

Quarry References

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2. Binnie & Partners - British Industrial Sand Ltd. Moneystone Quarries Oakamoor. Second report on the use of Disused Quarries for the Disposal of Slurry Waste. October 1984. *Includes logs, photos, plans, sections and testing.*
3. Knight Piesold & Partners. Hepworth Minerals and Chemicals Ltd. Slope Stability Analysis of Oakamoor Quarry, Staffordshire. May 1996. Report Ref 11126\R9350\rjhp. *Includes sections, plans and photographs*
4. Donaldson Associates Limited. Ritchies Ltd. Tunnel Assessment Report. Moneystone Quarry Staffordshire. January 2002. Job No. JS176. *Includes plans, rock mass classification, logs, photos (poor quality), geological mapping, stereographic projections and unwedge analysis.*
5. Plan HP 5.1 Q2E Borehole Location Survey Date 22.22.94. Scale 1:1250. May 1994.
6. Plan HP 5.2 Q2E Borehole Location Survey Date 22.22.94. Scale 1:1250. June 1994.
7. Plan HP 5.3 Q2E Geological Section. Scale 1:1250 / 1:500. May 1994.
8. Plan HP 6.1 Q2 Geological Section. Scale 1:1250 / 1:500. June 1994.
9. Plan HP 7.1 Oakamoor Base of Sandstone contour plan. Scale 1:5000. March 2004.
10. Plan HP 8.2 British Industrial Sand Ltd. Frame Wood Oxide and Clay Pits. Tip 2. Dwg Ref S.OM. 120. Scale 1:500.
11. Plan HP 15.2. British Industrial Sand Ltd. Geological Map of Oakamoor Area. Tip Nos 1&3, 2 and Framewood Clay Tip. Scale 6" to 1 mile.
12. Plan HP 8.3. British Industrial Sand Ltd - Oakamoor. Sections Tip No. 2 Frame Wood. A B Daily Son & Clarke. Job No. 479. Dwg No. 21 Rev B. Scale 1:500. April 1974.
13. Plan HP 8.4. British Industrial Sand Ltd - Oakamoor. Sections Tip No. 2 Frame Wood. A B Daily Son & Clarke. Job No. 479. Dwg No. 22 Rev A. Scale 1:500. July 1974.
14. Report HR 8.1 Sibelco Minerals and Chemicals Ltd. Moneystone Quarry Staffordshire. Report Under Regulations 18 of the Mines and Quarries (Tips) Regulations-1971. Tip No. 2 Frame Wood Clay. CLOSED. May 2001.

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15. Report HR 8.2. British Industrial Sand. Tip No. 2 Frame Wood Clay. Report in pursuance of Regulations 12(1) of the Mines and Quarries (Tips) Regulations 1971. A B Daily Son & Clarke. March 1978.
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18. Plan HP 9.1. British Industrial Sand Ltd. Geological Map of Oakamoor Area. Black Plantation Area. Scale 6" to 1 mile. April 1978.
19. Report HR 9.1 Sibelco Minerals and Chemicals Ltd. Moneystone Quarry Staffordshire. Report Under Regulations 18 of the Mines and Quarries (Tips) Regulations 1971. Tip No. 3 "Moneystone". CLOSED. May 2001.
20. Report HR 9.2. M&Q Form No. 319. Mines and Quarries (Tips) Regulations 1971. Cessation of Tipping Operations at British Industrial Sand Ltd Moneystone Quarry Staffordshire. Tip No. 3 Moneystone. October 1984.
21. Report HR 9.3 Tip Tip No. 3 Moneystone. Report outlining past history for attachment to a report in pursuance of the Mines and Quarries (Tips) Regulations 1971. A B Daily Son & Clarke. With BH10 log and location plan.
22. Report HR 10.1 Sibelco Minerals and Chemicals Ltd. Moneystone Quarry Staffordshire. Report Under Regulations 18 of the Mines and Quarries (Tips) Regulations 1971. Tip No. 4 "Black Plantation" CLOSED. May 2001.
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32. Plan HP 15.3. British Industrial Sand Ltd - Oakamoor Staffordshire. Plan showing location of mud pits L2 and L3. Dwg Ref SM24. Scale 1:1250. November 1960.
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- E. Updated Technical Background to the CLEA Model. Science Report SC050021/SR3. January 2009. Environment Agency.
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APPENDIX B - EXPLORATION LOGS

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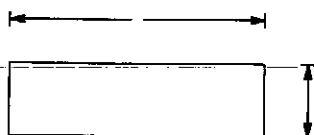
TRIAL PIT LOG

Abbeydale
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Project Moneystone Quarry, Oakamoor, Staffordshire				TRIAL PIT No TP A	
Job No 418040	Date 15-10-79	Ground level (m)	Co-Ordinates ()		
Method/Plant Used Trial Pit				Sheet 1 of 2	

SAMPLES & TESTS			STRATA				Geology	Instrument/Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	DESCRIPTION		
						Soft, firm and stiff brown CLAY with bands and zones of light brown sand		
					(3.40)		a2	
				3.40				
				3.50	Topsoil		b3	
					Firm grey very silty organic CLAY		b2	

Shoring/Support:
Stability:



GENERAL REMARKS

SI for Clay process building



All dimensions in metres
Scale 1:25

Client

Laver Leisure

Contractor

MGL (Ref: 37)

Logged By
MGL

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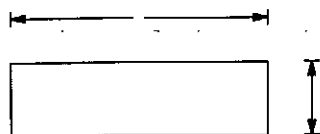
TRIAL PIT LOG

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Building Environment Consultants

Project Moneystone Quarry, Oakamoor, Staffordshire				TRIAL PIT No TP A	
Job No 418040	Date 15-10-79	Ground level (m)	Co-Ordinates ()		
Method/Plant Used Trial Pit				Sheet 2 of 2	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						(1.10)	Firm grey very silty organic CLAY (continued)	b2	
						4.60			

Shoring/Support:
Stability:



GENERAL REMARKS

SI for Clay process building



All dimensions in metres
Scale 1:25

Client
Laver Leisure

Contractor
MGL (Ref: 37)

Logged By
MGL

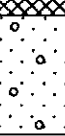
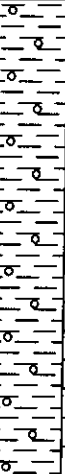
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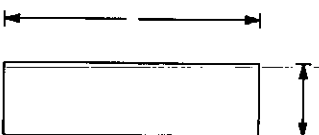
TRIAL PIT LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				TRIAL PIT No TP B	
Job No 418040	Date 15-10-79	Ground level (m)	Co-Ordinates ()		
Method/Plant Used Trial Pit				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						0.15	Tarmacadam	a	
						(0.20) 0.35	Crushed limestone	a1	
						(0.41) 0.76	Red sand and sandstone	b1	
						(1.64) 2.40	Compacted grey shale pieces and firm grey clay	b2	

Shoring/Support:
Stability:



GENERAL REMARKS		N ↑
SI for Clay process building		

All dimensions in metres Scale 1:25	Client Laver Leisure	Contractor MGL (Ref: 37)	Logged By MGL
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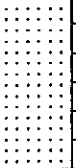
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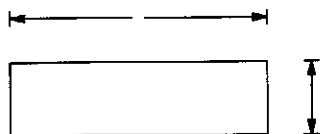
TRIAL PIT LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				TRIAL PIT No TP Q2E	
Job No 418040	Date 04-02-83	Ground level (m) 190.00	Co-Ordinates ()		
Method/Plant Used				Sheet 1 of 2	

SAMPLES & TESTS			Water	STRATA			Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)		
						(0.60)		
				189.40		0.60		
						(4.00)		
							c2	
							c1	

Shoring/Support:
Stability:



GENERAL REMARKS



All dimensions in metres
Scale 1:25

Client
Laver Leisure

Contractor
B&P (Ref:2)

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 1956 BH2	
Job No 418040	Date 01-05-56	Ground level (m) 175.86	Co-Ordinates ()		
Method/Plant Used Openhole				Sheet 1 of 5	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						(1.83)			
				174.03		1.83	White to mauve medium grained SANDSTONE.	c2	
						(2.59)			
				171.44		4.42	Mauve medium grained SANDSTONE.	c2	
						(2.59)			
				168.85		7.01	White medium grained SANDSTONE.	c2	

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Drillers Log		
All dimensions in metres Scale 1:50			Client Laver Leisure		Contractor (Ref: 53)		Logged By Dailey		

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 1956 BH2	
Job No 418040	Date 01-05-56	Ground level (m) 175.86	Co-Ordinates ()		
Method/Plant Used Openhole				Sheet 2 of 5	

SAMPLES & TESTS			STRATA					Geology	Instrument/Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						(4.27)	White medium grained SANDSTONE(continued)	c2	
				164.58		11.28	Mauve medium to fine grained SANDSTONE.	c2	
						(7.01)			

Boring Progress and Water Observations							GENERAL REMARKS		N ↑
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Drillers Log		
All dimensions in metres Scale 1:50			Client Laver Leisure			Contractor (Ref: 53)			Logged By Dailey

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 1956 BH2	
Job No 418040	Date 01-05-56	Ground level (m) 175.86	Co-Ordinates ()		
Method/Plant Used Openhole				Sheet 3 of 5	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
							Mauve medium to fine grained SANDSTONE(continued)	c2	
				157.57		18.29			
						(0.61)	Coarse grained pale pink feldspathic SANDSTONE.	c2	
				156.96		18.90			
						(0.91)	Pale mauve medium grained SANDSTONE.	c2	
				156.05		19.81			
						(0.76)	Nearly white SANDSTONE.	c2	
				155.29		20.57			
				154.98		20.88	Passing down into mauve speckled SANDSTONE.	c2	
						(1.68)	Coarse pebbly mauve or white SANDSTONE.	c2	
				153.30		22.56			
						(0.91)	Deep red micaceous fine to medium grained SANDSTONE.	c2	
				152.39		23.47			
						(0.91)	Pale mauve medium grained SANDSTONE.	c2	

Boring Progress and Water Observations							GENERAL REMARKS		N ↑
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Drillers Log		
All dimensions in metres Scale 1:50			Client Laver Leisure		Contractor (Ref: 53)		Logged By Dailey		

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 1956 BH2	
Job No 418040	Date 01-05-56	Ground level (m) 175.86	Co-Ordinates ()		
Method/Plant Used Openhole					Sheet 4 of 5

SAMPLES & TESTS			STRATA					
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	Geology
				151.48		24.38	Pale mauve medium grained SANDSTONE(continued)	c2
						(1.83)	Purple micaceous fine grained SANDSTONE. Passing into ochreous sand.	c2
				149.65		26.21	Soft purple medium grained SANDSTONE. Occasional white mounds.	c2
						(1.53)		
				148.12		27.74	Mauve medium grained SANDSTONE.	c2
						(1.06)		
				147.06		28.80	Mottled SANDSTONE with occasional coarse bands and few white bands near base.	c2
						(1.68)		
				145.38		30.48	MARL.	c1
						(2.13)		

Boring Progress and Water Observations							GENERAL REMARKS		N ↑
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Drillers Log		
All dimensions in metres Scale 1:50			Client Laver Leisure		Contractor (Ref: 53)			Logged By Dailey	

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 1956 BH2	
Job No 418040	Date 01-05-56	Ground level (m) 175.86	Co-Ordinates ()		
Method/Plant Used Openhole				Sheet 5 of 5	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
							MARL. (continued)	c1	
				143.25		32.61	White SANDSTONE.	c2	
				142.94		32.92	Bottom of borehole at 32.92m (108') bgl.		

