	90	26	0		(00:15)					31.15m to 31.20m - AZCL. 31.20m to 31.38m - NI.		-22		
31.50-32.00	98	32	0		(00:15)		1.33E-06m/s					-22.45	31.90	
32.00-33.00	100	84	22		(00:40)					Strong to very strong grey fine to medium grained PSAMMITE with 60-80 degree, upto 4mm, very closely to closely spaced calcite and occasional quartz inclusions. Discontinuities:- Set 1:- 10-20 degree medium to closely spaced planar, rough locally striated, incipient to very tight red stained, clean. Many drilling induced. Set 2:- 60-80 degree medium to medium spaced planar, rough, incipient to very tight red stained, clean. Many drilling induced.		-22.95	32.40	(0.50)

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44**	**ND**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**19** of **23**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(The New Harbour Group) Strong very narrowly foliated greyish green PHYLLITE with 30-50 degree, upto 4mm, extremely closely spaced lenticular calcite with occasional quartz inclusions. Discontinuities:- Set 1:- 65-80 degree medium to medium spaced, planar, rough, incipient to very tight dark brown stained, clean. (The New Harbour Group)		-23 -23.10	(0.15) 32.55	
	100	84	22		(00:40)		1.33E-06m/s			Strong to very strong grey fine to medium grained PSAMMITE with 60-80 degree, upto 4mm, very closely to closely spaced calcite and occasional quartz inclusions. Discontinuities:- Set 1:- 10-20 degree medium to closely spaced planar, rough locally striated, incipient to very tight red stained, clean. Many drilling induced. Set 2:- 60-80 degree medium to medium spaced planar, rough, incipient to very tight red stained, clean. Many drilling induced. (The New Harbour Group) 33.20m to 33.45m - NI.				
33.00-34.50 33.00-38.00												-24		
	96	83	18		(00:50)		1.95E-07m/s						(2.30)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44**	**ND**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**20** of **23**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										strata continues from previous page				
	96	83	18		(00:50)									
										34.44m to 34.50m assumed zone core loss		-25		
34.50-36.00														
										34.69m to 34.74 band of strong very narrowly foliated dark green grey PHYLLITE.				
												-25.40	34.85	
							1.95E-07m/s			Strong thinly interbedded very narrowly foliated (poorly developed) greenish grey fine to medium grained PSAMMITE and medium strong very narrowly foliated pale green PHYLLITE with 60-80 degree, upto 3mm, extremely closely spaced, lenticular calcite veins. Discontinuities:- Set 1:- 10-20 closely spaced, planar rough, very tight brown stained, clean. Many drilling induced. Set 2:- 80-85 degree medium spaced, planar rough, very tight dark brown stained, clean. Many drilling induced. (The New Harbour Group) 35.15m to 35.25m 60 degree, upto 20mm wide calcite vein. 35.30m to 35.37m - NI.				
	95	85	0		(00:50)							-26		
													(1.91)	
										35.85m to 35.88m very thin bands of very strong greenish grey fine to medium grained psammite.				
										Description on next sheet				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Beretta T44**	Drilled By:	**ND**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**21** of **23**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
36.00-37.50	73	33	0		(00:50)		1.95E-07m/s			35.96m to 36.00m very thin bands of very strong greenish grey fine to medium grained psammite. 36.00m to 36.41m - AZCL.		-27 -27.31	36.76	
										Strong very narrowly foliated greyish green PHYLLITE with 50-70 degree, upto 4mm, closely to very closely spaced, lenticular calcite veins. Discontinuities:- Set 1:- 10-20 degree, planar smooth, very tight brown stained, clean. Many drilling induced. (The New Harbour Group)		-27.45	(0.14) 36.90	
37.50-38.60	100	64	0		(00:40)					Very strong greenish grey fine to medium grained PSAMMITE with 50-70 degree, upto 4mm, closely spaced, lenticular, calcite veins. Discontinuities:- Set 1:- 10-20 degree, closely to medium spaced, planar rough, very tight brown stained, clean. Many drilling induced. Set 2:- 80-85 degree, medium spaced, planar smooth to rough, very tight dark brown stained, clean. Many drilling induced. (The New Harbour Group) 36.98m to 37.18m - NI. 37.2m to 37.3m bands of strong very narrowly foliated green grey phyllite.		-28	(1.50)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44**	**ND**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**22** of **23**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
							1.95E-07m/s			37.8m to 37.90m bands of strong very narrowly foliated green grey phyllite. 37.96m to 38.15m 80 degree, upto 25mm, boulinaged calcite vein. 38.10m to 38.20m bands of strong very narrowly foliated green grey phyllite. 38.15m to 38.26m - NI.				
	100	64	0		(00:40)							-28.95	38.40	
38.60-40.00										Strong to very strong very narrowly foliated greenish grey PHYLLITE. Discontinuities:- Set 1:- 10-20 degree, closely to medium spaced, planar rough, very tight brown stained, clean. Many drilling induced. (The New Harbour Group) 38.60m to 38.75m bands of very strong green grey fine to medium grained psammite.		-29		
	85	23	0		(00:50)					39.09m to 39.30m - AZCL.			(1.60)	
										39.30m to 39.45m bands of very strong green grey fine to medium grained psammite.		-30		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44**	**ND**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 309R**

Contract Ref:	Start: **28.10.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **02.11.09**	**9.45**	**E:235816.10 N:393410.50**	**23** of **23**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	85	23	0		(00:50)					*strata continues from previous page*		-30.55	40.00	
										Borehole terminated at 40.00m depth.		-31		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Beretta T44**	**ND**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	**12.11.09** End: **12.11.09**	**11.86**	**E:236094.36 N:393333.30**	**1** of **1**

Samples and In-situ Tests				Water	Backfill & Instru-mentation	Description of Strata	Reduced Level	Depth (Thick ness)	Material Graphic Legend
Depth	No	Type	Results						
						Firm dark brown TOPSOIL. With rare to occasional medium to coarse gravel of phyllite and dolerite.	11.41	0.45	
0.50-0.70	1	B				Firm locally stiff orangish brown sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse of phyllite, psammite, sandstone and chert. (Glacial Deposits)		(0.85)	
0.90-1.00	2	B							
1.10-1.20	3	B				Below 0.60m: low cobble content.	10.56	1.30	
1.40	4	D				Below 0.70m: lenses (approx 800mm by 200mm) of brownish grey gravelly clay.			
1.50-1.95	5	SPT	N=17			Below 1.00m: Grey brown mottling and pockets of soft grey brown clay.		(1.10)	
1.50-1.95	6	B							
2.40	7	D				Firm becoming stiff brown mottled orange brown and light grey slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to medium occasionally coarse of phyllite and psammite. (Glacial Deposits)	9.46	2.40	
2.50-2.95	8	SPT	N=21						
2.50-2.95	9	B		1		Stiff light brown to greyish brown sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse of phyllite, psammite and dolerite. (Glacial Deposits)			
3.40	10	D		1				(2.30)	
3.50	11	W							
3.50-3.95	12	SPT	N=19						
3.50-3.95	13	B							
4.40	14	D		2					
4.50-4.87	15	SPT	N=70*				7.16	4.70	
4.50	18	W				Weak greyish green and orange brown very narrowly foliated PHYLLITE. Recovered as clay and gravel size fragments. (The New Harbour Group)		(0.52)	
5.00	16	D							
5.10-5.22	17	SPT	N=214*				6.64	5.22	
						Borehole terminated at 5.22m on bedrock.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
12/11/09	09:00	3.50	1.50	150	3.50
12/11/09	10:15	4.50	4.50	150	4.50
12/11/09	15:00	5.22	4.50	150	4.50

Chiselling		
From	To	Duration (hh:mm)
4.80	5.11	01:00

General Remarks

1. Machine dug inspection pit to 1.30m depth.
2. Inspection pit stable during excavation.
3. No groundwater encountered during excavation.
4. Inspection pit backfilled with arisings on completion.
5. Percussive boring from 1.30m to 5.22m.
6. Groundwater encountered at 3.50m rising to

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	**Dando 2000**	**SP**	**ADingle**	**MD**

AGS

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**1** of **23**

Mechanical Log: Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										Dark brown TOPSOIL with rare to occasional medium to coarse grained gravel of phyllite and dolerite.			(0.45)	
									1	Firm locally stiff orangish brown sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse of phyllite, psammite, sandstone and chert. (Glacial Deposits)		11.53	0.45	
												11	(0.85)	
										Boulder clay brown (Foreman's description). (Glacial Deposits)		10.68	1.30	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/12/09	13:00	5.50	2.00	121	2.00
01/12/09	17:00	5.50	5.50	121	0.51
02/12/09	08:00	5.50	5.50	121	4.39
02/12/09	17:00	16.00	5.50	121	5.85
03/12/09	08:00	16.00	5.50	121	0.31
03/12/09	17:00	19.00	5.50	121	0.39
04/12/09	08:00	19.00	5.50	121	0.30
04/12/09	17:00	23.00	5.50	121	1.50

General Remarks

1. Machine dug inspection pit to 1.30m depth. (see log IP310)
2. Rotary open hole drilling from ground level to 5.50m using symetrix system.
3. Rotary core drilling from 5.50m to 40.00m using PWF core barrel, impregnated bits and air/mist flush.
4. Water encountered at 2.00m on 01/12/2009, standing level 0.51m.
5. 50mm diameter HDPE water monitoring well installed on completion.

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Comacchio MC300**	**JS**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**2** of **23**

Mechanical Log					Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)										
									1	*(strata continues from previous page)*		10		
													(2.20)	
												9		
												8.48	3.50	
										Boulder clay grey (Foreman's description).				

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/12/09	08:00	23.00	5.50	121	0.30
07/12/09	17:00	26.50	5.50	121	1.80
08/12/09	08:00	26.50	5.50	121	0.30
08/12/09	17:00	32.00	5.50	121	1.85
09/12/09	08:00	32.00	5.50	121	0.30
09/12/09	17:00	38.00	5.50	121	1.60
10/12/09	08:00	38.00	5.50	121	0.30
10/12/09	17:00	40.00	5.50	121	1.00

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Comacchio MC300**	**JS**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**3** of **23**

Mechanical Log: Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)		8	(1.30)	
										Siltstone grey (Foreman's description).		7.18	4.80	
5.00-10.00							7.96E-06m/s					7	(0.70)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Comacchio MC300**	**JS**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**4** of **23**

Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)		6.48	5.50	
5.50-6.50	52	0	0	NI NI 40	(00:15)		7.96E-06m/s			Medium strong to strong very narrowly foliated light green/cream PHYLLITE with narrow laminations and very thin interbeds of green fine to medium grained PSAMMITE. Recovered as angular to subangular fine to medium gravel size fragments. (The New Harbour Group) 5.50-6.00m - AZCL. 6.00-6.50m recovered as predominantly NI.		6	(1.65)	
6.50-7.50	77	50	21	NI 100 600	(00:15)					6.92m to 7.15m - AZCL.	1[i] 2[i] 3[i]	5		
										Description on next sheet		4.83	7.15	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Comacchio MC300**	**JS**	**NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**5** of **23**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
7.50-9.00	77 60	50 37	21 13	NI 100 600	(00:15) (00:19)		7.96E-06m/s			Strong green and light brown very narrowly foliated (30-50 degree) PHYLLITE with extremely closely to very closely spaced, narrow, lenticular bluish green/green fine grained psammite fabric. Discontinuities:- Set 1:- Subhorizontal, closely spaced, planar and undulating, smooth, partly open dark brown stained. (The New Harbour Group) 8.40m to 9.00m - AZCL.	4[i] 5[i] 6[i]	4 3	(2.33)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Comacchio MC300**	**JS**	**NFowler**	**MDolby**

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**6** of **23**

Depth	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
9.00-10.00										*(strata continues from previous page)* 9.00m to 9.48m foliation 15 to 20 degrees.		2.50	9.48	
	75	52	0	NI 100 600	(00:13)		7.96E-06m/s			Strong very thinly interlaminated bluish grey green fine to medium grained PSAMMITE and very narrowly foliated (20 degree) green light brown PHYLLITE. (The New Harbour Group) 9.75m to 10.00m - AZCL.		2		
10.00-11.00 10.00-15.00	75	33	0		(00:08)		5.00E-06m/s			Below 10.00m Discontinuities:- Set 1:- 30-60 degree, planar and undulating, smooth and rough orange brown stained, clean. 10.72m to 11.00m - AZCL.	7[i] 8[i]		(1.97)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Comacchio MC300**	**JS**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**7** of **23**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	75	33	0		(00:08)					*(strata continues from previous page)*		1		
11.00-12.00										11.00m to 11.45m some narrow lenticular phyllite bands.				
	65	20	10	NI 100 600	(00:14)		5.00E-06m/s			Strong light brown and green very narrowly foliated (25 degree) PHYLLITE with extremely closely spaced, narrow to very narrow, lenticular, blue green psammite fabric. (The New Harbour Group) 11.65m to 12.00m - AZCL.		0.53	11.45	
12.00-13.00										Below 12.00m occasional thin laminations of phyllite.		0	(0.80)	
	100	85	60		(00:19)					Strong to very strong grey and blue green narrowly foliated (poorly developed 20 degree) PHYLLITE. Discontinuities:- Set 1:- 1 no. 20 degree, undulating smooth, open orange brown stained, clean. Set 2:- 1 no 80 degree, stepped rough, tight dark brown stained, clean.	9[i]	-0.27	12.25	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Comacchio MC300**	**JS**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**8** of **23**

Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	85	60		(00:19)					(The New Harbour Group) *(strata continues from previous page)*	10[i]			
13.00-14.00												-1	(1.75)	
	73	44	0	NI 100 600	(00:15)		5.00E-06m/s			13.73m to 14.00m - AZCL.		-2.02	-2 14.00	
14.00-15.00	63	49	25		(00:13)					Strong bluish green and purple very narrowly foliated (30-40 degree) PHYLLITE with very closely spaced, very narrow, lenticular green blue psammite fabric. Discontinuities:- Set 1:- 30-60 degree, closely spaced, planar and undulating smooth, open tight orange brown stained. (The New Harbour Group)	11[i] 12[i] 13[i]			

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Comacchio MC300**	**JS**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**9** of **23**

Depth	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										(strata continues from previous page)				
											14[i]			
										14.63m to 15.00m - AZCL.				
	63	49	25		(00:13)		5.00E-06m/s							
15.00-16.00 15.00-20.00												-3	(2.00)	
											15[i]			
											16[i]			
				NI 100 600							17[i]			
	85	35	18		(00:13)		6.84E-06m/s							
											18[i]			
										15.85m to 16.00m - AZCL.				
												-4.02	16.00	
16.00-17.00										Strong to very strong interlaminated bluish green fine grained PSAMMITE and narrowly foliated (20 degree) brown green and blue PHYLLITE. Discontinuities:-				
	97	80	75		(00:19)									

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Comacchio MC300**	**JS**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**10** of **23**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	97	80	75		(00:19)					Set 1:- 20-40 degree, undulating/curved, closely spaced smooth, tight, dark brown stained, clean. (The New Harbour Group)	19[i] 20[i]		(1.57)	
17.00-18.00				NI 100 600			6.84E-06m/s				21[i] 22[i]	-5		
	80	70	70		(00:18)						23[i]	-5.59	17.57	
										Strong to very strong bluish green fine to medium grained PSAMMITE with extremely closely spaced, very narrow, lenticular, narrowly foliated purple phyllite fabric. (The New Harbour Group) 17.80m to 18.00m - AZCL.		-6.02-6	(0.43) 18.00	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Comacchio MC300**	Drilled By:	**JS**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**11** of **23**

Mechanical Log: Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
18.00-19.00	96	80	75	NI 100 600	(00:20)		6.84E-06m/s			Strong bluish green brown very narrowly foliated (poorly developed 30-40 degree) PHYLLITE with closely spaced locally extremely closely spaced, very narrow, lenticular to irregular, greenish blue psammite fabric. Discontinuities:- Set 1:-20-40 degree, closely spaced, undulating smooth, tight orange brown stained, clean. (The New Harbour Group)	24[i] 25[i] 26[i] 27[i]	-6.68	(0.66)	
19.00-20.00	65	40	40		(00:20)					Strong to very strong thinly laminated to thinly bedded bluish grey fine to coarse PSAMMITE and very narrowly foliated (30-40 degree) purple PHYLLITE. Discontinuities:- Set 1: (Below 20.00m) 30-70 degree, closely to medium spaced, planar and undulating, smooth and rough, tight, clean. (The New Harbour Group) Below 19.10m randomly oriented, upto 2mm, quartz veins. 19.65m to 20.00m - AZCL.	28[i] 29[i] 30[i]	-7	18.66	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Comacchio MC300**	**JS**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**12** of **23**

Depth	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
20.00-21.00 20.00-25.00	65	40	40		(00:20)		6.84E-06m/s			*(strata continues from previous page)*		-8		
	78	67	48	NI 100 600	(00:19)		4.48E-06m/s			20.78m to 21.00m - AZCL.	31[i] 32[i]		(3.34)	
21.00-22.00	76	10	0		(00:26)					21.00m to 21.76m - NI.		-9		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Comacchio MC300**	**JS**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**13** of **23**

Depth	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
	76	10	0		(00:26)					*(strata continues from previous page)* 21.76m to 22.00m - AZCL.		-10.02	22.00	
22.00-23.00	90	16	0	NI 100 600	(00:25)		4.48E-06m/s			Strong bluish green and orange brown very narrowly foliated (30 degree) PHYLLITE with occasional narrow laminations of green blue fine grained psammite. (The New Harbour Group)		-10.36	(0.34) 22.34	
23.00-24.00	30	8	0		(01:45)					Strong to very strong green blue fine to medium grained PSAMMITE with closely to extremely closely spaced, very narrow, lenticular light brown and orange phyllite fabric and occasional mineral dissolution voids present below 22.65m. (The New Harbour Group) 23.30m to 24.00m - AZCL.	33[i]	-11		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Comacchio MC300**	**JS**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**14** of **23**

Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
	30	8	0		(01:45)					*(strata continues from previous page)*			(2.16)	
24.00-24.50										24.00m to 24.19m - NI.		-12		
	38	14	0	NI 100 600	(00:45)		4.48E-06m/s			24.19m to 24.50m - AZCL.				
24.50-25.50										Strong to very strong greyish green fine to medium grained PSAMMITE with frequent mineral dissolution voids. Discontinuities:- Set 1:- 50-60 degree, closely to medium spaced, planar to undulating, rough, tight orange brown stained, clean. (The New Harbour Group)	34[i]	-12.52	24.50	
	80	57	45		(01:10)						35[i]			
25.00-30.00							3.76E-06m/s				36[i]	-13		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Comacchio MC300**	**JS**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**15** of **23**

Depth	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										(strata continues from previous page)	37[i] 38[i]			
	80	57	45		(01:10)					25.30m to 25.50m - AZCL.				
25.50-26.50										25.58m to 25.78m quartz veining and inclusions upto 40mm. 25.60m to 25.85m - NI.				
	62	17	0	NI 100 600	(01:00)		3.76E-06m/s			Below 26.00m extremely closely spaced, very narrow, laminations of green brown phyllite.	39[i]	-14	(3.00)	
26.50-27.50										26.50m to 26.98 - NI.				
	48	0	0		(00:40)							-15		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Comacchio MC300**	**JS**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**16** of **23**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	48	0	0		(00:40)					26.98m to 27.50m - AZCL. *(strata continues from previous page)*				
												-15.52	27.50	
27.50-28.50	63	35	35	NI 100 600	(00:42)		3.76E-06m/s			Strong to very strong greyish green narrowly to very narrowly foliated (20-30 degree) PHYLLITE with very closely spaced, narrow, lenticular bluish green fine to medium grained psammite fabric. (The New Harbour Group) 27.50m to 27.80m - NI.				
												-16	(1.17)	
										28.13m to 28.50m - AZCL. 28.58m 50 degree, upto 15mm, quartz vein.	40[i]			
28.50-29.50	98	95	95	15 250 900	(01:00)							-16.69	28.67	
										Strong bluish grey fine to medium grained PSAMMITE with extremely closely spaced, narrow, lenticular, very narrowly foliated				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Comacchio MC300**	Drilled By:	**JS**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**17** of **23**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(35-40 degree) green brown phyllite fabric and randomly oriented, upto 20mm, closely spaced, undulating, curved, quartz veins. (The New Harbour Group)		-17	(0.51)	
	98	95	95		(01:00)						41[i]	-17.20	29.18	
							3.76E-06m/s			Strong to very strong very narrowly foliated (30 degree) purplish brown and greenish brown PHYLLITE with extremely closely spaced, very narrow to narrow, lenticular, bluish grey fine to medium grained psammite and randomly oriented, upto 5mm, extremely closely spaced, curved and planar, calcite veins. Discontinuities:- Set 1:- 10-35 degree, medium spaced planar and undulating, tight, orange brown stained, clean. (The New Harbour Group)				
29.50-30.50				15 250 900										
30.00-35.00	100	90	90		(01:00)					29.97m to 30.11m strong blue grey fine to medium grained psammite band.		-18	(1.53)	
							1.21E-06m/s				42[i]			
30.50-32.00	93	87	83		(01:20)						43[i]			

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Comacchio MC300**	**JS**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**18** of **23**

Mechanical Log													
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										(strata continues from previous page)		-18.73	30.71	
										Strong very strong bluish grey fine to medium grained PSAMMITE with extremely closely to very closely spaced, very narrow to narrow, lenticular, locally thinly laminated, purple brown and green blue, very narrowly foliated (30 degree) phyllite fabric and randomly oriented, upto 4mm, extremely closely spaced, planar, calcite veins. (The New Harbour Group)	44[i]	-19		
	93	87	83	15 250 900	(01:20)		1.21E-06m/s						(1.64)	
										31.90m to 32.00m - AZCL.		-20		
32.00-33.50	91	87	87		(01:10)									
										Description on next sheet		-20.37	32.35	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Comacchio MC300**	**JS**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**19** of **23**

Depth	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
33.50-35.00	91	87	87	15 250 900	(01:10)		1.21E-06m/s			Strong greyish blue and light purple brown very narrowly foliated (30 degree) PHYLLITE with extremely closely spaced, very narrow to narrow, lenticular, greyish blue, fine to medium grained psammite fabric and randomly oriented, upto 3mm, extremely closely spaced, planar, curved calcite veins. Discontinuities:- Set 1:- 15-30 degree, medium spaced, planar and undulating, smooth, tight, clean. (The New Harbour Group) 33.37m to 33.50m - AZCL.	45[i] 46[i]	-21	(1.45)	
	93	93	93		(01:10)					Very strong bluish grey fine to medium grained PSAMMITE with closely, locally extremely closely spaced, narrow, lenticular, very narrowly foliated (30 degree) phyllite fabric and randomly oriented, upto 5mm, extremely closely spaced, planar, calcite inclusions and veins. (The New Harbour Group)		-21.82 -22	33.80 (0.77)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Comacchio MC300**	**JS**	**NFowler**	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**20** of **23**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
										(strata continues from previous page)		-22.59	34.57	
	93	93	93		(01:10)		1.21E-06m/s			Strong to very strong greyish blue and greenish grey very narrowly foliated (30-40 degree) PHYLLITE with closely locally extremely closely spaced, very narrow, lenticular, locally irregular fine to medium grained psammite fabric and randomly oriented, upto 2mm, very closely spaced, planar and undulating, calcite veins. Discontinuities:- Set 1:- 60-70 degree, medium spaced planar and undulating, tight, orange brown stained, clean. (The New Harbour Group)				
35.00-36.50				15 250 900							47[i] 48[i] 49[i] 50[i] 51[i]	-23		
	100	93	87		(01:10)							-24		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Comacchio MC300**	Drilled By:	**JS**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**21** of **23**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
36.50-38.00	100	93	87	15 250 900	(01:10)					Below 36.05m phyllite becoming purple brown, psammite becoming bluish grey. *(strata continues from previous page)*		-25	(5.43)	
	100	80	67		(01:10)									

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	**Rotary Cored + Rotary open hole**	Plant Used:	**Comacchio MC300**	Drilled By:	**JS**	Logged By:	**NFowler**	Checked By:	**MDolby**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**22** of **23**

Depth	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Legend
										(strata continues from previous page)	52[i]			
38.00-39.50	100	80	67		(01:10)							-26		
	100	100	100	15 250 900	(01:10)						53[i]	-27		
39.50-40.00	100	70	70		(00:30)									

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Comacchio MC300**	**JS**	**NFowler**	**MDolby**

STRUCTURAL_SOILS_GINT_LIBRARY.GLBIXCUSTOM - WYLFA - DETAIL LOG | 761404 WYLFA LOGS ONLY.GPJ - v8_02 | 20/05/10 - 15:26.◆ = datamarker used throughout reporting for current exploratory position.
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 310R**

Contract Ref:	Start: **01.12.09**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **10.12.09**	**11.98**	**E:236096.60 N:393333.70**	**23** of **23**

Mechanical Log														
Depth	TCR (%)	SCR (%)	RQD (%)	If (mm)	Drill Time (hh:mm)	Sampling	Packer Testing	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Legend
	100	70	70	15 250 900	(00:30)					*(strata continues from previous page)*				
										Borehole terminated at 40.00m.		-28.02	40.00	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:10**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored + Rotary open hole	**Comacchio MC300**	**JS**	**NFowler**	**MDolby**

STRUCTURAL_SOILS_GINT_LIBRARY.GLBIXCUSTOM - WYLFA - DETAIL LOG | 761404 WYLFA LOGS ONLY.GPJ - v8_02 | 20/05/10 - 15:26.◆ = datamarker used throughout reporting for current exploratory position.
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 311**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **17.11.09**	**11.96**	**E:236051.24 N:393711.51**	**1** of **3**

Samples and In-situ Tests				Water	Backfill & Instru-mentation	Description of Strata	Reduced Level	Depth (Thick ness)	Material Graphic Legend
Depth	No	Type	Results						
0.50-1.00	1	B				Rough grass/pasture over soft to firm brown slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is subangular to subrounded fine to coarse of sandstone, quartz, psammite and dolerite. (Glacial Deposits)	10.96	(1.00) 1.00	
1.40	2	D				Firm brown locally mottled orange brown slightly sandy to sandy slightly gravelly CLAY with rare cobbles. Gravel is subangular to rounded fine to coarse of sandstone, dolerite, phyllite and siltstone. (Glacial Deposits)			
1.50-1.95	3	$SPT_{(NR)}$	N=9					(1.80)	
1.50-1.95	3	B							
2.40	4	D							
2.50-2.95	5	U	38 blows				9.16	2.80	
3.40	6	D				Stiff grey dark grey clayey slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of sandstone, flint, limestone, siltstone and rare schist (Glacial Deposits)			
3.50-3.95	7	SPT	N=22						
3.50-3.95	8	B							
4.40	9	D							
4.50-4.95	10	SPT	N=19						
4.50-4.95	11	B							
4.50	12	W				Below 5.00m boulders (foremans description).			
5.90	13	D							
6.00-6.45	14	SPT	N=35			Below 6.00m becoming very stiff.			
6.00-6.45	15	B							
7.40	16	D							
7.50-7.95	17	U	68 blows					(12.30)	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
12/11/09	09:00	0.00	-		
12/11/09	17:00	4.40	3.00	150	Dry
13/11/09	08:00	4.40	3.00	150	2.90
13/11/09	17:00	7.95	7.95	150	Dry
16/11/09	08:00	7.95	7.95	150	Dry
16/11/09	17:00	15.55	9.00	150	Dry
17/11/09	08:00	15.50	9.00	150	Dry
17/11/09	14:00	25.00	10.50	150	25.00

Chiselling

From	To	Duration (hh:mm)
5.40	6.00	01:50
6.80	7.10	01:00
10.00	10.30	01:00

General Remarks

1. Inspection pit excavated from ground level to 1.20m.
2. Groundwater encountered at 2.90m at start of shift 13/11/2009.
3. Water added from 3.50m to 20.00m 240 litres.
4. Falling head permeability tests undertaken at 8.50m, 10.50m and 12.50m.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	**Dando 2000**	**SP**	**AFoss**	**MD**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 311**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **17.11.09**	**11.96**	**E:236051.24 N:393711.51**	**2** of **3**

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
8.90	18	D				Stiff grey dark grey clayey slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of sandstone, flint, limestone, siltstone and rare schist (Glacial Deposits)			
9.00-9.45	19	SPT	N=24						
9.00-9.45	20	B				Below 9.00m becoming stiff.			
10.40	21	D							
10.50-10.95	22	SPT	N=30			Below 10.50m becoming very stiff.			
10.50-10.95	23	B		▽1					
11.90	24	D							
12.00-12.45	25	U	87 blows						
13.40	26	D							
13.50-13.95	27	SPT	N=26			Below 13.50m becoming stiff.			
13.50-13.95	28	B							
14.90	29	D				Below 14.90m medium gravel sized pockets of brown clay.	-3.14	15.10	
15.00-15.45	30	U	65 blows			Stiff thinly laminated grey calcareous CLAY. (Glacial Deposits)			
15.45-15.55	31	D							
16.40	31a	D							
16.50-16.95	32	SPT	N=21						
16.50-16.95	33	B							
16.50	34	W							

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
17/11/09	16:00	25.00	10.50	150	11.30

Chiselling		
From	To	Duration (hh:mm)

General Remarks

5. Borehole drilled to 25.00m.
6. 50mm diameter HDPE monitoring well installed on completion.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	**Dando 2000**	**SP**	**AFoss**	**MD**

AGS

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa B Power Station	**RWEnpower**	**BH 311**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
761404	End: **17.11.09**	**11.96**	**E:236051.24 N:393711.51**	**3** of **3**

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
17.90	35	D				Stiff thinly laminated grey calcareous CLAY. (Glacial Deposits)			
18.00-18.45	36	U	74 blows						
19.40	37	D				Below 19.50m becoming very stiff.		(9.80)	
19.50-19.95	38	SPT	N=36						
19.50-19.95	39	B							
20.90	40	D							
21.00-21.45	41	U	86 blows						
21.45-21.55	42	D							
22.40	43	D				Below 22.50m becoming stiff.			
22.50-22.95	44	SPT	N=24						
22.50-22.95	45	B							
23.90	46	D							
24.00-24.45	47	U	89 blows						
24.45-24.55	48	D							
				▼			-12.94	24.90	
25.00	49	D				Multicoloured clayey slightly sandy GRAVEL. Gravel is angular to rounded fine to coarse of sandstone, quartz, phyllite and occasional psammite. (Glacial Deposits)	-13.04	25.00	
25.00	50a	W							

Boring Progress and Water Observations						Chiselling			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	**Dando 2000**	**SP**	**AFoss**	**MD**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH712R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **29.4.14**	**17.01**	**E:234818.8 N:393289.7**	**1** of **20**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00										Made Ground: Grass over dark brown SILT with frequent roots and rootlets. (Topsoil)		16.91	0.10	
												16.81	0.20	
				NI 50 210	Air+Mist (Green)	(0:29:00)				Dark brown mottled orange brown gravelly silty SAND with occasional rootlets. (Superficial Deposits - Locally derived lodgement till)				
1.00										Medium strong very thin bands of dark bluish green medium grained slightly weathered PSAMMITE with medium strong very narrowly foliated light green PHYLLITE. (New Harbour Group - PSAMMITE)		16	1	
					Air+Mist (Green)	(0:25:00)								
2.00					Air+Mist (Grey/red)	(00:05:00)						15	2	
				NI 200 100									(4.00)	
						(0:33:00)						14	3	
3.00					Air+Mist (Grey/red)									
				NI 2040 NI								13	4	
4.00						(0:30:00)				*Description on next sheet*		12.81	4.20	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
16/04/14	17:55	7.00	4.00	116	3.70
17/04/14	08:30	7.00	4.00	116	1.20
17/04/14	14:50	15.70	4.00	116	3.40
22/04/14	11:30	15.70	4.00	116	1.30
22/04/14	17:50	23.20	4.00	116	18.20
23/04/14	08:25	23.20	4.00	116	1.10
23/04/14	17:50	33.30	4.00	116	11.70
24/04/14	08:20	33.30	4.00	116	1.30

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 0.20m depth terminated due to obstruction (possibly rockhead). (IP)
3. Rotary cored drilling from 0.20m to 87.25m depth with air mist flush between 16/04/14 and 29/04/14.
4. Casing progressed between core runs by rotary open hole from 1.90m to 2.50m depth on 16/04/2014.
5. 9 Hydro-tests conducted within borehole at various depths between 8.50m and 78.50m from 11/05/14 to 22/06/14.
6. Groundwater monitoring standpipe installed as shown upon completion.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH712R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **29.4.14**	**17.01**	**E:234818.8 N:393289.7**	**2** of **20**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
5.00				NI 2040 NI	Air+Mist (Grey/red)	(0:30:00)				Strong very thin bands of dark bluish green medium grained fresh PSAMMITE with medium strong very narrowly foliated brownish purple PHYLLITE. (New Harbour Group - PSAMMITE)*(stratum copied from* 4.20m from previous sheet)		12	(1.30) 5	
6.00				100 244 650	Air+Mist (Red)	(0:25:00)				Medium strong very narrowly foliated purple fresh PHYLLITE with strong very thin lenticular bands of dark bluish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		11.51 11	5.50 (2.30) 6	
7.00				200 300 480	Air+Mist (Red)	(0:49:00)				Strong very thin bands of poorly foliated dark bluish green medium grained fresh PSAMMITE. (New Harbour Group - PSAMMITE)		10 9.21	7 7.80 (0.65) 8	
8.00					Air+Mist (Red)	(1:13:00)				Medium strong very narrowly foliated purple fresh PHYLLITE with strong very thin lenticular bands of dark bluish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		9 8.56	8.45 9	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/04/14	17:50	45.70	4.00	116	17.10
25/04/14	08:30	45.70	4.00	116	1.30
25/04/14	17:50	50.70	4.00	116	12.20
26/04/14	09:05	50.70	4.00	116	0.40
26/04/14	16:25	60.30	4.00	116	11.70
27/04/14	09:20	60.30	4.00	116	0.40
27/04/14	16:25	72.30	4.00	116	9.70
28/04/14	08:25	72.30	4.00	116	72.30

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH712R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **29.4.14**	**17.01**	**E:234818.8 N:393289.7**	**3** of **20**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00				200 300 480	Air+Mist (Red)	(1:13:00)				Medium strong very narrowly foliated purple fresh PHYLLITE with strong very thin lenticular bands of dark bluish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)*(stratum copied from 8.45m* from previous sheet)				
10.00					Air+Mist (Red)	(0:29:00)						7	(3.10) 10	
11.00				70 350 800								6	11	
												5.46	11.55	
										Strong very thin bands of poorly foliated dark bluish green medium grained fresh PSAMMITE. (New Harbour Group - PSAMMITE)			(0.35)	
												5.11	11.90	
12.00					Air+Mist (Grey)	(0:29:00)				Medium strong very narrowly foliated purple fresh PHYLLITE with strong very thin bands of dark bluish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		5	12	
13.00				50 100 520	Air+Mist (Grey/red)	(0:33:00)						4	(2.30) 13	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
28/04/14	17:50	83.20	4.00	116	83.20
29/04/14	08:32	83.20	4.00	116	2.10
29/04/14	16:40	87.25	4.00	116	37.50

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH712R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **29.4.14**	**17.01**	**E:234818.8 N:393289.7**	**4** of **20**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
14.00					Air+Mist (Grey/red)	(0:33:00)				Medium strong very narrowly foliated purple fresh PHYLLITE with strong very thin bands of dark bluish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)*(stratum copied from* 11.90m from previous sheet)		3	14	
												2.81	14.20	
15.00					Air+Mist (Red.)	(0:44:00)				Medium strong very narrowly foliated purple fresh PHYLLITE with strong very thin lenticular bands of dark bluish green medium to coarse grained PSAMMITE. (New Harbour Group - PHYLLITE)		2	15	
													(2.20)	
16.00				50 100 520	Air+Mist (Grey)	(1:20:00)						1	16	
												0.61	16.40	
17.00					Air+Mist (Grey)	(1:13:00)				Strong very thin bands of dark bluish green medium grained fresh PSAMMITE. (New Harbour Group - PSAMMITE)		0	17	
													(2.45)	
													18	

Mechanical Log

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH712R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **29.4.14**	**17.01**	**E:234818.8 N:393289.7**	**5** of **20**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
18.00					Air+Mist (Grey)	(1:13:00)				Strong very thin bands of dark bluish green medium grained fresh PSAMMITE. (New Harbour Group - PSAMMITE)*(stratum copied from* 16.40m from previous sheet)		-1.85	18.85	
19.00				50 100 520	Air+Mist (Red/grey)	(0:41:00)				Medium strong very thin bands of dark bluish green medium grained fresh PSAMMITE with medium strong very narrowly foliated green and PHYLLITE. (New Harbour Group - PSAMMITE)		-2	19	
20.00												-3	20	
21.00				130 600 800	Air+Mist (Grey)	(0:37:00)						-4	(4.35) 21	
22.00					Air+Mist (Grey)	(0:39:00)						-5	22	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH712R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **29.4.14**	**17.01**	**E:234818.8 N:393289.7**	**6** of **20**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
23.00				130 600 800	Air+Mist (Grey)	(0:39:00)				Medium strong very thin bands of dark bluish green medium grained fresh PSAMMITE with medium strong very narrowly foliated green and PHYLLITE. (New Harbour Group - PSAMMITE)*(stratum copied from* 18.85m from previous sheet)		-6 -6.20	23 23.20	
24.00					Air+Mist (Grey)	(0:29:00)				Medium strong very thin bands of dark bluish green medium grained fresh PSAMMITE with medium strong very narrowly foliated light greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-7 -7.70	(1.50) 24 24.70	
25.00				300 805 2100	Air+Mist (Grey/red)	(0:30:00)				Medium strong very narrowly foliated purple fresh PHYLLITE with strong very thin bands of dark bluish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-8 -9 -9.90	25 (2.20) 26 26.90	
26.00					Air+Mist (Red)	(0:23:00)								
						(1:11:00)				*Description on next sheet*			27	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH712R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **29.4.14**	**17.01**	**E:234818.8 N:393289.7**	**7** of **20**

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
27.00										Medium strong very thin bands of dark bluish green medium grained fresh PSAMMITE with medium strong very narrowly foliated light greyish green PHYLLITE. (New Harbour Group - PSAMMITE)*(stratum copied from* 26.90m from previous sheet)				
28.00					Air+Mist (Grey)	(1:11:00)						-11	28	
29.00				300 805 2100	Air+Mist (Grey)	(0:40:00)						-12	29 (4.55)	
30.00					Air+Mist (Grey)	(0:51:00)						-13	30	
31.00				50 500 1,100	Air+Mist (Grey)	(0:58:00)						-14 -14.45	31 31.45	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH712R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **29.4.14**	**17.01**	**E:234818.8 N:393289.7**	**8** of **20**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
32.00				50 500 1,100	Air+Mist (Grey)	(0:58:00) (1:05:00)				Strong very thin bands of disturbed dark bluish green medium grained fresh PSAMMITE with medium strong very narrowly foliated light greyish green PHYLLITE. (New Harbour Group - PSAMMITE)*(stratum copied from* 31.45m from previous sheet) Strong very thin bands of poorly foliated dark bluish green fine to medium grained fresh PSAMMITE. (New Harbour Group - PSAMMITE)		-14.85 -15	(0.40) 31.85 32	
33.00												-16	33	
34.00					Air+Mist (Grey)	(1:28:00)						-17	34	
35.00					Air+Mist (Grey) Air+Mist (Grey)	(0:32:00) (0:34:00)						-18	35 36	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH712R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **29.4.14**	**17.01**	**E:234818.8 N:393289.7**	**9** of **20**

Mechanical Log													
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
36.00				50 500 1,100	Air+Mist (Grey)	(0:34:00)				Strong very thin bands of poorly foliated dark bluish green fine to medium grained fresh PSAMMITE. (New Harbour Group - PSAMMITE)*(stratum copied from* 31.85m from previous sheet)			(9.55)	
37.00					Air+Mist (Grey)	(0:30:00)						-20	37	
38.00				1,100 1,300 1,700	Air+Mist (Grey)	(0:25:00)						-21	38	
39.00												-22	39	
40.00					Air+Mist (Grey)	(0:17:00)						-23	40	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
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Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
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Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
41.00				1,100 1,300 1,700	Air+Mist (Grey)	(0:17:00)				Strong very thin bands of poorly foliated dark bluish green fine to medium grained fresh PSAMMITE. (New Harbour Group - PSAMMITE)*(stratum copied from* 31.85m from previous sheet)		-24	41	
												-24.40	41.40	
42.00					Air+Mist (Grey)	(0:21:00)				Strong very thin bands of dark bluish green medium grained fresh PSAMMITE with medium strong foliated fine grained PHYLLITE. (New Harbour Group - PSAMMITE)		-25	42 (1.70)	
43.00				1200 1500 1700	Air+Mist (Grey/red)	(0:15:00)				Strong very thin bands of dark bluish green fine to medium grained fresh PSAMMITE with medium strong very narrowly foliated light greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-26	43	
												-26.10	43.10	
44.00					Air+Mist (Grey)	(0:39:00)						-27	44 (2.60)	
													45	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH712R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
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Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
45.00					Air+Mist (Grey)	(0:39:00)				Strong very thin bands of dark bluish green fine to medium grained fresh PSAMMITE with medium strong very narrowly foliated light greyish green PHYLLITE. (New Harbour Group - PSAMMITE)*(stratum copied from* 43.10m from previous sheet)		-28.70	45.70	
46.00				1200 1500 1700	Air+Mist (Grey)	(0:42:00)				Strong very thin bands of dark bluish green medium grained fresh PSAMMITE. (New Harbour Group - PSAMMITE)		-29	46	
47.00					Air+Mist (Grey)	(0:26:00)						-30	47	
48.00				NI 100 300	Air+Mist (Grey)	(0:26:00)						-31	(4.70) 48	
49.00					Air+Mist (Grey)	(0:58:00)						-32	49	
				300 300 2,350		(0:20:00)								

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH712R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **29.4.14**	**17.01**	**E:234818.8 N:393289.7**	**12** of **20**

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
50.00					Air+Mist (Grey/red)	(0:20:00)				Strong very thin bands of dark bluish green medium grained fresh PSAMMITE. (New Harbour Group - PSAMMITE)*(stratum copied from* 45.70m from previous sheet)		-33	50	
												-33.40	50.40	
										Medium strong very narrowly foliated dark reddish brown fresh PHYLLITE with strong very thin lenticular bands of dark bluish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-34	(1.20) 51	
51.00					Air+Mist (Red/grey)	(0:17:00)						-34.60	51.60	
				300 300 2,350						Strong very thin bands of dark bluish green medium grained fresh PSAMMITE with medium strong very narrowly foliated PHYLLITE. (New Harbour Group - PSAMMITE)		-35	52	
52.00					Air+Mist (Grey)	(0:19:00)								
53.00						(0:21:00)						-36	53	
													54	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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BOREHOLE LOG

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Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **29.4.14**	**17.01**	**E:234818.8 N:393289.7**	**13** of **20**

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
54.00										Strong very thin bands of dark bluish green medium grained fresh PSAMMITE with medium strong very narrowly foliated PHYLLITE. (New Harbour Group - PSAMMITE)*(stratum copied from* 51.60m from previous sheet)				
					Air+Mist (Grey)	(0:21:00)								
55.00												-38	55	
				300 300 2,350	Air+Mist (Grey)	(0:20:00)								
56.00												-39	56	
					Air+Mist (Grey)	(0:19:00)								
57.00												-40	57 (11.05)	
				50 500 550										
58.00						(0:20:00)						-41	58	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
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Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **29.4.14**	**17.01**	**E:234818.8 N:393289.7**	**14** of **20**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
59.00					Air+Mist (Grey)	(0:20:00)				Strong very thin bands of dark bluish green medium grained fresh PSAMMITE with medium strong very narrowly foliated PHYLLITE. (New Harbour Group - PSAMMITE)*(stratum copied from* 51.60m from previous sheet)		-42	59	
60.00					Air+Mist (Grey)	(0:18:00)						-43	60	
61.00				50 500 550	Air+Mist (Grey)	(0:20:00)						-44	61	
62.00					Air+Mist (Grey)	(0:27:00)				*Description on next sheet*		-45	62	
												-45.65	62.65	
													63	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
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Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **29.4.14**	**17.01**	**E:234818.8 N:393289.7**	**15** of **20**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
63.00										Medium strong very narrowly foliated purple fresh PHYLLITE with strong very thin lenticular bands of dark bluish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)*(stratum copied from* 62.65m from previous sheet)				
				50 500 550	Air+Mist (Grey)	(0:20:00)							(1.40)	
64.00												-47.05	64.05	
										Strong very thin bands of dark bluish green medium grained fresh PSAMMITE with medium strong very narrowly foliated PHYLLITE. (New Harbour Group - PSAMMITE)			(1.25)	
65.00												-48	65	
												-48.30	65.30	
										Medium strong very narrowly foliated purple fresh PHYLLITE with strong very thin lenticular bands of dark bluish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)			(1.10)	
66.00				100 200 1,200	Air+Mist (Grey)	(0:16:00)						-49	66	
												-49.40	66.40	
										Strong very thin bands of dark bluish green medium grained fresh PSAMMITE with medium strong very narrowly foliated PHYLLITE. (New Harbour Group - PHYLLITE)			(1.00)	
67.00					Air+Mist (Grey)	(0:19:00)						-50	67	
												-50.40	67.40	
										Description on next sheet				

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH712R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **29.4.14**	**17.01**	**E:234818.8 N:393289.7**	**16** of **20**

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
68.00					Air+Mist (Grey)	(0:17:00)				Strong very thin bands of dark bluish green medium grained fresh PSAMMITE unfractured. (New Harbour Group - PSAMMITE)*(stratum copied from* 67.40m from previous sheet)		-51	(1.30) 68	
												-51.70	68.70	
69.00				3,450 3,450 3,450	Air+Mist (Grey)	(0:14:00)				Medium strong very narrowly foliated purple fresh PHYLLITE with strong very thin lenticular bands of dark bluish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-52	69 (1.00)	
												-52.70	69.70	
70.00					Air+Mist (Grey)	(0:14:00)				Strong very thin bands of dark bluish green medium grained fresh PSAMMITE with medium strong very narrowly foliated PHYLLITE. (New Harbour Group - PSAMMITE)		-53	(0.75) 70	
												-53.45	70.45	
71.00				100 300 1,050	Air+Mist (Grey)	(0:18:00)				Medium strong very narrowly foliated purple fine grained fresh PHYLLITE with strong very thinly lenticular bands of dark bluish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-54	(0.85) 71	
												-54.30	71.30	
										Strong very thin bands of dark bluish green medium grained fresh PSAMMITE with medium strong very narrowly foliated PHYLLITE. (New Harbour Group - PSAMMITE)			(1.30) 72	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH712R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **29.4.14**	**17.01**	**E:234818.8 N:393289.7**	**17** of **20**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
72.00										Strong very thin bands of dark bluish green medium grained fresh PSAMMITE with medium strong very narrowly foliated PHYLLITE. (New Harbour Group - PSAMMITE)*(stratum copied from* 71.30m from previous sheet)				
				100 300 1,050	Air+Mist (Grey)	(0:15:00)						-55.60	72.60	
73.00					Air+Mist (Grey)	(0:17:00)				Medium strong very narrowly foliated purple fresh PHYLLITE with strong very thinly lenticular bands of dark bluish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-56	73	
74.00				2,550 2,550 2,550	Air+Mist (Grey)	(0:19:00)						-57	74 (3.70)	
75.00												-58	75	
76.00				40 150 900	Air+Mist (Grey)	(0:18:00)				*Description on next sheet*		-59	76	
												-59.30	76.30	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH712R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **29.4.14**	**17.01**	**E:234818.8 N:393289.7**	**18** of **20**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
77.00					Air+Mist (Grey)	(0:21:00)				Strong very thin bands of dark bluish green medium grained fresh PSAMMITE with medium strong very narrowly foliated PHYLLITE. (New Harbour Group - PSAMMITE)*(stratum copied from* 76.30m from previous sheet)		-60	(0.95) 77	
												-60.25	77.25	
78.00				40 150 900	Air+Mist (Grey)	(0:19:00)				Medium strong very narrowly foliated purple fresh PHYLLITE with strong very thin lenticular bands of dark bluish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-61	78	
79.00					Air+Mist (Grey)							-62	(3.45) 79	
80.00				100 550 1,850	Air+Mist (Grey)	(0:19:00)						-63	80	
												-63.70	80.70	
										Very strong massive dark green fine to medium grained fresh DOLERITE. (Intrusions)			(0.60) 81	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH712R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **29.4.14**	**17.01**	**E:234818.8 N:393289.7**	**19** of **20**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
81.00										Very strong massive dark green fine to medium grained fresh DOLERITE. (Intrusions)*(stratum copied from 80.70m* from previous sheet)		-64.30	81.30	
					Air+Mist (Grey)	(0:19:00)				Very strong very narrowly foliated purple fresh PHYLLITE with strong very thin lenticular bands of dark bluish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)				
82.00				2,500 2,500 2,500	Air+Mist (Grey)	(0:25:00)						-65	82	
83.00				50 100 100	Air+Mist (Grey)	(0:18:00)						-66	83	
84.00				3,650 3,650 3,650	Air+Mist (Grey)	(0:18:00)						-67	84 (5.95)	
85.00												-68	85	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH712R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **29.4.14**	**17.01**	**E:234818.8 N:393289.7**	**20** of **20**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
86.00				3,650 3,650 3,650	Air+Mist (Grey)	(0:18:00)				Very strong very narrowly foliated purple fresh PHYLLITE with strong very thin lenticular bands of dark bluish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)*(stratum copied from* 81.30m from previous sheet)		-69	86	
87.00					Air+Mist (Grey)	(0:35:00)						-70	87	
										Borehole terminated at 87.25m depth.		-70.25	87.25	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored	**Beretta T44**	**Richard Cowan**	**RMclennan + RMcLennan**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH719A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **27.5.14**	**31.41**	**E:234791.0 N:393048.5**	**1** of **3**

Samples and In-situ Tests				Water	Backfill & Instru-mentation	Description of Strata	Reduced Level	Depth (Thick ness)	Material Graphic Legend
Depth	Ref	Type	Results						
0.00-0.50	IP1	D				Grass over soft to firm friable dark brown slightly gravelly CLAY with frequent roots, rootlets and occasional twigs. Gravel is angular to subrounded medium to coarse of predominantly grey psammite, greenish grey phyllite with occasional brown flint.			
0.00-0.50	IP1	B							
0.00-0.50	RAD1	D						(0.40)	
						(Topsoil)	31.01	0.40	
0.50-1.00	IP2	D				Yellowish brown with occasional black specks slightly gravelly clayey SAND with occasional twigs. Gravel is angular to subrounded fine to coarse of psammite and phyllite.			
0.50-1.00	IP2	B							
0.50-1.00	RAD2	D							
						(Superficial Deposits - Locally derived lodgement till)	30.81	0.60	
						Firm and locally soft brown mottled yellow brown speckled black slightly gravelly sandy CLAY with occasional cobbles. Sand is fine to coarse. Gravel is angular to subrounded medium to coarse of grey psammite and occasional dolerite. Cobbles are angular to subangular of psammite.			
								(0.60)	
1.20-1.50	1	B							
						(Superficial Deposits - Locally derived lodgement till)	30.21	1.20	
						Soft to firm greyish brown mottled dark brown slightly gravelly sandy silty CLAY. Gravel is subrounded to subangular fine to coarse flat to cubic psammite, phyllite and dolerite. Locally pockets of dark brown silty sand.		(0.30)	
1.50	2	D							
1.50-1.95	3	SPT(c)	N=11						
1.50-2.00	3	B							
						(Superficial Deposits - Locally derived lodgement till)	29.91	1.50	
						Firm orangish brown mottled light grey slightly gravelly sandy silty CLAY. Gravel is subrounded to subangular fine to coarse flat to cubic psammite, phyllite and dolerite. Locally dark brown pockets of silty sand.			
								(1.00)	
2.00-2.50	4	B							
2.00-2.50	5	B							
						(Superficial Deposits - Locally derived lodgement till)	28.91	2.50	
2.50	6	D				Stiff orangish brown mottled light grey slightly gravelly sandy CLAY with a low cobble content. Cobbles are subrounded up to 92mm in diameter of psammite, dolerite and quartzite. Gravel is subrounded to subangular fine to coarse psammite, phyllite, quartzite and dolerite.			
2.50-2.95	7	SPT(c)	N=27						
2.50-3.00	8	B							
						(Superficial Deposits - Locally derived lodgement till)		(1.00)	
3.00-3.50	9	B							
							27.91	3.50	
3.50	10	D				Stiff to very stiff dark greyish brown slightly gravelly sandy CLAY with a low cobble content. Cobbles are subrounded up to 174mm in diameter of psammite and dolerite. Gravel is subrounded to angular fine to coarse flat to cubic psammite, phyllite, dolerite and quartzite.			
3.50-3.95	11	SPT(c)	N=35						
3.50-4.00	12	B							
						(Superficial Deposits - Locally derived lodgement till)		(1.00)	
4.00-4.50	13	B							
4.00-4.50	14	B							
							26.91	4.50	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
15/04/14	17:45	7.00	7.00	200	Dry
16/04/14	08:20	7.00	7.00	200	4.90
16/04/14	12:30	10.50	10.50	200	10.50
16/04/14	18:00	10.50	10.50	200	10.30
20/05/14	08:32	52.50	11.55	99	12.27
20/05/14	18:00	60.85	11.55	99	36.57
22/05/14	08:27	68.20	11.55	99	13.15
22/05/14	17:55	77.35	11.55	99	38.20

Chiselling / Slow Progress		
From	To	Duration (hh:mm)
10.50	10.50	01:30
68.20	69.75	00:39
69.75	71.25	00:39
71.25	72.75	00:39
72.75	74.25	00:46
74.25	75.80	00:46
75.80	77.35	00:42

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 1.20m depth. (IP)
3. Cable percussion boring using 200mm diameter tools to 10.50m depth between 15/04/14 and 16/04/14.
4. Falling head tests carried out between 5.27m and 7.00m depth on 16/04/14, and between 9.32m and 10.34m depth on 16/04/14.
5. Rotary open hole drilling from 10.50m to 11.55m depth on 13/05/14.
6. Rotary cored drilling from 11.55m to 102.77m depth with air and mist flush between 13/05/14 and 27/05/14.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Byron Hawkins**	**WDixon + DOnanuga**	**TPayne**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH719A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **27.5.14**	**31.41**	**E:234791.0 N:393048.5**	**2** of **3**

Samples and In-situ Tests				Water	Backfill & Instru-mentation	Description of Strata	Reduced Level	Depth (Thick ness)	Material Graphic Legend
Depth	Ref	Type	Results						
4.50	15	D				Stiff dark greyish brown slightly gravelly sandy CLAY with a low cobble content. Cobbles are subrounded up to 161mm in diameter of psammite, phyllite and dolerite. Gravel is subrounded to angular fine to coarse flat to cubic psammite, phyllite, dolerite and quartzite. (Superficial Deposits - Locally derived lodgement till)			
4.50-4.95	16	SPT(c)	N=23						
4.50-5.00	17	B							
5.00-5.50	18	B						(1.00)	
							25.91	5.50	
5.50	19	D				Stiff dark greyish brown slightly gravelly sandy CLAY. Gravel is subrounded to subangular fine to coarse psammite, phyllite, dolerite and quartzite. (Superficial Deposits - Locally derived lodgement till)			
5.50-6.00	21	B							
5.50-5.95	20	SPT(c)	N=30					(0.50)	
							25.41	6.00	
6.00-7.00	22	B				Firm to stiff dark greyish brown slightly gravelly sandy CLAY with a low cobble content. Cobbles are subrounded fine to coarse up to 120mm in diameter of psammite, phyllite and dolerite. Gravel is subrounded fine to coarse to subangular psammite, phyllite, dolerite and quartzite. (Superficial Deposits - Locally derived lodgement till)			
6.00-7.00	23	B						(1.00)	
							24.41	7.00	
7.00	24	D				Very stiff dark greyish brown slightly gravelly sandy CLAY with low cobble content. Gravel is subangular fine to coarse psammite and dolerite with rare pockets of fine sand. Cobbles are subangular 109mm of psammite and dolerite. (Superficial Deposits - Locally derived lodgement till)			
7.00-7.45	25	SPT(c)	N=39						
7.00-7.50	26	B							
7.50-8.50	27	B						(2.40)	
8.50	28	D							
8.50-8.95	29	SPT(c)	N=35						
8.50-9.00	30	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
23/05/14	08:27	77.35	11.55	99	12.90
23/05/14	17:52	84.90	11.55	99	38.27
24/05/14	09:27	84.90	11.55	99	12.90
24/05/14	16:20	90.45	11.55	99	38.22
25/05/14	09:20	90.45	11.55	99	13.10
25/05/14	16:30	94.35	11.55	99	42.45
26/05/14	08:30	94.35	11.55	99	13.10
26/05/14	17:56	98.60	11.55	99	41.10

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

7. Groundwater monitoring standpipe installed as shown upon completion.
8. SPT hammer EQU167-2013 (E_t = 62.10%) used.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Byron Hawkins**	**WDixon + DOnanuga**	**TPayne**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH719A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.4.14** End: **27.5.14**	**31.41**	**E:234791.0 N:393048.5**	**3** of **3**

Samples and In-situ Tests				Water	Backfill & Instru-mentation	Description of Strata	Reduced Level	Depth (Thick ness)	Material Graphic Legend
Depth	Ref	Type	Results						
9.00-9.40	31	B					22.01	9.40	
9.40	32	D				Stiff to very stiff light bluish grey mottled light brownish yellow slightly sandy slightly gravelly silty CLAY with a low cobble content. Cobbles are subangular up to 101mm in diameter of psammite, dolerite and quartzite. Gravel is subrounded fine to coarse to angular flat to cubic psammite, phyllite, dolerite and quartzite. Occasional pockets of silty sand. (Superficial Deposits - Locally derived lodgement till)			
9.40-10.00	33	B							
9.40-10.00	34	B						(1.10)	
10.00-10.45	35	SPT(c)	N=38						
10.00-10.50	36	B		1			20.91	10.50	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/05/14	08:25	98.60	11.55	99	13.00
27/05/14	17:53	102.77	11.55	99	47.45

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Byron Hawkins**	**WDixon + DOnanuga**	**TPayne**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH719**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**12.4.14** End: **14.4.14**	**31.32**	**E:234791.0 N:393048.6**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	Ref	Type	Results						
0.00-0.50	IP1	D				Grass over soft to firm friable dark brown slightly gravelly CLAY with frequent roots, rootlets and occasional twigs. Gravel is angular to subrounded medium to coarse of predominantly grey psammite, greenish grey phyllite with occasional brown flint.			
0.00-0.50	IP1	B							
0.00-0.50	RAD1	D						(0.40)	
							30.92	0.40	
						(Topsoil)			
0.50-1.00	IP2	D				Friable yellowish brown with occasional black specks slightly gravelly clayey SAND with occasional twigs. Gravel is angular to subangular fine to coarse of psammite and phyllite.	30.72	0.60	
0.50-1.00	IP2	B							
0.50-1.00	RAD2	D							
						(Superficial Deposits - Locally derived lodgement till)			
						Firm and locally soft brown mottled yellowish brown speckled black slightly gravelly sandy CLAY with occasional cobbles. Sand is fine to coarse. Gravel is angular to subrounded medium to coarse of grey psammite and occasional dolerite. Cobbles are angular to subangular of psammite.		(0.60)	
							30.12	1.20	
1.20-1.50	1	B				(Superficial Deposits - Locally derived lodgement till)			
						Soft to firm orangish brown mottled yellowish grey slightly gravelly sandy silty CLAY. Gravel is subrounded fine to coarse psammite. Locally dark brown pockets of slightly silty sand.		(0.40)	
1.50	2	D					29.72	1.60	
1.50-1.95	3	SPT(c)	N=9						
1.50-2.00	4	B				(Superficial Deposits - Locally derived lodgement till)			
						Soft to firm orangish brown mottled grey slightly gravelly sandy CLAY with a low cobble content. Cobbles are subrounded up to 70mm in diameter of psammite and dolerite. Gravel is subrounded to angular fine to coarse flat to cubic psammite, phyllite, dolerite and quartzite. Locally pockets of medium sand.			
2.00-2.50	5	B						(0.90)	
						(Superficial Deposits - Locally derived lodgement till)			
							28.82	2.50	
2.50	6	D				Stiff to very stiff brown mottled grey slightly gravelly sandy silty CLAY with a low cobble content. Cobbles are subangular up to 141mm in diameter of psammite, dolerite and quartzite. Gravel is subrounded to subangular fine to medium grained psammite, quartzite and dolerite.			
2.50-2.95	7	SPT(c)	N=36					(0.50)	
2.50-3.00	8	B				(Superficial Deposits - Locally derived lodgement till)	28.32	3.00	
3.00-3.50	9	B				Firm to stiff brown mottled grey slightly gravelly sandy CLAY. Gravel is subrounded to angular fine to coarse cubic to elongate psammite, phyllite, quartzite and dolerite.			
						(Superficial Deposits - Locally derived lodgement till)		(0.50)	
							27.82	3.50	
3.50	10	D				Stiff to very stiff brown slightly gravelly sandy CLAY with a low cobble content. Cobbles are rounded to subangular up to 95mm in diameter of psammite and dolerite. Gravel is rounded to subangular fine to coarse psammite and dolerite.			
3.50-3.95	11	SPT(c)	N=33					(0.50)	
3.50-4.00	12	B				(Superficial Deposits - Locally derived lodgement till)			
							27.32	4.00	
4.00-4.50	13	B				*Description on next sheet*			
4.00	14	D							

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
13/04/14	08:00	1.20	-	200	Dry
13/04/14	16:30	7.00	2.00	200	Dry
14/04/14	08:35	7.00	7.00	200	4.66
14/04/14	16:40	9.10	9.10	200	8.33

Chiselling / Slow Progress		
From	To	Duration (hh:mm)
2.80	2.90	00:30
8.60	8.80	00:45
9.00	9.10	00:30
9.10	9.10	01:00

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 1.20m depth. (IP)
3. Cable percussion boring using 200mm diameter tools to 9.10m depth between 12/04/14 and 14/04/14.
4. Water added to assist boring from 8.50m to 9.00m depth.
5. Soakaway test carried out at 3.22m depth on 13/04/14.
6. Rising head tests carried out between 2.02m and 3.22m depth on 13/04/14 and at 6.18m depth on 14/04/14.
7. On completion borehole backfilled with bentonite cement grout.
8. SPT hammer EQU167-2013 (E_r = 62.10%) used.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Byron Hawkins**	**WDixon + DOnanuga**	**???**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH719**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**12.4.14** End: **14.4.14**	**31.32**	**E:234791.0 N:393048.6**	**2** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	Ref	Type	Results						
4.50-4.95	15	SPT(c)	N=26			Stiff becoming very stiff dark greyish brown slightly gravelly sandy CLAY with a low cobble content. Cobbles are subrounded up to 98mm in diameter of psammite, phyllite and dolerite. Gravel is subrounded to angular fine to coarse psammite, phyllite, quartzite and dolerite. (Superficial Deposits - Locally derived lodgement till) *(stratum copied from 4.00m from previous sheet)*			
4.50-5.00	16	B							
5.00-5.50	17	B							
5.00-5.50	18	B							
5.50-5.95	19	SPT(c)	N=28						
5.50-6.00	20	B						(3.50)	
6.00-7.00	21	B							
6.50	22	D							
7.00-7.45	23	SPT(c)	N=37						
7.00-7.50	24	B					23.82	7.50	
7.50-8.50	25	B				Stiff dark greyish brown slightly gravelly sandy CLAY with a medium cobble content and a low boulder content. Cobbles and boulders are subrounded to subangular of psammite, phyllite and dolerite. Boulders are up to 223mm in diameter. Gravel is subrounded coarse psammite, dolerite and quartzite. (Superficial Deposits - Locally derived lodgement till)			
7.50-8.50	26	B							
8.00	27	D						(1.00)	
							22.82	8.50	
8.50-8.95	28	SPT(c)	N=44			Dense dark brownish grey and black GRAVEL with a high cobble content and a low boulder content. Cobbles and boulders are subrounded to subangular up to 201mm in diameter of psammite, phyllite and dolerite. Gravel is subrounded to subangular medium to coarse psammite, quartzite and dolerite.		(0.30)	
8.50-8.90	29	B					22.52	8.80	
8.90-9.10	30	B						(0.30)	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
13/04/14	08:00	1.20	-	200	Dry
13/04/14	16:30	7.00	2.00	200	Dry
14/04/14	08:35	7.00	7.00	200	4.66
14/04/14	16:40	9.10	9.10	200	8.33

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Byron Hawkins**	**WDixon + DOnanuga**	**???**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH719**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**12.4.14**	**31.32**	**E:234791.0 N:393048.6**	**3** of **3**
	End: **14.4.14**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	Ref	Type	Results						
						(Superficial Deposits - Locally derived lodgement till)	22.22	9.10	
						Very strong light greyish blue mottled dark purple slightly weathered PSAMMITE. Recovered as angular medium to coarse gravel and cobbles (due to chiselling). (New Harbour Group - PSAMMITE) *(stratum copied from 8.80m from previous sheet)*			
						Cable percussion borehole terminated at 9.10m depth.			

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
13/04/14	08:00	1.20	-	200	Dry
13/04/14	16:30	7.00	2.00	200	Dry
14/04/14	08:35	7.00	7.00	200	4.66
14/04/14	16:40	9.10	9.10	200	8.33

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Byron Hawkins**	**WDixon + DOnanuga**	**???**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH763**

Contract Ref:	Start: **3.4.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **25.4.14**	**26.91**	**E:235312.3 N:392907.5**	**1** of **6**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00									MADE GROUND: Grey and dark brown BOULDERS with much silty SAND. (Made Ground)			(0.95)	
											25.96	0.95	
1.00									MADE GROUND: Concrete slab (no reinforcement). (Made Ground)		25.81	1.10	1
									MADE GROUND: Light grey subangular to subrounded medium coarse GRAVEL of psammite and phyllite (subbase). (Made Ground)		25.71	1.20	
									Firm brown mottled grey slightly gravelly sandy SILT with a low cobble content. (Superficial Deposits - Locally derived lodgement till)		25	(1.40)	2
2.00													
											24.31	2.60	
									Firm becoming stiff brown mottled grey slightly gravelly sandy SILT with a low cobble content. (Superficial Deposits - Locally derived lodgement till)		24		3
3.00												(1.30)	
											23.01	3.90	
									Loose light brown mottled grey gravelly very silty SAND with a low cobble content. (Superficial Deposits - Locally derived lodgement till)		23		4
4.00													

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
03/04/14	14:00	4.20	4.20	200	4.20
03/04/14	17:55	8.80	8.50	200	6.80
04/04/14	08:30	8.80	8.00	200	6.01
25/04/14	08:40	16.50	9.10	99	6.50
25/04/14	15:40	24.00	9.10	99	9.01
24/04/14	13:20	9.20	None	N/R	4.70
24/04/14	17:40	16.50	9.10	N/R	8.75
25/04/14	08:40	16.50	9.10	N/R	6.50

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 1.20m depth. (IP)
3. Cable percussion boring using 200mm diameter tools to 9.00m depth between 03/04/14 and 04/04/14.
4. Water seepage from 4.20-6.30m depth. Water level monitored for 20 minutes at 6.30m depth and rose to 6.10m depth
5. Water added to assist boring from 6.30m to 8.60m depth.
6. Rising head test carried out between 8.00m and 9.00m depth on 04/04/14.
7. Rotary cored drilling from 9.00m to 24.00m depth with air and mist flush between 24/04/14 and 25/04/14.
8. Groundwater monitoring standpipe installed as shown upon completion.
9. SPT hammer EQU166-2013 (E_r = 80.05%) used.

