

Borehole Log

NICHOLSON

Drilled by RH Logged by SB Checked by GA	Start 10/01/2003 End 11/01/2003	Equipment, Methods and Remarks Cable tool percussion boring Sample 6 omitted. Geosoc fitted to slotted pipe 1.00 to 12.30m.	Depth from 0.00m to 14.40m Diameter 200mm Casing Depth 13.60m	Ground Level Coordinates National Grid			
Samples and Tests			Strata				
Depth	Type & No	Records	Date Casing Time Water	Description	Depth, Level/ (Thickness)	Legend	Backfill/ Instruments
0.20-1.20	B 1		10/01/2003 0800	Medium dense dark brown slightly clayey SAND and GRAVEL with ash. Gravel is angular to subrounded fine to coarse of cinders, blaes, coal and mudstone. With scrap metal, rubber, plastic bags, broken glass and occasional animal bone fragments. Foreman notes cobbles. (MADE GROUND)			
1.20-1.65 1.20-1.70	SPT C B 2	N=10 (2,2,2,2,3,3)		dry			
2.20-2.65 2.20-2.70	SPT C B 3	N=8 (1,1,2,2,2,2)	2.00	dry			
3.20-3.65 3.20-3.70	SPT C B 4	N=10 (1,2,2,2,3,3)	3.00	dry			
4.20-4.65 4.20-4.70	SPT C B 5	N=26 (2,2,3,4,8,11)	4.00	dry			
5.20-4.65 5.20-5.70	SPT C B 6	N=19 (2,3,3,4,5,6)	5.00	dry			
7.00-7.45 7.00-7.50	SPT C B 7	N=36 (6,7,8,8,9,11)	6.80	dry			
			10/01/2003 1600 7.90	dry			
			11/01/2003 0800 7.90	dry			
8.50-8.95 8.50-9.00	SPT C B 9	N=47 (6,9,10,11,12,14)	8.40	dry			
				Dense brown clayey SAND and GRAVEL. Gravel is subrounded fine to coarse of various lithologies.	7.50	+26.43	
				Stratum continued next sheet			
Depth	Type & No	Records	Date Casing Time Water	Groundwater Entries No. Struck Post strike behaviour (m)	Depth sealed (m)	Depth Related Remarks From to (m) 0.00 1.20 0.5hr Hand digging inspection pit.	Chiselling Depths (m) 4.60-4.80 45 mins Chisel 7.50-7.80 60 mins Chisel 7.80-8.00 45 mins Chisel 8.60-8.90 45 mins Chisel
				None observed (see Key Sheet)			
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.			Project Project No. C2230 Carried out for URS CORPORATION LTD		Borehole BH1 Sheet 1 of 2		
Scale 1:50 W/ MESG H&B (201), 14/07/2003 17:00:14							

Borehole Log

NICHOLSON

Drilled by RH Logged by SB Checked by GA		Start 10/01/2003 End 11/01/2003		Equipment, Methods and Remarks		Depth from 0.00m to 14.40m Diameter 200mm Casing Depth 13.60m		Ground Level Coordinates National Grid	
Samples and Tests						Strata			
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth/Level (Thickness)	Legend	Backfill/ Instruments	
10.00-10.45 10.00-10.50	SPT C B 10	N=47 (7,9/9,10,12,16)	9.60	dry	Dense brown clayey SAND and GRAVEL. Gravel is subrounded fine to coarse of various lithologies.	(5.80)			
11.50-11.95 11.50-12.00	SPT C B 11	N=40 (6,8/9,8,11,11)	11.40	dry					
13.00-13.40 13.00-13.50	SPT C B 12	50 (12.13 for 65mm/ 14.20,16 for 55mm)	12.80	dry					
14.00-14.22	SPT C	50 (20.5 for 15mm/ 26.24 for 55mm)	13.60 11/01/2003 1600 13.60	dry dry	Possible dark grey boulder clay with sandstone boulders (Driller's description)	13.30 +20.63 (1.10)		SP	
EXPLORATORY HOLE ENDS AT 14.40 m						14.40 +19.53			
Depth	Type & No	Records	Date Casing	Time Water					
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)			Depth sealed (m)		Depth Related Remarks From to (m)		Chiselling Depths (m) 10.30 - 10.70 60 mins Chisel 13.30 - 13.60 30 mins Chisel 13.60 - 14.00 30 mins Chisel 14.00 - 14.40 90 mins Chisel		
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project Project No. C2230 Carried out for URS CORPORATION LTD		Borehole BH1 Sheet 2 of 2		