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Drillers Log		
All dimensions in metres Scale 1:50			Client Laver Leisure		Contractor (Ref: 53)		Logged By Dailey		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No BH 1	
Job No 418040	Date 01-03-66	Ground level (m) 144.50	Co-Ordinates () E 404,516.0 N 345,386.0		
Method/Plant Used				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				141.20		(2.60) 3.30	MADE GROUND MADE GROUND. Stiff grey clay and stones.	a2	
				138.40		(2.80) 6.10	MADE GROUND. Stiff grey clay and shale particles.	a2	
				136.80		7.70	MADE GROUND. Hard grey shale.	a1	
						(18.40)	MADE GROUND. Stiff brown clay and shale particles.	a2	
							MADE GROUND. Stiff red clay and stones.	a2	
							MADE GROUND. Stiff brown and grey clay and stones.	a2	
							MADE GROUND. Soft brown clay and red sandstone.	a2	
							MADE GROUND. Soft brown clay and stones.	a2	
						(2.60) 17.20	MADE GROUND. Stiff red clay and stones.	a2	
				127.30		17.20			
				126.10		18.40	MADE GROUND. Stiff brown clay and grey shale fragments.	a2	
				124.70		19.80	Hard dark grey SILTSTONE	c1	

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Strata descriptions taken from jar sample descriptions.		
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref: 48)		Logged By Dailey		

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No BH 2	
Job No 418040	Date 01-03-66	Ground level (m) 140.00	Co-Ordinates () E 404,545.0 N 345,384.0		
Method/Plant Used				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				138.02		1.98	MADE GROUND MADE GROUND. Hard grey siltstone.	a1	
						(3.92)	MADE GROUND. Stiff grey clay and shale fragments.	a2	
				134.10		5.90	MADE GROUND. Stiff brown mottled clay and stones.	a2 a	
				129.50		10.50	MADE GROUND. Red sandstone.	a1	
				128.30		11.70	MADE GROUND. Stiff brown mottled clay and stones.	a2	
				125.20		14.80	MADE GROUND. Hard grey shale. MADE GROUND. Hard dark grey siltstone. MADE GROUND. Hard dark grey shaley siltstone.	a1 a1 a1	
				123.24		16.76	SILTSTONE Hard dark grey SILTSTONE.	cl cl	
				120.20		19.80			

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Strata descriptions taken from jar sample descriptions.		

All dimensions in metres
Scale 1:250

Client: Laver Leisure

Contractor: (Ref: 48)

Logged By: Dailey

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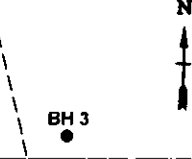
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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No BH 3	
Job No 418040	Date 01-03-66	Ground level (m) 133.00	Co-Ordinates () E 404,528.0 N 345,364.0		
Method/Plant Used				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				129.80		(2.30) 3.20	MADE GROUND MADE GROUND. Stiff brown and grey clay and stones.	a2	
				127.10		(2.70) (9.70)	MADE GROUND. Stiff reddish brown clay and sandstones.	a2 a	
				125.90		7.10	MADE GROUND. Stiff reddish brown clay and stones with red sandstone fragments.	a2	
				124.70		8.30	MADE GROUND. Hard brown weathered shale.	a1	
				123.30		9.70	MADE GROUND. Stiff brown clay and stones.	a2	
				121.75		11.25	SILTSTONE Hard dark grey SILTSTONE.	c1 c1	
							Bottom of borehole at 11.05m bgl?		

Boring Progress and Water Observations							GENERAL REMARKS	
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)		
							Strata descriptions taken from jar sample descriptions.	
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref: 48)		Logged By Dailey	

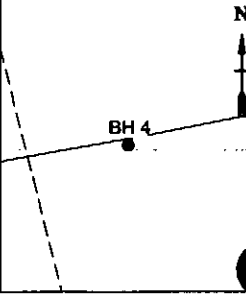
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BOREHOLE LOG

Abbeydale
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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No BH 4
Job No 418040	Date 01-03-66	Ground level (m) 151.30	Co-Ordinates () E 404,528.0 N 345,404.0	
Method/Plant Used				Sheet 1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				148.10		3.20	MADE GROUND MADE GROUND. Stiff mauve clay and grey siltstone fragments. MADE GROUND. Stiff brown clay and grey siltstone fragments.	a2	
						(3.30)	MADE GROUND. Soft brown clay and stones.	a2	
				143.60		7.70	MADE GROUND. Stiff mottled clay and stones and mauve shale fragments.	a2	
						(2.70)	MADE GROUND. Stiff mottled clay and mauve shale fragments.	a2	
						(2.40)	MADE GROUND. Hard mauve siltstone.	a1	
							MADE GROUND. Soft brown clay and grey siltstone fragments.	a2	
				136.60		(2.70)	MADE GROUND. Stiff grey clay and siltstone fragments.	a2	
						(4.30)	MADE GROUND. Soft brown mottled clay and stones with shale fragments.	a2	
				132.30		19.00	MADE GROUND. Stiff grey mottled clay and shale fragments.	a2	
				129.60		21.70	MADE GROUND. Hard dark grey siltstone.	a1	
						(4.30)	MADE GROUND. Stiff brown mottled clay and sandstone fragments.	a2	
				125.30		26.00	MADE GROUND. Stiff brown clay.	a2	
				123.90		27.40	MADE GROUND. Stiff grey clay and siltstone fragments.	a2	
						(3.08)	SILTSTONE	c1	
				120.82		30.48	Hard grey and dark grey SILTSTONE.	c1	
							Hard dark grey SHALE and stiff clay.	c1	
							Bottom of borehole at 32.3m bgl ?		

Boring Progress and Water Observations							GENERAL REMARKS	
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)		
							Strata descriptions taken from jar sample descriptions.	
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref: 48)			Logged By Dailey

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No BH 9	
Job No 418040	Date	Ground level (m)	Co-Ordinates ()		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						1.80	Superficials	b2	
						3.35	Red medium grained SANDSTONE	c2	
						(2.75) 6.10	Pink and purple medium SANDSTONE with white bands becoming purple with dark speckles at base	c2	
						(3.05) 9.15	Deep purple/red medium grained SANDSTONE with coarse bands of red ochreous medium graind sandstone	c2	
						10.36	Pink & white medium grained SANDSTONE with coarse bands	c2	
						(2.14) 12.50	Red SHALE	c1	

Boring Progress and Water Observations							GENERAL REMARKS	N ↑
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)		
							Location near to Tip 4	
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor BIS (Ref: 26)		Logged By Dailey	

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No BH10	
Job No 418040	Date 01-05-78	Ground level (m) 241.92	Co-Ordinates () E 405,134.0 N 346,401.0		
Method/Plant Used Rotary				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
6.70	D			241.62		0.30	Topsoil	b3	
				239.18		(2.44) 2.74	Pink and white medium grained SANDSTONE	b1	
				238.80		3.12	Purplish medium grained SANDSTONE	c2	
						(6.02)	Pink and white medium grained SANDSTONE	c2	
				232.78		9.14	Purplish red medium grained SANDSTONE	c2	
				229.73		12.19	White (speckled blue & brown) SANDSTONE	c2	
				229.12		12.80			

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Drillers Log		
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor BIS (Ref: 21)		Logged By Dailey		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No BH18	
Job No 418040	Date 20-06-68	Ground level (m) 136.17	Co-Ordinates () E 404,775.0 N 345,327.0		
Method/Plant Used				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				134.61		1.56	Soil (Driller's description).	a	
				134.19		1.98	Firm red CLAY (Driller's description).	b2	
				134.11		2.06 (4.06)	Red sandy CLAY (Driller's description) with gravel (Driller's description).	b2	
				133.24		2.93	Grey and red SANDSTONE (Driller's description).	c2	
				129.18		6.99			
				127.77		8.40	Grey SANDSTONE (Driller's description).	c2	
				126.45		9.72	Broken with red CLAY (Driller's description).	b2	
				125.93		10.24 (3.51)	Hard (Driller's description). SANDSTONE (Driller's description).	c1	
				122.42		13.75		c2	
				121.57		14.60	Red and grey massive SANDSTONE (Driller's description).	c2	
				119.92		16.25	Red and grey SANDSTONE with bands of red clay (Driller's description).	c2	
							Bottom of borehole at 16.25m bgl.		

Boring Progress and Water Observations							GENERAL REMARKS	
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Time (hr)		
							Strata descriptions taken from jar sample descriptions.	
All dimensions in metres Scale 1:250							Client Laver Leisure	Contractor GEL (Ref: 16)
							Logged By GEL	

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No BH19	
Job No 418040	Date 03-07-68	Ground level (m) 155.02	Co-Ordinates () E 404,704.0 N 345,347.0		
Method/Plant Used				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
						(25.20)	Dark grey reddish hard SHALE with soft bands	cl	
				132.62		(1.90) 22.40	Dark grey hard SHALE with soft bands	cl	
				127.42		27.60			
				125.62		29.40	SHALES with red clay intrusions and sandy bands	c3	

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Drillers log for runs 17 to 22 only. L2 dam site		
03-07-68	29.38	2.51	10.24						
03-07-68	29.38	6.10	10.24						
03-07-68	29.38	3.05	10.24						
03-07-68	29.38	3.73	10.24						
03-07-68	29.38	3.50	10.24						
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor GEL (Ref: 35)		Logged By GEL		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No BH21	
Job No 418040	Date 26-06-68 27-06-68	Ground level (m) 140.03	Co-Ordinates () E 404,795.0 N 345,364.0		
Method/Plant Used				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				138.57		1.46	Soil (Driller's description).	a	
				138.16		1.87	Firm red CLAY (Driller's description).	b2	
							CLAY light (Driller's description).	b2	
				137.81		2.22	Firm to stiff red and brown CLAY (Driller's description).	b2	
							SANDSTONE.	c2	
				137.52		2.51	Grey broken SANDSTONE (Driller's description).	c2	
				136.13		3.90	Sandy CLAY (Driller's description).	b2	
				134.50		5.53	Stiff red CLAY (Driller's description).	b2	
				132.88		7.15		b2	
				131.39		8.64	Medium hard red and grey medium grained SANDSTONE (Driller's description).	c2	
				130.28		9.75			
							Bottom of borehole at 9.75m bgl.		

Boring Progress and Water Observations							GENERAL REMARKS		 BH21
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Strata descriptions taken from jar sample descriptions.		
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor GEL (Ref: 16)		Logged By GEL		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No BH22	
Job No 418040	Date 05-07-68 08-07-68	Ground level (m) 136.17	Co-Ordinates () E 404,746.0 N 345,334.0		
Method/Plant Used				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				134.38		1.79	Silty CLAY (Driller's description).	b2	
				133.03		3.14	Dark grey very stiff CLAY (Driller's description).	b2	
				132.68		3.49	Stiff red silty CLAY (Driller's description).	b2	
						(8.78)	Red SANDSTONE with lithorelics of red and brown clay bands (Driller's description).	c2	
				123.90		12.27	Medium hard red and grey medium grained SANDSTONE (Driller's description).	c2	
						(6.58)			
				117.32		18.85	Bottom of borehole at 18.85m bgl.		

Boring Progress and Water Observations							GENERAL REMARKS Strata descriptions taken from jar sample descriptions.		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor GEL (Ref: 16)		Logged By GEL		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No BH24	
Job No 418040	Date 11-07-68 13-07-68	Ground level (m) 144.63	Co-Ordinates () E 404,730.0 N 345,368.0		
Method/Plant Used				Sheet 1 of 1	

SAMPLES & TESTS			STRATA						
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	Geology	Instrument/Backfill
				143.98		0.65	Firm brown silty CLAY.	b2	
						(3.49)	Brown silty CLAY with shale.	b2	
				140.49		4.14			
						(2.11)	SHALE with brown silty clay bands.	c3	
				138.38		6.25	Poor recovery in U70 sample.		
						(5.31)	Soft broken SHALE with soft sandy bands.	c3	
				133.07		11.56			
				131.82		12.81	Soft SHALE with medium hard bands.	c3	
				130.88		13.75	Red and grey SHALE.	c3	
							Red and grey SHALE with sandy bands.	c3	
				130.17		14.46	Red SANDSTONE with clayey bands.		
						(4.74)		c2	
				125.43		19.20			
						(3.20)	Medium hard red medium grained SANDSTONE.	c2	
				122.23		22.40			
							Bottom of borehole at 22.4m bgl.		