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**Daniel Price + Lee Harris**	**LVonCadenhead + WDixon + LVon Cadenhead**	**TPayne + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH763**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**3.4.14** End: **25.4.14**	**26.91**	**E:235312.3 N:392907.5**	**2** of **6**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
5.00									Loose light brown mottled grey gravelly very silty SAND with a low cobble content. (Superficial Deposits - Locally derived lodgement till)*(stratum copied from 3.90m from* previous sheet)		22	(2.40)	5
6.00								1			21		6
								1			20.61	6.30	
									Very stiff dark greyish brown slightly gravelly sandy CLAY with a low cobble content. (Superficial Deposits - Locally derived lodgement till)				
7.00											20		7
												(2.30)	
8.00											19		8
											18.31	8.60	
									Medium strong to strong very thinly banded greenish grey mottled dark reddish purple slightly weathered interbedded PHYLLITE & PSAMMITE. (New Harbour Group - PHYLLITE)			(0.50)	
											18		9

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
25/04/14	15:40	24.00	9.10	N/R	9.00

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**Daniel Price + Lee Harris**	**LVonCadenhead + WDixon + LVon Cadenhead**	**TPayne + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH763**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**3.4.14** End: **25.4.14**	**26.91**	**E:235312.3 N:392907.5**	**3** of **6**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00											17.81	9.10	
				NI 30 100	Air+Mist (Brown)				Weak to medium strong very narrowly foliated dark brownish green and dark purple moderately weathered to slightly weathered PHYLLITE with rare very thin lenticular bands of greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		17	(1.20)	
10.00					Air+Mist (Brown)						16.61	10.30	
				10 68 180	Air+Mist (Light brown)				Strong to very strong very narrowly foliated dark greyish purple fresh to slightly weathered PHYLLITE with rare very thin lenticular bands and greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		16	(0.80)	
11.00									Strong to very strong very narrowly foliated dark greyish purple and dark brown moderately weathered to fresh PHYLLITE interbanded with very closely to closely spaced very narrow to narrow lenticular bands of grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		15.81	11.10	
12.00				NI 25 25							15	(1.70)	
				10 93 260	Air+Mist (Light brown)						14.11	12.80	
13.00									Strong very narrowly foliated dark reddish purple fresh to slightly weathered PHYLLITE interbanded with very closely to closely spaced very narrow to narrow lenticular bands of greenish grey medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		14	13 (0.92)	
				NI									

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**Daniel Price + Lee Harris**	**LVonCadenhead + WDixon + LVon Cadenhead**	**TPayne + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH763**

Contract Ref:	Start: **3.4.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **25.4.14**	**26.91**	**E:235312.3 N:392907.5**	**4** of **6**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
					Air+Mist (Light brown)						13.19	13.72	
14.00									Strong very narrowly to narrowly foliated dark greyish purple slightly weathered to fresh PHYLLITE interbanded with closely spaced very thin lenticular bands of greenish grey medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		13	14 (0.88)	
											12.31	14.60	
15.00				10 92 170	Air+Mist (Light green)				Strong very narrowly foliated dark greyish purple dark green slightly weathered to fresh PHYLLITE interbanded with very close to closely spaced very thin bands of green fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		12	15 (1.30)	
											11.01	15.90	
16.00									Medium strong very narrowly foliated dark greyish purple slightly weathered to fresh PHYLLITE interbanded with very closely spaced very thin to thin bands of dark green fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		11	16	
17.00					Air+Mist (Cream)						10	17	
											9	18	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**Daniel Price + Lee Harris**	**LVonCadenhead + WDixon + LVon Cadenhead**	**TPayne + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH763**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**3.4.14** End: **25.4.14**	**26.91**	**E:235312.3 N:392907.5**	**5** of **6**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
18.00				10 92 170	Air+Mist Air+Mist (Cream)				Medium strong very narrowly foliated dark greyish purple slightly weathered to fresh PHYLLITE interbanded with very closely spaced very thin to thin bands of dark green fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)*(stratum copied from 15.90m from previous sheet)*				
				NI									
19.00					Air+Mist (Light green)						8	(6.15) 19	
20.00				30 195 610	Air+Mist (Light brown)						7	20	
21.00				70 100 120							6	21	
22.00				30 196 340	Air+Mist (Light brown)				*Description on next sheet*		5 4.86	22.03 22	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**Daniel Price + Lee Harris**	**LVonCadenhead + WDixon + LVon Cadenhead**	**TPayne + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH763**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**3.4.14** End: **25.4.14**	**26.91**	**E:235312.3 N:392907.5**	**6** of **6**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
23.00				30 196 340	Air+Mist (Light brown)				Strong very narrow to very thin bands of very narrowly foliated dark greenish purple and dark green slightly weathered to fresh PHYLLITE with occasional narrow to very thin lenticular bands of green fine to medium PSAMMITE. (New Harbour Group - PHYLLITE)*(stratum copied from 22.05m from previous sheet)*		4	(1.95) 23	
24.00									Borehole terminated at 24.00m depth.		2.91 3	24.00 24	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**Daniel Price + Lee Harris**	**LVonCadenhead + WDixon + LVon Cadenhead**	**TPayne + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH769R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**14.5.14** End: **23.5.14**	**12.95**	**E:234761.8 N:393376.2**	**1** of **11**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
0.00										Grass over sandy gravelly SILT with frequent roots. (Topsoil)		12.80	0.15	
										Firm orange brown sandy slightly gravelly CLAY with a low cobble content. (Superficial Deposits - Locally derived lodgement till)		12.55	0.40	
										Stiff orange brown sandy gravelly CLAY with a medium to high cobble content. (Superficial Deposits - Locally derived lodgement till)		12.15	(0.40) 0.80	
1.00										Rotary open hole technique used.		12	1 (0.70)	
				NI NI NI	Air+Mist (Grey)	(0:25:00)				Strong very thinly to thinly banded very narrowly foliated dark greyish green slightly weathered to fresh PHYLLITE with strong very closely spaced to closely spaced narrow to very thin bands of dark greyish green medium and coarse grained PSAMMITE. (New Harbour Group - PHYLLITE)		11.45	1.50	
2.00				50 220 220	Air+Mist (Grey)	(0:45:00)				Strong to very strong very thinly to thinly banded very narrowly foliated dark greyish green fresh PHYLLITE with strong very closely spaced to closely spaced very thin bands of dark greyish green medium and coarse grained PSAMMITE. (New Harbour Group - PHYLLITE)		11	(0.60) 2	
												10.85	2.10	
3.00					Air+Mist (Grey)	(0:10:00)				Strong very thinly banded dark greyish green medium to coarse grained fresh PSAMMITE with strong very closely spaced narrow to very thin bands of very narrowly foliated dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		10	(1.00) 3	
				15 80 240	Air+Mist (Grey)	(0:30:00)				Strong very thinly to thinly banded dark greenish grey medium and coarse grained fresh PSAMMITE with strong very closely spaced to closely spaced very narrow to very thin bands of very narrowly foliated dark brownish purple and dark greenish grey PHYLLITE. (New Harbour Group - PSAMMITE)		9.85	3.10	
												9.65	3.30	
4.00												9.19	(0.46) 3.76	
												9	4 (0.74)	
										Strong very thinly to thinly banded dark greenish grey medium and coarse grained		8.45	4.50	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
14/05/14	08:30	22.15	5.60	116	1.50
14/05/14	18:00	3.30	1.50	116	2.15
15/05/14	08:30	3.30	1.50	116	2.90
15/05/14	18:00	13.80	1.50	116	11.15
16/05/14	08:30	13.20	1.50	116	9.60
16/05/14	12:00	16.80	1.50	116	11.45
19/05/14	12:30	16.80	1.50	116	1.60
19/05/14	18:00	20.05	1.50	116	14.25

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 0.75m depth terminated due to possible bedrock. (IP)
3. Rotary open hole drilling from 0.75m to 1.50m depth on 14/05/14.
4. Rotary cored drilling from 0.75m to 43.23m depth with air and mist flush between 14/05/14 and 23/05/14.
5. 6 Packer tests conducted within borehole at various depths between 5.00m and 39.50m from 20/06/14 to 22/06/14.
6. Groundwater monitoring standpipe installed as shown upon completion.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Beretta T44**	**Christopher Yandell**	**MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH769R**

Contract Ref:	Start: **14.5.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **23.5.14**	**12.95**	**E:234761.8 N:393376.2**	**2** of **11**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
										fresh PSAMMITE with strong very closely spaced to closely spaced very narrow to very thin bands of very narrowly foliated dark brownish purple and dark greenish grey PHYLLITE. (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)		7.97	(0.48) 4.98	
5.00				25 250 375	Air+Mist (Grey)	(1:10:00)				Strong very thinly to thinly banded dark greenish grey medium and coarse grained fresh PSAMMITE with strong very closely spaced to closely spaced very narrow to very thin bands of very narrowly foliated dark brownish purple and dark greenish grey PHYLLITE. (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)		7.12	(0.85) 5.83	
6.00					Air+Mist (Grey)	(1:00:00)				Strong very thinly to thinly banded dark greenish grey medium and coarse grained fresh PSAMMITE with strong very closely to closely spaced very narrow to very thin bands of very narrowly foliated dark brownish purple PHYLLITE. (New Harbour Group - PHYLLITE)		6.69	(0.43) 6.26	
										Strong very thinly banded dark bluish green medium and coarse grained fresh PSAMMITE with strong very closely spaced very narrow to very thin bands of dark greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PSAMMITE)			(0.74)	
7.00										Strong very thinly banded dark bluish green medium and coarse grained fresh PSAMMITE with strong very closely spaced very narrow to very thin bands of dark greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PSAMMITE)		5.95	7.00	
				15 80 330	Air+Mist (Grey)	(1:00:00)				Strong narrowly to very thinly banded very narrowly foliated dark brownish purple fresh PHYLLITE with strong very closely spaced narrow to very thin bands of lenticular dark greyish purple medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		5.72	(0.51) 7.23	
8.00										Strong narrowly to very thinly banded very narrowly foliated dark bluish green medium grained fresh PSAMMITE with strong very closely spaced narrow to very thin bands of very narrowly foliated dark greyish purple and light greyish green PHYLLITE. (New Harbour Group - PHYLLITE)		5.21	(0.55) 7.74	
					Air+Mist (Grey)	(0:45:00)						4.66	(0.40) 8.29	
				35 180 380	Air+Mist (Grey)	(0:35:00)				Strong to very strong very thinly banded very narrowly foliated dark greyish green fresh PHYLLITE with strong to very		4.26	(0.61) 8.69	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
20/05/14	08:30	20.05	1.50	116	1.60
20/05/14	18:00	27.50	1.50	116	14.45
21/05/14	08:30	27.50	1.50	16	1.60
21/05/14	18:00	38.55	1.50	116	14.10
22/05/14	08:30	38.55	1.50	116	1.60
14/05/14	08:30	22.15	5.60	116	1.50
14/05/14	18:00	33.00	7.50	116	2.15
15/05/14	08:30	3.30	1.50	116	2.90

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Beretta T44**	**Christopher Yandell**	**MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH769R**

Contract Ref:	Start: **14.5.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **23.5.14**	**12.95**	**E:234761.8 N:393376.2**	**3** of **11**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00										strong extremely closely spaced to very closely spaced narrow bands of lenticular dark greenish grey medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		3.65	9.30	
				35 180 380	Air+Mist (Grey)	(0:35:00)				Strong to very strong very thinly banded very narrowly foliated dark greyish green fresh PHYLLITE with strong to very strong extremely closely spaced to very closely spaced narrow bands of lenticular dark greenish grey medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		3	(0.79)	
10.00						(0:45:00)				Very strong very thinly banded very narrowly foliated dark greenish grey fresh PHYLLITE with very strong extremely closely spaced to very closely spaced narrow to very thin bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)*(stratum copied from 8.69m* from previous sheet)		2.86 10	10.09 (0.76)	
										Very strong very thinly banded very narrowly foliated dark greenish grey fresh PHYLLITE with very strong extremely closely spaced to very closely spaced narrow to very thin bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		2.10 2	10.85	
11.00										Very strong narrowly banded very narrowly foliated dark greenish grey fresh PHYLLITE with very strong extremely closely spaced to very closely spaced narrow bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		1	11 (1.50)	
12.00				52	Air+Mist (Grey)	(0:40:00)				Very strong narrowly banded very narrowly foliated dark greenish grey fresh PHYLLITE with very strong extremely closely spaced to very closely spaced narrow bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		0.60	12 12.35	
										Very strong narrowly banded very narrowly foliated dark greenish grey fresh PHYLLITE with very strong extremely closely spaced to very closely spaced narrow bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-0.03 0	(0.63) 12.98	
13.00					Air+Mist (Grey)	(0:40:00)				Very strong narrowly banded very narrowly foliated dark greenish grey fresh PHYLLITE with very strong extremely closely spaced to very closely spaced narrow bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)			13 (0.55)	
										Description on next sheet				

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
15/05/14	18:00	13.80	1.50	116	11.15
16/05/14	08:30	13.80	1.50	116	9.60
16/05/14	12:00	16.80	1.50	116	11.45
19/05/14	12:30	16.80	1.50	116	1.60
19/05/14	18:00	20.05	1.50	116	14.25
20/05/14	08:30	20.05	1.50	116	1.60
20/05/14	18:00	27.50	1.50	116	14.45

General Remarks

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Beretta T44**	**Christopher Yandell**	**MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH769R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**14.5.14** End: **23.5.14**	**12.95**	**E:234761.8 N:393376.2**	**4** of **11**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
				52		(0:40:00)				Very strong narrowly banded very narrowly foliated dark greenish grey fresh PHYLLITE with very strong extremely closely spaced to very closely spaced narrow bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)*(stratum copied from* 12.98m from previous sheet)		-0.58	13.53 (0.32)	
												-0.90	13.85	
14.00				170 170 870	Air+Mist (Grey)	(0:50:00)				Very strong narrowly banded very narrowly foliated dark greenish grey fresh PHYLLITE with very strong extremely closely spaced to very closely spaced narrow bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-1	14 (1.65)	
15.00										Very strong very thinly banded very narrowly foliated dark greyish green fresh PHYLLITE with very strong very closely spaced very narrow to very thin bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-2	15	
												-2.55	15.50	
16.00				45 200 610	Air+Mist (Grey)	(1:15:00)				Very strong very thinly to thinly banded dark greenish green medium and coarse grained fresh PSAMMITE with very strong very closely spaced to closely spaced very thin to thin bands of very narrowly foliated dark brownish purple PHYLLITE. (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)		-3	(0.93) 16	
												-3.48	16.43	
										Very strong very thinly to thinly banded dark greenish green medium and coarse grained fresh PSAMMITE with very strong very closely spaced to closely spaced very thin to thin bands of very narrowly foliated dark brownish purple PHYLLITE. (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)		-3.85	(0.37) 16.80	
17.00					Air+Mist (Grey)	(0:40:00)						-4	(0.35) 17	
												-4.20	17.15	
				25 230 300	Air+Mist (Grey)	(0:40:00)				Very strong very thinly to thinly banded dark greenish green medium and coarse grained fresh PSAMMITE with very strong very closely spaced to closely spaced very thin to thin bands of very narrowly foliated dark brownish purple PHYLLITE. (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)				
										Description on next sheet		-5	18	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Beretta T44**	**Christopher Yandell**	**MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH769R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**14.5.14** End: **23.5.14**	**12.95**	**E:234761.8 N:393376.2**	**5** of **11**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
18.00										Very strong very thinly to thinly banded dark greenish green medium and coarse grained fresh PSAMMITE with very strong very closely spaced to closely spaced very thin to thin bands of very narrowly foliated dark brownish purple PHYLLITE. (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)*(stratum copied from 17.15m from previous sheet)*			(1.79)	
				25 230 300	Air+Mist (Grey)	(0:40:00)						-5.99	18.94	
19.00						(0:45:00)				Very strong narrowly banded sheared dark greenish green medium and coarse grained fresh PSAMMITE with very strong very closely spaced very narrow bands of very narrowly foliated dark brownish purple PHYLLITE. (New Harbour Group - PSAMMITE)		-6	19	
												-6.39	(0.40) 19.34	
				150 150 230	Air+Mist (Grey)					Very strong very thinly to thinly banded dark greenish green medium and coarse grained fresh PSAMMITE with very strong very closely spaced to closely spaced very thin to thin bands of very narrowly foliated dark brownish purple and dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-6.85	(0.46) 19.80	
20.00				20 20 40	Air+Mist (Grey)	(0:45:00)						-7	(0.46) 20	
										Very strong very thinly to thinly banded dark greyish green medium grained fresh PSAMMITE with strong very closely spaced to closely spaced very narrow to narrow bands of very narrowly foliated light greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-7.31	20.26	
										Very strong very thinly to thinly banded dark greyish green medium grained fresh PSAMMITE. (New Harbour Group - PSAMMITE)		-8	(1.39) 21	
21.00				125 350 660	Air+Mist (Grey)	(1:15:00)						-8.70	21.65	
										Very strong very thinly banded dark greyish green medium grained fresh PSAMMITE with strong closely spaced narrow bands of very narrowly foliated light greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-9	(0.35) 22	
22.00					Air+Mist (Grey)	(0:50:00)						-9.05	22.00	
										Very strong very thinly banded dark greyish green medium grained fresh PSAMMITE. (New Harbour Group - PSAMMITE)		-9.34	(0.29) 22.29	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Beretta T44**	**Christopher Yandell**	**MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH769R**

Contract Ref:	Start: **14.5.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **23.5.14**	**12.95**	**E:234761.8 N:393376.2**	**6** of **11**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
				125 350 660	Air+Mist (Grey)	(0:50:00)				Very strong medium to thickly banded dark greyish green medium to coarse grained fresh PSAMMITE. (New Harbour Group - PSAMMITE)*(stratum copied from* 22.29m from previous sheet)		-10.05	(0.71)	
23.00				NI NI NI						Strong very thinly banded dark greyish green medium grained slightly weathered PSAMMITE with strong very closely spaced to closely spaced very narrow bands of very narrowly foliated light greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-10.79	23.74 (0.74)	
24.00				56 170 1,010	Air+Mist (Grey)	(0:40:00)				Strong very thinly to thinly banded dark greyish green medium grained slightly weathered PSAMMITE with strong very closely spaced to closely spaced very narrow bands of very narrowly foliated light greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-11.70	24.65 (0.91)	
25.00					Air+Mist (Grey)	(0:50:00)				Strong very thinly banded dark greyish green medium grained slightly weathered PSAMMITE with strong very closely spaced to closely spaced very narrow bands of very narrowly foliated light greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-12.67	25.62 (0.97)	
26.00					Air+Mist (Grey)	(0:30:00)				Strong very thinly to thinly banded dark greyish green medium grained slightly weathered PSAMMITE with strong very closely spaced to closely spaced very narrow bands of very narrowly foliated light greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-13.09	26.04 (0.42)	
				45 120 580	Air+Mist (Grey)	(1:05:00)				Strong very thinly banded dark greyish green medium grained slightly weathered PSAMMITE with strong very closely spaced to closely spaced very narrow bands of very narrowly foliated light greyish green PHYLLITE. (New Harbour Group - PSAMMITE) *Description on next sheet*		-13.43	26.38 (0.34)	
												-14	(1.12)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Beretta T44**	**Christopher Yandell**	**MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH769R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**14.5.14** End: **23.5.14**	**12.95**	**E:234761.8 N:393376.2**	**7** of **11**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
27.00				45 120 580	Air+Mist (Grey)	(1:05:00)				Very strong very thinly to thinly banded dark bluish green medium and coarse grained fresh PSAMMITE with very strong very closely spaced to closely spaced very thin to thin bands of very narrowly foliated dark brownish purple PHYLLITE. (New Harbour Group - PSAMMITE)*(stratum copied from 26.38m from previous sheet)*		-14.55	27.50	
28.00					Air+Mist (Grey)	(1:20:00)				Strong very thinly banded dark greyish green medium grained slightly weathered PSAMMITE with strong very closely spaced to closely spaced very narrow bands of very narrowly foliated light greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-15	(0.99) 28	
29.00				35 210 540	Air+Mist (Grey)	(0:35:00)				Strong to very strong very thinly to thinly banded dark bluish green medium grained fresh PSAMMITE with strong very closely spaced narrow bands of very narrowly foliated dark brownish purple and light greenish grey PHYLLITE. (New Harbour Group - PSAMMITE)		-15.54 -16.07	28.49 (0.53) 29.02	
30.00					Air+Mist (Grey)	(0:35:00)				Strong to very strong narrowly to very thinly banded dark bluish green medium grained fresh PSAMMITE with strong very closely spaced narrow bands of very narrowly foliated dark brownish purple and light greenish grey PHYLLITE. (New Harbour Group - PSAMMITE)		-17 -17.24	(1.17) 30.19	
31.00				150 210 560	Air+Mist (Grey)	(0:35:00)				Strong to very strong very narrowly to narrowly banded very narrowly foliated dark brownish purple fresh PHYLLITE with strong extremely closely spaced very narrow to narrow bands of lenticular dark greenish grey medium grained PSAMMITE. (New Harbour Group - PHYLLITE) Strong to very strong very narrowly to narrowly banded very narrowly foliated dark brownish purple fresh PHYLLITE with strong extremely closely spaced very narrow to narrow bands of lenticular dark greenish grey medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-17.50 -17.76 -18 -18.29	30.45 30.71 (0.53) 31 31.24	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Beretta T44**	**Christopher Yandell**	**MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH769R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**14.5.14** End: **23.5.14**	**12.95**	**E:234761.8 N:393376.2**	**8** of **11**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
32.00				150 210 560	Air+Mist (Grey)	(0:45:00)				Strong to very strong very narrowly to narrowly banded very narrowly foliated dark brownish purple and light greenish grey fresh PHYLLITE with strong extremely closely spaced very narrow to narrow bands of lenticular dark greenish grey medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-19	(1.01) 32	
										Strong to very strong very thinly banded very narrowly foliated dark brownish purple and light greenish grey fresh PHYLLITE with strong very closely spaced narrow to very thin bands of dark greenish grey medium grained PSAMMITE. (New Harbour Group - PHYLLITE)*(stratum copied from* 31.24m from previous sheet)		-19.30	32.25	
													(0.50)	
												-19.80	32.75	
33.00					Air+Mist (Grey)	(0:30:00)				Strong to very strong very narrowly to narrowly banded very narrowly foliated dark brownish purple and light greenish grey fresh PHYLLITE with strong extremely closely spaced very narrow to narrow bands of lenticular dark greenish grey medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-20	33	
													(1.50)	
34.00										Strong to very strong very thinly banded dark bluish green medium grained fresh PSAMMITE with strong very closely spaced narrow bands of very narrowly foliated light greyish green and light greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		-21	34	
												-21.30	34.25	
35.00				120 280 490	Air+Mist (Grey)	(0:40:00)				Strong to very strong very thinly to thinly banded dark bluish green and dark greyish green medium to coarse grained fresh PSAMMITE with strong very closely spaced to closely spaced narrow bands of very narrowly foliated light greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-22	35	
													(2.17)	
					Air+Mist (Grey)							-23	36	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Beretta T44**	**Christopher Yandell**	**MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH769R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**14.5.14** End: **23.5.14**	**12.95**	**E:234761.8 N:393376.2**	**9** of **11**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
36.00												-23.47	36.42	
				120 280 490	Air+Mist (Grey)	(0:40:00)				Strong to very strong very thinly to thinly banded dark bluish green and dark greyish green medium to coarse grained fresh PSAMMITE with strong very closely spaced to closely spaced narrow to very thin bands of very narrowly foliated light greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		-23.83	(0.36) 36.78	
37.00										Very strong very thinly banded dark bluish green and dark greyish green medium to coarse grained fresh PSAMMITE with very strong very closely spaced very narrow to narrow bands of very narrowly foliated light greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		-24 -24.27	(0.44) 37 37.22	
				450 - 1050	Air+Mist (Grey)	(0:40:00)				Very strong very thinly banded dark bluish green and dark greyish green medium to coarse grained fresh PSAMMITE with very strong very closely spaced narrow to very thin bands of very narrowly foliated light greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		-24.58 -25	(0.31) 37.53 38	
38.00										Very strong very thinly banded dark bluish green and dark greyish green fine to medium grained fresh PSAMMITE with very strong very closely spaced narrow to very thin bands of very narrowly foliated light greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		-26	(1.61) 39	
39.00				80 340 780	Air+Mist (Grey)	(0:30:00)				Very strong narrowly to very thinly banded dark greyish green fine to medium to coarse grained fresh PSAMMITE with very strong extremely closely spaced to closely spaced very narrow to narrow bands of very narrowly foliated dark greyish green fine grained PHYLLITE. (New Harbour Group - PSAMMITE)		-26.19 -26.58	(0.39) 39.14 39.53	
										Very strong narrowly to very thinly banded disturbed dark greyish green medium to coarse grained fresh PSAMMITE with very strong extremely closely to very closely spaced narrow to very thin bands of very narrowly foliated dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-26.83 -27 -27.18	(0.35) 39.78 40 40.13	
40.00					Air+Mist (Grey)								(0.63)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Beretta T44**	**Christopher Yandell**	**MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH769R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**14.5.14** End: **23.5.14**	**12.95**	**E:234761.8 N:393376.2**	**10** of **11**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
										Very strong narrowly to very thinly banded disturbed dark greyish green medium to coarse grained fresh PSAMMITE with very strong extremely closely spaced to very closely spaced narrow to very thin bands of very narrowly foliated dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-27.81	40.76	
41.00				80 340 780	Air+Mist (Grey)	(0:40:00)						-28	(0.44) 41	
										Very strong narrowly to very thinly banded disturbed dark greyish green medium to coarse grained fresh PSAMMITE with very strong very closely spaced to closely spaced narrow to very thin bands of very narrowly foliated dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE) *(stratum copied from 40.13m from previous sheet)*		-28.25	41.20	
42.00				20 1,480 1,480	Air+Mist (Grey)	(0:40:00)						-28.83	(0.58) 41.78	
										Very strong narrowly to very thinly banded disturbed dark greyish green medium to coarse grained fresh PSAMMITE with very strong very closely spaced to closely spaced narrow to very thin bands of very narrowly foliated dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-29	(0.35) 42	
										Very strong very thinly to thinly banded disturbed dark greyish green medium and coarse grained fresh PSAMMITE with very strong closely spaced very narrow to narrow bands of very narrowly foliated dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-29.18	42.13	
43.00												-29.75	(0.57) 42.70	
										Very strong narrowly to very thinly banded disturbed dark greyish green medium grained fresh PSAMMITE with very strong extremely closely spaced to very closely spaced narrow to very thin bands of very narrowly foliated dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-30	(0.53) 43	
										Very strong very thinly to thinly banded disturbed dark greyish green medium and coarse grained fresh PSAMMITE with very strong closely spaced very narrow to narrow bands of very narrowly foliated dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-30.28	43.23	
										Very strong thinly to medium banded dark greyish green medium to coarse grained fresh PSAMMITE with very strong closely spaced very narrow to narrow bands of very narrowly foliated dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Beretta T44**	**Christopher Yandell**	**MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH769R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**14.5.14** End: **23.5.14**	**12.95**	**E:234761.8 N:393376.2**	**11** of **11**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
										Borehole terminated at 43.23m depth.				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Beretta T44**	**Christopher Yandell**	**MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH836R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**06.07.14** End: **08.07.14**	**26.21**	**E:234728.0 N:393136.4**	**1** of **9**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00						(00:20:00)				Grass over soft to firm orange brown slightly sandy slightly gravelly CLAY. (Topsoil)		26	(0.75)	
												25.46	0.75	
										Stiff orange brown to blue grey slightly sandy gravelly CLAY. (Superficial Deposits - Locally derived lodgement till)			(0.45)	1
1.00												25.01	1.20	
										Borehole progressed using open hole drilling techniques; descriptions based on recovered chippings.		25		
2.00														2
												24		
3.00														OH 3
												23		
4.00													(5.80)	4
												22		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/07/14	08:15	7.00	7.00	116	Dry
07/07/14	18:00	21.75	7.00	116	8.10
08/07/14	08:15	21.75	7.00	116	8.40
08/07/14	18:00	36.00	7.00	116	8.70

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 1.20m depth.(IP)
3. Rotary open hole drilling from 1.20m to 7.00m depth on 06/07/2014.
4. Rotary cored drilling from 7.00m to 36.10m depth with air mist flush between 07/07/2014 and 08/07/2014.
5. On completion borehole backfilled with bentonite cement grout.
6. Adjacent hole was drilled to recover samples from the superficial deposits. Coordinates: E: 234728.228, N: 393136.397. TL: 19.00m AOD.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Rotary open hole + Rotary Cored	**SoilMec SM-14**	**Paul Morris**	**KWhitcombe + MSummersall + MSummersall**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH836R**

Contract Ref:	Start: **06.07.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **08.07.14**	**26.21**	**E:234728.0 N:393136.4**	**2** of **9**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
5.00						(00:20:00)						21	5	
6.00												20	6	OH
7.00					Air+Mist (Grey)	(00:10:00)				Weak to medium strong narrowly to very thinly banded very narrowly foliated greyish green fine to medium grained slightly weathered PSAMMITE with medium strong closely spaced very narrow bands of very narrowly foliated yellowish green PHYLLITE. (New Harbour Group - PSAMMITE)		19.21	7.00	
8.00				NI 20 120	Air+Mist (Grey)	(0:22:00)						19	(1.30)	
						(0:16:00)				Weak to medium strong narrowly to very thinly banded very narrowly foliated greyish green fine to medium grained fresh PSAMMITE with medium strong closely spaced very narrow bands of very narrowly foliated brownish green and greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		17.91	8.30	
												18	(1.20)	
													9	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/07/14	08:15	7.00	7.00	116	Dry
07/07/14	18:00	21.75	7.00	116	8.10
08/07/14	08:15	21.75	7.00	116	8.40
08/07/14	18:00	36.00	7.00	116	8.70

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Rotary open hole + Rotary Cored	**SoilMec SM-14**	**Paul Morris**	**KWhitcombe + MSummersall + MSummersall**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH836R**

Contract Ref:	Start: **06.07.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **08.07.14**	**26.21**	**E:234728.0 N:393136.4**	**3** of **9**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
9.00												17		
												16.71	9.50	
				10 120 260	Air+Mist (Grey)	(0:22:00)				Medium strong to strong narrowly to very thinly banded very narrowly foliated greenish grey fine to medium grained fresh PSAMMITE with medium strong closely spaced very narrow bands of very narrowly foliated greyish purple and PHYLLITE. (New Harbour Group - PSAMMITE)		16	10	
10.00														
11.00					Air+Mist (Grey)	(0:20:00)						15	(4.00)	
				40 230 630								14	12	
12.00														
13.00					Air+Mist (Grey)	(0:18:00)						13	13	
												12.71	13.50	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/07/14	08:15	7.00	7.00	116	Dry
07/07/14	18:00	21.75	7.00	116	8.10
08/07/14	08:15	21.75	7.00	116	8.40
08/07/14	18:00	36.00	7.00	116	8.70

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Rotary open hole + Rotary Cored	**SoilMec SM-14**	**Paul Morris**	**KWhitcombe + MSummersall + MSummersall**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH836R**

Contract Ref:	Start: **06.07.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **08.07.14**	**26.21**	**E:234728.0 N:393136.4**	**4** of **9**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
14.00					Air+Mist (Grey)	(0:18:00)				Medium strong to strong narrowly to very thinly banded very narrowly foliated greenish grey fine to medium grained fresh PSAMMITE with medium strong closely spaced very narrow bands of disturbed greyish purple and PHYLLITE. (New Harbour Group - PSAMMITE)		12 11.91	(0.80) 14.30	
15.00				20 400 890	Air+Mist (Grey)	(0:19:00)				Medium strong to strong narrowly to very thinly banded very narrowly foliated greenish grey fine to medium grained fresh PSAMMITE with medium strong very closely spaced to closely spaced very narrow bands of disturbed greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		11	15	
16.00					Air+Mist (Grey)	(0:21:00)						10	(3.20) 16	
17.00				20 80 320	Air+Mist (Grey)	(0:20:00)						9 8.71	17 17.50	
				70 280 600	Air+Mist (Grey)	(0:22:00)				Medium strong to strong narrowly to very thinly banded very narrowly foliated greenish grey fine to medium grained fresh PSAMMITE with medium strong very closely spaced to closely spaced very narrow bands of very		8.21	(0.50) 18.00 18	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/07/14	08:15	7.00	7.00	116	Dry
07/07/14	18:00	21.75	7.00	116	8.10
08/07/14	08:15	21.75	7.00	116	8.40
08/07/14	18:00	36.00	7.00	116	8.70

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Rotary open hole + Rotary Cored	**SoilMec SM-14**	**Paul Morris**	**KWhitcombe + MSummersall + MSummersall**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH836R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**06.07.14** End: **08.07.14**	**26.21**	**E:234728.0 N:393136.4**	**5** of **9**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
18.00										narrowly foliated greyish purple and PHYLLITE. (New Harbour Group - PSAMMITE)				
										Medium strong to strong narrowly to very thinly banded very narrowly foliated greenish grey fine to medium grained fresh PSAMMITE with medium strong very closely spaced to closely spaced very narrow bands of disturbed greyish purple and PHYLLITE. (New Harbour Group - PSAMMITE)		7.86	(0.35) 8 18.35	
				70 280 600	Air+Mist (Grey)	(0:22:00)						7.61	18.60	
19.00										Medium strong to strong narrowly to very thinly banded very narrowly foliated greenish grey fine to medium grained fresh PSAMMITE with medium strong very closely spaced to closely spaced very narrow bands of very narrowly foliated greyish purple and PHYLLITE. (New Harbour Group - PSAMMITE)			19 (1.02) 7	
												6.59	19.62	
										Medium strong to strong narrowly to very thinly banded very narrowly foliated greenish grey fine to medium grained fresh PSAMMITE with medium strong very closely spaced to closely spaced very narrow bands of disturbed greyish purple and PHYLLITE. (New Harbour Group - PSAMMITE)			(0.73) 20	
20.00													6	
				10 350 670	Air+Mist (Grey)	(0:19:00)						5.86	20.35	
										Medium strong to strong narrowly to very thinly banded very narrowly foliated greenish grey fine to medium grained fresh PSAMMITE with medium strong closely spaced very narrow to narrow bands of very narrowly foliated greyish purple and PHYLLITE. (New Harbour Group - PSAMMITE)			21	
21.00										Strong narrowly to very thinly banded very narrowly foliated greenish grey fine to coarse grained fresh PSAMMITE with medium strong closely spaced very narrow to thin bands of very narrowly foliated greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)			5 (2.40)	
				20 420 1000	Air+Mist (Grey)	(0:18:00)							22	
22.00					Air+Mist (Grey)	(0:18:00)							4	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/07/14	08:15	7.00	7.00	116	Dry
07/07/14	18:00	21.75	7.00	116	8.10
08/07/14	08:15	21.75	7.00	116	8.40
08/07/14	18:00	36.00	7.00	116	8.70

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Rotary open hole + Rotary Cored	**SoilMec SM-14**	**Paul Morris**	**KWhitcombe + MSummersall + MSummersall**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH836R**

Contract Ref:	Start: **06.07.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **08.07.14**	**26.21**	**E:234728.0 N:393136.4**	**6** of **9**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
												3.46	22.75	
23.00					Air+Mist (Grey)	(0:18:00)				Strong narrowly to medium banded very narrowly foliated dark greenish grey and light greenish grey fine to coarse grained fresh PSAMMITE with medium strong closely to medium spaced narrow bands of very narrowly foliated purplish grey PHYLLITE. (New Harbour Group - PSAMMITE)		2.91	(0.55) 23 3 23.30	
24.00				20 420 1000	Air+Mist (Grey)	(0:18:00)				Strong narrowly to very thinly banded very narrowly foliated greenish grey fine to medium grained fresh PSAMMITE with very closely spaced to closely spaced very narrow to narrow bands of very narrowly foliated greyish purple and PHYLLITE. (New Harbour Group - PSAMMITE)			24 2 (2.95)	
25.00					Air+Mist (Grey)	(0:23:00)							25 1	
26.00					Air+Mist (Grey)	(0:18:00)				Medium strong very narrowly to narrowly banded very narrowly foliated greyish purple fresh PHYLLITE with strong very closely spaced very narrow bands of lenticular greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-0.04	26 0 26.25 (0.85) 27	
				20 250 420										

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/07/14	08:15	7.00	7.00	116	Dry
07/07/14	18:00	21.75	7.00	116	8.10
08/07/14	08:15	21.75	7.00	116	8.40
08/07/14	18:00	36.00	7.00	116	8.70

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Rotary open hole + Rotary Cored	**SoilMec SM-14**	**Paul Morris**	**KWhitcombe + MSummersall + MSummersall**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH836R**

Contract Ref:	Start: **06.07.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **08.07.14**	**26.21**	**E:234728.0 N:393136.4**	**7** of **9**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
27.00												-0.89	27.10	
					Air+Mist (Grey)	(0:18:00)				Strong narrowly to very thinly banded very narrowly foliated greenish grey fine to medium grained fresh PSAMMITE with medium strong very closely spaced to closely spaced very narrow to narrow bands of very narrowly foliated greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		-1	(1.15)	
28.00												-2.04	28.25	
				20 250 420	Air+Mist (Grey)	(0:21:00)				Strong very narrowly banded very narrowly foliated greenish grey fine to coarse grained fresh PSAMMITE. (New Harbour Group - PSAMMITE)		-2.29	28.50	
										Strong narrowly to very thinly banded very narrowly foliated greenish grey fine to medium grained fresh PSAMMITE with medium strong very closely spaced to closely spaced very narrow to narrow bands of disturbed greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		-3	(1.70)	
29.00														
30.00				50 500 780	Air+Mist (Grey)	(0:20:00)						-3.99	30.20	
										Medium strong very narrowly to narrowly banded very narrowly foliated greyish purple fresh PHYLLITE with strong very closely spaced very narrow bands of disturbed greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-4	(1.00)	
31.00					Air+Mist (Grey/Red)	(0:19:00)						-4.99	31.20	
										Strong narrowly to very thinly banded very narrowly foliated greenish grey fine to coarse grained fresh PSAMMITE with		-5	(0.60)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/07/14	08:15	7.00	7.00	116	Dry
07/07/14	18:00	21.75	7.00	116	8.10
08/07/14	08:15	21.75	7.00	116	8.40
08/07/14	18:00	36.00	7.00	116	8.70

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Rotary open hole + Rotary Cored	**SoilMec SM-14**	**Paul Morris**	**KWhitcombe + MSummersall + MSummersall**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH836R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**06.07.14** End: **08.07.14**	**26.21**	**E:234728.0 N:393136.4**	**8** of **9**

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
										medium strong very closely spaced to closely spaced very narrow to narrow bands of disturbed greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		-5.59	31.80	
32.00					Air+Mist (Grey/Red)	(0:19:00)				Strong very narrowly to narrowly banded very narrowly foliated greyish purple fresh PHYLLITE with strong very closely spaced very narrow bands of disturbed greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-6	32 (1.95)	
					Air+Mist (Red)	(0:18:00)						-7	33	
33.00				50 500 780	Air+Mist (Grey/Red)	(0:21:00)						-7.54	33.75	
										Strong narrowly to very thinly banded very narrowly foliated greenish grey fine to coarse grained fresh PSAMMITE with medium strong closely spaced very narrow to thin bands of sheared greyish purple and PHYLLITE. (New Harbour Group - PSAMMITE)		-8	34 (0.65)	
34.00												-8.19	34.40	
										Medium strong very narrowly to narrowly banded very narrowly foliated greyish purple fresh PHYLLITE with strong very closely spaced very narrow bands of lenticular greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-9	(0.95) 35	
35.00					Air+Mist (Grey/Red)	(0:20:00)						-9.14	35.35	
										Strong narrowly to very thinly banded very narrowly foliated greenish grey fine to coarse grained fresh PSAMMITE with medium strong closely spaced very narrow to thin bands of sheared greyish purple and PHYLLITE. (New Harbour Group - PSAMMITE)			(0.75) 36	

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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/07/14	08:15	7.00	7.00	116	Dry
07/07/14	18:00	21.75	7.00	116	8.10
08/07/14	08:15	21.75	7.00	116	8.40
08/07/14	18:00	36.00	7.00	116	8.70

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Rotary open hole + Rotary Cored	**SoilMec SM-14**	**Paul Morris**	**KWhitcombe + MSummersall + MSummersall**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH836R**

Contract Ref:	Start: **06.07.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **08.07.14**	**26.21**	**E:234728.0 N:393136.4**	**9** of **9**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
36.00					↓	↓						-9.89	36.10	
										Borehole terminated at 36.10m depth.				

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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/07/14	08:15	7.00	7.00	116	Dry
07/07/14	18:00	21.75	7.00	116	8.10
08/07/14	08:15	21.75	7.00	116	8.40
08/07/14	18:00	36.00	7.00	116	8.70

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Rotary open hole + Rotary Cored	**SoilMec SM-14**	**Paul Morris**	**KWhitcombe + MSummersall + MSummersall**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH854RA**

Contract Ref:	Start: **02.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **08.10.14**	**12.54**	**E:235311.5 N:394173.7**	**1** of **8**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00										MADE GROUND: Grass over firm friable (dry) brown sandy CLAY (TOPSOIL). (Made Ground)		12.44	0.10	
										MADE GROUND: Stiff friable brown orange-brown speckled sandy gravelly CLAY with a low cobble content. (Made Ground)		12	(1.10)	
1.00												11.34	1.20	
										Borehole progressed using open hole drilling techniques; descriptions based on recovered chippings.		11		OH
2.00												10		
3.00												9		
4.00														

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
03/10/14	08:30	20.70	19.20	116	16.25
03/10/14	11:45	22.90	19.20	116	17.35
06/10/14	12:15	22.90	19.20	116	6.25
06/10/14	17:45	27.20	19.20	116	11.42
07/10/14	08:20	27.20	19.20	116	2.52
07/10/14	17:45	32.80	19.20	116	7.41

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 1.20m depth.(IP)
3. Strata unsuitable for Hand Vane tests.
4. Groundwater monitoring standpipe installed as shown upon completion.
5. Rotary open hole drilling from 1.20m to 19.20m depth on 02/10/2014.
6. Rotary cored drilling from 19.20m to 32.80m depth with air mist flush between 02/10/2014 and 08/10/2014.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm**	**Neil Davies**	**MNaisbitt + NBeckett + NBeckett**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH854RA**

Contract Ref:	Start: **02.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **08.10.14**	**12.54**	**E:235311.5 N:394173.7**	**2** of **8**

Mechanical Log					Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
Depth	TCR %	SCR %	RQD %	If (mm)										
5.00												8	5	
6.00												7	6	
7.00												6	7	OH
8.00												5	8	
												4	9	

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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
03/10/14	08:30	20.70	19.20	116	16.25
03/10/14	11:45	22.90	19.20	116	17.35
06/10/14	12:15	22.90	19.20	116	6.25
06/10/14	17:45	27.20	19.20	116	11.42
07/10/14	08:20	27.20	19.20	116	2.52
07/10/14	17:45	32.80	19.20	116	7.41

General Remarks

7. Packer test conducted within borehole from 22.00m to 29.00m on 07/11/2014.
8. Monitoring standpipe installed on completion as shown.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm**	**Neil Davies**	**MNaisbitt + NBeckett + NBeckett**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH854RA**

Contract Ref:	Start: **02.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **08.10.14**	**12.54**	**E:235311.5 N:394173.7**	**3** of **8**

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00												3	10	
10.00													(18.00)	
												2		
11.00													11	OH
												1		
12.00													12	
												0		
13.00													13	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
03/10/14	08:30	20.70	19.20	116	16.25
03/10/14	11:45	22.90	19.20	116	17.35
06/10/14	12:15	22.90	19.20	116	6.25
06/10/14	17:45	27.20	19.20	116	11.42
07/10/14	08:20	27.20	19.20	116	2.52
07/10/14	17:45	32.80	19.20	116	7.41

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm**	**Neil Davies**	**MNaisbitt + NBeckett + NBeckett**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH854RA**

Contract Ref:	Start: **02.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **08.10.14**	**12.54**	**E:235311.5 N:394173.7**	**4** of **8**

Mechanical Log					Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
Depth	TCR %	SCR %	RQD %	If (mm)										
14.00												-1	14	
15.00												-2	15	
16.00												-3	16	OH
17.00												-4	17	
												-5	18	

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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
03/10/14	08:30	20.70	19.20	116	16.25
03/10/14	11:45	22.90	19.20	116	17.35
06/10/14	12:15	22.90	19.20	116	6.25
06/10/14	17:45	27.20	19.20	116	11.42
07/10/14	08:20	27.20	19.20	116	2.52
07/10/14	17:45	32.80	19.20	116	7.41

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm**	**Neil Davies**	**MNaisbitt + NBeckett + NBeckett**	**ADingle + ADingle**

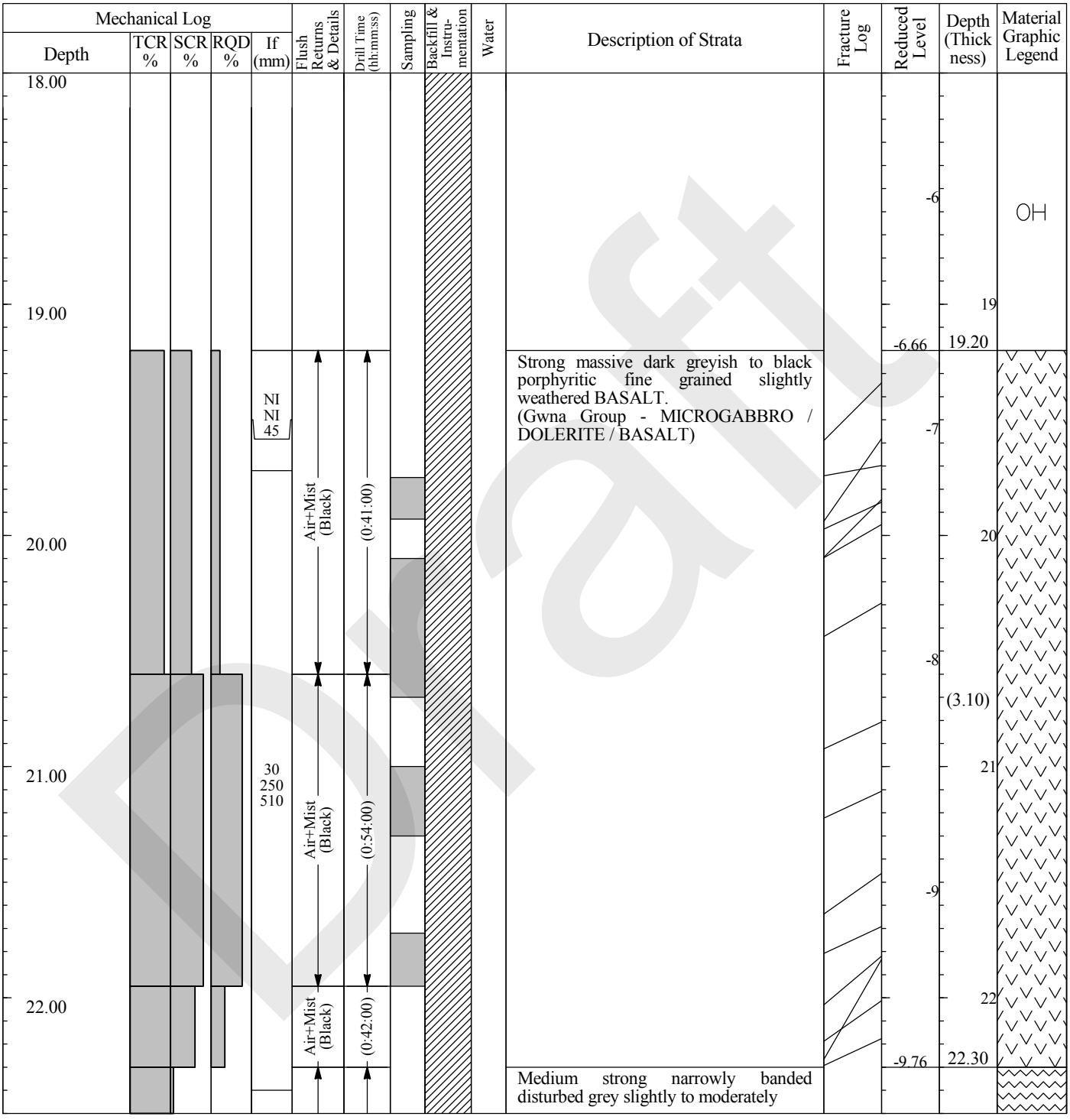
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH854RA**

Contract Ref:	Start: **02.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **08.10.14**	**12.54**	**E:235311.5 N:394173.7**	**5** of **8**



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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
03/10/14	08:30	20.70	19.20	116	16.25
03/10/14	11:45	22.90	19.20	116	17.35
06/10/14	12:15	22.90	19.20	116	6.25
06/10/14	17:45	27.20	19.20	116	11.42
07/10/14	08:20	27.20	19.20	116	2.52
07/10/14	17:45	32.80	19.20	116	7.41

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm**	**Neil Davies**	**MNaisbitt + NBeckett + NBeckett**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH854RA**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**02.10.14** End: **08.10.14**	**12.54**	**E:235311.5 N:394173.7**	**6** of **8**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
23.00				NI 110 110	Air+Mist (Black)	(0:37:00)				weathered PHYLLITE with medium strong very closely to medium spaced narrow bands of disturbed grey fine grained PSAMMITE. (Gwna Group - PHYLLITE)		-10	23	
					Air+Mist (Grey)	(0:14:00)								
				NI NI 60	Air+Mist (Grey)	(0:21:00)						-11		
					Air+Mist (Grey)	(0:23:00)								
24.00				NI	Air+Mist (Grey)	(0:29:00)						-12	24 (4.80)	
					Air+Mist (Grey)	(0:31:00)								
25.00					Air+Mist (Grey)	(0:37:00)						-13	25	
				NI NI 50	Air+Mist (Grey)	(0:15:00)								
26.00					Air+Mist (Grey)	(0:39:00)						-14	26	
					Air+Mist (Grey)	(0:28:00)							27	

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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
03/10/14	08:30	20.70	19.20	116	16.25
03/10/14	11:45	22.90	19.20	116	17.35
06/10/14	12:15	22.90	19.20	116	6.25
06/10/14	17:45	27.20	19.20	116	11.42
07/10/14	08:20	27.20	19.20	116	2.52
07/10/14	17:45	32.80	19.20	116	7.41

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm**	**Neil Davies**	**MNaisbitt + NBeckett + NBeckett**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH854RA**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**02.10.14** End: **08.10.14**	**12.54**	**E:235311.5 N:394173.7**	**7** of **8**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
27.00				NI NI 50 40 80 120	Air+Mist (Grey)	(0:31:00)				Medium strong to strong narrowly banded dark grey to black cryptocrystalline slightly weathered MICROGABBRO. (Gwna Group - MICROGABBRO / DOLERITE / BASALT)		-14.56 -14.84	27.10 (0.28) 27.38	
28.00				NI NI	Air+Mist (Grey)	(0:32:00)				Medium strong narrowly banded disturbed grey slightly to moderately weathered PHYLLITE with medium strong very closely to medium spaced narrow bands of disturbed grey fine grained PSAMMITE. (Gwna Group - PHYLLITE)		-15 -16	28	
29.00					Air+Mist (Grey)	(0:36:00)						-17	29	
30.00				NI 90 120	Air+Mist (Grey)	(0:22:00)						-18	30 (5.42)	
31.00				NI	Air+Mist (Grey)	(0:23:00) (0:36:00)							31	

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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
03/10/14	08:30	20.70	19.20	116	16.25
03/10/14	11:45	22.90	19.20	116	17.35
06/10/14	12:15	22.90	19.20	116	6.25
06/10/14	17:45	27.20	19.20	116	11.42
07/10/14	08:20	27.20	19.20	116	2.52
07/10/14	17:45	32.80	19.20	116	7.41

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm**	**Neil Davies**	**MNaisbitt + NBeckett + NBeckett**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH854RA**

Contract Ref:	Start: **02.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **08.10.14**	**12.54**	**E:235311.5 N:394173.7**	**8** of **8**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
32.00				NI		(0:36:00)						-19		
				NI	Air+Mist (Grey)	(0:40:00)							32	
				NI								-20		
										Borehole terminated at 32.80m depth.		-20.26	32.80	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
03/10/14	08:30	20.70	19.20	116	16.25
03/10/14	11:45	22.90	19.20	116	17.35
06/10/14	12:15	22.90	19.20	116	6.25
06/10/14	17:45	27.20	19.20	116	11.42
07/10/14	08:20	27.20	19.20	116	2.52
07/10/14	17:45	32.80	19.20	116	7.41

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm**	**Neil Davies**	**MNaisbitt + NBeckett + NBeckett**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH858**

Contract Ref:	Start: **24.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **02.10.14**	**12.50**	**E:235335.8 N:394090.9**	**1** of **3**

Samples and In-situ Tests				Water	Backfill & Instru-mentation	Description of Strata	Reduced Level	Depth (Thick ness)	Material Graphic Legend
Depth	Ref	Type	Results						
0.00-0.50	1	B				MADE GROUND: Grass over soft friable brown sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular fine to coarse psammite. (TOPSOIL). (Made Ground)	12.30	0.20	
0.50	2	D				MADE GROUND: Greyish-brown slightly clayey sandy GRAVEL with frequent roots and a high cobble content. Sand is fine to coarse. Gravel is angular to subangular fine to coarse psammite, wood, brick and metal bar. Cobbles are subangular flat and cubic of psammite and brick. (Made Ground)		(1.10)	
0.50-1.00	3	B							
1.00	4	D					11.20	1.30	
1.30-1.60	1	B				Medium dense bluish brown slightly silty sandy GRAVEL with a medium cobble content. Gravel is subangular to angular fine to coarse psammite and phyllite. (Superficial Deposits - Locally derived lodgement till)			
1.50	2	D						(0.60)	
1.50-1.95	3	SPT(c)	N=11				10.60	1.90	
1.90-2.20	4	B				Medium dense bluish brown slightly silty sandy GRAVEL. Gravel is subangular to angular fine to coarse psammite and phyllite. (Add full description here - Locally derived lodgement till)			
2.00	5	D							
2.00-2.45	6	SPT(c)	N=14					(1.00)	
2.90-3.10	7	B					9.60	2.90	
3.00	8	D				Dense brownish blue GRAVEL and COBBLES. Cobbles are subangular up to 195mm in diameter psammite and phyllite. Gravel is angular to subangular fine to coarse psammite and phyllite. (Superficial Deposits - Locally derived lodgement till)			
3.00-3.45	9	SPT(c)	N=39						
3.90-4.20	10	B						(2.00)	
4.00	11	D				4.00m : Locally loose.			
4.00-4.45	12	SPT(c)	N=6						

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	17:45	5.30	5.30	200	3.32
25/09/14	08:30	5.30	5.30	200	2.78

Chiselling / Slow Progress		
From	To	Duration (hh:mm)
2.50	2.80	00:30
9.50	9.65	00:30

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 1.20m depth.(IP)
3. Cable percussion boring using 200mm diameter tools to 9.80m depth between 24/09/2014 and 25/09/2014.
4. Water added to assist boring at 3.86m depth.
5. Three number falling head tests carried out

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Gavin James**	**MNaisbitt + WDixon**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH858**

Contract Ref:	Start: **24.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **02.10.14**	**12.50**	**E:235335.8 N:394090.9**	**2** of **3**

Samples and In-situ Tests				Water	Backfill & Instru-mentation	Description of Strata	Reduced Level	Depth (Thick ness)	Material Graphic Legend
Depth	Ref	Type	Results						
							7.60	4.90	
4.90-5.20	13	B				Medium dense to dense bluish brown clayey sandy GRAVEL with a high cobble content. Cobbles are subangular up to 189mm in diameter psammite. Gravel is angular to subangular fine to coarse psammite and phyllite. (Superficial Deposits - Locally derived lodgement till)			
5.00	14	D							
5.00-5.45	15	SPT(c)	N=16						
6.40-6.70	16	B							
6.50	17	D				6.50m : Locally dense.			
6.50-6.95	18	SPT(c)	N=40					(4.50)	
7.90-8.20	19	B							
8.00	20	D							
8.00-8.45	21	SPT(c)	N=21						

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	17:45	5.30	5.30	200	3.32
25/09/14	08:30	5.30	5.30	200	2.78

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

between 4.71m and 15.52m depth between 24/09/2014 and 22/10/2014

6. Rotary open hole drilling from 9.80m to 10.50m depth on 30/09/2014.
7. Rotary cored drilling from 10.50m to 33.23m depth with air mist flush between 30/09/2014 and 02/10/2014.
8. Two number packer tests conducted within

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Gavin James**	**MNaisbitt + WDixon**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH858**

Contract Ref:	Start: **24.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **02.10.14**	**12.50**	**E:235335.8 N:394090.9**	**3** of **3**

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	Ref	Type	Results						
							3.10	9.40	
9.50-9.59 9.60-9.80	22 23	SPT(c) B	N=750*			Greyish blue slightly weathered PHYLLITE. Recovered as angular cobbles due to chiselling (New Harbour Group - PHYLLITE)	2.70	(0.40) 9.80	
						Cable percussion borehole continued using rotary drilling techniques from 9.80m depth.			

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Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	17:45	5.30	5.30	200	3.32
25/09/14	08:30	5.30	5.30	200	2.78

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

borehole from 16.25m to 27.25m on 22/10/2014.
9. Groundwater monitoring standpipe installed as shown upon completion.
10. SPT hammer EQU166-2013 (E_r = 80.05%) used.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Gavin James**	**MNaisbitt + WDixon**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH858**

Contract Ref:	Start: **24.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **02.10.14**	**12.50**	**E:235335.8 N:394090.9**	**1** of **8**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
0.00										MADE GROUND: Grass over soft friable brown sandy slightly gravelly CLAY. (Made Ground)		12.30	0.20	
										MADE GROUND: Greyish-brown slightly clayey sandy GRAVEL with frequent roots and a high cobble content. (Made Ground)		12	(1.10)	
1.00												11.20	1.30	
										Medium dense bluish brown slightly silty sandy GRAVEL with a medium cobble content. (Superficial Deposits - Locally derived lodgement till)		11	(0.60)	
												10.60	1.90	
2.00										Medium dense bluish brown slightly silty sandy GRAVEL. (Add full description here - Locally derived lodgement till)		10	(1.00)	
												9.60	2.90	
3.00										Dense brownish blue GRAVEL and COBBLES. (Superficial Deposits - Locally derived lodgement till)		9	(2.00)	
4.00												8		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	17:45	5.30	5.30	200	3.32
25/09/14	08:30	5.30	5.30	200	2.78
30/09/14	17:45	12.00	12.00	116	10.10
01/10/14	08:25	12.00	12.00	116	6.80
01/10/14	17:45	24.15	12.00	116	18.20
02/10/14	08:20	24.15	12.00	116	6.80
02/10/14	15:50	33.10	12.00	116	21.50

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 1.20m depth.(IP)
3. Cable percussion boring using 200mm diameter tools to 9.80m depth between 24/09/2014 and 25/09/2014.
4. Water added to assist boring at 3.86m depth.
5. Three number falling head tests carried out between 4.71m and 15.52m depth between 24/09/2014 and 22/10/2014

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Beretta T44**	**Gavin James + Christopher Yandell**	**LVonCadenhead + MNaisbitt + WDixon**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH858**

Contract Ref:	Start: **24.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **02.10.14**	**12.50**	**E:235335.8 N:394090.9**	**2** of **8**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
												7.60	4.90	
5.00										Medium dense to dense bluish brown clayey sandy GRAVEL with a high cobble content. (Superficial Deposits - Locally derived lodgement till)				
6.00														
7.00													(4.50)	
8.00														

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	17:45	5.30	5.30	200	3.32
25/09/14	08:30	5.30	5.30	200	2.78
30/09/14	17:45	12.00	12.00	116	10.10
01/10/14	08:25	12.00	12.00	116	6.80
01/10/14	17:45	24.15	12.00	116	18.20
02/10/14	08:20	24.15	12.00	116	6.80
02/10/14	15:50	33.10	12.00	116	21.50

General Remarks

6. Rotary open hole drilling from 9.80m to 10.50m depth on 30/09/2014.
7. Rotary cored drilling from 10.50m to 33.23m depth with air mist flush between 30/09/2014 and 02/10/2014.
8. Two number packer tests conducted within borehole from 16.25m to 27.25m on 22/10/2014.
9. Groundwater monitoring standpipe installed as shown upon completion.
10. SPT hammer EQU166-2013 (E_r = 80.05%) used.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Beretta T44**	**Gavin James + Christopher Yandell**	**LVonCadenhead + MNaisbitt + WDixon**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH858**

Contract Ref:	Start: **24.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **02.10.14**	**12.50**	**E:235335.8 N:394090.9**	**3** of **8**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00												3.10	9.40	
										Greyish blue slightly weathered PHYLLITE. (New Harbour Group - PHYLLITE)		3	(0.40)	
												2.70	9.80	
										Borehole progressed using rotary open hole drilling techniques from 9.80m to 10.50m depth.			10 (0.70)	OH
10.00												2.00	10.50	
										Medium strong narrowly thinly banded very narrowly foliated dark brownish green slightly to moderately weathered PHYLLITE with medium strong very closely to closely spaced narrow to very thin bands of dark green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		2	(0.75)	
11.00				NI	Air+Mist (Grey)	(0:50:00)							11	
										Zone of Assumed Core Loss.		1.25	11.25	
												1	(0.75)	AZCL
12.00												0.50	12.00	
				NI NI 50	Air+Mist (Grey)	(0:45:00)				Weak to medium strong very narrowly to narrowly banded very narrowly foliated dark brownish green slightly to moderately weathered PHYLLITE with medium strong to strong very closely to closely spaced narrow to very thin lenticular bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		0	(1.60)	
13.00				NI								-1	13	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	17:45	5.30	5.30	200	3.32
25/09/14	08:30	5.30	5.30	200	2.78
30/09/14	17:45	12.00	12.00	116	10.10
01/10/14	08:25	12.00	12.00	116	6.80
01/10/14	17:45	24.15	12.00	116	18.20
02/10/14	08:20	24.15	12.00	116	6.80
02/10/14	15:50	33.10	12.00	116	21.50

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Beretta T44**	**Gavin James + Christopher Yandell**	**LVonCadenhead + MNaisbitt + WDixon**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH858**

Contract Ref:	Start: **24.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **02.10.14**	**12.50**	**E:235335.8 N:394090.9**	**4** of **8**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
				NI								-1.10	13.60	
				NI						Medium strong to strong very narrowly to narrowly banded very narrowly foliated dark brownish green slightly to moderately weathered PHYLLITE with strong closely to medium spaced narrow to very thin bands of dark green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)			14	
14.00				10 100 240	Air+Mist (Grey)	(0:30:00)						-2	(2.05)	
				NI NI									15	
15.00				NI 60 200	Air+Mist (Grey)	(0:15:00)						-3		
												-3.15	15.65	
										Weak to medium strong very narrowly to narrowly banded very narrowly foliated dark brownish green moderately to highly weathered PHYLLITE with weak to medium strong closely to medium spaced narrow to very thin bands of dark green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)			16	
16.00					Air+Mist (Grey)	(0:55:00)						-4		
				NI									17	
17.00					Air+Mist (Grey)	(1:00:00)						-5	(4.00)	
													18	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	17:45	5.30	5.30	200	3.32
25/09/14	08:30	5.30	5.30	200	2.78
30/09/14	17:45	12.00	12.00	116	10.10
01/10/14	08:25	12.00	12.00	116	6.80
01/10/14	17:45	24.15	12.00	116	18.20
02/10/14	08:20	24.15	12.00	116	6.80
02/10/14	15:50	33.10	12.00	116	21.50

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Beretta T44**	**Gavin James + Christopher Yandell**	**LVonCadenhead + MNaisbitt + WDixon**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH858**

Contract Ref:	Start: **24.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **02.10.14**	**12.50**	**E:235335.8 N:394090.9**	**5** of **8**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
18.00				NI										
				20 150 170	Air+Mist (Grey)	(0:40:00)						-6		
19.00				NI									19	
				50 130 130								-7		
												-7.15	19.65	
				200 250 250						Medium strong to strong very narrowly to narrowly banded very narrowly foliated dark brownish green slightly to moderately weathered PHYLLITE with medium strong to strong medium spaced narrow to very thin lenticular bands of dark green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)				
20.00					Air+Mist (Grey)	(0:30:00)							20	
				NI 150 300								-8		
21.00													21	
					Air+Mist (Grey)	(0:35:00)						-9		
22.00				80 200 240									22	
												-10	(5.50)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	17:45	5.30	5.30	200	3.32
25/09/14	08:30	5.30	5.30	200	2.78
30/09/14	17:45	12.00	12.00	116	10.10
01/10/14	08:25	12.00	12.00	116	6.80
01/10/14	17:45	24.15	12.00	116	18.20
02/10/14	08:20	24.15	12.00	116	6.80
02/10/14	15:50	33.10	12.00	116	21.50

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Beretta T44**	**Gavin James + Christopher Yandell**	**LVonCadenhead + MNaisbitt + WDixon**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH858**

Contract Ref:	Start: **24.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **02.10.14**	**12.50**	**E:235335.8 N:394090.9**	**6** of **8**

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
23.00				80 200 240	Air+Mist (Grey)	(0:40:00)						-11	23	
24.00				300 300 400	Air+Mist (Grey)	(0:30:00)						-12	24	
25.00				NI NI 70	Air+Mist (Grey)	(0:40:00)				Strong massive dark grey medium grained slightly to moderately weathered DOLERITE. (Intrusions)		-12.65	25 25.15	
26.00				NI 100 270						Weak to medium strong very narrowly to narrowly banded very narrowly foliated dark brownish green slightly weathered PHYLLITE with strong very closely to medium spaced narrow to very thin lenticular bands of dark green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-12.80 -13 -14	25.30 26 27	
				NI										

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	17:45	5.30	5.30	200	3.32
25/09/14	08:30	5.30	5.30	200	2.78
30/09/14	17:45	12.00	12.00	116	10.10
01/10/14	08:25	12.00	12.00	116	6.80
01/10/14	17:45	24.15	12.00	116	18.20
02/10/14	08:20	24.15	12.00	116	6.80
02/10/14	15:50	33.10	12.00	116	21.50

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Beretta T44**	**Gavin James + Christopher Yandell**	**LVonCadenhead + MNaisbitt + WDixon**	**ADingle + ADingle + ADingle**

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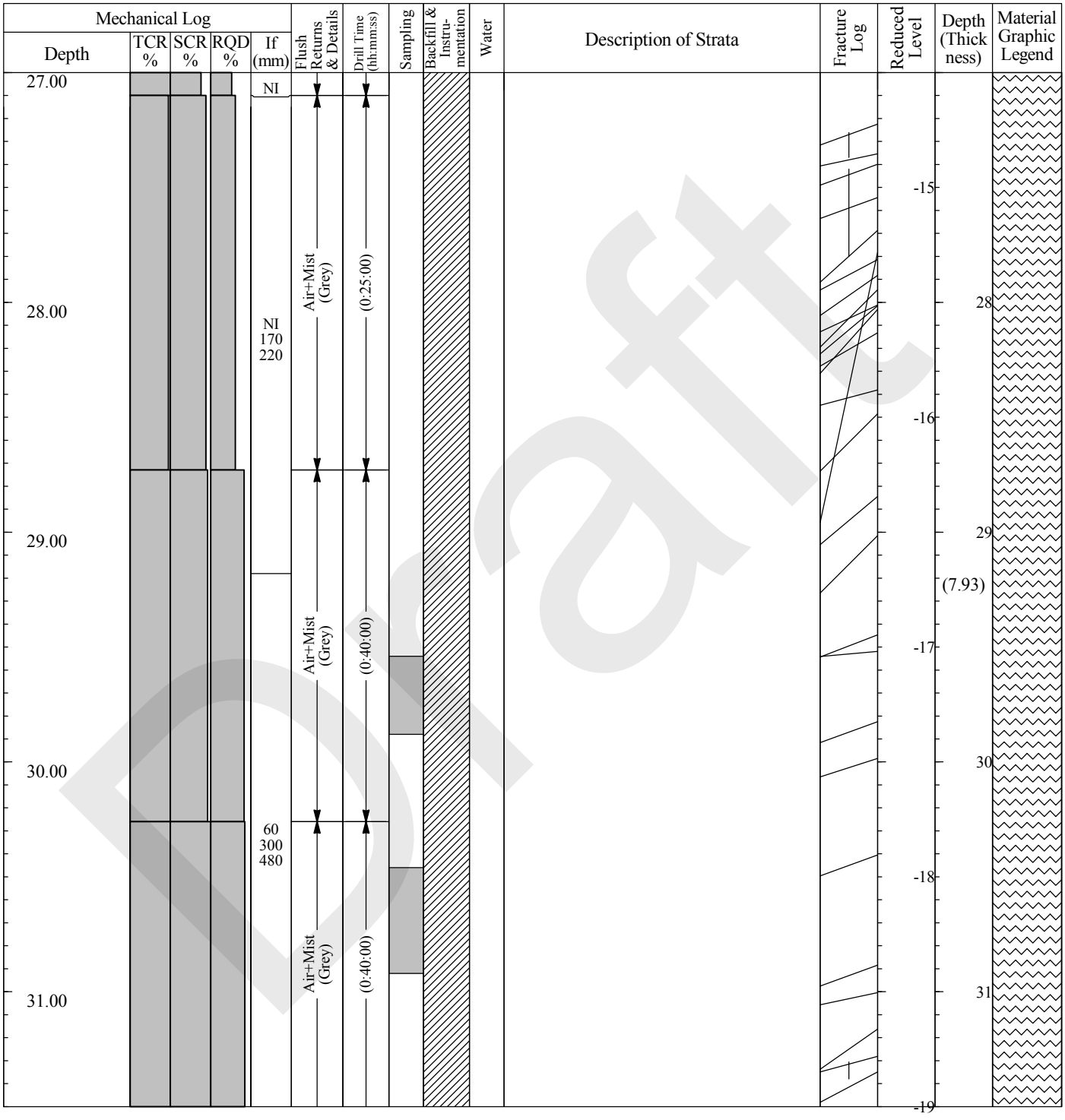
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH858**

Contract Ref:	Start: **24.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **02.10.14**	**12.50**	**E:235335.8 N:394090.9**	**7** of **8**



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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	17:45	5.30	5.30	200	3.32
25/09/14	08:30	5.30	5.30	200	2.78
30/09/14	17:45	12.00	12.00	116	10.10
01/10/14	08:25	12.00	12.00	116	6.80
01/10/14	17:45	24.15	12.00	116	18.20
02/10/14	08:20	24.15	12.00	116	6.80
02/10/14	15:50	33.10	12.00	116	21.50

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Beretta T44**	**Gavin James + Christopher Yandell**	**LVonCadenhead + MNaisbitt + WDixon**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH858**

Contract Ref:	Start: **24.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **02.10.14**	**12.50**	**E:235335.8 N:394090.9**	**8** of **8**

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
32.00				60 300 480	Air+Mist (Grey)	(0:40:00)						-20	32	
33.00										Borehole terminated at 33.23m depth.		-20.73	33 33.23	

Draft

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	17:45	5.30	5.30	200	3.32
25/09/14	08:30	5.30	5.30	200	2.78
30/09/14	17:45	12.00	12.00	116	10.10
01/10/14	08:25	12.00	12.00	116	6.80
01/10/14	17:45	24.15	12.00	116	18.20
02/10/14	08:20	24.15	12.00	116	6.80
02/10/14	15:50	33.10	12.00	116	21.50

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Beretta T44**	**Gavin James + Christopher Yandell**	**LVonCadenhead + MNaisbitt + WDixon**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH864R**

Contract Ref:	Start: **28.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **01.10.14**	**19.07**	**E:235443.1 N:393754.4**	**1** of **9**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
0.00						(02:00:00)				MADE GROUND: Soft to firm dark brown sandy slightly gravelly CLAY with plant roots and low cobble content. (Made Ground)		19		
1.00												18	1	
2.00												17	(4.00) 2	
3.00												16	3	
4.00										Borehole progressed using open hole drilling techniques; descriptions based on recovered chippings.		15.07 15	4.00 4	OH

Draft

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
28/09/14	09:00	0.00	0.00	116	Dry
28/09/14	16:30	11.70	7.50	116	11.30
29/09/14	08:15	10.50	7.50	116	10.50
29/09/14	18:00	20.90	7.50	116	15.00
30/09/14	08:00	20.90	16.00	116	10.90
30/09/14	18:00	38.00	16.00	116	14.90
01/10/14	08:10	38.00	16.00	116	11.00
01/10/14	10:10	39.50	16.00	116	12.10

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 1.20m depth.(IP)
3. Strata unsuitable for Hand Vane tests.
4. Rotary open hole drilling from 1.20m to 7.50m depth on 28/09/2014.
5. Rotary cored drilling from 7.50m depth with air mist flush between 28/09/2014 and 01/10/2014.
6. Groundwater monitoring standpipe installed as shown upon completion.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm KR 802**	**Duncan Howells**	**MNaisbitt + SParkes + SParkes**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH864R**

Contract Ref:	Start: **28.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **01.10.14**	**19.07**	**E:235443.1 N:393754.4**	**2** of **9**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
5.00						(02:00:00)						14	5	
6.00												13	(3.50) 6	OH
7.00						(00:35:00)						12	7	
												11.57	7.50	
8.00				NI 150 270	Air+Mist (Brown)	(0:40:00)				Extremely weak to weak disturbed greenish grey fine to medium grained moderately weathered PSAMMITE with extremely weak reddish purple PHYLLITE. (Fault Rocks)		11	(0.82) 8	
												10.75	8.32	
										Very weak to weak (very narrowly to narrowly banded) lenticular greenish grey fine to medium grained slightly weathered PSAMMITE with extremely closely to closely spaced very narrow bands of greyish purple PHYLLITE. (Fault Rocks)			(0.48)	
				NI						*Description on next sheet*		10.27	8.80	
													9	

Draft

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm KR 802**	**Duncan Howells**	**MNaisbitt + SParkes + SParkes**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH864R**

Contract Ref:	Start: **28.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **01.10.14**	**19.07**	**E:235443.1 N:393754.4**	**3** of **9**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00				NI	Air+Mist (Brown)	(0:42:00)				Extremely weak to very weak disturbed greenish grey fine to medium grained moderately weathered PSAMMITE with reddish purple PHYLLITE. (Fault Rocks)		10		
10.00				NI								9	10	
				NI									(4.00)	
11.00				NI	Air+Mist (Brown/Grey)	(0:40:00)						8	11	
12.00				NI	Air+Mist (Brown/Grey)	(0:37:00)						7	12	
				20 120 290						Extremely weak to very weak disturbed greenish grey slightly weathered psammite recovered as weakly cemented fault breccia composed of angular fine to coarse gravel of psammite cemented by red phyllite matrix. (Fault Rocks)		6.27	12.80	
13.00												6	13 (0.70)	
												5.57	13.50	

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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm KR 802**	**Duncan Howells**	**MNaisbitt + SParkes + SParkes**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH864R**

Contract Ref:	Start: **28.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **01.10.14**	**19.07**	**E:235443.1 N:393754.4**	**4** of **9**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
14.00				NI	Air+Mist (Brown/Grey)	(0:40:00)				Recovered as fine to coarse crushed angular gravel of green psammite embedded in green thick firm clay. (Fault Rocks)		5 / 4.07	(1.50) 14 / 15.00	
15.00				NI	Air+Mist (Brown/Grey)	(0:30:00)				Recovered non-intact as crushed fine to coarse angular fragments of open psammite (possible crushed zone associated with faulting. (New Harbour Group - PSAMMITE)		4 / 3.24	(0.83) 15 / 15.83	
16.00				130 220 310 1200	Air+Mist (Brown/Grey)	(0:30:00)				Weak to medium strong very narrowly to narrowly banded greyish green fine to medium grained slightly weathered PSAMMITE with weak extremely closely to closely spaced very narrow to narrow bands of greyish purple and greenish PHYLLITE. (New Harbour Group - PSAMMITE)		3 / 2	(3.67) 16 / 17 / 18	
17.00				NI 80 190	Air+Mist (Brown/Grey)	(0:39:00)								

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm KR 802**	**Duncan Howells**	**MNaisbitt + SParkes + SParkes**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH864R**

Contract Ref:	Start: **28.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **01.10.14**	**19.07**	**E:235443.1 N:393754.4**	**5** of **9**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
18.00				NI	Air+Mist (Brown/Grey)	(0:37:00)						1		
				20 90 180										
19.00				10 30 100								0	19	
				60 100 150								-0.43	19.50	
				NI						Weak very narrowly to narrowly banded greyish green fine to medium grained slightly weathered PSAMMITE with extremely closely spaced to closely spaced very narrow to narrow bands of greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)				
20.00				10 40 70								-1	20 (1.35)	
				30 70 90										
				10 20 40	Air+Mist (Brown/Grey)	(0:37:00)								
				30 60 80										
				10 30 50								-1.78	20.85	
				110 180 300						Weak very narrowly to very thinly banded greenish grey fine and medium grained slightly weathered PSAMMITE with medium strong extremely closely spaced to very closely spaced very narrow to very thin bands of very narrowly foliated greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		-2	21 (1.17)	
21.00				20 30 40										
				110 180 300	Air+Mist (Grey)	(0:37:00)								
				100 290 550								-2.95	22.03	
22.00										Medium strong very narrowly to very thinly banded very narrowly foliated greenish grey slightly weathered PHYLLITE with medium strong extremely closely spaced to very closely spaced very narrow to narrow bands of		-3	(0.58)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm KR 802**	**Duncan Howells**	**MNaisbitt + SParkes + SParkes**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH864R**