Scale 1:50

(S) MEGS HB/9 (281), 18/07/2003 17:00:28



Borehole Log

NICHOLSON

Drilled by RH Logged by SB Checked by GA		Start 18/12/2002 End 19/12/2002	Equipment, Methods and Remarks Cable tool percussion boring Geosoc fitted to slotted pipe 1.00 to 18.10m.		Depth from 0.00m to 19.49m Diameter 200mm Casing Depth 18.50m	Ground Level +35.87 mOD Coordinates National Grid	
Samples and Tests					Strata		
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level (Thickness)	Legend
0.30-1.20	B 1		18/12/2002	0800	Topsoil (Driller's description)	(0.30)	
1.20-1.65 1.20-1.70	SPT C B 2	N=21 (3.5/5.5, 6.5)		dry	Medium dense dark grey brown slightly clayey SAND and GRAVEL with ash. Gravel is angular to subangular fine to coarse of cinders and mudstone. With rubber, scrap metal, broken glass, plastic bags and occasional animal bone fragments. (MADE GROUND)	0.30 +35.52	
2.20-2.65 2.20-2.70	SPT C B 3	N=27 (4.5/5.5, 6.5)	2.00	dry	Below 5.20m, becoming dense.		
3.20-3.65 3.20-3.70	SPT C B 4	N=25 (2.4/5.5, 6.5)	3.00	dry			
4.20-4.64 4.20-4.70	SPT C B 5	50 (4.8/12.13, 13.12 for 60mm)	4.00	dry			
5.20-5.65 5.20-5.70	SPT C B 6	N=41 (7.8/9.10, 11.11)	5.00	dry			
6.80-7.25 6.80-7.30	SPT C B 7	N=38 (4.6/8.8, 9.13)	6.00	dry		(12.00)	
8.50-8.95 8.50-9.00	SPT C B 8	N=33 (5.5/6.7, 9.11)	8.00	dry			
			18/12/2002 9.50	1600 dry			
			19/12/2002 9.50	0800 dry			
					Stratum continued next sheet		
Depth	Type & No	Records	Date Casing	Time Water	Depth Related Remarks	Chiselling Depths (m)	
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)			Depth sealed (m)		From 0.00 to 1.20 0.5hr Hand digging inspection pit.	4.40-4.90 75 mins Chisel 5.50-5.90 60 mins Chisel 6.00-6.20 45 mins Chisel 6.40-6.70 45 mins Chisel 7.00-7.40 60 mins Chisel 8.80-9.20 30 mins Chisel	
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project Project No. C2230 Carried out for URS CORPORATION LTD	Borehole BH2 Sheet 1 of 2	

Scale 1:50

01 MERS HBH1 (2011) 214072003 10-41-22



Borehole Log

CHOLSON

Drilled by RH Logged by SB Checked by GA		Start 19/12/2002 End 19/12/2002		Equipment, Methods and Remarks		Depth from 0.00m to 19.49m Diameter 200mm Casing Depth 18.50m		Ground Level Coordinates National Grid +35.82 mOD	
Samples and Tests					Strata				
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth/Level (Thickness)	Legend	Backfill/ Instruments	
10.00-10.45 10.00-10.50	SPT C B 9	N=37 (5,7,7,9,9,12)	9.50	dry	Medium dense dark grey brown slightly clayey SAND and GRAVEL with ash. Gravel is angular to subangular fine to coarse of cinders and mudstone. With rubber, scrap metal, broken glass, plastic bags and occasional animal bone fragments. (MADE GROUND) Below 5.20m, becoming dense.				
11.50-11.95 11.50-12.00	SPT C B 10	N=39 (5,6/8,9,11,11)	11.00	dry					
12.30 12.50-12.95 12.50-12.95 12.50-13.60	D 11 SPT S D 12 D 14	N=8 (1,1/2,2,2,2)	12.00	dry	Loose dark brown slightly silty fine and medium SAND with rare gravel. Gravel is subangular fine of mudstone. Below 15.50m, becoming medium dense.	12.30 +23.52			
14.00-14.45 14.00-14.45 14.00-14.50	SPT S D 15 B 16	N=7 (1,1/1,2,2,2)	13.80	dry					
15.10	D 17					(5.80)			
15.50-15.95 15.50-15.95 15.50-16.00	SPT S D 18 B 19	N=10 (1,2/2,2,3,3)	15.30	dry					
16.60	D 20								
17.00-17.45 17.00-17.45 17.00-17.50	SPT S D 21 B 22	N=11 (1,2/2,3,3,3)	16.80	dry					
18.10 18.20	D 23 U	150 blows No recovery			Dark grey brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of various lithologies. Foreman notes boulders. (GLACIAL TILL)	18.10 +17.72			
18.80-19.25 18.80-19.30	SPT C B 24	N=34 (7,9/9,10,10,5)	18.50	dry		(1.00)			
19.40-19.49	SPT C	50 (25 for 65mm)	19/12/2002 18.50	1600 dry	Possible weathered grey sandstone (Driller's description)	19.10 +16.72 (0.39)			
					EXPLORATORY HOLE ENDS AT 19.49 m				
Depth Type & No Records Date Casing Time Water					Depth Related Remarks From to (m)		Chiselling Depths (m) 10.40 -10.80 45 mins Chisel 11.70 -12.10 75 mins Chisel 18.30 -18.70 75 mins Chisel 19.10 -19.40 90 mins Chisel		
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)									
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project Project No. C2230 Carried out for URS CORPORATION LTD		Borehole BH2 Sheet 2 of 2		
Scale 1:50 (H) MESS H80 (201), 21/07/2002 10:41:34									