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
								Strata descriptions taken from jar sample descriptions.	
All dimensions in metres Scale 1:250							Client Laver Leisure	Contractor GEL (Ref: 16)	Logged By GEL

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No OAK81/001	
Job No 418040	Date 01-01-81	Ground level (m) 168.50	Co-Ordinates () E 404,695.0 N 345,874.0		
Method/Plant Used Shell & Auger				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
1.25 1.52-2.52	Vane	N13					MADE GROUND. Laminated red brown clayey silt with subsidiary bands of pale brown silty clay and associated white gypsum bands (TAILINGS).		
2.60	VANE	N1				(7.00)		T	
4.25	VANE	N7							
6.25	VANE	N2							
6.90	VANE	N7		161.50		7.00	MADE GROUND. Weakly laminated red brown clayey silt subsidiary bands of silty sand and some gypsum bands (TAILINGS).		
7.75	VANE	N21							
9.10-10.00						(5.50)		T	
10.75	VANE	N14							
				156.00		12.50			
12.84-13.40				155.70		12.80	Weathered fine grained SANDSTONE.	c2	

Boring Progress and Water Observations							GENERAL REMARKS		N ↑ OAK81/001
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	150mm cable percussive borchote.		
All dimensions in metres Scale 1:125			Client Laver Leisure		Contractor (Ref: 51)			Logged By	

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No OM-83-001	
Job No 418040	Date 01-10-84	Ground level (m) 181.70	Co-Ordinates () E 404,494.0 N 346,144.0		
Method/Plant Used Rotary Cored				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						(10.90)	Openhole drilling - no information available.		
				170.80		10.90			
						(5.94)	Pinkish white coarse grained becoming light red fine grained feldspathic slightly weathered SANDSTONE with hocmatite, strong with medium to closely spaced fractures, either low angle (bedding?) or steep joints. Some fractures stained, occasionally with a little clay and some black wad. Some cross bedding, feldspathic coarse bands and micaceous bands. Fractures mainly at 16-25, or 45-50'. Some 25-30' planar breaks, micaceous parallel to bedding.	c2	
				164.86		16.84	Becomes coarse slightly conglomeratic contains feldspar, quartz and mudstone pellets.	c1	
				164.20		17.50	Becomes brownish cream medium to coarse grained.		
						(3.63)	Purplish red fine grained laminated to very thinly bedded slightly weathered MUDSTONE.	c1	
				160.57		21.13	Purplish red fine grained laminated to very thinly bedded slightly weathered SILTSTONE with haematite, micaceous and slakes slowly. Medium strong but weak and friable from 16.84m to 16.95m bgl.		
				158.72		(1.85) 22.98	Some planar fractures at 65, bedding at 10-11'. Becomes reddish grey to grey unweathered siltstone with bands (5mm) of purplish red mudstone. Becomes weak with 10-20mm clayey micaceous bands. Increase in very thin sandy bands. Light grey banded grey silty fine SANDSTONE with siltstone bands, thin bedded, unweathered strong, some red staining and flaser structures. Bedding dipping approximately 10-11'. Bottom of borehole at 22.98m bgl.	c2	

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Openhole drilling to 10.9m bgl then rotary coring to 22.98m bgl.		
All dimensions in metres Scale 1:200			Client Laver Leisure		Contractor BIS (Ref: 2)		Logged By B&P		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No OM-83-003	
Job No 418040	Date 01-10-84	Ground level (m) 180.89	Co-Ordinates () E 404,562.0 N 346,115.0		
Method/Plant Used Rotary Cored				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						(9.17)	Openhole drilling - no information available.		
				171.72		9.17			
				171.54		9.35	Coarse grained with red stained joint. Generally pinkish grey thin-medium bedded slightly weathered fine-medium SANDSTONE, strong with medium spaced fractures. Contains mica and in parts feldspathic, some coarse bands and cross-bedded.		
						(7.35)	Some weak friable bands. Cross bedding at 25-30.	c2	
				164.37		16.52	Below 15.75m: leached whitish grey. Some coarse quartz grains at base.	c1	
				163.87	x x x x	17.02	Irregular contact with purplish red MUDSTONE very thinly bedded, weak.	c1	
				161.54	x x x x	19.35	Purplish grey becoming grey fine grained banded slightly weathered SILTSTONE with thin bands of mudstone and sandstone, medium strong, very thinly bedded.		
						(2.29)	10-20mm clayey band with trace of shearing.	c2	
				159.25		21.64	10-20mm clayey band with trace of shearing. Strong grey occasionally purplish grey unweathered silty fine grained SANDSTONE. Ripple laminated and thinly bedded with occasional mudstone or siltstone bands. Bedding dip 7-8 Clay layer - possible bedding plane shear at base of mudstone band. 40° planar joint in mudstone band. Clay layer - possible bedding plane shear at base of mudstone band. Clay layer - possible bedding plane shear at base of mudstone band. Bottom of borehole at 21.64m bgl.		

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Openhole drilling to 9.17m bgl then rotary coring to 21.64m bgl. No run markers from 15.64m to 21.64m bgl.		
All dimensions in metres Scale 1:200			Client Laver Leisure		Contractor BIS (Ref: 2)		Logged By B&P		

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BOREHOLE LOG

Abbeydale
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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No OM-83-004	
Job No 418040	Date 01-10-84	Ground level (m) 201.63	Co-Ordinates () E 404,610.0 N 346,216.0		
Method/Plant Used Rotary Cored				Sheet 1 of 2	

SAMPLES & TESTS			STRATA					Geology	Instrument/Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						(24.77)	Openhole drilling - no information available.		
				176.86		24.77	Pinkish grey alternating dark brownish red slightly weathered medium SANDSTONE haematite rich medium strong to strong, occasionally weak and highly weathered, medium spaced fractures. Few joints, most fractures 20-25 on cross bedding	c2	
				170.07		31.56			

Boring Progress and Water Observations							GENERAL REMARKS		N ↑ OM-83-004 ● ↓	
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Openhole drilling to 24.77m bgl then rotary coring to 37.36m bgl.			
All dimensions in metres Scale 1:200							Client Laver Leisure		Contractor BIS (Ref: 2)	Logged By B&P

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No OM-83-004	
Job No 418040	Date 01-10-84	Ground level (m) 201.63	Co-Ordinates () E 404,610.0 N 346,216.0		
Method/Plant Used Rotary Cored				Sheet 2 of 2	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				169.48	x x x x	32.15 (1.63)	Red and light greyish green MUDSTONE. Silty with depth(continued)	c1	
				167.85	x x x x	33.78		c1	
					.	(3.58)	Greyish red very thinly bedded shaly SILTSTONE, medium strong, very closely spaced fractures. Unweathered but contains clayey bands up to 10mm and mudstone bands up to 60mm thick which slake slowly. Sandy with depth. Dip 8.	c2	
				164.27	.	37.36	Light grey banded unweathered fine SANDSTONE, ripple laminated, strong with closely spaced fractures, contains bands of grey and purplish grey mudstone (<60mm thick).		
							Mudstone bands become grey with depth, are weak and slake slowly. Some sedimentary clayey bands.		
							Some dark red staining of laminae within sandstones. Becomes fine grained, quartzitic and very strong.		
							Bottom of borehole at 37.36m bgl.		

Boring Progress and Water Observations							GENERAL REMARKS		N ↑ OM-83-004 ●
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Openhole drilling to 24.77m bgl then rotary coring to 37.36m bgl.		
All dimensions in metres Scale 1:200			Client Laver Leisure		Contractor BIS (Ref: 2)		Logged By B&P		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No OM-83-005	
Job No 418040	Date 01-10-84	Ground level (m) 181.88	Co-Ordinates () E 404,627.0 N 346,076.0		
Method/Plant Used Rotary Cored					Sheet 1 of 2

SAMPLES & TESTS			STRATA					Geology	Instrument/Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						(9.00)	Openhole drilling - no information available.		
				172.88		9.00			
						(10.55)	Pinkish grey to pinkish brown occasionally purplish red medium to highly weathered fine-medium SANDSTONE micaceous in part, occasionally coarse and feldspathic. Thin-medium bedded, strong, some very weak friable zones. Fractures mainly 10 sub-horizontal or occasionally 30 generally rough clean.	c2	
				162.33		19.55			
				161.81	x x x x	20.07 (1.90)	Purplish red slightly weathered MUDSTONE weak, slakes and generally broken.	c1	
				159.91	x x x x	21.97	Mudstone contact with sandstone slightly irregular fairly flat, some drilling disturbance of mudstone, listric surfaces present, some slickensided planes at 25-50 but no bedding plane shears. Becomes silty with depth and grades into siltstone below.	c1	
						(3.08)		c2	
				156.83		25.05	Purplish grey to reddish grey becoming grey banded SILTSTONE slightly shaly very thin-thin bedded strong but with bands of weak mudstone and strong sandstone. Bedding dip 6-8 Red clay associated with mudstone bands, poorly developed, possibly sedimentary feature 1-2mm thick at 20.65m and 20.80m. Appears to be bedding plane principle shear. Light green clay layer dips 8 above. Light grey banded reddish grey and dark grey unweathered silty fine SANDSTONE thin bedded strong with 50mm bands of weak mudstone, occasional clay layer.		
							Dip of beds 6-7.		

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Time (hr)			
							Openhole drilling to 9.0m bgl then rotary coring to 25.05m bgl.		
All dimensions in metres Scale 1:200			Client Laver Leisure		Contractor BIS (Ref: 2)		Logged By B&P		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No OM-83-006	
Job No 418040	Date 01-10-84	Ground level (m) 203.75	Co-Ordinates () E 404,678.0 N 346,184.0		
Method/Plant Used Rotary Cored				Sheet 1 of 2	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						(26.14)	Openhole drilling - no information available.		
				177.61		26.14	Pinkish grey to reddish grey or brownish red, occasionally patchy cream medium bedded slightly weathered fine SANDSTONE, strong with medium spaced fractures, cross bedded, sometimes micaceous and sometimes contains coarse feldspathic bands. Planar cross (?) bedding dips at 25°. Very weak micaceous friable sand.	c2	
				171.65		32.10	Contains increasing number of coarse feldspathic bands. Low angle fractures at 20-22.		

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Openhole drilling to 26.14m bgl then rotary coring to 38.28m bgl.		
All dimensions in metres Scale 1:200			Client Laver Leisure		Contractor BIS (Ref: 2)		Logged By B&P		

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BOREHOLE LOG

Abbeydale
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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No OM-83-006	
Job No 418040	Date 01-10-84	Ground level (m) 203.75	Co-Ordinates () E 404,678.0 N 346,184.0		
Method/Plant Used Rotary Cored				Sheet 2 of 2	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				171.15	xxxxx	32.60	Becomes creamy white leached, medium grained and very strong.	c1	
				169.60	xxxxx	34.15	Purplish red-brownish red thin bedded MUDSTONE becomes silty, weak, slakes slowly.	c1	
					xxxxx	(4.13)	Grades into reddish grey becoming grey with depth fine grained slightly weathered SILTSTONE thin bedded medium strong with fine sandstone bands and some thin clay layers. Weak, slakes. Bedding dip 10.	c2	
				165.47	xxxxx	38.28	Light grey banded unweathered fine-medium silty SANDSTONE, ripple laminated thin-medium bedded, strong contains thin 60-100mm bands of purplish grey weak mudstone.		
							Becoming grey unweathered strong sandstone with bands of mudstone which tend to slake. Bedding dip 10		
							Rare clay layers, no well defined jointing, occasional slight staining on fractures in mudstone bands. No well defined jointing. Becomes more sandy with occasional purplish siltstone bands.		
							Bottom of borehole at 38.28m bgl.		