Contract Ref:	Start: **28.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **01.10.14**	**19.07**	**E:235443.1 N:393754.4**	**6** of **9**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
										lenticular greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-3.53	22.60	
23.00				100 290 550	Air+Mist (Grey)	(0:30:00)				Medium strong very narrowly to very thinly banded greenish grey fine and medium grained slightly weathered PSAMMITE with medium strong extremely closely spaced to very closely spaced very narrow to very thin bands of very narrowly foliated greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		-4	23 (1.28)	
				30 45 60								-4.81	23.88	
24.00				270 340 440	Air+Mist (Grey)	(0:31:00)				Medium strong to strong very narrowly to very thinly banded greenish grey PSAMMITE to fresh to slightly weathered with extremely closely spaced to very closely spaced very narrow to very thin bands of very narrowly and foliated greenish and brown phyllite. (New Harbour Group - PHYLLITE)		-5	24	
25.00				50 140 190								-6	25	
				90 210 300										
26.00				130 280 560	Air+Mist (Grey)	(0:29:00)						-7	26 (5.90)	
													27	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm KR 802**	**Duncan Howells**	**MNaisbitt + SParkes + SParkes**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH864R**

Contract Ref:	Start: **28.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **01.10.14**	**19.07**	**E:235443.1 N:393754.4**	**7** of **9**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
27.00				50 90 170								-8		
				20 50 90										
				90 110 120	Air+Mist (Grey)	(0:30:00)								
28.00				40 90 170								-9	28	
				20 130 220										
				70 140 230										
29.00				20 70 160								-10	29	
				90 130 160	Air+Mist (Grey)	(0:29:00)								
				40 90 200								-10.71	29.78	
30.00				20 50 100						Weak to medium strong very narrowly to very thinly banded very narrowly foliated greenish grey slightly weathered PHYLLITE with medium strong extremely closely spaced to very closely spaced very narrow to narrow bands of lenticular greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-11	30 (1.01)	
				30 60 80										
				40 120 270	Air+Mist (Grey)	(0:27:00)						-11.72	30.79	
31.00				10 50 90						Weak to medium strong very narrowly to very thinly banded greenish grey fine to medium grained slightly weathered PSAMMITE with weak extremely closely spaced to very closely spaced very narrow to narrow bands of very narrowly foliated greenish grey and brownish purple PHYLLITE. (New Harbour Group - PSAMMITE)		-12	31	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm KR 802**	**Duncan Howells**	**MNaisbitt + SParkes + SParkes**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH864R**

Contract Ref:	Start: **28.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **01.10.14**	**19.07**	**E:235443.1 N:393754.4**	**8** of **9**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
32.00				50 190 420	Air+Mist (Grey)	(0:27:00)						-13	32	
				20 40 70									(3.92)	
				80 170 310	Air+Mist (Grey)	(0:26:00)						-14	33	
33.00														
				30 230 320	Air+Mist (Grey)	(0:28:00)						-15	34	
34.00														
				50 110 170								-15.64	34.71	
				220 300 420	Air+Mist (Grey)	(0:27:00)				Weak very narrowly to very thinly banded very narrowly foliated greenish grey and brownish purple slightly weathered PHYLLITE with medium strong extremely closely spaced to very closely spaced very narrow to very thin bands of lenticular greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-16	35	
35.00													(1.94)	
				20 70 110									36	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm KR 802**	**Duncan Howells**	**MNaisbitt + SParkes + SParkes**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH864R**

Contract Ref:	Start: **28.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **01.10.14**	**19.07**	**E:235443.1 N:393754.4**	**9** of **9**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
36.00												-17		
				NI	Air+Mist (Grey)	(0:20:00)						-17.58	36.65	
				20 75 130						Weak to medium strong very narrowly to thinly banded greenish grey fine to medium grained slightly weathered PSAMMITE with weak to medium strong extremely closely spaced to closely spaced very narrow to very thin bands of very narrowly foliated greenish grey and brownish purple PHYLLITE. (New Harbour Group - PSAMMITE)				
37.00				80 50 880	Air+Mist (Grey)	(0:30:00)						-18	37	
				80 110 130								-19	38 (2.95)	
38.00				80 250 350	Air+Mist (Grey)	(0:33:00)						-20	39	
39.00				80 120 150								-20.53	39.60	
										Borehole terminated at 39.60m depth.				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm KR 802**	**Duncan Howells**	**MNaisbitt + SParkes + SParkes**	**ADingle + ADingle**

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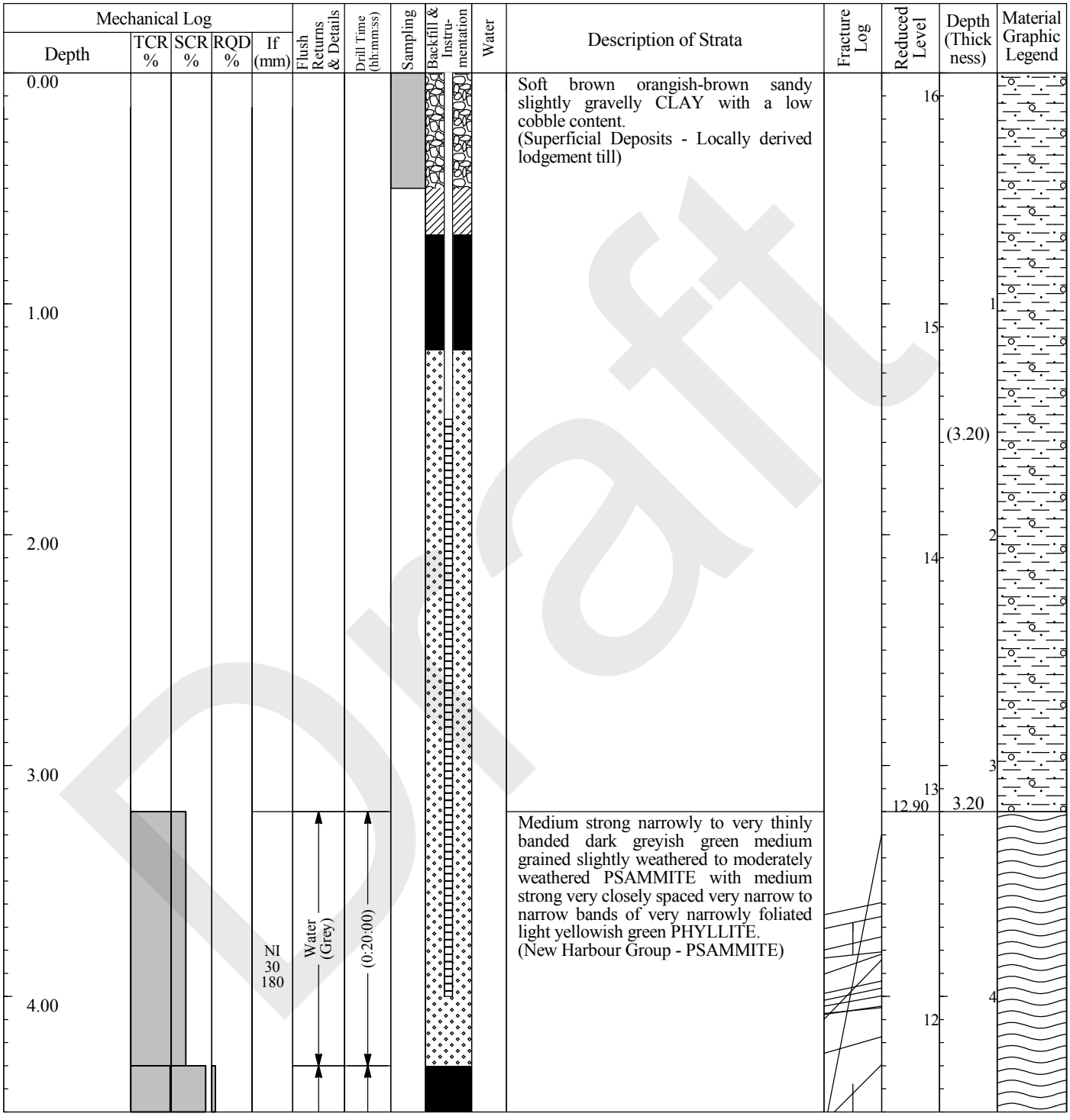
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH866R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**27.09.14** End: **29.09.14**	**16.10**	**E:235427.2 N:393717.0**	**1** of **9**



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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/09/14	09:15	1.00	None	116	Dry
27/09/14	14:30	12.20	5.80	116	3.00
28/09/14	09:15	12.20	5.80	116	1.40
28/09/14	16:30	25.70	5.80	116	2.10
29/09/14	08:30	25.70	5.80	116	1.40
29/09/14	18:00	38.30	6.00	116	2.10

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 0.50m depth.(IP)
3. Inspection pit remained stable during excavation.
4. No groundwater encountered.
5. Rotary open hole drilling from 0.50m to 3.20m depth on 27/09/2014.
6. Rotary cored drilling from 3.20m to 38.30m depth with water flush between 27/09/2014 and 29/09/2014.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Dando MTec 6**	**Paul Havard**	**MNaisbitt + DAshmore**	**ADingle + ADingle**

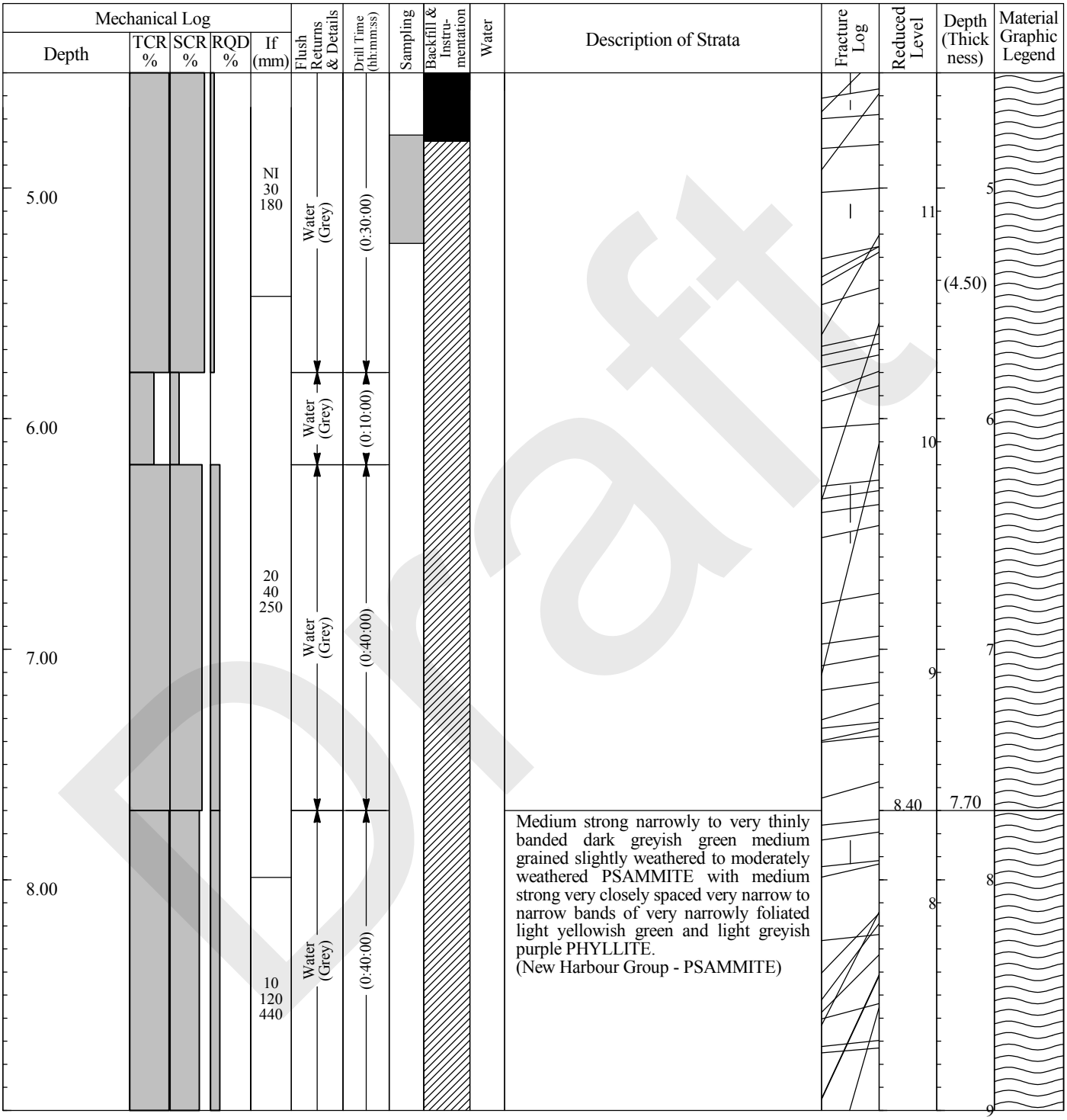
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH866R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**27.09.14** End: **29.09.14**	**16.10**	**E:235427.2 N:393717.0**	**2** of **9**



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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/09/14	09:15	1.00	None	116	Dry
27/09/14	14:30	12.20	5.80	116	3.00
28/09/14	09:15	12.20	5.80	116	1.40
28/09/14	16:30	25.70	5.80	116	2.10
29/09/14	08:30	25.70	5.80	116	1.40
29/09/14	18:00	38.30	6.00	116	2.10

General Remarks

7. Four number packer tests conducted within borehole from 7.50m to 31.50m depth between 14/10/2014 and 15/10/2014.
8. Groundwater monitoring standpipe installed as shown upon completion.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Dando MTec 6**	**Paul Havard**	**MNaisbitt + DAshmore**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH866R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**27.09.14** End: **29.09.14**	**16.10**	**E:235427.2 N:393717.0**	**3** of **9**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00				10 120 440	Water (Grey)	(0:40:00) (0:25:00)						7	(4.30)	
10.00				30 50 200	Water (Grey)	(0:25:00)						6 5	10 11	
11.00														
12.00				20 220 550	Water (Grey)	(0:20:00)				Medium strong narrowly to very thinly banded dark greyish green medium grained fresh to slightly weathered PSAMMITE with medium strong very closely spaced very narrow to narrow bands of very narrowly foliated light yellowish green and dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		4.10 4	12.00 12	
13.00				20 140 480								3	13	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/09/14	09:15	1.00	None	116	Dry
27/09/14	14:30	12.20	5.80	116	3.00
28/09/14	09:15	12.20	5.80	116	1.40
28/09/14	16:30	25.70	5.80	116	2.10
29/09/14	08:30	25.70	5.80	116	1.40
29/09/14	18:00	38.30	6.00	116	2.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Dando MTec 6**	**Paul Havard**	**MNaisbitt + DAshmore**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH866R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**27.09.14** End: **29.09.14**	**16.10**	**E:235427.2 N:393717.0**	**4** of **9**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
14.00					Water (Grey)	(0:20:00)					-	2	(4.17) 14	
15.00				20 140 480	Water (Grey)	(0:50:00)						1	15	
16.00										Medium strong narrowly to very thinly banded lenticular dark greyish green medium grained fresh to slightly weathered PSAMMITE with medium strong very closely spaced very narrow bands of very narrowly foliated light yellowish green and dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-0.07 0	16 16.17	
17.00				60 470 520								-1	17 (3.10)	
													18	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/09/14	09:15	1.00	None	116	Dry
27/09/14	14:30	12.20	5.80	116	3.00
28/09/14	09:15	12.20	5.80	116	1.40
28/09/14	16:30	25.70	5.80	116	2.10
29/09/14	08:30	25.70	5.80	116	1.40
29/09/14	18:00	38.30	6.00	116	2.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Dando MTec 6**	**Paul Havard**	**MNaisbitt + DAshmore**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH866R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**27.09.14** End: **29.09.14**	**16.10**	**E:235427.2 N:393717.0**	**5** of **9**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
18.00												-2		
				60 470 520	Water (Grey)	(0:40:00)							19	
19.00												-3		
				50 130 280								-3.17	19.27	
										Medium strong narrowly to very thinly banded lenticular dark greyish green medium grained fresh to slightly weathered PSAMMITE with medium strong very closely spaced very narrow bands of very narrowly foliated light yellowish green and dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)			(0.80)	
20.00					Water (Grey)	(0:55:00)						-3.97	20.07	20
				30 150 290						Weak to medium strong narrowly to very thinly banded lenticular dark greyish green medium grained fresh to slightly weathered PSAMMITE with weak to medium strong very closely spaced very narrow to narrow bands of very narrowly foliated light yellowish green and dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-4		
21.00				10 40 100	Water (Grey)	(0:55:00)						-5	21	
22.00				NI	Water (Grey)	(0:55:00)						-6	22 (4.13)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/09/14	09:15	1.00	None	116	Dry
27/09/14	14:30	12.20	5.80	116	3.00
28/09/14	09:15	12.20	5.80	116	1.40
28/09/14	16:30	25.70	5.80	116	2.10
29/09/14	08:30	25.70	5.80	116	1.40
29/09/14	18:00	38.30	6.00	116	2.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Dando MTec 6**	**Paul Havard**	**MNaisbitt + DAshmore**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH866R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**27.09.14** End: **29.09.14**	**16.10**	**E:235427.2 N:393717.0**	**6** of **9**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
23.00				NI	Water (Grey)	(0:55:00)						-7	23	
				NI	Water (Grey)	(0:15:00)						-8	24	
24.00												-8.10	24.20	
					Water (Grey)	(0:30:00)				Weak to medium strong narrowly to very thinly banded lenticular dark greyish green medium grained fresh PSAMMITE with weak to medium strong very closely spaced very narrow bands of very narrowly foliated dark greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		-9	25	
25.00				NI 60 270									(2.50)	
					Water (Grey)	(0:30:00)						-10	26	
26.00												-10.60	26.70	
										Weak narrowly to very thinly banded lenticular dark greyish green medium grained fresh PSAMMITE with weak			27	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/09/14	09:15	1.00	None	116	Dry
27/09/14	14:30	12.20	5.80	116	3.00
28/09/14	09:15	12.20	5.80	116	1.40
28/09/14	16:30	25.70	5.80	116	2.10
29/09/14	08:30	25.70	5.80	116	1.40
29/09/14	18:00	38.30	6.00	116	2.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Dando MTec 6**	**Paul Havard**	**MNaisbitt + DAshmore**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH866R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**27.09.14** End: **29.09.14**	**16.10**	**E:235427.2 N:393717.0**	**7** of **9**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
27.00				NI 60 270	Water (Grey)	(0:25:00)				very closely spaced very narrow bands of very narrowly foliated dark greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		-11	28	
28.00												-12		
29.00				20 110 640	Water (Grey)	(0:20:00)						-13	(4.20) 29	
30.00					Water (Grey)	(0:20:00)						-14	30	
												-14.80	30.90	
31.00					Water (Grey)	(0:20:00)				Medium strong narrowly to very thinly banded lenticular dark greyish green medium grained fresh PSAMMITE with weak to medium strong very closely spaced very narrow bands of very narrowly foliated dark greyish purple PHYLLITE.		-15	31	

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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/09/14	09:15	1.00	None	116	Dry
27/09/14	14:30	12.20	5.80	116	3.00
28/09/14	09:15	12.20	5.80	116	1.40
28/09/14	16:30	25.70	5.80	116	2.10
29/09/14	08:30	25.70	5.80	116	1.40
29/09/14	18:00	38.30	6.00	116	2.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Dando MTec 6**	**Paul Havard**	**MNaisbitt + DAshmore**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH866R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**27.09.14** End: **29.09.14**	**16.10**	**E:235427.2 N:393717.0**	**8** of **9**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
32.00				20 110 640	Water (Grey)	(0:20:00)				(New Harbour Group - PSAMMITE)		-16	(1.34)	
												-16.14	32	
										Strong to very strong narrowly to very thinly banded lenticular dark greyish green medium grained fresh PSAMMITE with weak to medium strong very closely spaced very narrow bands of very narrowly foliated dark greyish purple and dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)			32.24	
33.00				880 900 960	Water (Grey)	(0:20:00)						-17	(1.60)	
												-17.74	33.84	
34.00										Strong narrowly to very thinly banded dark greyish green medium grained fresh PSAMMITE with strong very closely spaced narrow to very thin bands of very narrowly foliated dark greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		-18	(0.62)	
												-18.36	34.46	
										Strong to very strong narrowly to thinly banded dark greyish green medium grained fresh PSAMMITE with strong very closely to closely spaced very narrow to narrow bands of very narrowly foliated dark greyish purple and dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)			(0.89)	
35.00				20 160 670	Water (Grey)	(0:25:00)						-19	35	
												-19.25	35.35	
					Water (Grey)	(0:25:00)				Strong narrowly to thinly banded dark greyish green medium grained fresh PSAMMITE with strong very closely spaced to closely spaced very narrow to narrow bands of very narrowly foliated dark greyish purple and dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)			36	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/09/14	09:15	1.00	None	116	Dry
27/09/14	14:30	12.20	5.80	116	3.00
28/09/14	09:15	12.20	5.80	116	1.40
28/09/14	16:30	25.70	5.80	116	2.10
29/09/14	08:30	25.70	5.80	116	1.40
29/09/14	18:00	38.30	6.00	116	2.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Dando MTec 6**	**Paul Havard**	**MNaisbitt + DAshmore**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH866R**

Contract Ref:	Start: **27.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **29.09.14**	**16.10**	**E:235427.2 N:393717.0**	**9** of **9**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
36.00					Water (Grey)	(0:25:00)						-20	(1.65)	
												-20.90	37.00	
37.00				20 160 670	Water (Grey)	(0:25:00)				Strong to very strong very thinly to thinly banded dark greyish green medium grained fresh PSAMMITE with strong very closely to closely spaced very narrow bands of very narrowly foliated dark greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		-21	(1.30)	
38.00												-22	38	
										Borehole terminated at 38.30m depth.		-22.20	38.30	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/09/14	09:15	1.00	None	116	Dry
27/09/14	14:30	12.20	5.80	116	3.00
28/09/14	09:15	12.20	5.80	116	1.40
28/09/14	16:30	25.70	5.80	116	2.10
29/09/14	08:30	25.70	5.80	116	1.40
29/09/14	18:00	38.30	6.00	116	2.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Dando MTec 6**	**Paul Havard**	**MNaisbitt + DAshmore**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH867R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**24.09.14** End: **26.09.14**	**16.81**	**E:235435.3 N:393695.3**	**1** of **9**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00										Firm friable brown slightly sandy CLAY with occasional plant roots. (Topsoil)			(0.50)	
												16.31	0.50	
					Water (Brown)					Firm orangish brown slightly sandy gravelly CLAY with low cobble content. (Superficial Deposits - Locally derived lodgement till)		16	(1.00)	1
1.00														
												15.31	1.50	
					Water (Grey)	(0:20:00)				Medium strong very narrowly to narrowly banded very narrowly foliated dark green moderately weathered to highly weathered PHYLLITE with medium strong to strong closely spaced to medium spaced narrow to very thin bands of dark green PSAMMITE. (New Harbour Group - PHYLLITE)		15		2
2.00					Water (Grey/Brown)	(0:20:00)								
				NI	Water (Grey/Brown)	(0:25:00)						14	(2.10)	3
3.00														
					Water (Grey/Brown)	(0:35:00)								
				20 150 280						Strong narrowly to very thinly banded dark green medium grained fresh to slightly weathered PSAMMITE with medium strong to strong extremely closely spaced to very closely spaced very narrow to narrow bands of very narrowly foliated dark brown PHYLLITE. (New Harbour Group - PSAMMITE)		13.21	3.60	
4.00												13	4 (1.08)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	18:00	12.00	4.50	116	2.20
25/09/14	08:15	12.00	4.50	116	3.10
25/09/14	05:45	27.00	4.50	116	2.90
26/09/14	08:15	27.00	4.50	116	2.10

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 0.70m depth.(IP)
3. Strata unsuitable for Hand Vane tests.
4. Rotary open hole drilling from 0.70m to 1.50m depth on 24/09/2014.
5. Rotary cored drilling from 1.50m to 39.00m with water flush between 24/09/2014 and 26/09/2014.
6. Five number packer tests conducted within borehole from 6.50m to 34.25m

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Dando MTec 6**	**Paul Havard**	**LVonCadenhead + MNaisbitt + LVonCadenhead**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH867R**

Contract Ref:	Start: **24.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **26.09.14**	**16.81**	**E:235435.3 N:393695.3**	**2** of **9**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
5.00				20 150 280	Water (Grey)	(0:40:00)				Weak very narrowly to narrowly banded very narrowly foliated dark brownish green fresh to slightly weathered PHYLLITE with weak very closely spaced narrow to very thin bands of lenticular dark green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		12.13	4.68	
6.00					Water (Grey)	(0:35:00)							(3.62)	
7.00				70 170 330	Water (Grey)	(0:25:00)								
8.00										Strong narrowly to thinly banded dark green medium grained fresh to slightly weathered PSAMMITE with strong extremely closely spaced to closely spaced very narrow to narrow bands of very narrowly foliated dark brownish green PHYLLITE. (New Harbour Group - PSAMMITE)		8.51	8.30	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	18:00	12.00	4.50	116	2.20
25/09/14	08:15	12.00	4.50	116	3.10
25/09/14	05:45	27.00	4.50	116	2.90
26/09/14	08:15	27.00	4.50	116	2.10

General Remarks

depth between 09/10/2014 and 11/10/2014.
7. Groundwater monitoring standpipe installed as shown upon completion.

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Dando MTec 6**	**Paul Havard**	**LVonCadenhead + MNaisbitt + LVonCadenhead**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH867R**

Contract Ref:	Start: **24.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **26.09.14**	**16.81**	**E:235435.3 N:393695.3**	**3** of **9**

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00														
				70 170 330	Water (Grey)	(0:35:00)						7	10	
10.00														
												6	11	
11.00					Water (Grey)	(0:30:00)							(5.70)	
												5		
12.00				10 150 390									12	
					Water (Grey)	(0:30:00)						4		
13.00													13	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	18:00	12.00	4.50	116	2.20
25/09/14	08:15	12.00	4.50	116	3.10
25/09/14	05:45	27.00	4.50	116	2.90
26/09/14	08:15	27.00	4.50	116	2.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Dando MTec 6**	**Paul Havard**	**LVonCadenhead + MNaisbitt + LVonCadenhead**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH867R**

Contract Ref:	Start: **24.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **26.09.14**	**16.81**	**E:235435.3 N:393695.3**	**4** of **9**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
14.00				10 150 390	Water (Grey)	(0:25:00)				Strong very narrowly to narrowly banded very narrowly foliated dark brownish green fresh to slightly weathered PHYLLITE. (New Harbour Group - PHYLLITE)		2.81	14.00 (0.50)	
15.00				10 90 150	Water (Grey)	(0:40:00)				Strong narrowly to very thinly banded lenticular dark green medium grained fresh to slightly weathered PSAMMITE with strong extremely closely spaced to very closely spaced very narrow to narrow bands of very narrowly foliated dark brownish green and dark brown PHYLLITE. (New Harbour Group - PSAMMITE)		2.31	14.50 (4.47)	
16.00				40 190 300	Water (Grey)	(0:25:00)								
17.00														

Reduced Level: 3, 2, 1, 0, -1

Depth (Thickness): 14, 15, 16, 17, 18

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	18:00	12.00	4.50	116	2.20
25/09/14	08:15	12.00	4.50	116	3.10
25/09/14	05:45	27.00	4.50	116	2.90
26/09/14	08:15	27.00	4.50	116	2.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Dando MTec 6**	**Paul Havard**	**LVonCadenhead + MNaisbitt + LVonCadenhead**	**ADingle + ADingle**

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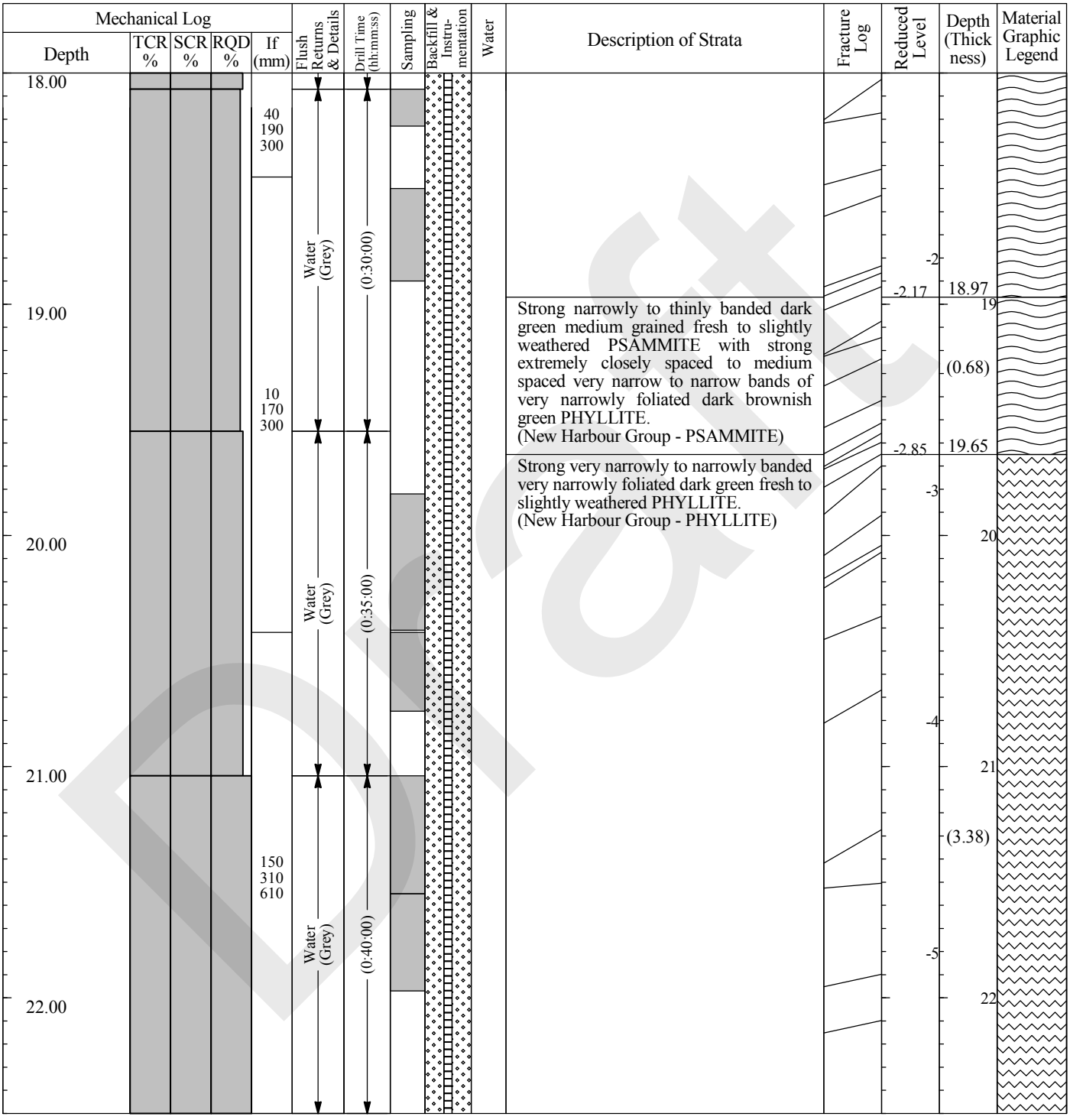
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH867R**

Contract Ref:	Start: **24.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **26.09.14**	**16.81**	**E:235435.3 N:393695.3**	**5** of **9**



Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	18:00	12.00	4.50	116	2.20
25/09/14	08:15	12.00	4.50	116	3.10
25/09/14	05:45	27.00	4.50	116	2.90
26/09/14	08:15	27.00	4.50	116	2.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Dando MTec 6**	**Paul Havard**	**LVonCadenhead + MNaisbitt + LVonCadenhead**	**ADingle + ADingle**

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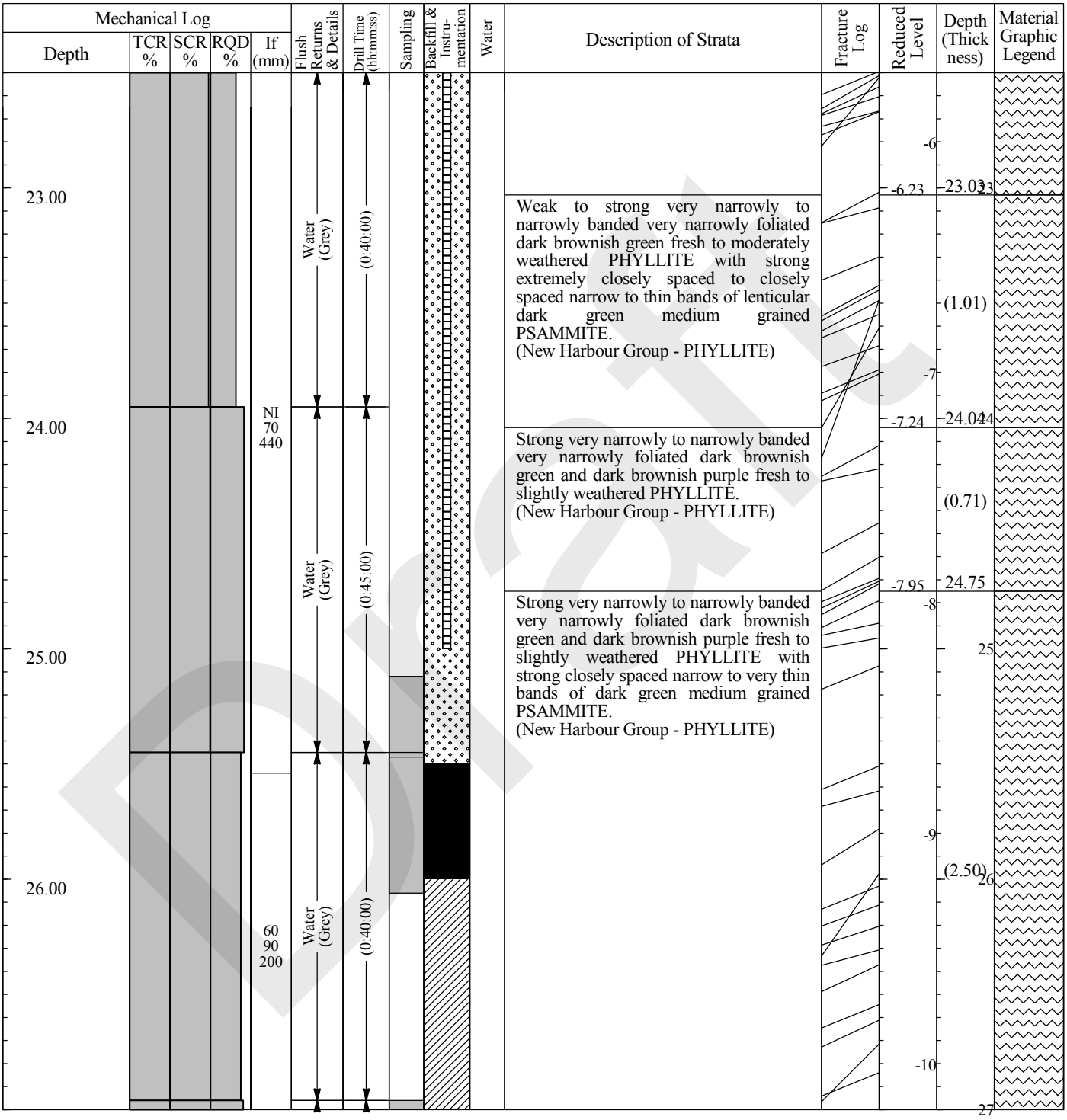
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH867R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**24.09.14** End: **26.09.14**	**16.81**	**E:235435.3 N:393695.3**	**6** of **9**



Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	18:00	12.00	4.50	116	2.20
25/09/14	08:15	12.00	4.50	116	3.10
25/09/14	05:45	27.00	4.50	116	2.90
26/09/14	08:15	27.00	4.50	116	2.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Dando MTec 6**	**Paul Havard**	**LVonCadenhead + MNaisbitt + LVonCadenhead**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH867R**

Contract Ref:	Start: **24.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **26.09.14**	**16.81**	**E:235435.3 N:393695.3**	**7** of **9**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
27.00				60 90 200								-10.45	27.25	
					Water (Grey)	(0:45:00)				Strong narrowly to thinly banded dark brownish green and medium grained fresh to slightly weathered PSAMMITE. (New Harbour Group - PSAMMITE)		-11	28 (1.71)	
28.00				30 170 260								-12		
												-12.16	28.96	
29.00				NI 50 60	Water (Grey)	(0:35:00)				Weak to strong narrowly to thinly banded dark green and dark greenish grey medium grained slightly weathered to highly weathered PSAMMITE with weak to medium strong extremely closely spaced to closely spaced very narrow to narrow bands of very narrowly foliated dark brownish purple PHYLLITE. (New Harbour Group - PSAMMITE)			29 (0.90)	
				NI								-13.06	29.86	
				NI 80 100						Strong very thinly to medium banded dark greyish green medium grained slightly weathered to moderately weathered PSAMMITE. (New Harbour Group - PSAMMITE)			30	
30.00					Water (Pink)	(0:30:00)						-14		
				30 150 400									31 (2.49)	
31.00														

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	18:00	12.00	4.50	116	2.20
25/09/14	08:15	12.00	4.50	116	3.10
25/09/14	05:45	27.00	4.50	116	2.90
26/09/14	08:15	27.00	4.50	116	2.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Dando MTec 6**	**Paul Havard**	**LVonCadenhead + MNaisbitt + LVonCadenhead**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH867R**

Contract Ref:	Start: **24.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **26.09.14**	**16.81**	**E:235435.3 N:393695.3**	**8** of **9**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
32.00				30 150 400	Water (Grey)	(0:30:00)						-15		
												-15.55	32 32.35	
										Medium strong to strong narrowly to very thinly banded dark green medium grained slightly weathered to moderately weathered PSAMMITE with medium strong to strong extremely closely spaced to very closely spaced very narrow to narrow bands of very narrowly foliated dark brownish purple and light brown PHYLLITE. (New Harbour Group - PSAMMITE)			(0.37)	
												-15.92	32.72	
				NI 160 170								-16		
33.00													(0.61)	
										Strong very thinly to thinly banded dark green medium grained fresh to slightly weathered PSAMMITE. (New Harbour Group - PSAMMITE)		-16.53	33 33.33	
										Strong thinly banded massive in overall appearance dark greenish grey medium grained fresh to slightly weathered PSAMMITE. (New Harbour Group - PSAMMITE)			(0.79)	
				NI 60 230	Water (Grey)	(0:35:00)						-17		
34.00												-17.32	34 34.12	
										Strong very thinly to thinly banded dark green medium grained fresh to slightly weathered PSAMMITE. (New Harbour Group - PSAMMITE)				
												-18		
35.00				60 150 220	Water (Grey)	(0:30:00)							35 (1.98)	
												-19		
													36	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	18:00	12.00	4.50	116	2.20
25/09/14	08:15	12.00	4.50	116	3.10
25/09/14	05:45	27.00	4.50	116	2.90
26/09/14	08:15	27.00	4.50	116	2.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Dando MTec 6**	**Paul Havard**	**LVonCadenhead + MNaisbitt + LVonCadenhead**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH867R**

Contract Ref:	Start: **24.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **26.09.14**	**16.81**	**E:235435.3 N:393695.3**	**9** of **9**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
36.00				30 NI 40 60						Strong to medium strong narrowly to very thinly banded dark green medium grained slightly weathered to moderately weathered PSAMMITE with weak to medium strong very closely spaced to closely spaced very narrow to narrow bands of very narrowly foliated dark brownish purple and dark green PHYLLITE. (New Harbour Group - PSAMMITE)		-19.30	36.10	
				NI 100 290	Water (Grey)	(0:25:00)						-20	37	
37.00														
													(2.90)	
												-21		
38.00				NI 100 190	Water (Grey)	(0:30:00)							38	
												-22		
39.00										Borehole terminated at 39.00m depth.		-22.20	39.00	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/09/14	18:00	12.00	4.50	116	2.20
25/09/14	08:15	12.00	4.50	116	3.10
25/09/14	05:45	27.00	4.50	116	2.90
26/09/14	08:15	27.00	4.50	116	2.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Dando MTec 6**	**Paul Havard**	**LVonCadenhead + MNaisbitt + LVonCadenhead**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH870R**

Contract Ref:	Start: **01.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **30.09.14**	**21.10**	**E:235377.2 N:393619.4**	**1** of **10**

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
0.00										MADE GROUND: Firm brown slightly sandy CLAY. (Made Ground)		20.98	0.12	
												20.85	0.25	
										MADE GROUND: Firm friable brown slightly sandy gravelly CLAY. (Made Ground)				
										MADE GROUND: Greyish green slightly clayey GRAVEL and COBBLES. (Made Ground)				
1.00					Air (Grey/Brown)	(00:05:00)						20	1	
													(2.95)	
2.00												19	2	
					Air (Grey)	(00:08:00)								
					Air (Grey)	(00:06:00)								
3.00												18	3	
												17.90	3.20	
				NI 120 160	Air+Mist (Grey)	(0:32:00)				Medium strong to strong narrowly to thinly banded lenticular dark green medium grained fresh to slightly weathered PSAMMITE with medium strong to strong extremely closely spaced to closely spaced very narrow to narrow bands of very narrowly foliated dark orangish brown PHYLLITE. (New Harbour Group - PSAMMITE)		17	4	
4.00														

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/09/14	09:15	6.00	1.50	116	5.00
27/09/14	18:00	16.50	1.50	116	-
28/09/14	09:00	3.20	3.20	116	Dry
28/09/14	16:30	15.20	3.20	116	15.00
29/09/14	08:00	15.20	3.20	116	7.80
29/09/14	18:00	33.20	3.20	116	-
30/09/14	08:15	33.20	3.20	116	9.10

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 0.50m depth.(IP)
3. Strata unsuitable for Hand Vane tests.
4. Two number falling head tests carried out between 4.57m and 10.17m depth on 18/11/2014.
5. Rotary open hole drilling from 0.50m to 3.20m depth on 01/09/2014.
6. Rotary cored drilling from 3.20m to 42.95m depth with air mist flush between

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Simon Griffiths**	**LVonCadenhead + MNaisbitt + LVonCadenhead**	**ADingle + ADingle**

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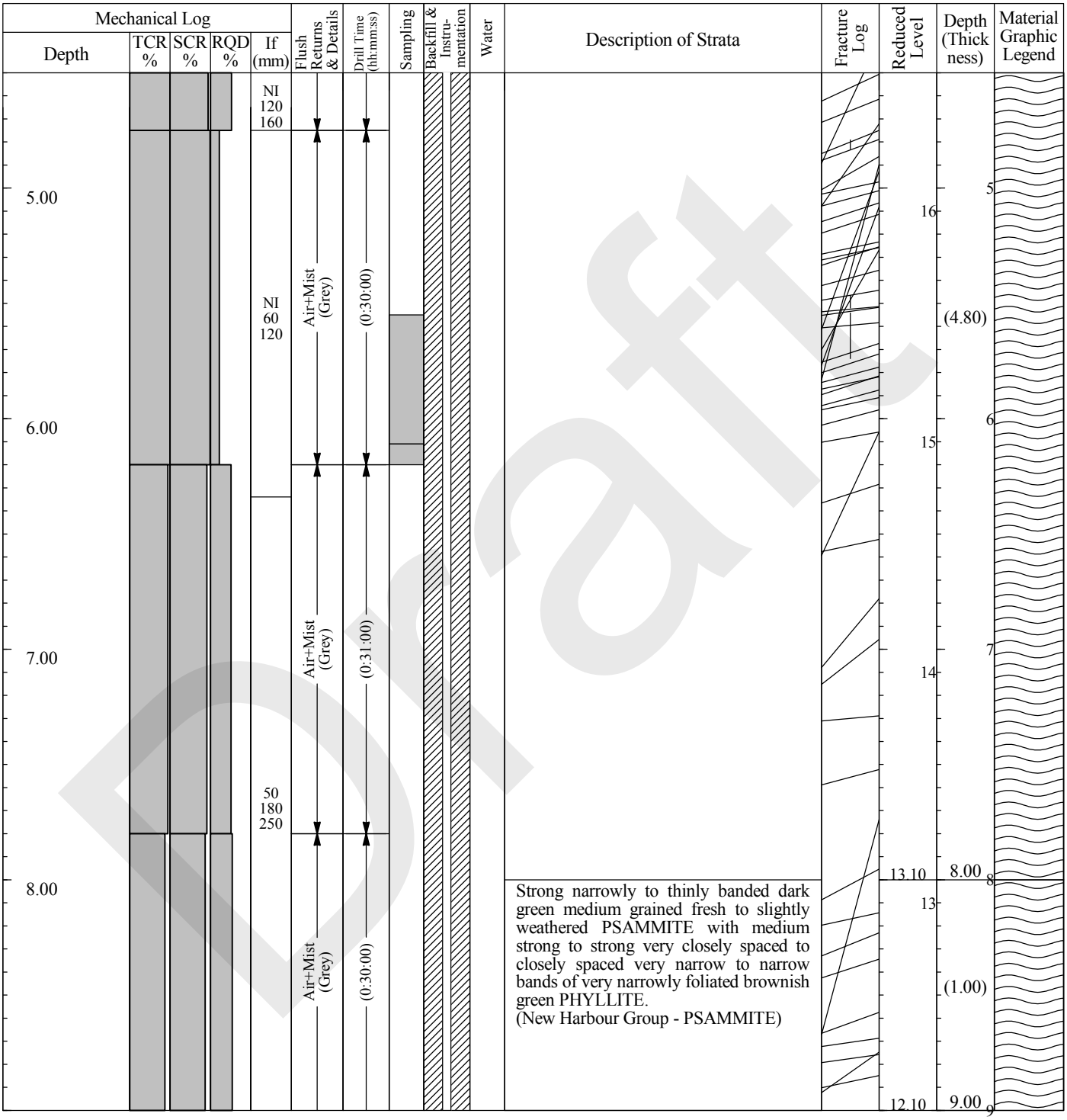
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH870R**

Contract Ref:	Start: **01.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **30.09.14**	**21.10**	**E:235377.2 N:393619.4**	**2** of **10**



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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/09/14	09:15	6.00	1.50	116	5.00
27/09/14	18:00	16.50	1.50	116	-
28/09/14	09:00	3.20	3.20	116	Dry
28/09/14	16:30	15.20	3.20	116	15.00
29/09/14	08:00	15.20	3.20	116	7.80
29/09/14	18:00	33.20	3.20	116	-
30/09/14	08:15	33.20	3.20	116	9.10

General Remarks

28/09/2014 and 30/09/2014.
7. Three number packer tests conducted within borehole from 11.00m to 39.75m depth on 18/11/2014.
8. Groundwater monitoring standpipe installed as shown upon completion.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Simon Griffiths**	**LVonCadenhead + MNaisbitt + LVonCadenhead**	**ADingle + ADingle**

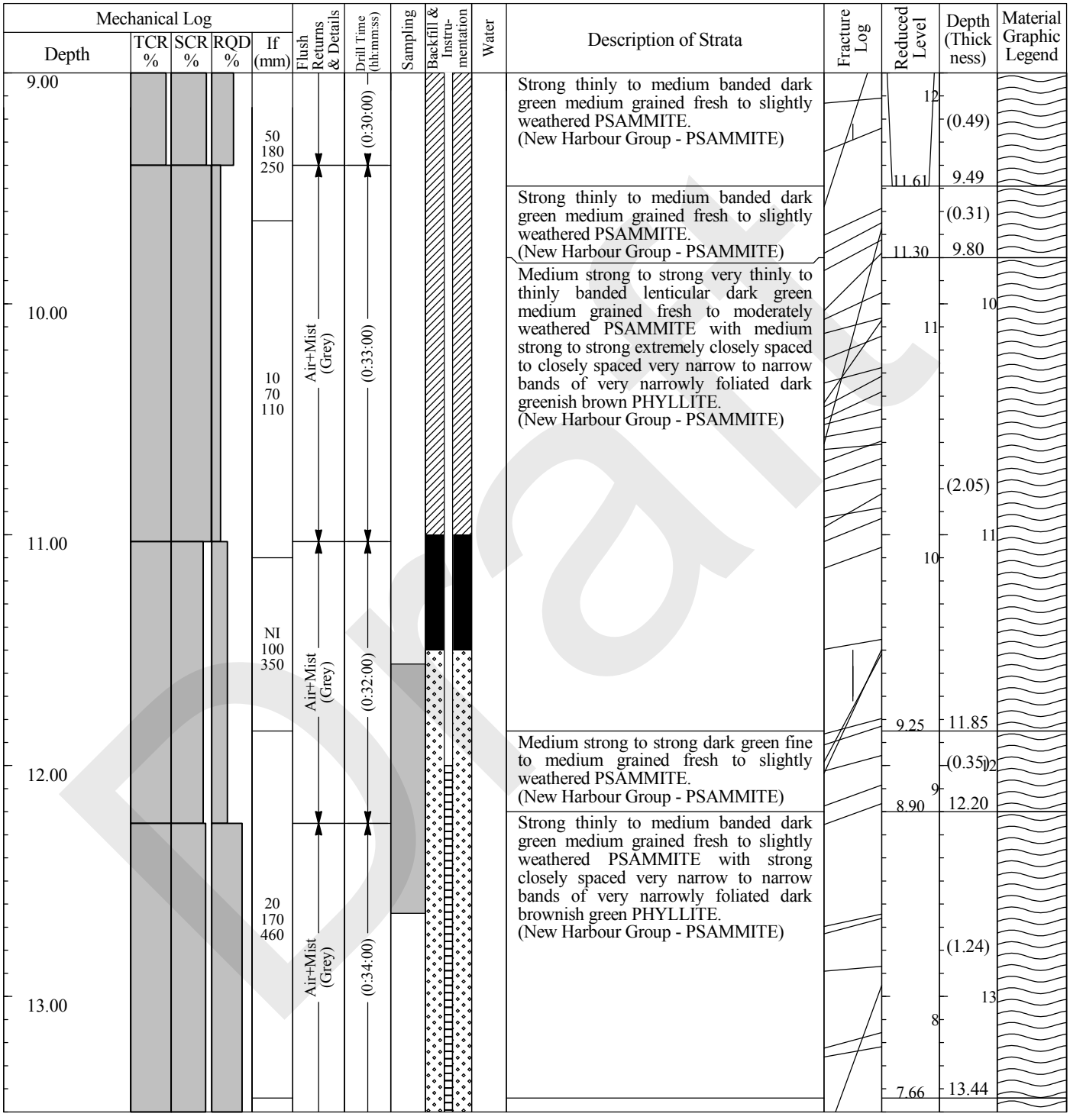
GINT_LIBRARY_V8_05.GLB LibVersion: v8_05 - Lib0006 PrjVersion: | Log XCUSTOM - SSL - 728599 - SUMMARY LOG | 728599_LOW_PRIORITY_WYLFA_NEWYDD_DETAILED_ONSHORE_GROUND_INVESTIGATION.GPJ - v8_05.
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH870R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**01.09.14** End: **30.09.14**	**21.10**	**E:235377.2 N:393619.4**	**3** of **10**



Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/09/14	09:15	6.00	1.50	116	5.00
27/09/14	18:00	16.50	1.50	116	-
28/09/14	09:00	3.20	3.20	116	Dry
28/09/14	16:30	15.20	3.20	116	15.00
29/09/14	08:00	15.20	3.20	116	7.80
29/09/14	18:00	33.20	3.20	116	-
30/09/14	08:15	33.20	3.20	116	9.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Simon Griffiths**	**LVonCadenhead + MNaisbitt + LVonCadenhead**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH870R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**01.09.14** End: **30.09.14**	**21.10**	**E:235377.2 N:393619.4**	**4** of **10**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
				NI						Weak to medium strong very thinly to thinly banded dark brown medium grained slightly weathered to moderately weathered PSAMMITE. (New Harbour Group - PSAMMITE)		7.40	13.70	
14.00				NI	Air+Mist (Grey)	(0:36:00)				Strong narrowly to very thinly banded dark green and dark greyish green medium grained fresh to slightly weathered PSAMMITE with medium strong to strong very closely spaced to closely spaced very narrow to narrow bands of very narrowly foliated dark brownish green PHYLLITE. (New Harbour Group - PSAMMITE)		7	14 (1.00)	
15.00				20 150 190	Air+Mist (Grey)	(0:45:00)				Strong narrowly to very thinly banded lenticular dark green medium grained fresh to slightly weathered PSAMMITE with strong extremely closely spaced to very closely spaced very narrow to narrow bands of very narrowly foliated dark brownish green PHYLLITE. (New Harbour Group - PSAMMITE)		6.40 6	14.70 15 (2.05)	
16.00				NI						Strong narrowly to thinly banded lenticular dark green and dark greyish green medium grained fresh to slightly weathered PSAMMITE with strong very closely spaced to medium spaced very narrow to narrow bands of very narrowly foliated dark brownish green PHYLLITE. (New Harbour Group - PSAMMITE)		4.35 5	16.75 16	
17.00				10 130 140	Air+Mist (Grey)	(0:37:00)				Strong narrowly to thinly banded lenticular dark green and dark greyish green medium grained fresh to slightly weathered PSAMMITE with strong extremely closely spaced to medium spaced very narrow to narrow bands of		3.60 4	17.50 17 (0.75)	
				NI									18	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/09/14	09:15	6.00	1.50	116	5.00
27/09/14	18:00	16.50	1.50	116	-
28/09/14	09:00	3.20	3.20	116	Dry
28/09/14	16:30	15.20	3.20	116	15.00
29/09/14	08:00	15.20	3.20	116	7.80
29/09/14	18:00	33.20	3.20	116	-
30/09/14	08:15	33.20	3.20	116	9.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Simon Griffiths**	**LVonCadenhead + MNaisbitt + LVonCadenhead**	**ADingle + ADingle**

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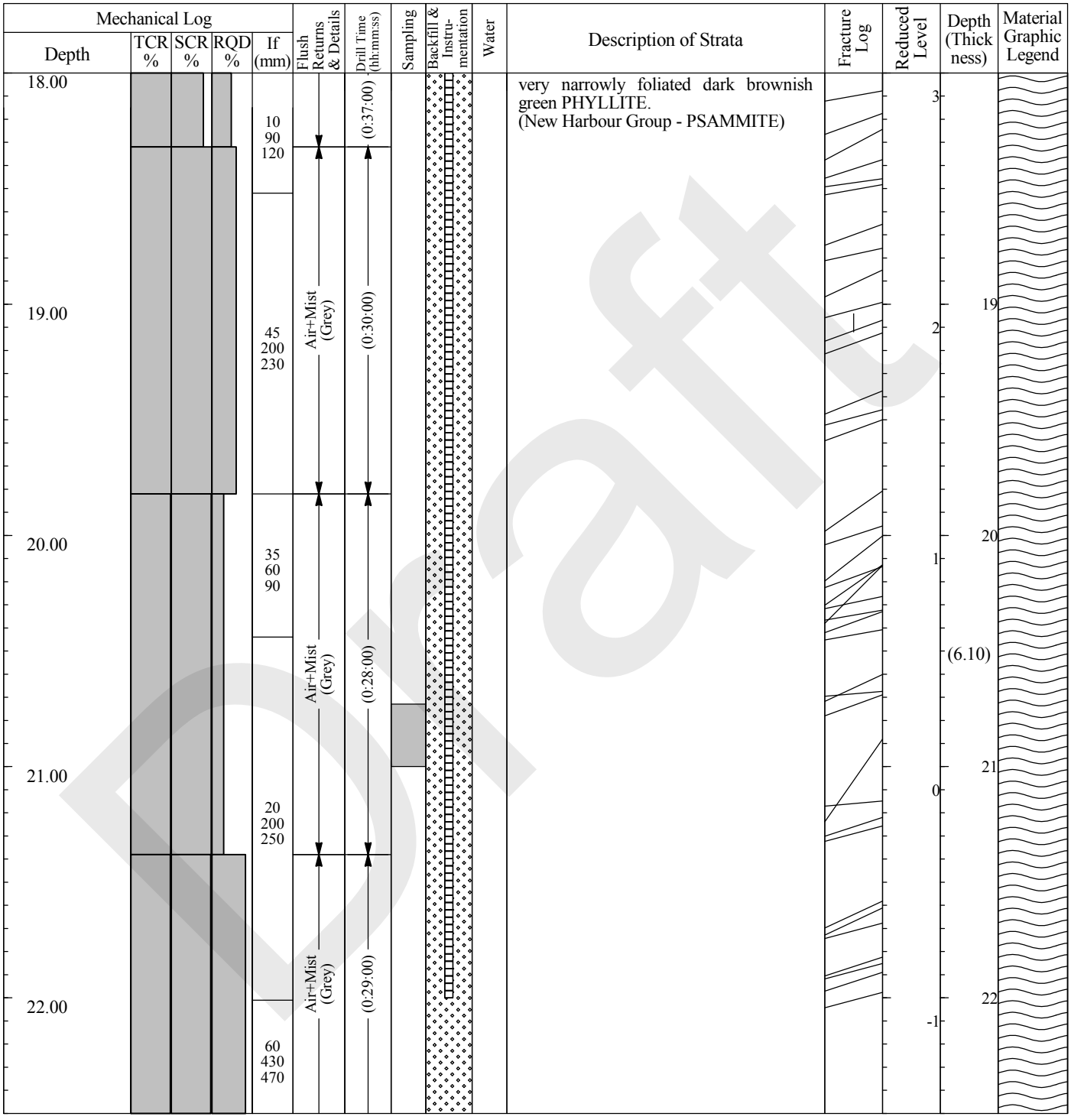
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH870R**

Contract Ref:	Start: **01.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **30.09.14**	**21.10**	**E:235377.2 N:393619.4**	**5** of **10**



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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/09/14	09:15	6.00	1.50	116	5.00
27/09/14	18:00	16.50	1.50	116	-
28/09/14	09:00	3.20	3.20	116	Dry
28/09/14	16:30	15.20	3.20	116	15.00
29/09/14	08:00	15.20	3.20	116	7.80
29/09/14	18:00	33.20	3.20	116	-
30/09/14	08:15	33.20	3.20	116	9.10

General Remarks

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Simon Griffiths**	**LVonCadenhead + MNaisbitt + LVonCadenhead**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH870R**

Contract Ref:	Start: **01.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **30.09.14**	**21.10**	**E:235377.2 N:393619.4**	**6** of **10**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
23.00				60 430 470	Air+Mist (Grey)	(0:29:00)						-2.50	23.60	
24.00				20 130 230		(0:19:00)				Strong very narrowly to narrowly banded very narrowly foliated dark greyish green fresh to slightly weathered PHYLLITE with strong very closely spaced to closely spaced narrow to very thin bands of lenticular dark green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-3.60	24.70 (1.10)	
25.00				NI 60 220	Air+Mist (Grey)	(0:24:00)				Strong very narrowly to narrowly banded very narrowly foliated dark greyish green fresh to slightly weathered PHYLLITE with strong very closely spaced to closely spaced narrow to very thin bands of lenticular dark green medium grained PSAMMITE. (New Harbour Group - PHYLLITE) Strong medium to thickly banded dark green medium grained fresh to slightly weathered DOLERITE. (Intrusions)		-4.10	25.20 (0.50)	
26.00					Air+Mist (Grey)	(0:28:00)				Strong massive dark greenish grey medium grained moderately weathered DOLERITE. (Intrusions)		-5.00	26.10 (0.90)	
				NI NI 150						Very weak to strong massive dark greenish grey medium grained highly weathered DOLERITE. (Intrusions)		-5.50	26.60 (0.50)	
													27 (0.66)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/09/14	09:15	6.00	1.50	116	5.00
27/09/14	18:00	16.50	1.50	116	-
28/09/14	09:00	3.20	3.20	116	Dry
28/09/14	16:30	15.20	3.20	116	15.00
29/09/14	08:00	15.20	3.20	116	7.80
29/09/14	18:00	33.20	3.20	116	-
30/09/14	08:15	33.20	3.20	116	9.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Simon Griffiths**	**LVonCadenhead + MNaisbitt + LVonCadenhead**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH870R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**01.09.14** End: **30.09.14**	**21.10**	**E:235377.2 N:393619.4**	**7** of **10**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
27.00				NI NI 150	Air+Mist (Grey)	(0:28:00)						-6		
												-6.16	27.26	
										Medium strong to strong very narrowly to narrowly banded very narrowly foliated dark greyish green and light yellowish brown moderately weathered PHYLLITE with medium strong to strong closely spaced narrow bands of disturbed dark green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)			(0.39)	
												-6.55	27.65	
													(0.30)	
												-6.85	27.95	
28.00				20 80 210	Air+Mist (Grey)	(0:29:00)				Medium strong to strong narrowly to very thinly banded poorly foliated disturbed dark green and light yellowish brown medium grained slightly weathered PSAMMITE. (New Harbour Group - PSAMMITE)		-7	28 (0.69)	
										Strong narrowly to very thinly banded poorly foliated dark green medium grained fresh to moderately weathered PSAMMITE. (New Harbour Group - PSAMMITE)		-7.54	28.64	
29.00				80 220 240						Strong massive dark greenish grey medium grained fresh to slightly weathered DOLERITE. (Intrusions)		-8	29 (1.06)	
												-8.60	29.70	
				NI	Air+Mist (Grey)	(0:44:00)				Strong narrowly to very thinly banded disturbed dark brownish green medium grained slightly weathered PSAMMITE with strong very closely spaced to closely spaced very narrow to narrow bands of very narrowly foliated light brownish green PHYLLITE. (New Harbour Group - PSAMMITE)		-9	30 (1.64)	
30.00				50 150 170								-10	31	
31.00												-10.24	31.34	
				NI						Medium strong narrowly to very thinly banded sheared dark green medium				

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/09/14	09:15	6.00	1.50	116	5.00
27/09/14	18:00	16.50	1.50	116	-
28/09/14	09:00	3.20	3.20	116	Dry
28/09/14	16:30	15.20	3.20	116	15.00
29/09/14	08:00	15.20	3.20	116	7.80
29/09/14	18:00	33.20	3.20	116	-
30/09/14	08:15	33.20	3.20	116	9.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Simon Griffiths**	**LVonCadenhead + MNaisbitt + LVonCadenhead**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH870R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**01.09.14** End: **30.09.14**	**21.10**	**E:235377.2 N:393619.4**	**8** of **10**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
32.00				NI	Air+Mist (Grey)	(0:36:00)				grained slightly weathered to moderately weathered PSAMMITE with medium strong very closely to closely spaced very narrow to narrow bands of very narrowly foliated light brownish green PHYLLITE. (New Harbour Group - PSAMMITE)		-10.64	(0.40) 31.74	
				80 160 400						Strong massive dark greenish grey fine grained slightly weathered DOLERITE. (Intrusions)		-11	32 (1.31)	
33.00				NI NI 80	Air+Mist (Grey)	(0:38:00)				Medium strong to strong narrowly to very thinly banded sheared dark greyish green medium grained slightly weathered to highly weathered PSAMMITE with medium strong to strong very closely to closely spaced very narrow to narrow bands of very narrowly foliated light greenish brown PHYLLITE. (New Harbour Group - PSAMMITE)		-11.95 -12	33.03 33 (1.02)	
34.00				NI NI 140	Air+Mist (Grey/Red)	(0:30:00)				Weak to medium strong very narrowly to narrowly banded very narrowly foliated dark brownish purple highly weathered PHYLLITE with strong closely spaced very thin to thin bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-12.97 -13	34.07 34	
35.00				NI	Air+Mist (Grey)	(0:31:00)						-14	35 (2.73)	
													36	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/09/14	09:15	6.00	1.50	116	5.00
27/09/14	18:00	16.50	1.50	116	-
28/09/14	09:00	3.20	3.20	116	Dry
28/09/14	16:30	15.20	3.20	116	15.00
29/09/14	08:00	15.20	3.20	116	7.80
29/09/14	18:00	33.20	3.20	116	-
30/09/14	08:15	33.20	3.20	116	9.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Simon Griffiths**	**LVonCadenhead + MNaisbitt + LVonCadenhead**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH870R**

Contract Ref:	Start: **01.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **30.09.14**	**21.10**	**E:235377.2 N:393619.4**	**9** of **10**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
36.00					Air+Mist (Grey)	(0:31:00)						-15		
												-15.70	36.80	
				NI						Weak to medium strong very narrowly to narrowly banded sheared dark greenish grey fresh to slightly weathered PHYLLITE with weak to medium strong very closely spaced to closely spaced narrow to very thin bands of sheared dark greenish grey medium grained PSAMMITE. (New Harbour Group - PHYLLITE)			37	
37.00												-16	(0.80)	
					Air+Mist (Grey)	(0:15:00)						-16.50	37.60	
				10 50 70						Strong narrowly to very thinly banded dark greyish green medium grained fresh to slightly weathered PSAMMITE with strong closely spaced to medium spaced very narrow to narrow bands of very narrowly foliated dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)			(0.82) 38	
38.00												-17		
												-17.32	38.42	
										Medium strong narrowly to very thinly banded dark greyish green medium grained fresh to slightly weathered PSAMMITE with medium strong closely spaced very narrow to narrow bands of very narrowly foliated dark brownish green and dark brown PHYLLITE. (New Harbour Group - PSAMMITE)			39	
39.00				50 90 160	Air+Mist (Grey)	(0:40:00)						-18	(2.38)	
													40	
40.00				80 270 290	Air+Mist (Grey/Red)	(0:28:00)						-19		

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/09/14	09:15	6.00	1.50	116	5.00
27/09/14	18:00	16.50	1.50	116	-
28/09/14	09:00	3.20	3.20	116	Dry
28/09/14	16:30	15.20	3.20	116	15.00
29/09/14	08:00	15.20	3.20	116	7.80
29/09/14	18:00	33.20	3.20	116	-
30/09/14	08:15	33.20	3.20	116	9.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Simon Griffiths**	**LVonCadenhead + MNaisbitt + LVonCadenhead**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH870R**

Contract Ref:	Start: **01.09.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **30.09.14**	**21.10**	**E:235377.2 N:393619.4**	**10** of **10**

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
				40 60 90	Air+Mist (Grey/Red)	(0:28:00)						-19.70	40.80	
41.00										Strong narrowly to very thinly banded dark green medium grained fresh to slightly weathered PSAMMITE with strong very closely spaced very narrow to narrow bands of very narrowly foliated dark reddish brown PHYLLITE. (New Harbour Group - PSAMMITE)		-20	41 (1.14)	
				10 320 500								-20.84	41.94	
42.00					Air+Mist (Grey)	(0:30:00)				Strong narrowly to very thinly banded dark green medium grained fresh to slightly weathered PSAMMITE with strong extremely closely spaced to very closely spaced very narrow to narrow bands of very narrowly foliated dark greenish brown and light greenish brown PHYLLITE. (New Harbour Group - PSAMMITE)		-21	42 (1.01)	
										Borehole terminated at 42.95m depth.		-21.85	42.95	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/09/14	09:15	6.00	1.50	116	5.00
27/09/14	18:00	16.50	1.50	116	-
28/09/14	09:00	3.20	3.20	116	Dry
28/09/14	16:30	15.20	3.20	116	15.00
29/09/14	08:00	15.20	3.20	116	7.80
29/09/14	18:00	33.20	3.20	116	-
30/09/14	08:15	33.20	3.20	116	9.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Simon Griffiths**	**LVonCadenhead + MNaisbitt + LVonCadenhead**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH871R**

Contract Ref:	Start: **02.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **07.10.14**	**20.05**	**E:235387.0 N:393596.7**	**1** of **10**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00					Air+Mist (Brown)	(01:00:00)				MADE GROUND: Soft dark brown organic CLAY composed of leaf/pine needle mulch. (Made Ground)		20	0.12	
												19.93		
										MADE GROUND: Stiff friable (dry) brown sandy gravelly CLAY with a low cobble content. (Made Ground)		19	1	
1.00													(2.88)	
2.00												18	2	
												17.05	3.00	
3.00										Borehole progressed using open hole drilling techniques; descriptions based on recovered chippings. (Made Ground - Possible Made Ground)		17	3	
4.00												16	4	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
02/10/14	08:00	0.00	0.00	116	Dry
02/10/14	18:00	13.30	8.80	116	12.10
03/10/14	08:00	13.30	8.80	116	11.20
03/10/14	12:00	19.30	8.86	116	15.60
06/10/14	12:00	19.30	8.80	116	17.20
06/10/14	18:00	29.80	8.80	116	26.70
07/10/14	08:00	29.80	8.80	116	27.40
07/10/14	18:00	40.30	None	116	37.10

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 0.80m depth.(IP)
3. Inspection pit remained stable during excavation.
4. Strata unsuitable for Hand Vane tests.
5. Falling head test carried out between 9.80m and 20,00m depth on 21/11/2014
6. Rotary open hole drilling from 0.80m to 6.40m depth on 02/10/2014.
7. Rotary cored drilling from 6.40m to 40.63m depth with air mist flush between

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Mark McKinney**	**MGalan + MNaisbitt + MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH871R**

Contract Ref:	Start: **02.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **07.10.14**	**20.05**	**E:235387.0 N:393596.7**	**2** of **10**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
5.00					Air+Mist (Brown)	(00:40:00)						15	(3.40) 5	
6.00					Air+Mist (Brown)	(00:35:00)						14	6	
												13.65	6.40	
7.00				NI	Air+Mist (Brown)	(0:45:00)				Very weak to weak narrowly to very thinly banded dark greenish brown medium to coarse grained highly weathered PSAMMITE with extremely weak to very weak very closely spaced narrow bands of very narrowly foliated to dark orangish green PHYLLITE. (New Harbour Group - PSAMMITE)		13	7 (2.40)	
8.00					Air+Mist (Brown)	(0:50:00)						12	8	
										Weak narrowly to very thinly banded dark greenish brown medium to coarse		11.25	8.80	
													9	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

02/10/2014 and 07/10/2014.

8. Three number packers tests conducted within borehole from 21.00m to 38.00m depth between 20/11/2014 and 21/11/2014.
9. Groundwater monitoring standpipe installed as shown upon completion.