Borehole Log

NICHOLSON

Drilled by RH Logged by SB Checked by GA		Start 06/12/2002 End 07/12/2002	Equipment, Methods and Remarks Cable tool percussion boring		Depth from 0.00m to 12.00m Diameter 200mm Casing Depth 12.00m	Ground Level Coordinates National Grid +33.97 m		
Samples and Tests					Strata			
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level (Thickness)	Legend	Backfill/ Instruments
			06/01/2002	0800	Medium dense dark grey colliery (fill) with large slag boulders (Driller's description)	(1.20)		
1.20-1.65 1.20-1.70	SPT C B 1	N=21 (4,4/5,5,6,5)		dry		1.20 +32.77		
2.00 2.00 2.20-2.65 2.20-2.70	D 2 ES SPT C B 3	N=31 (3,6/7,7,8,9)	2.00	dry	Brown sandy slightly gravelly CLAY with ash. Gravel is angular to subangular fine to coarse of mudstone, blaes and sandstone. With some brick fragments.	(2.40)		
3.00 3.00 3.20-3.65 3.20-3.70	D 4 ES SPT C B 5	N=17 (3,3/5,6,4,2)	3.00	dry				
4.00	D 6		06/01/2002 4.00	1800 dry	Loose brown fine and medium SAND.	3.60 +30.37		
4.20-4.65 4.20-4.65 4.20-4.70	SPT S D 7 B 8	N=7 (1,1/1,2,2,2)	07/01/2002 4.00	0800 dry				
5.00	D 9							
5.20-5.65 5.20-5.65 5.20-5.70	SPT S D 10 B 11	N=9 (1,1/2,2,2,3)	5.00	dry		(3.50)		
6.10	D 12							
6.50-6.95 6.50-6.95 6.50-7.00	SPT S D 13 B 14	N=9 (1,1/2,2,2,3)	6.30	dry				
7.50	D 15				Medium dense brown silty SAND and GRAVEL. Gravel is subrounded fine to coarse of various lithologies.	7.10 +26.87		
7.70-8.15 7.70-8.20	SPT C B 16	N=30 (3,3/5,7,9,9)	7.50	dry		(1.50)		
8.60 8.80 8.80-9.50	D 17 U B 18	150 blows No recovery			Dark grey brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of various lithologies. (GLACIAL TILL)	8.60 +25.37		SP
9.50 9.50-9.80	U B 19	150 blows No recovery						
Stratum continued next sheet								
Depth	Type & No	Records	Date Casing	Time Water				
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)			Depth sealed (m)		Depth Related Remarks From to (m) 0.00 1.20 0.5hr Hand digging inspection pit.		Chiselling Depths (m) 2.50-2.80 45 mins Chisel 2.90-3.00 45 mins Chisel 8.00-8.40 60 mins Chisel 9.00-9.40 45 mins Chisel	
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project Project No. C2230 Carried out for URS CORPORATION LTD		Borehole BH3 Sheet 1 of 2	
Scale 1:50 (S) MESO 1500 (21), 21/07/2003 10:44:25								

NICHOLSON

Drilled by RH Logged by SB Checked by GA	Start 06/12/2002 End 07/12/2002	Equipment, Methods and Remarks		Depth from 0.00m to 12.00m Diameter 200mm Casing Depth 12.00m	Ground Level Coordinates National Grid	+33.97 mOD		
Samples and Tests				Strata				
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth/Level/ (Thickness)	Legend	Backfill/ Instruments
10.00-10.41 10.00-10.45 10.00-10.50	SPT S D 20 B 21	50 (8,11/11,13,16,10 for 35mm)	9.80	dry	Dark grey brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of various lithologies. (GLACIAL TILL)	(3.40)		
11.20-11.52 11.20	SPT C D 22	50 (12,13/15,20,15 for 20mm)	11.20	dry				
11.50-12.00	B 23		07/01/2002 12.00	1600 dry				
EXPLORATORY HOLE ENDS AT 12.00 m						12.00 +21.97		
Depth	Type & No	Records	Date Casing	Time Water				
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)			Depth sealed (m)		Depth Related Remarks From to (m)	Chiselling Depths (m) 10.30-10.70 60 mins Chisel 11.50-12.00 75 mins Chisel		
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.			Project Project No. C2230 Carried out for URS CORPORATION LTD			Borehole BH3 Sheet 2 of 2		
Scale: 1:50 WJ HESG 1997 (2011) 21/07/2003 10-44-42			AGS					