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Openhole drilling to 26.14m bgl then rotary coring to 38.28m bgl.		
All dimensions in metres Scale 1:200			Client Laver Leisure		Contractor BIS (Ref: 2)		Logged By B&P		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No OM-83-007	
Job No 418040	Date	Ground level (m) 199.95	Co-Ordinates () E 404,477.0 N 346,284.0		
Method/Plant Used				Sheet 1 of 1	

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)		
				199.80		0.15	Tarmac	a
				199.60		0.64	Crushed Limestone	al
				199.19		0.76	Red sand and sandstone	al
				197.55		2.40	Compact grey shale pieces and firm grey clay	al

Boring Progress and Water Observations							GENERAL REMARKS		N ↑ ↓ N
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							SI for Clay process building		OM-83-007 ●
All dimensions in metres Scale 1:200			Client Laver Leisure			Contractor			Logged By MGL

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 22001	
Job No 418040	Date	Ground level (m) 190.96	Co-Ordinates () E 404,326.0 N 346,350.0		
Method/Plant Used Openhole					Sheet 1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				188.86		(2.10) 2.10	TOPSOIL, RED SAND AND CLAY	b3	
				186.96		(1.90) 4.00	PALE PINK SANDSTONE WITH BANDS OF WHITE	c2	
				184.96		(2.00) 6.00	COARSER PALE PINK SST, WITH BANDS OF WHITE SST	c2	
				182.96		(2.00) 8.00	COARSE DARK PINK SANDSTONE WITH BANDS OF WHITE	c2	
				180.96		(2.00) 10.00	FRACTURED COARSE PINK SANDSTONE	c2	
				178.96		(2.00) 12.00	COARSE PINK SANDSTONE WITH DARK PINK LAMINAE	c2	
				176.96		(2.00) 14.00	PINK TO WHITE MEDIUM SANDSTONE	c2	
				174.96		(2.00) 16.00	COARSE WHITE SANDSTONE	c2	
				172.96		(2.00) 18.00	COARSE PINK SANDSTONE	c2	
				169.96		(3.00) 21.00	COARSER LIGHT PINK TO WHITE SANDSTONE	c2	
				166.76		(3.20) 24.20	COARSER LIGHT PINK TO RED SANDSTONE	c2	

Boring Progress and Water Observations							GENERAL REMARKS		N 22001
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250							Client Laver Leisure	Contractor (Ref. 55)	Logged By

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 22004	
Job No 418040	Date	Ground level (m) 187.92	Co-Ordinates () E 404,206.0 N 346,376.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
				185.82		(2.10) 2.10	TOPSOIL & RED SAND	b3	
				183.92		(1.90) 4.00	SOFT ORANGE SANDSTONE, CLAY BAND AT 3M	b2	
				181.92		(2.00) 6.00	LIGHT PINK ORANGE TO PURPLE SST BECOMING CLAYEY	c2	
				179.92		(2.00) 8.00	WHITE SANDSTONE, CLAY BAND AT 6.57 O 7.2M	c2	
				177.92		(2.00) 10.00	WHITE SANDSTONE TO SOFT DARK PURPLE SANDY CLAY	c2	
				175.92		(2.00) 12.00	COARSE WHITE SANDSTONE	c2	
				173.92		(2.00) 14.00	PINK SANDSTONE WITH A WHITE SST BAND	c2	
				171.92		(2.00) 16.00	WHITE TO PINK SANDSTONE	c2	
				169.92		(2.00) 18.00	PINK TO LIGHT PINK SANDSTONE, COARSER	c2	
				167.92		(2.00) 20.00	LIGHT PINK/WHITE SANDSTONE BECOMING WHITER	c2	
				165.02		(2.90) 22.90	ORANGEY PINK SANDSTONE, SOME COARSE BANDS	c2	
				162.02		(2.99) 25.90	ORANGEY PINK SANDSTONE	c2	

Boring Progress and Water Observations							GENERAL REMARKS Drillers descriptions for WBB extension assessment		 N ↑
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

Abbeydale
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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 23001	
Job No 418040	Date	Ground level (m) 183.73	Co-Ordinates () E 403,897.0 N 346,522.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				182.43		1.30	EST OB THICKNESS		
						(3.70)	EST INF THICKNESS		
				178.73		5.00	EST GS THICKNESS		
						(29.00)		c2	
				149.73		34.00			
				148.73		35.00	EST SHALE POSITION	c3	

Boring Progress and Water Observations							GENERAL REMARKS		 23001
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Drillers descriptions for WBB extension assessment		

All dimensions in metres Scale 1:250	Client Laver Leisure	Contractor (Ref. 55)	Logged By
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BOREHOLE LOG

Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 24012
Job No 418040	Date	Ground level (m) 174.93	Co-Ordinates () E 404,412.0 N 346,162.0	
Method/Plant Used Openhole				Sheet 1 of 1

ABEC SHELL & AUGER 418040.GPJ ABEC TEMPLATE.GDT 18/3/11

Boring Progress and Water Observations							GENERAL REMARKS	
Date	Depth	Water Depth	Depth	Casing Dia. mm	Chiselling Depth	Time (hr)		
							Drillers descriptions for WBB extension assessment	24012 ●

All dimensions in metres Scale 1:250	Client Laver Leisure	Contractor (Ref. 55)	Logged By
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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 24013	
Job No 418040	Date	Ground level (m) 192.70	Co-Ordinates () E 404,430.0 N 346,229.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						(24.47)			
				168.23		24.47			
						(7.53)			
				160.70		32.00			

Boring Progress and Water Observations							GENERAL REMARKS Drillers descriptions for WBB extension assessment		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Time (hr)			

All dimensions in metres Scale 1:250	Client Laver Leisure	Contractor (Ref. 55)	Logged By
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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 78001	
Job No 418040	Date	Ground level (m) 182.50	Co-Ordinates () E 404,405.0 N 346,082.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				182.15		0.35	TOPSOIL	b3	
				180.02		(2.13) 2.48	CLAY	b2	
						(2.00) 4.48	PINK/WHITE SANDSTONE	c2	
				178.02		(2.00) 6.48	PINK/WHITE SANDSTONE & CLAY LENSES	c2	
				176.02		(2.00) 8.48	PINK/WHITE SANDSTONE	c2	
				174.02		(2.00) 10.48	PINK/WHITE SANDSTONE	c2	
				172.02		(2.00) 12.48	PINK/WHITE/MAUVE SANDSTONE	c2	
				170.02		(2.00) 14.48	PALE PINK/RED PINKSANDSTONE	c2	
				168.02		(2.00) 16.48	MAUVE/PINK/PALE PINK SANDSTONE	c2	
				166.02		(2.00) 18.48	WHITE/PINK/PURPLE SANDSTONE	c2	
				164.02		(2.00) 20.48	RED/PINK SANDSTONE	c2	
				162.02		(2.00) 22.48	RED/PINK SANDSTONE	c2	
				160.02		(2.00) 24.48	PINK/WHITE/RED SANDSTONE	c2	
				158.02		(2.00) 26.48	PINK/RED SANDTONE	c2	
				156.02		(2.00) 28.48	PINK/RED MAUVE SANDSTONE	c2	
				154.02		(2.00) 30.48	PINK/MAUVE SANDSTONE	c2	
				152.02		32.00	MAUVE SANDSTONE	c2	
				150.50		32.48	SILTSTONE & SHALE	c3	
				150.02					

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 78002	
Job No 418040	Date	Ground level (m) 177.75	Co-Ordinates () E 404,370.0 N 346,032.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				177.40		0.35	TOPSOIL	b3	
						(5.45)	MUDSTONE	c1	
				171.95		5.80	WHITE/DARK PINK SANDSTONE	c2	
				168.95		8.80	PINK SANDSTONE	c2	
				166.95		10.80	PINK SANDSTONE	c2	
				164.95		12.80	PINK SANDSTONE	c2	
				162.95		14.80	PINK SANDSTONE	c2	
				160.95		16.80	PALE/DARK PINK SANDSTONE	c2	
				158.95		18.80	DARK PINK/MAUVE SANDSTONE	c2	
				156.95		20.80	DARK PINK/MAUVE SANDSTONE	c2	
				154.95		22.80	PALE PINK SANDSTONE	c2	
				152.95		24.80	PALE/DARK PINK/MAUVE SANDSTONE	c2	
				150.95		26.80	PINK/WHITE SANDSTONE	c2	
				148.95		28.80	WHITE/PINK/RED SANDSTONE	c2	
				146.95		30.80	PURPLE/RED/PINK SANDSTONE	c2	
				144.95		32.80	PINK/MAUVE SANDSTONE	c2	
				142.83		34.92	MAUVE/PINK/WHITE SANDSTONE	c2	
				142.29		35.46	RED SHALE & SILTSTONE	c3	

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Drillers descriptions for WBB extension assessment		

All dimensions in metres Scale 1:250	Client Laver Leisure	Contractor (Ref. 55)	Logged By
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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 78003	
Job No 418040	Date	Ground level (m) 189.17	Co-Ordinates () E 404,442.0 N 346,158.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick- ness)	DESCRIPTION		
				188.87		0.30	TOPSOIL	b3	
				186.91		(1.96) 2.26	LOOSE SAND	b1	
						(2.74) 5.00	PINK SANDSTONE	c2	
				184.17		(2.00) 7.00	PINK SANDSTONE	c2	
				182.17		(3.00) 10.00	PINK SANDSTONE	c2	
				179.17		(2.00) 12.00	PINK/CREAM/DARK PINK SANDSTONE	c2	
				177.17		(2.00) 14.00	DARK PINK/PALE PINK/PURPLE SANDST.	c2	
				175.17		(2.00) 16.00	PINK/MAUVE SANDSTONE	c2	
				173.17		(3.00) 19.00	PALE PINK/MAUVE SANDSTONE	c2	
				170.17		(2.00) 21.00	PALE PINK SANDSTONE	c2	
				168.17		(2.00) 23.00	PALE PINK SANDSTONE	c2	
				166.17		(2.00) 25.00	PALE PINK SANDSTONE	c2	
				164.17		(2.71) 27.71	PINK SANDSTONE	c2	
				161.46		(2.69) 30.40	PINK SANDSTONE	c2	
				158.77		31.00	RED CLAY	c1	
				158.17					

Boring Progress and Water Observations							GENERAL REMARKS Drillers descriptions for WBB extension assessment		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)			Logged By	

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 78004	
Job No 418040	Date	Ground level (m) 178.41	Co-Ordinates () E 404,311.0 N 346,069.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				178.06		0.35	TOPSOIL	b3	
						(8.02)	MUDSTONE	c1	
				170.04		8.37	PINK/WHITE SANDSTONE	c2	
				167.41		(2.63) 11.00		c2	
				165.41		(2.00) 13.00	PALE PINK SANDSTONE	c2	
				163.41		(2.00) 15.00	PINK SANDSTONE	c2	
				161.41		(2.00) 17.00	PINK SANDSTONE	c2	
				159.41		(2.00) 19.00	PINK SANDSTONE	c2	
				157.41		(2.00) 21.00	PINK SANDSTONE	c2	
				154.91		(2.50) 23.50	PINK/WHITE SANDSTONE	c2	
						(6.04)	PINK/WHITE SANDSTONE	c2	
				148.87		29.54	ESTIMATED BASE OF GS	c2	
						(8.87)		c2	
				140.00		38.41		c3	
				139.41		39.00			

Boring Progress and Water Observations						GENERAL REMARKS		 78004
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth			
							Drillers descriptions for WBB extension assessment	
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By	

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BOREHOLE LOG

Abbeydale
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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 78005	
Job No 418040	Date	Ground level (m) 173.36	Co-Ordinates () E 404,360.0 N 345,971.0		
Method/Plant Used Openhole					Sheet 1 of 1

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	
				173.01		0.35	TOPSOIL	b3
						(2.65)	CLAY	b2
				170.36		3.00		
				168.36		(2.00)	PINK SANDSTONE	c2
				166.36		(2.00)	PINK SANDSTONE	c2
				164.36		(2.00)	PINK/OFF WHITE SANDSTONE	c2
				162.36		(2.00)	PINK/WHITE SANDSTONE	c2
				160.36		(2.00)	PINK SANDSTONE	c2
				158.36		(2.00)	PINK/WHITE SANDSTONE	c2
				156.36		(2.00)	PALE PINK SANDSTONE	c2
				154.36		(2.00)	PINK SANDSTONE	c2
				152.36		(2.00)	PINK SANDSTONE	c2
				150.36		(2.00)	PINK SANDSTONE	c2
				148.36		(2.00)	PINK SANDSTONE	c2
				146.36		(2.00)	PINK SANDSTONE	c2
				144.07		(2.29)	PINK SANDSTONE	c2
				142.63		30.73	PINK/MAUVE SANDSTONE	c2
				140.95		32.41	PINK SANDSTONE	c2
				138.95		(2.00)	PINK SANDSTONE	c2
				136.95		(2.00)	PALE PINK/WHITE SANDSTONE	c2
				136.36		37.00	PINK/GREEN/REDDISH PURPLE SHALE	c3