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Mark McKinney**	**MGalan + MNaisbitt + MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH871R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**02.10.14** End: **07.10.14**	**20.05**	**E:235387.0 N:393596.7**	**3** of **10**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00										grained highly weathered PSAMMITE with very weak very closely spaced narrow bands of very narrowly foliated to dark orangish green PHYLLITE. (New Harbour Group - PSAMMITE)		11		
				NI 20 100	Air+Mist (Brown)	(0:48:00)							(1.42)	
10.00												10		
										Weak very thinly to thinly banded dark greenish grey to light greenish grey medium grained moderately weathered PSAMMITE with very weak to weak closely spaced narrow to very thin bands of very narrowly foliated dark greyish green and dark greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		9.83	10.22	
11.00				NI	Air+Mist (Grey)	(0:50:00)						9		
12.00				NI 90 150								8		
					Air+Mist (Yellow)	(0:45:00)							(4.58)	
				NI										
13.00												7		
				NI										

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Mark McKinney**	**MGalan + MNaisbitt + MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH871R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**02.10.14** End: **07.10.14**	**20.05**	**E:235387.0 N:393596.7**	**4** of **10**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
14.00				NI	Air+Mist (Grey/Brown)	(0:50:00)						6	14	
				130 140 470								5.25	14.80	
15.00				NI	Air+Mist (Grey/Brown)	(0:45:00)				Weak very thinly banded dark greyish green fine to medium grained moderately weathered PSAMMITE with very weak very closely to closely spaced narrow to very thin bands of very narrowly foliated light greyish green to dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		5	15 (1.50)	
16.00				NI								4	16	
												3.75	16.30	
17.00				NI 20 120	Air+Mist (Grey)	(0:40:00)				Weak to medium strong very thinly to thinly banded dark greenish green to dark reddish grey medium grained moderately weathered PSAMMITE with very weak very closely to closely spaced very narrow to narrow bands of very narrowly foliated dark greyish green to dark greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		3.04	(0.71) 17.01	
										Weak very thinly to thinly banded dark greyish green medium grained moderately weathered PSAMMITE. (New Harbour Group - PHYLLITE)		3	17	
													18	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Mark McKinney**	**MGalan + MNaisbitt + MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH871R**

Contract Ref:	Start: **02.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **07.10.14**	**20.05**	**E:235387.0 N:393596.7**	**5** of **10**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
18.00				NI 20 120	Air+Mist (Grey)	(0:55:00)						2	(2.29)	
19.00				NI								1	19	
												0.75	19.30	
20.00				NI 40 340	Air+Mist (Grey)	(0:45:00)				Medium strong narrowly to very thinly banded very narrowly foliated dark yellowish green to dark greyish green slightly weathered PHYLLITE with medium strong to strong very closely spaced narrow to very thin lenticular bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		0	20	
21.00				50 100 350	Air+Mist (Grey)	(0:50:00)						-1	21 (4.02)	
22.00												-2	22	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Mark McKinney**	**MGalan + MNaisbitt + MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH871R**

Contract Ref:	Start: **02.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **07.10.14**	**20.05**	**E:235387.0 N:393596.7**	**6** of **10**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
23.00										Medium strong narrowly to very thinly banded disturbed dark yellowish green to dark greyish green fresh PHYLLITE with medium strong to strong very closely spaced narrow to very thin bands of disturbed dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-3	23	
												-3.27	23.32	
													(0.28)	
												-3.55	23.60	
24.00				80 190 330	Air+Mist (Grey)	(0:35:00)				Medium strong narrowly to very thinly banded very narrowly foliated dark yellowish green to dark greyish green slightly weathered PHYLLITE with medium strong to strong very closely to closely spaced very narrow to narrow bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-4	24	
					Air+Mist (Grey)	(0:40:00)							(2.75)	
25.00												-5	25	
26.00				10 350 410	Air+Mist (Grey)	(0:45:00)				Strong narrowly to thinly banded dark greyish green medium grained fresh PSAMMITE with medium strong to strong very closely to closely spaced narrow to very thin bands of very narrowly foliated dark yellowish green and light greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-6	26	
												-6.30	26.35	
													27	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Mark McKinney**	**MGalan + MNaisbitt + MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH871R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**02.10.14** End: **07.10.14**	**20.05**	**E:235387.0 N:393596.7**	**7** of **10**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
27.00				10 350 410	Air+Mist (Grey)	(0:40:00)						-7	(1.34)	
												-7.64	27.69	
										Strong narrowly to very thinly banded very narrowly foliated dark yellowish green to dark greyish green slightly weathered PHYLLITE with very closely to closely spaced very narrow to narrow bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)			28	
28.00												-8	(1.00)	
												-8.64	28.69	
										Medium strong very thinly to thinly banded poorly foliated dark greyish green medium grained fresh PSAMMITE. (New Harbour Group - PSAMMITE)			(0.44)	
29.00				40 350 610	Air+Mist (Grey)	(0:30:00)						-9	29	
												-9.08	29.13	
										Strong narrowly to very thinly banded poorly foliated dark greyish green fine and medium grained fresh PSAMMITE with strong very closely to closely spaced narrow to very thin bands of very narrowly foliated dark greyish green and light greyish green PHYLLITE. (New Harbour Group - PSAMMITE)			(0.82)	
												-9.90	29.95	
30.00				60 110 210	Air+Mist (Grey)	(0:40:00)				Strong very thinly banded very narrowly foliated dark yellowish green fresh PHYLLITE with strong very closely spaced narrow to very thin occasionally lenticular bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-10	30	
31.00				50 550 1050								-11	(2.20) 31	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Mark McKinney**	**MGalan + MNaisbitt + MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH871R**

Contract Ref:	Start: **02.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **07.10.14**	**20.05**	**E:235387.0 N:393596.7**	**8** of **10**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
32.00					Air+Mist (Grey)	(0:45:00)				Medium strong narrowly to very thinly banded very narrowly foliated dark yellowish green to dark greyish green fresh PHYLLITE with medium strong very closely to closely spaced very narrow to narrow bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-12	32	
												-12.10	32.15	
33.00				50 550 1050	Air+Mist (Grey)	(0:43:00)				Strong to very strong thinly banded dark greyish green medium grained fresh PSAMMITE with strong closely spaced narrow bands of very narrowly foliated dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-13	(1.44) 33	
												-13.54	33.59	
34.00					Air+Mist (Grey)	(0:38:00)				Strong narrowly to very thinly banded very narrowly foliated dark yellowish green to dark greyish green fresh PHYLLITE with strong very closely to closely spaced very narrow to narrow bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-14	34 (1.21)	
												-14.75	34.80	
35.00										Medium strong thinly banded dark greyish green medium grained fresh PSAMMITE with medium strong closely spaced narrow bands of very narrowly foliated dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-15	35 (0.69)	
												-15.44	35.49	
													(0.59) 36	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Mark McKinney**	**MGalan + MNaisbitt + MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH871R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**02.10.14** End: **07.10.14**	**20.05**	**E:235387.0 N:393596.7**	**9** of **10**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
36.00				40 90 640	Air+Mist (Grey)	(0:35:00)				Strong narrowly to very thinly banded very narrowly foliated dark yellowish green to dark greyish green fresh PHYLLITE with strong very closely to closely spaced very narrow to narrow bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-16.03	36.08	
37.00												-17	37 (2.02)	
38.00				210 450 650	Air+Mist (Grey)	(0:40:00)				Strong to very strong narrowly to thinly banded dark greyish green medium grained fresh PSAMMITE with strong very closely to closely spaced narrow bands of very narrowly foliated dark greyish green and dark greyish brown PHYLLITE. (New Harbour Group - PSAMMITE)		-18.05	38 38.10 (0.72)	
										Strong narrowly to very thinly banded very narrowly foliated dark yellowish green to dark greyish green fresh PHYLLITE with strong very closely to closely spaced very narrow to narrow bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-18.77	38.82 (0.33)	
39.00					Air+Mist (Grey)	(0:39:00)				Strong to very strong thinly banded dark greyish green medium grained fresh PSAMMITE. (New Harbour Group - PSAMMITE)		-19 -19.10	39 39.15 (0.29)	
										Strong narrowly to very thinly banded very narrowly foliated dark yellowish green to dark greyish purple fresh PHYLLITE with strong very closely to closely spaced very narrow to narrow bands of dark greyish green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-19.39	39.44	
40.00												-20	40 (1.19)	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Mark McKinney**	**MGalan + MNaisbitt + MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH871R**

Contract Ref:	Start: **02.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **07.10.14**	**20.05**	**E:235387.0 N:393596.7**	**10** of **10**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
												-20.58	40.63	
										Borehole terminated at 40.63m depth.				
													41	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Mark McKinney**	**MGalan + MNaisbitt + MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH874RA**

Contract Ref:	Start: **24.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **28.10.14**	**15.65**	**E:235334.7 N:393536.3**	**1** of **9**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00					Air+Mist (Brown)	(00:07:00)				MADE GROUND: Soft dark brown organic sandy CLAY with tree roots. (Made Ground)		15.55	0.10	
										MADE GROUND: Soft brown sandy gravelly CLAY with medium cobble content. (Made Ground)		15.25	(0.30) 0.40	
					Air+Mist (Grey)	(00:05:00)				Light brown mottled grey slightly sandy GRAVEL. (Superficial Deposits - Locally derived lodgement till)		15	(1.25) 1	
1.00					Air+Mist (Grey)	(00:05:00)								
				NI	Air+Mist (Grey)	(00:05:00)						14.00	1.65	
2.00				70 190 320	Air+Mist (Grey)	(0:42:00)				Medium strong very narrowly to very thinly banded dark bluish grey fine grained slightly to moderately weathered PSAMMITE with medium strong extremely closely to closely spaced very narrow to narrow bands of very narrowly foliated light yellowish brown PHYLLITE. (New Harbour Group - PSAMMITE)		14	2	
												13	3	
3.00				NI										
				100 195 290	Air+Mist (Grey)	(0:39:00)						12	4	
4.00				NI										
				520 520 520										

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/10/14	13:30	6.10	1.50	116	Dry
24/10/14	18:00	9.10	6.00	116	4.00
25/10/14	09:00	9.10	6.00	116	3.20
25/10/14	16:30	18.10	6.00	116	4.00
26/10/14	09:00	18.10	6.00	116	3.70
26/10/14	16:30	19.60	6.00	116	2.40
27/10/14	08:00	22.10	6.00	116	2.50
27/10/14	17:30	30.20	6.00	116	2.80

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 0.50m depth.(IP)
3. Inspection pit remained stable during excavation.
4. Rotary open hole drilling from 0.50m to 1.65m depth on 24/10/2014.
5. Rotary cored drilling from 1.65m to 36.20m depth with air mist flush between 24/10/2014 and 28/10/2014.
6. Four number packer tests conducted within borehole from 7.50m to 30.50m

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Simon Griffiths + Mark McKinney**	**MNaisbitt + WDixon + WDixon**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH874RA**

Contract Ref:	Start: **24.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **28.10.14**	**15.65**	**E:235334.7 N:393536.3**	**2** of **9**



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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
28/10/14	08:00	30.20	6.00	116	2.60
28/10/14	17:00	36.20	6.00	116	2.40

General Remarks

depth between 19/11/2014 and 20/11/2014.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Simon Griffiths + Mark McKinney**	**MNaisbitt + WDixon + WDixon**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH874RA**

Contract Ref:	Start: **24.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **28.10.14**	**15.65**	**E:235334.7 N:393536.3**	**3** of **9**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00				220 470 700	Air+Mist (Grey)	(0:45:00)						6	10	
10.00				NI								5.44	10.21	
				700 700 700						Medium strong very narrowly to very thinly banded foliated brownish purple and bluish green slightly weathered PHYLLITE with medium strong extremely closely spaced to closely spaced very narrow to narrow bands of lenticular dark bluish grey fine grained PSAMMITE. (New Harbour Group - PHYLLITE)		5	11	
11.00				NI	Air+Mist (Grey)	(0:40:00)						4	12	
				10 210 730									(4.00)	
12.00					Air+Mist (Grey)	(0:48:00)						3	13	
13.00				1,150 1,200 2,400										

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Simon Griffiths + Mark McKinney**	**MNaisbitt + WDixon + WDixon**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
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Contract Ref:	Start: **24.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **28.10.14**	**15.65**	**E:235334.7 N:393536.3**	**4** of **9**

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
14.00					Air+Mist (Grey)	(0:50:00)				Medium strong very narrowly to very thinly banded dark green fine grained fresh PSAMMITE with medium strong extremely closely to closely spaced very narrow bands of very narrowly foliated dark purple PHYLLITE. (New Harbour Group - PSAMMITE)		2 1.44	14 14.21	
15.00				1,150 1,200 2,400	Air+Mist (Grey)	(0:50:00)						1 0 -0.23	(1.67)15 15.88	
16.00										Strong narrowly to very thinly banded dark green fine grained fresh PSAMMITE with medium strong extremely closely to closely spaced very narrow to narrow bands of very narrowly foliated light green PHYLLITE. (New Harbour Group - PSAMMITE)		-1	16	
17.00				100 130 270	Air+Mist (Grey)	(0:40:00)						-2	(2.26)17	
				2,100									18	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Simon Griffiths + Mark McKinney**	**MNaisbitt + WDixon + WDixon**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH874RA**

Contract Ref:	Start: **24.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **28.10.14**	**15.65**	**E:235334.7 N:393536.3**	**5** of **9**

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
18.00												-2.49	18.14	
										Medium strong narrowly to very thinly banded very narrowly foliated bluish green fresh PHYLLITE with medium strong very closely to closely spaced very narrow to narrow lenticular bands of dark green fine grained PSAMMITE. (New Harbour Group - PHYLLITE)		-3	(1.46)	
19.00				2,100	Air+Mist (Grey)	(0:55:00)							19	
												-3.95	19.60	
										Medium strong very narrowly to very thinly banded dark bluish green fine grained fresh PSAMMITE with medium strong very closely to closely spaced very narrow to narrow bands of very narrowly foliated dark purple PHYLLITE. (New Harbour Group - PSAMMITE)		-4		
20.00					Air+Mist (Grey)	(1:30:00)							20	
												-5		
21.00				2,580	Air+Mist (Grey)	(0:50:00)							21	
												-6		
22.00					Air+Mist (Grey)	(0:35:00)							22	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Simon Griffiths + Mark McKinney**	**MNaisbitt + WDixon + WDixon**	**ADingle + ADingle**

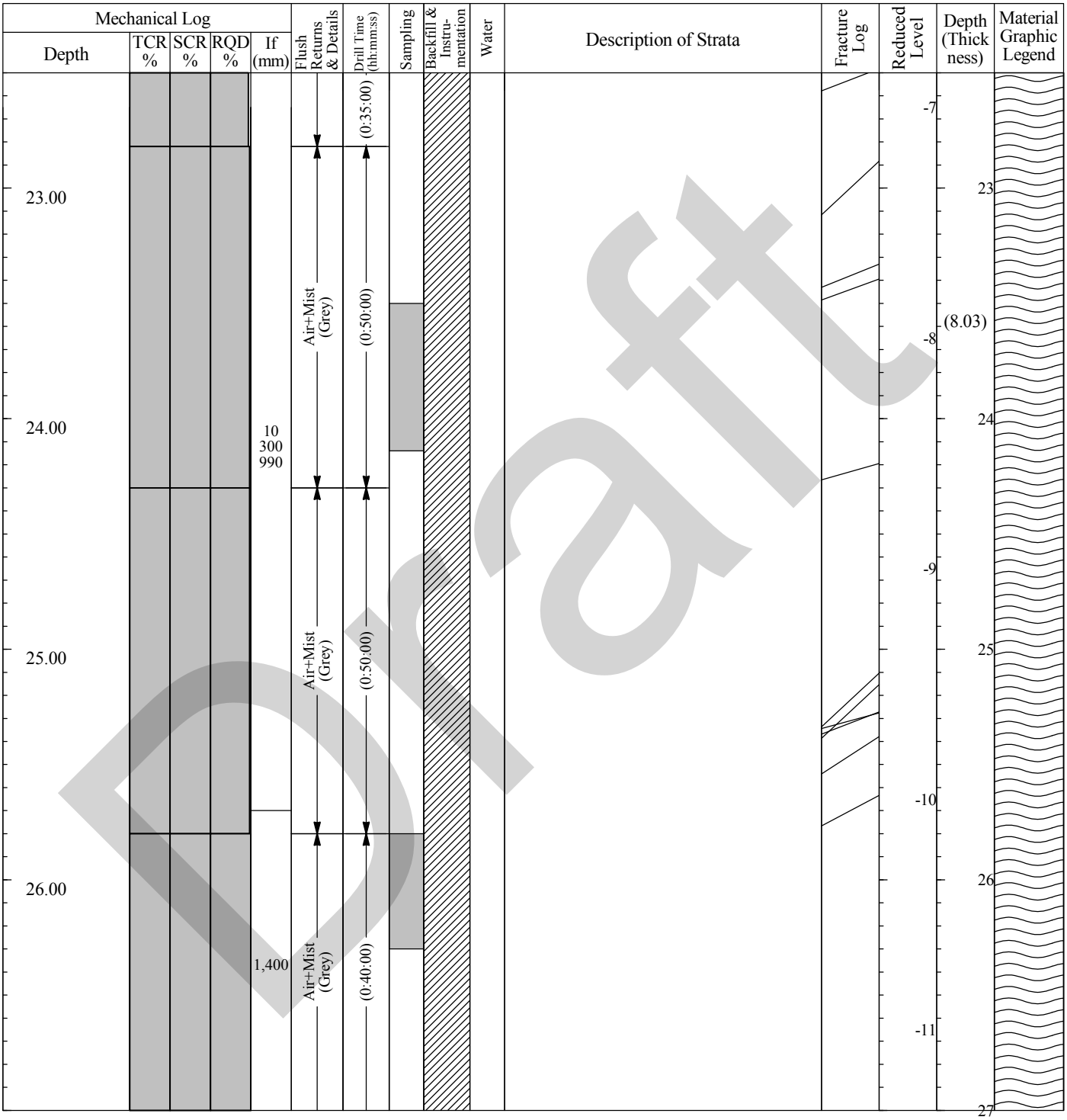
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH874RA**

Contract Ref:	Start: **24.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **28.10.14**	**15.65**	**E:235334.7 N:393536.3**	**6** of **9**



Draft

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Simon Griffiths + Mark McKinney**	**MNaisbitt + WDixon + WDixon**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH874RA**

Contract Ref:	Start: **24.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **28.10.14**	**15.65**	**E:235334.7 N:393536.3**	**7** of **9**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
27.00				1,400	Air+Mist (Grey)	(0:40:00)						-11.98	27.63	
										Weak to medium strong very narrowly to narrowly banded very narrowly foliated light purple and green fresh PHYLLITE with medium strong extremely closely to very closely spaced very narrow lenticular bands of dark green fine grained PSAMMITE. (New Harbour Group - PHYLLITE)		-12	28	
28.00												-13		
				80 400 980	Air+Mist (Grey)	(0:50:00)							(2.87) 29	
29.00												-14		
30.00												-14.85	30.50	
					Air+Mist (Grey)	(0:45:00)				Medium strong very narrowly to narrowly banded bluish green fine grained fresh PSAMMITE with medium strong extremely closely to closely spaced very narrow to narrow bands of disturbed dark purple PHYLLITE. (New Harbour Group - PSAMMITE)		-15	31	
31.00				1,150 1,150 1,330									(1.78)	

Draft

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Simon Griffiths + Mark McKinney**	**MNaisbitt + WDixon + WDixon**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
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Contract Ref:	Start: **24.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **28.10.14**	**15.65**	**E:235334.7 N:393536.3**	**8** of **9**

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
32.00				1,150 1,150 1,330	Air+Mist (Grey)	(0:40:00)						-16 -16.63	32 32.28	
										Medium strong very narrowly to very thinly banded very narrowly foliated dark reddish purple and dark red fresh PHYLLITE with medium strong extremely closely to closely spaced very narrow lenticular bands of bluish green fine grained PSAMMITE. (New Harbour Group - PHYLLITE)		-17	33 (2.32)	
33.00												-18		
34.00				260 460 800	Air+Mist (Grey)	(0:50:00)						-18.95	34.60	
										Medium strong very narrowly to narrowly banded very narrowly foliated light purple and bluish green fresh PHYLLITE with medium strong extremely closely to very closely spaced very narrow lenticular bands of dark green fine grained PSAMMITE. (New Harbour Group - PHYLLITE)		-19	35 (1.60)	
35.00					Air+Mist (Grey)	(0:40:00)						-20	36	

Draft

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Simon Griffiths + Mark McKinney**	**MNaisbitt + WDixon + WDixon**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH874RA**

Contract Ref:	Start: **24.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **28.10.14**	**15.65**	**E:235334.7 N:393536.3**	**9** of **9**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
36.00												-20.55	36.20	
										Borehole terminated at 36.20m depth.				

Draft

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Fraste XL**	**Simon Griffiths + Mark McKinney**	**MNaisbitt + WDixon + WDixon**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH875R**

Contract Ref:	Start: **20.06.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **24.06.14**	**15.11**	**E:235334.0 N:393494.3**	**1** of **8**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00										MADE GROUND: Turf over slightly gravelly sandy SILT. (Made Ground)		15.01	0.10	
										POSSIBLE MADE GROUND: Brown slightly sandy slightly gravelly silty CLAY with topsoil. (Made Ground)		15	(1.10)	
1.00												14	1.20	
										Borehole progressed using open hole drilling techniques; descriptions based on recovered chippings. (Superficial Deposits)		13.91		
2.00												13	2	
3.00												12	3	OH
													(5.15)	
4.00												11	4	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
20/06/14	17:45	7.90	8.00	116	2.30
21/06/14	09:30	7.90	6.20	116	2.40
21/06/14	16:20	15.10	9.20	116	7.96
22/06/14	09:30	15.10	9.50	116	2.41
22/06/14	16:25	25.00	9.50	116	9.25
23/06/14	08:30	25.00	9.50	116	2.85
23/06/14	17:45	34.70	9.50	116	12.76
24/06/14	08:30	34.70	9.50	116	2.80

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 0.30m depth.
3. Rotary open hole drilling from 0.30m to 6.20m depth on 20/06/2014.
4. Rotary cored drilling from 6.20m to 34.55m depth with air mist flush between 20/06/2014 and 24/06/2014.
5. Three number packer tests conducted within borehole from 13.00m to 29.25m depth between 23/07/2014 and 24/07/2014.
6. Groundwater monitoring standpipe installed as shown upon completion.
7. Adjacent hole was drilled to recover samples from the superficial deposits. Coordinates: E: 235333.217, N: 393495.149. TL: 10.00m AOD.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm**	**Neil Davies**	**BSaimen + MNaisbitt + BSaimen**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH875R**

Contract Ref:	Start: **20.06.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **24.06.14**	**15.11**	**E:235334.0 N:393494.3**	**2** of **8**

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
5.00												10	5	
														OH
6.00												9	6	
				70 200 200	Air+Mist (Grey)	(0:35:00)				Very weak to weak very narrowly foliated greenish yellow slightly weathered to moderately weathered PHYLLITE with extremely closely spaced to very closely spaced very narrow to narrow bands of lenticular green PSAMMITE. (New Harbour Group - PHYLLITE)		8.76	6.35	
				20 40 60										
7.00				80 260 41								8	7 (1.60)	
					Air+Mist (Grey)	(0:30:00)						7.16	7.95	
8.00										Very weak to weak yellowish brown medium to coarse grained moderately weathered DOLERITE. (Intrusions)		7	8	
				50 320 780	Air+Mist (Brown)	(0:30:00)							9	

Draft

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm**	**Neil Davies**	**BSaimen + MNaisbitt + BSaimen**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

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Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH875R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**20.06.14** End: **24.06.14**	**15.11**	**E:235334.0 N:393494.3**	**3** of **8**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
9.00				50 320 780	Air+Mist (Brown)	(0:21:00)						6	(2.40)	
				20 40 80	Air+Mist (Brown)	(0:19:00)								
					Air+Mist (Brown)	(0:15:00)								
10.00				30 110 510	Air+Mist (Brown)	(0:29:00)				Very weak to weak very narrowly foliated greenish yellow slightly weathered to moderately weathered PHYLLITE with extremely closely spaced to very closely spaced very narrow to narrow bands of lenticular green PSAMMITE. (New Harbour Group - PHYLLITE)		5	10 (0.75)	
				20 30 50								4.76	10.35 11	
11.00				20 140 390						Weak very narrowly foliated purple slightly weathered PHYLLITE with extremely closely spaced to very closely spaced lenticular greenish fine to medium grained PHYLLITE. (New Harbour Group - PHYLLITE)		4.01	11.10 (1.25)	
12.00				100 250 380	Air+Mist (Grey)	(0:41:00)						3	12	
				10 40 70								2.76	12.35	
13.00				80 110 190	Air+Mist (Grey)	(0:40:00)				Weak very narrowly to very thinly banded lenticular greenish and fine to medium grained slightly weathered PSAMMITE with extremely closely spaced to closely spaced very narrow to narrow bands of very narrowly foliated greenish and purple PHYLLITE. (New Harbour Group - PSAMMITE)		2	13 (1.70)	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm**	**Neil Davies**	**BSaimen + MNaisbitt + BSaimen**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH875R**

Contract Ref:	Start: **20.06.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **24.06.14**	**15.11**	**E:235334.0 N:393494.3**	**4** of **8**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
14.00				10 70 130	Air+Mist (Grey)	(0:40:00)						1.06	14.05	
						(0:41:00)				Strong narrowly to thinly banded lenticular greenish grey medium to coarse grained slightly weathered PSAMMITE with very closely spaced to medium spaced very narrow to narrow bands of very narrowly foliated yellowish green and purple PHYLLITE. (New Harbour Group - PSAMMITE)		1		
15.00				20 480 850	Air+Mist (Grey/Red)	(0:21:00)						0	(1.95)	
16.00				20 50 70	Air+Mist (Grey/Red)	(0:30:00)						-0.89	16.00	
										Weak to medium strong very narrowly foliated purple brown slightly weathered PHYLLITE with extremely closely spaced to closely spaced narrow to thin greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-1		
17.00				60 160 200	Air+Mist (Grey)	(0:40:00)						-2	17 (2.45)	
				10 60 120									18	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm**	**Neil Davies**	**BSaimen + MNaisbitt + BSaimen**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

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728599	End: **24.06.14**	**15.11**	**E:235334.0 N:393494.3**	**5** of **8**

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
18.00												-3		
												-3.34	18.45	
				170 300 550	Air+Mist (Grey)	(0:40:00)				Strong thinly to thickly banded greenish grey fine to medium grained slightly weathered PSAMMITE. (New Harbour Group - PSAMMITE)				
19.00												-4	19	
				40 200 370	Air+Mist (Grey)	(0:41:00)								
20.00												-5	20	
					Air+Mist (Grey)	(0:40:00)								
21.00				90 400 1,220								-6	(5.05) 21	
					Air+Mist (Grey)	(0:42:00)								
22.00												-7	22	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm**	**Neil Davies**	**BSaimen + MNaisbitt + BSaimen**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH875R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**20.06.14** End: **24.06.14**	**15.11**	**E:235334.0 N:393494.3**	**6** of **8**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
23.00				90 400 1,220	Air+Mist (Grey)	(0:58:00)				Medium strong very narrowly foliated purple and brown slightly weathered PHYLLITE very narrow to narrow bands of greyish brown PHYLLITE. (New Harbour Group - PHYLLITE)		-8 -8.39	23 23.50 (0.70)	
24.00					Air+Mist (Grey)	(1:21:00)				Medium strong very narrowly to thinly banded lenticular greenish grey fine to medium grained slightly weathered PSAMMITE with extremely closely spaced to closely spaced very narrow to narrow bands of very narrowly foliated greenish grey and purple PHYLLITE locally non-intact. (New Harbour Group - PSAMMITE)		-9 -9.09 -9.89	24 24.20 (0.80) 25.00	
25.00				10 100 120	Air+Mist (Grey)	(0:48:00)				Medium strong very narrowly foliated purple brown slightly weathered PHYLLITE with extremely closely spaced to very closely spaced very narrow to narrow bands of lenticular greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-10 -11	25 (1.45) 26	
26.00				190 200 350								-11.34	26.45	
				30 120 250	Air+Mist (Grey)	(0:48:00)				Medium strong narrowly to medium banded greenish grey fine to medium grained slightly weathered PSAMMITE with very closely spaced to widely spaced very narrow to narrow bands of very foliated lenticular PHYLLITE. (New Harbour Group - PSAMMITE)			(0.85) 27	

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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm**	**Neil Davies**	**BSaimen + MNaisbitt + BSaimen**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH875R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**20.06.14** End: **24.06.14**	**15.11**	**E:235334.0 N:393494.3**	**7** of **8**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
27.00												-12		
					Air+Mist (Grey)	(0:48:00)				Medium strong to strong very narrowly to very thinly banded greenish grey fine to medium grained slightly weathered PSAMMITE with medium strong extremely closely spaced to very closely spaced very narrow to narrow bands of very narrowly foliated light purple brown PHYLLITE with lenticular clasts green psammite and pink quartz. (New Harbour Group - PSAMMITE)		-12.19	27.30	
28.00				100 210 380	Air+Mist (Grey)	(0:50:00)						-13	28 (1.70)	
29.00										Medium strong very narrowly foliated purple brown slightly weathered PHYLLITE with extremely closely spaced to closely spaced very narrow to narrow greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-13.89	29.00	29
												-14	(1.20)	
30.00				50 100 150	Air+Mist (Grey)	(0:52:00)						-15	30 (1.45)	
				220 330 470						Medium strong very narrowly foliated purple brown slightly weathered PHYLLITE. (New Harbour Group - PHYLLITE)		-15.09	30.20	
31.00					Air+Mist (Grey)	(0:45:00)						-16	31	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm**	**Neil Davies**	**BSaimen + MNaisbitt + BSaimen**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH875R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**20.06.14** End: **24.06.14**	**15.11**	**E:235334.0 N:393494.3**	**8** of **8**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
												-16.54	31.65	
										Strong narrowly to thinly banded greenish grey medium to coarse grained fresh PSAMMITE. (New Harbour Group - PSAMMITE)				
32.00				10 50 160	Air+Mist (Grey)	(0:45:00)						-17	32 (1.00)	
												-17.54	32.65	
										Medium strong very narrowly foliated greenish purple brown fresh PHYLLITE. (New Harbour Group - PHYLLITE)				
33.00					Air+Mist (Grey)	(0:48:00)						-18	33 (1.90)	
				40 200 360	Air+Mist (Grey)	(0:31:00)						-19	34	
34.00												-19.44	34.55	
										Borehole terminated at 34.55m depth.				

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm**	**Neil Davies**	**BSaimen + MNaisbitt + BSaimen**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH950R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.7.14** End: **16.7.14**	**21.00**	**E:234985.2 N:393027.1**	**1** of **4**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
0.00										Grass over dark brown slightly sandy CLAY. (Topsoil)		20.90	0.10	
										Stiff dark brown slightly sandy gravelly CLAY with low boulder content. (Superficial Deposits - Locally derived lodgement till)			(0.50)	
												20.40	0.60	
										Stiff friable light grey to orange brown sandy silty CLAY with pockets of fibrous peat. (Superficial Deposits - Locally derived lodgement till)			(0.60)	
1.00												20	1	
												19.80	1.20	
										Borehole progressed using open hole drilling techniques; descriptions based on recovered chippings. (Superficial Deposits)				
2.00												19	2	
						(00:30:00)								OH
3.00												18	3	
													(4.70)	
4.00												17	4	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
15/07/14	08:00	0.00	None	N/R	-
15/07/14	17:50	5.90	5.70	N/R	2.70
16/07/14	09:00	5.90	5.70	99	2.70
16/07/14	17:40	10.45	6.70	99	4.30
17/07/14	08:45	10.45	6.70	99	2.70
17/07/14	17:40	12.80	6.70	99	3.40
18/07/14	09:00	12.80	6.70	99	2.70
18/07/14	15:20	16.50	6.40	99	1.80

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 1.20m depth. (IP)
3. Rotary open hole drilling from 1.20m to 5.90m depth on 15/07/2014.
4. Rotary cored drilling from 5.90m to 16.50m depth with air mist flush on 16/07/2014.
5. Groundwater monitoring standpipe installed as shown upon completion.
6. Adjacent hole was drilled to recover samples from the superficial deposits. Coordinates: E: 234984.443, N: 393026.777. TL: 15.00m AOD.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Comacchio MC450-P1**	**Lee Harris**	**KWhitcombe + MSummersall**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH950R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.7.14** End: **16.7.14**	**21.00**	**E:234985.2 N:393027.1**	**2** of **4**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
5.00						(00:30:00)						16	5	OH
6.00				NI	Air+Mist (Brown)	(0:05:00)				Medium strong very narrowly banded very narrowly foliated brownish purple slightly weathered to fresh PHYLLITE. (New Harbour Group - PHYLLITE)		15.10	5.90	
					Air+Mist (Brown)	(0:08:00)						15	6	
					Air+Mist (Brown)	(0:26:00)						14.90	6.10	
										Medium strong to strong very thinly banded very narrowly foliated greyish green fine to medium grained fresh PSAMMITE. (New Harbour Group - PSAMMITE)		14.45	(0.45) 6.55	
7.00				140 200 1,440	Air+Mist (Brown/grey)	(0:22:00)				Medium strong very narrowly to narrowly banded very narrowly foliated brownish purple and greyish purple fresh PHYLLITE with medium strong to strong very closely to closely spaced narrow to thin bands of very narrowly foliated greyish green fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		14	(0.75) 7	
												13.70	7.30	
8.00					Air+Mist (Brown/grey)	(1:02:00)				Strong narrowly to very thinly banded very narrowly foliated greyish green fine to medium grained fresh PSAMMITE. (New Harbour Group - PSAMMITE)		13	8	
				NI 60 340								12	(3.15) 9	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Comacchio MC450-P1**	**Lee Harris**	**KWhitcombe + MSummersall**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH950R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.7.14** End: **16.7.14**	**21.00**	**E:234985.2 N:393027.1**	**3** of **4**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
9.00														
				NI 60 340	Air+Mist (Brown/grey)	(1:05:00)						11	10	
10.00												10.55	10.45	
					Air+Mist (Brown)	(0:15:00)				Weak to medium strong very thinly banded disturbed greyish green and dark yellowish green fine to medium grained slightly to moderately weathered PSAMMITE. (New Harbour Group - PSAMMITE)			(0.35)	
					Air+Mist (Brown)	(0:03:00)						10.20	10.80	
					Air+Mist (Brown)	(0:03:00)				Medium strong brownish grey fine to medium grained slightly weathered DOLERITE. (Intrusions)		10	11	
11.00				NI	Air+Mist (Brown)	(0:11:00)							(0.95)	
					Air+Mist (Brown)	(0:22:00)						9.25	11.75	
										Weak to medium strong very thinly banded disturbed greyish green and dark yellowish green fine to medium grained moderately weathered to slightly weathered PSAMMITE. (New Harbour Group - PSAMMITE)		9.05	11.95	
12.00				30 90 130	Air+Mist (Brown)	(0:11:00)						9	12	
					Air+Mist (Brown)	(0:10:00)				Weak to medium strong very narrowly banded very narrowly foliated greyish green and dark yellowish green fine to medium grained slightly weathered PSAMMITE with weak extremely closely spaced very narrow bands of very narrowly foliated greenish grey PHYLLITE. (New Harbour Group - PSAMMITE)			(0.85)	
												8.20	12.80	
13.00				20 500 1,000	Air+Mist (Brown)	(0:15:00)				Medium strong very narrowly banded greenish grey fine to coarse grained fresh PSAMMITE with medium strong very closely spaced to closely spaced very narrow to narrow bands of very narrowly foliated greyish purple PHYLLITE.		8	13	

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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Comacchio MC450-P1**	**Lee Harris**	**KWhitcombe + MSummersall**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH950R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**15.7.14** End: **16.7.14**	**21.00**	**E:234985.2 N:393027.1**	**4** of **4**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
14.00				20 500 1,000	Air+Mist (Brown)	(0:18:00)				(New Harbour Group - PSAMMITE)		7	(2.20) 14	
					Air+Mist (Brown)	(0:08:00)								
					Air+Mist (Brown)	(0:20:00)						6.00	15.00	
15.00				140 240 530	Air+Mist (Brown/Light Brown)	(0:48:00)				Medium strong very closely spaced narrow bands of very narrowly foliated greyish purple PHYLLITE interbanded with medium strong narrowly banded greenish grey fine to medium grained fresh PSAMMITE. (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)		6	15	
													(1.50)	
16.00												5	16	
												4.50	16.50	
										Borehole terminated at 16.50m depth.				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Comacchio MC450-P1**	**Lee Harris**	**KWhitcombe + MSummersall**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH957**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**30.8.14** End: **10.9.14**	**19.11**	**E:234947.4 N:392789.0**	**1** of **2**

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	Ref	Type	Results						
0.00-0.50	1	B				Grass over stiff friable greyish brown sandy slightly gravelly CLAY. Gravel is angular fine to coarse psammite. (Topsoil)	18.87	0.24	
0.50	2	D				Stiff brown slightly sandy gravelly CLAY with a low cobble content. Gravel is angular to rounded flat tabular fine to coarse phyllite. Gravel and cobbles are similar. Becomes increasingly sandy with depth. (Superficial Deposits - Locally derived lodgement till)	18.31	(0.56) 0.80	
0.80-1.20	3	B				Light orangish brown and pale grey slightly gravelly clayey SAND. Gravel is angular fine to coarse phyllite. (Superficial Deposits - Locally derived lodgement till)	17.81	(0.50) 1.30	
1.20	4	D							
1.30-1.60	1	B				Loose light greyish brown slightly gravelly silty SAND. Gravel is subangular to subrounded fine to medium psammite, dolerite and quartzite. (Superficial Deposits - Locally derived lodgement till)	17.61	1.50	
1.50	2	D							
1.50-1.95	3	SPT(c)	N=5				17.41	1.70	
1.70-2.30	4	AMAL				Loose to dense brown silty SAND. (Superficial Deposits - Locally derived lodgement till)			
1.70-2.30	5	AMAL							
2.00	6	D				Loose light brown and yellow slightly clayey gravelly very silty SAND. Gravel is subangular fine psammite. (Superficial Deposits - Locally derived lodgement till)			
2.00-2.45	7	SPT(c)	N=8	1				(1.10)	
				1			16.31	2.80	
2.90-3.20	8	B				Medium dense and locally dense bluish brown slightly silty sandy GRAVEL with a low cobble content. Cobbles are subangular to subrounded (up to 167mm in diameter) of psammite. Gravel is subangular fine to coarse psammite and dolerite. (Probable highly weathered bedrock). (Superficial Deposits - Locally derived lodgement till)			
3.00	9	D							
3.00-3.45	10	SPT(c)	N=31						
3.70-4.30	11	B							
3.70-4.30	12	B							
4.00	13	D						(2.40)	
4.00-4.45	14	SPT(c)	N=18						

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/09/14	09:10	2.80	3.00	200	2.80

Chiselling / Slow Progress		
From	To	Duration (hh:mm)
5.20	5.30	00:30

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 1.20m depth. (IP)
3. Water strike at 2.80m depth.
4. Strata unsuitable for Hand Vane tests.
5. Cable percussion boring using 200mm diameter tools to 5.50m depth between 30/08/2014 and 01/09/2014.
6. Falling head test carried out between 4.71m and 4.87m depth on 01/09/2014.
7. Rotary cored drilling from 5.50m to 23.05m depth with water flush between 09/09/2014 and 10/09/2014.
8. Groundwater monitoring standpipe installed as shown upon completion.
9. SPT hammer EQU166-2013 (E_t = 80.05%) used.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Garry James**	**MNaisbitt + WDixon**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH957**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**30.8.14** End: **10.9.14**	**19.11**	**E:234947.4 N:392789.0**	**2** of **2**

Samples and In-situ Tests				Water	Backfill & Instru-mentation	Description of Strata	Reduced Level	Depth (Thick ness)	Material Graphic Legend
Depth	Ref	Type	Results						
4.90-5.20	15	B							
5.00	16	D							
5.00-5.13	17	SPT(c)	N=1500*				13.91	5.20	
						Brownish blue slightly weathered PSAMMITE. Recovered as angular gravel and cobbles due to chiselling. (New Harbour Group - PSAMMITE)		(0.30)	
5.30	18	B							
5.30-5.39	19	SPT(c)	N=3000*				13.61	5.50	
						Cable percussion borehole continued using rotary drilling techniques from 5.50m depth.			

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Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/09/14	09:10	2.80	3.00	200	2.80

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Garry James**	**MNaisbitt + WDixon**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH957**

Contract Ref:	Start: **30.8.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **10.9.14**	**19.11**	**E:234947.4 N:392789.0**	**1** of **6**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
0.00									Grass over stiff friable greyish brown sandy slightly gravelly CLAY. (Topsoil)		19		
											18.87	0.24	
									Stiff brown slightly sandy gravelly CLAY with a low cobble content. (Superficial Deposits - Locally derived lodgement till)			(0.56)	
											18.31	0.80	
1.00									Light orangish brown and pale grey slightly gravelly clayey SAND. (Superficial Deposits - Locally derived lodgement till)		18	(0.50)	1
											17.81	1.30	
									Loose light greyish brown slightly gravelly silty SAND. (Superficial Deposits - Locally derived lodgement till)		17.61	1.50	
									Loose to dense brown silty SAND. (Superficial Deposits - Locally derived lodgement till)		17.41	1.70	
2.00									Loose light brown and yellow slightly clayey gravelly very silty SAND. (Superficial Deposits - Locally derived lodgement till)		17	(1.10)	2
											16.31	2.80	
3.00									Medium dense and locally dense bluish brown slightly silty sandy GRAVEL with a low cobble content. (Superficial Deposits - Locally derived lodgement till)		16		3
4.00											15	(2.40)	4

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/09/14	09:10	2.80	3.00	200	2.80
09/09/14	09:10	5.30	None	116	4.40
09/09/14	18:00	17.00	5.50	116	2.60
10/09/14	08:15	17.00	5.50	116	2.60
10/09/14	14:30	23.00	5.50	116	2.55

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 1.20m depth. (IP)
3. Water strike at 2.80m depth.
4. Strata unsuitable for Hand Vane tests.
5. Cable percussion boring using 200mm diameter tools to 5.50m depth between 30/08/2014 and 01/09/2014.
6. Falling head test carried out between 4.71m and 4.87m depth on 01/09/2014.
7. Rotary cored drilling from 5.50m to 23.05m depth with water flush between 09/09/2014 and 10/09/2014.
8. Groundwater monitoring standpipe installed as shown upon completion.
9. SPT hammer EQU166-2013 (E_t = 80.05%) used.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + SoilMec SM-14**	**Garry James + Paul Morris**	**LVonCadenhead + MNaisbitt + WDixon**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH957**

Contract Ref:	Start: **30.8.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **10.9.14**	**19.11**	**E:234947.4 N:392789.0**	**2** of **6**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
5.00											14 13.91	5.20	5
									Brownish blue slightly weathered PSAMMITE. (New Harbour Group - PSAMMITE)			(0.30)	
				NI							13.61	5.50	
6.00				30 80 200	Water (Grey)				Medium strong very narrowly to narrowly banded very narrowly foliated light purple moderately weathered PHYLLITE with medium strong very closely spaced narrow to very thin bands of dark green medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		13		6
												(2.71)	
7.00				NI 110 140	Water (Grey)						12		7
8.00											11 10.90	8.21	8
				10 190 280	Water (Grey)				Medium strong to strong narrowly to very thinly banded dark green medium grained slightly weathered to moderately weathered PSAMMITE with medium strong to strong very closely spaced very narrow to narrow bands of very narrowly foliated light purple PHYLLITE. (New Harbour Group - PSAMMITE)			(0.84)	
													9

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/09/14	09:10	2.80	3.00	200	2.80
09/09/14	09:10	5.30	None	116	4.40
09/09/14	18:00	17.00	5.50	116	2.60
10/09/14	08:15	17.00	5.50	116	2.60
10/09/14	14:30	23.00	5.50	116	2.55

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + SoilMec SM-14**	**Garry James + Paul Morris**	**LVonCadenhead + MNaisbitt + WDixon**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH957**

Contract Ref:	Start: **30.8.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **10.9.14**	**19.11**	**E:234947.4 N:392789.0**	**3** of **6**

Mechanical Log												
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00					Water (Grey)				Medium strong to strong very narrowly to narrowly banded very narrowly foliated dark purple slightly weathered PHYLLITE with strong extremely closely spaced to closely spaced narrow to thin bands of dark green medium grained PHYLLITE. (New Harbour Group - PHYLLITE)		10.06	9.05	
											10	(0.49)	
											9.57	9.54	
10.00				10 190 280	Water (Grey)				Strong to very strong narrowly to thinly banded dark green and dark greenish grey medium grained slightly weathered PSAMMITE with strong very closely spaced to closely spaced very narrow to narrow bands of very narrowly foliated light purple and light green PHYLLITE. (New Harbour Group - PSAMMITE)		9	10	
11.00											8	11	
12.00				20 250 400	Water (Grey)						7	12	
13.00					Water (Grey)						6	13	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/09/14	09:10	2.80	3.00	200	2.80
09/09/14	09:10	5.30	None	116	4.40
09/09/14	18:00	17.00	5.50	116	2.60
10/09/14	08:15	17.00	5.50	116	2.60
10/09/14	14:30	23.00	5.50	116	2.55

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + SoilMec SM-14**	**Garry James + Paul Morris**	**LVonCadenhead + MNaisbitt + WDixon**	**ADingle + ADingle**

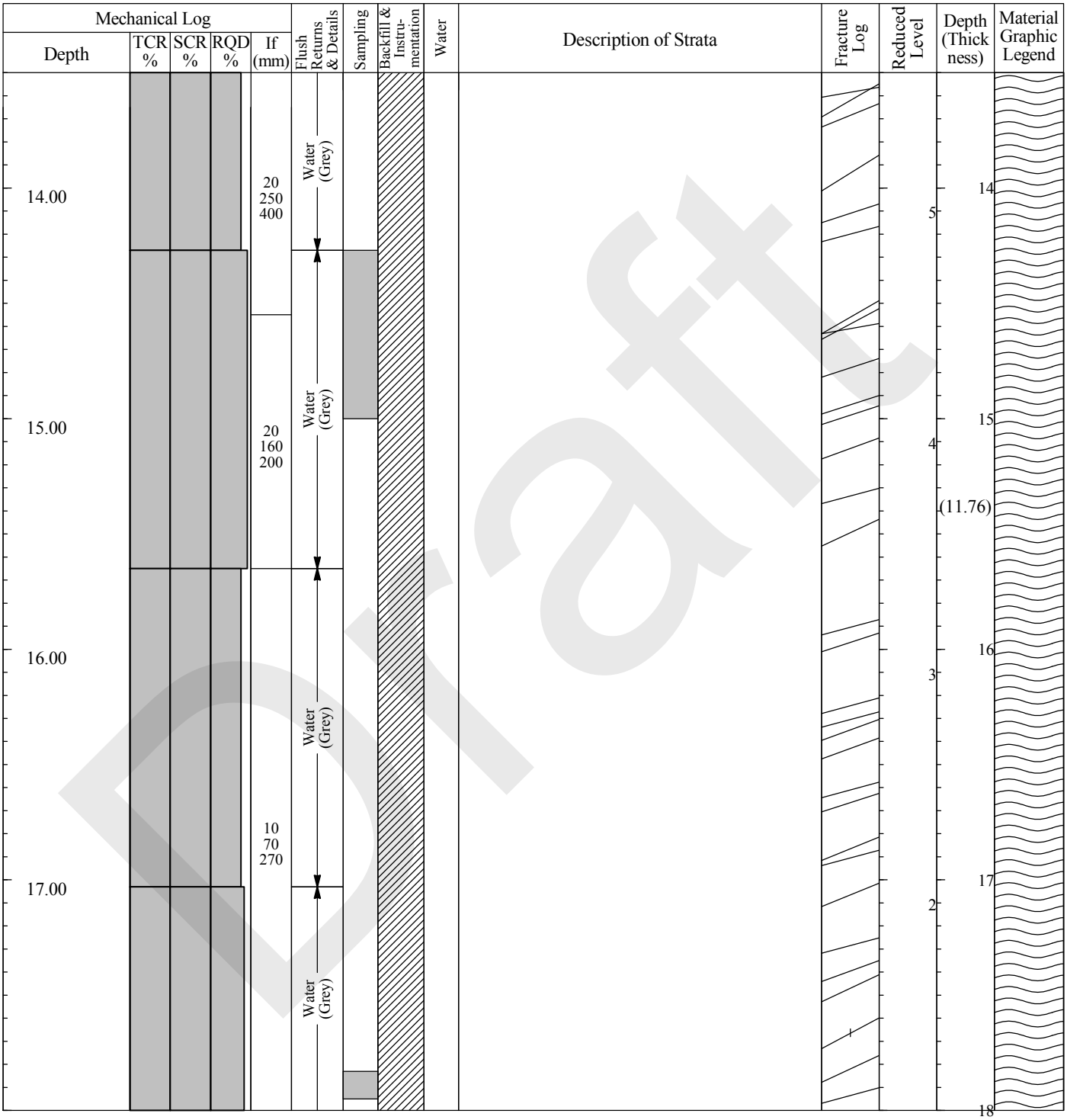
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH957**

Contract Ref:	Start: **30.8.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **10.9.14**	**19.11**	**E:234947.4 N:392789.0**	**4** of **6**



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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/09/14	09:10	2.80	3.00	200	2.80
09/09/14	09:10	5.30	None	116	4.40
09/09/14	18:00	17.00	5.50	116	2.60
10/09/14	08:15	17.00	5.50	116	2.60
10/09/14	14:30	23.00	5.50	116	2.55

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + SoilMec SM-14**	**Garry James + Paul Morris**	**LVonCadenhead + MNaisbitt + WDixon**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH957**

Contract Ref:	Start: **30.8.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **10.9.14**	**19.11**	**E:234947.4 N:392789.0**	**5** of **6**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
18.00					Water (Grey)						1		
19.00					Water (Grey)						0	19	
20.00				10 70 270	Water (Grey)						-1	20	
21.00					Water (Grey)						-2	21	
									Medium strong to strong narrowly to very thinly banded dark greyish green light purple medium grained fresh to slightly weathered PSAMMITE. (New Harbour Group - PSAMMITE)		-2.19	21.30	
22.00				NI	Water (Grey)						-3	22 (1.75)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/09/14	09:10	2.80	3.00	200	2.80
09/09/14	09:10	5.30	None	116	4.40
09/09/14	18:00	17.00	5.50	116	2.60
10/09/14	08:15	17.00	5.50	116	2.60
10/09/14	14:30	23.00	5.50	116	2.55

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + SoilMec SM-14**	**Garry James + Paul Morris**	**LVonCadenhead + MNaisbitt + WDixon**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH957**

Contract Ref:	Start: **30.8.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **10.9.14**	**19.11**	**E:234947.4 N:392789.0**	**6** of **6**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
23.00				40 70 110	Water (Grey) ▼				Borehole terminated at 23.05m depth.		-3.94	23.05	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/09/14	09:10	2.80	3.00	200	2.80
09/09/14	09:10	5.30	None	116	4.40
09/09/14	18:00	17.00	5.50	116	2.60
10/09/14	08:15	17.00	5.50	116	2.60
10/09/14	14:30	23.00	5.50	116	2.55

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + SoilMec SM-14**	**Garry James + Paul Morris**	**LVonCadenhead + MNaisbitt + WDixon**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1009**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**10.07.14** End: **16.07.14**	**41.53**	**E:234718.9 N:392910.3**	**1** of **5**

Samples and In-situ Tests				Water	Backfill & Instru-mentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	Ref	Type	Results						
0.00	1A	EW				Grass over stiff friable greyish brown sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular fine to medium psammite phyllite and occasional dolerite. (Topsoil)	41.43	0.10	
0.00-0.50	1	B							
0.00-0.50	IP1	D							
0.00-0.50	IP1	B							
0.00-0.50	RAD1	D							
0.50	2	D				Soft to firm brown sandy gravelly CLAY with a low cobble content. Gravel is subangular fine to coarse psammite, phyllite and dolerite. Cobbles are tabular to cubic psammite and phyllite. (Superficial Deposits - Locally derived lodgement till)		(0.70)	
0.50-1.00	IP2	D							
0.50-1.00	IP2	B							
0.50-1.00	RAD2	D					40.73	0.80	
						Firm to stiff friable brown orangish brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is subangular fine to coarse tabular psammite and phyllite. (Superficial Deposits - Locally derived lodgement till)		(0.50)	
							40.23	1.30	
1.30-1.60	1	B				Firm to stiff orangish brown mottled grey and black slightly gravelly sandy silty CLAY with a low cobble content. Cobbles are subangular flat (up to 98mm in diameter) psammite. Gravel is subangular fine to medium psammite, phyllite, dolerite, quartzite and organic siltstone. Frequent pockets of orangish brown medium sand and fibrous organic material. (Superficial Deposits - Locally derived lodgement till)			
1.50	2	D							
1.50-1.95	3	SPT(c)	N=16						
1.70-2.30	4	B							
1.70-2.30	5	B							
2.00	6	D						(1.60)	
2.00-2.45	7	SPT(c)	N=15						
							38.63	2.90	
2.90-3.20	8	B				Stiff light brown slightly sandy gravelly CLAY with a low cobble content. Cobbles are subangular (up to 70mm in diameter) psammite and quartzite. Gravel is subangular to subrounded fine to medium psammite, phyllite, dolerite and quartzite. (Superficial Deposits - Locally derived lodgement till)			
3.00	9	D							
3.00-3.45	10	SPT(c)	N=22						
								(1.40)	
3.70-4.30	11	B							
3.70-4.30	12	B							
4.00	13	D							
4.00-4.45	14	SPT(c)	N=29						
							37.23	4.30	
						Stiff dark greyish brown slightly sandy slightly gravelly silty CLAY with a low cobble content. Cobbles are subangular (up to			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
10/07/14	17:55	10.40	10.50	200	-
11/07/14	08:15	10.40	10.00	200	-
11/07/14	11:30	11.80	11.80	200	11.80
11/07/14	11:50	12.50	12.00	200	11.74
14/07/14	12:10	12.50	12.00	200	10.15
14/07/14	17:55	16.80	16.50	200	-
15/07/14	08:30	16.80	15.14	200	15.14

Chiselling / Slow Progress		
From	To	Duration (hh:mm)
18.60	18.70	00:30

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 0.60m depth. (IP)
3. Strata unsuitable for Hand Vane tests.
4. Water strike at 11.80m depth rose to 11.74m depth after 20 minutes.
5. Cable percussion boring using 200mm diameter tools to 18.70m depth between 07/10/2014 and 15/10/2014.
6. Water added to assist boring from 10.40m to 18.70m depth.
7. Soakaway tests carried out between 4.82m and 9.09m depth on 10/07/2014.
8. Two number rising head tests carried out between 12.21m and 12.68m depth on 14/07/2014.
9. Falling head test carried out between 18.21m and 18.68m depth on 15/07/2014.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Daniel Price**	**MLinyard + WDixon**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1009**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**10.07.14** End: **16.07.14**	**41.53**	**E:234718.9 N:392910.3**	**2** of **5**

Samples and In-situ Tests				Water	Backfill & Instru-mentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	Ref	Type	Results						
						93mm in diameter) psammite. Gravel is subangular to subrounded fine to coarse psammite, phyllite, dolerite and quartzite. (Superficial Deposits - Locally derived lodgement till)			
4.90-5.20	15	B							
5.00	16	D							
5.00-5.45	17	SPT(c)	N=22						
								(3.60)	
6.30-6.60	18	B							
6.30-6.60	19	B							
6.50	20	D							
6.50-6.95	21	SPT(c)	N=21						
							33.63	7.90	
7.90-8.20	22	B				Medium dense dark greyish brown clayey very sandy GRAVEL with a low cobble content. Cobbles are subangular (up to 93mm diameter) psammite. Gravel is subangular to subrounded fine to coarse psammite, phyllite, dolerite and quartzite. (Superficial Deposits - Locally derived lodgement till)			
8.00	23	D							
8.00-8.45	24	SPT(c)	N=22						
								(1.40)	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

10. Rotary open hole drilling from 18.70m to 19.40m depth on 15/07/2014.
11. Rotary cored drilling from 19.40m to 38.76m depth with air mist flush between 15/07/2014 and 16/07/2014.
12. Groundwater monitoring standpipe installed as shown upon completion.
13. SPT hammer EQU166-2013 (E_r = 80.05%) used.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Daniel Price**	**MLinyard + WDixon**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1009**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**10.07.14** End: **16.07.14**	**41.53**	**E:234718.9 N:392910.3**	**3** of **5**

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	Ref	Type	Results						
							32.23	9.30	
9.30-9.70	25	B				Very stiff greyish brown mottled brownish yellow slightly sandy slightly gravelly silty CLAY with a high cobble content. Cobbles are subrounded (up to 207mm in diameter) psammite and dolerite. Gravel is subangular fine to coarse psammite, phyllite, dolerite and quartzite. (Superficial Deposits - Locally derived lodgement till)		(2.50)	
9.30-9.70	26	B							
9.50	27	D							
9.50-9.95	28	SPT(c)	N=44						
10.90-11.20	29	B							
11.00	30	D							
11.00-11.45	31	SPT(c)	N=31	1			29.73	11.80	
12.30-12.80	32	B				Dense dark greyish brown slightly gravelly silty SAND. Gravel is subangular medium to coarse psammite and dolerite. (Superficial Deposits - Locally derived lodgement till)		(2.10)	
12.30-12.80	33	B							
12.50	34	D							
12.50-12.95	35	SPT(c)	N=42						

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Daniel Price**	**MLinyard + WDixon**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1009**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**10.07.14** End: **16.07.14**	**41.53**	**E:234718.9 N:392910.3**	**4** of **5**

Samples and In-situ Tests				Water	Backfill & Instru-mentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	Ref	Type	Results						
							27.63	13.90	
13.90-14.20	36	B				Very stiff dark greyish brown slightly gravelly sandy silty CLAY with a low cobble content. Cobbles are subangular to subrounded (up to 105mm in diameter) psammite. Gravel is subangular to subrounded fine to coarse psammite, phyllite and dolerite. (Superficial Deposits - Locally derived lodgement till)			
14.00	37	D							
14.00-14.40	38	SPT(c)	N=54*						
15.00	41	D							
15.00-15.38	42	SPT(c)	N=67*					(2.70)	
15.20-15.70	39	B							
15.20-15.70	40	B					24.93	16.60	
						Drillers log states 'grey silty sand with fine to coarse gravel and cobbles' - no sample. (Superficial Deposits - Locally derived lodgement till)	24.73	16.80	
16.90-17.20	43	B				Dense grey very clayey gravelly SAND with a high cobble content. Cobbles are subangular (up to 148mm in diameter) quartzite. Gravel is subangular fine to coarse psammite and quartzite. (Superficial Deposits - Locally derived lodgement till)			
17.00	44	D							
17.00-17.45	45	SPT(c)	N=50					(1.30)	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Daniel Price**	**MLinyard + WDixon**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
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Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**10.07.14** End: **16.07.14**	**41.53**	**E:234718.9 N:392910.3**	**5** of **5**

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	Ref	Type	Results						
							23.43	18.10	
18.10-18.60	46	B				Very stiff dark greyish brown slightly sandy slightly gravelly silty CLAY. Gravel is subangular fine to coarse psammite, phyllite and dolerite. (Superficial Deposits - Locally derived lodgement till)		(0.60)	
18.50	47	D							
18.60-18.63	48	SPT(c)	NP				22.83	18.70	
18.60-18.70	49	D				*Cable percussion borehole continued using rotary drilling* techniques from 18.70m depth.			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Daniel Price**	**MLinyard + WDixon**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
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Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**10.07.14** End: **16.07.14**	**41.53**	**E:234718.9 N:392910.3**	**1** of **9**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
0.00										Grass over stiff friable greyish brown sandy slightly gravelly CLAY. (Topsoil)		41.43	0.10	
										Soft to firm brown sandy gravelly CLAY with a low cobble content. (Superficial Deposits - Locally derived lodgement till)		41	(0.70)	
												40.73	0.80	
1.00										Firm to stiff friable brown orangish brown mottled grey slightly sandy slightly gravelly CLAY. (Superficial Deposits - Locally derived lodgement till)			(0.50)	1
												40.23	1.30	
										Firm to stiff orangish brown mottled grey and black slightly gravelly sandy silty CLAY with a low cobble content. (Superficial Deposits - Locally derived lodgement till)		40		
2.00													(1.60)	2
												39		
												38.63	2.90	
3.00										Stiff light brown slightly sandy gravelly CLAY with a low cobble content. (Superficial Deposits - Locally derived lodgement till)				3
												38	(1.40)	
4.00														4
												37.23	4.30	
										Stiff dark greyish brown slightly sandy slightly gravelly silty CLAY with a low				

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
10/07/14	17:55	10.40	10.50	200	-
11/07/14	08:15	10.40	10.00	200	-
11/07/14	11:30	11.80	11.80	200	11.80
11/07/14	11:50	12.50	12.00	200	11.74
14/07/14	12:10	12.50	12.00	200	10.15
14/07/14	17:55	16.80	16.50	200	-
15/07/14	08:30	16.80	15.14	200	15.14
15/07/14	17:00	19.50	19.50	116	18.50

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 0.60m depth. (IP)
3. Strata unsuitable for Hand Vane tests.
4. Water strike at 11.80m depth rose to 11.74m depth after 20 minutes.
5. Cable percussion boring using 200mm diameter tools to 18.70m depth between 07/10/2014 and 15/10/2014.
6. Water added to assist boring from 10.40m to 18.70m depth.
7. Soakaway tests carried out between 4.82m and 9.09m depth on 10/07/2014.
8. Two number rising head tests carried out between 12.21m and 12.68m depth on 14/07/2014.
9. Falling head test carried out between 18.21m and 18.68m depth on 15/07/2014.
10. Rotary open hole drilling from 18.70m to 19.40m depth on 15/07/2014.
11. Rotary cored drilling from 19.40m to 38.76m depth with air mist flush between 15/07/2014 and 16/07/2014.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Klemm KR 802**	**Daniel Price + Duncan Howells**	**MLinyard + WDixon + MVincent**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1009**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**10.07.14** End: **16.07.14**	**41.53**	**E:234718.9 N:392910.3**	**2** of **9**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
										cobble content. (Superficial Deposits - Locally derived lodgement till)		37		
5.00													5	
												36		
6.00													6 (3.60)	
												35		
7.00													7	
												34		
												33.63	7.90	
8.00										Medium dense dark greyish brown clayey very sandy GRAVEL with a low cobble content. (Superficial Deposits - Locally derived lodgement till)			8	
												33	(1.40)	
													9	

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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
16/07/14	08:10	21.80	19.50	116	18.50
16/07/14	19:00	38.80	19.50	116	21.00
17/07/14	08:10	38.80	19.50	116	17.50

General Remarks

12. Groundwater monitoring standpipe installed as shown upon completion.
13. SPT hammer EQU166-2013 (E_t = 80.05%) used.

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Klemm KR 802**	**Daniel Price + Duncan Howells**	**MLinyard + WDixon + MVincent**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
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Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**10.07.14** End: **16.07.14**	**41.53**	**E:234718.9 N:392910.3**	**3** of **9**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00												32.23	9.30	
										Very stiff greyish brown mottled brownish yellow slightly sandy slightly gravelly silty CLAY with a high cobble content. (Superficial Deposits - Locally derived lodgement till)		32		
10.00													10	
												31	(2.50)	
11.00													11	
									1			30		
												29.73	11.80	
12.00										Dense dark greyish brown slightly gravelly silty SAND. (Superficial Deposits - Locally derived lodgement till)			12	
												29		
													(2.10)	
13.00													13	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Klemm KR 802**	**Daniel Price + Duncan Howells**	**MLinyard + WDixon + MVincent**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1009**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**10.07.14** End: **16.07.14**	**41.53**	**E:234718.9 N:392910.3**	**4** of **9**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
												28		
												27.63	13.90	
14.00										Very stiff dark greyish brown slightly gravelly sandy silty CLAY with a low cobble content. (Superficial Deposits - Locally derived lodgement till)		14		
												27		
15.00													15	
													(2.70)	
												26		
16.00													16	
												25		
												24.93	16.60	
										Drillers log states 'grey silty sand with fine to coarse gravel and cobbles' - no sample. (Superficial Deposits - Locally derived lodgement till)		24.73	16.80	
17.00										Dense grey very clayey gravelly SAND with a high cobble content. (Superficial Deposits - Locally derived lodgement till)			17	
													(1.30)	
												24		
													18	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Klemm KR 802**	**Daniel Price + Duncan Howells**	**MLinyard + WDixon + MVincent**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
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Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**10.07.14** End: **16.07.14**	**41.53**	**E:234718.9 N:392910.3**	**5** of **9**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
18.00												23.43	18.10	
										Very stiff dark greyish brown slightly sandy slightly gravelly silty CLAY. (Superficial Deposits - Locally derived lodgement till)			(0.60)	
												23		
												22.83	18.70	
										Bluish grey fine grained slightly weathered PSAMMITE. (New Harbour Group - PSAMMITE)			(0.70)	
19.00													19	
												22.13	19.40	
					Air+Mist (Red/Grey)	(0:25:00)				Medium strong to strong narrowly to thinly banded poorly foliated greenish grey fine to medium grained slightly weathered PSAMMITE with medium strong to strong very closely to medium spaced very thin to thin bands of very narrowly foliated reddish brown PHYLLITE. (New Harbour Group - PSAMMITE)		22	(0.35)	
												21.78	19.75	
												21.53	20.00	
20.00				30 65 100						Medium strong to strong very narrowly to medium banded narrowly foliated dark reddish brown slightly weathered PHYLLITE with medium strong to strong very closely to medium spaced narrow bands of dark greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)			20	
				40 80 120	Air+Mist (Red/Grey)	(0:37:00)						21	(0.95)	
										Medium strong to strong narrowly to medium banded very narrowly foliated greenish grey coarse grained slightly weathered PHYLLITE with medium strong to strong narrow to medium bands of poorly foliated greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		20.58	20.95	
21.00				20 65 110									21	
													(0.55)	
										Medium strong to strong narrowly to medium banded very narrowly foliated reddish brown to purple slightly weathered PHYLLITE with medium strong to strong very closely to closely spaced very thin to thin bands of poorly foliated greenish grey PSAMMITE. (New Harbour Group - PHYLLITE)		20.03	21.50	
				130 210 290	Air+Mist (Red/Grey)	(0:25:00)						20		
22.00													22	
										Medium strong to strong narrowly to medium banded foliated greenish grey fine and medium grained slightly weathered PSAMMITE with medium strong to strong very closely to medium spaced very			(1.40)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Klemm KR 802**	**Daniel Price + Duncan Howells**	**MLinyard + WDixon + MVincent**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1009**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**10.07.14** End: **16.07.14**	**41.53**	**E:234718.9 N:392910.3**	**6** of **9**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
				130 210 290		(0:25:00)				narrow bands of very narrowly foliated greenish grey to reddish brown PHYLLITE. (New Harbour Group - PSAMMITE)		19 18.63	22.90	
23.00				30 35 40 45 55 65 70 145 220	Air+Mist (Red/Grey)	(0:30:00)				Medium strong to strong very narrowly to thinly banded very narrowly foliated reddish brown to greenish grey slightly weathered PHYLLITE with medium strong to strong very closely to closely spaced narrow to medium bands of poorly foliated greenish grey to reddish brown fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		23 18	(1.85)	
24.00				70 115 160 90 195 300	Air+Mist (Red/Grey)	(0:32:00)						17 16.78	24.75	
25.00				170 295 420	Air+Mist (Red/Grey)	(0:35:00)				Medium strong to strong very narrowly to very thinly banded very narrowly foliated greenish grey slightly weathered PHYLLITE with medium strong to strong very closely spaced to closely spaced narrow to medium bands of foliated dark greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		25 16	(1.75)	
26.00				120 260 400	Air+Mist (Red/Grey)	(0:30:00)				Medium strong narrowly to medium banded poorly foliated dark greenish grey fine to medium grained slightly weathered to fresh PSAMMITE with medium strong very closely to medium spaced very narrow to thin bands of very narrowly		26 15.03 15	26.50 27	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Klemm KR 802**	**Daniel Price + Duncan Howells**	**MLinyard + WDixon + MVincent**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1009**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**10.07.14** End: **16.07.14**	**41.53**	**E:234718.9 N:392910.3**	**7** of **9**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
27.00				120 260 400	Air+Mist (Red/Grey)	(0:30:00)				foliated dark greenish grey PHYLLITE. (New Harbour Group - PSAMMITE)		14	(2.65)	
28.00				55 77 100	Air+Mist (Red/Grey)	(0:33:00)						13		
29.00				100 160								12.38	29 29.15	
										Medium strong to strong very narrowly banded very narrowly foliated greenish grey to reddish purple slightly weathered PHYLLITE with medium strong very closely spaced narrow bands of poorly foliated greenish grey fine and medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		12.03	(0.35) 29.50	
30.00				60 205 350	Air+Mist (Red/Grey)	(0:39:00)				Medium strong to strong narrowly to medium banded poorly foliated greenish grey fine and medium grained slightly weathered to fresh PSAMMITE with medium strong to strong very spaced to medium spaced very narrow to thin bands of foliated greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		12 11	30 (1.55)	
31.00				NI 20 40 60 100 140 180		(0:37:00)				Medium strong to strong narrowly to very thinly banded very narrowly foliated greenish grey to greyish purple slightly weathered PHYLLITE with medium strong to strong very closely to closely		10.48	31.05	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Klemm KR 802**	**Daniel Price + Duncan Howells**	**MLinyard + WDixon + MVincent**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1009**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**10.07.14** End: **16.07.14**	**41.53**	**E:234718.9 N:392910.3**	**8** of **9**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
				100 140 180	Air+Mist (Red/Grey)	(0:37:00)				spaced narrow to medium bands of poorly foliated greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		10	(1.50)	
32.00				250 250 250									32	
				90 120 150								8.98	32.55	
				90 210 330	Air+Mist (Red/Grey)	(0:33:00)				Medium strong to strong narrowly to medium banded poorly foliated greenish grey fine to medium grained slightly weathered PSAMMITE with very closely to medium spaced very narrow to thin bands of very narrowly foliated greenish grey PHYLLITE. (New Harbour Group - PSAMMITE)		9	33	
33.00				590 590 590								8	(2.85)	
34.00				60 177 295	Air+Mist (Red/Grey)	(0:40:00)						7	34	
35.00													35	
												6.13	35.40	
				100 185 270	Air+Mist (Red/Grey)	(0:39:00)				Medium strong to strong very narrowly to very thinly banded very narrowly foliated greenish grey slightly weathered PHYLLITE with medium strong to strong very closely spaced bands of very narrow to thin poorly foliated greenish grey fine to medium grained PSAMMITE.		6	(0.72)	
													36	

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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Klemm KR 802**	**Daniel Price + Duncan Howells**	**MLinyard + WDixon + MVincent**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1009**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**10.07.14** End: **16.07.14**	**41.53**	**E:234718.9 N:392910.3**	**9** of **9**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
36.00				100 185 270	Air+Mist (Red/Grey)	(0:39:00)				(New Harbour Group - PHYLLITE)		5.41	36.12	
				350 350 350						Strong very narrowly to thinly banded poorly foliated greenish grey fine to medium grained slightly weathered PSAMMITE with strong to strong extremely closely spaced to closely spaced very narrow to thin bands of very narrowly foliated greenish grey to reddish purple PHYLLITE. (New Harbour Group - PSAMMITE)		5	37	
37.00				100 135 170									(2.64)	
				400 400 400	Air+Mist (Red/Grey)	(0:40:00)						4	38	
38.00				90 160 230								3		
										Borehole terminated at 38.76m depth.		2.77	38.76	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Klemm KR 802**	**Daniel Price + Duncan Howells**	**MLinyard + WDixon + MVincent**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1010R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**07.07.14** End: **08.07.14**	**25.03**	**E:234552.0 N:392917.1**	**1** of **6**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
0.00										Grass over firm brown sandy slightly gravelly CLAY. (Superficial Deposits - Locally derived lodgement till)		25	(0.40)	
												24.63	0.40	
										Firm pale orangish brown pale grey mottled sandy locally very sandy slightly gravelly CLAY. (Superficial Deposits - Locally derived lodgement till)			(0.60)	
1.00												24.03	1.00 1	
										Borehole progressed using open hole drilling techniques; descriptions based on recovered chippings.		24		
2.00												23	(2.00) 2	OH
												22.03	3.00 3	
3.00										Borehole progressed using open hole drilling techniques; descriptions based on recovered chippings.		22		OH
4.00												21	4	
													(3.00)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/07/14	18:00	10.50	7.50	116	4.50
08/07/14	08:20	10.50	7.50	116	2.10
08/07/14	18:00	22.50	7.50	116	2.10