Borehole Log

NICHOLSON

Drilled by RH Logged by SB Checked by GA		Start 09/12/2002 End 10/12/2002	Equipment, Methods and Remarks Cable tool percussion boring		Depth from 0.00m to 11.70m Diameter 200mm Casing Depth 11.50m	Ground Level Coordinates National Grid +34.01 mOD
Samples and Tests				Strata		
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level/ (Thickness)
0.30-1.20	B 1		09/12/2002	0800	Turf and topsoil (Driller's description)	(0.30)
1.20-1.65	SPT S	N=6 (1,1/2,2,2,2)		dry	Loose dark yellow brown fine and medium SAND.	0.30 +33.71
1.20-1.65	D 2					
1.20-1.70	B 3					
2.00	D 4					(2.70)
2.20-2.65	SPT S	N=7 (1,1/1,2,2,2)	2.00	dry		
2.20-2.65	D 5					
2.20-2.70	B 6					
3.00	D 7					3.00 +31.01
3.20-3.65	SPT S	N=10 (1,1/2,2,3,3)	3.00	dry	Medium dense dark yellow brown slightly fine and medium SAND.	
3.20-3.65	D 8					
3.20-3.70	B 9					
4.00	D 10					(2.00)
4.20-4.65	SPT S	N=10 (1,2/2,2,3,3)	4.00	dry		
4.20-4.65	D 11					
4.20-4.70	B 12					
5.00	D 13					5.00 +29.01
5.20-5.65	SPT S	N=13 (1,2/3,3,3,4)	5.00	dry	Medium dense dark yellow brown slightly silty SAND.	
5.20-5.65	D 14					
5.20-5.70	B 15					
6.10	D 16					(2.60)
6.50-6.95	SPT S	N=15 (2,2/3,4,4,4)	6.40	dry		
6.50-6.95	D 17		09/12/2002	1600		
6.50-7.00	B 18		7.00	dry		
			10/12/2002	0800		
			7.00	dry		
7.60	D 19					7.60 +26.41
8.00-8.36	SPT C	50 (16.9 for 35mm/ 34.16 for 20mm)	7.90	dry	Grey brown sandy gravelly CLAY with many cobbles. Gravel is subangular to subrounded fine to coarse of various lithologies. Cobbles are subangular to subrounded of sandstone.	
8.00-8.50	B 20					(1.80)
9.40	D 21					9.40 +24.61
9.50	U					
9.50-10.00	B 22	150 blows No recovery			Dark grey brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of various lithologies. Cobbles are subangular to subrounded of sandstone.	
Stratum continued next sheet						
Depth	Type & No	Records	Date Casing	Time Water		
Groundwater Entries			Depth sealed (m)		Chiselling Depths (m)	
No.	Struck (m)	Post strike behaviour			8.00-8.40 75 mins Chisel	
None observed (see Key Sheet)					9.80-10.20 75 mins Chisel	
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.			Project			Borehole
Scale 1:50			Project No. C2230			BH4
AGS			Carried out for URS CORPORATION LTD			Sheet 1 of 2

Borehole Log

NICHOLSON

Drilled by RH Logged by SB Checked by GA		Start 09/12/2002 End 10/12/2002		Equipment, Methods and Remarks		Depth from 0.00m to 11.70m Diameter 200mm Casing Depth 11.55m		Ground Level Coordinates National Grid +34.01 mOD	
Samples and Tests						Strata			
Depth	Type & No	Records	Date Casing	Time Water	Description	Depth, Level (Thickness)	Legend	Backfill Instruments	
10.20 10.20-10.70	U B 23	150 blows No recovery			lithologies. Foreman notes boulders. (GLACIAL TILL)	(2.30)			
			10/12/2002 11.50	1600 dry	EXPLORATORY HOLE ENDS AT 11.70 m	11.70 +22.31			
Depth	Type & No	Records	Date Casing	Time Water					
Groundwater Entries No. Struck Post strike behaviour (m) None observed (see Key Sheet)			Depth sealed (m)		Depth Related Remarks From to (m)		Chiselling Depths (m) 10.30-10.60 60 mins Chisel 11.30-11.70 75 mins Chisel		
Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.					Project Project No. C2230 Carried out for URS CORPORATION LTD		Borehole BH4 Sheet 2 of 2		
Scale 1:50 60 MESS HBR (281), 21/07/2002 10:37:48									