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
								Drillers descriptions for WBB extension assessment	
All dimensions in metres Scale 1:250							Client Laver Leisure	Contractor (Ref. 55)	Logged By

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 78006	
Job No 418040	Date	Ground level (m) 180.18	Co-Ordinates () E 404,331.0 N 346,095.0		
Method/Plant Used Openhole				Sheet 1 of 2	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				179.83		0.35	TOPSOIL	b3	
						(6.07)	MUDSTONE	c1	
				173.76		6.42			
						(2.58)	PINK SANDSTONE	c2	
				171.18		9.00			
						(2.00)	PINK/MAUVE SANDSTONE	c2	
				169.18		11.00			
						(2.00)	PINK SANDSTONE	c2	
				167.18		13.00			
						(2.00)	WHITE/CREAM SANDSTONE	c2	
				165.18		15.00			
						(2.00)	PINK/MAUVE SANDSTONE	c2	
				163.18		17.00			
						(2.00)	PINK/WHITE SANDSTONE	c2	
				161.18		19.00			
						(2.00)	PINK SANDSTONE	c2	
				159.18		21.00			
						(2.00)	PINK/MAUVE SANDSTONE	c2	
				157.18		23.00			
						(2.00)	PINK/DARK PINK SANDSTONE	c2	
				155.18		25.00			
						(2.00)	PINK/WHITE SANDSTONE	c2	
				153.18		27.00			
						(2.00)	DARK PINK/RED SANDSTONE	c2	
				151.18		29.00			
						(2.79)	RED/MAUVE/PINK SANDSTONE	c2	
				148.39		31.79			
						(8.39)	ESTIMATED BASE OF GS	c2	

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Boring Progress and Water Observations							GENERAL REMARKS		 78006
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)			Logged By	

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 78006	
Job No 418040	Date	Ground level (m) 180.18	Co-Ordinates () E 404,331.0 N 346,095.0		
Method/Plant Used Openhole					Sheet 2 of 2

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
			140.00		40.18		e3	
			139.18		41.00			

Boring Progress and Water Observations							GENERAL REMARKS		78006 N
Date	Depth	Water Depth	Casing Depth	Dia. mm	Chiselling Depth	Time (hr)			
							Drillers descriptions for WBB extension assessment		

All dimensions in metres Scale 1:250	Client Laver Leisure	Contractor (Ref. 55)	Logged By
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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 78008	
Job No 418040	Date	Ground level (m) 181.17	Co-Ordinates () E 404,280.0 N 346,153.0		
Method/Plant Used Openhole					Sheet 1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				180.87		0.30	TOPSOIL	b3	
						(4.20)	CLAY	b2	
				176.67		4.50			
				174.67		(2.00) 6.50	RED/BUFF/WHITE/GREY SANDSTONE	c2	
				172.67		(2.00) 8.50	PALE PINK SANDSTONE	c2	
				170.67		(2.00) 10.50	OFF WHITE SANDSTONE	c2	
				168.67		(2.00) 12.50	PALE PINK SANDSTONE	c2	
				166.67		(2.00) 14.50	DARK PINK/PALE PINK SANDSTONE	c2	
				164.67		(2.00) 16.50	PALE PINK/WHITE SANDSTONE	c2	
				162.67		(2.00) 18.50	PALE PINK/WHITE SANDSTONE	c2	
				160.67		(2.00) 20.50	WHITE/PINK SANDSTONE	c2	
				158.67		(2.00) 22.50	PINK/WHITE SANDSTONE	c2	
				156.67		(2.00) 24.50	PINK/WHITE SANDSTONE	c2	
				154.67		(2.00) 26.50	PINK/WHITE SANDSTONE	c2	
				152.67		(2.00) 28.50	PINK/WHITE SANDSTONE	c2	
				150.67		(2.00) 30.50	PINK SANDSTONE	c2	
				148.67		(2.00) 32.50	PINK SANDSTONE	c2	
				146.67		(2.00) 34.50	PINK SANDSTONE	c2	
				144.67		(2.00) 36.50	PALE PINK/DARK PINK SANDSTONE	c2	
				142.92		38.25	PINK/WHITE SANDSTONE	c2	
				142.17		39.00	PURPLE SHALE	c3	

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Boring Progress and Water Observations							GENERAL REMARKS		 78008
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)			Logged By	

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 78009	
Job No 418040	Date	Ground level (m) 177.36	Co-Ordinates () E 404,248.0 N 346,095.0		
Method/Plant Used Openhole					Sheet 1 of 2

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	
				177.06		0.30	TOPSOIL	b3
						(7.80)	MUDSTONE	c1
				169.26		8.10		
				167.36		(1.90) 10.00	DARK PINK SANDSTONE	c2
				165.36		(2.00) 12.00	PINK/BUFF SANDSTONE	c2
				163.36		(2.00) 14.00	PINK SANDSTONE	c2
				161.36		(2.00) 16.00	PINK/MAUVE SANDSTONE	c2
				159.36		(2.00) 18.00	MAUVE/DARK PINK SANDSTONE	c2
				157.36		(2.00) 20.00	DARK PINK SANDSTONE	c2
				155.36		(2.00) 22.00	PALE PINK/WHITE SANDSTONE	c2
				153.36		(2.00) 24.00	BUFF/WHITE/PINK SANDSTONE	c2
				151.36		(2.00) 26.00	PALE PINK/DARK PINK SANDSTONE	c2
				149.36		(2.00) 28.00	DARK PINK/PALE PINK SANDSTONE	c2
				147.36		(2.00) 30.00	DARK RED/PINK SANDSTONE	c2
				145.36		(2.00) 32.00	DARK PINK SANDSTONE	c2
				143.36		(2.00) 34.00	PINK SANDSTONE	c2
				141.36		(2.00) 36.00	PALE PINK/DARK PINK SANDSTONE	c2
				139.44		(1.92) 37.92	PINK SANDSTONE	c2
							ESTIMATED BASE OF GS	c2

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 78009	
Job No 418040	Date	Ground level (m) 177.36	Co-Ordinates () E 404,248.0 N 346,095.0		
Method/Plant Used Openhole					Sheet 2 of 2

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						(4.44)	ESTIMATED BASE OF GS(continued)	c2	
				135.00		42.36		c3	
				134.36		43.00			

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
								Drillers descriptions for WBB extension assessment	
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)			Logged By	

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 78010	
Job No 418040	Date	Ground level (m) 178.73	Co-Ordinates () E 404,223.0 N 346,194.0		
Method/Plant Used Openhole					Sheet 1 of 1

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
			178.43		0.30	TOPSOIL	b3	
					(4.50)	CLAY	b2	
			173.93		4.80			
			171.93		(2.00) 6.80	RED SANDSTONE, WHITE BANDS	c2	
			169.93		(2.00) 8.80	DARK RED/MAUVE SANDSTONE	c2	
			167.93		(2.00) 10.80	RED/MAUVE/PINK SANDSTONE	c2	
			165.93		(2.00) 12.80	PINK SANDSTONE	c2	
			163.93		(2.00) 14.80	PINK SANDSTONE	c2	
			161.93		(2.00) 16.80	PINK SANDSTONE	c2	
			159.93		(2.00) 18.80	PINK SANDSTONE	c2	
			157.93		(2.00) 20.80	PINK/WHITE SANDSTONE	c2	
			155.93		(2.00) 22.80	WHITE/DARK PINK SANDSTONE	c2	
			153.93		(2.00) 24.80	DARK PINK SANDSTONE	c2	
			151.93		(2.00) 26.80	DARK PINK SANDSTONE	c2	
			149.93		(2.00) 28.80	DARK PINK/RED SANDSTONE	c2	
			147.93		(2.00) 30.80	DARK PINK SANDSTONE	c2	
			145.93		(2.00) 32.80	DARK PINK/RED SANDSTONE	c2	
			143.93		(2.00) 34.80	DARK PINK/PINK/WHITE SANDSTONE	c2	
			141.83		(2.10) 36.90	DARK PINK/WHITE SANDSTONE	c2	
			140.34		38.39	PURPLE&REDDISH SHALE	c3	

Boring Progress and Water Observations							GENERAL REMARKS		78010 N ↑
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 78011	
Job No 418040	Date	Ground level (m) 172.46	Co-Ordinates () E 404,185.0 N 346,132.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				172.16		0.30	TOPSOIL-RED SILTSTONE+CLAY	b3	
						(6.75)	RED CLAY & SILTSTONE	b2	
				165.41		7.05			
				163.46		(1.95) 9.00	DARK PINK/WHITE SANDSTONE	c2	
				161.46		(2.00) 11.00	PINK/WHITE SANDSTONE	c2	
				159.46		(2.00) 13.00	PINK/DARK RED SANDSTONE	c2	
				157.46		(2.00) 15.00	WHITE/PINK SANDSTONE, CLAY BANDS	c2	
				155.46		(2.00) 17.00	DARK RED SANDSTONE, CLAY BANDS	c2	
				153.46		(2.00) 19.00	DARK PINK SANDSTONE	c2	
				151.46		(2.00) 21.00	WHITE/PALE PINK SANDSTONE	c2	
				149.46		(2.00) 23.00	DARK RED SANDSTONE	c2	
				147.46		(2.00) 25.00	DARK RED SANDSTONE	c2	
				145.46		(2.00) 27.00	DARK RED/PINK SANDSTONE	c2	
				143.46		(2.00) 29.00	DARK RED/PURPLE SANDSTONE	c2	
				141.46		(2.00) 31.00	DARK RED/PURPLE SANDSTONE	c2	
				139.46		(2.00) 33.00	DARK RED/PURPLE SANDSTONE	c2	
				137.81		34.65	PINK SANDSTONE	c2	
				135.00		(2.81) 37.46	ESTIMATED BASE OF GS	c2	
				134.46		38.00		c3	

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Boring Progress and Water Observations							GENERAL REMARKS	
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Time (hr)		
							Drillers descriptions for WBB extension assessment	
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By	

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 78012	
Job No 418040	Date	Ground level (m) 183.40	Co-Ordinates () E 404,254.0 N 346,254.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				183.10		0.30	TOPSOIL	b3	
				181.70		1.70	LOOSE SAND	b1	
						(2.30)	PALE PINK/CREAM SANDSTONE	c2	
				179.40		4.00	PINK/CREAM SANDSTONE	c2	
						(2.00)	PINK SANDSTONE	c2	
				177.40		6.00	PINK SANDSTONE	c2	
						(2.00)	PINK SANDSTONE	c2	
				175.40		8.00	PINK SANDSTONE	c2	
						(2.00)	PINK SANDSTONE	c2	
				173.40		10.00	PINK/WHITE SANDSTONE	c2	
						(2.00)	WHITE/PALE PINK SANDSTONE	c2	
				171.40		12.00	PALE PINK SANDSTONE	c2	
						(2.00)	PINK SANDSTONE	c2	
				169.40		14.00	PINK SANDSTONE	c2	
						(2.00)	PINK SANDSTONE	c2	
				167.40		16.00	PINK SANDSTONE	c2	
						(2.00)	PINK SANDSTONE	c2	
				165.40		18.00	PINK SANDSTONE	c2	
						(2.00)	PINK SANDSTONE	c2	
				163.40		20.00	PINK SANDSTONE	c2	
						(2.00)	PINK SANDSTONE	c2	
				161.40		22.00	PINK SANDSTONE	c2	
						(2.00)	PINK SANDSTONE	c2	
				159.40		24.00	PINK SANDSTONE	c2	
						(2.00)	PINK SANDSTONE	c2	
				157.40		26.00	PINK SANDSTONE	c2	
						(2.00)	PINK/RED/PURPLE SANDSTONE	c2	
				155.40		28.00	RED/PURPLE SANDSTONE	c2	
						(2.00)	RED/WHITE SANDSTONE	c2	
				153.40		30.00	RED/PURPLE CLAY & SHALE	c3	
						(2.75)			
				148.65		34.75			
				148.40		35.00			