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 1.00m depth. (IP)
3. Rotary open hole drilling from 1.00m to 6.00m depth on 07/07/2014.
4. Rotary cored drilling from 6.00m to 22.80m depth with air mist flush between 07/07/2014 and 08/07/2014.
5. Groundwater monitoring standpipe installed as shown upon completion.
6. Adjacent hole was drilled to recover samples from the superficial deposits. Coordinates: E: 234552.058, N: 392916.474. TL: 18.00m AOD.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm KR 802**	**Duncan Howells**	**MNaisbitt + EMenkiti**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1010R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**07.07.14** End: **08.07.14**	**25.03**	**E:234552.0 N:392917.1**	**2** of **6**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
5.00												20	5	OH
6.00				NI 85 190	Air+Mist (Red/Grey)	(0:35:00)				Medium strong very thin to thinly bedded very narrowly foliated dark purple slightly weathered PHYLLITE with medium strong to strong very closely to closely spaced narrow to very thin bands of greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		19.03 19	6.00 (1.50) 7	
7.00												18		
8.00				NI 60 140 210 50 70 110	Air+Mist (Red/Grey)	(0:39:00)				Weak to medium strong very narrowly to thinly banded foliated reddish brown slightly to moderately weathered PHYLLITE with weak to medium strong extremely closely spaced to closely spaced narrow to very thin bands of foliated greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		17.53 17	7.50 (2.83) 8 9	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/07/14	18:00	10.50	7.50	116	4.50
08/07/14	08:20	10.50	7.50	116	2.10
08/07/14	18:00	22.50	7.50	116	2.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm KR 802**	**Duncan Howells**	**MNaisbitt + EMenkiti**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1010R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**07.07.14** End: **08.07.14**	**25.03**	**E:234552.0 N:392917.1**	**3** of **6**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00				120 200 300	Air+Mist (Red/Grey)	(0:41:00)						16		
10.00				50 110 240						Medium strong to strong narrowly to very thinly banded foliated greenish grey fine to medium grained slightly weathered PSAMMITE with medium strong extremely closely spaced to very closely spaced very narrow to very thin bands of foliated reddish brown PHYLLITE. (New Harbour Group - PSAMMITE)		15 14.70	10 10.33 (0.67)	
11.00				90 140 220	Air+Mist (Red/Grey)	(0:35:00)				Weak to medium strong narrowly to medium banded foliated reddish brown slightly weathered PHYLLITE with weak to medium strong extremely closely to medium spaced very narrow to narrow bands of lenticular greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		14 14.03 13.48	11 11.00 (0.55) 11.55	
				60 180 290						Medium strong to strong narrowly to very thinly banded foliated greenish grey fine to medium grained fresh to slightly weathered PSAMMITE with medium strong extremely closely spaced to very closely spaced very narrow to very thin bands of foliated reddish brown PHYLLITE. (New Harbour Group - PSAMMITE)		13.13	(0.35) 11.90	
12.00				90 360 850	Air+Mist (Red/Grey)	(0:32:00)				Weak narrowly to thinly banded foliated reddish brown fresh to slightly weathered PHYLLITE with extremely closely spaced to closely spaced very narrow to very thin bands of lenticular greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		13 12.03	12 (1.10) 13.00	
13.00				80 150 260						Medium strong to strong narrowly to very thinly banded foliated greenish grey fine to medium grained slightly weathered to fresh PSAMMITE. (New Harbour Group - PSAMMITE)		12 11.57	13 (0.46) 13.46	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/07/14	18:00	10.50	7.50	116	4.50
08/07/14	08:20	10.50	7.50	116	2.10
08/07/14	18:00	22.50	7.50	116	2.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm KR 802**	**Duncan Howells**	**MNaisbitt + EMenkiti**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1010R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**07.07.14** End: **08.07.14**	**25.03**	**E:234552.0 N:392917.1**	**4** of **6**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
14.00				80 130 230	Air+Mist (Red/Grey)	(0:30:00)				Strong narrowly to thinly banded foliated reddish brown slightly weathered to fresh PHYLLITE with strong extremely closely spaced to closely spaced very narrow to very thin bands of lenticular greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		11	14	
15.00				90 150 200								10	15	
16.00				130 180 240	Air+Mist (Red/Grey)	(0:30:00)						9	16	
17.00				140 230 310	Air+Mist (Red/Grey)	(0:45:00)						8	17	
				50 140 210						Medium strong to strong narrowly to very thinly banded foliated greenish grey fine to medium grained slightly weathered		7.33	17.70 (4.24) (0.55) 18	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/07/14	18:00	10.50	7.50	116	4.50
08/07/14	08:20	10.50	7.50	116	2.10
08/07/14	18:00	22.50	7.50	116	2.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm KR 802**	**Duncan Howells**	**MNaisbitt + EMenkiti**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1010R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**07.07.14** End: **08.07.14**	**25.03**	**E:234552.0 N:392917.1**	**5** of **6**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
18.00				50 140 210	Air+Mist (Red/Grey)	(0:35:00)				PSAMMITE with medium strong extremely closely spaced to very closely spaced very narrow to very thin bands of foliated reddish brown PHYLLITE. (New Harbour Group - PSAMMITE)		7 6.78	18.25	
				20 70 280						Weak narrowly to thinly banded foliated reddish brown moderately weathered to slightly weathered PHYLLITE with weak to medium strong extremely closely spaced to closely spaced very narrow to very thin bands of foliated greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		6.15	(0.63) 18.88	
19.00				20 100 170						Medium strong to strong narrowly to very thinly banded foliated greenish grey fine to medium grained slightly weathered PSAMMITE with medium strong extremely closely spaced to very closely spaced very narrow to very thin bands of foliated reddish brown PHYLLITE. (New Harbour Group - PSAMMITE)		6 5.66	19 (0.49) 19.37	
				40 140 250	Air+Mist (Red/Grey)	(0:32:00)				Medium strong to strong narrowly to very thinly banded foliated greenish grey fine to medium grained slightly weathered PSAMMITE with medium strong extremely closely spaced to very closely spaced very narrow to very thin bands of foliated reddish brown PHYLLITE. (New Harbour Group - PSAMMITE)		5 4.67	(0.99) 20 20.36	
20.00				100 150 200						Medium strong to strong narrowly to thinly banded foliated reddish brown fresh to slightly weathered PHYLLITE with strong extremely closely spaced to closely spaced very narrow to very thin bands of lenticular greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		4 3.80	(0.87) 21 21.23	
21.00				30 70 90	Air+Mist (Red/Grey)	(1:00:00)				Medium strong to strong very narrowly to thinly banded very narrowly foliated greyish purple fresh to slightly weathered PHYLLITE with extremely closely to closely spaced narrow to thin bands of foliated greenish grey fine to medium grained PSAMMITE. (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)		3 2.73	(1.07) 22 22.30	
22.00				40 120 220										
				50 130						Medium strong to strong narrowly to very thinly banded foliated greenish grey fine				

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/07/14	18:00	10.50	7.50	116	4.50
08/07/14	08:20	10.50	7.50	116	2.10
08/07/14	18:00	22.50	7.50	116	2.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm KR 802**	**Duncan Howells**	**MNaisbitt + EMenkiti**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1010R**

Contract Ref:	Start: **07.07.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **08.07.14**	**25.03**	**E:234552.0 N:392917.1**	**6** of **6**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
				170 50 130 170	↓	(1:00:00)				to medium grained slightly weathered PSAMMITE with medium strong extremely closely spaced to very closely spaced very narrow to very thin bands of foliated reddish purple PHYLLITE. (New Harbour Group - PSAMMITE)		2.23	(0.50) 22.80	
										Borehole terminated at 22.80m depth.			23	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/07/14	18:00	10.50	7.50	116	4.50
08/07/14	08:20	10.50	7.50	116	2.10
08/07/14	18:00	22.50	7.50	116	2.10

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Klemm KR 802**	**Duncan Howells**	**MNaisbitt + EMenkiti**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1025R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**10.07.14** End: **14.07.14**	**18.33**	**E:234550.7 N:392679.7**	**1** of **4**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
0.00										Soft grey brown gravelly CLAY. (Topsoil)		18.23	0.10	
										Orange brown and grey mottled silty gravelly SAND with low cobble content and fine clay pockets. (Superficial Deposits - Locally derived lodgement till)		18	(1.20)	
1.00					Air+Mist (Brown)	(00:01:30)						17.03	1.30	
										Firm brown mottled grey slightly gravelly sandy silty CLAY. (Superficial Deposits - Locally derived lodgement till)		17	(0.40)	
												16.63	1.70	
										Dense light orangish brown mottled light bluish grey slightly gravelly clayey SAND with a low cobble content. (Superficial Deposits - Locally derived lodgement till)			(0.35)	
2.00												16.28	2.05	
										Greyish blue slightly weathered PSAMMITE. (New Harbour Group - PSAMMITE)		16	(1.65)	
3.00					Air+Mist (Grey)	(00:03:00)						15	3	
												14.63	3.70	
4.00				NI 115 250	Air+Mist (Grey)	(0:22:00)				Medium strong very narrowly to very thinly banded very narrowly foliated light greenish green slightly weathered to moderately weathered PHYLLITE with medium strong to strong extremely closely spaced to closely spaced very narrow to narrow bands of lenticular greenish grey fine grained PSAMMITE. (New Harbour Group - PHYLLITE)		14	4	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
10/07/14	18:00	3.30	3.30	99	Dry
11/07/14	08:20	3.30	3.30	99	Dry
11/07/14	11:55	9.80	3.30	99	8.10
14/07/14	13:08	9.80	3.30	99	2.10
14/07/14	18:00	15.55	3.30	99	6.45

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 1.20m depth. (IP)
3. Rotary open hole drilling from 1.20m to 3.70m depth between 10/07/2014 and 11/07/2014.
4. Rotary cored drilling from 3.70m to 15.85m depth with air mist flush between 11/07/2014 and 14/07/2014.
5. Groundwater monitoring standpipe installed as shown upon completion.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Beretta T44**	**Richard Cowan**	**MNaisbitt + JPhelan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1025R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**10.07.14** End: **14.07.14**	**18.33**	**E:234550.7 N:392679.7**	**2** of **4**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
5.00				NI 115 250	Air+Mist (Grey)	(0:22:00)						13	(5.00)	
6.00				NI 120 260	Air+Mist (Grey)	(0:30:00)						12		
7.00				50 100 200	Air+Mist (Grey)	(0:17:00)						11		
8.00				90 130 250	Air+Mist (Grey)	(0:40:00)						10		
				240 350 420		(0:40:00)				Medium strong very narrowly to very thinly banded very narrowly foliated light greenish green fresh to slightly weathered		9.63	8.70	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
10/07/14	18:00	3.30	3.30	99	Dry
11/07/14	08:20	3.30	3.30	99	Dry
11/07/14	11:55	9.80	3.30	99	8.10
14/07/14	13:08	9.80	3.30	99	2.10
14/07/14	18:00	15.55	3.30	99	6.45

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Beretta T44**	**Richard Cowan**	**MNaisbitt + JPhelan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1025R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**10.07.14** End: **14.07.14**	**18.33**	**E:234550.7 N:392679.7**	**3** of **4**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00				240 350 420						PHYLLITE with medium strong to strong extremely closely spaced to closely spaced very narrow to narrow bands of foliated greenish grey fine grained PSAMMITE. (New Harbour Group - PHYLLITE)		9	(2.03)	
10.00				NI 150 280	Air+Mist (Grey)	(0:40:00)						8	10	
				160 190 220								7.60	10.73	
				20 40 70	Air+Mist (Grey)	(0:44:00)				Medium strong very narrowly to very thinly banded very narrowly foliated light greenish green slightly weathered to fresh PHYLLITE with medium strong to strong extremely closely spaced to closely spaced very narrow to narrow bands of foliated greenish grey fine grained PSAMMITE. (New Harbour Group - PHYLLITE)		7.29	(0.31) 11.04	
11.00												7		
				NI 150 210 330						Medium strong very narrowly to very thinly banded very narrowly foliated light greenish green slightly weathered to fresh PHYLLITE with medium strong to strong extremely closely spaced to closely spaced very narrow to narrow bands of foliated greenish grey fine grained PSAMMITE. (New Harbour Group - PHYLLITE)				
12.00					Air+Mist (Grey)	(0:40:00)						6	12	
				105 245 405									13	
13.00						(0:40:00)						5	(4.33)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
10/07/14	18:00	3.30	3.30	99	Dry
11/07/14	08:20	3.30	3.30	99	Dry
11/07/14	11:55	9.80	3.30	99	8.10
14/07/14	13:08	9.80	3.30	99	2.10
14/07/14	18:00	15.55	3.30	99	6.45

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Beretta T44**	**Richard Cowan**	**MNaisbitt + JPhelan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1025R**

Contract Ref:	Start: **10.07.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **14.07.14**	**18.33**	**E:234550.7 N:392679.7**	**4** of **4**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
14.00				105 245 405	Air+Mist (Grey)	(0:40:00)						4	14	
15.00				NI 250 415	Air+Mist (Grey)	(0:38:00)				Medium strong very narrowly to very thinly banded very narrowly foliated greenish green slightly weathered to fresh PSAMMITE with medium strong to strong extremely closely spaced to closely spaced very narrow to narrow bands of foliated greenish grey fine grained PHYLLITE. (New Harbour Group - PSAMMITE) Borehole terminated at 15.85m depth.		2.96 2.48	15 15.37 (0.48) 15.85	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
10/07/14	18:00	3.30	3.30	99	Dry
11/07/14	08:20	3.30	3.30	99	Dry
11/07/14	11:55	9.80	3.30	99	8.10
14/07/14	13:08	9.80	3.30	99	2.10
14/07/14	18:00	15.55	3.30	99	6.45

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Beretta T44**	**Richard Cowan**	**MNaisbitt + JPhelan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1028R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **15.07.14**	**16.70**	**E:234508.3 N:392566.6**	**1** of **5**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
0.00					Mist (Brown)					Grass over brown sandy CLAY. (Topsoil)		16.60	0.10	
										Firm brown sandy slightly gravelly CLAY. (Superficial Deposits - Locally derived lodgement till)		16.20	(0.40) 0.50	
										Dark brown black mottled slightly clayey sandy coarse GRAVEL. (Superficial Deposits - Locally derived lodgement till)		16	(0.80)	
1.00												15.40	1.30	
										Firm greyish brown slightly sandy gravelly CLAY. (Superficial Deposits - Locally derived lodgement till)		15.00	(0.40) 1.70	
										Medium dense dark bluish grey slightly silty slightly sandy GRAVEL and COBBLES with a high cobble content. (Superficial Deposits - Locally derived lodgement till)		15	(0.70)	
2.00												14.30	2.40	
										Firm to stiff dark brown mottled light yellowish brown silty slightly sandy CLAY. (Superficial Deposits - Locally derived lodgement till)		14.20	2.50	
										Very dense greyish brown and greyish blue slightly clayey sandy GRAVEL with a medium cobble content. (Superficial Deposits - Locally derived lodgement till)		14	(1.90)	
3.00												13		
4.00														
												12.30	4.40	
										Description on next sheet				

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
14/07/14	18:00	9.00	7.50	116	5.00
15/07/14	08:15	9.00	7.50	116	0.60
15/07/14	16:50	20.80	7.50	116	0.60

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit. (IP)
3. Rotary open hole drilling from 0.00m to 8.20m depth on 14/07/2014.
4. Rotary cored drilling from 8.20m to 20.80m depth with air mist flush between 14/07/2014 and 15/07/2014.
5. Groundwater monitoring standpipe installed as shown upon completion.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**SoilMec SM-14**	**Paul Morris**	**MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1028R**

Contract Ref:	Start: **14.07.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **15.07.14**	**16.70**	**E:234508.3 N:392566.6**	**2** of **5**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
5.00					Mist (Brown)					Dark bluish grey fine grained slightly weathered PSAMMITE. (New Harbour Group - PSAMMITE)		12		
													5	
												11	(2.80)	
6.00													6	
												10		
7.00													7	
												9.50	7.20	
					Mist (Brown)					No recovery.				
												9	(1.00)	AZCL
8.00													8	
												8.50	8.20	
				NI	Air+Mist (Grey)	(0:15:00)				Weak to medium strong very thinly to medium banded light greyish green to dark greyish green medium grained slightly weathered PSAMMITE with very weak medium spaced narrow to very thin bands of sheared light greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		8		
				50 60 90										
													9	

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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
14/07/14	18:00	9.00	7.50	116	5.00
15/07/14	08:15	9.00	7.50	116	0.60
15/07/14	16:50	20.80	7.50	116	0.60

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**SoilMec SM-14**	**Paul Morris**	**MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1028R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**14.07.14** End: **15.07.14**	**16.70**	**E:234508.3 N:392566.6**	**3** of **5**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00				60 160 350	Air+Mist (Grey)	(0:16:00)						7	(2.62)	
10.00				NI	Air+Mist (Grey)	(0:10:00)				Weak very thinly to medium banded disturbed dark greyish green medium to coarse grained slightly weathered PSAMMITE with very weak medium spaced narrow to very thin bands of sheared light greyish green and dark reddish brown PHYLLITE. (New Harbour Group - PSAMMITE)		6 5.88	10.82	
11.00				NI 100 250	Air+Mist (Grey)	(0:10:00)				Medium strong very thinly to thinly banded dark greyish green medium grained slightly weathered PSAMMITE with extremely weak very closely spaced to closely spaced very narrow bands of sheared light greyish green and dark reddish brown PHYLLITE. (New Harbour Group - PSAMMITE)		5 4.88	11.82 (0.46)	
12.00										Very weak to weak very thinly banded disturbed dark greyish green medium grained fresh to moderately weathered PSAMMITE with extremely weak to very weak closely spaced narrow to very thin bands of sheared dark greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		4 4.42 3.95	12.28 (0.47) 12.75	
13.00					Air+Mist (Grey)	(0:16:00)				Medium strong very thinly banded dark greyish green medium grained fresh to slightly weathered PSAMMITE with weak very closely spaced very narrow			(0.97)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
14/07/14	18:00	9.00	7.50	116	5.00
15/07/14	08:15	9.00	7.50	116	0.60
15/07/14	16:50	20.80	7.50	116	0.60

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**SoilMec SM-14**	**Paul Morris**	**MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1028R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**14.07.14** End: **15.07.14**	**16.70**	**E:234508.3 N:392566.6**	**4** of **5**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
										bands of very narrowly foliated light yellowish green and dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		2.98	13.72	
14.00				NI 100 250	Air+Mist (Grey)	(0:16:00)				Very weak to weak very thinly banded sheared dark greyish green fine to coarse grained slightly weathered to moderately weathered PSAMMITE with very weak closely spaced narrow to very thin bands of sheared dark greyish green PHYLLITE. (New Harbour Group - PSAMMITE)			14 (0.80)	
				NI	Air+Mist (Grey)	(0:07:00)						2.18	14.52	
15.00				20 50 130	Air+Mist (Grey)	(0:12:00)				Medium strong very thinly banded dark greyish green medium grained fresh PSAMMITE with medium strong very closely spaced narrow to very thin bands of very narrowly foliated light yellowish green and dark reddish brown PHYLLITE. (New Harbour Group - PSAMMITE)			15 (1.76)	
16.00												0.42	16.28	
				80 1,200	Air+Mist (Grey)	(0:20:00)				Medium strong to strong very thinly banded dark greyish green medium grained fresh PSAMMITE with medium strong closely spaced very thin bands of very narrowly foliated dark greyish green and light greyish brown PHYLLITE. (New Harbour Group - PSAMMITE)			17 (1.52)	
17.00												-1.10	17.80	
										Medium strong to strong very thinly banded dark greyish green and dark bluish			18	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
14/07/14	18:00	9.00	7.50	116	5.00
15/07/14	08:15	9.00	7.50	116	0.60
15/07/14	16:50	20.80	7.50	116	0.60

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**SoilMec SM-14**	**Paul Morris**	**MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH1028R**

Contract Ref:	Start: **14.07.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **15.07.14**	**16.70**	**E:234508.3 N:392566.6**	**5** of **5**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
18.00					Air+Mist (Grey)	(0:17:00)				green fine to medium grained fresh PSAMMITE with medium strong very closely spaced narrow to very thin bands of light greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		-2	(1.50)	
19.00												-2.60	19.30	
				80 1,200						Medium strong to strong narrow to very thinly banded lenticular dark greyish green and bluish green fine to medium grained fresh PSAMMITE. (New Harbour Group - PSAMMITE)		-3	(1.50)	
20.00					Air+Mist (Grey)	(0:19:00)						-4		
										Borehole terminated at 20.80m depth.		-4.10	20.80	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
14/07/14	18:00	9.00	7.50	116	5.00
15/07/14	08:15	9.00	7.50	116	0.60
15/07/14	16:50	20.80	7.50	116	0.60

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**SoilMec SM-14**	**Paul Morris**	**MGalan**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH1**

Contract Ref:	Start: **30.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **27.11.14**	**21.00**	**E:236525.5 N:393417.7**	**1** of **5**

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	Ref	Type	Results						
0.00	1A	EW				Grass over soft dark brown sandy CLAY. Sand is fine to medium. (Topsoil)	20.85	0.15	
0.00	IP1	B							
0.00	RAD1	D				Soft to firm brown orangish-brown and pale grey mottled slightly gravelly sandy CLAY with a low cobble content. Gravel is angular to subrounded fine to coarse weathered psammite, occasional quartzite, mudstone. Gravel and cobbles are flat and cubic. (Superficial Deposits - Locally derived lodgement till)		(1.25)	
0.50	IP1	D							
0.50	IP2	B							
0.50	RAD2	D							
1.00	IP2	D					19.60	1.40	
1.40-1.70	1	B				Very soft light brown mottled grey slightly sandy slightly gravelly silty CLAY. Gravel is subangular medium to coarse Psammite. Gravel content <5% and local. Frequent pockets of yellowish brown medium sand.. (Superficial Deposits - Locally derived lodgement till)		(0.50)	
1.50-2.20	2	D							
1.50-1.95	3	SPT(c)	N=3				19.10	1.90	
1.90	4	B				Soft to firm light brownish grey slightly gravelly very silty CLAY. Gravel is subrounded coarse Dolerite. Gravel content ~5-10%. (Superficial Deposits - Locally derived lodgement till)		(0.40)	
2.00	5	D							
2.00-2.45	6	SPT(c)	N=10				18.70	2.30	
2.75-3.20	7	$U_{(100)}$	15 blows			Firm brownish grey silty CLAY. (Superficial Deposits - Locally derived lodgement till)		(1.40)	
3.20-3.65	8	SPT(c)	N=9				17.30	3.70	
3.70-4.00	9	B				Soft brownish grey slightly gravelly CLAY. Gravel is subangular fine Psammite and dolerite. Gravel content ~5-10%. (Superficial Deposits - Locally derived lodgement till)		(1.10)	
4.00	10	D							
4.15-4.60	11	$U_{(100)}$	16 blows						

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
03/11/14	12:30	7.45	3.00	200	4.20
05/11/14	08:00	14.40	12.00	200	13.60
05/11/14	16:35	18.20	18.00	200	17.60
06/11/14	08:00	18.20	18.00	200	14.70

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 1.20m depth.(IP)
3. Perched water entering inspection pit.
4. Inspection pit remained stable during excavation.
5. Archaeology pit excavated in same location.
6. Cable percussion boring using 200mm diameter tools to 18.20m depth between 30/10/2014 and 11/12/2014.
7. Water added to assist boring from 1.20m to 11.65m depth.
8. Rotary open hole drilling from 18.20m to 18.80m depth on 26/11/2014.
9. Rotary cored drilling from 18.80m to 31.70m depth with air mist flush from 18.80m to 19.55m depth and 22.50m to 31.70m depth, water flush from 19.55m to 22.50m depth between 26

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Gavin James**	**MNaisbitt + WDixon**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH1**

Contract Ref:	Start: **30.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **27.11.14**	**21.00**	**E:236525.5 N:393417.7**	**2** of **5**

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	Ref	Type	Results						
4.60-4.80	12	D							
							16.20	4.80	
4.80-5.25	13	SPT	N=12			Firm grey mottled light brown slightly gravelly CLAY. Gravel is subangular fine Psammite and dolerite. Gravel content <5%. (Superficial Deposits - Locally derived lodgement till)			
4.90-5.20	14	B							
5.00	15	D							
5.25-5.70	16	$U_{(100)}$	17 blows						
5.70-5.90	17	D							
5.90-6.35	18	SPT	N=15						
5.90-6.20	19	B							
6.00	20	D						(3.10)	
6.35	21	$U_{(100)}$	27 blows						
6.80-7.00	22	D							
6.90-7.20	24	B							
7.00-7.45	23	SPT	N=12						
7.00	25	D							
7.45-7.90	26	$U_{(100)}$	29 blows						
							13.10	7.90	
7.90-8.35	27	SPT	N=15			Firm grey mottled light brown CLAY. (Superficial Deposits - Locally derived lodgement till)			
7.90-8.20	28	B							
8.00	29	D							
8.35-8.80	30	$U_{(100)}$	23 blows						
8.80-9.00	31	D							
8.90-9.45	33	B							

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

10. Groundwater monitoring standpipe installed as shown upon completion.
11. SPT hammer EQU166-2013 (E_r = 80.05%) used.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Gavin James**	**MNaisbitt + WDixon**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH1**

Contract Ref:	Start: **30.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **27.11.14**	**21.00**	**E:236525.5 N:393417.7**	**3** of **5**

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	Ref	Type	Results						
9.00-9.45	32	SPT	N=17			9.00m : Becoming stiff.			
9.45-9.90	35	$U_{(100)}$	23 blows					(4.00)	
9.90-10.10	36	D							
9.90-10.20	38	B							
10.00	39	D							
10.10-10.55	37	SPT	N=20						
10.55-11.00	40	$U_{(100)}$	36 blows						
10.90-11.20	43	B							
11.00-11.20	41	D							
11.00	44	D							
11.20-11.65	42	SPT	N=23						
11.65-12.10	45	$U_{(100)}$	43 blows				9.10	11.90	
11.90-12.20	47	B				Stiff brownish grey slightly gravelly CLAY. Gravel is subangular fine Dolerite. Gravel content ~5%. (Superficial Deposits - Locally derived lodgement till)			
12.00	48	D							
12.10-12.55	46	SPT(c)	N=27						
12.55-13.00	49	$U_{(100)}$	50 blows					(2.00)	
12.90-13.20	51	B							
13.00-13.45	50	SPT	N=24						
13.00	52	D							

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Gavin James**	**MNaisbitt + WDixon**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH1**

Contract Ref:	Start: **30.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **27.11.14**	**21.00**	**E:236525.5 N:393417.7**	**4** of **5**

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	Ref	Type	Results						
13.45-13.90	53	$U_{(100)}$	37 blows				7.10	13.90	
13.90-14.35	54	SPT	N=21			Stiff brownish grey CLAY. (Superficial Deposits - Locally derived lodgement till)			
13.90-14.20	55	B							
14.00	56	D							
14.40-14.85	57	$U_{(100)}$	38 blows						
14.85-15.05	58	D							
14.90-15.20	60	B							
15.00	61	D							
15.05-15.50	59	SPT	N=25						
15.50-15.95	62	$U_{(100)}$	36 blows						
15.90-16.20	65	B							
15.95-16.15	63	D						(4.30)	
16.00	66	D							
16.40-16.85	64	SPT	N=23						
16.90-17.20	69	B							
17.00	70	D							
17.30-17.75	67	$U_{(100)}$	32 blows						
17.75-18.20	68	SPT	N=26						
17.90-18.20	72	B							

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Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Gavin James**	**MNaisbitt + WDixon**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH1**

Contract Ref:	Start: **30.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **27.11.14**	**21.00**	**E:236525.5 N:393417.7**	**5** of **5**

Samples and In-situ Tests				Water	Backfill & Instru-mentation	Description of Strata	Reduced Level	Depth (Thick ness)	Material Graphic Legend
Depth	Ref	Type	Results						
18.00	71	D					2.80	18.20	
						Cable percussion borehole continued using rotary drilling techniques from 18.20m depth.			

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Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Gavin James**	**MNaisbitt + WDixon**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH1**

Contract Ref:	Start: **30.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **27.11.14**	**21.00**	**E:236525.5 N:393417.7**	**1** of **8**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00									Grass over soft dark brown sandy CLAY. (Topsoil)		20.85	0.15	
									Soft to firm brown orangish-brown and pale grey mottled slightly gravelly sandy CLAY with a low cobble content. (Superficial Deposits - Locally derived lodgement till)			(1.25)	
1.00											20	1	
											19.60	1.40	
									Very soft light brown mottled grey slightly sandy slightly gravelly silty CLAY. (Superficial Deposits - Locally derived lodgement till)			(0.50)	
											19.10	1.90	
2.00									Soft to firm light brownish grey slightly gravelly very silty CLAY. (Superficial Deposits - Locally derived lodgement till)		19	2 (0.40)	
											18.70	2.30	
									Firm brownish grey silty CLAY. (Superficial Deposits - Locally derived lodgement till)				
3.00											18	(1.40) 3	
											17.30	3.70	
									Soft brownish grey slightly gravelly CLAY. (Superficial Deposits - Locally derived lodgement till)				
4.00											17	4	
												(1.10)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
03/11/14	12:30	7.45	3.00	200	4.20
05/11/14	08:00	14.40	12.00	200	13.60
05/11/14	16:35	18.20	18.00	200	17.60
06/11/14	08:00	18.20	18.00	200	14.70
26/11/14	08:00	18.20	18.00	146	0.00
26/11/14	16:15	25.50	25.50	146	14.80
27/11/14	08:15	25.50	25.50	146	8.10
27/11/14	16:30	31.70	31.70	146	14.80

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 1.20m depth.(IP)
3. Perched water entering inspection pit.
4. Inspection pit remained stable during excavation.
5. Archaeology pit excavated in same location.
6. Cable percussion boring using 200mm diameter tools to 18.20m depth between 30/10/2014 and 11/12/2014.
7. Water added to assist boring from 1.20m to 11.65m depth.
8. Rotary open hole drilling from 18.20m to 18.80m depth on 26/11/2014.
9. Rotary cored drilling from 18.80m to 31.70m depth with air mist flush from 18.80m to 19.55m depth and 22.50m to 31.70m depth, water flush from 19.55m to 22.50m depth between 26
10. Groundwater monitoring standpipe installed as shown upon completion.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Comacchio GEO 601**	**Gavin James + Scott Pincher**	**MNaisbitt + WDixon + WDixon**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH1**

Contract Ref:	Start: **30.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **27.11.14**	**21.00**	**E:236525.5 N:393417.7**	**2** of **8**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
											16.20	4.80	
5.00									Firm grey mottled light brown slightly gravelly CLAY. (Superficial Deposits - Locally derived lodgement till)		16	5	
6.00											15	6	
												(3.10)	
7.00											14	7	
											13.10	7.90	
8.00									Firm grey mottled light brown CLAY. (Superficial Deposits - Locally derived lodgement till)		13	8	
											12	9	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

11. SPT hammer EQU166-2013 (E_t = 80.05%) used.

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	**Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 601**	Drilled By:	**Gavin James + Scott Pincher**	Logged By:	**MNaisbitt + WDixon + WDixon**	Reviewed By:	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH1**

Contract Ref:	Start: **30.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **27.11.14**	**21.00**	**E:236525.5 N:393417.7**	**3** of **8**

Mechanical Log					Flush Returns & Details	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
Depth	TCR %	SCR %	RQD %	If (mm)									
9.00													
												(4.00)	
10.00											11	10	
11.00											10	11	
											9.10	11.90	
12.00									Stiff brownish grey slightly gravelly CLAY. (Superficial Deposits - Locally derived lodgement till)		9	12	
												(2.00)	
13.00											8	13	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	**Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 601**	Drilled By:	**Gavin James + Scott Pincher**	Logged By:	**MNaisbitt + WDixon + WDixon**	Reviewed By:	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH1**

Contract Ref:	Start: **30.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **27.11.14**	**21.00**	**E:236525.5 N:393417.7**	**4** of **8**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
											7.10	13.90	
14.00									Stiff brownish grey CLAY. (Superficial Deposits - Locally derived lodgement till)		7	14	
15.00											6	15	
16.00											5	(4.30) 16	
17.00											4	17	
											3	18	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	**Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 601**	Drilled By:	**Gavin James + Scott Pincher**	Logged By:	**MNaisbitt + WDixon + WDixon**	Reviewed By:	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH1**

Contract Ref:	Start: **30.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **27.11.14**	**21.00**	**E:236525.5 N:393417.7**	**5** of **8**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
18.00											2.80	18.20	
					Air+Mist (Grey)				Stiff to very stiff dark greyish brown slightly sandy silty CLAY. (Superficial Deposits - Locally derived lodgement till)				
19.00											2	19	
												(2.70)	
20.00					Water (Grey)						1	20	
											0.10	20.90	
21.00				10 15 20	Water (Grey)				Medium strong to strong very narrowly to narrowly banded foliated greenish grey fine grained slightly weathered PHYLLITE with medium strong to strong extremely closely spaced to very closely spaced very narrow to very thin bands of foliated greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		0	21	
												(1.20)	
22.00				30 60 90	Water (Grey)						-1	22	
											-1.11	22.10	
									Medium strong to strong very narrowly to narrowly banded foliated greenish grey slightly weathered PHYLLITE with medium strong to strong extremely closely spaced to very closely spaced very narrow to very thin bands of				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Comacchio GEO 601**	**Gavin James + Scott Pincher**	**MNaisbitt + WDixon + WDixon**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH1**

Contract Ref:	Start: **30.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **27.11.14**	**21.00**	**E:236525.5 N:393417.7**	**6** of **8**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
23.00				30 60 90	Air+Mist (Grey)				foliated greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-2	23	
												(3.40)	
24.00				30 75 120	Air+Mist (Grey)						-3	24	
25.00											-4	25	
											-4.51	25.50	
26.00				120 195 270	Air+Mist (Grey)				Medium strong to strong very narrowly to narrowly banded foliated greenish grey to dark reddish purple slightly weathered PHYLLITE with medium strong to strong extremely closely spaced to very closely spaced very narrow to narrow bands of foliated greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		-5	26	
											-6	27	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Comacchio GEO 601**	**Gavin James + Scott Pincher**	**MNaisbitt + WDixon + WDixon**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	RGM-BH1

Contract Ref:	Start: 30.10.14	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: 27.11.14	21.00	E:236525.5 N:393417.7	7 of 8

Mechanical Log													
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
27.00				120 195 270	Air+Mist (Grey)								
28.00				210 330 450							-7	28 (5.88)	
29.00				80 105 130							-8	29	
30.00				460 460 460	Air+Mist (Grey)						-9	30	
31.00				140 255 370	Air+Mist (Grey)				*Description on next sheet*		-10 -10.39	31 31.38	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	Plant Used:	Dando 2000 + Comacchio GEO 601	Drilled By:	Gavin James + Scott Pincher	Logged By:	MNaisbitt + WDixon + WDixon	Reviewed By:	ADingle + ADingle + ADingle

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH1**

Contract Ref:	Start: **30.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **27.11.14**	**21.00**	**E:236525.5 N:393417.7**	**8** of **8**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
									Dropped core. (New Harbour Group - PHYLLITE)		-10.71	(0.32) 31.70	
									Borehole terminated at 31.70m depth.			32	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable Percussion + Rotary open hole + Rotary Cored	**Dando 2000 + Comacchio GEO 601**	**Gavin James + Scott Pincher**	**MNaisbitt + WDixon + WDixon**	**ADingle + ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH2**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**26.10.14** End: **28.10.14**	**25.63**	**E:235788.7 N:392937.3**	**1** of **4**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00										MADE GROUND: Grass over dark brown gravelly SAND with occasional rootlets. (Made Ground)		25	(1.55)	
1.00					Air+Mist (Brown)	(00:30:00)						24.08	1.55	
2.00				80 130 280 10 40 90 50 130 190	Air+Mist (Green)	(0:50:00)				Medium strong very narrowly banded greenish grey fine to medium grained slightly weathered PSAMMITE with medium strong extremely closely to closely spaced very narrow to narrow bands of very narrowly foliated light greenish grey PHYLLITE. (New Harbour Group - PSAMMITE)		24	(1.10)	
3.00				30 60 80 NI	Air+Mist (Red)	(0:38:00)				Weak very narrowly banded very narrowly foliated brownish purple slightly weathered PHYLLITE with weak extremely closely spaced very narrow lenticular bands of greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		22.98	2.65	
4.00				210 220 230	Air+Mist (Green)	(0:42:00)				Medium strong thinly to medium banded greenish grey medium to coarse grained slightly weathered PSAMMITE with medium strong medium spaced narrow bands of very narrowly foliated brownish purple and greenish grey PHYLLITE. (New Harbour Group - PSAMMITE)		22 21.80	(1.18) 3.83	
												21.17	(0.63) 4.46	

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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/10/14	08:30	5.25	1.50	99	4.90
27/10/14	13:47	12.35	1.50	99	5.08
27/10/14	16:45	14.95	1.50	99	6.30
28/10/14	08:30	14.95	1.50	99	4.90
28/10/14	11:00	14.95	1.50	99	-

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 0.40m depth.(IP)
3. Inspection pit remained stable during excavation.
4. Rotary open hole drilling from 0.40m to 1.55m depth on 26/10/2014.
5. Rotary cored drilling from 1.55m to 14.95m depth with air mist flush between 26/10/2014 and 28/10/2014.
6. Groundwater monitoring standpipe installed as shown upon completion.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Beretta T44**	**Daniel Price**	**RNewberry + SParkes + SParkes**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH2**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**26.10.14** End: **28.10.14**	**25.63**	**E:235788.7 N:392937.3**	**2** of **4**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
5.00				30 75 160 NI	Air+Mist (Green)	(0:42:00)				Weak to medium strong very narrowly to very thinly banded greenish grey fine grained slightly to moderately weathered PSAMMITE with weak extremely closely to very closely spaced very narrow to narrow bands of very narrowly foliated light greenish grey PHYLLITE. (New Harbour Group - PSAMMITE)		21 20.53	(0.64) 5.10	5
										Very weak to weak very narrowly to narrowly banded very narrowly foliated brownish purple slightly to moderately weathered PHYLLITE with very weak to weak very narrow lenticular bands of greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		20.28	5.35	
6.00				20 60 110 100 190 300 80 100 140	Air+Mist (Green)	(0:22:00)				Medium strong very narrowly to thinly banded greenish grey fine to medium grained slightly weathered PSAMMITE with weak to medium strong extremely closely spaced to closely spaced very narrow to very thin bands of very narrowly foliated light greenish grey and greyish purple PHYLLITE. (New Harbour Group - PSAMMITE)		20 19	(2.22)	6
7.00				10 50 90 100 140 170 70 95 140	Air+Mist (Green)	(0:20:00)						18.06	7.57	7
8.00				20 60 90 80 100 110 130 210	Air+Mist (Green/Red)	(0:23:00)				Weak to medium strong very narrowly to narrowly banded very narrowly foliated greyish purple slightly weathered PHYLLITE with weak to medium strong extremely closely spaced very narrow lenticular bands of greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		18 17.02	(1.04) 8.61	8
										Medium strong thinly banded greenish grey fine to medium grained slightly weathered PSAMMITE with weak to medium strong closely spaced narrow bands of very narrowly foliated greyish		17	(0.58)	9

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/10/14	08:30	5.25	1.50	99	4.90
27/10/14	13:47	12.35	1.50	99	5.08
27/10/14	16:45	14.95	1.50	99	6.30
28/10/14	08:30	14.95	1.50	99	4.90
28/10/14	11:00	14.95	1.50	99	-

General Remarks

7. SPT hammer EQU166-2013 (E_r = 80.05%) used.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Beretta T44**	**Daniel Price**	**RNewberry + SParkes + SParkes**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH2**

Contract Ref:	Start: **26.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **28.10.14**	**25.63**	**E:235788.7 N:392937.3**	**3** of **4**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00				300						purple and PHYLLITE. (New Harbour Group - PSAMMITE)		16.44	9.19	
				130 210 300	Air+Mist (Green)	(0:23:00)				Medium strong very narrowly to narrowly banded very narrowly foliated reddish purple and greyish purple slightly weathered PHYLLITE with medium strong extremely closely to very closely spaced very narrow lenticular bands of greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		16	(0.93)	
10.00				10 30 60								15.51	10.12	
				120 130 140	Air+Mist (Green)	(0:25:00)				Medium strong to strong very thinly to medium banded greenish grey fine grained slightly weathered PSAMMITE with medium strong to strong extremely closely to medium spaced very narrow to thin bands of very narrowly foliated purple PHYLLITE. (New Harbour Group - PSAMMITE)		15		
				60 140 190										
11.00				300 380 440	Air+Mist (Green)	(0:26:00)						14	(2.07)	
12.00				10 130 290								13.44	12.19	
				30 40 50	Air+Mist (Green)	(0:28:00)				Medium strong very thinly to medium banded greenish grey fine and medium grained slightly weathered PSAMMITE with medium strong very closely spaced to closely spaced very narrow to very thin bands of very narrowly foliated greyish purple and light greenish grey PHYLLITE. (New Harbour Group - PSAMMITE)		13		
13.00				10 80 150										
				70 110 150										

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/10/14	08:30	5.25	1.50	99	4.90
27/10/14	13:47	12.35	1.50	99	5.08
27/10/14	16:45	14.95	1.50	99	6.30
28/10/14	08:30	14.95	1.50	99	4.90
28/10/14	11:00	14.95	1.50	99	-

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Beretta T44**	**Daniel Price**	**RNewberry + SParkes + SParkes**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH2**

Contract Ref:	Start: **26.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **28.10.14**	**25.63**	**E:235788.7 N:392937.3**	**4** of **4**

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
14.00				70 130 180 NI 90 125 210 40 60 80	Air+Mist (Green)	(0:31:00)				Borehole terminated at 14.95m depth.		12 11 10.68	(2.76) 14 14.95	

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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/10/14	08:30	5.25	1.50	99	4.90
27/10/14	13:47	12.35	1.50	99	5.08
27/10/14	16:45	14.95	1.50	99	6.30
28/10/14	08:30	14.95	1.50	99	4.90
28/10/14	11:00	14.95	1.50	99	-

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Beretta T44**	**Daniel Price**	**RNewberry + SParkes + SParkes**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH4A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**4.11.14** End: **5.11.14**	**14.84**	**E:234133.3 N:392855.5**	**1** of **4**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00										Grass over soft brown sandy CLAY. (Topsoil)		14.69	0.15	
										Firm brown orangish brown slightly sandy gravelly CLAY with a low cobble content. (Superficial Deposits - Locally derived lodgement till)		14	(1.05)	
1.00												13.64	1.20	
										Medium dense becoming loose greyish brown slightly clayey GRAVEL with a low cobble content. (Superficial Deposits - Locally derived lodgement till)		13	(1.70)	
2.00					Water (Grey)	(00:15:00)						12		
												11.94	2.90	
3.00										Loose greyish brown GRAVEL. (Superficial Deposits - Locally derived lodgement till)		11	(1.00)	
												10.94	3.90	
4.00										Brownish purple slightly weathered to moderately weathered PHYLLITE. (New Harbour Group - PHYLLITE)		10	(0.80)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
04/11/14	16:10	9.90	9.90	146	0.40
05/11/14	08:00	9.90	9.90	146	0.10
05/11/14	13:15	15.90	4.50	146	0.90

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 1.20m depth. (IP)
3. Archaeology pit excavated in same location.
4. Perched water entering inspection pit.
5. Strata unsuitable for Hand Vane tests.
6. Rotary open hole drilling from 1.20m to 4.70m depth on 04/11/2014.
7. Rotary cored drilling from 4.70m to 15.90m depth with water flush between

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Unknown**	**Scott Pincher**	**MNaisbitt + MVincent**	**ADingle + ADingle**

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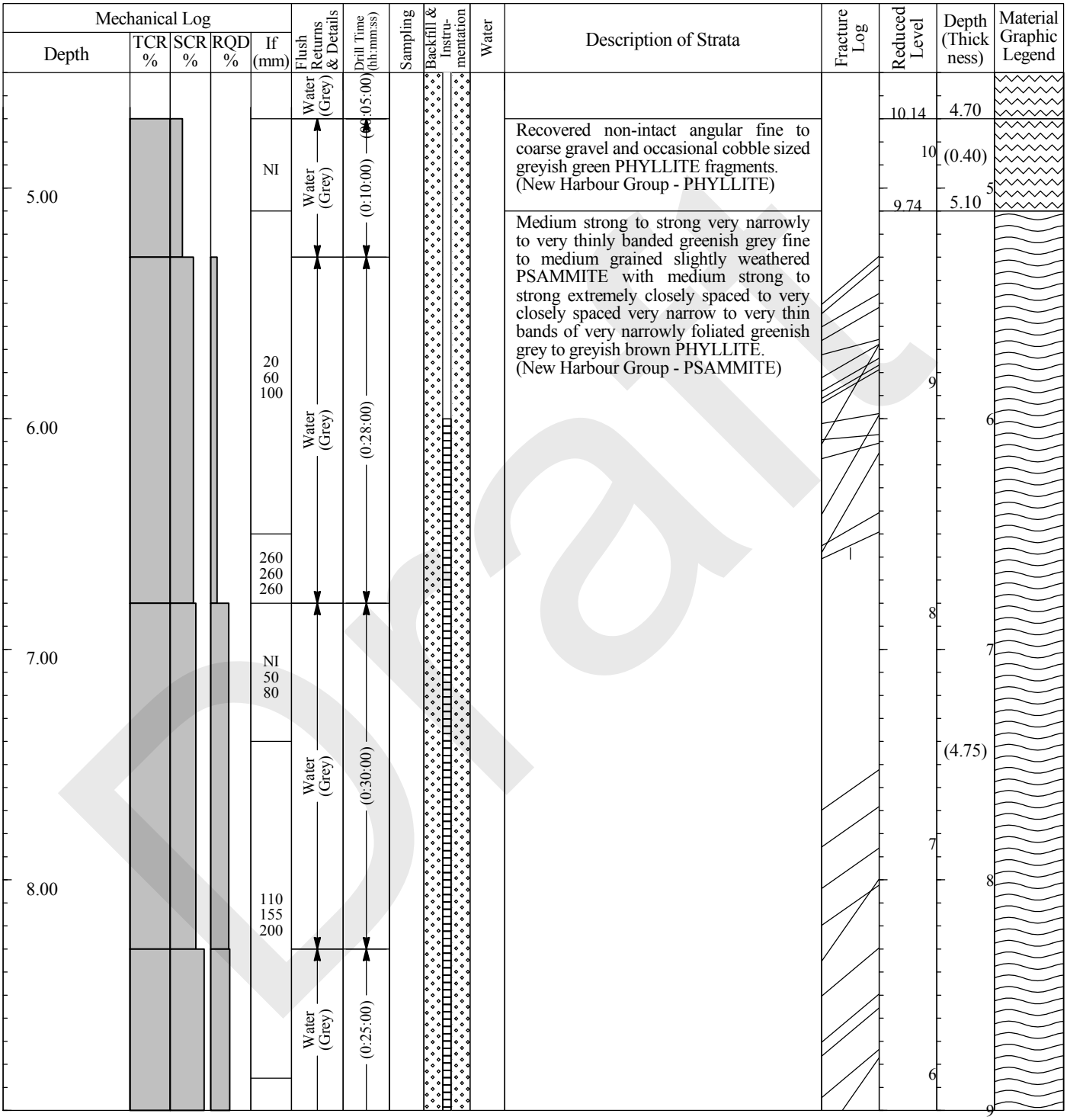
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH4A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**4.11.14** End: **5.11.14**	**14.84**	**E:234133.3 N:392855.5**	**2** of **4**



Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
04/11/14	16:10	9.90	9.90	146	0.40
05/11/14	08:00	9.90	9.90	146	0.10
05/11/14	13:15	15.90	4.50	146	0.90

General Remarks

04/11/2014 and 05/11/2014.
8. Groundwater monitoring standpipe installed as shown upon completion.

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Unknown**	**Scott Pincher**	**MNaisbitt + MVincent**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH4A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**4.11.14** End: **5.11.14**	**14.84**	**E:234133.3 N:392855.5**	**3** of **4**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00				20 30 40	Water (Grey)	(0:25:00)								
				40 110 180						Medium strong to strong very narrowly to narrowly banded very narrowly foliated greenish grey to reddish purple slightly weathered PHYLLITE with medium strong to strong extremely closely spaced to very closely spaced very narrow to very thin bands of greenish grey fine to medium grained PSAMMITE. (New Harbour Group - PHYLLITE)		4.99	9.85	
10.00				25 72 120	Water (Grey)	(0:27:00)						5 4	10 11 (2.87)	
11.00				NI										
				80 105 130	Water (Grey)	(0:29:00)						3	12	
12.00				50 107 165										
				70 145 220	Water (Grey)	(0:22:00)				Medium strong to strong very narrowly to very thinly banded greenish grey fine to medium grained slightly weathered PSAMMITE with medium strong to strong extremely closely spaced to very closely spaced very narrow to very thin bands of very narrowly foliated greenish grey PHYLLITE. (New Harbour Group - PSAMMITE)		2.12	12.72	
13.00												2	13	

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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
04/11/14	16:10	9.90	9.90	146	0.40
05/11/14	08:00	9.90	9.90	146	0.10
05/11/14	13:15	15.90	4.50	146	0.90

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Unknown**	**Scott Pincher**	**MNaisbitt + MVincent**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH4A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**4.11.14** End: **5.11.14**	**14.84**	**E:234133.3 N:392855.5**	**4** of **4**

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
14.00				70 145 220 30 40 50 150 150 150 NI	Water (Grey)	(0:22:00)						1	14 (3.18)	
15.00				50 105 160 20 85 150	Water (Grey)	(0:28:00)						0 -1.06	15 15.90	
										Borehole terminated at 15.90m depth.				

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
04/11/14	16:10	9.90	9.90	146	0.40
05/11/14	08:00	9.90	9.90	146	0.10
05/11/14	13:15	15.90	4.50	146	0.90

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Unknown**	**Scott Pincher**	**MNaisbitt + MVincent**	**ADingle + ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH4**

Contract Ref:	Start: **29.10.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **29.10.14**	**13.90**	**E:234153.4 N:392851.3**	**1** of **1**

Samples and In-situ Tests				Water	Backfill & Instru-mentation	Description of Strata	Reduced Level	Depth (Thick ness)	Material Graphic Legend
Depth	Ref	Type	Results						
0.00	1A	EW				Grass over soft brown sandy slightly gravelly CLAY. Sand is fine to medium.			
0.00-0.50	IP1	B					13.75	0.15	
0.00-0.50	RAD1	D				(Topsoil)			
						Soft to firm brown orangish-brown mottled slightly sandy gravelly CLAY with low cobble content. Gravel is angular to subangular fine to coarse weathered psammite, phyllite. sand is fine to medium. Gravel and cobbles are flat and cubic.		(0.75)	
0.50	IP1	D				(Superficial Deposits - Locally derived lodgement till)			
0.50-1.00	IP2	B				0.30m : Layer of tabular flat cobbles (possible land drain).			
0.50-1.00	RAD2	D					13.00	0.90	
0.90-1.20	1	B				Firm light brown slightly sandy gravelly CLAY with a low cobble content. Cobbles are subangular up to 79mm in diameter Psammite. Gravel is subrounded to subangular fine to coarse Psammite, phyllite and dolerite.		(0.30)	
1.00-1.45	3	SPT(c)	N=20			(Superficial Deposits - Locally derived lodgement till)	12.70	1.20	
						Medium dense becoming loose greyish brown slightly clayey GRAVEL with a low cobble content. Cobbles are subrounded to subangular up to 80mm in diameter Psammite. Gravel is subangular fine to coarse Psammite and phyllite.			
						(Superficial Deposits - Locally derived lodgement till)			
1.90-2.20	4	B						(1.70)	
2.00	5	D							
2.00-2.45	6	SPT(c)	N=6	1.1					
							11.00	2.90	
2.90-3.20	7	B				Loose greyish brown GRAVEL. Gravel is subangular fine to medium Phyllite.			
3.00	8	D				(Superficial Deposits - Locally derived lodgement till)			
3.00-3.45	9	SPT(c)	N=5					(1.00)	
							10.00	3.90	
3.90-4.20	10	B				Brownish purple slightly weathered to moderately weathered PHYLLITE. Recovered as angular cobbles due to chiselling.		(0.30)	
4.00	11	D				(New Harbour Group - PHYLLITE)			
4.00-4.19	12	SPT(c)	N=375*				9.70	4.20	
						Cable percussion borehole terminated at 4.20m depth.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
29/10/14	10:20	2.40	2.40	200	2.25

Chiselling / Slow Progress		
From	To	Duration (hh:mm)
1.45	1.60	00:35
4.10	4.20	01:00

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 1.20m depth.(IP)
3. Archaeology pit excavated in same location.
4. Inspection pit remained stable during excavation.
5. Water strike at 2.40m depth.
6. Perched water entering inspection pit.
7. Strata unsuitable for Hand Vane tests.
8. Cable percussion boring using 200mm diameter tools to 4.2m depth between 29/10/2014 and 29/10/2014.
9. Water added to assist boring from 1.20m to 4.20m depth.
10. Groundwater monitoring standpipe installed as shown upon completion.
11. SPT hammer EQU166-2013 (E_r = 80.05%) used.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Cable percussion	**Dando 2000**	**Gavin James**	**MNaisbitt + WDixon**	**ADingle**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH7**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**11.11.14** End: **12.11.14**	**24.65**	**E:234898.6 N:391949.7**	**1** of **4**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
0.00										Grass over soft brown slightly sandy slightly gravelly CLAY. (Topsoil)		24.50	0.15	
				NI	Water (Grey)	(0:05:00)				Strong greyish brown angular boulders of PSAMMITE with brown clay infill (Material cored).		24.15	(0.35) 0.50	
										Borehole progressed using open hole drilling techniques; descriptions based on recovered chippings.		24	(1.00) 1	OH
1.00						(00:15:00)						23.15	1.50	
					Water (Grey)	(0:10:00)				Medium strong narrowly to very thinly banded very narrowly foliated greenish grey fine to coarse grained fresh to slightly weathered PSAMMITE with weak to medium strong very closely spaced to closely spaced very narrow to narrow bands of very narrowly foliated greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		23	(0.50) 2	
2.00						(00:15:00)				Borehole progressed using open hole drilling techniques: Zone of no recovery.		22.65	2.00	
												22	(0.90)	OH
				10 350 900	Water (Grey)	(0:17:00)				Medium strong narrowly to very thinly banded very narrowly foliated greenish grey fine to coarse grained fresh to slightly weathered PSAMMITE with weak to medium strong very closely spaced to closely spaced very narrow to narrow bands of very narrowly foliated greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		21.75	2.90	
3.00													3	
					Water (Grey)	(0:25:00)						21		
4.00													4	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
11/11/14	16:30	7.70	7.70	146	5.80

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 0.60m depth.(IP)
3. Rotary open hole drilling from 0.60m to 1.50m depth and 2.00m to 2.90m depth on 11/11/2014.
4. Rotary cored drilling from 0.30m to 0.60m depth, 1.50m to 2.00m depth and 2.90m to 13.95m depth with water and air mist flush between 11/11/2014 and 12/11/2014.

All dimensions in metres	Scale: **1:25**	Inclination: **Vertical**	Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored + Rotary open hole	**Comacchio GEO 601**	**Scott Pincher**	**KWhitcombe + MSummersall + MSummersall**	**ADingle + ADingle + ADingle +**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH7**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**11.11.14** End: **12.11.14**	**24.65**	**E:234898.6 N:391949.7**	**2** of **4**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
5.00				10 350 900	Water (Grey)	(0:25:00)						20	5	
6.00				NI	Water (Grey)	(0:22:00)						19	(5.85)	
7.00				10 450 1,250	Water (Grey)	(0:22:00)						18	6	
8.00					Air+Mist (Grey)	(0:14:00)						17	7	
												16	8	
										Medium strong narrowly to thinly banded very narrowly foliated greenish grey fine to coarse grained fresh PSAMMITE with		15.90	8.75	
													9	

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Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
11/11/14	16:30	7.70	7.70	146	5.80

General Remarks

5. Groundwater monitoring standpipe installed as shown upon completion.

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored + Rotary open hole	**Comacchio GEO 601**	**Scott Pincher**	**KWhitcombe + MSummersall + MSummersall**	**ADingle + ADingle + ADingle +**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH7**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**11.11.14** End: **12.11.14**	**24.65**	**E:234898.6 N:391949.7**	**3** of **4**

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00					Air+Mist (Grey)	(0:14:00)				weak to medium strong very closely spaced to closely spaced very narrow to narrow bands of very narrowly foliated greyish green PHYLLITE. (New Harbour Group - PSAMMITE)		15	10	
10.00					Air+Mist (Grey)	(0:18:00)						14		
11.00				240 400 2,000	Air+Mist (Grey)	(0:15:00)						13	(5.20)	
12.00					Air+Mist (Grey)	(0:10:00)						12	12	
13.00													13	

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Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
11/11/14	16:30	7.70	7.70	146	5.80

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored + Rotary open hole	**Comacchio GEO 601**	**Scott Pincher**	**KWhitcombe + MSummersall + MSummersall**	**ADingle + ADingle + ADingle +**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH7**

Contract Ref:	Start: **11.11.14**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	End: **12.11.14**	**24.65**	**E:234898.6 N:391949.7**	**4** of **4**

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
				240 400 2,000	Air+Mist (Grey) ↓	(0:10:00) ↓						11 10.70	13.95	
										Borehole terminated at 13.95m depth.			14	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
11/11/14	16:30	7.70	7.70	146	5.80

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary Cored + Rotary open hole	**Comacchio GEO 601**	**Scott Pincher**	**KWhitcombe + MSummersall + MSummersall**	**ADingle + ADingle + ADingle +**

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GINT_LIBRARY_V8_05.GLB LibVersion: v8_05 - Lib0006 PrjVersion: | Log XCUSTOM - SSL - 728599 - SUMMARY LOG | 728599_LOW_PRIORITY_WYLFA_NEWYDD_DETAILED_ONSHORE_GROUND_INVESTIGATION.GPJ - v8_05.
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH13**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**18.11.14** End: **19.11.14**	**31.69**	**E:234648.2 N:391385.5**	**1** of **3**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
0.00										MADE GROUND: Asphalt. (Made Ground)		31.66	0.03	
										MADE GROUND: Grey slightly sandy GRAVEL. (Made Ground)		31.49	0.20	
										Firm locally friable red brown sandy CLAY with low cobble content. (Superficial Deposits - Locally derived lodgement till)		31.29	0.40	
					Air+Mist (Grey)	(00:20:00)				Weak thinly banded grey slightly weathered PHYLLITE. (New Harbour Group - PHYLLITE)		31		1
1.00						(0:05:00)						30	(2.87)	
2.00					Air+Mist (Grey)	(00:30:00)								2
					Air+Mist (Grey)	(00:45:00)						29		3
3.00												28.42	3.27	
					Air+Mist (Grey)	(0:20:00)				Medium strong narrowly banded very narrowly foliated light brownish grey and dark bluish grey fresh to slightly weathered PHYLLITE. (New Harbour Group - PHYLLITE)		28		4
4.00				20 80 290		(0:25:00)								

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
18/11/14	16:30	3.15	3.00	146	Dry
19/11/14	08:15	3.15	3.15	146	Dry
19/11/14	16:00	12.40	12.40	146	1.75

General Remarks

1. Location CAT and Genny scanned prior to commencement.
2. Hand dug inspection pit GL to 0.40m depth. (IP)
3. No groundwater encountered.
4. Rotary open hole drilling from 0.40m to 1.40m depth and 2.00m to 3.15m depth on 18/11/2014.
5. Rotary cored drilling from 1.40m to 2.00m depth and 3.15m to 12.40m depth with air mist flush between 18/11/2014 and 19/11/2014.

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Comacchio GEO 601**	**Scott Pincher**	**MHoness + WDixon + WDixon**	**ADingle + ADingle + ADingle +**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH13**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**18.11.14** End: **19.11.14**	**31.69**	**E:234648.2 N:391385.5**	**2** of **3**

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
5.00				20 80 290	Air+Mist (Grey)	(0:25:00)						27	(2.50)	
6.00				100 100 840	Air+Mist (Grey)	(0:35:00)				Medium strong very narrowly to narrowly banded very narrowly foliated purple and bluish green fresh PHYLLITE. (New Harbour Group - PHYLLITE)		26 25.92	5.77	
7.00					Air+Mist (Grey)	(0:42:00)						25		
8.00				320 780 1,100	Air+Mist (Grey)	(0:40:00)						24 23	(5.55)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
18/11/14	16:30	3.15	3.00	146	Dry
19/11/14	08:15	3.15	3.15	146	Dry
19/11/14	16:00	12.40	12.40	146	1.75

General Remarks

6. Groundwater monitoring standpipe installed as shown upon completion.

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Comacchio GEO 601**	**Scott Pincher**	**MHoness + WDixon + WDixon**	**ADingle + ADingle + ADingle +**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa Newydd Detailed Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**RGM-BH13**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
728599	**18.11.14** End: **19.11.14**	**31.69**	**E:234648.2 N:391385.5**	**3** of **3**

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00					Air+Mist (Grey)	(0:40:00)						22	10	
10.00				320 780 1,100	Air+Mist (Grey)	(0:48:00)						21	11	
11.00										Medium strong to strong very narrowly to narrowly banded disturbed dark green fine grained fresh PSAMMITE with medium strong extremely closely to very closely spaced very narrow lenticular bands of very narrowly foliated brownish green PHYLLITE. (New Harbour Group - PSAMMITE)		20.37	11.32	
12.00				40 160 530	Air+Mist (Grey)	(0:45:00)						20	(1.08) 12	
										Borehole terminated at 12.40m depth.		19.29	12.40	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
18/11/14	16:30	3.15	3.00	146	Dry
19/11/14	08:15	3.15	3.15	146	Dry
19/11/14	16:00	12.40	12.40	146	1.75

General Remarks

All dimensions in metres | Scale: **1:25** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Reviewed By:
Inspection pit + Rotary open hole + Rotary Cored	**Comacchio GEO 601**	**Scott Pincher**	**MHoness + WDixon + WDixon**	**ADingle + ADingle + ADingle +**

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WYL-SSL-SDT-LOG-00001

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH509

Contract Ref:	Start: 15.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 18.04.11	17.944	E:234980.7 N:393348.6	1 of 1

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Grass over TOPSOIL of brown silty sandy CLAY. (Topsoil)	17.644	0.30	
0.50	1	ES				Firm brown mottled orange slightly sandy slightly gravelly CLAY. Gravel is fine to coarse subrounded to subangular with occasional cobbles of chert and occasional psammite and occasional tabular platy subangular medium to coarse gravel of phyllite. Occasional black nodules (possibly organic?). At 1.60m depth rare fine possible brick fragments and grey crumbly nodules (possibly reworked ground?). (Possible Made Ground)		(1.30)	
0.60	1	D					16.344	1.60	
1.00	2	D							
1.40	3	D							
1.50-1.95	4	SPT	N=15						
1.50	4	D							
1.50-1.95	5	B							
						Firm brown mottled orange slightly sandy slightly gravelly CLAY. Gravel is fine to coarse subrounded to subangular with occasional cobbles of chert and occasional psammite and occasional tabular platy subangular medium to coarse gravel of phyllite. Occasional black nodules (possibly organic?). (Unit B1)		(1.60)	
2.40	6	D							
2.50-2.95	7	U	200 blows			. . . at approximately 1.70m depth occasional purple red mottling of clay around gravel (possible iron oxide due to moderate weathering?).	14.744	3.20	
3.40	8	D				Stiff dark brown dark grey becoming very gravelly CLAY. Gravel is fine to coarse subrounded to subangular psammite and phyllite and rare red crumbly nodules (possible glacial till?). (Unit B1)			
3.50-3.95	9	SPT	N=45						
3.50-3.95	10	B							
3.50	9	D							
4.40	11	D							
4.50-	11	$SPT_{(NR)}$							
4.50-4.95	12	B						(4.60)	
5.90	13	D							
6.00-6.45	14	SPT	N=43						
6.00	14	D							
6.00-6.45	15	B							
7.00	1	W							
7.40	16	D							
7.50-7.71	16	$SPT_{(NR)}$	N=125*				10.144	7.80	
7.50-7.71	17	B							
7.90	18	D				Very weak to weak purple brown very narrowly foliated moderately weathered PHYLLITE with some brown discolouration/staining and crumbles under hand pressure (weathered rockhead). (Phyllite)	9.694	8.25	
8.00-8.14	18	$SPT_{(NR)}$	N=176*						
8.00-8.14	19	D							
8.15-8.25	19	SPT(c)	N=231*			Cable percussion borehole terminated at 8.25m depth due to refusal.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
15/04/11	12:00	3.50	3.00	150	Dry
18/04/11	08:00	8.25	3.00	150	Dry

Chiselling		
From	To	Duration (hh:mm)
7.60	7.70	00:30
8.00	8.15	01:00

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 7.75m depth.
3. Borehole dry.
4. Hammer Serial No: 2011-H2

All dimensions in metres | Scale: 1:50

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	Dando 2000	RW	GSherwood	

GINT_LIBRARY_V8_04.GLB|CABLE PERCUSSION LOG | 725061_WYLFA.GPJ - v8_04 | 25/11/11 - 13:59 | KJ ● = datamarker used throughout reporting for current exploratory position.
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WYL-SSL-SDT-LOG-00002

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH512

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	03.05.11	17.867	E:235342.4 N:393197.2	1 of 1
	End: 03.05.11			

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						MADE GROUND: BALLAST (MADE GROUND)	17.667	0.20	
						Soft dark brown silty slightly gravelly CLAY. Gravel is fine to coarse subrounded to angular phyllite. (Topsoil)	17.217	0.65	
						Firm light grey occasional mottled orange slightly silty CLAY with rare fine subrounded gravel of purple phyllite. (Unit B1)			
1.40	1	D							
1.50-1.95	2	SPT	N=17					(2.85)	
1.50	2	D							
1.50-1.95	3	B							
2.40	4	D							
2.50-2.95	5	U	39 blows			. . . below 2.40m depth becoming brown to orange in colour and slightly gravelly. Gravel is fine subrounded to subangular gravel of phyllite, psammite and flint.			
3.00	1	W		▽1					
3.40	6	D		▼1			14.367	3.50	
3.50-3.95	7	SPT	N=19			Medium dense brown and orange fine to medium subangular to subrounded clayey slightly gravelly SAND. Gravel is fine occasionally medium to coarse subangular to subrounded phyllite, psammite and chert. (Unit D)	14.067	3.80	
3.50	7	D							
3.50-3.95	8	B						(0.80)	
4.40	9	D				Brown green subangular to subrounded fine to coarse slightly weathered PSAMMITE/PHYLLITE recovered as gravel with occasional chert (possibly beginning of weathered rockhead?). (Psammite)	13.267	4.60	
4.50-4.89	10	SPT	N=62*					(0.56)	
4.50	10	D							
4.50-4.89	11	B							
4.90-5.13	12	SPT(c)	N=100*			Medium strong purple mottled brown very narrowly foliated moderately weathered PHYLLITE (which crumbles under hand pressure) recovered as fine to coarse subangular to subrounded slightly clayey gravel. (possible weathered rockhead?). (Phyllite)	12.707	5.16	
						Cable percussion borehole terminated at 5.16m depth.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
03/05/11	10:00	3.50	3.00	150	3.50

Chiselling		
From	To	Duration (hh:mm)

General Remarks

1. Machine dug inspection trench dug to 1.20m depth. Trench shared with BH512R.
2. Water strike at 3.5m depth.
3. 50mm standpipe installed to 3.7m depth.
4. Hammer Serial No: 2011-H2

All dimensions in metres | Scale: 1:50

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	Dando 2000	RW	GSherwood	SAT

GINT_LIBRARY_V8_04.GLB|CABLE PERCUSSION LOG | 725061_WYLFA.GPJ - v8_04 | 25/11/11 - 14:00 | KJ ● = datamarker used throughout reporting for current exploratory position.
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH512R

Contract Ref:	Start: 04.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 09.05.11	18.004	E:235341.8 N:393197.4	1 of 10

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
0.00					Air	(00:20:00)				MADE GROUND: BALLAST (Made Ground)		17.804	0.20	
										Soft dark brown silty slightly gravelly CLAY. (Topsoil)		17.354	(0.45) 0.65	
1.00										Firm light grey occasional mottled orange silty CLAY with rare fine subrounded gravel of purple phyllite. (Drift Deposits - Unit B1)		17	1	
2.00												16	(2.85) 2	
3.00												15	3	
										Brown and orange clayey slightly gravelly SAND. (Drift Deposits - Unit D)		14.504	3.50	
												14.204	(0.30) 3.80	
4.00										Brown green subangular to subrounded fine to coarse clayey slightly weathered GRAVEL of Psammite or Phyllite (possibly beginning of weathered rockhead?). (New Harbour Group - Psammite)		14	4 (0.80)	
										Purple mottled brown very narrowly foliated PHYLLITE (which crumbles under hand pressure) recovered as fine to coarse subangular to subrounded slightly		13.404	4.60	
													5	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
04/05/11		1.50	None	99	1.50
05/05/11	08:00	12.20	6.60	99	-
06/05/11	08:00	35.70	6.60	99	-
09/05/11	11:00	41.70	6.60	99	-

General Remarks

1. Machine dug inspection trench dug to 1.20m depth. Trench shared with BH512R.
2. 50mm standpipe installed to 16.0m depth on completion of hydro testing.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Fraste	GF	BSaimen + JWickenden	BNS

GINT_LIBRARY_V8_04.GLB|XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 16:06 | MJB
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH512R

Contract Ref:	Start: 04.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 09.05.11	18.004	E:235341.8 N:393197.4	2 of 10

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
5.00					Air	(00:00:00)				clayey gravel. (New Harbour Group - Phyllite)				
													(2.00)	
6.00												12	6	
												11.404	6.60	
				100 160 180						Very weak to weak green narrowly to very thinly banded fine to medium slightly weathered PSAMMITE with weak extremely to very closely spaced purplish very narrow to very thin bands of very narrowly foliated fresh phyllite. (New Harbour Group - Psammite)		11	(0.85) 7	
7.00				NI 50 70										
				NI 120 430								10.554	7.45	
										Soft brown slightly gravelly CLAY. (New Harbour Group - Phyllite)		10.404	7.60	
8.00				10 100 200	Mist					Weak very narrowly foliated purple brown slightly weathered PHYLLITE with extremely to very closely spaced green lenticular elongated very narrow to very thin fine to medium psammite (possible mylonitic fabric) with extremely closely spaced en echelon sigmoidal/lenticular calcite and parallel array of calcite veins. (New Harbour Group - Phyllite)		10	8 (1.55)	
9.00				NI 210 380						Strong green very narrowly to thinly banded fine to medium slightly weathered to fresh PSAMMITE with extremely closely to closely spaced green very narrowly to medium banded fresh phyllite. (New Harbour Group - Psammite)		9	9	
												8.854	9.15	
													(1.45)	
													10	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
04/05/11		1.50	None	99	1.50
05/05/11	08:00	12.20	6.60	99	-
06/05/11	08:00	35.70	6.60	99	-
09/05/11	11:00	41.70	6.60	99	-

General Remarks

1. Machine dug inspection trench dug to 1.20m depth. Trench shared with BH512R.
2. 50mm standpipe installed to 16.0m depth on completion of hydro testing.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Fraste	GF	BSaimen + JWickenden	BNS

GINT_LIBRARY_V8_04.GLB|XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 16:06 | MJB
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WYL-SSL-SDT-LOG-00002

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH512R

Contract Ref:	Start: 04.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 09.05.11	18.004	E:235341.8 N:393197.4	3 of 10

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
10.00				NI 210 380	Mist							7.404	10.60	
				20 40 60						Weak to very weak very narrowly foliated green and red slightly weathered PHYLLITE with en echelon lenticular calcite veins. (New Harbour Group - Phyllite)		7	(0.70) 11	
11.00				NI 130 270								6.704	11.30	
				NI 40 100						Very weak to weak green narrowly to very thin bands of fine to medium fresh PSAMMITE with extremely closely to very closely spaced narrow to very thin bands of green phyllite. (New Harbour Group - Psammite)		6	12	
12.00				NI 190 290									(2.70)	
13.00												5	13	
				40 230 580								4.004	14.00	
14.00				NI						Very weak to weak very narrowly foliated green fresh PHYLLITE with extremely closely spaced lenticular green fine to medium psammite with calcite veins and patches. (New Harbour Group - Phyllite)		4	(1.00)	
				30 40								3.004	15.00	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
04/05/11		1.50	None	99	1.50
05/05/11	08:00	12.20	6.60	99	-
06/05/11	08:00	35.70	6.60	99	-
09/05/11	11:00	41.70	6.60	99	-

General Remarks

1. Machine dug inspection trench dug to 1.20m depth. Trench shared with BH512R.
2. 50mm standpipe installed to 16.0m depth on completion of hydro testing.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Fraste**	**GF**	**BSaimen + JWickenden**	**BNS**

GINT_LIBRARY_V8_04.GLB|XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 16:06 | MJB
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH512R

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	04.05.11	18.004	E:235341.8 N:393197.4	4 of 10
	End: 09.05.11			

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
15.00				60						Weak greenish brown narrowly to very thinly banded fine to medium fresh PSAMMITE with brown/green narrow bands of very narrowly foliated phyllite with sigmoidal and parallel array of calcite veins. (New Harbour Group - Psammite)			(1.30)	
				50 110 160								2	16	
16.00												1.704	16.30	
										Strong green fine to medium very narrowly to very thinly banded fresh PSAMMITE with extremely closely to very closely spaced very narrowly foliated very narrow bands of green phyllite. (New Harbour Group - Psammite)			(0.87)	
17.00												1	17	
												0.834	17.17	
				NI 430 1730						Strong green very narrowly foliated fresh PHYLLITE with occasional lenticular (8 x 50mm) elongated very narrow to narrow bands of fine to medium psammite. (New Harbour Group - Phyllite)			(1.08)	
18.00												0	18	
												-0.246	18.25	
										Weak becomes strong very narrowly foliated green and purple brown fresh PHYLLITE with extremely closely to very closely spaced lenticular green fine grained psammite (3 x 40mm) (possible grain-tail complex associated with mylonitic fabric) and en echelon calcite veins. (New Harbour Group - Phyllite)				
19.00												-1	19	
													20	

Mist

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
04/05/11		1.50	None	99	1.50
05/05/11	08:00	12.20	6.60	99	-
06/05/11	08:00	35.70	6.60	99	-
09/05/11	11:00	41.70	6.60	99	-

General Remarks

1. Machine dug inspection trench dug to 1.20m depth. Trench shared with BH512R.
2. 50mm standpipe installed to 16.0m depth on completion of hydro testing.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Fraste	GF	BSaimen + JWickenden	BNS

GINT_LIBRARY_V8_04.GLB|XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 16:06 | MJB
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WYL-SSL-SDT-LOG-00002

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH512R

Contract Ref:	Start: 04.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 09.05.11	18.004	E:235341.8 N:393197.4	5 of 10

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
20.00				NI 430 1730	Mist								(3.95)	
21.00				40 250 580								-3	21	
22.00				60 90 140								-4	22	
										Strong green extremely closely to very closely spaced lenticular very narrow to very thin bands of fine to medium fresh PSAMMITE with extremely closely to very closely spaced very narrowly foliated brown phyllite with randomly orientated ptygmatic veins of chlorite/epidote and extremely closely spaced parallel array of sigmoidal/lenticular calcite veins. (New Harbour Group - Psammite)		-4.196	22.20	
23.00				150 390 950								-5	23	
													(3.10)	
24.00												-6	24	
													25	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
04/05/11		1.50	None	99	1.50
05/05/11	08:00	12.20	6.60	99	-
06/05/11	08:00	35.70	6.60	99	-
09/05/11	11:00	41.70	6.60	99	-

General Remarks

1. Machine dug inspection trench dug to 1.20m depth. Trench shared with BH512R.
2. 50mm standpipe installed to 16.0m depth on completion of hydro testing.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Fraste**	**GF**	**BSaimen + JWickenden**	**BNS**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH512R

Contract Ref:	Start: 04.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 09.05.11	18.004	E:235341.8 N:393197.4	6 of 10

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
25.00												-7.296	25.30	
				150 390 950	Mist					Strong to very strong very narrowly foliated purple brown fresh PHYLLITE with extremely closely spaced green very narrow to very thin lenticular fine to medium psammite (possible mylonitic texture). (New Harbour Group - Phyllite)				
26.00												-8	(1.55) 26	
												-8.846	26.85	
27.00				2140						Strong dark green very thin to thin bands of fine to coarse fresh PSAMMITE with extremely to very closely spaced very narrow to narrow bands of green phyllite with ptygmatic epidote/chlorite veins almost re aligned along the primary foliation. (New Harbour Group - Psammite)		-9	27	
28.00												-10	28	
29.00				580 600 1500								-11	29	
													30	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
04/05/11		1.50	None	99	1.50
05/05/11	08:00	12.20	6.60	99	-
06/05/11	08:00	35.70	6.60	99	-
09/05/11	11:00	41.70	6.60	99	-

General Remarks

1. Machine dug inspection trench dug to 1.20m depth. Trench shared with BH512R.
2. 50mm standpipe installed to 16.0m depth on completion of hydro testing.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Fraste**	**GF**	**BSaimen + JWickenden**	**BNS**

GINT_LIBRARY_V8_04.GLB|XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 16:06 | MJB
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH512R

Contract Ref:	Start: 04.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 09.05.11	18.004	E:235341.8 N:393197.4	7 of 10

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
30.00				580 600 1500										
31.00												-13	31	
32.00				3080	Mist							-14	32 (10.45)	
33.00												-15	33	
34.00				2020								-16	34	
													35	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
04/05/11		1.50	None	99	1.50
05/05/11	08:00	12.20	6.60	99	-
06/05/11	08:00	35.70	6.60	99	-
09/05/11	11:00	41.70	6.60	99	-

General Remarks

1. Machine dug inspection trench dug to 1.20m depth. Trench shared with BH512R.
2. 50mm standpipe installed to 16.0m depth on completion of hydro testing.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Fraste**	**GF**	**BSaimen + JWickenden**	**BNS**

GINT_LIBRARY_V8_04.GLB|XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 16:06 | MJB
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH512R

Contract Ref:	Start: 04.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 09.05.11	18.004	E:235341.8 N:393197.4	8 of 10

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
35.00				2020	Mist									
36.00												-18	36	
37.00												-19	37	
												-19.296	37.30	
										Very strong green narrowly to very thin bands of fine to coarse fresh METACONGLOMERATE with fine to coarse subrounded to rounded quartz and jasper/chert set in phyllitic matrix with rare very narrow bands of very narrowly foliated fresh phyllite with randomly orientated ptygmatic slightly sheared epidote/chlorite veins occasionally intersects with each other and randomly orientated quartz veins (up to 5mm). (New Harbour Group - METACONGLOMERATE)			(0.95)	
38.00				20 420 1240								-20	38	
												-20.246	38.25	
										Strong reddish brown very narrowly foliated fresh PHYLLITE with extremely closely spaced lenticular green/brown psammite with rare randomly orientated sheared/ptygmatic epidote/chlorite veins. (New Harbour Group - Phyllite)			(0.60)	
												-20.846	38.85	
39.00										Very strong purple brown and orange very narrowly foliated fresh PHYLLITE with extremely closely to very closely spaced narrow bands of lenticular fine to medium green psammite (Possible mylonitic fabric) Foliation is 20 - 40°. (New Harbour Group - Phyllite)		-21	39	
													(1.90)	
													40	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
04/05/11		1.50	None	99	1.50
05/05/11	08:00	12.20	6.60	99	-
06/05/11	08:00	35.70	6.60	99	-
09/05/11	11:00	41.70	6.60	99	-

General Remarks

1. Machine dug inspection trench dug to 1.20m depth. Trench shared with BH512R.
2. 50mm standpipe installed to 16.0m depth on completion of hydro testing.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Fraste**	**GF**	**BSaimen + JWickenden**	**BNS**

AGS

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH512R

Contract Ref:	Start: 04.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 09.05.11	18.004	E:235341.8 N:393197.4	9 of 10

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
40.00														
				60 110 140								-22.746	40.75	
										very strong green narrowly to very thinly banded fine to medium fresh PSAMMITE with extremely to very closely spaced brown and green very narrowly foliated phyllite with extremely closely spaced sigmoidal green chlorite (partially replaced by quartz) veins. (New Harbour Group - Psammite)		-22.996	41.00	
41.00												-23	41	
													(0.70)	
										Very strong reddish/purple brown green fresh PHYLLITE with extremely closely to very closely spaced lenticular elongated fine to medium fresh psammite with randomly orientated sheared ptygmatic epidote veins. (New Harbour Group - Phyllite)		-23.696	41.70	
												-24	(0.50) 42	
42.00												-24.196	42.20	
				NI 550 1300	Mist					Medium strong greenish brown narrow bands fine to coarse fresh PSAMMITE with extremely closely spaced very narrow bands of very narrowly foliated green phyllite with randomly orientated ptygmatic and sheared light green epidote veins. (New Harbour Group - Psammite)			(0.70)	
										Very strong purple brown and green very narrowly foliated fresh PHYLLITE with extremely closely spaced lenticular elongated green fine to medium psammite. (New Harbour Group - Phyllite)		-24.896	42.90	
43.00												-25	43	
													(0.80)	
										Very strong extremely closely to very closely spaced lenticular elongated green fine to medium fresh PSAMMITE with extremely closely to very closely spaced very narrowly foliated green phyllite with randomly orientated ptygmatic and sheared epidote veins (1mm). (New Harbour Group - Psammite)		-25.696	43.70	
44.00												-26	44	
										Very strong purple brown very narrowly foliated fresh PHYLLITE with extremely closely spaced green lenticular narrow to very narrow bands of fine to medium psammite with ptygmatic green chlorite/epidote veins (partially replaced by quartz) (possibly mylonitic fabric). (New Harbour Group - Phyllite)			(1.30)	
												-26.996	45.00	
										Rotary borehole terminated at 45.00m depth.			45	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
04/05/11		1.50	None	99	1.50
05/05/11	08:00	12.20	6.60	99	-
06/05/11	08:00	35.70	6.60	99	-
09/05/11	11:00	41.70	6.60	99	-

General Remarks

1. Machine dug inspection trench dug to 1.20m depth. Trench shared with BH512R.
2. 50mm standpipe installed to 16.0m depth on completion of hydro testing.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Fraste**	**GF**	**BSaimen + JWickenden**	**BNS**

GINT_LIBRARY_V8_04.GLB|XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 16:06 | MJB
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WYL-SSL-SDT-LOG-00002

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH512R

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	04.05.11 End: 09.05.11	18.004	E:235341.8 N:393197.4	10 of 10

Mechanical Log					Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
Depth	TCR %	SCR %	RQD %	If (mm)										
45.00														

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
04/05/11		1.50	None	99	1.50
05/05/11	08:00	12.20	6.60	99	-
06/05/11	08:00	35.70	6.60	99	-
09/05/11	11:00	41.70	6.60	99	-

General Remarks

1. Machine dug inspection trench dug to 1.20m depth. Trench shared with BH512R.
2. 50mm standpipe installed to 16.0m depth on completion of hydro testing.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Fraste	GF	BSaimen + JWickenden	BNS

GINT_LIBRARY_V8_04.GLB|XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 16:06 | MJB
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00003

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH516A

Contract Ref:	Start: 19.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 20.04.11	15.333	E:235257.5 N:393342.2	1 of 1

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						MADE GROUND: Turf over TOPSOIL consisting of soft dark brown slightly gravelly CLAY. Gravel is fine to coarse subangular to angular phyllite. (Topsoil)	15.033	0.30	
0.50	1	B				POSSIBLE MADE GROUND: Firm to stiff dark brown very gravelly CLAY with a high cobble content. Gravel is fine to coarse subangular to angular phyllite. (Possible Made Ground)		(0.90)	
0.50	2	ES					14.133	1.20	
1.40	1	D				Firm to stiff light brown gravelly CLAY. Gravel is fine to medium occasional coarse subrounded gravel of purple phyllite and occasional quartz and chert. (Unit B1)		(1.20)	
1.50-1.95	1	$SPT_{(NR)}$	N=19						
1.50-1.95	2	B					12.933	2.40	
2.40	3	D				Firm to stiff light brown sandy slightly gravelly CLAY. Gravel is fine to medium subrounded to subangular phyllite. (Unit B1)		(1.20)	
2.50-2.95	4	U	30 blows						
3.40	5	D					11.733	3.60	
3.50-3.95	6	SPT	N=35			Purple very narrowly foliated moderately becoming slightly weathered PHYLLITE (weathered rockhead?). (Phyllite)		(1.01)	
3.50	6	D							
3.50-3.95	7	B							
4.00	8	D							
4.10-4.43	9	SPT	N=83*						
4.10	9	D					10.723	4.61	
4.50-4.69	10	SPT	N=130*			Cable percussion borehole terminated at 4.61m depth due to refusal.			
4.50	10	D							

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
20/04/11	09:00	2.80	2.50		2.80

Chiselling		
From	To	Duration (hh:mm)
4.20	4.50	01:00

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Pit moved 5 times due to boulders within the made ground.
3. Groundwater strike at 2.80m depth.
4. 50mm standpipe installed to 3.60m depth.
5. Hammer Serial No: 2011-H2

All dimensions in metres | Scale: 1:50

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	Dando 2000	RW	JWickenden + GSherwood	SAT

GINT_LIBRARY_V8_04.GLB|CABLE PERCUSSION LOG | 725061_WYLFA.GPJ - v8_04 | 25/11/11 - 14:09 | KJ.● = datamarker used throughout reporting for current exploratory position.
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00003

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH516R

Contract Ref:	Start: 07.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 15.04.11	15.389	E:235258.0 N:393340.1	1 of 5

Depth	Description of Strata	Reduced Level	Depth (Thickness)
0.00	Turf over TOPSOIL consisting of soft dark brown slightly gravelly CLAY with abundant fine rootlets. (Made Ground - Topsoil)	15.089	0.30
	MADE GROUND: Stiff dark brown sandy gravelly CLAY with a low cobble content. (Made Ground)	14.589	(0.50) 0.80
1.00	POSSIBLE MADE GROUND: Stiff dark brown slightly gravelly CLAY. (Made Ground - Possible Made Ground)	14.189	1.20
	Firm to stiff light brown gravelly CLAY. (Drift Deposits - Unit B1)		(1.20)
2.00		12.989	2.40
	Firm to stiff light brown sandy slightly gravelly CLAY. (Drift Deposits - Unit B1)		(1.20)
3.00		11.789	3.60
	Purple very narrowly foliated moderately becoming slightly weathered PHYLLITE (weathered rockhead?). (New Harbour Group - Phyllite)		(1.10)
4.00		10.689	4.70
	Medium strong thin to very thin bands of very narrowly foliated purple slightly weathered PHYLLITE with closely to medium spaced very thin lenticular bands of green grey fine grained psammite. (New Harbour Group - Phyllite)		
5.00			
6.00			
7.00			
8.00			

Mechanical Log: TCR %, SCR %, RQD %, If (mm)

If (mm): NI 20 150; NI 150 300 750; 30 120 300; NI 80 320; 40 110 160; 30 160 220

Flush Returns & Details: Air; Water

Drill Time (hh:mm:ss): (00:15:00); (00:02:00)

Sampling; Backfill & Instrumentation; Water; Fracture Log

Material Graphic Legend

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
11/04/11	17:30	5.35	4.30	101	3.70
12/04/11	08:30	5.35	4.40	101	3.30
12/04/11	17:15	11.00	9.00	101	4.80
13/04/11	08:20	11.00	9.00	101	3.60
13/04/11	17:45	26.20	9.00	101	2.80
14/04/11	08:30	26.20	9.00	101	3.10
14/04/11	17:45	37.15	9.00	101	1.80
15/04/11	08:30	37.15	9.00	101	4.10

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 16.6m depth.

All dimensions in metres | Scale: 1:50 | Inclination: Vertical | Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Comacchio MC405	SP	JWickenden + JPhelan	GS+JTW

AGS

GINT_LIBRARY_V8_04.GLB!XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 16:32 | MJB
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00003

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH516R

Contract Ref:	Start: 07.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 15.04.11	15.389	E:235258.0 N:393340.1	2 of 5

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00				40 110 130	Water							6	(9.50)	
				20 60 90										
10.00				NI 130 450								5	10	
11.00				50 100 140								4	11	
12.00				120 220 390								3	12	
				30 120 170										
13.00												2	13	
14.00										Medium strong very narrow to very thin bands of very narrowly foliated purple and green grey slightly weathered PHYLLITE with extremely to very closely spaced lenticular very narrow to narrow bands of green grey fine grained psammite. (New Harbour Group - Phyllite)		1.189	14 14.20	
												1	(0.70)	
15.00				40 360 670								0.489	14.90 15	
												0		
16.00										Medium strong to strong very thin to thin bands of green grey fine grained slightly weathered PSAMMITE with extremely to very closely spaced very narrow bands of very narrowly foliated green grey and purple phyllite. (New Harbour Group - Psammite)		-1	16	
17.00												-2	17	
													18	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 16.6m depth.

All dimensions in metres | Scale: **1:50** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Comacchio MC405**	**SP**	**JWickenden + JPhelan**	**GS+JTW**

AGS

GINT_LIBRARY_V8_04.GLB!XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 16:32 | MJB
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00003

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH516R

Contract Ref:	Start: 07.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 15.04.11	15.389	E:235258.0 N:393340.1	3 of 5

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
18.00														
												-3	(6.70)	
19.00				40 360 670								-4	19	
20.00												-5	20	
21.00				150 175 200								-6	21	
												-6.211	21.60	
22.00					Water					Medium strong narrowly foliated purple slightly weathered PHYLLITE with very closely to closely spaced very narrow lenticular bands (appears as lenses) of green grey fine grained psammite. (New Harbour Group - Phyllite)		-6.611	22.00	
												-7	22	
23.00										Medium strong to strong very thin to thin lenticular bands of green grey fine grained fresh PSAMMITE with extremely to very closely spaced very narrowly foliated purple and green grey phyllite. (New Harbour Group - Psammite)		-8	23	
24.00				80 280 960								-9	24	
25.00												-10	25	
26.00												-11	26	
													(8.90)	
													27	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 16.6m depth.

All dimensions in metres | Scale: **1:50** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Comacchio MC405**	**SP**	**JWickenden + JPhelan**	**GS+JTW**

AGS

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STRUCTURAL SOILS

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH516R

Contract Ref:	Start: 07.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 15.04.11	15.389	E:235258.0 N:393340.1	4 of 5

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
27.00				10 170 250	Water							-12		
28.00												-13	28	
29.00				70 420 1970								-14	29	
30.00												-15	30	
												-15.511	30.90	
31.00										Medium strong thin to narrow bands of very narrowly foliated purple slightly weathered PHYLLITE with closely spaced very thin bands of blue grey fine grained psammite. (New Harbour Group - Phyllite)		-16	(1.78)	
32.00												-17	32	
												-17.291	32.68	
										Strong blue grey fine to coarse grained narrowly foliated slightly weathered METACONGLOMERATE consisting of subrounded aligned clasts of psammite and quartzite. (New Harbour Group - METACONGLOMERATE)		-17.761	33.15	
33.00				200 720 1150								-18	(0.65)	
												-18.411	33.80	
										Medium strong to strong very narrow to narrow bands of very narrowly foliated purple slightly weathered PHYLLITE with extremely to very closely spaced very thin lenticular bands of blue grey fine grained psammite. (New Harbour Group - Phyllite)		-18.811	34.20	
34.00												-19	34	
										Medium strong to strong green grey fine grained slightly weathered PSAMMITE. (New Harbour Group - Psammite)				
35.00												-20	35	
										Medium strong very narrow to narrow bands of very narrowly foliated purple slightly weathered PHYLLITE with			(3.17)	
													36	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 16.6m depth.

All dimensions in metres | Scale: **1:50** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Comacchio MC405**	**SP**	**JWickenden + JPhelan**	**GS+JTW**

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00003

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH516R

Contract Ref:	Start: 07.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 15.04.11	15.389	E:235258.0 N:393340.1	5 of 5

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
36.00										extremely closely spaced very thin lenticular bands of blue grey fine grained psammite. (New Harbour Group - Phyllite)		-21		
37.00				200 720 1150									37	
												-21.981	37.37	
										Medium strong highly disturbed very narrow bands of purple and blue grey fine to coarse grained fresh PSAMMITE consisting of angular to subangular clasts of psammite randomly set in a purple poorly foliated phyllite matrix. (New Harbour Group - Psammite)		-22	(0.96)	
38.00					Water								38	
				20 130 140								-22.941	38.33	
										Medium strong to strong very thin to thin lenticular bands of green grey fine to medium grained fresh PSAMMITE with extremely to very closely spaced very narrow bands of very narrowly foliated purple phyllite. (New Harbour Group - Psammite)		-23	(1.37)	
39.00				60 220 770								-24	39	
												-24.311	39.70	
										Medium strong of very narrowly foliated red fresh to locally slightly weathered PHYLLITE with closely spaced very narrow lenticular bands of fine grained grey psammite. (New Harbour Group - Phyllite)			(0.60)	
40.00													40	
												-24.911	40.30	
										Rotary borehole terminated at 40.30m depth.				

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 16.6m depth.

All dimensions in metres	Scale: 1:50	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Comacchio MC405	SP	JWickenden + JPhelan	GS+JTW

AGS

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH520

Contract Ref:	Start: 10.03.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 14.03.11	15.446	E:235001.5 N:393411.4	1 of 2

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						MADE GROUND: Grass over TOPSOIL consisting of dark brown sandy slightly gravelly CLAY. Gravel is concrete, phyllite and psammite. (Made Ground - Topsoil)	15.146	0.30	
0.50	1	B				MADE GROUND: Soft to firm dark brown sandy gravelly CLAY with a low coble content. Gravel is fine to coarse subangular to angular phyllite, psammite, concrete and metal. (Made Ground)			
0.50	2	ES							
1.60-2.00	1	B		11/03 08:00					
2.40	4	D						(4.10)	
2.50-2.95	5	U	63 blows						
3.40	6	D		14/03					
3.50-3.95	7	SPT	N=18						
3.50	7	D							
3.50-3.95	8	D					11.046	4.40	
4.40	9	D				Firm becoming stiff with depth dark grey slightly sandy slightly gravelly CLAY. Gravel is fine to coarse subrounded to angular psammite and phyllite. (Drift Deposits - Unit C)			
4.50-4.95	10	U	59 blows						
5.90	11	D						(3.30)	
6.00-6.32	12	SPT	N=79*						
6.00	12	D							
6.00-6.32	13	B							
7.40	14	D							
7.50-7.95	15	SPT	N=28				7.746	7.70	
7.50	15	D				Stiff dark grey slightly gravelly CLAY. Gravel is fine to coarse subrounded to angular phyllite and psammite. (Drift Deposits - Unit C)			
7.50-7.95	16	B							
8.00	17	D							

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
10/03/11		4.40	4.40	150	-
11/03/11	08:00	4.40	4.40	150	1.90
11/03/11		9.00	9.00	150	1.90
14/03/11	10:00	12.50	12.00	150	12.50
14/03/11		16.40	12.00	150	3.90

Chiselling

From	To	Duration (hh:mm)
15.80	16.00	01:00

General Remarks

1. Hand dug inspection pit to 0.55m depth.
2. Water strike at 12.5m depth.
3. 50mm standpipe installed to 14.9m depth.
4. Hammer Serial No: 2011-H2

All dimensions in metres | Scale: 1:50

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	Dando 2000	RW	JWickenden + GSherwood	SAT

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00003

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH520

Contract Ref:	Start: 10.03.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 14.03.11	15.446	E:235001.5 N:393411.4	2 of 2

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
8.90	18	D							
9.00-9.45	19	U	73 blows						
							5.046	(2.70)	
10.50	20	D				Firm grey green slightly silty CLAY. (Drift Deposits - Unit C)			
10.50-10.95	21	B							
								(2.05)	
11.90	22	D							
12.00-12.45	23	U	150 blows	1					
							2.996	12.45	
12.45-12.55	24	D				Firm orange brown slightly sandy CLAY containing possible gravel of psammite and phyllite. (Drift Deposits - Unit C)			
13.00	1	W							
13.40	25	D							
13.50	26	D				. . . below 13.50m depth becoming very sandy.			
13.50-13.95	27	B						(2.75)	
14.90	28	D							
15.00-15.27	29	D					0.246	15.20	
15.00-15.27	30	B				Weak to moderately weak thinly laminated friable purple slightly to moderately weathered PHYLLITE with pearly lustre. Breaks easily along planar smooth bedding surfaces. (New Harbour Group - Phyllite)			
15.90	31	D				. . . below 15.90m depth becoming reddish purple.		(1.20)	
16.00-16.11	32	D					-0.954	16.40	
						Cable percussion borehole terminated at 16.40m depth.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
10/03/11		4.40	4.40	150	-
11/03/11	08:00	4.40	4.40	150	1.90
11/03/11		9.00	9.00	150	1.90
14/03/11	10:00	12.50	12.00	150	12.50
14/03/11		16.40	12.00	150	3.90

Chiselling		
From	To	Duration (hh:mm)

General Remarks

1. Hand dug inspection pit to 0.55m depth.
2. Water strike at 12.5m depth.
3. 50mm standpipe installed to 14.9m depth.
4. Hammer Serial No: 2011-H2

All dimensions in metres | Scale: 1:50

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	Dando 2000	RW	JWickenden + GSherwood	SAT

GINT_LIBRARY_V8_04.GLB!XCUSTOM - SSL - 725061 - CP LOG | 725061_WYLFA.GPJ - v8_04 | 25/11/11 - 15:39 | KJ.
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00003

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH523BR

Contract Ref:	Start: 01.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 12.04.11	19.741	E:235489.3 N:393971.5	1 of 15

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00								Open holed.		19	1	
1.00										18	2	
2.00				OH						17	3	
3.00										16	4	
4.00										15	5	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
02/04/11	08:30	15.00	15.00	177	-
02/04/11	16:00	33.30	15.00	139	7.00
03/04/11	09:00	33.30	15.00	121	8.50
03/04/11	16:00	43.00	15.00	121	12.70
04/04/11	08:15	43.00	15.00	121	8.80
04/04/11	17:30	48.00	15.00	121	13.71
05/04/11	08:15	49.50	15.00	121	8.96
05/04/11	14:15	51.00	15.00	121	9.26

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Borehole open holed in 7" to 15.0m depth and SW casing installed. Borehole then open holed in 5 1/2" to 30.0m depth and PW casing installed.
3. Twin 50mm standpipes installed: Deep standpipe to 51.90m depth and shallow to 20.0m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler	BNS

GINT_LIBRARY_V8_04.GLB|XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 21:37 | MJB
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00003

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH523BR

Contract Ref:	Start: 01.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 12.04.11	19.741	E:235489.3 N:393971.5	2 of 15

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
5.00												
										14	6	
6.00												
										13	7	
7.00				OH								
										12	8	
8.00												
										11	9	
9.00												
										10	10	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
06/04/11	08:15	51.00	15.00	121	8.96
06/04/11		55.50	15.00	121	12.79
07/04/11	08:30	55.50	15.00	121	8.96
07/04/11	17:45	63.00	15.00	121	12.11
08/04/11	08:15	63.00	15.00	121	8.96
08/04/11	11:45	64.00	15.00	121	13.57
12/04/11	08:30	67.50	15.00	121	8.95
12/04/11	14:30	70.50	15.00	121	14.70

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Borehole open holed in 7" to 15.0m depth and SW casing installed. Borehole then open holed in 5 1/2" to 30.0m depth and PW casing installed.
3. Twin 50mm standpipes installed: Deep standpipe to 51.90m depth and shallow to 20.0m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler	BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00003

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH523BR

Contract Ref:	Start: 01.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 12.04.11	19.741	E:235489.3 N:393971.5	3 of 15

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
10.00												
11.00										9	11	
12.00				OH						8	12	
13.00										7	13	
14.00										6	14	
										5	(30.00) 15	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Borehole open holed in 7" to 15.0m depth and SW casing installed. Borehole then open holed in 5 1/2" to 30.0m depth and PW casing installed.
3. Twin 50mm standpipes installed: Deep standpipe to 51.90m depth and shallow to 20.0m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler	BNS

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STRUCTURAL SOILS

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH523BR

Contract Ref:	Start: 01.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 12.04.11	19.741	E:235489.3 N:393971.5	4 of 15

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
15.00										4	16	
16.00										3	17	
17.00				OH						2	18	
18.00										1	19	
19.00										0	20	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Borehole open holed in 7" to 15.0m depth and SW casing installed. Borehole then open holed in 5 1/2" to 30.0m depth and PW casing installed.
3. Twin 50mm standpipes installed: Deep standpipe to 51.90m depth and shallow to 20.0m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler	BNS

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BOREHOLE LOG

Contract:	Client:	Borehole:
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Contract Ref:	Start: 01.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 12.04.11	19.741	E:235489.3 N:393971.5	5 of 15

Mechanical Log											
Depth	TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
20.00												
										-1	21	
21.00												
										-2	22	
22.00				OH								
										-3	23	
23.00												
										-4	24	
24.00												
										-5	25	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Borehole open holed in 7" to 15.0m depth and SW casing installed. Borehole then open holed in 5 1/2" to 30.0m depth and PW casing installed.
3. Twin 50mm standpipes installed: Deep standpipe to 51.90m depth and shallow to 20.0m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler	BNS

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BOREHOLE LOG

Contract:	Client:	Borehole:
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Contract Ref:	Start: 01.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 12.04.11	19.741	E:235489.3 N:393971.5	6 of 15

Mechanical Log					Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
Depth	TCR %	SCR %	RQD %	If (mm)								
25.00												
										-6	26	
26.00												
										-7	27	
27.00				OH								
										-8	28	
28.00												
										-9	29	
29.00												
										-10	30	
										-10.259	30.00	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Borehole open holed in 7" to 15.0m depth and SW casing installed. Borehole then open holed in 5 1/2" to 30.0m depth and PW casing installed.
3. Twin 50mm standpipes installed: Deep standpipe to 51.90m depth and shallow to 20.0m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler	BNS

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH523BR

Contract Ref:	Start: 01.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 12.04.11	19.741	E:235489.3 N:393971.5	7 of 15

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
30.00				NI 80 170				Medium strong to strong poorly very narrowly foliated (dipping at 20 - 30°) blue moderately to slightly weathered fine grained PSAMMITE (with possible moderately developed mylonitic fabric) composed of subrounded medium to coarse lenticular clasts of psammite in very narrowly foliated yellowish green phyllite matrix. (New Harbour Group - Psammite)		-11	(1.08)	
				90 190 240						-11.339	31.08	
31.00				30 60 110				Medium strong very narrowly foliated (dipping at 10 - 20°) reddish purple moderately to slightly weathered PHYLLITE with extremely closely spaced very narrow lenticular greenish blue fine grained psammite (possible moderately developed mylonitic fabric). (New Harbour Group - Phyllite)		-11.719	(0.38) 31.46	
								Medium strong to strong very narrowly foliated (dipping at 10 - 20°) yellowish green moderately to slightly weathered PHYLLITE with highly disturbed (possible mylonitic fabric) composed of subrounded fine to coarse clasts of phyllite in dark green matrix (possible fine grained psammite?). (New Harbour Group - Phyllite)		-12	(0.54)	
32.00				40 100 300						-12.259	32.00	
								Medium strong to strong bluish grey moderately to slightly weathered fine grained PSAMMITE with highly disturbed extremely closely spaced lenticular green phyllite fabric composed of subangular to subrounded fine to medium clasts of phyllite and psammite in a fine grained psammite matrix. (New Harbour Group - Psammite)		-12.539	32.28	
										-13	(1.18)	
33.00				NI NI NI				Medium strong to strong very narrowly foliated (dipping at 5 - 10°) pale greyish green and pale yellowish green slightly weathered PHYLLITE with highly disturbed fabric comprising subangular to subrounded fine to coarse lenticular clasts of phyllite in dark green "vein like" matrix (possibly of fine grained psammite). (New Harbour Group - Phyllite)		-13.719	33.46	
								Medium strong to strong pale bluish grey slightly weathered fine grained PSAMMITE with highly disturbed indistinct (possible brecciated appearance comprising subangular fine to medium clasts of pale pink orthoclase (?). (New Harbour Group - Psammite)		-14	(0.59)	
34.00				200 300 400						-14.309	34.05	
								Medium strong poorly very narrowly foliated (dipping at 10°) pale greenish blue locally pale green moderately to slightly weathered PHYLLITE with disturbed (possible brecciated appearance composed of angular to subrounded fine to coarse clasts of phyllite in dark green fine grained psammite matrix (matrix has "vein like" appearance). (New Harbour Group - Phyllite)		-14.779	(0.47) 34.52	
				50 80 110				*Description on next sheet*		-15		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Borehole open holed in 7" to 15.0m depth and SW casing installed. Borehole then open holed in 5 1/2" to 30.0m depth and PW casing installed.
3. Twin 50mm standpipes installed: Deep standpipe to 51.90m depth and shallow to 20.0m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler	BNS

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BOREHOLE LOG

Contract:	Client:	Borehole:
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Contract Ref:	Start: 01.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 12.04.11	19.741	E:235489.3 N:393971.5	8 of 15

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
35.00				50 80 110				Medium strong poorly very narrowly foliated (dipping at 15°) greenish blue moderately to slightly weathered PHYLLITE with indistinct locally highly disturbed extremely closely spaced very narrow lenticular greenish blue fine grained psammite (possible mylonitic fabric). (New Harbour Group - Phyllite)			(2.12)	
				200 220 230						-16		
36.00											36	
										-16.899	36.64	
								Strong very narrowly foliated (dipping at 10°) pale bluish green slightly weathered PHYLLITE with extremely closely spaced very narrow lenticular greenish blue fine grained psammite fabric. (New Harbour Group - Phyllite)		-17	(0.48)	
37.00										-17.379	37 37.12	
				50 310 1280				Medium strong to strong very narrowly foliated (dipping at 5 - 15°) greenish blue slightly weathered PHYLLITE with moderately with locally highly disturbed extremely closely spaced very narrow to narrow lenticular greenish blue fine grained psammite fabric. (New Harbour Group - Phyllite)				
										-18		
38.00											38	
										-19		
39.00											39	
				60 170 290						-20	(5.26)	
											40	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Borehole open holed in 7" to 15.0m depth and SW casing installed. Borehole then open holed in 5 1/2" to 30.0m depth and PW casing installed.
3. Twin 50mm standpipes installed: Deep standpipe to 51.90m depth and shallow to 20.0m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH523BR

Contract Ref:	Start: 01.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 12.04.11	19.741	E:235489.3 N:393971.5	9 of 15

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
40.00				NI NI NI						-21	41	
41.00				20 150 480						-22	42	
42.00								Medium strong to strong highly disturbed bluish grey slightly weathered fine to medium grained PSAMMITE narrowly to very thinly interbanded with very narrowly foliated highly disturbed green PHYLLITE. (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)		-22.639	42.38	
43.00				110 550 770						-23	(1.19) 43	
44.00								Strong narrowly foliated bluish green slightly weathered PHYLLITE with highly disturbed extremely closely spaced very narrow to narrow lenticular bluish green fine grained psammite fabric. (New Harbour Group - Phyllite)		-23.829	43.57	
										-24	44 (1.13)	
								Strong bluish green slightly weathered fine to medium grained PSAMMITE with bluish green phyllite with highly disturbed very narrowly foliated (possible		-24.959	44.70	
										-25	(0.60) 45	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Borehole open holed in 7" to 15.0m depth and SW casing installed. Borehole then open holed in 5 1/2" to 30.0m depth and PW casing installed.
3. Twin 50mm standpipes installed: Deep standpipe to 51.90m depth and shallow to 20.0m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler	BNS

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Contract Ref:	Start: 01.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 12.04.11	19.741	E:235489.3 N:393971.5	10 of 15

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
45.00								moderate to well developed mylonitic fabric) comprising subrounded to rounded fine to medium clasts of psammite and phyllite in dark green and green very narrowly foliated highly disturbed phyllite matrix. (New Harbour Group - Psammite)		-25.559	45.30	
				110 550 770				Medium strong to strong very narrowly foliated (subhorizontal) bluish green slightly weathered PHYLLITE with extremely to very closely spaced very narrow lenticular bluish green fine grained psammite fabric locally disturbed comprising subrounded to rounded lenticular medium clasts of phyllite in psammite (?) matrix (possible brecciated fabric). (New Harbour Group - Phyllite)		-26	46	
46.00												
				NI NI NI						-27	47 (3.68)	
47.00												
				NI 20 30						-28	48	
48.00												
				NI NI NI						-29		
				20 180 440						-29.239	48.98 49	
49.00								Medium strong to strong very narrowly foliated (dipping at 10 - 25°) bluish green slightly weathered PHYLLITE with extremely locally very closely spaced very narrow lenticular bluish green fine grained psammite fabric. (New Harbour Group - Phyllite)				
				NI 330 700						-30	(1.67)	
											50	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Borehole open holed in 7" to 15.0m depth and SW casing installed. Borehole then open holed in 5 1/2" to 30.0m depth and PW casing installed.
3. Twin 50mm standpipes installed: Deep standpipe to 51.90m depth and shallow to 20.0m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler	BNS

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BOREHOLE LOG

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Contract Ref:	Start: 01.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 12.04.11	19.741	E:235489.3 N:393971.5	11 of 15

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
50.00												
										-30.909	50.65	
								Medium strong to strong dark bluish green slightly weathered fine to medium grained PSAMMITE with occasional very narrow closely spaced bands of very narrowly foliated pale bluish green phyllite (dipping at 15°). (New Harbour Group - Psammite)		-31	(0.40)	
51.00				NI 330 700						-31.309	51.051	
								Medium strong slightly weathered dark bluish green fine to medium grained PSAMMITE narrowly to very thinly interbanded with very narrowly foliated pale green PHYLLITE with a disturbed extremely to very closely spaced lenticular fabric (possibly poorly developed mylonitic fabric). (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)		-32	(1.10)	
52.00										-32.409	52.15	
								Medium strong to strong very narrowly foliated (dipping at 15 - 25°) bluish green slightly weathered PHYLLITE with extremely closely spaced very narrow lenticular bluish green fine grained psammite fabric. (New Harbour Group - Phyllite)		-33	(1.05)	
53.00				20 240 1330						-33.459	53.20	
								Medium strong very narrowly foliated (dipping at 10 - 15°) pale green slightly weathered PHYLLITE with extremely closely spaced very narrow locally narrow lenticular bluish green fine grained psammite fabric (possible poorly to moderately developed mylonitic fabric). (New Harbour Group - Phyllite)		-34		
54.00				20 90 150								
				NI						-35		
				160 200							55	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Borehole open holed in 7" to 15.0m depth and SW casing installed. Borehole then open holed in 5 1/2" to 30.0m depth and PW casing installed.
3. Twin 50mm standpipes installed: Deep standpipe to 51.90m depth and shallow to 20.0m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler	BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00003

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH523BR

Contract Ref:	Start: 01.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 12.04.11	19.741	E:235489.3 N:393971.5	12 of 15

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
55.00				220 160 200 220								
				60 140 240						-36	(5.17)	
56.00											56	
				250 290 380						-37		
57.00											57	
				10 90 160						-38		
58.00											58	
				50 200 560				Medium strong to strong dark green very thinly to medium banded slightly weathered fine to medium grained PSAMMITE interbanded with very thin bands of very narrowly foliated locally highly disturbed pale green PHYLLITE locally with brownish green discolouration. (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)		-38.629	58.37	
59.00										-39	59	
				90 430 860						-40		
											60	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Borehole open holed in 7" to 15.0m depth and SW casing installed. Borehole then open holed in 5 1/2" to 30.0m depth and PW casing installed.
3. Twin 50mm standpipes installed: Deep standpipe to 51.90m depth and shallow to 20.0m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler	BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00003

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH523BR

Contract Ref:	Start: 01.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 12.04.11	19.741	E:235489.3 N:393971.5	13 of 15

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
60.00											(3.37)	
										-41		
61.00											61	
										-41.990	61.74	
								Medium strong very narrowly foliated highly disturbed pale green slightly weathered PHYLLITE with extremely closely spaced undulating rough randomly orientated intersecting incipient fractures and frequent subrounded brownish green medium clasts of (possible) chert. (New Harbour Group - Phyllite)		-42	(0.32)	
62.00										-42.319	62.06	
				90 430 860				Medium strong dark green slightly weathered fine to medium grained PSAMMITE. (New Harbour Group - Psammite)		-42.739	62.48	
								Medium strong very narrowly foliated pale green slightly weathered PHYLLITE with very closely to closely spaced very thin locally lenticular bands of green fine grained psammite. (New Harbour Group - Phyllite)		-43	(0.52)	
63.00										-43.259	63.00	
								Strong dark brownish green slightly weathered fine to medium grained PSAMMITE with narrow to very thin bands of medium strong very narrowly foliated green slightly weathered phyllite. (New Harbour Group - Psammite)			(0.77)	
										-44.029	63.77	
								Medium strong to strong very narrowly foliated (dipping at 15°) pale green slightly weathered PHYLLITE with localised disturbed fabric comprising subrounded lenticular medium clasts of green fine grained psammite and (possible chert?). (New Harbour Group - Phyllite)			64 (0.87)	
64.00										-44.899	64.64	
								Strong dark green fine to medium grained slightly weathered PSAMMITE with extremely closely to closely spaced narrow bands of pale green very narrowly foliated phyllite.		-45		
											65	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Borehole open holed in 7" to 15.0m depth and SW casing installed. Borehole then open holed in 5 1/2" to 30.0m depth and PW casing installed.
3. Twin 50mm standpipes installed: Deep standpipe to 51.90m depth and shallow to 20.0m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler	BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00003

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH523BR

Contract Ref:	Start: 01.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 12.04.11	19.741	E:235489.3 N:393971.5	14 of 15

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
65.00				90 430 860				(New Harbour Group - Psammite)				
				NI 90 270						-46	(1.69)	
66.00											66	
										-46.589	66.33	
								Medium strong very narrowly foliated pale green slightly weathered PHYLLITE with highly disturbed fabric cross cut by frequent microfaults and occasional lenticular inclusions of (possible) chert?. (New Harbour Group - Phyllite)		-46.859	66.60	
								Medium strong to strong narrowly to very thinly banded (dipping at 5 - 10°) brownish green fine to medium locally coarse slightly weathered PSAMMITE with extremely to very closely spaced very narrow bands of pale green phyllite. (New Harbour Group - Psammite)		-47	67	
67.00				120 240 1580							(1.64)	
										-48	68	
68.00										-48.499	68.24	
								Medium strong to strong very thinly to thinly banded very narrowly foliated pale green slightly weathered PHYLLITE with brownish green fine grained psammite. (New Harbour Group - Phyllite)		-49	69	
69.00				40 160 510							(2.26)	
										-50	70	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Borehole open holed in 7" to 15.0m depth and SW casing installed. Borehole then open holed in 5 1/2" to 30.0m depth and PW casing installed.
3. Twin 50mm standpipes installed: Deep standpipe to 51.90m depth and shallow to 20.0m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler	BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00003

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH523BR

Contract Ref:	Start: 01.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 12.04.11	19.741	E:235489.3 N:393971.5	15 of 15

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
70.00				40 160 510				Rotary borehole terminated at 70.50m depth.		-50.759	70.50	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Borehole open holed in 7" to 15.0m depth and SW casing installed. Borehole then open holed in 5 1/2" to 30.0m depth and PW casing installed.
3. Twin 50mm standpipes installed: Deep standpipe to 51.90m depth and shallow to 20.0m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler	BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00003

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH523R

Contract Ref:	Start: 14.03.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 21.03.11	19.741	E:235489.3 N:393971.4	1 of 8

Mechanical Log Depth	TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00								Grass over TOPSOIL comprising soft grey brown slightly sandy slightly gravelly silty CLAY. (Made Ground - Topsoil)		19.341	(0.40) 0.40	
								Soft light grey to light orange brown slightly sandy slightly gravelly slightly silty locally silty CLAY. (Drift Deposits - Unit B1)		19		
1.00											1 (1.55)	
										18		
										17.791	1.95	
2.00								Very stiff orangish brown slightly sandy slightly gravelly CLAY. (Drift Deposits - Unit B1)			2	
										17	(1.55)	
3.00											3	
										16.241	3.50	
								Hard orangish to greenish brown sandy gravelly CLAY. (Drift Deposits - Unit B1)		16		
4.00											4 (1.50)	
										15		
										14.741	5.00 5	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
14/03/11	18:00	4.50	4.50	121	0.00
15/03/11	17:30	7.50	5.00	121	2.14
16/03/11	08:15	7.50	6.00	121	3.80
16/03/11	17:30	15.00	6.00	121	3.36
17/03/11	08:15	15.00	6.00	121	7.36
17/03/11	17:45	16.50	15.00	121	4.27
19/03/11		24.50	15.00	121	8.10
20/03/11	08:00	30.50	30.50	121	18.00

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. No water strike.
3. Borehole abandoned at 36.0m depth, severely unstable ground conditions resulting in multiple instances of casing parting and hole collapses.
4. Borehole backfilled with 1:1 cement/bentonite grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored	Beretta T44	CG/CA	BSaimen + WAllwood	BNS

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WYL-SSL-SDT-LOG-00003

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH523R

Contract Ref:	Start: 14.03.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 21.03.11	19.741	E:235489.3 N:393971.4	2 of 8

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
5.00								Non intact recovered fine to coarse subangular slightly clayey GRAVEL of green and reddish brown moderately weathered phyllite and psammite (possible jointed/fractured zone). (New Harbour Group - Phyllite)		14 13.741	(1.00) 6.00	
6.00				NI				Very weak very narrowly foliated reddish brown slightly weathered PHYLLITE with occasional lenticular clasts of red phyllite/jasper and green psammite (<15mm) embedded within reddish brown phyllite matrix (possible grain- tail complex associated with possible mylonitic fabric) . (New Harbour Group - Phyllite)		13	(1.50) 7.50	
7.00				80 100 140						12.241		
8.00				NI 50 100				Very weak very narrowly foliated light green slightly weathered PHYLLITE with occasional green lenticular psammite and red phyllite/jasper (possible grain - tail complex associated with possible mylonitic fabric) set in light green phyllite matrix. (New Harbour Group - Phyllite)		12 11	(3.00) 10.50	
9.00				NI						10		

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
20/03/11	17:00	33.00	32.30	121	3.00
21/03/11	08:30	33.00	32.30	121	7.60
21/03/11	17:45	35.10	32.30	121	2.72
22/03/11	08:30	35.00	32.30	121	8.70

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. No water strike.
3. Borehole abandoned at 36.0m depth, severely unstable ground conditions resulting in multiple instances of casing parting and hole collapses.
4. Borehole backfilled with 1:1 cement/bentonite grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored	Beretta T44	CG/CA	BSaimen + WAllwood	BNS

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH523R

Contract Ref:	Start: 14.03.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 21.03.11	19.741	E:235489.3 N:393971.4	3 of 8

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
10.00				40 60 70						9.241	10.50	
								Loose light green and red fine to coarse slightly clayey SAND (Possible void infilled sand related to the 2nd episode of brittle faulting)). (New Harbour Group - Phyllite)		9	11	
11.00										8	(3.00) 12	
12.00				NR						7	13	
13.00										6.241	13.50	
								Very weak very narrowly foliated light greenish brown slightly weathered PHYLLITE with occasional lenticular green psammite clasts (5-15mm) set in light greenish brown phyllitic matrix (matrix 80% clasts 20%) possible grain- tail complex associated with possible Mylonitic fabric) Foliation fractures are 40 - 50° closely spaced planar rough open brown discolouration on fracture surface. (New Harbour Group - Phyllite)		6	14	
14.00				NI						5	(3.00) 15	
				50 450								

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. No water strike.
3. Borehole abandoned at 36.0m depth, severely unstable ground conditions resulting in multiple instances of casing parting and hole collapses.
4. Borehole backfilled with 1:1 cement/bentonite grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored	Beretta T44	CG/CA	BSaimen + WAllwood	BNS

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Contract Ref:	Start: 14.03.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 21.03.11	19.741	E:235489.3 N:393971.4	4 of 8

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
15.00				NR								
16.00										3.241	16.50	
								Weak very narrowly foliated light greenish brown slightly weathered PHYLLITE with occasional lenticular psammite clasts (5 - 15mm) (possible grain-tail complex associated with mylonitic texture) set in phyllitic matrix parallel to the foliation. (New Harbour Group - Phyllite)			(1.10)	
17.00				110 300 1100						2.141	17.60	
								Extremely weak to very weak very narrowly foliated light green slightly weathered PHYLLITE with occasional lenticular psammite clasts (3 - 10mm) set in light green phyllitic matrix. (New Harbour Group - Phyllite)			(0.40)	
18.00										1.741	18.00	
								Weak very narrowly foliated light green slightly weathered PHYLLITE with occasional fine to coarse subangular lenticular clasts set in phyllitic matrix (<40mm). (New Harbour Group - Phyllite)				
19.00				100 290 950								

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. No water strike.
3. Borehole abandoned at 36.0m depth, severely unstable ground conditions resulting in multiple instances of casing parting and hole collapses.
4. Borehole backfilled with 1:1 cement/bentonite grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored	Beretta T44	CG/CA	BSaimen + WAllwood	BNS

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BOREHOLE LOG

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Contract Ref:	Start: 14.03.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 21.03.11	19.741	E:235489.3 N:393971.4	5 of 8

Mechanical Log					Sampling	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	TCR %	SCR %	RQD %	If (mm)								
20.00				100 290 950							(5.00)	
21.00				50 280 600						-1 -2	21 22	
22.00										-3		
23.00				150 300 650				Weak very narrowly foliated light green slightly weathered PHYLLITE with occasional fine to coarse lenticular subangular to subrounded fine to medium psammite clasts set in light green foliated phyllite matrix (possible grain - tail complex associated with possible mylonitic fabric) along the direction of foliation. (New Harbour Group - Phyllite)		-3.259	23.00	
24.00				10 130 380						-4 -5	24 (3.60)	
											25	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. No water strike.
3. Borehole abandoned at 36.0m depth, severely unstable ground conditions resulting in multiple instances of casing parting and hole collapses.
4. Borehole backfilled with 1:1 cement/bentonite grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored	Beretta T44	CG/CA	BSaimen + WAllwood	BNS

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BOREHOLE LOG

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Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH523R

Contract Ref:	Start: 14.03.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 21.03.11	19.741	E:235489.3 N:393971.4	6 of 8

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
25.00				10 130 380								
				110 250 450						-6	26	
26.00										-6.859	26.60	
				10 60 110				Very weak narrowly foliated green slightly weathered PHYLLITE with occasional elongated rounded to subangular psammite clasts (2 - 20mm) (possible grain- tail complex associated with possible mylonitic fabric) set in foliated phyllitic matrix. (New Harbour Group - Phyllite)		-7	27	
27.00				NI						-8	(2.40)	
				100 150 550							28	
28.00										-9		
29.00				NI				Non intact and randomly fractured recovered as fine to coarse angular GRAVEL of moderately weathered phyllite and psammite with brown stains on fracture surface. (New Harbour Group - Phyllite)		-9.259	29.00	
										-10	30	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. No water strike.
3. Borehole abandoned at 36.0m depth, severely unstable ground conditions resulting in multiple instances of casing parting and hole collapses.
4. Borehole backfilled with 1:1 cement/bentonite grout.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored	**Beretta T44**	**CG/CA**	**BSaimen + WAllwood**	**BNS**

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00003

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH523R

Contract Ref:	Start: 14.03.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 21.03.11	19.741	E:235489.3 N:393971.4	7 of 8

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
30.00											(2.20)	
										-11		
31.00											31	
										-11.459	31.20	
								Very weak very narrowly foliated light green and reddish brown slightly weathered PHYLLITE with elongated /lenticular clasts (<20mm) of red phyllite set in foliated phyllite matrix. (New Harbour Group - Phyllite)			(0.80)	
										-12		
										-12.259	32.00	
32.00								Greenish and grey fine to medium clayey SAND. (New Harbour Group - Phyllite)			32	
										-12.559	32.30	
				NI				Non intact recovered as fine to coarse angular to subrounded GRAVEL of phyllite and psammite (Possible crushed zone related to faulting). (New Harbour Group - Phyllite)			(0.40)	
										-12.959	32.70	
								Very weak highly fractured very narrowly foliated light green slightly weathered PHYLLITE with less than 20% lenticular clast of psammite set in phyllite matrix (possible ultra-mylonitic texture). (New Harbour Group - Phyllite)		-13	(0.50)	
33.00											33	
										-13.459	33.20	
								Non intact recovered as fine to coarse angular to subrounded slightly weathered GRAVEL of green phyllite and psammite with brown staining and possible dissolution features (Possible crushed zone?). (New Harbour Group - Phyllite)				
										-14		
34.00											34	
											(2.80)	
										-15		
											35	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. No water strike.
3. Borehole abandoned at 36.0m depth, severely unstable ground conditions resulting in multiple instances of casing parting and hole collapses.
4. Borehole backfilled with 1:1 cement/bentonite grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored	Beretta T44	CG/CA	BSaimen + WAllwood	BNS

GINT_LIBRARY_V8_04.GLB|XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 21:42 | MJB
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WYL-SSL-SDT-LOG-00003

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH523R

Contract Ref:	Start: 14.03.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 21.03.11	19.741	E:235489.3 N:393971.4	8 of 8

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Sampling	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
35.00				NI						-16		
										-16.259	36.00 (36)	
36.00								Rotary borehole abandoned at 36.00m depth.				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. No water strike.
3. Borehole abandoned at 36.0m depth, severely unstable ground conditions resulting in multiple instances of casing parting and hole collapses.
4. Borehole backfilled with 1:1 cement/bentonite grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary Cored	Beretta T44	CG/CA	BSaimen + WAllwood	BNS

GINT_LIBRARY_V8_04.GLB|XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 21:42 | MJB
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00003

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH524

Contract Ref:	Start: 14.03.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 15.03.11	9.633	E:235620.0 N:393778.2	1 of 1

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						MADE GROUND: Dense light brown clayey GRAVEL. Gravel is subrounded to subangular fine to coarse chert and possible limestone. (MADE GROUND)	9.533	0.10	
							9.333	0.30	
0.50	1	ES				MADE GROUND: Light grey/green clayey GRAVEL. Gravel is fine to coarse subangular grey limestone. Possible sub-base. (MADE GROUND)		(0.90)	
0.60	1	D							
1.00	2	D					8.433	1.20	
1.40	3	D				MADE GROUND: Brown gravelly CLAY. Gravel is fine to coarse subangular to angular orange chert. With orange and black staining. Occasional boulders. (MADE GROUND) . . . below 0.50m depth becoming less gravelly and rare boulders.		(1.10)	
1.50-1.95	4	SPT	N=20						
1.50	4	D							
1.50-1.95	5	B							
						Soft becoming firm dark brown sandy slightly gravelly CLAY. Gravel is fine to coarse angular to subangular phyllite and occasional subrounded medium chert. (Unit B1)	7.333	2.30	
2.40	6	D							
2.50-2.95	7	U							
2.75-3.05	8	D				Firm grey fine sandy CLAY. (Unit B1)			
3.40	9	D							
3.50-3.95	10	SPT	N=16						
3.50	10	D							
3.50-3.95	11	B		1				(4.20)	
4.40	12	D							
4.50-4.95	13	U							
5.00	1	W							
5.30		EW							
5.90	14	D							
6.00-6.45	15	SPT	N=5			. . . at 6.00m depth becoming soft.			
6.00	15	D							
6.00-6.45	16	B		1			3.133	6.50	
						Very stiff to hard grey fine sandy CLAY. Occasional gravel of dark grey/green subangular to angular fine to medium psammite. (Unit B1)	2.833	6.80	
6.70	17	D							
6.80-7.13	18	SPT	N=83*					(0.55)	
6.80	18	D				Strong grey/green thinly laminated moderately weathered fine grained PSAMMITE with red/purple staining on fracture surfaces. (Psammite)			
6.80-7.13	19	B							
7.20	20	D					2.283	7.35	
7.20-7.35	21	SPT	N=158*						
7.20	21	D				Cable percussion borehole terminated at 7.35m depth due to refusal.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
15/03/11		4.50	-	150	4.50
15/03/11		6.50	6.50	150	6.50

Chiselling		
From	To	Duration (hh:mm)
7.00	7.20	01:00

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Water strike at 6.50m depth.
3. 50mm standpipe installed to 6.50m depth. Sunken stopcock cover used as borehole within car park open to the public.
4. Hammer Serial No: 2011-H2

All dimensions in metres | Scale: 1:50

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	Dando 2000	RW	GSherwood	SAT

GINT_LIBRARY_V8_04.GLB|CABLE PERCUSSION LOG | 725061_WYLFA.GPJ - v8_04 | 25/11/11 - 14:00 | KJ ● = datamarker used throughout reporting for current exploratory position.
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STRUCTURAL SOILS

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH524R

Contract Ref:	Start: 23.03.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 29.03.11	9.557	E:235623.8 N:393776.7	1 of 3

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00										MADE GROUND: Dense grey sandy fine to coarse subangular to angular GRAVEL of phyllite. (Made Ground)		9.357	0.20	
										MADE GROUND: Dense sandy fine to coarse subangular to angular GRAVEL and COBBLES of brick, wood and phyllite. (Made Ground)		8.757	(0.60)	
1.00										MADE GROUND: Dense silvery grey very gravelly SAND. (Made Ground)		8.357	0.80	
										Soft becoming firm dark brown sandy slightly gravelly CLAY. (Drift Deposits - Unit B1)		7.257	1.20	
2.00										Firm grey fine sandy CLAY. (Drift Deposits - Unit B1)			(1.10)	
3.00					Air	(00:40:00)							2.30	
4.00													(4.50)	
5.00														
6.00														
7.00				NI 100 600	Water					Medium strong to strong narrow to very thin bands of green grey fine grained slightly weathered to locally moderately weathered PSAMMITE with very narrow lenticular bands of very narrowly foliated green grey phyllite. (New Harbour Group - Psammite)		2.757	6.80	
				NI										
8.00				50 100 170										
				100 180 220										

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
25/03/11	08:30	10.50	6.50	121	2.83
25/03/11	12:00	15.00	6.50	121	2.52
28/03/11	12:30	15.00	6.50	121	2.87
28/03/11	17:45	19.50	6.50	121	3.23
29/03/11	08:30	19.50	6.50	121	2.86
29/03/11	17:30	25.00	6.50	121	2.31

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 19.0m depth. Sunken stopcock cover used as borehole within car park open to the public.

All dimensions in metres	Scale: 1:50	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG	JWickenden + JPhelan	GS+BNS

GINT_LIBRARY_V8_04.GLB!XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 21:45 | MJB
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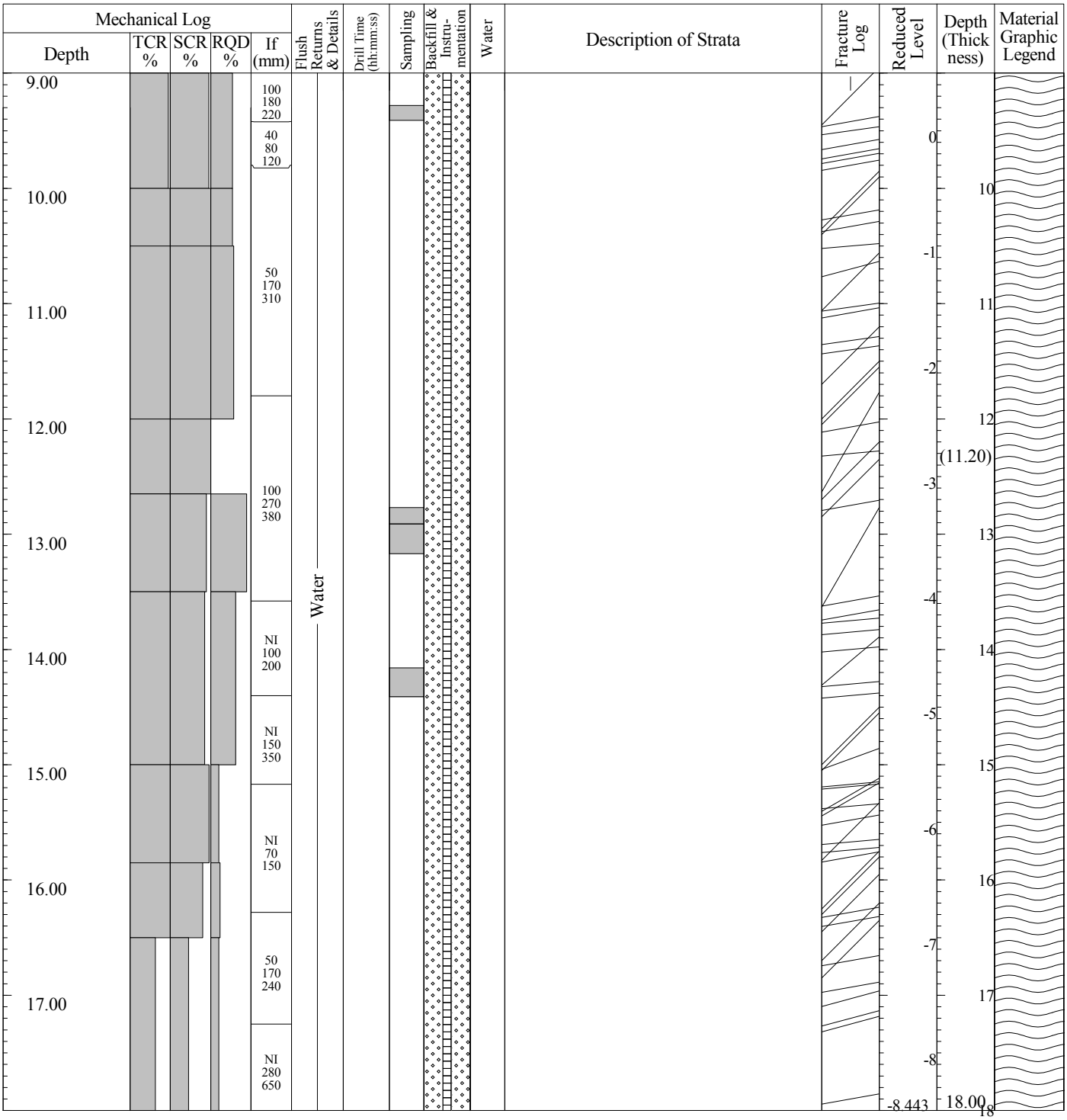
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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH524R

Contract Ref:	Start: 23.03.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 29.03.11	9.557	E:235623.8 N:393776.7	2 of 3



Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
25/03/11	08:30	10.50	6.50	121	2.83
25/03/11	12:00	15.00	6.50	121	2.52
28/03/11	12:30	15.00	6.50	121	2.87
28/03/11	17:45	19.50	6.50	121	3.23
29/03/11	08:30	19.50	6.50	121	2.86
29/03/11	17:30	25.00	6.50	121	2.31

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 19.0m depth. Sunken stopcock cover used as borehole within car park open to the public.

All dimensions in metres	Scale: 1:50	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG	JWickenden + JPhelan	GS+BNS

GINT_LIBRARY_V8_04.GLB!XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 21:45 | MJB
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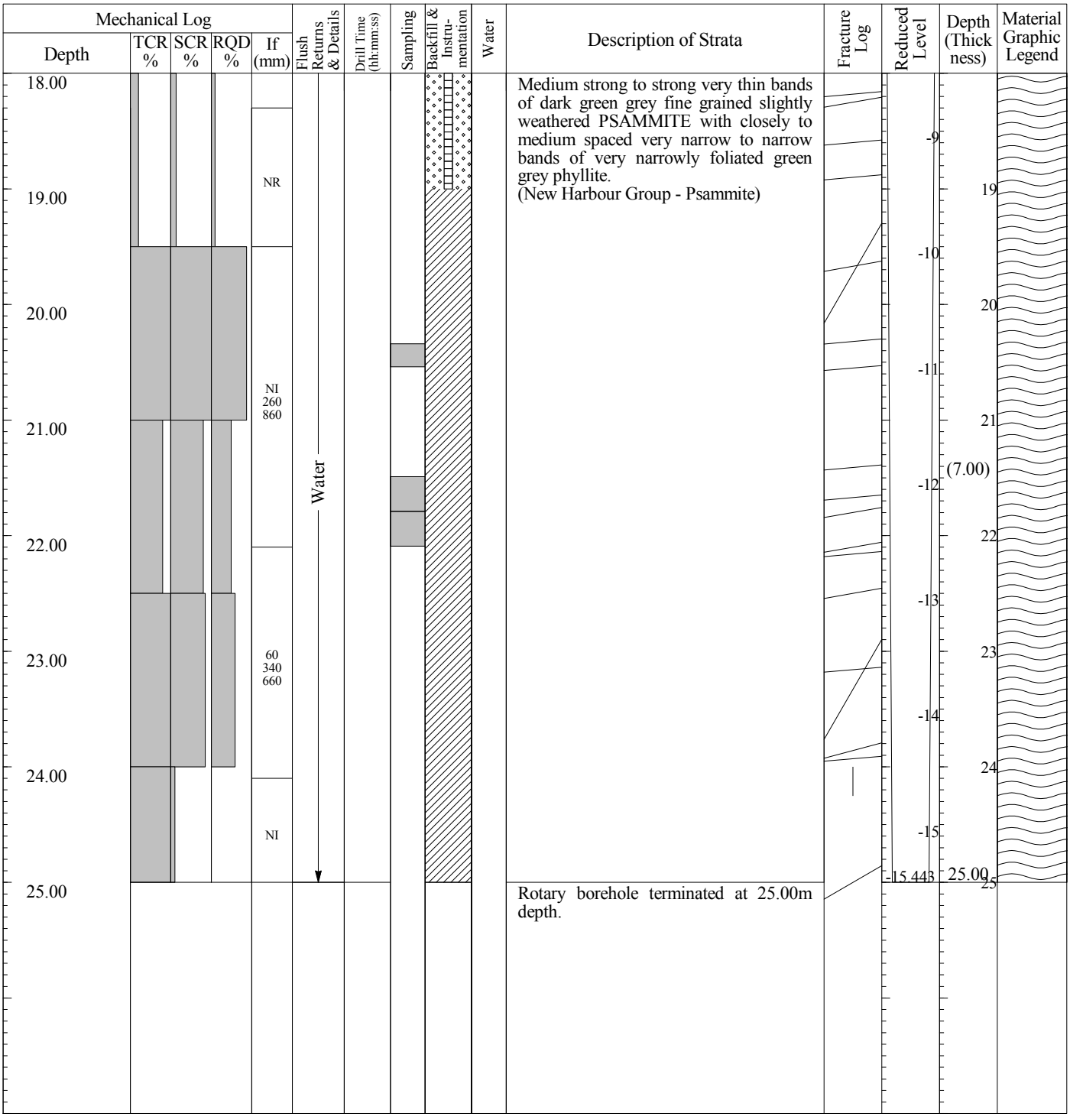
STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00003

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH524R

Contract Ref:	Start: 23.03.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 29.03.11	9.557	E:235623.8 N:393776.7	3 of 3



Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
25/03/11	08:30	10.50	6.50	121	2.83
25/03/11	12:00	15.00	6.50	121	2.52
28/03/11	12:30	15.00	6.50	121	2.87
28/03/11	17:45	19.50	6.50	121	3.23
29/03/11	08:30	19.50	6.50	121	2.86
29/03/11	17:30	25.00	6.50	121	2.31

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 19.0m depth. Sunken stopcock cover used as borehole within car park open to the public.

All dimensions in metres	Scale: 1:50	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG	JWickenden + JPhelan	GS+BNS

GINT_LIBRARY_V8_04.GLB!XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 21:45 | MJB
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH525R

Contract Ref:	Start: 28.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 30.04.11	10.761	E:235735.9 N:393538.1	1 of 6

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00					Air	(00:35:00)				Grass over TOPSOIL consisting of soft dark brown slightly sandy CLAY with abundant fine rootlets. (Made Ground - Topsoil)		10.561	0.20	
										Soft dark brown slightly sandy gravelly CLAY. (Drift Deposits - Unit B1)		10.361	0.40	
										Soft dark orange brown sandy slightly gravelly CLAY. (Drift Deposits - Unit B1)		9.961	(0.40)	
1.00										Firm light brown slightly sandy gravelly CLAY. (Drift Deposits - Unit B1)		9.561	0.80	
										Firm dark brown gravelly CLAY. (Drift Deposits - Unit B1)			(0.40)	
2.00													1.20	
													(2.00)	
3.00												7.561	3.20	
										Firm to very stiff grey slightly silty very gravelly CLAY. (Drift Deposits - Unit B1)			(2.10)	
4.00														

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
29/04/11	09:00	9.00	6.00	121	3.80
29/04/11	16:00	21.00	6.00	121	4.80
30/04/11	09:00	21.00	9.00	121	3.90
30/04/11		25.50	9.00	121	4.10

General Remarks

1. Hand dug inspection pit to 1.10m depth.
2. Between 10.50 to 12.00m depth no liner.
3. 50mm standpipe installed to 12.50m depth.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Beretta T44**	**CG/CA**	**GSherwood + JWickenden**	**GS+BS**

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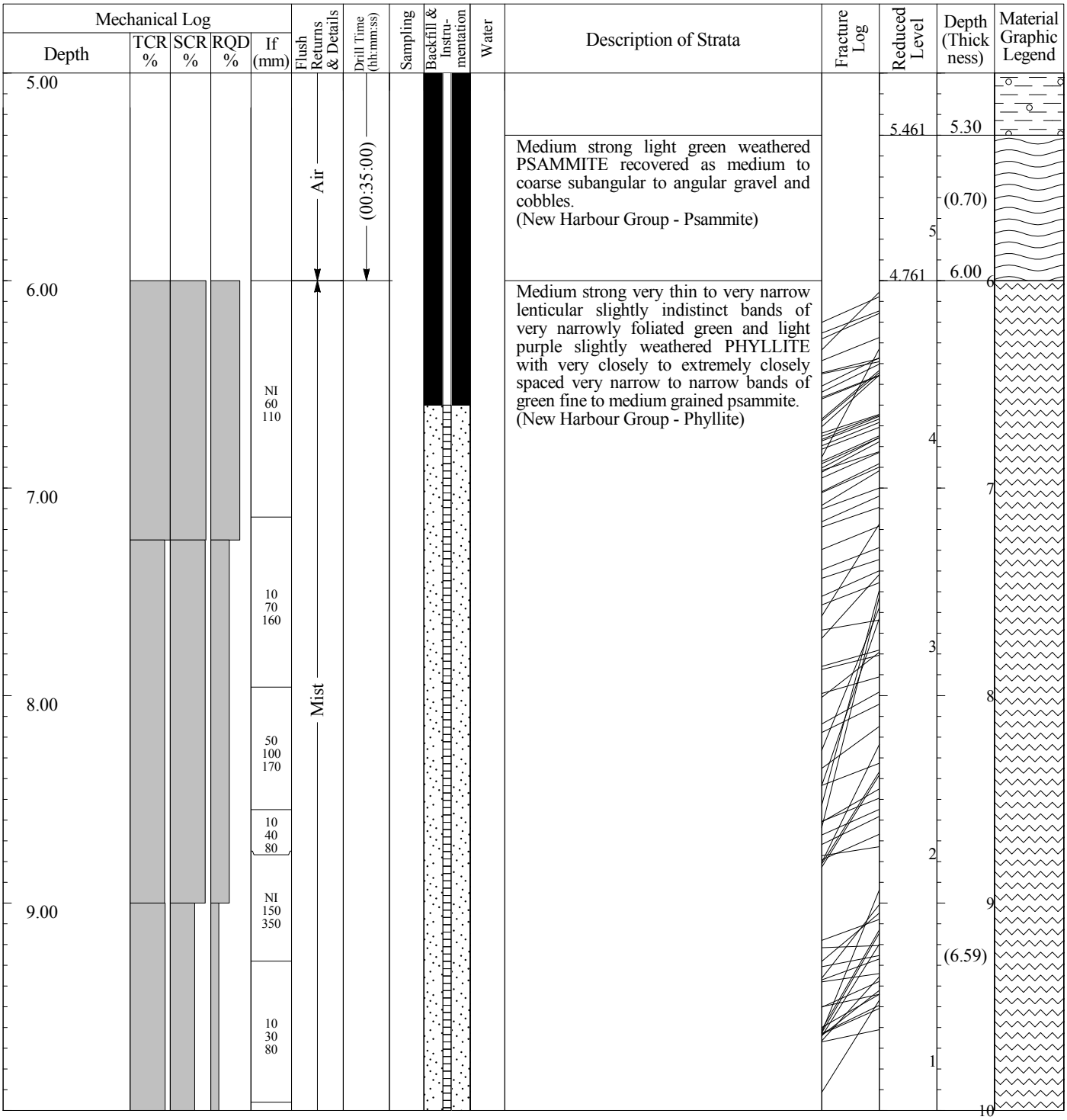
STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH525R

Contract Ref:	Start: 28.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 30.04.11	10.761	E:235735.9 N:393538.1	2 of 6



Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
29/04/11	09:00	9.00	6.00	121	3.80
29/04/11	16:00	21.00	6.00	121	4.80
30/04/11	09:00	21.00	9.00	121	3.90
30/04/11		25.50	9.00	121	4.10

General Remarks

1. Hand dug inspection pit to 1.10m depth.
2. Between 10.50 to 12.00m depth no liner.
3. 50mm standpipe installed to 12.50m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG/CA	GSherwood + JWickenden	GS+BS

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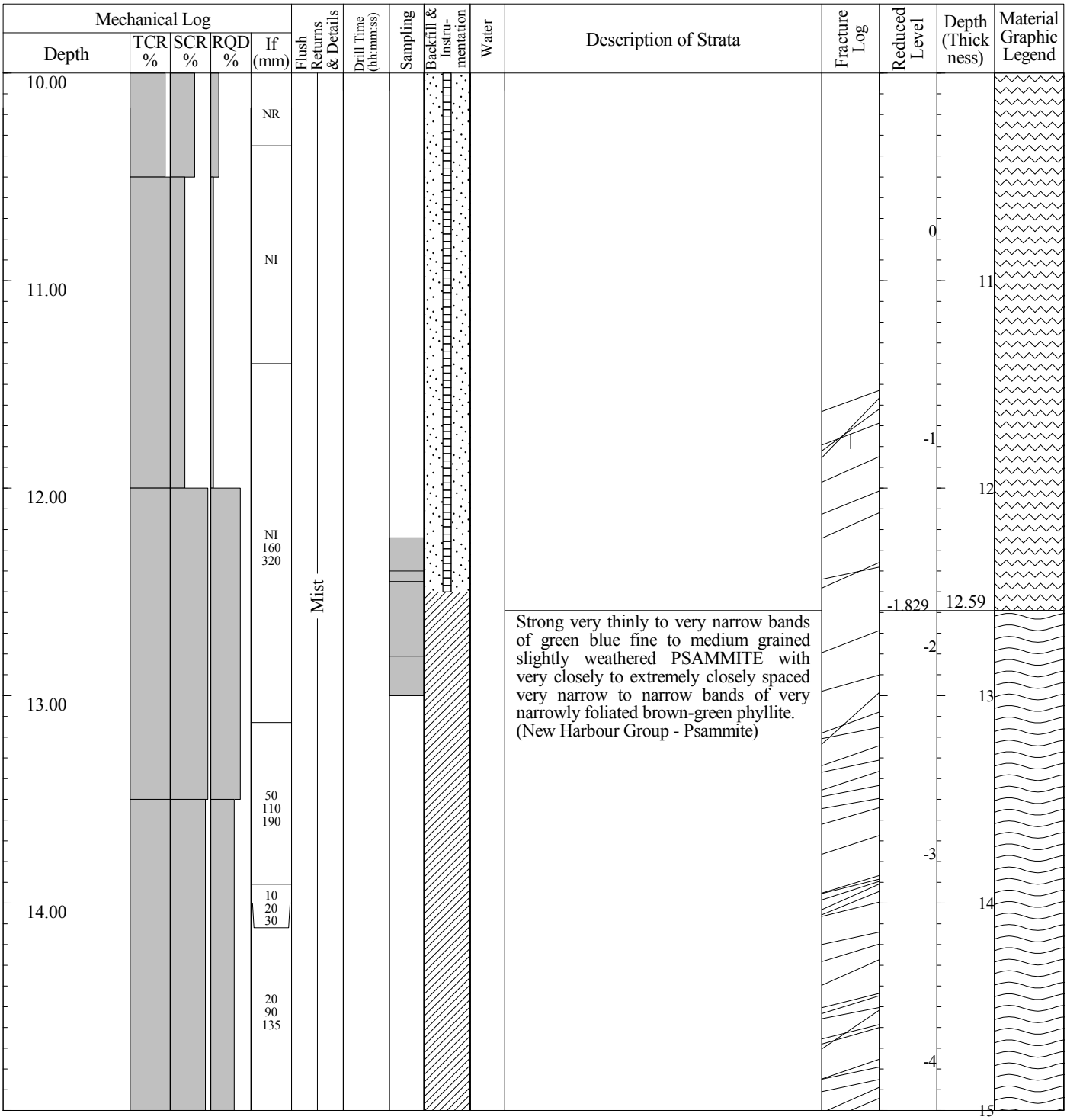
STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH525R

Contract Ref:	Start: 28.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 30.04.11	10.761	E:235735.9 N:393538.1	3 of 6



Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
29/04/11	09:00	9.00	6.00	121	3.80
29/04/11	16:00	21.00	6.00	121	4.80
30/04/11	09:00	21.00	9.00	121	3.90
30/04/11		25.50	9.00	121	4.10

General Remarks

1. Hand dug inspection pit to 1.10m depth.
2. Between 10.50 to 12.00m depth no liner.
3. 50mm standpipe installed to 12.50m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG/CA	GSherwood + JWickenden	GS+BS

GINT_LIBRARY_V8_04.GLB!XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 21:47 | MJB
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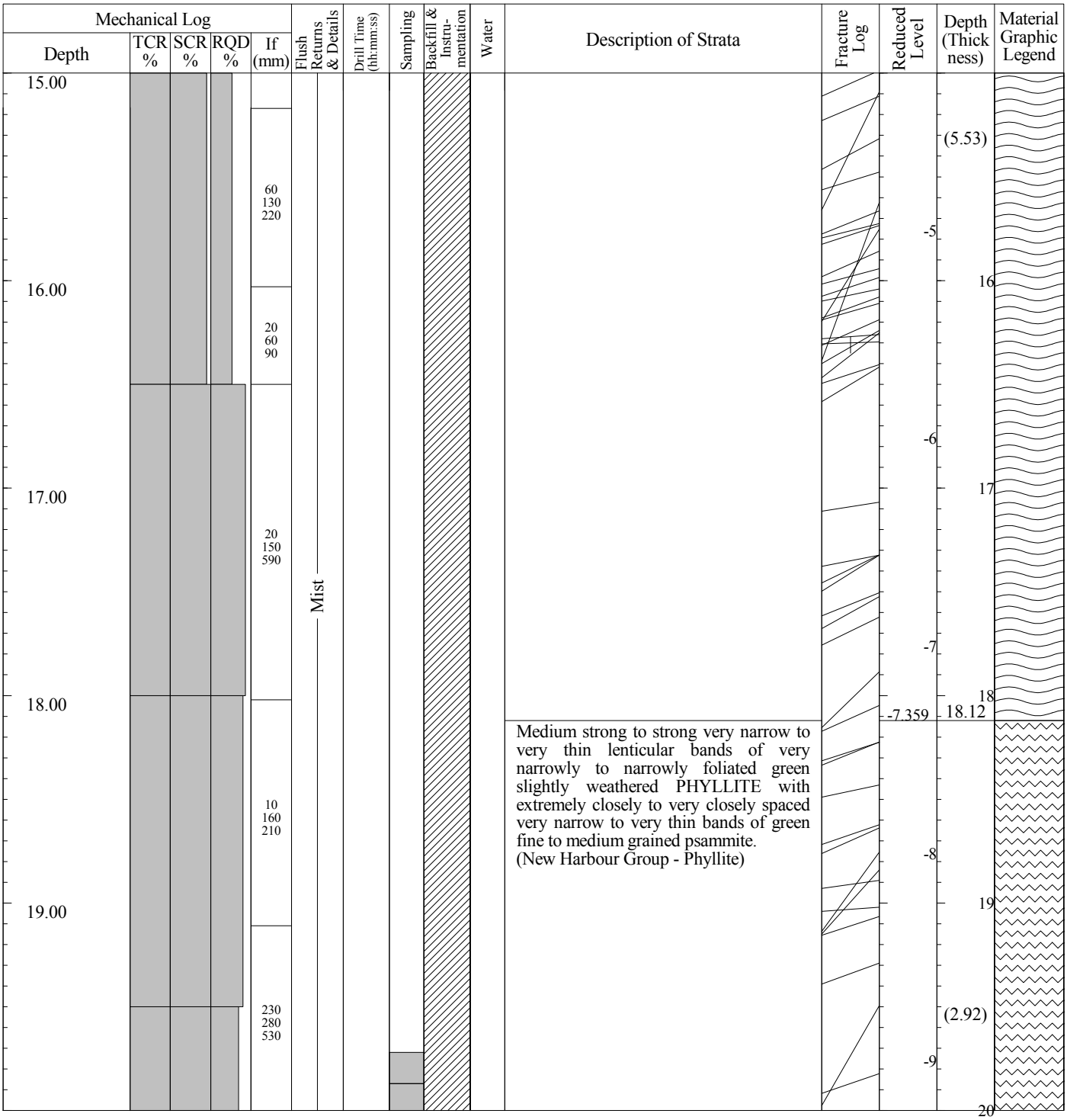
STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH525R

Contract Ref:	Start: 28.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 30.04.11	10.761	E:235735.9 N:393538.1	4 of 6



Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
29/04/11	09:00	9.00	6.00	121	3.80
29/04/11	16:00	21.00	6.00	121	4.80
30/04/11	09:00	21.00	9.00	121	3.90
30/04/11		25.50	9.00	121	4.10

General Remarks

1. Hand dug inspection pit to 1.10m depth.
2. Between 10.50 to 12.00m depth no liner.
3. 50mm standpipe installed to 12.50m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG/CA	GSherwood + JWickenden	GS+BS

GINT_LIBRARY_V8_04.GLB!XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 21:47 | MJB
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH525R

Contract Ref:	Start: 28.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 30.04.11	10.761	E:235735.9 N:393538.1	5 of 6

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
20.00												-10		
				10 70 130								-10.279	21.04	
21.00										Strong very thin to thin bands of green blue fine to medium grained slightly weathered to fresh PSAMMITE with very closely to closely spaced very narrow to very thin bands of very narrowly foliated purple phyllite. (New Harbour Group - Psammite)			(0.76)	
				40 40 630								-11.039	21.80	
22.00										Medium strong thin to very thin bands of very narrowly foliated green occasionally green brown slightly weathered PHYLLITE with closely to very closely spaced very narrow to very thin lenticular bands of green fine to medium grained psammite. (New Harbour Group - Phyllite)		-12	22	
				10 140 360	Mist									
23.00												-13	23	
				210 230 310									(3.70)	
24.00												-14	24	
				10 50 180										
				150 310 370									25	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
29/04/11	09:00	9.00	6.00	121	3.80
29/04/11	16:00	21.00	6.00	121	4.80
30/04/11	09:00	21.00	9.00	121	3.90
30/04/11		25.50	9.00	121	4.10

General Remarks

1. Hand dug inspection pit to 1.10m depth.
2. Between 10.50 to 12.00m depth no liner.
3. 50mm standpipe installed to 12.50m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG/CA	GSherwood + JWickenden	GS+BS

GINT_LIBRARY_V8_04.GLB!XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 21:47 | MJB
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH525R

Contract Ref:	Start: 28.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 30.04.11	10.761	E:235735.9 N:393538.1	6 of 6

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
25.00				20 70 150	Mist ↓							-14.739	25.50	
										Rotary borehole terminated at 25.50m depth.				