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)			Logged By	

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 78013	
Job No 418040	Date	Ground level (m) 184.10	Co-Ordinates () E 404,296.0 N 346,217.0		
Method/Plant Used Openhole					Sheet 1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				183.85		0.25	TOPSOIL	b3	
						(2.75)	CLAY	b2	
				181.10		3.00			
						(2.00)	PINK/WHITE SANDSTONE	c2	
				179.10		5.00			
						(2.00)	WHITE/PINK SANDSTONE	c2	
				177.10		7.00			
						(2.00)	PINK SANDSTONE	c2	
				175.10		9.00			
						(2.00)	PINK SANDSTONE	c2	
				173.10		11.00			
						(2.00)	PINK/DARK PINK SANDSTONE	c2	
				171.10		13.00			
						(2.00)	PALE PINK/WHITE SANDSTONE	c2	
				169.10		15.00			
						(2.00)	PINK SANDSTONE	c2	
				167.10		17.00			
						(2.00)	PINK SANDSTONE	c2	
				165.10		19.00			
						(2.00)	PINK SANDSTONE	c2	
				163.10		21.00			
						(2.00)	PINK/DARK PINK SANDSTONE	c2	
				161.10		23.00			
						(2.00)	PINK SANDSTONE	c2	
				159.10		25.00			
						(2.00)	PINK SANDSTONE	c2	
				157.10		27.00			
						(2.00)	PINK SANDSTONE	c2	
				155.10		29.00			
						(2.00)	MAUVE/PINK SANDSTONE	c2	
				153.10		31.00			
						(2.00)	DARK PINK SANDSTONE	c2	
				151.10		33.00			
							PINK/PURPLE/WHITE SANDSTONE	c2	
				149.35		34.75			
							RED SHALE & SILTSTONE	c3	
				148.91		35.19			

Boring Progress and Water Observations							GENERAL REMARKS	
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)		
							Drillers descriptions for WBB extension assessment	
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By	

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BOREHOLE LOG

Abbeydale
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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 78014	
Job No 418040	Date	Ground level (m) 177.07	Co-Ordinates () E 404,226.0 N 346,285.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				176.77		0.30	TOPSOIL	b3	
						(2.70)	LOOSE SAND	b1	
				174.07		3.00			
						(2.00)	PALE PINK SANDSTONE	c2	
				172.07		5.00			
						(2.00)	PALE PINK/WHITE SANDSTONE	c2	
				170.07		7.00			
						(2.00)	PALE PINK/WHITE SANDSTONE	c2	
				168.07		9.00			
						(2.00)	PALE PINK SANDSTONE	c2	
				166.07		11.00			
						(2.00)	PALE PINK/WHITE SANDSTONE	c2	
				164.07		13.00			
						(2.00)	PINK SANDSTONE	c2	
				162.07		15.00			
						(2.00)	PINK SANDSTONE	c2	
				160.07		17.00			
						(3.93)	PINK SANDSTONE	c2	
				156.14		20.93			
						(8.14)	ESTIMATED BASE OF GS	c2	
				148.00		29.07			
				147.07		30.00		c3	

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Drillers descriptions for WBB extension assessment		

All dimensions in metres Scale 1:250	Client Laver Leisure	Contractor (Ref. 55)	Logged By
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BOREHOLE LOG

Abbeydale
Building Environment Consultants

Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 78015	
Job No 418040	Date	Ground level (m) 177.25	Co-Ordinates () E 404,151.0 N 346,222.0		
Method/Plant Used Openhole					Sheet 1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
				176.95		0.30	TOPSOIL	b3	
				174.45		(2.50) 2.80	CLAY	b2	
						(2.20) 5.00	PINK SANDSTONE	c2	
				172.25		(2.00) 7.00	PINK SANDSTONE	c2	
				170.25		(2.00) 9.00	PINK SANDSTONE	c2	
				168.25		(2.00) 11.00	PINK/PALE PINK SANDSTONE	c2	
				166.25		(2.00) 13.00	PINK/WHITE SANDSTONE	c2	
				164.25		(2.00) 15.00	WHITE/DARK PINK SANDSTONE	c2	
				162.25		(2.00) 17.00	DARK PINK SANDSTONE	c2	
				160.25		(3.00) 20.00	DARK PINK SANDSTONE	c2	
				157.25		(2.00) 22.00	DARK PINK SANDSTONE	c2	
				155.25		(2.20) 24.20	DARK PINK SANDSTONE	c2	
				153.05		(12.02)	ESTIMATED BASE OF GS	c2	
				141.03		36.22		c3	
				140.25		37.00			

ABEC SHELL & AUGER 418040 GPJ ABEC TEMPLATE GDT 18/3/11

Boring Progress and Water Observations							GENERAL REMARKS Drillers descriptions for WBB extension assessment		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)			Logged By	

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 78016	
Job No 418040	Date	Ground level (m) 164.65	Co-Ordinates () E 404,093.0 N 346,170.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				164.35		0.30	TOPSOIL	b3	
						(3.30)	CLAY	b2	
				161.05		3.60			
						(1.90)	PINK SANDSTONE	c2	
				159.15		5.50			
						(2.00)	PINK SANDSTONE	c2	
				157.15		7.50			
						(2.00)	PINK SANDSTONE	c2	
				155.15		9.50			
						(2.00)	PINK SANDSTONE	c2	
				153.15		11.50			
						(2.00)	PINK SANDSTONE	c2	
				151.15		13.50			
						(2.00)	PINK SANDSTONE	c2	
				149.15		15.50			
						(2.00)	PINK SANDSTONE	c2	
				147.15		17.50			
						(3.00)	PINK SANDSTONE	c2	
				144.15		20.50			
						(3.80)	PINK SANDSTONE	c2	
				140.35		24.30			
				138.89		25.76	PINK SANDSTONE	c2	
						(8.89)	ESTIMATED BASE OF GS	c2	
				130.00		34.65			
				129.65		35.00		c1	

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

Abbeydale
Building Environment Consultants

Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 80020	
Job No 418040	Date	Ground level (m) 191.59	Co-Ordinates () E 404,339.0 N 346,299.0		
Method/Plant Used Openhole					Sheet 1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				191.09		0.50	TOPSOIL	b3	
				190.59		1.00	LOOSE SAND	b1	
				187.59		4.00	PINK SANDSTONE	c2	
				185.59		6.00	PINK SANDSTONE	c2	
				183.59		8.00	PALE PINK SANDSTONE	c2	
				181.59		10.00	PALE PINK/DARK PINK SANDSTONE	c2	
				179.59		12.00	WHITE/PALE PINK/DARK PINK SANDSTONE	c2	
				177.59		14.00	PALE PINK SANDSTONE	c2	
				175.59		16.00	DARK PINK SANDSTONE	c2	
				173.59		18.00	PINK/PURPLE SANDSTONE	c2	
				171.59		20.00	PALE PINK SANDSTONE	c2	
						23.00	PINK/DARK PINK SANDSTONE	c2	
				168.59		25.00	DARK PINK/PALE PINK SANDSTONE	c2	
				166.59		28.00	PALE PINK SANDSTONE	c2	
				163.59					

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Boring Progress and Water Observations							GENERAL REMARKS	
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)		
							Drillers descriptions for WBB extension assessment	
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By	

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 82001	
Job No 418040	Date	Ground level (m) 180.94	Co-Ordinates () E 404,130.0 N 346,330.0		
Method/Plant Used Openhole					Sheet 1 of 1

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	
				180.64		0.30	TOPSOIL	b3
				180.22		0.72 (3.92)	SOFT SAND DARK/PALE PINK SANDSTONE, SHALE BAND	b1 c2
				176.30		4.64 (3.05)	DARK PINK/MAUVE SANDST/SHALE BAND	c2
				173.25		7.69 (2.84)	PINK/PALE MAUVE/RED SANDSTONE	c2
				170.41		10.53 (3.05)	PALE PINK/CREAMY WHITE SANDSTONE	c2
				167.36		13.58 (2.95)	PALE PINK SANDSTONE	c2
				164.41		16.53 (3.15)	PALE PINK SANDSTONE	c2
				161.26		19.68 (3.05)	DARK PINK/PALE PINK SANDSTONE	c2
				158.21		22.73 (3.27)	PINK/DARK PINK SANDSTONE	c2
				154.94		26.00 (2.72)	DARK PINK/PALE PINK/BROWN SANDSTONE	c2
				153.10		27.84 (2.32)	DARK RED SANDSTONE	c2
				150.38		30.56 (2.08)	DARK RED/MAUVE SANDSTONE	c2
				148.06		32.88 (2.08)	PINK/PALE PINK/WHITE SANDSTONE	c2
				146.36		34.58 (2.08)	PALE RED/MAUVE SILTSTONE & SHALE	c3
				144.28		36.66		

Boring Progress and Water Observations							GENERAL REMARKS		 82001
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

Abbeydale
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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 82002	
Job No 418040	Date	Ground level (m) 172.20	Co-Ordinates () E 404,088.0 N 346,257.0		
Method/Plant Used Openhole					Sheet 1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				171.90		0.30	TOPSOIL	b3	
				170.40		1.80	CLAY	b2	
				168.20		(2.20) 4.00	PINK/DARK PINK SANDSTONE, CLAY BAND	c2	
				166.20		(2.00) 6.00	PINK/DARK PINK/CREAM SANDSTONE	c2	
				164.20		(2.00) 8.00	PINK/DARK PINK/CREAM SANDSTONE	c2	
				162.20		(2.00) 10.00	PINK/DARK PINK SANDSTONE	c2	
				160.20		(2.00) 12.00	DARK PINK/PINK SANDSTONE	c2	
				158.20		(2.00) 14.00	PINK/PALE PINK/OFFWHITE SANDSTONE	c2	
				156.20		(2.00) 16.00	PALE PINK/MAUVE SANDSTONE	c2	
				154.20		(2.00) 18.00	PALE MAUVE/PINK SANDSTONE	c2	
				152.20		(2.00) 20.00	PINK/PALE PINK SANDSTONE	c2	
				150.20		(2.00) 22.00	LOOSE BROWN SAND, PINK SANDSTONE	c2	
				148.20		(2.00) 24.00	PINK/PALE PINK SANDSTONE	c2	
				146.20		(2.00) 26.00	PALE/DARK PINK SANDSTONE	c2	
				143.20		(3.00) 29.00	ORANGE-RED/PINK/PURPLE SANDSTONE	c2	
				139.27		(3.93) 32.93	ORANGE-RED/PINK/PURPLE SANDSTONE	c2	
				137.20		(2.07) 35.00	DARK PINK/RED SANDSTONE	c2	
				136.22		35.98	SHALE	c3	

Boring Progress and Water Observations							GENERAL REMARKS		82002 
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 82003	
Job No 418040	Date	Ground level (m) 164.91	Co-Ordinates () E.404,052.0 N.346,191.0		
Method/Plant Used Openhole					Sheet 1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				164.61		0.30	TOPSOIL	b3	
						(2.55)	WHITE CLAY	b2	
				162.06		2.85	WHITE/PINK SANDSTONE	c2	
				160.26		4.65	DARK PINK/MAUVE SANDSTONE	c2	
				158.51		6.40	WHITE/PINK SANDSTONE	c2	
						(2.82)		c2	
				155.69		9.22	PINK/MAUVE MICACEOUS SANDST/SHALE	c2	
						(2.70)		c2	
				152.99		11.92	PALE PINK SANDSTONE	c2	
						(3.05)		c2	
				149.94		14.97	PALE PINK/DARK PINK/MAUVE SANDSTONE	c2	
						(2.03)		c2	
				147.91		17.00	PINK SANDSTONE	c2	
						(2.00)		c2	
				145.91		19.00	PINK/DARK PINK SANDSTONE	c2	
						(2.00)		c2	
				143.91		21.00	PINK/DARK PINK/REDSANDSTONE	c2	
						(2.00)		c2	
				141.91		23.00	PINK/DARK PINK SANDSTONE	c2	
						(2.00)		c2	
				139.91		25.00	PINK/DARK PINK SANDSTONE	c2	
						(2.00)		c2	
				137.91		27.00	PINK/DARK PINK SANDSTONE	c2	
						(2.00)		c2	
				135.91		29.00	PINK/DARK PINK/REDSANDSTONE	c2	
						(3.00)		c2	
				132.91		32.00	DARK PINK/RED SANDSTONE	c2	
						(2.10)		c2	
				131.41		33.50	DARK PINK/PALE PINK SANDSTONE	c2	
						(2.60)		c3	
				129.31		35.60	RED/MAUVE SHALE & SILTSTONE		
						(2.60)			
				126.71		38.20			