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
29/04/11	09:00	9.00	6.00	121	3.80
29/04/11	16:00	21.00	6.00	121	4.80
30/04/11	09:00	21.00	9.00	121	3.90
30/04/11		25.50	9.00	121	4.10

General Remarks

1. Hand dug inspection pit to 1.10m depth.
2. Between 10.50 to 12.00m depth no liner.
3. 50mm standpipe installed to 12.50m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Beretta T44	CG/CA	GSherwood + JWickenden	GS+BS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH526

Contract Ref:	Start: 03.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 11.05.11	9.748	E:236013.6 N:393694.3	1 of 3

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.40	1	B				TOPSOIL over soft dark brown sandy slightly gravelly CLAY. Gravel is fine to coarse subrounded to subangular phyllite/psammite. (Topsoil)		(1.20)	
0.50	1	ES							
0.50	1	B							
0.60	2	D							
1.00	3	D					8.548	1.20	
1.40	4	D				Firm becoming stiff with depth dark grey slightly gravelly sandy CLAY. Gravel is fine to medium subangular to subrounded of flint, quartz and rare psammite and possible calcite (Drift Deposits - Unit F)			
1.50-1.95	5	SPT	N=18						
1.50	5	D							
1.50-1.75	6	B							
2.40	7	D							
2.50-2.95	8	U	49 blows						
2.95-3.05	9	B							
3.40	10	D							
3.50-3.95	11	SPT	N=21						
3.50	11	D							
3.50-3.95	12	B							
4.40	13	D				. . . from 4.40m depth becoming stiff.			
4.50-4.95	14	U	53 blows						
4.95-5.05	15	B						(8.10)	
5.90	16	D							
6.00-6.45	17	SPT	N=25						
6.00	17	D							
6.00-6.45	18	B							
7.40	19	D							
7.50-7.95	19A	U	100 blows 0% recovery						
7.50-7.95	20	B							

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
12/05/11	08:00	22.30	22.30	150	7.60

Chiselling		
From	To	Duration (hh:mm)
22.50	22.60	01:00

General Remarks

1. Inspection pit to 1.2m depth.
2. 50mm standpipe installed to 11.80m depth.
3. Standing water level at 7.60m depth on 12/05/11.
4. Hammer Serial No: 2011-H2

All dimensions in metres | Scale: 1:50

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	Dando 2000	RW	GSherwood	SAT

GINT_LIBRARY_V8_04.GLB!XCUSTOM - SSL - 725061 - CP LOG | 725061_WYLFA.GPJ - v8_04 | 25/11/11 - 15:40 | KJ.
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH526

Contract Ref:	Start: 03.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 11.05.11	9.748	E:236013.6 N:393694.3	2 of 3

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
8.90	21	D							
9.00-9.45	22	SPT	N=29				0.448	9.30	
9.00	22	D				Light grey brown sandy silty CLAY with occasional fine subangular to subrounded gravel of flint (Driller's report water seepage). (Drift Deposits - Unit F)		(0.50)	
9.00-9.45	23	B					-0.052	9.80	
10.40	24	D				Stiff dark grey silty slightly gravelly CLAY. Gravel is fine to medium rounded to subangular flint, quartz (with some red staining and rare psammite. (Drift Deposits - Unit F)			
10.50-10.95	25	U	180 blows						
10.95-11.05	26	B							
11.00	1	W							
11.90	27	D							
12.00-12.45	28	SPT	N=39					(4.80)	
12.00	28	D							
12.00-12.45	29	B							
13.40	30	D							
13.50-13.95	31	U	150 blows						
13.95-14.00	32	B					-4.852	14.60	
14.90	33	D				Firm to stiff light grey slightly silty CLAY. (Drift Deposits - Unit F)			
15.00-15.45	33	$SPT_{(NR)}$	N=28						
15.00-15.45	34	B							
15.22	48	CS							
16.40	35	D							
16.50-16.95	36	U	150 blows					(6.20)	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
12/05/11	08:00	22.30	22.30	150	7.60

Chiselling		
From	To	Duration (hh:mm)

General Remarks

1. Inspection pit to 1.2m depth.
2. 50mm standpipe installed to 11.80m depth.
3. Standing water level at 7.60m depth on 12/05/11.
4. Hammer Serial No: 2011-H2

All dimensions in metres | Scale: 1:50

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	Dando 2000	RW	GSherwood	SAT

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH526

Contract Ref:	Start: 03.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 11.05.11	9.748	E:236013.6 N:393694.3	3 of 3

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
17.90	37	D							
18.00-18.45	38	SPT	N=43						
18.00	38	D							
18.00-18.45	39	B							
19.40	40	D							
19.50-19.95	41	U	150 blows						
							-11.052	20.80	
20.90	42	D				Firm light brown mottled grey silty CLAY. (Drift Deposits - Unit F)			
21.00-21.45	43	SPT	N=11					(1.50)	
21.00	43	D							
21.00-21.45	44	B					-12.552	22.30	
22.40	45	D				Very stiff to hard brown slightly sandy gravelly CLAY. Gravel is fine to coarse angular to subangular blue green fine to medium grained psammite and purple phyllite. Highly weathered crumbles under hand pressure. (Drift Deposits - Unit B1)		(0.70)	
22.50-22.78	46	SPT	N=115*						
22.50	46	D							
22.50	47	B					-13.252	23.00	
22.80-23.00	48	SPT	N=136*			. . . at 22.6m depth becoming weak (possibly weathered rock head).			
22.80	48	D				Cable percussion borehole terminated at 23.00m depth.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
12/05/11	08:00	22.30	22.30	150	7.60

Chiselling		
From	To	Duration (hh:mm)

General Remarks

1. Inspection pit to 1.2m depth.
2. 50mm standpipe installed to 11.80m depth.
3. Standing water level at 7.60m depth on 12/05/11.
4. Hammer Serial No: 2011-H2

All dimensions in metres | Scale: 1:50

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	Dando 2000	RW	GSherwood	SAT

GINT_LIBRARY_V8_04.GLB!XCUSTOM - SSL - 725061 - CP LOG | 725061_WYLFA.GPJ - v8_04 | 25/11/11 - 15:40 | KJ.
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH526R

Contract Ref:	Start: 30.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 09.05.11	7.892	E:236005.9 N:393683.2	1 of 9

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00					Air	(00:15:00)				Grass over soft dark brown to dark reddish brown sandy PEAT with additional fine rootlets. (Drift Deposits - Topsoil)		7.592	(0.30) 0.30	
										Loose light grey silty clayey fine to coarse SAND. (Drift Deposits - Unit F)		7.392	0.50	
										Soft dark brown very sandy slightly gravelly CLAY. (Drift Deposits - Unit F)		7.092	(0.30) 0.80	
1.00										Soft dark brown very gravelly slightly clayey SAND. (Drift Deposits - Unit F)		6.692	(0.40) 1.20	
										Dark grey very fine sand slightly gravelly CLAY. (Drift Deposits - Unit F)				
2.00														
3.00														
4.00														

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
28/04/11	13:30	0.90	None	121	0.90
30/04/11		7.00	7.00	121	7.00
01/05/11	09:00	10.00	10.00	121	6.00
01/05/11	16:00	19.50	18.00	121	-2.80
03/05/11	10:30	22.50	21.00	121	1.30
04/05/11	08:30	27.00	25.50	121	1.40
04/05/11	17:45	31.50	25.50	121	7.30
05/05/11	08:30	31.50	25.50	121	1.35

General Remarks

1. Hand dug inspection pit to 1.10m depth.
2. Twin 50mm standpipes installed: Deep to 39.0m depth, shallow to 23.0m depth.
3. Inspection pit backfilled on completion.
4. Dynamic sample from 10.00 to 10.20 and 10.20 to 13.50m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Dynamic sampling + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler + SAl-Jassar	GS+BNS

GINT_LIBRARY_V8_04.GLB|XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 21:51 | MJB
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH526R

Contract Ref:	Start: 30.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 09.05.11	7.892	E:236005.9 N:393683.2	2 of 9

Mechanical Log													
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
5.00														
													(8.10)	
6.00												2	6	
7.00					Air	(00:15:00)			1.1			1	7	
8.00												0	8	
9.00												-1	9	
										Light grey brown sandy silty CLAY with occasional fine subangular to subrounded gravel of flint (Driller's report water seepage). (Drift Deposits - Unit F)		-1.408	9.30	
													(0.50)	
										Dark grey silty slightly gravelly CLAY. (Drift Deposits - Unit F)		-1.908	9.80	
												-2		
												-2.108	10.00	10

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
05/05/11	17:30	37.50	25.50	121	4.00
09/05/11		39.00	25.50	121	7.63

General Remarks

1. Hand dug inspection pit to 1.10m depth.
2. Twin 50mm standpipes installed: Deep to 39.0m depth, shallow to 23.0m depth.
3. Inspection pit backfilled on completion.
4. Dynamic sample from 10.00 to 10.20 and 10.20 to 13.50m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Rotary open hole + Dynamic sampling + Rotary Cored	Plant Used:	Beretta T44	Drilled By:	CG/CA	Logged By:	JWickenden + NFowler + SAl-Jassar	Checked By:	GS+BNS

GINT_LIBRARY_V8_04.GLB|XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 21:51 | MJB
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH526R

Contract Ref:	Start: 30.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 09.05.11	7.892	E:236005.9 N:393683.2	3 of 9

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
10.00						(00:15:00)				Stiff to very stiff locally firm medium grey brown mottled gravelly sandy silty CLAY. (Drift Deposits - Unit F)		-3	11 (2.50)	
11.00	Dynamic sampling run 101mm dia (30% rec)					(00:05:00)								
12.00	Dynamic sampling run 88mm dia (100% rec)					(00:06:00)						-4	12	
												-4.608	12.50	
										Stiff to very stiff brown grey mottled locally poorly laminated slightly gravelly sandy CLAY. (Drift Deposits - Unit F)		-5	(0.60)	
13.00	Dynamic sampling run 88mm dia (100% rec)					(00:06:00)						-5.208	13.10	
										Very stiff locally stiff medium grey brown locally poorly laminated slightly sandy silty CLAY. (Drift Deposits - Unit F)		-6	14 (2.10)	
14.00	Dynamic sampling run 88mm dia (100% rec)				Mist	(00:25:00)						-7	15	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.10m depth.
2. Twin 50mm standpipes installed: Deep to 39.0m depth, shallow to 23.0m depth.
3. Inspection pit backfilled on completion.
4. Dynamic sample from 10.00 to 10.20 and 10.20 to 13.50m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Dynamic sampling + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler + SAl-Jassar	GS+BNS

GINT_LIBRARY_V8_04.GLB|XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 21:51 | MJB
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH526R

Contract Ref:	Start: 30.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 09.05.11	7.892	E:236005.9 N:393683.2	4 of 9

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
15.00												-7.308	15.20	
										Stiff to very stiff dark brown grey locally poorly laminated slightly fissured silty CLAY. (Drift Deposits - Unit F)				
												-8	(1.60)	
16.00													16	
												-8.908	16.80	
										Very stiff locally stiff medium brown becoming light brown with depth locally poorly laminated slightly fissured silty CLAY. (Drift Deposits - Unit F)		-9	17	
17.00													(1.00)	
												-9.908	17.80	
										Very stiff brown light brown very silty CLAY. (Drift Deposits - Unit F)		-10	18	
18.00														
												-11	19	
19.00														
												-12	(4.20)	
													20	

Dynamic sampling run 88mm dia (100% rec) — (00:31:00)

Dynamic sampling run 88mm dia (90% rec) — (00:25:00)

(00:30:00)

Mist

NR

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.10m depth.
2. Twin 50mm standpipes installed: Deep to 39.0m depth, shallow to 23.0m depth.
3. Inspection pit backfilled on completion.
4. Dynamic sample from 10.00 to 10.20 and 10.20 to 13.50m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Dynamic sampling + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler + SAl-Jassar	GS+BNS

GINT_LIBRARY_V8_04.GLB!XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 21:51 | MJB
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH526R

Contract Ref:	Start: 30.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 09.05.11	7.892	E:236005.9 N:393683.2	5 of 9

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
20.00														
												-13		
21.00				NR									21	
												-14		
												-14.108	22.00	
22.00					Mist					Soft locally firm brown sandy locally very sandy gravelly CLAY with rare subangular cobbles of psammite. (Drift Deposits - Unit B1)			22	
													(0.50)	
												-14.608	22.50	
										Brown slightly clayey slightly sandy angular to rounded fine to coarse GRAVEL of psammite and phyllite (possibly moderately weathered phyllite/psammite) (New Harbour Group - Psammite)		-15		
23.00													23	
				NI									(1.27)	
												-15.878	23.77	
										Medium strong to strong dark greenish blue fine to medium grained moderately to slightly weathered PSAMMITE. (New Harbour Group - Psammite)		-16		
24.00													24	
													(1.73)	
												-17		
													25	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.10m depth.
2. Twin 50mm standpipes installed: Deep to 39.0m depth, shallow to 23.0m depth.
3. Inspection pit backfilled on completion.
4. Dynamic sample from 10.00 to 10.20 and 10.20 to 13.50m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Rotary open hole + Dynamic sampling + Rotary Cored	Plant Used:	Beretta T44	Drilled By:	CG/CA	Logged By:	JWickenden + NFowler + SAl-Jassar	Checked By:	GS+BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH526R

Contract Ref:	Start: 30.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 09.05.11	7.892	E:236005.9 N:393683.2	6 of 9

Mechanical Log														
Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
25.00												-17.608	25.50	
										Medium strong to strong greenish blue fine grained slightly weathered PSAMMITE with medium strong very narrowly foliated greenish blue slightly weathered phyllite. (New Harbour Group - Psammite)		-18	26	
26.00														
												-19	(3.00) 27	
27.00				NI	Mist									
												-20	28	
28.00												-20.608	28.50	
										Medium strong very narrowly foliated purple slightly weathered PHYLLITE with strong dark bluish grey fine grained slightly weathered psammite with evidence of extremely closely spaced randomly orientated calcite veining. (New Harbour Group - Phyllite)		-21	(1.00) 29	
29.00												-21.608	29.50	
				30 70 120						Strong narrow to very thin bands of very narrowly foliated locally highly disturbed dark purple fresh PHYLLITE with extremely closely spaced very narrow locally narrow lenticular bands of		-22	30	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.10m depth.
2. Twin 50mm standpipes installed: Deep to 39.0m depth, shallow to 23.0m depth.
3. Inspection pit backfilled on completion.
4. Dynamic sample from 10.00 to 10.20 and 10.20 to 13.50m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Rotary open hole + Dynamic sampling + Rotary Cored	Plant Used:	Beretta T44	Drilled By:	CG/CA	Logged By:	JWickenden + NFowler + SAl-Jassar	Checked By:	GS+BNS

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STRUCTURAL SOILS

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH526R

Contract Ref:	Start: 30.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 09.05.11	7.892	E:236005.9 N:393683.2	7 of 9

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
30.00										bluish grey fine grained psammite. (New Harbour Group - Phyllite)			(1.30)	
												-22.908	30.80	
										Medium strong to strong very narrow bands of very narrowly foliated purplish red and red fresh PHYLLITE with extremely closely spaced very narrow lenticular bands of grey fine grained psammite. (New Harbour Group - Phyllite)		-23.038	30.93	
31.00													31	
										Strong bluish grey fine to medium grained fresh PSAMMITE. (New Harbour Group - Psammite)		-24	32	
32.00				NI 500	Mist								(2.51)	
												-25	33	
33.00												-25.548	33.44	
										Medium strong highly disturbed very narrow to very thin bands of very narrowly foliated dark purple moderately to slightly weathered PHYLLITE with very narrow to narrow bands of blue-grey fine grained psammite. (New Harbour Group - Phyllite)			(0.52)	
												-26.068	33.96	
34.00										Medium strong very narrowly foliated dark purple moderately weathered PHYLLITE with foliation dipping at 15 - 20°. (New Harbour Group - Phyllite)			34 (0.69)	
												-26.758	34.65	
										Medium strong very narrow to narrow bands of very narrowly foliated purplish grey slightly weathered PHYLLITE with extremely closely spaced very narrow		-27	35	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.10m depth.
2. Twin 50mm standpipes installed: Deep to 39.0m depth, shallow to 23.0m depth.
3. Inspection pit backfilled on completion.
4. Dynamic sample from 10.00 to 10.20 and 10.20 to 13.50m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Dynamic sampling + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler + SAl-Jassar	GS+BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH526R

Contract Ref:	Start: 30.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 09.05.11	7.892	E:236005.9 N:393683.2	8 of 9

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
35.00				20 130 390	Mist					lenticular bands of bluish grey fine grained psammite. (New Harbour Group - Phyllite)			(1.20)	
												-27.958	35.85	
										Medium strong to strong narrow bands of bluish grey fine grained slightly weathered to fresh PSAMMITE with extremely closely spaced very narrow bands of very narrowly foliated dark purple phyllite. (New Harbour Group - Psammite)		-28	36 (0.65)	
36.00				60 70 100								-28.608	36.50	
				NI 80 140						Medium strong disturbed very narrow to narrow bands of very narrowly foliated greyish purple slightly weathered PHYLLITE with extremely closely spaced very narrow lenticular bands of bluish grey fine grained psammite. (New Harbour Group - Phyllite)			(0.34)	
												-28.948	36.84	
												-29	(0.32) 37	
37.00												-29.268	37.16	
				NI						Medium strong to strong highly disturbed very narrowly foliated bluish green slightly weathered to fresh PHYLLITE with frequent extremely to very closely spaced incipient fractures and microfaulting disturbing/deformed foliation. (New Harbour Group - Phyllite)		-29.448	37.34	
													(0.76)	
				10 30 40						Medium strong bluish grey fine grained moderately weathered PSAMMITE. (New Harbour Group - Psammite)		-30	38	
38.00												-30.208	38.10	
				40 70 110						Medium strong very narrow to very thin bands of very narrowly foliated bluish green slightly weathered PHYLLITE with extremely closely spaced very narrow lenticular bands of bluish green fine grained psammite. (New Harbour Group - Phyllite)				
				NI						Medium strong highly disturbed bluish green fine grained slightly weathered PSAMMITE with highly disturbed/deformed fabric. (New Harbour Group - Psammite)		-31	39 (1.95)	
39.00														
				NI 300								-32	40	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.10m depth.
2. Twin 50mm standpipes installed: Deep to 39.0m depth, shallow to 23.0m depth.
3. Inspection pit backfilled on completion.
4. Dynamic sample from 10.00 to 10.20 and 10.20 to 13.50m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Dynamic sampling + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler + SAl-Jassar	GS+BNS

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH526R

Contract Ref:	Start: 30.04.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 09.05.11	7.892	E:236005.9 N:393683.2	9 of 9

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
40.00										Medium strong to strong very narrowly foliated bluish green fresh PHYLLITE. (New Harbour Group - Phyllite)		-32.158	40.05	
				NI 300	Mist								(1.45)	
												-33		
41.00													41	
										Rotary borehole terminated at 41.50m depth.		-33.608	41.50	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.10m depth.
2. Twin 50mm standpipes installed: Deep to 39.0m depth, shallow to 23.0m depth.
3. Inspection pit backfilled on completion.
4. Dynamic sample from 10.00 to 10.20 and 10.20 to 13.50m depth.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Dynamic sampling + Rotary Cored	Beretta T44	CG/CA	JWickenden + NFowler + SAl-Jassar	GS+BNS

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WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	**Horizon Nuclear Power Wylfa Limited**	**BH529**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	**21.03.11** End: **21.03.11**	**16.767**	**E:235504.6 N:393197.6**	**1** of **1**

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Grass over TOPSOIL consisting of soft dark brown silty gravelly CLAY. Gravel is fine to coarse subangular to angular phyllite. (Topsoil)	16.467	0.30	
0.50	1	ES				Dense greyish GRAVEL and COBBLES of angular fine to coarse phyllite. (Unit A)	16.167	0.60	
0.50	1	B							
0.60	1	D						(0.60)	
1.00	2	ES				Firm orange brown sandy slightly gravelly CLAY. Gravel is fine to medium subangular to angular phyllite. (Unit B1)	15.567	1.20	
1.00	2	D							
1.02	1	EW							
1.40	3	D							
1.50-1.95	4	SPT	N=21			Firm to stiff brown locally mottled green and purple slightly sandy gravelly CLAY. Gravel is angular to subangular tabular fine to coarse psammite and phyllite. (Unit B1)			
1.50	4	D							
1.50-1.95	5	B						(2.00)	
2.40	6	D							
2.50-2.95	7	SPT	N=23			. . . below 2.50m depth stiff.			
2.50	7	D							
2.50-2.95	8	B		1					
3.00-3.35	9	SPT	N=75*			. . . below 3.00m depth very stiff.	13.567	3.20	
3.00-3.35	10	B				Extremely weak brown locally mottled grey fine grained moderately weathered phyllite. (Phyllite)			
3.00	9	D							
3.50-3.60	11	SPT	N=250*				13.167	3.60	
3.50	11	D				Borehole terminated at 3.60m depth.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
21/03/11		2.50	-	150	2.50
21/03/11	16:00	3.00	3.00	150	3.00

Chiselling		
From	To	Duration (hh:mm)
3.20	3.50	01:00

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Water strike at 3.00m depth.
3. 50mm standpipe installed to 3.00m depth.
4. Hammer Serial No: 2011-H2

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	**Dando 2000**	**RW**	**JWickenden + DOstafijczuk**	SAT

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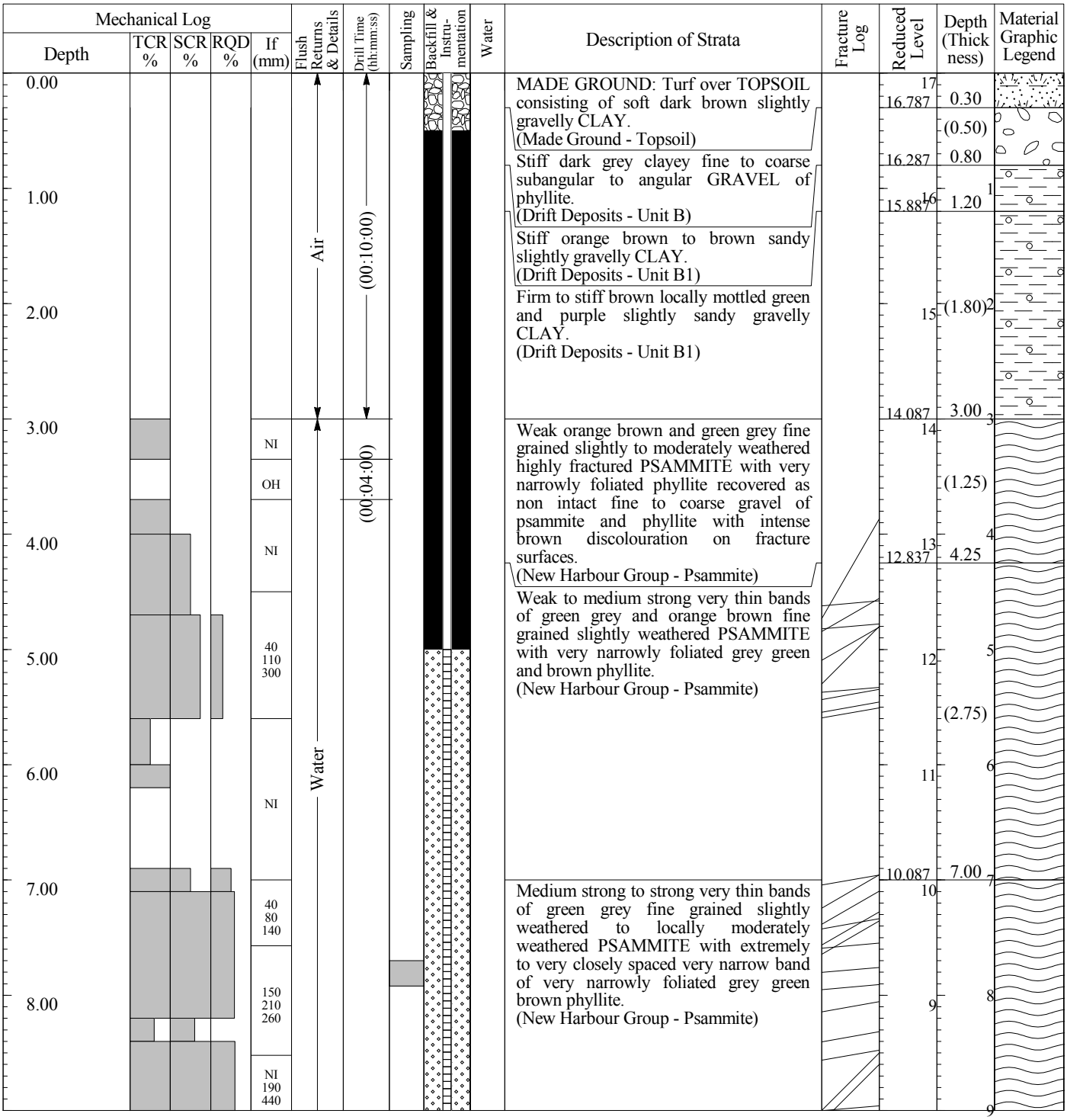
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WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH529R

Contract Ref:	Start: 31.03.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 04.04.11	17.087	E:235502.6 N:393199.8	1 of 4



Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/04/11	17:30	11.40	6.90	101	2.10
02/04/11	09:00	11.30	6.90	101	1.60
02/04/11	15:30	16.90	16.80	101	1.10
03/04/11	09:00	16.90	16.70	101	4.30
03/04/11	16:00	27.30	16.70	101	2.10
04/04/11	08:20	27.30	16.70	101	2.30

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 3.35 - 3.70m depth no recovery.
3. 6.20 - 6.90m depth no recovery.
4. 16.50 - 16.90m depth open hole.
5. 50mm standpipe installed to 10.0m depth.
6. Open hole drilling from 0.00 - 3.00m depth.

All dimensions in metres	Scale: 1:50	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Comacchio MC405	SP	JWickenden + JPhelan	GS+BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH529R

Contract Ref:	Start: 31.03.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 04.04.11	17.087	E:235502.6 N:393199.8	2 of 4

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
9.00												8	(4.10)	
10.00				NI 190 440								7	10	
11.00												5.987 6	11.10	
				10 70 140						Medium strong to strong very thin bands of green grey fine grained slightly weathered PSAMMITE. (New Harbour Group - Psammite)			12	
12.00				NI								5	(2.35)	
13.00					Water							4	13	
				20 120 180								3.637	13.45	
										Medium strong narrow to very thin bands of very narrowly foliated purple to light brown slightly weathered PHYLLITE with extremely to very closely spaced very narrow lenticular bands of green grey fine grained psammite. (New Harbour Group - Phyllite)		3	14	
14.00													(1.85)	
15.00				NI 80 220								2	15	
												1.787	15.30	
										Medium strong very narrow to very thin bands of very narrowly foliated purple and green grey slightly weathered PHYLLITE with extremely to very closely spaced very narrow to narrow lenticular bands of green grey fine grained psammite. (New Harbour Group - Phyllite)		1	(1.60) 16	
16.00				OH								0.187	16.90	
17.00										Medium strong very narrow to very thin very narrowly foliated purple to grey-brown slightly weathered PHYLLITE with extremely to very closely spaced very narrow lenticular poorly defined bands of green grey fine grained psammite (possible mylonitic		0	17	
				250 310 360									18	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/04/11	17:30	11.40	6.90	101	2.10
02/04/11	09:00	11.30	6.90	101	1.60
02/04/11	15:30	16.90	16.80	101	1.10
03/04/11	09:00	16.90	16.70	101	4.30
03/04/11	16:00	27.30	16.70	101	2.10
04/04/11	08:20	27.30	16.70	101	2.30

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 3.35 - 3.70m depth no recovery.
3. 6.20 - 6.90m depth no recovery.
4. 16.50 - 16.90m depth open hole.
5. 50mm standpipe installed to 10.0m depth.
6. Open hole drilling from 0.00 - 3.00m depth.

All dimensions in metres	Scale: 1:50	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Comacchio MC405	SP	JWickenden + JPhelan	GS+BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH529R

Contract Ref:	Start: 31.03.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 04.04.11	17.087	E:235502.6 N:393199.8	3 of 4

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
18.00				30 100 140	Water					fabric). (New Harbour Group - Phyllite)		-1	(3.05)	
19.00												-2	19	
												-2.863	19.95	
20.00										Medium strong very narrow to very thin poorly defined bands of very narrowly foliated green grey to locally dark green slightly weathered PHYLLITE with extremely to very closely spaced very narrow lenticular poorly defined bands of green grey to dark green fine grained psammite (possible mylonitic fabric). (New Harbour Group - Phyllite)		-3	20 (1.05)	
												-3.913	21.00	
21.00				180 790 1720						Medium strong very narrow to very thin poorly defined bands of very narrowly foliated purple and grey-brown slightly weathered PHYLLITE with extremely to very closely spaced very narrow lenticular poorly defined bands of green grey fine grained psammite. (New Harbour Group - Phyllite)		-4	21	
22.00												-5	(1.80) 22	
												-5.713	22.80	
23.00										Medium strong to strong very narrow to very thin bands of green grey fine grained fresh PSAMMITE interbanded with very narrow to narrow occasionally poorly defined bands of very narrowly foliated green grey PHYLLITE. (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)		-6	23	
24.00												-7	24 (3.37)	
25.00				50 660 1220								-8	25	
26.00												-9.083	26 26.17	
										Medium strong very narrowly foliated red orange locally slightly weathered to fresh PHYLLITE with very closely spaced very narrow lenticular bands of green grey fine grained psammite.			(1.48) 27	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/04/11	17:30	11.40	6.90	101	2.10
02/04/11	09:00	11.30	6.90	101	1.60
02/04/11	15:30	16.90	16.80	101	1.10
03/04/11	09:00	16.90	16.70	101	4.30
03/04/11	16:00	27.30	16.70	101	2.10
04/04/11	08:20	27.30	16.70	101	2.30

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 3.35 - 3.70m depth no recovery.
3. 6.20 - 6.90m depth no recovery.
4. 16.50 - 16.90m depth open hole.
5. 50mm standpipe installed to 10.0m depth.
6. Open hole drilling from 0.00 - 3.00m depth.

All dimensions in metres | Scale: **1:50** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Comacchio MC405**	**SP**	**JWickenden + JPhelan**	**GS+BNS**

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH529R

Contract Ref:	Start: 31.03.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 04.04.11	17.087	E:235502.6 N:393199.8	4 of 4

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
27.00										(New Harbour Group - Phyllite)		-10		
												-10.563	27.65	
28.00				50 660 1220	Water					Strong green grey fine grained fresh PSAMMITE with medium to very closely spaced narrow to very thin poorly defined lenticular highly disturbed clast-like band of phyllite. (New Harbour Group - Psammite)		-11	28 (1.25)	
												-11.813	28.90	
29.00										Strong dark green fine grained slightly weathered PSAMMITE with possible brecciated appearance. (New Harbour Group - Psammite)		-12	29 (1.30)	
30.00												-13.113	30 30.20	
										Rotary borehole terminated at 30.20m depth.				

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/04/11	17:30	11.40	6.90	101	2.10
02/04/11	09:00	11.30	6.90	101	1.60
02/04/11	15:30	16.90	16.80	101	1.10
03/04/11	09:00	16.90	16.70	101	4.30
03/04/11	16:00	27.30	16.70	101	2.10
04/04/11	08:20	27.30	16.70	101	2.30

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 3.35 - 3.70m depth no recovery.
3. 6.20 - 6.90m depth no recovery.
4. 16.50 - 16.90m depth open hole.
5. 50mm standpipe installed to 10.0m depth.
6. Open hole drilling from 0.00 - 3.00m depth.

All dimensions in metres | Scale: **1:50** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Comacchio MC405**	**SP**	**JWickenden + JPhelan**	**GS+BNS**

GINT_LIBRARY_V8_04.GLB|XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 21:55 | MJB
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH530

Contract Ref:	Start: 22.03.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 22.03.11	14.787	E:235182.3 N:393394.3	1 of 1

Samples and In-situ Tests				Water	Backfill & Instru-mentation	Description of Strata	Reduced Level	Depth (Thick ness)	Material Graphic Legend
Depth	No	Type	Results						
						Turf over TOPSOIL consisting of soft dark brown sandy slightly gravelly CLAY. Gravel is fine to coarse subangular to angular phyllite. (Topsoil)	14.487	0.30	
0.50	1	B						(0.50)	
0.50	2	ES					13.987	0.80	
0.60	1	D				Soft dark brown sandy very gravelly CLAY with a low cobble content. Gravel and cobbles are fine to coarse subangular to angular phyllite. (Unit B1)			
1.00	2	D							
1.40	3	D				Soft to firm grey sandy very gravelly CLAY. Gravel is fine to coarse subangular to angular phyllite. (Unit B1)			
1.50-1.95	3	$SPT_{(NR)}$	N=14						
1.50-1.95	4	B							
								(2.80)	
2.40	5	D							
2.50-2.95	6	SPT	N=28						
2.50	6	D							
2.50-2.95	7	B							
3.40	8	D					11.187	3.60	
3.50-3.78	9	SPT	N=115*			Medium strong purplish grey to grey PHYLLITE recovered as sandy fine to coarse angular possibly slightly weathered gravel. (Phyllite)			
3.50-3.78	10	B						(0.60)	
3.50	9	D							
3.90	11	D					10.587	4.20	
4.00-4.28	12	SPT	N=120*						
4.00	12	D				Borehole abandoned at 4.20m depth.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
22/03/11	16:30	3.50	3.00	150	3.50

Chiselling		
From	To	Duration (hh:mm)
3.70	4.00	01:00

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Water strike at 3.50m depth.
3. 50mm standpipe installed to 3.50m depth.
4. Hammer Serial No: 2011-H2

All dimensions in metres | Scale: 1:50

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	Dando 2000	RW	JWickenden	SAT

GINT_LIBRARY_V8_04.GLB|CABLE PERCUSSION LOG | 725061_WYLFA.GPJ - v8_04 | 25/11/11 - 14:01 | KJ.● = datamarker used throughout reporting for current exploratory position.
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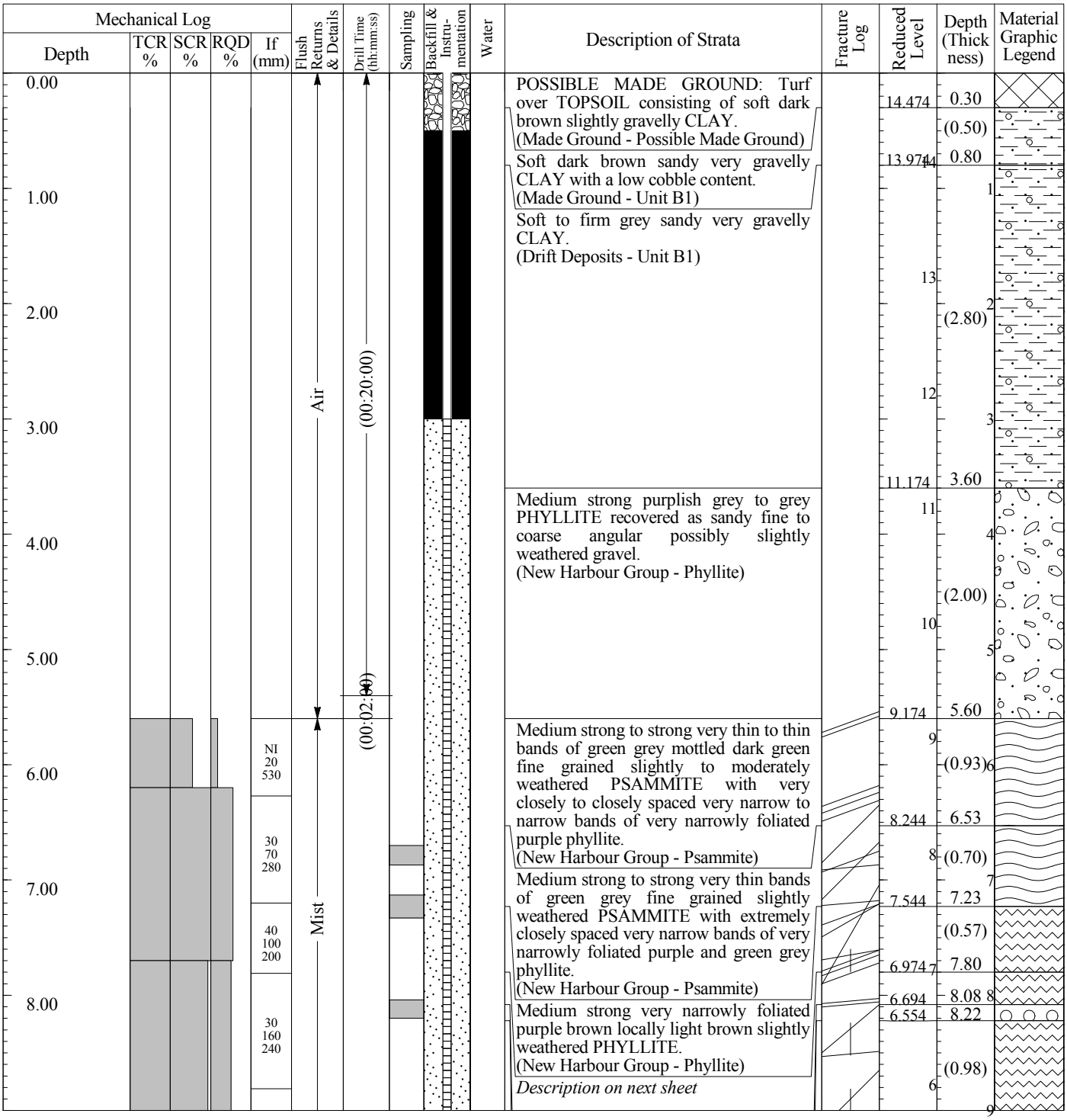
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WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH530R

Contract Ref:	Start: 01.04.44	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 03.04.11	14.774	E:235185.2 N:393395.0	1 of 4



Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/04/11		5.60	5.60	99	2.00
02/04/11	08:00	12.70	5.60	99	1.70
03/04/11	08:00	29.00	5.60	99	1.80

General Remarks

1. Inspection pit hand dug to 1.10m depth.
2. 50mm standpipe installed to 16.00m depth.

All dimensions in metres | Scale: **1:50** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Fraste**	**GF**	**JWickenden + JPhelan**	**GS+BNS**

AGS

GINT_LIBRARY_V8_04.GLB!XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 21:58 | MJB
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WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH530R

Contract Ref:	Start: 01.04.44	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 03.04.11	14.774	E:235185.2 N:393395.0	2 of 4

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
9.00										Medium strong very narrow to narrow bands of narrowly foliated light green grey and locally purple slightly weathered PHYLLITE with very closely spaced very narrow to very thin bands of fine to coarse grained poorly sorted grey blue psammite. (New Harbour Group - Phyllite)		5.574	9.20	
				80 120 530								5	(0.87)	
10.00				NI								4.704	10.07	
				20 90 130						Strong green grey slightly weathered METACONGLOMERATE consisting of fine to medium subrounded to subangular clasts of psammite, phyllite and quartz in fine to coarse grained poorly sorted grey blue matrix. (New Harbour Group - METACONGLOMERATE)		4.374	10.40	
				20 40 50								4	11	
11.00										Medium strong to strong very narrow to very thin poorly defined highly disturbed bands of very narrowly foliated light green grey and locally purple slightly to moderately weathered PHYLLITE with very closely spaced very narrow lenticular bands of fine grained blue grey psammite. (New Harbour Group - Phyllite)		3	12 (3.70)	
12.00				50 220 950								2	13	
13.00				NI 80 150	Mist					Medium strong very thin to thin bands of very narrowly foliated purple slightly weathered PHYLLITE with closely to very closely spaced irregular brecciated highly disturbed clast-like bands of fine grained light grey blue psammite. (New Harbour Group - Phyllite)		1	14.10	
14.00												0.674	14.45	
				50 200 470						Weak to medium strong green grey mottled brown slightly weathered highly fractured PHYLLITE recovered non intact as fine to coarse subangular to subrounded gravel and rare cobbles with intense brown black staining with frequent slight clay smearing. (New Harbour Group - Phyllite)		0.324		
15.00												0	15	
				40 60 70						Medium strong narrow to thin bands of very narrowly foliated purple red slightly weathered PHYLLITE with closely to widely spaced very narrow to rarely very thin irregular clast-like slightly lenticular bands of fine grained grey blue psammite generally dipping parallel to foliation. (New Harbour Group - Phyllite)		-1	16	
16.00				20 170 780								-2	17	
17.00				80 210 400						Medium strong narrowly foliated light green grey slightly weathered PHYLLITE with a highly disturbed fabric. (New Harbour Group - Phyllite)		-3	18	
										Medium strong to weak narrow to thin bands of very narrowly foliated purple				

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/04/11		5.60	5.60	99	2.00
02/04/11	08:00	12.70	5.60	99	1.70
03/04/11	08:00	29.00	5.60	99	1.80

General Remarks

1. Inspection pit hand dug to 1.10m depth.
2. 50mm standpipe installed to 16.00m depth.

All dimensions in metres | Scale: **1:50** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Fraste**	**GF**	**JWickenden + JPhelan**	**GS+BNS**

GINT_LIBRARY_V8_04.GLB!XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 21:58 | MJB
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH530R

Contract Ref:	Start: 01.04.44	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 03.04.11	14.774	E:235185.2 N:393395.0	3 of 4

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
18.00				80 210 400	Mist					red slightly weathered PHYLLITE with closely to widely spaced very narrow to narrow lenticular slightly poorly defined bands of fine grained grey blue psammite generally dipping parallel to foliation. (New Harbour Group - Phyllite)		-4	19	
19.00				110 270 570								-5	20	
				20 30 50										
20.00				230 600 800								-6	(12.72)	
21.00												-7	21	
22.00				40 150 250								-8	22	
23.00												-9	23	
24.00				100 320 860								-10	24	
25.00												-11	25	
26.00				180 640 1350								-12	26	
													27	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/04/11		5.60	5.60	99	2.00
02/04/11	08:00	12.70	5.60	99	1.70
03/04/11	08:00	29.00	5.60	99	1.80

General Remarks

1. Inspection pit hand dug to 1.10m depth.
2. 50mm standpipe installed to 16.00m depth.

All dimensions in metres | Scale: **1:50** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Fraste**	**GF**	**JWickenden + JPhelan**	**GS+BNS**

AGS

GINT_LIBRARY_V8_04.GLB!XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 21:58 | MJB
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH530R

Contract Ref:	Start: 01.04.44	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 03.04.11	14.774	E:235185.2 N:393395.0	4 of 4

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
27.00												-12.396	27.17	
										Medium strong narrow to thin moderately disturbed bands of very narrowly foliated purple slightly weathered PHYLLITE with closely to very closely spaced very narrow to narrow to locally very thin lenticular to irregular highly disturbed slightly poorly defined bands of fine grained grey blue psammite generally dipping parallel to foliation. (New Harbour Group - Phyllite)		-13	(1.48)	
28.00				180 640 1350	Mist								28	
												-13.876	28.65	
										Medium strong to strong very narrow to thin bands of green grey to dark green fine grained slightly weathered PSAMMITE with very closely to closely spaced very narrow to very thin bands of very narrowly foliated green to dark green phyllite. (New Harbour Group - Psammite)		-14	29	
29.00													(1.85)	
												-15		
30.00													30	
												-15.726	30.50	
										Rotary borehole terminated at 30.50m depth.				

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/04/11		5.60	5.60	99	2.00
02/04/11	08:00	12.70	5.60	99	1.70
03/04/11	08:00	29.00	5.60	99	1.80

General Remarks

1. Inspection pit hand dug to 1.10m depth.
2. 50mm standpipe installed to 16.00m depth.

All dimensions in metres | Scale: **1:50** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Fraste**	**GF**	**JWickenden + JPhelan**	**GS+BNS**

GINT_LIBRARY_V8_04.GLB|XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 21:58 | MJB
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH533

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	01.07.11	22.717	E:235047.2 N:393134.9	1 of 1
	End: 01.07.11			

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Turf over TOPSOIL consisting of soft dark brown sandy slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded phyllite/psammite. (Topsoil)	22.517	0.20	
						Firm dark brown sandy gravelly CLAY. Gravel is fine to medium rare coarse subangular to subrounded phyllite/psammite. (Unit B1)	22.117	0.60	
0.50	1	ES							
0.50	1	B							
0.60	1	D							
1.00	2	D							
1.40	3	D				Firm dark brown sandy slightly gravelly CLAY. Gravel is fine to medium rare coarse subangular to subrounded phyllite/psammite. (Unit B1)		(5.10)	
1.50-1.95	4	SPT	N=15						
1.50	4	D							
1.50-1.95	5	B							
2.40	6	D							
2.50-2.95	7	U	53 blows						
3.40	8	D							
3.50-3.95	9	SPT	N=13						
3.50-3.95	10	B							
3.50	9	D							
4.40	11	D							
4.50-4.95	12	U	49 blows				17.017	5.70	
5.90	13	D				Recovered as fine to coarse angular brown GRAVEL of medium strong slightly weathered brown phyllite (Phyllite)		(0.70)	
6.00-6.40	14	SPT	N=60*						
6.00	14	D					16.317	6.40	
6.00-6.40	15	D							
6.40-6.58	16	SPT(c)	N=130*			Borehole terminated at 6.40m depth.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/07/11	11:00	6.40	1.00	150	Dry

Chiselling		
From	To	Duration (hh:mm)
6.00	6.40	01:00

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 5.60m depth.
3. Hammer Serial No: 2011-H2

All dimensions in metres | Scale: 1:50

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	Dando 2000	RW	JWickenden	SAT

GINT_LIBRARY_V8_04.GLB|CABLE PERCUSSION LOG | 725061_WYLFA.GPJ - v8_04 | 25/11/11 - 14:01 | KJ ● = datamarker used throughout reporting for current exploratory position.
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH533R

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	31.05.11	22.791	E:235044.6 N:393131.9	1 of 16
	End: 10.06.11			

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00					Air	(01:30:00)				Grass over TOPSOIL consisting of soft dark brown sandy slightly gravelly CLAY. (Topsoil)		22.541	0.25	
										Soft dark brown sandy gravelly CLAY. (Drift Deposits - Unit B1)			(0.95)	
1.00												21.591	1.20	
										Brown sandy gravelly CLAY. (Drift Deposits - Unit C)				
2.00													(3.50)	
3.00														
4.00												18.091	4.70	
										Dark brown clayey fine angular GRAVEL of phyllite (description from drilled cuttings).			(0.40)	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
01/06/11	08:30	7.30	7.30	101	4.60
01/06/11	17:40	14.10	9.60	101	7.10
02/06/11	08:15	9.80	9.60	101	6.10
02/06/11	18:00	20.95	9.90	101	7.80
03/06/11	08:15	20.95	9.90	101	6.30
03/06/11	11:50	26.10	9.90	101	8.50
06/06/11	11:00	26.10	9.90	101	6.10
06/06/11	17:20	37.85	9.90	101	8.30

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) between 47.60 and 47.80m depth.
3. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) at 49.10m depth.
4. Borehole reamed out with 165mm DTHH on completion of hydro testing and 80mm UPVC well liner installed. Liner grouted in with 1:3 bentonite/cement grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Comacchio MC405	SP	BSaimen + JWickenden + LCademhead	BNS

GINT_LIBRARY_V8_04.GLB!XCUSTOM - SSL - 725061 - SUMMARY LOG | 725061_WYLFA.GPJ - v8_04 | 17/12/11 - 22:12 | MJB
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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH533R

Contract Ref:	Start: 31.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 10.06.11	22.791	E:235044.6 N:393131.9	2 of 16

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
5.00										(Drift Deposits - Unit B)		17.691	5.10	
										Brown sandy gravelly CLAY. (Drift Deposits - Unit B1)				
6.00					Air	(01:30:00)								
7.00												15.441	7.35	
				NI	Water					Medium strong to weak green fine to medium grained slightly weathered PSAMMITE recovered as fine to coarse angular gravel and cobble of green psammite with flat surface and brown discolouration on the surface (possibly fractured/jointed green psammite). (New Harbour Group - Psammite)				
8.00				OH	Air	(00:40:00)								
				NI	Water									
9.00				OH	Air	(00:40:00)				OPEN HOLED (Possible weathered grey/brown phyllite (description from drilled cuttings)). (New Harbour Group - Phyllite)		13.591	9.20	
													(0.40)	
												13.191	9.60	
				10 60 450	Water					Weak greenish brown fine to medium grained slightly weathered PSAMMITE recovered fine to coarse angular gravel of slightly weathered psammite (possibly		12.991	9.80	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/06/11	08:20	37.85	9.90	101	6.20
07/06/11	17:40	51.75	9.90	101	9.10
08/06/11	08:20	51.75	9.90	101	6.30
08/06/11	17:45	60.45	9.90	101	10.80
09/06/11	08:15	60.45	9.90	101	6.60
09/06/11	17:41	69.35	9.90	101	8.90
10/06/11	08:30	69.35	9.90	101	6.60
10/06/11	17:30	75.95	9.90	101	8.10

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) between 47.60 and 47.80m depth.
3. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) at 49.10m depth.
4. Borehole reamed out with 165mm DTHH on completion of hydro testing and 80mm UPVC well liner installed. Liner grouted in with 1:3 bentonite/cement grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Comacchio MC405	SP	BSaimen + JWickenden + LCademhead	BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH533R

Contract Ref:	Start: 31.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 10.06.11	22.791	E:235044.6 N:393131.9	3 of 16

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
10.00										fractured/jointed psammite). (New Harbour Group - Psammite)				
				100 170 350	Water					Weak to strong green very narrow to very thin fine to medium slightly weathered PSAMMITE with extremely to very closely spaced very narrowly foliated very narrow bands of green phyllite with occasional vein of quartz and ptygmatic veins of epidote (possible metamorphic volcano sedimentary rock). (New Harbour Group - Psammite)		12	(1.40)	
11.00												11		
				30 50 120						Strong becomes very strong dark green very narrow to very thin fine to medium slightly weathered PSAMMITE with extremely to very closely spaced very narrowly foliated very narrow bands of green phyllite with occasional veins of quartz and randomly orientated ptygmatic veins of epidote (1mm). (New Harbour Group - Psammite)		11.591	11.20	
12.00												11		
												10	(3.35)	
13.00				170 380 930								9		
14.00												8.241	14.55	
				NI						Weak brown fine grained slightly weathered DOLERITE (possible younger basaltic dyke) recovered as fine to coarse gravel and cobble of dyke with brown coating on the fracture surface (probably		7.991	14.80	
														15

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) between 47.60 and 47.80m depth.
3. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) at 49.10m depth.
4. Borehole reamed out with 165mm DTHH on completion of hydro testing and 80mm UPVC well liner installed. Liner grouted in with 1:3 bentonite/cement grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Comacchio MC405	SP	BSaimen + JWickenden + LCademhead	BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH533R

Contract Ref:	Start: 31.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 10.06.11	22.791	E:235044.6 N:393131.9	4 of 16

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
15.00										fractured/jointed). (Dolerite)				
				NI 50 290						Weak to strong dark green very narrow to very thinly banded slightly weathered PSAMMITE with extremely to very closely spaced very narrowly foliated very narrow bands of green phyllite with randomly orientated ptygmatic epidote and veins of quartz (up to 40mm) (possible meta volcano sedimentary rock). (New Harbour Group - Psammite)		7	(1.35) 16	
16.00												6.641	16.15	
				30 40 70						Weak to medium strong purple brown/reddish brown very narrowly foliated slightly weathered PHYLLITE with extremely to very closely spaced lenticular very narrow bands of fine to medium psammite. (New Harbour Group - Phyllite)		6	(1.00) 17	
17.00												5.641	17.15	
				90 220 1540	Water					Strong to very strong brown and green highly deformed very narrowly foliated slightly weathered to fresh PHYLLITE with occasional refused microfault with calcite re-crystallisation. (New Harbour Group - Phyllite)			(0.40)	
												5.241	17.55	
										Strong green very narrow to very thinly banded fine to medium fresh PSAMMITE with extremely to very closely spaced very narrowly foliated green very narrow to narrow bands of phyllite with randomly orientated ptygmatic intersecting epidote, quartz and calcite veins (1-3mm). (New Harbour Group - Psammite)		5	18	
18.00												4	(2.75) 19	
19.00				20 140 410								3	20	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) between 47.60 and 47.80m depth.
3. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) at 49.10m depth.
4. Borehole reamed out with 165mm DTHH on completion of hydro testing and 80mm UPVC well liner installed. Liner grouted in with 1:3 bentonite/cement grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Comacchio MC405	SP	BSaimen + JWickenden + LCademhead	BNS

AGS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH533R

Contract Ref:	Start: 31.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 10.06.11	22.791	E:235044.6 N:393131.9	5 of 16

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
20.00												2.491	20.30	
										Very strong green very thin to thinly banded fine to medium fresh PSAMMITE with very closely to closely spaced very narrowly foliated very narrow (2mm) band of green phyllite with randomly orientated ptygmatic epidote, calcite and quartz veins. (New Harbour Group - Psammite)		2.061	(0.43) 20.73	
												2		
												1.791	21.00	
21.00										Very strong green and brown very narrowly foliated fresh PHYLLITE with extremely to very closely spaced narrow to very thin bands of green fine to medium psammite with randomly orientated epidote veins. (New Harbour Group - Phyllite)		1.641	21 21.15	
				20 540 1220						Strong greyish brown fine grained fresh DOLERITE (possible younger basaltic (fine grained) dyke) with lenticular vein of calcite (2 x 30mm). (Dolerite)		1	(1.45)	
22.00										Strong green narrowly to thinly banded fine to medium fresh PSAMMITE with extremely to very closely spaced green very narrowly foliated phyllite. (New Harbour Group - Psammite)			22	
												0.191	22.60	
										Strong green narrowly to thinly banded fine grained fresh PSAMMITE interbanded with extremely to very closely spaced green very narrowly foliated PHYLLITE with calcite veins (possibly thermally metamorphosed). (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)		0	23	
23.00													(1.60)	
												-1		
				200 250 570									24	
24.00												-1.409	24.20	
										Very strong green fine to coarse grained slightly metamorphosed spotted fresh DOLERITE with phenocryst of fine to coarse feldspar crystals with occasional calcite veins (possible older dyke). (Dolerite)		-1.509	24.30	
												-1.709	24.50	
										Very strong green very narrowly foliated fresh PHYLLITE with baked margin on		-2	(0.68)	
				20 170 300									25	

Water

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) between 47.60 and 47.80m depth.
3. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) at 49.10m depth.
4. Borehole reamed out with 165mm DTHH on completion of hydro testing and 80mm UPVC well liner installed. Liner grouted in with 1:3 bentonite/cement grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Comacchio MC405	SP	BSaimen + JWickenden + LCademhead	BNS

AGS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH533R

Contract Ref:	Start: 31.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 10.06.11	22.791	E:235044.6 N:393131.9	6 of 16

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
25.00										either side. (New Harbour Group - Phyllite)		-2.389	25.18	
										Very strong blackish green fine to coarse fresh spotted slightly metamorphosed fresh DOLERITE with occasional fine to coarse phenocryst of feldspar and extremely to very closely paced subhorizontal epidote veins. (Dolerite)		-3		
26.00										Very strong green narrowly to thinly banded fine grained fresh PSAMMITE with extremely to very closely spaced very narrowly foliated phyllite with quartz veins (possible thermally metamorphosed phyllite and psammite). (New Harbour Group - Psammite)			26 (2.32)	
				2560								-4		
27.00					Water								27	
												-4.709	27.50	
										Very strong green very narrow to very thin bands of medium to coarse fresh PSAMMITE with extremely to very closely paced very narrow foliation of green phyllite. (New Harbour Group - Psammite)		-5	(0.90)	
28.00													28	
												-5.609	28.40	
				200 700 1520						Very strong green narrowly to very thinly banded fine grained fresh PSAMMITE interbanded with very narrow to very thin bands of very narrowly foliated PHYLLITE with calcite and quartz veins (possibly thermally metamorphosed phyllite and psammite). (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)		-6	(0.65)	
29.00												-6.259	29.05	
												-6.359	29.15	
										Very strong to strong blackish green fine to medium fresh spotted DOLERITE with extremely closely spaced epidote subhorizontal veins. (Dolerite)			(0.47)	
												-6.829	29.62	
										Strong green poorly foliated very narrow to very thin bands of fine grained fresh PSAMMITE with extremely to very		-7	(0.53)	
													30	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) between 47.60 and 47.80m depth.
3. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) at 49.10m depth.
4. Borehole reamed out with 165mm DTHH on completion of hydro testing and 80mm UPVC well liner installed. Liner grouted in with 1:3 bentonite/cement grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Comacchio MC405	SP	BSaimen + JWickenden + LCademhead	BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH533R

Contract Ref:	Start: 31.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 10.06.11	22.791	E:235044.6 N:393131.9	7 of 16

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
30.00					Water					closely paced very narrowly foliated very narrow bands of green chlorite phyllite (possible thermally metamorphosed phyllite and psammite). (New Harbour Group - Psammite)		-7.359	30.15	
										Strong dark green fine to coarse grained fresh spotted fresh DOLERITE with irregular veins of epidote (possible thermally metamorphosed dyke). (Dolerite)		-8	(0.95)	
31.00				200 700 1520						Very strong purple brown and green very narrowly foliated fresh PHYLLITE with en echelon/stepped calcite and chlorite veins. (New Harbour Group - Phyllite)		-8.309	31.10 31	
										Strong to weak blackish green slightly metamorphosed fine to medium grained fresh DOLERITE with multiple randomly orientated veins of calcite(<4mm). (Dolerite)		-9.059 9	(0.75) 31.85	
32.00										Strong green very narrowly foliated very narrowly to very thin bands of fresh PHYLLITE interbanded with very narrow to very thin bands of fine grained PSAMMITE (possible contact/thermally metamorphosed psammite and phyllite). (New Harbour Group - Interbedded PHYLLITE & PSAMMITE)		-10	32 (1.40) 33	
33.00										Strong purple brown very narrowly foliated fresh PHYLLITE with extremely to very closely spaced lenticular (3 x 5mm) dark green phyllite with ptygmatic sheared and broken up epidote veins. (New Harbour Group - Phyllite)		-10.459	33.25	
34.00				150 700 1380								-11	(1.20) 34	
										Strong to very strong black fine to coarse grained spotted fresh to slightly weathered DOLERITE with irregular sigmoidal calcite veins. (Dolerite)		-11.659	34.45	
												-12	35	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) between 47.60 and 47.80m depth.
3. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) at 49.10m depth.
4. Borehole reamed out with 165mm DTHH on completion of hydro testing and 80mm UPVC well liner installed. Liner grouted in with 1:3 bentonite/cement grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Rotary open hole + Rotary Cored	Plant Used:	Comacchio MC405	Drilled By:	SP	Logged By:	BSaimen + JWickenden + LCademhead	Checked By:	BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH533R

Contract Ref:	Start: 31.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 10.06.11	22.791	E:235044.6 N:393131.9	8 of 16

Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
35.00				150 700 1380	Water							-13	(1.55)	
												-13.209	36.00	
36.00										Very strong purple brown and green very narrowly foliated fresh PHYLLITE with randomly orientated ptygmatic epidote veins and quartz veins. (New Harbour Group - Phyllite)			(0.55)	
												-13.759	36.55	
										Very strong green very narrow to narrow bands of fine to medium fresh PSAMMITE with extremely to very closely spaced green narrow bands of phyllite and randomly orientated ptygmatic intersecting veins (3mm). (New Harbour Group - Psammite)			(0.30)	
												-14 -14.059	36.85	
37.00				2590						Strong purple brown and green very narrowly foliated fresh PHYLLITE with very narrow bands of green psammite with randomly orientated ptygmatic and sheared epidote veins. (New Harbour Group - Phyllite)		-15	(1.90)	
38.00												-15.959	38.75	
										Strong to very strong greenish brown narrowly to thinly banded fine grained fresh PSAMMITE with extremely to closely spaced greenish and purple brown fresh very narrow to narrow bands of very narrowly foliated purple brown phyllite with randomly orientated ptygmatic epidote veins. (New Harbour Group - Psammite)		-16	(0.60)	
39.00				NI 120 700								-16.559	39.35	
										Very strong green and purple brown very narrow to thinly banded fine to coarse fresh PSAMMITE with randomly orientated ptygmatic occasionally intersecting with each other.		-17	(0.70)	
													40	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) between 47.60 and 47.80m depth.
3. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) at 49.10m depth.
4. Borehole reamed out with 165mm DTHH on completion of hydro testing and 80mm UPVC well liner installed. Liner grouted in with 1:3 bentonite/cement grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Comacchio MC405	SP	BSaimen + JWickenden + LCademhead	BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH533R

Contract Ref:	Start: 31.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 10.06.11	22.791	E:235044.6 N:393131.9	9 of 16

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
40.00										(New Harbour Group - Psammite)		-17.259	40.05	
										Very strong purple brown very narrowly foliated fresh PHYLLITE with extremely to very closely spaced very narrow band of brown grey fine to medium psammite with randomly orientated ptygmatic slightly sheared veins of epidote. (New Harbour Group - Phyllite)		-17.659	(0.40) 40.45	
										Very strong green very narrow to very thin bands of fine to medium fresh PSAMMITE with randomly orientated ptygmatic epidote veins (partially replaced by quartz). (New Harbour Group - Psammite)		-18.109	(0.45) 40.90	
41.00				NI 120 700						Medium strong to strong purple brown very narrowly foliated fresh PHYLLITE with extremely closely to very closely spaced very narrow to very thin bands of greenish brown fine to medium psammite with randomly orientated ptygmatic intersecting epidote veins. (New Harbour Group - Phyllite)		-19	41 42 (2.75)	
42.00					Water							-20	43	
43.00				2970								-20.859	43.65	
										Very strong dark green very thin to thinly banded fine to coarse fresh PSAMMITE with closely paced green grey very narrow bands of very narrowly foliated phyllite with randomly orientated ptygmatic occasionally intersecting epidote veins and veins and patches of quartz (possible metamorphic volcano sedimentary rocks). (New Harbour Group - Psammite)		-21	44	
44.00				100 140 540								-22	45	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) between 47.60 and 47.80m depth.
3. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) at 49.10m depth.
4. Borehole reamed out with 165mm DTHH on completion of hydro testing and 80mm UPVC well liner installed. Liner grouted in with 1:3 bentonite/cement grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Comacchio MC405	SP	BSaimen + JWickenden + LCademhead	BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH533R

Contract Ref:	Start: 31.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 10.06.11	22.791	E:235044.6 N:393131.9	10 of 16

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
45.00				100 140 540	Water							-23	(4.45)	
46.00													46	
				2610								-24		
47.00													47	
												-25		
48.00										Strong to very strong purple brown and reddish brown very narrowly foliated fresh PHYLLITE with randomly orientated ptygmatic and sheared epidote veins. (New Harbour Group - Phyllite)		-25.309	48.10	
				2630								-26	(1.75)	
49.00													49	
										Description on next sheet		-27.059	49.85	
													50	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) between 47.60 and 47.80m depth.
3. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) at 49.10m depth.
4. Borehole reamed out with 165mm DTHH on completion of hydro testing and 80mm UPVC well liner installed. Liner grouted in with 1:3 bentonite/cement grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Comacchio MC405	SP	BSaimen + JWickenden + LCademhead	BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH533R

Contract Ref:	Start: 31.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 10.06.11	22.791	E:235044.6 N:393131.9	11 of 16

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
50.00										Very strong brown very narrow to narrow bands of fine to medium fresh PSAMMITE with extremely closely spaced very narrow bands of purple brown phyllite with randomly oriented sheared ptygmatic epidote veins. (New Harbour Group - Psammite)			(0.50)	
				2630								-27.559	50.35	
										Very strong purple brown very narrowly foliated fresh PHYLLITE with extremely closely to very closely spaced very narrow bands of green psammite with extremely to very closely spaced re-fused microfault and parallel array of irregular calcite veins. (New Harbour Group - Phyllite)			(0.35)	
												-27.909	50.70	
												-28		
51.00													51 (0.85)	
										Strong purple brown very narrowly foliated fresh PHYLLITE with extremely to very closely spaced very narrow band of psammite. (New Harbour Group - Phyllite)		-28.759	51.55	
												-28.959	51.75	
												-29		
				70 700 1570						Very strong green narrow to very thin bands of fine to medium fresh PSAMMITE with extremely to closely spaced purple brown very narrowly foliated phyllite with randomly orientated ptygmatic and intersecting epidote veins (1mm). (New Harbour Group - Psammite)		-29.259	52.052	
52.00													(0.60)	
					Water					Very strong green and brown narrowly to very thinly banded fine to medium fresh PSAMMITE with randomly orientated ptygmatic intersecting epidote veins. (New Harbour Group - Psammite)		-29.859	52.65	
												-29.929	52.72	
												-30		
53.00										Very strong purple brown very narrowly foliated fresh PHYLLITE with extremely closely spaced very narrow bands of brown psammite. (New Harbour Group - Phyllite)			(0.68) 53	
												-30.609	53.40	
										Very strong green fine to coarse fresh METACONGLOMERATE with fine to coarse subrounded to rounded clast of jasper/quartz. (New Harbour Group - METACONGLOMERATE)		-31		
54.00				2810						Very strong purple brown very narrowly foliated fresh PHYLLITE with very closely spaced very narrow brown lenticular psammite. (New Harbour Group - Phyllite)			54	
										Strong purple brown and reddish brown fresh PHYLLITE with extremely closely to closely spaced very narrow to very thin bands of lenticular green and greenish brown fine to medium psammite.		-32		
													55	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) between 47.60 and 47.80m depth.
3. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) at 49.10m depth.
4. Borehole reamed out with 165mm DTHH on completion of hydro testing and 80mm UPVC well liner installed. Liner grouted in with 1:3 bentonite/cement grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Comacchio MC405	SP	BSaimen + JWickenden + LCademhead	BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH533R

Contract Ref:	Start: 31.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 10.06.11	22.791	E:235044.6 N:393131.9	12 of 16

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
55.00				2810	Water					(New Harbour Group - Phyllite)		-33	(4.96) 56	
56.00												-34		
57.00				190 330 860								-35	57	
58.00												-35.569	58.36	
										Very strong highly disturbed/deformed very narrow bands of green grey medium grained fresh PSAMMITE with thin bands of very narrowly foliated purple phyllite with randomly oriented ptygmatic quartz veins (2 - 50mm) with rare lenticular pockets of pink orthoclase feldspar(<5mm) and randomly oriented cross cutting ptygmatic chlorite/epidote veins (<1mm) . (New Harbour Group - Psammite)		-36	(1.15) 59	
59.00				80 270 550								-36.719	59.51	
										Strong very narrowly foliated very thinly to thinly banded purple/brown fine grained fresh PHYLLITE with very narrow to narrow bands of lenticular green grey medium to coarse grained		-37	60	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) between 47.60 and 47.80m depth.
3. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) at 49.10m depth.
4. Borehole reamed out with 165mm DTHH on completion of hydro testing and 80mm UPVC well liner installed. Liner grouted in with 1:3 bentonite/cement grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Comacchio MC405	SP	BSaimen + JWickenden + LCademhead	BNS

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH533R

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	31.05.11 End: 10.06.11	22.791	E:235044.6 N:393131.9	13 of 16

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
60.00				80 270 550	Water					psammite with rare 30° micro quartz vein (<2mm) with Rare subhorizontal to subvertical very closely spaced ptygmatic chlorite/epidote veins (<1mm). (New Harbour Group - Phyllite)			(1.92)	
				10 30 110								-38	61	
61.00				100 370 610								-38.639	61.43	
										Strong highly disturbed very thinly to thinly banded greenish grey medium grained slightly weathered PSAMMITE with rare very thin to thin bands of purple phyllite with randomly oriented extremely closely spaced ptygmatic chlorite/epidote veins(<1mm). (New Harbour Group - Psammite)		-39	(0.56)	
62.00				20 180 460						Strong to medium strong very thinly to thinly banded greenish grey medium grained fresh PSAMMITE with very thinly banded very narrowly foliated purple phyllite and randomly oriented very closely spaced ptygmatic chlorite/epidote veins(<1mm) and rare quartz micro vein with some pink orthoclase feldspar and very poorly developed medium spaced 35° shear planes/microfaults. (New Harbour Group - Psammite)		-39.199	61.99 62	
63.00				20 130 230						Very strong purple very narrow to narrowly foliated very thin to thinly banded fine grained fresh PHYLLITE slightly weathered with occasional very narrow lenticular and rare boudinage bands of greenish grey medium grained psammite and rare lenticular bands of green chlorite. (New Harbour Group - Phyllite)		-40	(1.01)	
				NI 130 180						Very strong highly disturbed very thin to thinly banded greenish grey medium grained fresh PSAMMITE with very thinly banded purple fine grained phyllite. (New Harbour Group - Psammite)		-40.209	63.00 63	
64.00				30 210 360						Strong locally highly disturbed very thinly to thinly lenticular banded greenish grey medium grained fresh PSAMMITE with extremely closely		-40.989	(0.78) 63.78	
												-41	64	
												-41.679	(0.69) 64.47	
												-42	65	

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) between 47.60 and 47.80m depth.
3. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) at 49.10m depth.
4. Borehole reamed out with 165mm DTHH on completion of hydro testing and 80mm UPVC well liner installed. Liner grouted in with 1:3 bentonite/cement grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Comacchio MC405	SP	BSaimen + JWickenden + LCademhead	BNS

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WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH533R

Contract Ref:	Start: 31.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 10.06.11	22.791	E:235044.6 N:393131.9	14 of 16

Depth	Mechanical Log TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
65.00				30 210 360	Water					spaced very thinly to thinly banded purple phyllite with randomly oriented very closely to closely spaced ptygmatic chlorite/epidote veins (<1mm) with rare lenticular quartz micro veins (<3mm). (New Harbour Group - Psammite)		-43	(2.97)	
66.00				2140								-44	66	
67.00												-44.649	67.44	
										Strong very thinly to thinly banded lenticular greenish grey medium grained fresh PSAMMITE with rare very thinly to thinly banded dark red phyllite (possible poorly developed mylonitic texture) with randomly oriented cross cutting ptygmatic chlorite/epidote veins (<1mm) predominantly in the psammite dark red mineral replacement with chlorite/epidote ptygmatic veins along the edge. (New Harbour Group - Psammite)		-45	67 (1.56)	
68.00				70 160 1010								-46	68	
69.00												-46.209	69.00	
										Strong highly disturbed lenticular very thin to thin bands of greenish grey medium grained fresh PSAMMITE and with very thinly to thinly banded dark red purple phyllite with randomly oriented extremely closely spaced cross cutting ptygmatic chlorite/epidote veins (<1mm) predominantly in the psammite and occasional undulating quartz veins. (New Harbour Group - Psammite)		-47	69 70	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) between 47.60 and 47.80m depth.
3. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) at 49.10m depth.
4. Borehole reamed out with 165mm DTHH on completion of hydro testing and 80mm UPVC well liner installed. Liner grouted in with 1:3 bentonite/cement grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Comacchio MC405	SP	BSaimen + JWickenden + LCademhead	BNS

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH533R

Contract Ref:	Start: 31.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 10.06.11	22.791	E:235044.6 N:393131.9	15 of 16

Depth	Mechanical Log: TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thickness)	Material Graphic Legend
70.00														
												-48	(3.15)	
71.00													71	
												-49		
72.00				130 340 820	Water							-49.359	72 72.15	
										Strong very narrowly to narrowly foliated very thin to thinly banded purple grey progressing to grey fine grained fresh PHYLLITE with rare lenticular very thin bands of greenish grey medium grained psammite with rare randomly ptygmatic chlorite/epidote veins (<1mm) predominantly on psammite. (New Harbour Group - Phyllite)		-50		
73.00													73	
												-51		
74.00													(3.80) 74	
				120 300 390								-52		
													75	

Drilling Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) between 47.60 and 47.80m depth.
3. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) at 49.10m depth.
4. Borehole reamed out with 165mm DTHH on completion of hydro testing and 80mm UPVC well liner installed. Liner grouted in with 1:3 bentonite/cement grout.

All dimensions in metres	Scale: 1:28	Inclination: Vertical	Azimuth: NA

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	Comacchio MC405	SP	BSaimen + JWickenden + LCademhead	BNS

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BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH533R

Contract Ref:	Start: 31.05.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 10.06.11	22.791	E:235044.6 N:393131.9	16 of 16

Mechanical Log: Depth	TCR %	SCR %	RQD %	If (mm)	Flush Returns & Details	Drill Time (hh:mm:ss)	Sampling	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (Thick ness)	Material Graphic Legend
75.00				120 300 390	Water ↓							-53 -53.159	75.95	
										Rotary borehole terminated at 75.95m depth.				

Drilling Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) between 47.60 and 47.80m depth.
3. Thinning of core (core diameter reduced, drilling related, possible bed of hard rock) at 49.10m depth.
4. Borehole reamed out with 165mm DTHH on completion of hydro testing and 80mm UPVC well liner installed. Liner grouted in with 1:3 bentonite/cement grout.

All dimensions in metres | Scale: **1:28** | Inclination: **Vertical** | Azimuth: **NA**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Rotary open hole + Rotary Cored	**Comacchio MC405**	**SP**	**BSaimen + JWickenden + LCademhead**	**BNS**

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH534

Contract Ref:	Start: 28.06.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 29.06.11	30.910	E:235157.4 N:393091.2	1 of 2

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Turf over TOPSOIL consisting of firm dark brown sandy slightly gravelly CLAY. Gravel is fine to coarse subangular phyllite/psammite. Abundant fine rootlets. (Topsoil)	30.660	0.25	
0.50	1	ES				Firm dark brown slightly sandy gravelly CLAY. Gravel is fine to medium subrounded to subangular phyllite/psammite. (Drift Deposits - Unit B1)			
0.50	1	B							
0.60	1	D							
1.00	2	D							
1.40	3	D						(2.35)	
1.50-1.95	4	SPT	N=15						
1.50	4	D							
1.50-1.95	5	B							
2.40	6	D					28.310	2.60	
2.50-2.95	7	U	78 blows			Firm dark grey slightly sandy slightly gravelly CLAY. Gravel is fine to medium subangular to subrounded phyllite/psammite. (Drift Deposits - Unit B1)		(0.80)	
							27.510	3.40	
3.40	8	D				Stiff/very stiff dark grey slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded to subangular phyllite/psammite. (Drift Deposits - Unit B1)			
3.50-3.95	9	SPT	N=23						
3.50-3.95	10	B							
3.50	9	D							
4.40	11	D							
4.50-4.95	12	U	100 blows						
5.90	13	D							
6.00-6.45	14	SPT	N=29						
6.00	14	D							
6.00-6.45	15	B							
7.40	16	D							
7.50-7.95	17	U	100 blows						
7.95-8.05	18	B						(9.90)	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
28/06/11	18:00	8.00	3.00	150	Dry
29/06/11	08:00	8.80	3.00	150	Dry
29/06/11	12:00	13.40	3.00	150	Dry

Chiselling		
From	To	Duration (hh:mm)
7.20	7.40	00:30
13.30	13.40	01:00

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 12.80m depth.
4. Hammer Serial No: 2011-H2

All dimensions in metres | Scale: 1:50

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	Dando 2000	RW	JWickenden	SAT

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00004

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH534

Contract Ref:	Start: 28.06.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 29.06.11	30.910	E:235157.4 N:393091.2	2 of 2

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
8.90	19	D							
9.00-9.45	20	SPT	N=40						
9.00	20	D							
9.00-9.45	21	B							
10.40	22	D							
10.50-10.75	22A	U	200 blows 0% recovery						
10.50-10.95	23	B							
11.90	24	D							
12.00-12.45	25	SPT	N=28						
12.00	25	D							
12.00-12.45	26	B							
13.30-13.40	27	D					17.610	13.30	
13.40-13.52	28	SPT(c)	N=214*			Medium strong slightly weathered phyllite recovered as fine to medium angular GRAVEL. (New Harbour Group - Phyllite)	17.510	13.40	
						Borehole terminated at 13.40m depth.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
28/06/11	18:00	8.00	3.00	150	Dry
29/06/11	08:00	8.80	3.00	150	Dry
29/06/11	12:00	13.40	3.00	150	Dry

Chiselling		
From	To	Duration (hh:mm)

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 12.80m depth.
4. Hammer Serial No: 2011-H2

All dimensions in metres | Scale: 1:50

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	Dando 2000	RW	JWickenden	SAT

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STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00005

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH535

Contract Ref:	Start: 27.06.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 28.06.11	32.745	E:235088.8 N:392895.8	1 of 2

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Turf over TOPSOIL consisting of soft dark brown slightly gravelly CLAY. With abundant fine rootlets. (Topsoil)	32.445	0.30	
0.50	1	B				Firm to stiff orange brown sandy slightly gravelly CLAY. Gravel is fine to coarse subrounded to subangular phyllite and psammite. (Drift Deposits - Unit B1)		(0.50)	
0.50	2	ES					31.945	0.80	
0.60	1	D				Stiff orange brown to light grey sandy gravelly CLAY. Gravel is fine to coarse subangular to subrounded phyllite and psammite. (Drift Deposits - Unit B1)			
1.00	2	D							
1.40	3	D							
1.50-1.95	4	SPT	N=18						
1.50	4	D							
1.50-1.95	5	B						(2.50)	
2.40	6	D							
2.50-2.95	7	U	63 blows						
							29.445	3.30	
3.40-3.95	8	B				Stiff dark grey silty gravelly CLAY. Gravel is fine to medium subangular to subrounded phyllite/psammite. (Drift Deposits - Unit C)			
3.50-3.95	8	$SPT_{(NR)}$	N=30						
4.40	10	D							
4.50-4.95	11	U	71 blows						
								(4.70)	
5.90	12	D							
6.00-6.45	13	SPT	N=25						
7.40	15	D							
7.50-7.95	16	U	50 blows						
							24.745	8.00	
7.95-8.05	17	B				Stiff dark grey silty slightly gravelly CLAY. Gravel is fine to medium subangular phyllite/psammite. Silt occurs as interlaminations. (Drift Deposits - Unit C)			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/06/11	13:00	3.00	3.00	150	3.00
28/06/11	08:00	12.00	12.00	150	Dry
28/06/11	12:00	14.00	12.00	150	Dry

Chiselling		
From	To	Duration (hh:mm)
13.80	14.00	01:00

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 12.60m depth.
3. Hammer Serial No: 2011-H2

All dimensions in metres | Scale: 1:50

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	Dando 2000	RW	JWickenden	SAT

GINT_LIBRARY_V8_04.GLB!XCUSTOM - SSL - 725061 - CP LOG | 725061_WYLFA.GPJ - v8_04 | 25/11/11 - 15:40 | KJ.
Structural Soils Ltd, Head Office - Bristol: The Old School, Stillhouse Lane, Bedminster, Bristol, BS3 4EB. Tel: 0117-947-1000, Fax: 0117-947-1004, Web: www.soils.co.uk, Email:admin@soils.co.uk.

STRUCTURAL SOILS

WYL-SSL-SDT-LOG-00005

BOREHOLE LOG

Contract:	Client:	Borehole:
Wylfa New Build - Intermediate Onshore Ground Investigation	Horizon Nuclear Power Wylfa Limited	BH535

Contract Ref:	Start: 27.06.11	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
725061	End: 28.06.11	32.745	E:235088.8 N:392895.8	2 of 2

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
8.90	18	D							
9.00-9.45	19	SPT	N=27						
10.40	21	D							
10.50-10.95	22	U	67 blows					(5.80)	
10.95-11.05	23	B							
11.00	11	W							
11.90	24	D							
12.00-12.45	25	SPT	N=29						
12.00	25	D							
12.00-12.45	26	B							
13.25-13.43	28	$SPT_{(NR)}$	N=143*						
13.25-13.98	29	D							
13.40	27	D				. . . at 13.40m depth becoming slightly sandy.			
13.50-13.80	27A	U	150 blows 0% recovery				18.945	13.80	
13.50-13.80	28	B				Weathered phyllite/psammite recovered as coarse angular slightly weathered gravel. (New Harbour Group - Phyllite)	18.745	14.00	
14.00-14.08	30	SPT(c)	N=273*			Borehole terminated at 14.00m depth.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/06/11	13:00	3.00	3.00	150	3.00
28/06/11	08:00	12.00	12.00	150	Dry
28/06/11	12:00	14.00	12.00	150	Dry

Chiselling		
From	To	Duration (hh:mm)

General Remarks

1. Hand dug inspection pit to 1.20m depth.
2. 50mm standpipe installed to 12.60m depth.
3. Hammer Serial No: 2011-H2

All dimensions in metres | Scale: 1:50

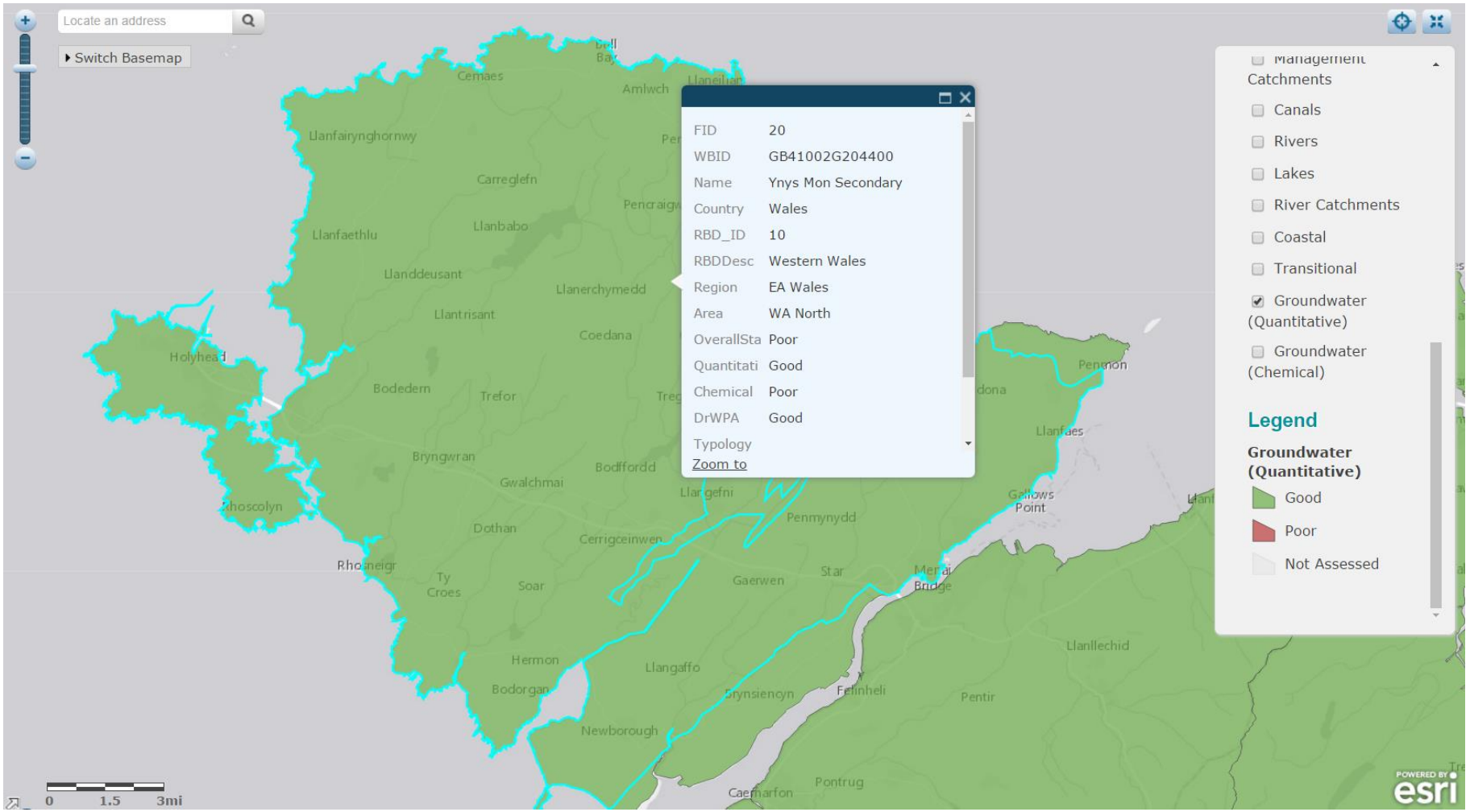
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	Dando 2000	RW	JWickenden	SAT

AGS

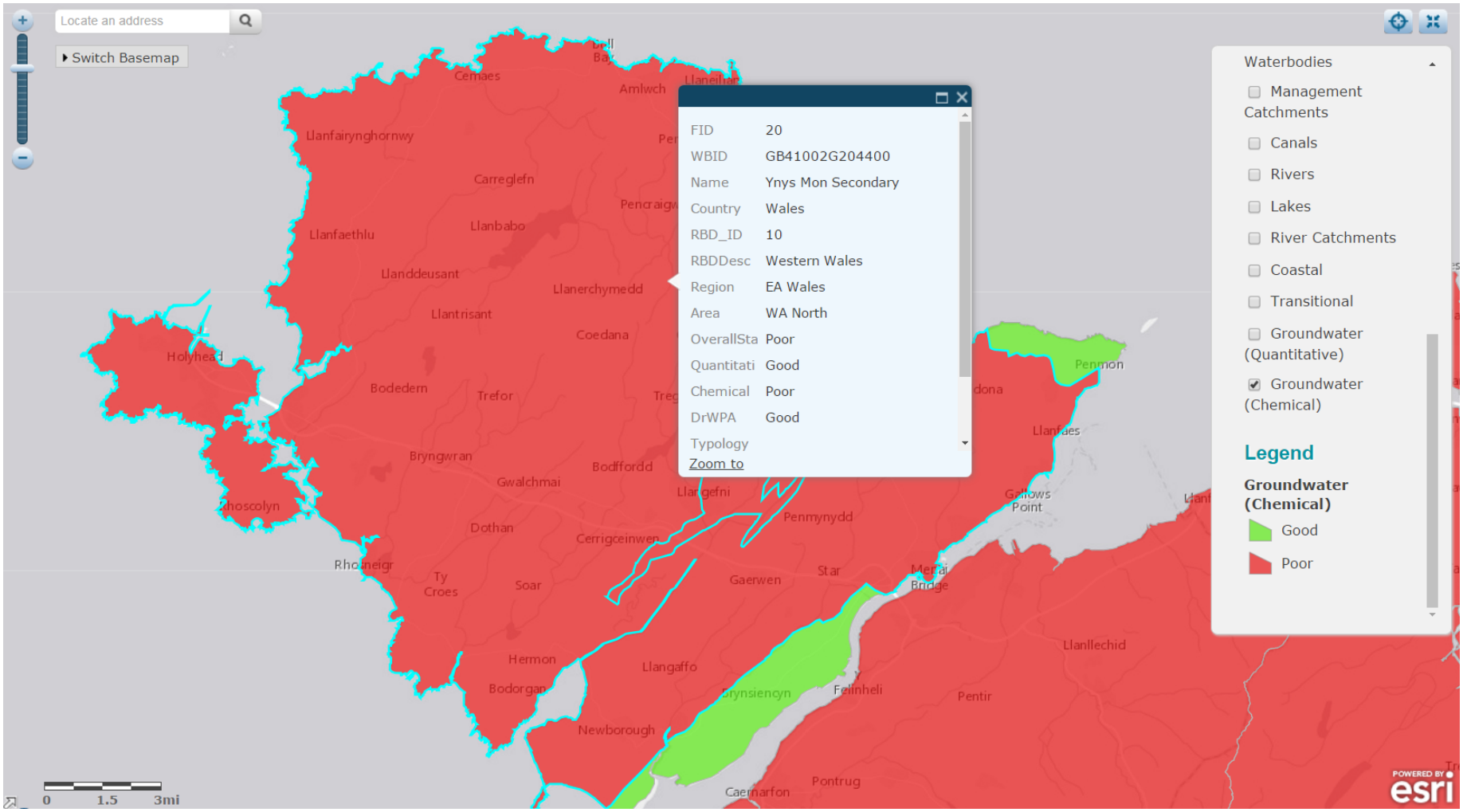
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Structural Soils Ltd, Head Office - Bristol: The Old School, Stillhouse Lane, Bedminster, Bristol, BS3 4EB. Tel: 0117-947-1000, Fax: 0117-947-1004, Web: www.soils.co.uk, Email:admin@soils.co.uk.

Appendix E NRW WFD Designations

Water Framework Directive aquifer status for groundwater quantity (from http://waterwatchwales.naturalresourceswales.gov.uk)



Water Framework Directive aquifer status for groundwater quality (from http://waterwatchwales.naturalresourceswales.gov.uk)

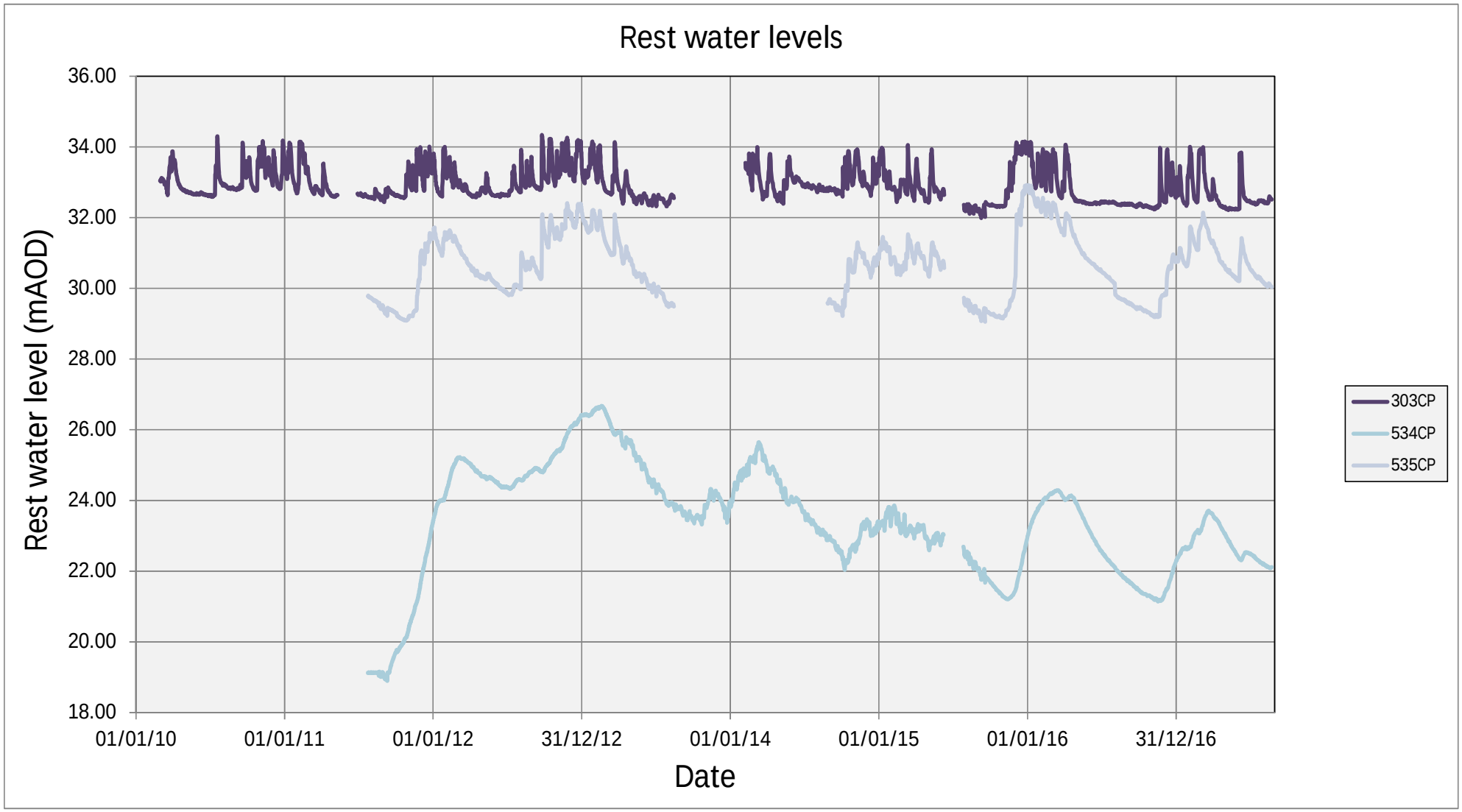


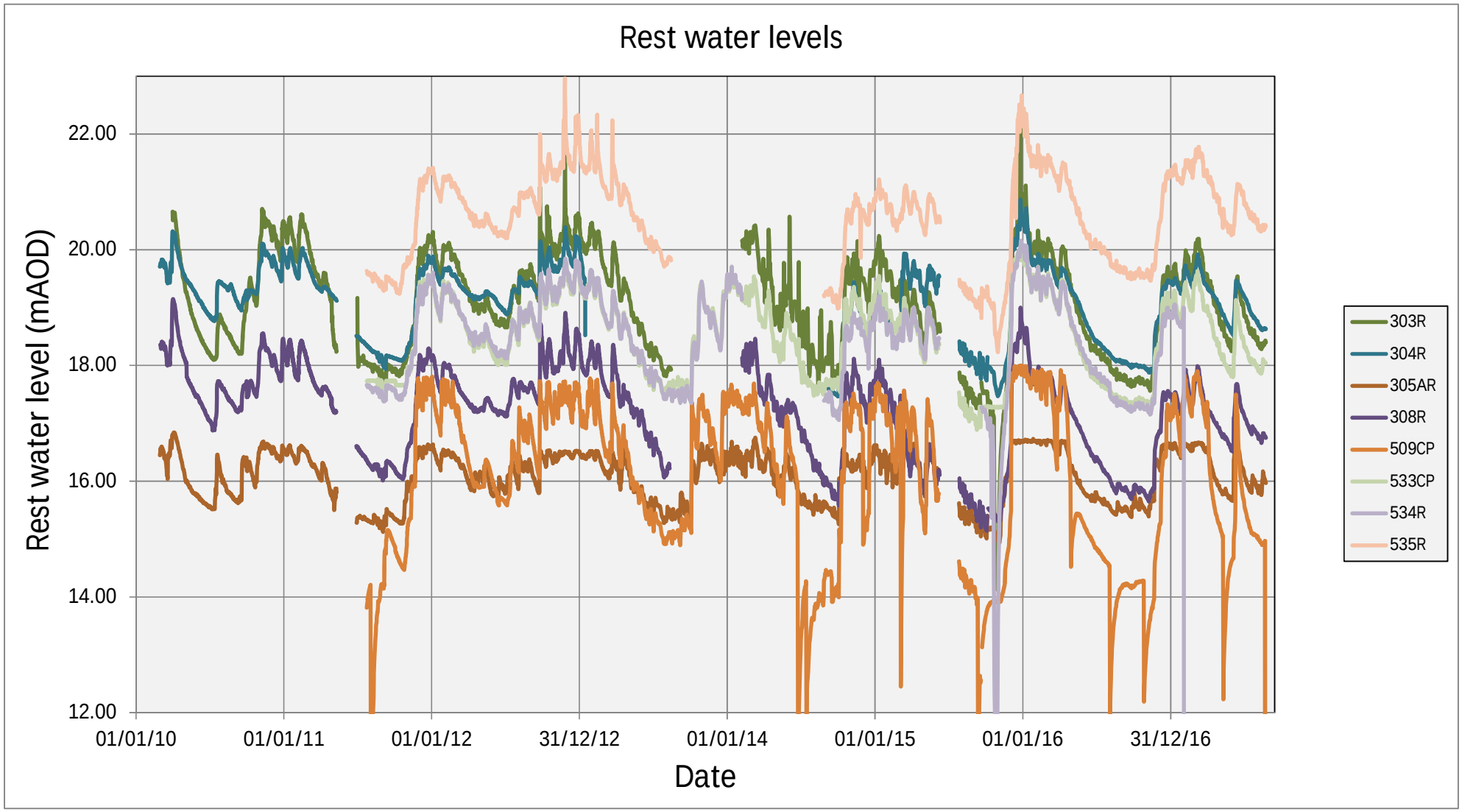
Appendix F List of Private Water Supplies and Public Wells

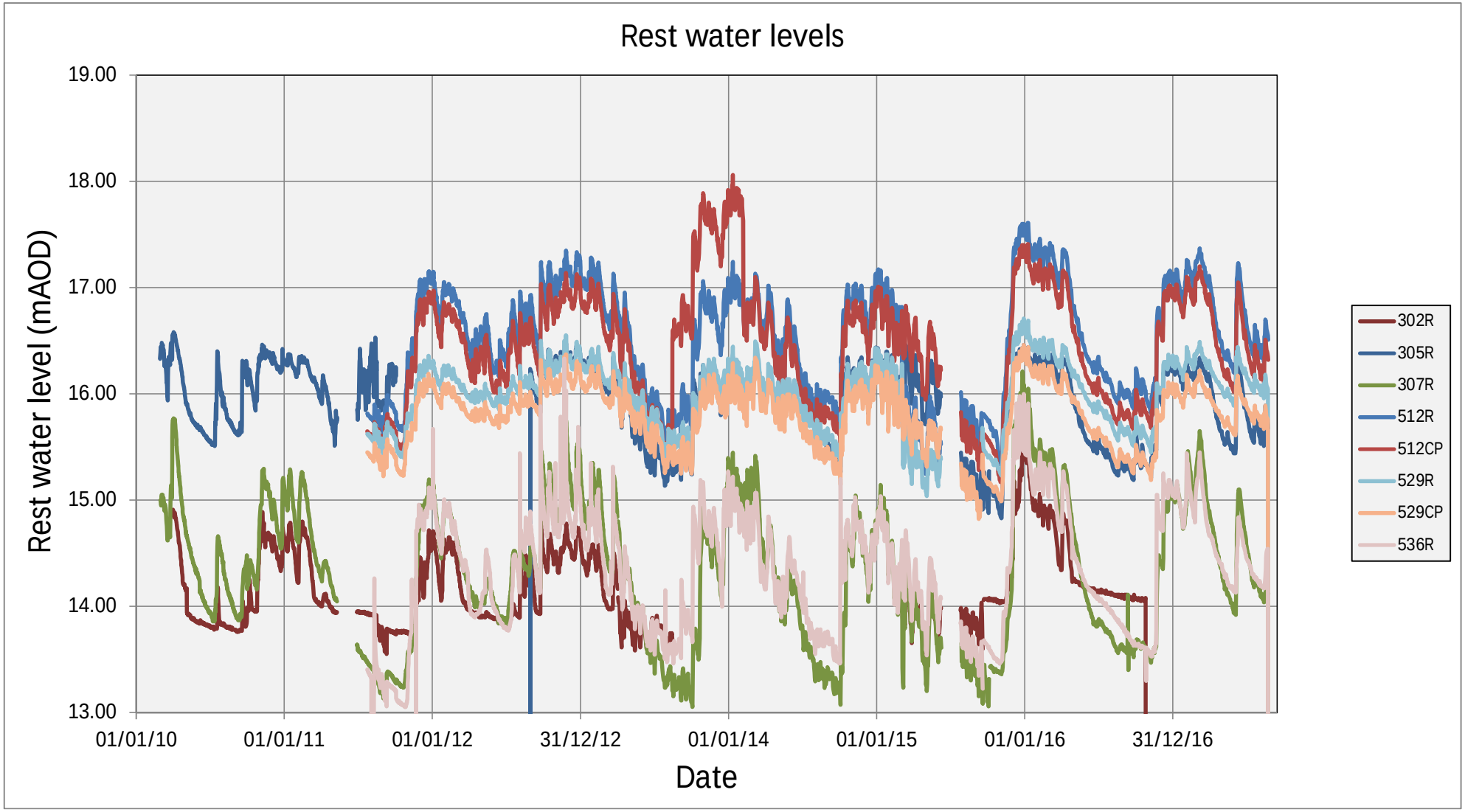
Easting	Northing	Address 1	Address 7
235060	390609	Llanddygfael Croes	PWS - Single Dwelling (Small Supply)
235873	390709	Maes Mawr	PWS - Single Dwelling (Small Supply)
234245	390719	Cefn Coch	Non Potable Uses
234379	391521	Cae Gwyn	PWS - Single Dwelling (Small Supply)
232933	391558	Ty Wian	PWS - Single Dwelling (Small Supply)
234159	391815	Caerdegog Uchaf	PWS - Large Commercial
235776	391990	Foel Fawr	Non Potable Uses
232853	392714	Bwthyn Pereos	PWS - Single Dwelling (Small Supply)
232312	393274	Tyn Llan Farm	PWS - Single Dwelling (Small Supply)

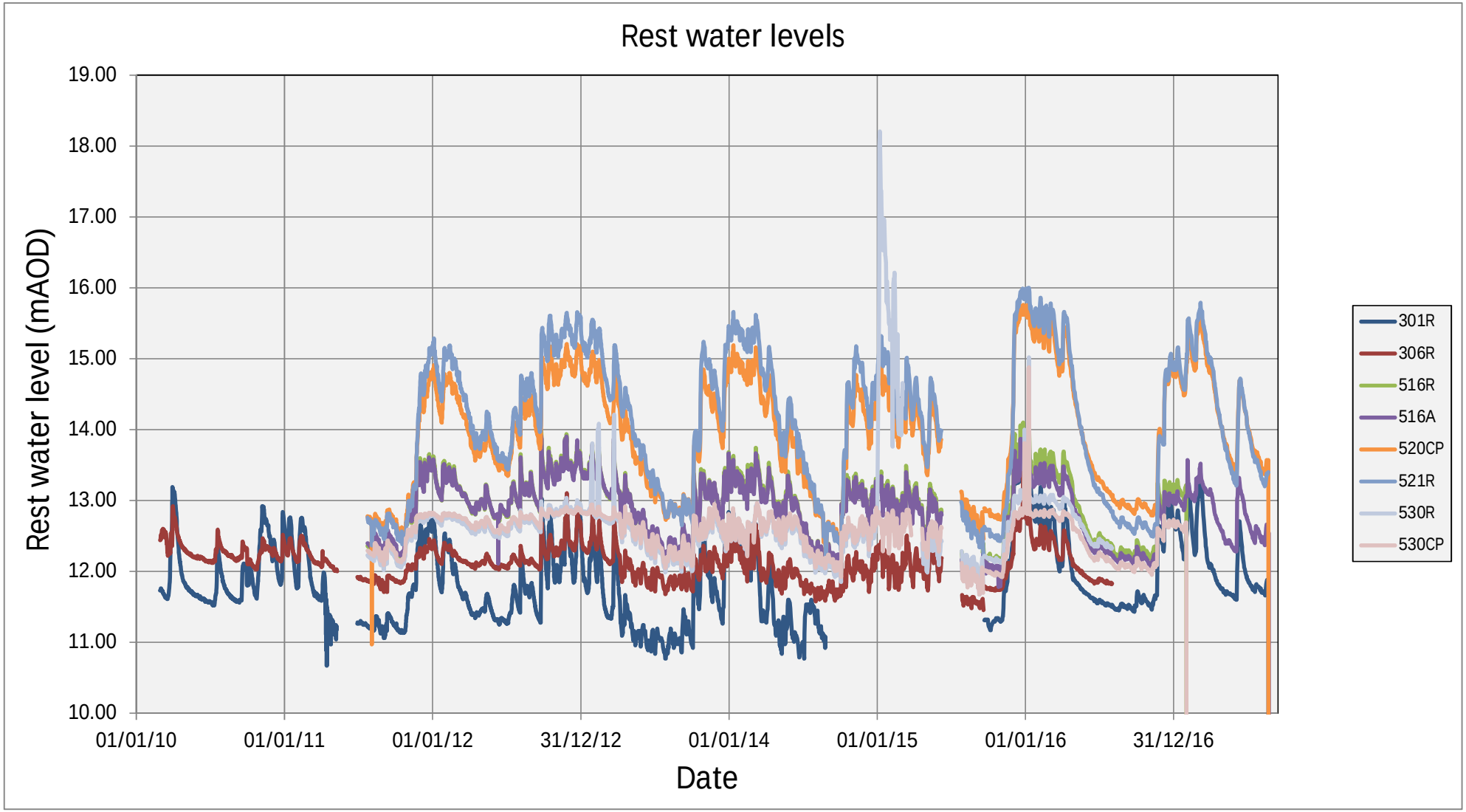
Address 1	Easting	Northing	Supply Type
TYDDYN WAEN	233120	388920	Public - historical
CARREG DOS FFORDD	235960	390240	Public - historical
LLANDYGFAEL HIR	235250	390320	Public - historical
PLAS BRAIN	234450	390620	Public - historical
TYDDYN WAEN	236520	390630	Public - historical
SEILO	234020	390700	Public - historical
CEFN COCH	234250	390870	Public - historical
GWENITHFRYN	235700	390910	Public - historical
MELIN WEN	236200	391040	Public - historical
HENBLAS	236160	391050	Public - historical
TALYBONT	236750	391080	Public - historical
PLAS	236960	391320	Public - historical
TYNNYNYDD	234290	391550	Public - historical
PENRALLT	236600	391600	Public - historical
CROMLECH	236250	392200	Public - historical
LODGE CEMLYN	233450	392450	Public - historical
CAE'R GORS	236250	392620	Public - historical
GWYDDELYN FAWR	236270	392850	Public - historical
PENYBRYN	237050	392850	Public - historical
GWYDDELYN BACH	236200	392900	Public - historical
CEFN HELIG	236860	392950	Public - historical
BRYN ABER	234500	393250	Public - historical
TYDDYN GORONWY	235930	393260	Public - historical
NANT ORMAN	236250	393320	Public - historical
FILLACH	237030	393400	Public - historical
CEMAES FAWR	237800	393400	Public - historical
TRAETH BACH	237070	393570	Public - historical
PARC	236610	393750	Public - historical
FFYNNON ROBIN	237570	393900	Public - historical

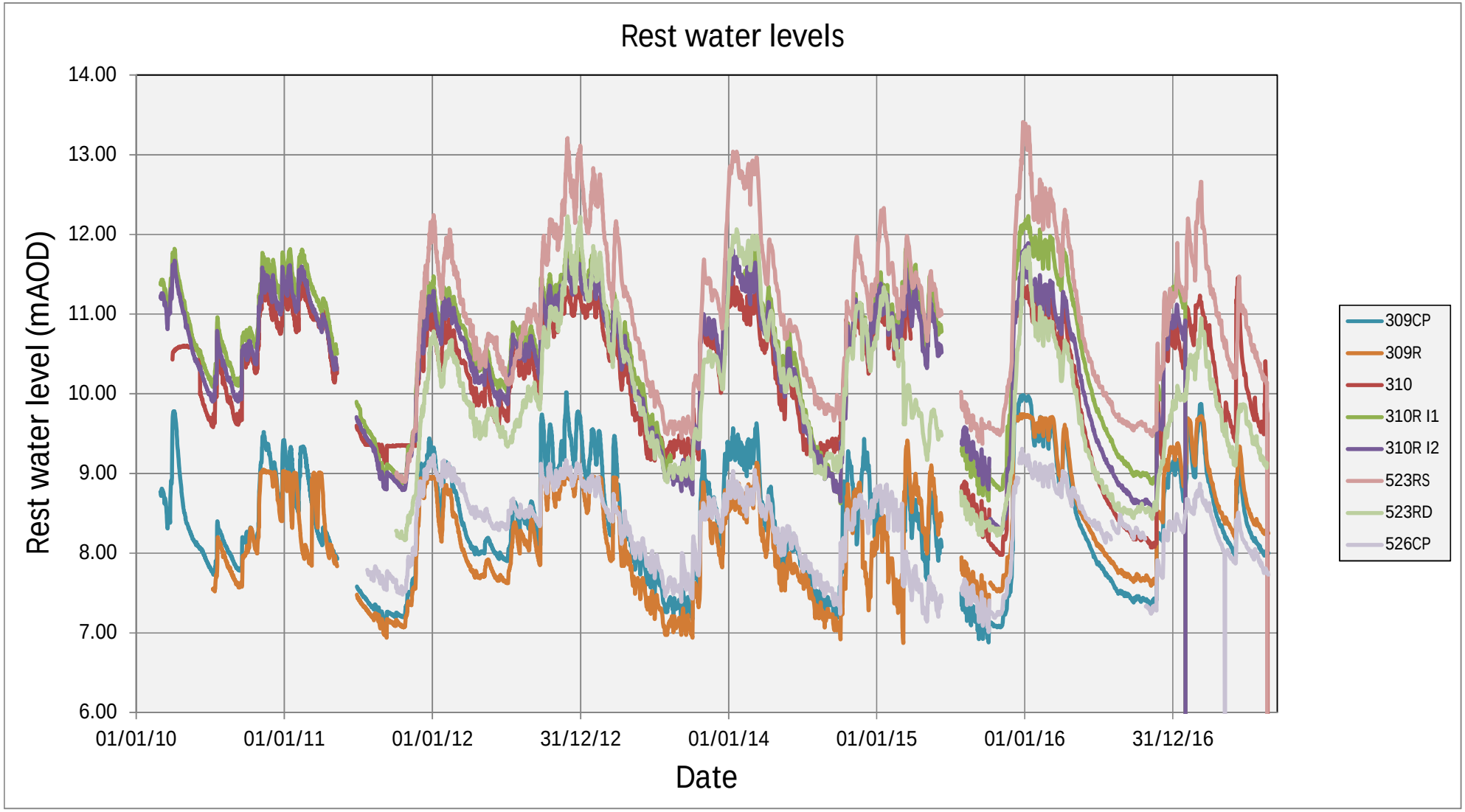
Appendix G Groundwater Level Hydrographs

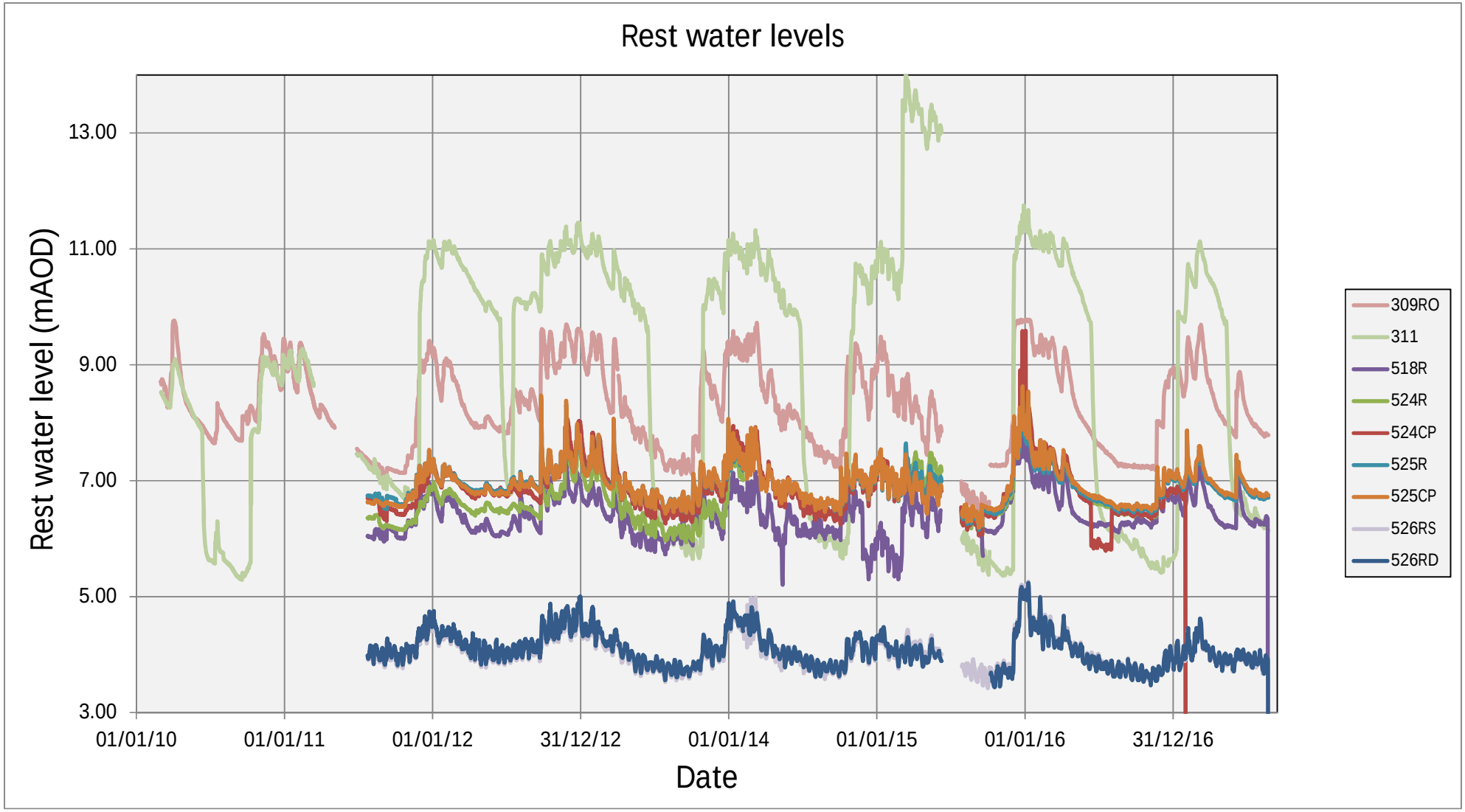

Rest water levels
Rest water level (mAOD)
36.00
34.00
32.00
30.00
28.00
26.00
24.00
22.00
20.00
18.00
01/01/10
01/01/11
01/01/12
31/12/12
01/01/14
01/01/15
01/01/16
31/12/16
Date
303CP
534CP
535CP

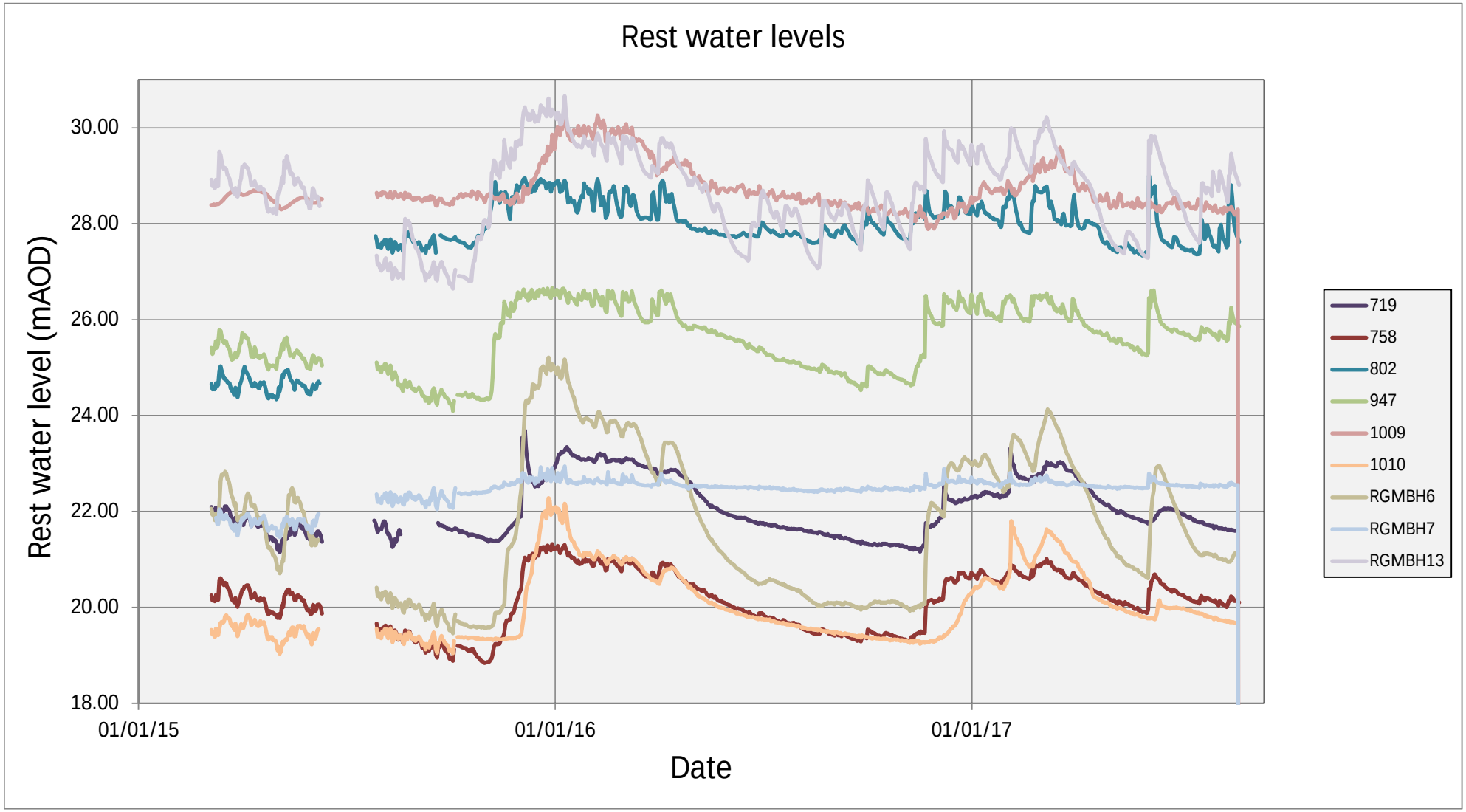

Rest water levels
Rest water level (mAOD)
22.00
20.00
18.00
16.00
14.00
12.00
01/01/10
01/01/11
01/01/12
31/12/12
01/01/14
01/01/15
01/01/16
31/12/16
Date
303R
304R
305AR
308R
509CP
533CP
534R
535R

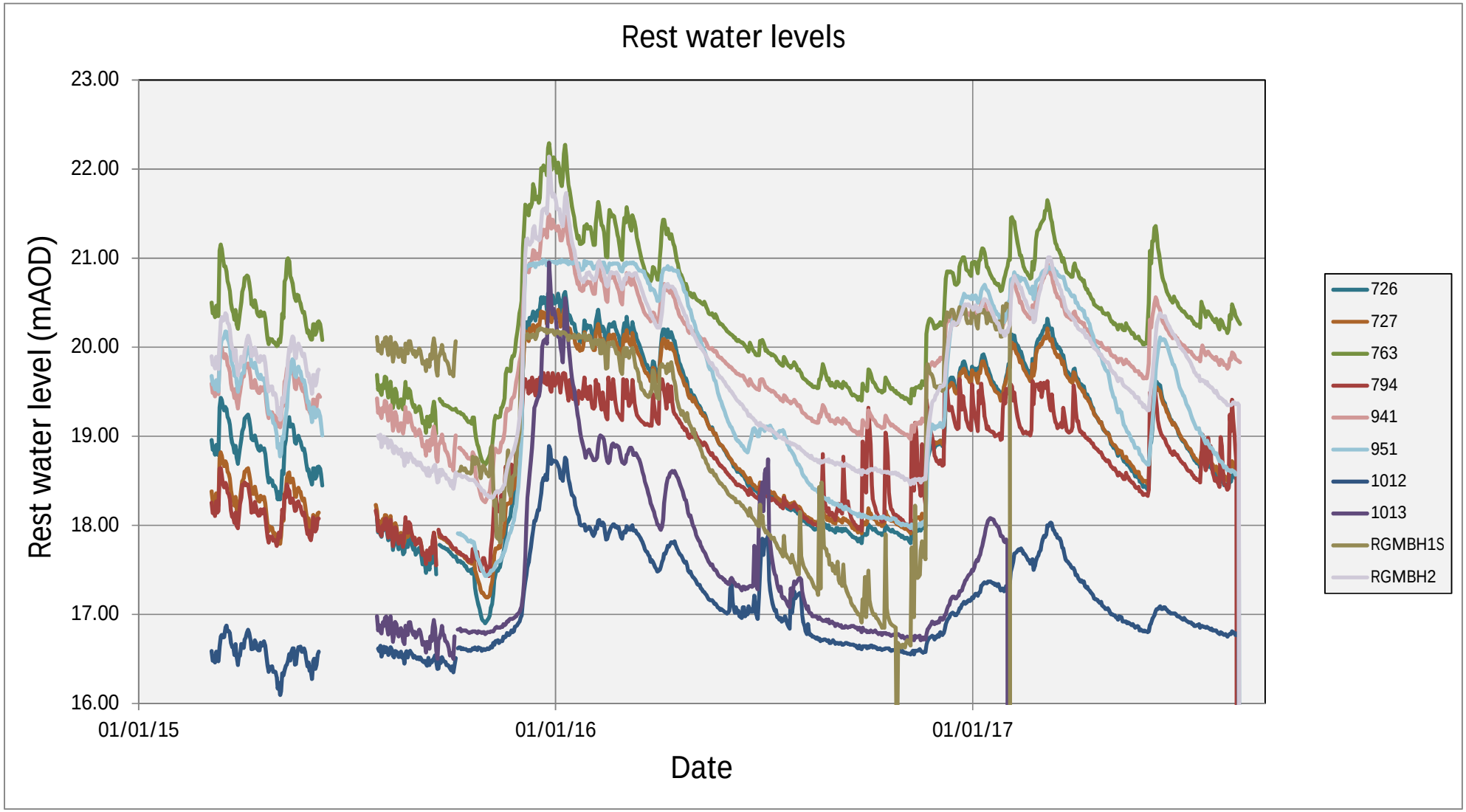

Rest water levels
Rest water level (mAOD)
19.00
18.00
17.00
16.00
15.00
14.00
13.00
01/01/10
01/01/11
01/01/12
31/12/12
01/01/14
01/01/15
01/01/16
31/12/16
Date
302R
305R
307R
512R
512CP
529R
529CP
536R

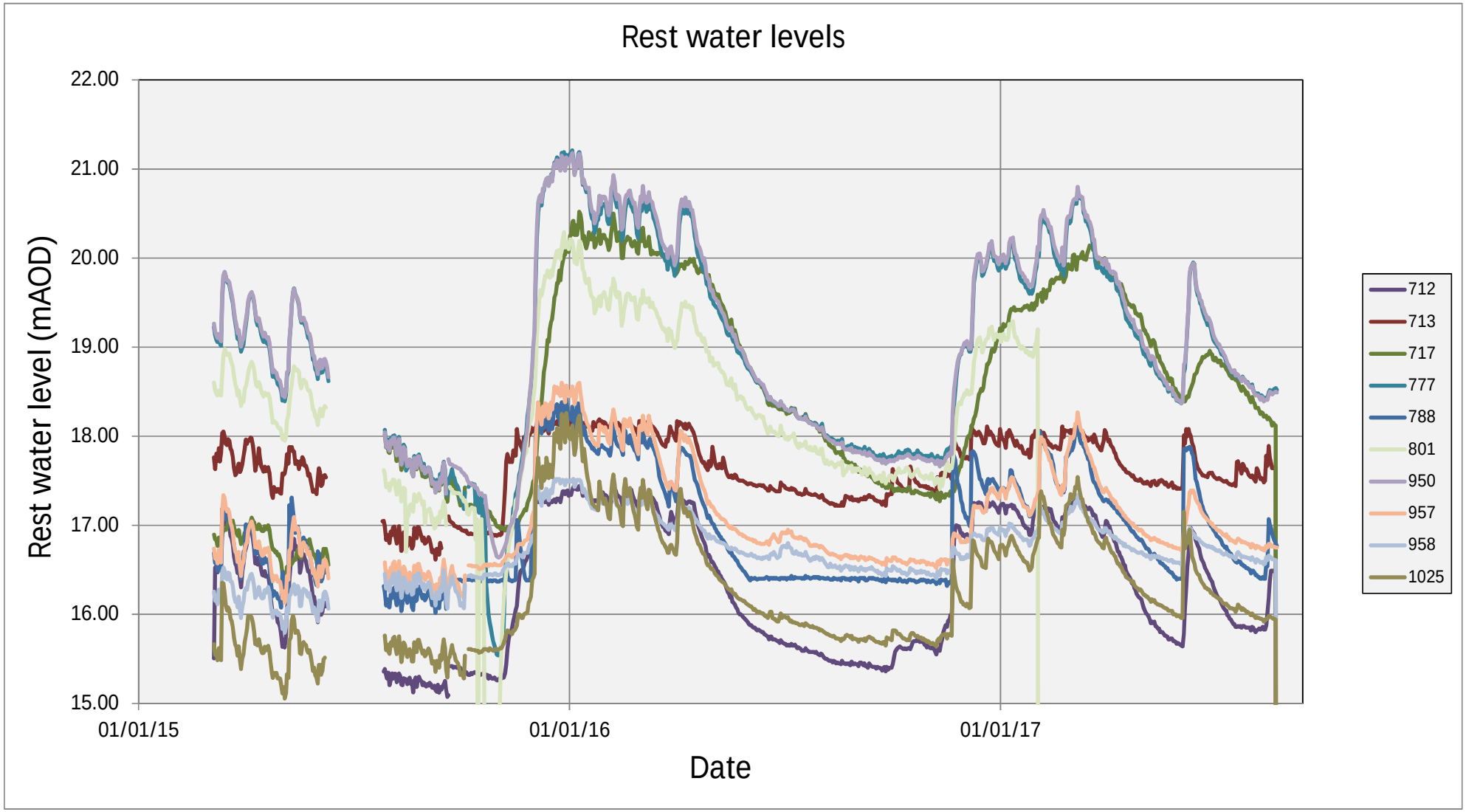

Rest water levels
Rest water level (mAOD)
19.00
18.00
17.00
16.00
15.00
14.00
13.00
12.00
11.00
10.00
01/01/10
01/01/11
01/01/12
31/12/12
01/01/14
01/01/15
01/01/16
31/12/16
Date
301R
306R
516R
516A
520CP
521R
530R
530CP

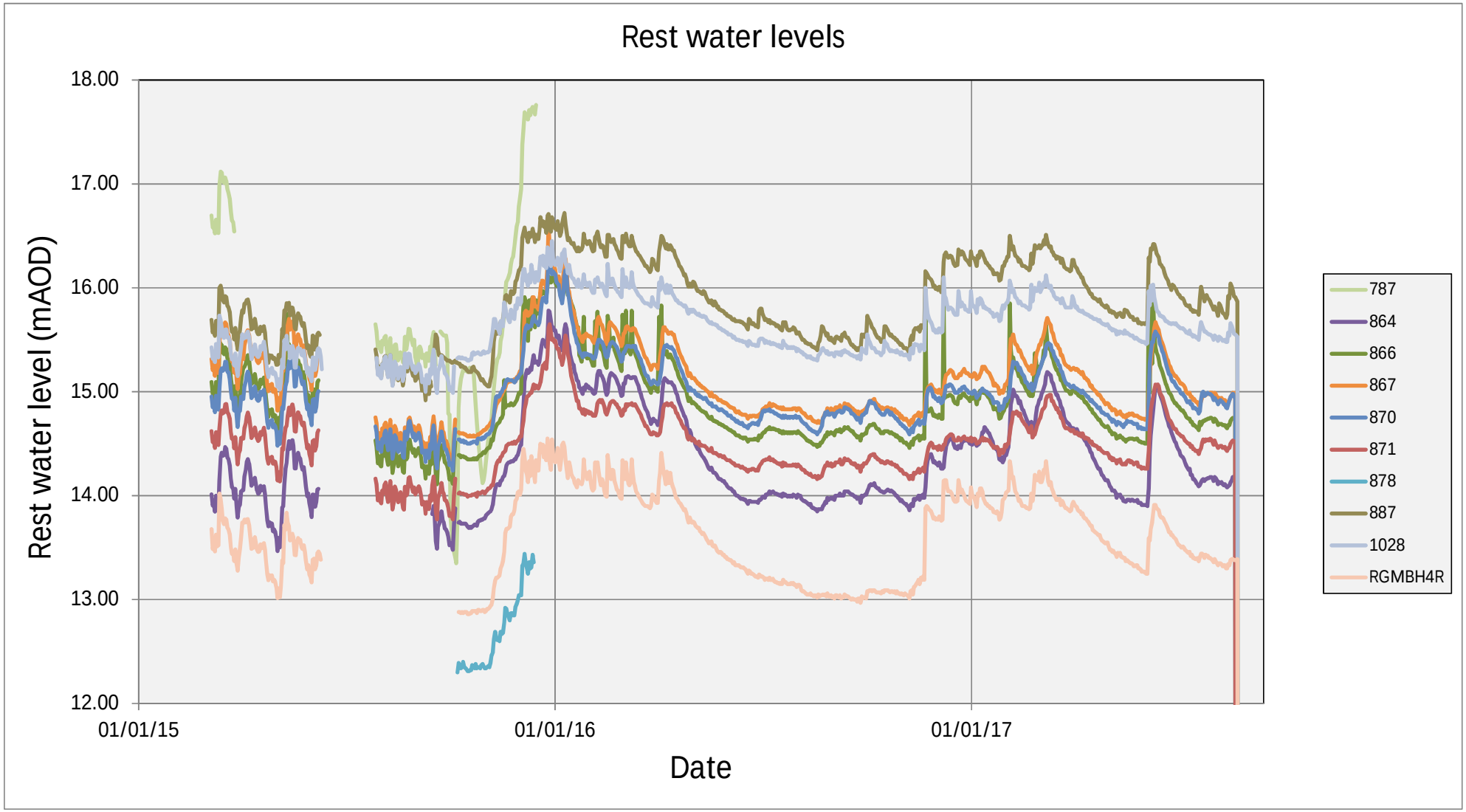

Rest water levels
Rest water level (mAOD)
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
01/01/10
01/01/11
01/01/12
31/12/12
01/01/14
01/01/15
01/01/16
31/12/16
Date
309CP
309R
310
310R I1
310R I2
523RS
523RD
526CP

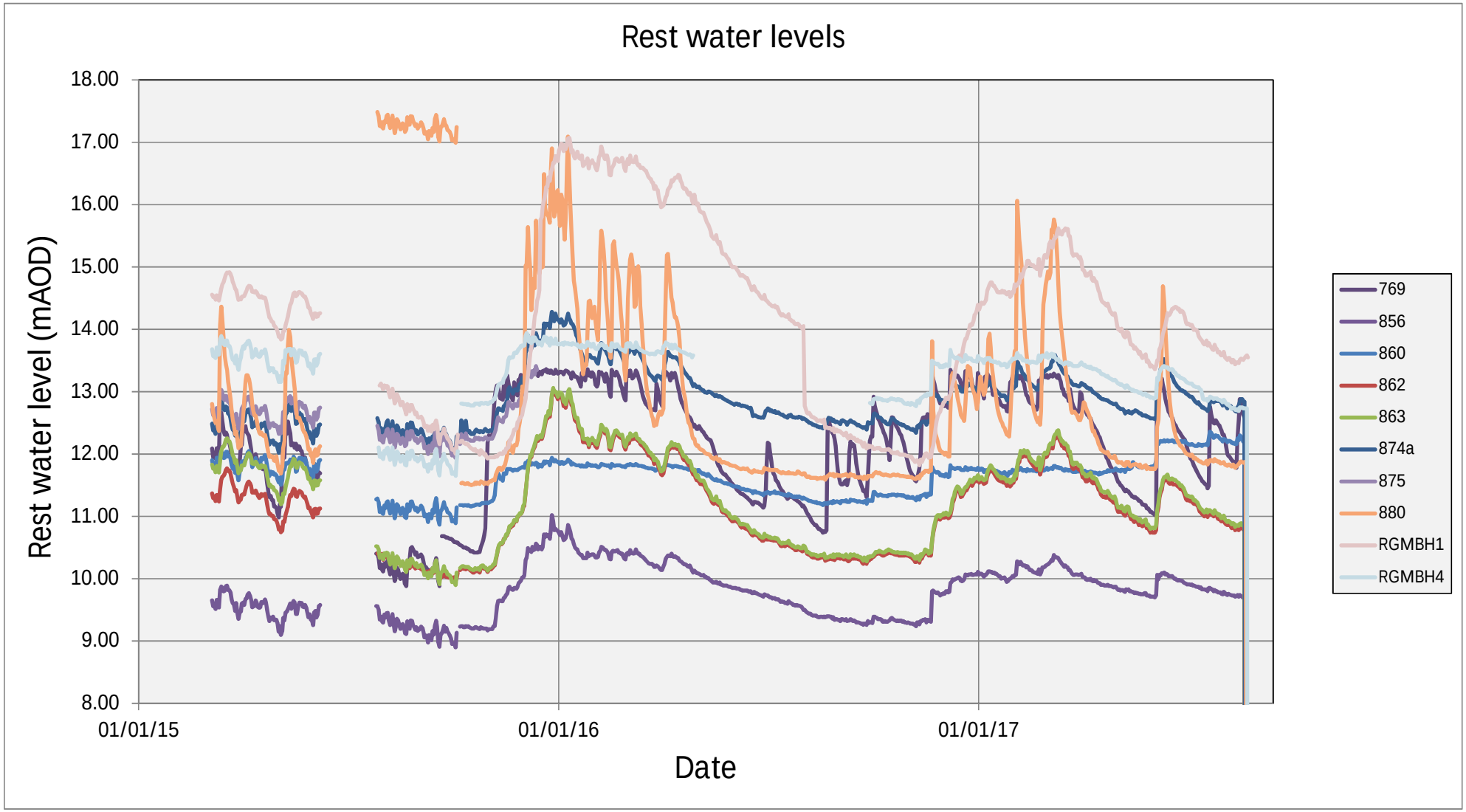

Rest water levels
Rest water level (mAOD)
13.00
11.00
9.00
7.00
5.00
3.00
01/01/10
01/01/11
01/01/12
31/12/12
01/01/14
01/01/15
01/01/16
31/12/16
Date
309RO
311
518R
524R
524CP
525R
525CP
526RS
526RD

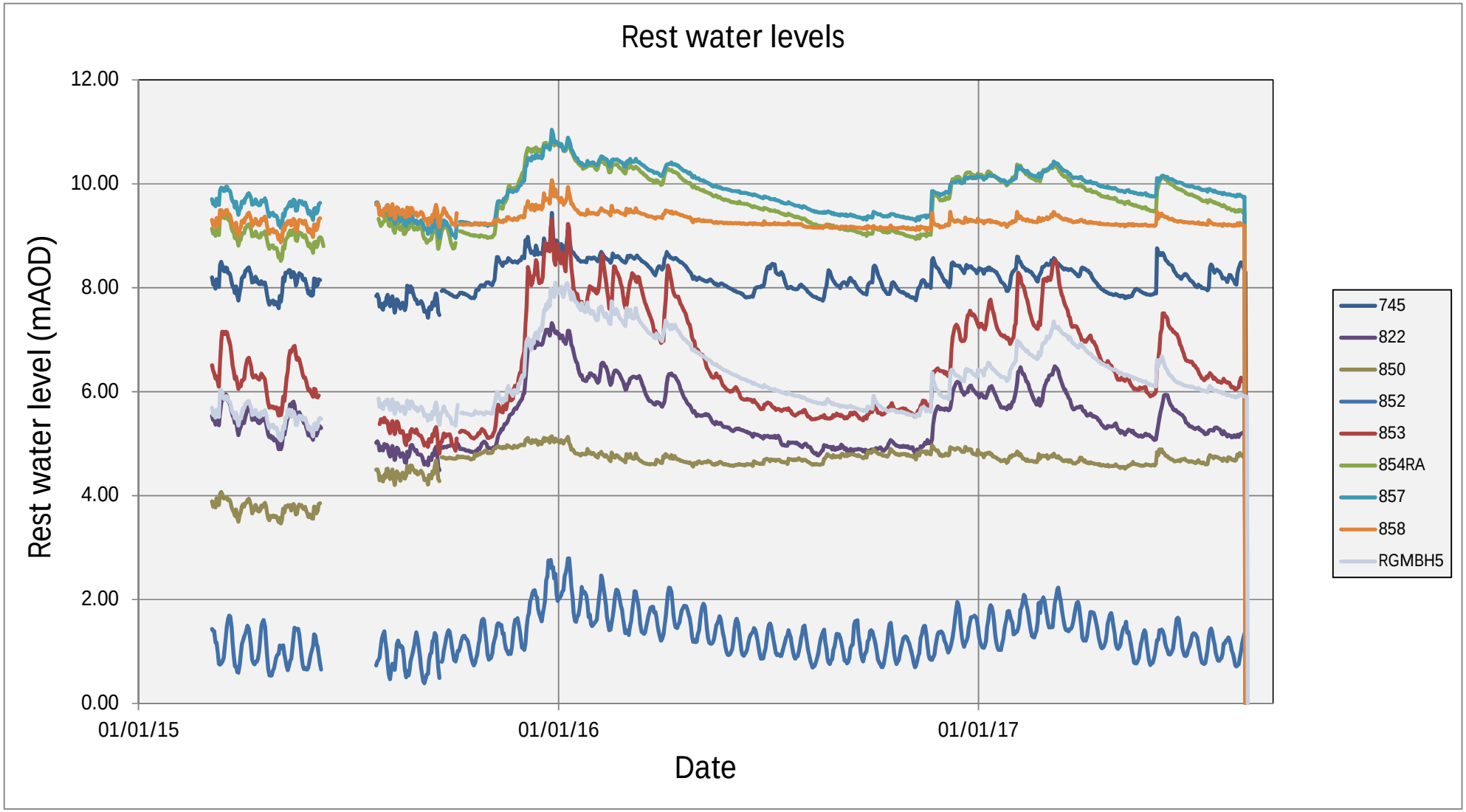

Rest water levels
Rest water level (mAOD)
30.00
28.00
26.00
24.00
22.00
20.00
18.00
01/01/15
01/01/16
01/01/17
Date
719
758
802
947
1009
1010
RGMBH6
RGMBH7
RGMBH13


Rest water levels
Rest water level (mAOD)
23.00
22.00
21.00
20.00
19.00
18.00
17.00
16.00
01/01/15
01/01/16
01/01/17
Date
726
727
763
794
941
951
1012
1013
RGMBH1S
RGMBH2


Rest water levels
Rest water level (mAOD)
22.00
21.00
20.00
19.00
18.00
17.00
16.00
15.00
01/01/15
01/01/16
01/01/17
Date
712
713
717
777
788
801
950
957
958
1025


Rest water levels
Rest water level (mAOD)
18.00
17.00
16.00
15.00
14.00
13.00
12.00
01/01/15
01/01/16
01/01/17
Date
787
864
866
867
870
871
878
887
1028
RGMBH4R


Rest water levels
Rest water level (mAOD)
18.00
17.00
16.00
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
01/01/15
01/01/16
01/01/17
Date
769
856
860
862
863
874a
875
880
RGMBH1
RGMBH4


Rest water levels
Rest water level (mAOD)
12.00
10.00
8.00
6.00
4.00
2.00
0.00
01/01/15
01/01/16
01/01/17
Date
745
822
850
852
853
854RA
857
858
RGMBH5