Boring Progress and Water Observations							GENERAL REMARKS		82003
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 82004	
Job No 418040	Date	Ground level (m) 163.81	Co-Ordinates () E 403,995.0 N 346,218.0		
Method/Plant Used Openhole					Sheet 1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				163.51		0.30	TOPSOIL	b3	
				161.47		(2.04) 2.34	CLAY & LOOSE SAND	b1	
						(2.21) 4.55	PINK/WHITE SANDSTONE	c2	
				159.26		(1.94) 6.49	PINK/PALE PINK SANDSTONE	c2	
				157.32		(2.00) 8.49	PINK SANDSTONE	c2	
				155.32		(2.00) 10.49	PINK SANDSTONE	c2	
				153.32		(2.00) 12.49	PINK/PALE PINK SANDSTONE	c2	
				151.32		(2.00) 14.49	PINK SANDSTONE	c2	
				149.32		(2.00) 16.49	PINK/PALE PINK SANDSTONE	c2	
				147.32		(2.00) 18.49	PINK/DARK PINK SANDSTONE	c2	
				145.32		(2.00) 20.49	PINK SANDSTONE	c2	
				143.32		(2.00) 22.49	PINK SANDSTONE	c2	
				141.32		(2.00) 24.49	PINK SANDSTONE	c2	
				139.32		(1.93) 26.42	PINK SANDSTONE	c2	
				137.39		(2.00) 28.42	PINK SANDSTONE	c2	
				135.39		(2.00) 30.42	PINK SANDSTONE	c2	
				133.39		(2.24) 32.66	DARK/PALE PINK SANDSTONE	c2	
				131.15		(2.39) 35.05	PINK/WHITE SANDSTONE	c2	
				128.76		(2.68) 37.73	MAUVE SHALE	c3	
				126.08					

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

Abbeydale
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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 82005	
Job No 418040	Date	Ground level (m) 169.70	Co-Ordinates () E 404,026.0 N 346,291.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				169.40		0.30	TOPSOIL	b3	
				167.30		(2.10) 2.40	SOFT SAND	b1	
						(2.28) 4.68	PINK/DARK PINK SANDSTONE	c2	
				165.02		(2.00) 6.68	PINK/PALE PINK SANDSTONE	c2	
				163.02		(2.00) 8.68	PINK SANDSTONE	c2	
				161.02			PINK SANDSTONE, THIN CLAY BANDS	c2	
				159.22		(2.00) 12.48	CREAM/PINK SANDSTONE	c2	
				157.22		(2.00) 14.48	PINK/DARK PINK SANDSTONE	c2	
				155.22		(2.40) 16.88	PINK/DARK PINK SANDSTONE	c2	
				152.82		(3.05) 19.93	PINK SANDSTONE	c2	
				149.77		(4.13) 24.06	PINK SANDSTONE	c2	
				145.64		(1.97) 26.03	DARK PINK/RED SANDSTONE	c2	
				143.67		(4.57) 30.60	DARK RED/PURPLE SANDSTONE	c2	
				139.10		(2.50) 33.10	DARK RED/PINK SANDSTONE	c2	
				136.60			PURPLE SHALE	c3	
				136.05		33.65			

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

Abbeydale
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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 82006	
Job No 418040	Date	Ground level (m) 174.68	Co-Ordinates () E 404,066.0 N 346,365.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				174.38		0.30	TOPSOIL	b3	
				172.18		(2.20) 2.50	SOFT SAND	b1	
						(2.08) 4.58	PALE PINK SANDSTONE, SHALE BANDS	c2	
				170.10		(2.00) 6.58	DARK MAUVE/PINK SANDSTONE	c2	
				168.10		(2.00) 8.58	PINK/ORANGE SANDSTONE	c2	
				166.10		(4.10) 12.68	DARK PINK/MAUVE SANDSTONE	c2	
				162.00			DARK/PALE PINK SANDSTONE	c2	
				160.18		16.23	DARK REDDISH/PURPLE SANDSTONE	c2	
				158.45		(2.00) 18.23	REDDISH PINK/PALE PINK SANDSTONE	c2	
				156.45		(2.00) 20.23	DARK RED/PINK SANDSTONE	c2	
				154.45		(3.57) 23.80	PALE PINK/DARK PINK SANDSTONE	c2	
				150.88		(2.50) 26.30	RED/PINK/WHITE SANDSTONE	c2	
				148.38		26.65	RED/WHITE SANDSTONE-MAUVE SHALE	c2	
				148.03		28.68	ESTIMATED BASE OF GS	c2	
				146.00				c1	
				145.68		29.00			

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
								Drillers descriptions for WBB extension assessment	
All dimensions in metres Scale 1:250			Client Laver Leisure			Contractor (Ref. 55)		Logged By	

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BOREHOLE LOG

Abbeydale
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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 82007	
Job No 418040	Date	Ground level (m) 178.22	Co-Ordinates () E 404,005.0 N 346,397.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			STRATA						
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	Geology	Instrument/Backfill
				177.92		0.30	TOPSOIL	b3	
				175.83		(2.09) 2.39	LOOSE SAND	b1	
						(2.32) 4.71	PINK FRACTURED SANDSTONE	c2	
				173.51		(1.94) 6.65	PINK SANDSTONE, PURPLE SHALE BANDS	c2	
				171.57		(2.00) 8.65	PINK SANDSTONE	c2	
				169.57		(2.00) 10.65	PINK/WHITE SANDSTONE	c2	
				167.57		(2.00) 12.65	PINK SANDSTONE	c2	
				165.57		(2.00) 14.65	PINK SANDSTONE	c2	
				163.57		(2.00) 16.65	PINK SANDSTONE	c2	
				161.57		(2.00) 18.40	PINK SANDSTONE	c2	
				159.82		(6.10) 24.50	PALE/DARK PINK SANDSTONE, FRACTURED	c2	
				153.72		(3.05) 27.55	DARK PINK SANDSTONE	c2	
				150.67		(2.00) 29.55	PINK SANDSTONE	c2	
				148.67		(2.19) 31.74	PINK/PALE PINK SANDSTONE	c2	
				146.48			PALE MAUVE SHALE	c3	
				145.67		32.55			

Boring Progress and Water Observations							GENERAL REMARKS		N ↑ 82007 ●
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 82008	
Job No 418040	Date	Ground level (m) 173.07	Co-Ordinates () E 403,964.0 N 346,326.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
172.77						0.30	TOPSOIL	b3	
170.86						(1.91) 2.21	LOOSE SAND	b1	
168.86						(2.00) 4.21	PINK/DARK PINK SANDSTONE	c2	
166.46						(2.40) 6.61	PINK/PALE MAUVE SANDST, SHALE BANDS	c2	
163.80						(2.66) 9.27	PINK/DARK PINK SANDSTONE	c2	
161.20						(2.60) 11.87	PINK/PALE MAUVE SANDST, SHALE BANDS	c2	
159.20						(2.00) 13.87	PINK/WHITE SANDSTONE	c2	
157.20						(2.00) 15.87	PINK/WHITE SANDSTONE	c2	
154.70						(2.50) 18.37	MAUVE/PINK SANDSTONE	c2	
152.57						(2.13) 20.50	MAUVE SANDSTONE	c2	
150.57						(2.00) 22.50	PINK/MAUVE SANDSTONE	c2	
148.57						(2.00) 24.50	DARK PINK SANDSTONE	c2	
146.57						(2.00) 26.50	PINK/DARK PINK SANDSTONE	c2	
145.37						27.70	PINK/DARK PINK SANDSTONE	c2	
						(7.62)	DARK RED SANDSTONE	c2	
137.75						35.32			
137.29						35.78	SHALE	c3	

Boring Progress and Water Observations							GENERAL REMARKS		82008
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure			Contractor (Ref. 55)		Logged By	

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BOREHOLE LOG

Abbeydale
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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 82009	
Job No 418040	Date	Ground level (m) 165.60	Co-Ordinates () E.403,922.0 N.346,259.0		
Method/Plant Used Openhole					Sheet 1 of 1

SAMPLES & TESTS			STRATA						
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	Geology	Instrument/Backfill
				165.30		0.30	TOPSOIL	b3	
				162.95		(2.35) 2.65	CLAY	b2	
				160.94		(2.01) 4.66	WHITE/PALE PINK SANDSTONE	c2	
				158.82		(2.12) 6.78	PINK SANDSTONE,PINK SILTSTONE & SHAL	c2	
				156.82		(2.00) 8.78	PINK/MAUVE SANDSTONE	c2	
				154.65		(2.17) 10.95	PINK SANDSTONE	c2	
				152.65		(2.00) 12.95	PINK SANDSTONE	c2	
				150.27		(2.38) 15.33	PINK/WHITE SANDSTONE	c2	
				148.04		(2.23) 17.56	PALE PINK SANDSTONE	c2	
				146.04		(2.00) 19.56	WHITE/PINK SANDSTONE	c2	
				143.99		(2.05) 21.61	PALE PINK SANDSTONE	c2	
				141.94		(2.05) 23.66	PINK SANDSTONE	c2	
				139.94		(2.00) 25.66	PINK SANDSTONE	c2	
				137.89		(2.05) 27.71	PINK SANDSTONE	c2	
				135.84		(2.05) 29.76	PINK SANDSTONE	c2	
				133.84		(2.00) 31.76	PALE PINK SANDSTONE	c2	
				131.84		(2.00) 33.76	PINK SANDSTONE	c2	
				129.20		(2.64) 36.40	PINK/WHITE SANDSTONE	c2	
				128.85		36.75	PINK SHALE	c3	

Boring Progress and Water Observations							GENERAL REMARKS		N ↑
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
								Drillers descriptions for WBB extension assessment	82009
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 82010	
Job No 418040	Date	Ground level (m) 160.37	Co-Ordinates () E 403,899.0 N 346,212.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				160.07		0.30	TOPSOIL	b3	
						(5.50)	CLAY & RED SHALE	b2	
				154.57		5.80			
						(1.88)	WHITE/MAUVE SANDSTONE	c2	
				152.69		7.68			
						(2.00)	MAUVE/CREAM SANDSTONE	c2	
				150.69		9.68			
						(2.00)	MAUVE/CREAM SANDSTONE, FRACTURED	c2	
				148.69		11.68			
						(2.24)	MAUVE/WHITE SANDSTONE, FRACTURED	c2	
				146.45		13.92			
						(2.00)	PINK/WHITE SANDSTONE	c2	
				144.45		15.92			
						(5.08)	PINK/WHITE SANDSTONE	c2	
				139.37		21.00			
						(2.00)	PINK SANDSTONE	c2	
				137.37		23.00			
						(2.00)	PINK SANDSTONE	c2	
				135.37		25.00			
						(2.60)	PINK SANDSTONE	c2	
				132.77		27.60			
						(6.55)	MAUVE/PINK/RED SHALE & SILTSTONE	c3	
				126.22		34.15			

Boring Progress and Water Observations							GENERAL REMARKS		N
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Drillers descriptions for WBB extension assessment	82010	
All dimensions in metres Scale 1:250							Client Laver Leisure	Contractor (Ref. 55)	Logged By

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 82011	
Job No 418040	Date	Ground level (m) 175.46	Co-Ordinates () E.403,942.0 N.346,433.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				175.16		0.30	TOPSOIL	b3	
						(2.99)	SOFT SAND	b1	
				172.17		3.29			
						(2.80)	PALE PINK/PINK, FRACTURED SANDSTONE	c2	
				169.37		6.09			
						(3.05)	PALE PINK/PINK, FRACTURED SANDSTONE	c2	
				166.32		9.14			
						(3.05)	PINK SANDSTONE	c2	
				163.27		12.19			
						(2.58)	PINK/PALE PINK SANDSTONE	c2	
				160.69		14.77			
						(2.00)	PINK SANDSTONE	c2	
				158.69		16.77			
						(2.00)	PINK/DARK PINK SANDSTONE	c2	
				156.69		18.77			
						(2.00)	PINK SANDSTONE	c2	
				154.69		20.77			
						(2.00)	PINK/PALE PINK SANDSTONE	c2	
				152.69		22.77			
						(7.69)	ESTIMATED BASE OF GS	c2	
				145.00		30.46			
				144.46		31.00		c3	

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 82012	
Job No 418040	Date	Ground level (m) 169.16	Co-Ordinates () E 403,899.0 N 346,361.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				168.86		0.30	TOPSOIL	b3	
				166.70		(2.16) 2.46	CLAY & LOOSE SAND	b1	
						(2.78)	DARK PINK/PINK/MAUVE SANDSTONE	c2	
				163.92		5.24	PINK/PALE PINK SANDSTONE	c2	
				161.92		(2.00) 7.24	PALE PINK SANDSTONE	c2	
				159.91		(2.01) 9.25	PALE PINK SANDSTONE	c2	
				157.91		(2.00) 11.25	PALE PINK SANDSTONE	c2	
				155.91		(2.00) 13.25	PINK/PALE PINK SANDSTONE	c2	
				153.91		(2.00) 15.25	PALE PINK SANDSTONE	c2	
						(2.55)	PALE PINK/PINK SANDSTONE	c2	
				151.36		17.80	PINK/PALE PINK SANDSTONE	c2	
				149.36		(2.00) 19.80	PALE PINK/PINK SANDSTONE	c2	
				147.36		(2.00) 21.80	PINK/PALE PINK SANDSTONE	c2	
				145.36		(2.00) 23.80	PALE PINK SANDSTONE	c2	
						(3.75)	PALE PINK FRACTURED SANDSTONE	c2	
				141.61		27.55	PINK/DARK PINK SANDSTONE	c2	
				138.57		(3.04) 30.59	PINK SANDSTONE	c2	
				136.06		(2.51) 33.10	RED/MAUVE SHALE	c3	
				135.81		33.35			

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure			Contractor (Ref. 55)		Logged By	

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 82013	
Job No 418040	Date	Ground level (m) 165.05	Co-Ordinates () E.403,862.0 N.346,291.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			STRATA						
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	Geology	Instrument/Backfill
				164.75		0.30	TOPSOIL	b3	
				162.30		(2.45) 2.75	CLAY & LOOSE SAND	b1	
				160.60		4.45	PINK/PALE PINK SANDSTONE	c2	
				158.60		(2.00) 6.45	PINK/PALE PINK SANDSTONE	c2	
				156.60		(2.00) 8.45	PINK/PALE MAUVE SANDSTONE	c2	
				154.60		(2.00) 10.45	PALE MAUVE/PINK SANDSTONE	c2	
				152.50		(2.10) 12.55	PALE MAUVE/PALE PINK SANDSTONE	c2	
				150.50		(2.00) 14.55	PINK/PALE PINK SANDSTONE	c2	
				148.50		(2.00) 16.55	PINK/WHITE SANDSTONE	c2	
				146.50		(2.00) 18.55	WHITE/PINK SANDSTONE	c2	
				144.50		(2.00) 20.55	PALE PINK SANDSTONE	c2	
				142.50		(2.00) 22.55	PINK SANDSTONE	c2	
				140.50		(2.00) 24.55	PINK SANDSTONE	c2	
				138.50		(2.00) 26.55	PINK SANDSTONE	c2	
				136.50		(2.00) 28.55	PINK/PALE PINK SANDSTONE	c2	
				134.50		(2.00) 30.55	PINK/DARK PINK SANDSTONE	c2	
				132.55		(1.95) 32.50	PINK SANDSTONE WITH RED SPOTS	c2	
				129.81		(2.74) 35.24	MAUVE SHALE & SILTSTONE	c3	

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Boring Progress and Water Observations							GENERAL REMARKS	
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)		
							Drillers descriptions for WBB extension assessment	
All dimensions in metres Scale 1:250		Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 82015	
Job No 418040	Date	Ground level (m) 179.18	Co-Ordinates () E 403,881.0 N 346,465.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				178.88		0.30	TOPSOIL	b3	
				177.87		1.31	SOFT SAND	b1	
						(3.69)	PALE PINK, FRACTURED SANDSTONE	c2	
				174.18		5.00	PALE PINK/PINK SANDSTONE	c2	
						(5.00)			
				169.18		10.00	PINK/PALE PINK SANDSTONE	c2	
				167.18		(2.00) 12.00	PINK/DARK PINK SANDSTONE	c2	
				165.18		(2.00) 14.00	PINK SANDSTONE	c2	
				163.18		(2.00) 16.00	PINK/DARK PINK SANDSTONE	c2	
				161.18		(2.00) 18.00	PINK/PALE PINK SANDSTONE	c2	
						(3.00)	PINK/PALE PINK SANDSTONE	c2	
				158.18		21.00	PINK/PALE PINK SANDSTONE	c2	
						(3.00)	PINK/PALE PINK SANDSTONE	c2	
				155.18		24.00	PINK/PALE PINK SANDSTONE	c2	
				153.18		(2.00) 26.00	PINK/DARK PINK SANDSTONE	c2	
				151.18		(2.00) 28.00	PINK SANDSTONE	c2	
				149.18		(2.00) 30.00	PINK/PALE PINK SANDSTONE	c2	
				147.18		(2.00) 32.00	PINK/PALE PINK SANDSTONE	c2	
				145.18		(2.00) 34.00	PINK/PALE PINK SANDSTONE	c2	
				145.07		34.11	PINK/MAUVE SHALE	c3	

Boring Progress and Water Observations							GENERAL REMARKS		82015
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 92016	
Job No 418040	Date	Ground level (m) 177.40	Co-Ordinates () E 404,207.0 N 346,090.0		
Method/Plant Used Openhole				Sheet 1 of 2	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
				177.10		0.30	TOPSOIL	b3	
						(11.90)	BROWN/PURPLE MUDSTONE	c1	
				165.20		12.20			
				163.40		14.00	WHITE PINK PURPLE SANDST+CLAY BANDS	c2	
				161.40		(2.00) 16.00	WHITE PINK PURPLE SANDST+CLAY BAND	c2	
				159.40		(2.00) 18.00	WHITE LIGHT PINK SANDSTONE	c2	
				157.40		(2.00) 20.00	WHITE PINK SANDSTONE	c2	
				155.40		(2.00) 22.00	DARK PINK PURPLE SANDST+SAND BAND	c2	
				153.40		(2.00) 24.00	PURPLE WHITE SANDSTONE	c2	
				151.40		(2.00) 26.00	WHITE SANDSTONE	c2	
				149.40		(2.00) 28.00	WHITE-LIGHT PURPLE SANDSTONE	c2	
				147.40		(2.00) 30.00	LIGHT PURPLE SANDSTONE	c2	
				145.40		(2.00) 32.00	LIGHT MID PURPLE STONE	c2	
				143.40		(2.00) 34.00	PURPLE SANDSTONE	c2	
				141.40		(2.00) 36.00	PURPLE SANDSTONE	c2	
				139.40		(2.00) 38.00	PURPLE-WHITE SANDSTONE	c2	
				137.40		(2.00) 40.00	WHITE PINK PURPLE SANDSTONE	c2	

Boring Progress and Water Observations							GENERAL REMARKS		92016
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Drillers descriptions for WBB extension assessment		

All dimensions in metres Scale 1:250	Client Laver Leisure	Contractor (Ref. 55)	Logged By
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ABEC SHELL & AUGER 418040.GPJ ABEC TEMPLATE.GDT 18/3/11

Boring Progress and Water Observations							GENERAL REMARKS	
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Time (hr)		
							Drillers descriptions for WBB extension assessment	92016
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)			Logged By

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BOREHOLE LOG

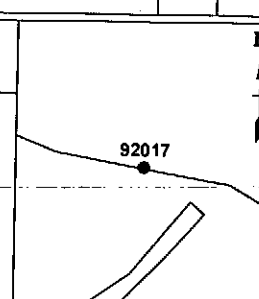
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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 92017	
Job No 418040	Date	Ground level (m) 181.19	Co-Ordinates () E.404,206.0 N.346,022.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			STRATA				
Depth	Type No	Test Result	Water	Reduced Level	Legend (Thickness)	DESCRIPTION	Geology
						TOPSOIL+CLAY+MUDSTONE	
					(20.58)		b3
				160.61	20.58	GREY-MAUVE-PURPLE SANDSTONE	c2
				157.74	(2.87) 23.45	WHITE-PALE PINK SANDSTONE	c2
				155.74	(2.00) 25.45	PINK-DARK PINK-PURPLE SANDSTONE	c2
				153.74	(2.00) 27.45	PINK-PURPLE-PALE PINK SANDSTONE	c2
				151.74	(2.00) 29.45	WHITE-PALE PINK SANDSTONE	c2
				149.74	(2.00) 31.45	PALE PINK-PALE MAUVE SANDSTONE	c2
				147.74	(2.00) 33.45	PALE MAUVE SANDSTONE	c2
				146.27	34.92	PALE PINK-WHITE SANDSTONE	c2
				143.23	(3.04) 37.96		

Boring Progress and Water Observations						
Date	Depth	Water Depth	Casing Depth	Dia. mm	Chiselling Depth	Time (hr)

GENERAL REMARKS
Drillers descriptions for WBB extension assessment



All dimensions in metres Scale 1:250	Client Laver Leisure	Contractor (Ref. 55)	Logged By
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BOREHOLE LOG

Abbeydale
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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 92018	
Job No 418040	Date	Ground level (m) 176.70	Co-Ordinates () E 404,107.0 N 346,300.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA			Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	
				176.40		0.30	TOPSOIL	b3
						(2.92)	CLAY+SOFT SAND	b1
				173.48		3.22		
				171.70		5.00	DARK-LIGHT PURPLE SANDSTONE	c2
				169.70		(2.00) 7.00	WHITE PINK PURPLE SANDST+CLAY BANDS	c2
				167.70		(2.00) 9.00	DARK PURPLE-PINK PURPLE SANDSTONE	c2
				165.70		(2.00) 11.00	DARK-PALE PURPLE SANDST+MUDST SEAM	c2
				163.70		(2.00) 13.00	LIGHT PINK BEIGE SANDSTONE+CLAY LENS	c2
				161.70		(2.00) 15.00	PINK BEIGE-PALE PURPLE SANDSTONE	c2
				159.70		(2.00) 17.00	LIGHT PURPLE SANDSTONE	c2
				157.70		(2.00) 19.00	LIGHT-DARK PURPLE SANDSTONE	c2
				155.70		(2.00) 21.00	DARK-LIGHT PURPLE SANDSTONE	c2
				153.70		(2.00) 23.00	LIGHT-MID PURPLE SANDSTONE	c2
				151.70		(2.00) 25.00	MID PURPLE SANDSTONE	c2
						(3.94)	PALE-DARK PURPLE SANDSTONE	c2
				147.76		28.94	ESTIMATED BASE OF GS	
						(6.76)		c2
				141.00		35.70		c3
				140.70		36.00		

Boring Progress and Water Observations							GENERAL REMARKS		92018
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

Abbeydale
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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 92019	
Job No 418040	Date	Ground level (m) 169.20	Co-Ordinates () E.404,128.0 N.346,200.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				168.90		0.30	TOPSOIL	b3	
				167.53		1.67	BROWN CLAY	b2	
				165.53		(2.00) 3.67	CREAM-PALE YELLOW-PINK-MAUVE SST+CL	c2	
				163.53		(2.00) 5.67	PURPLE-DARK PINK SANDSTONE	c2	
				161.53		(2.00) 7.67	PALE MAUVE SANDSTONE	c2	
				159.53		(2.00) 9.67	PALE PINK SANDSTONE	c2	
				157.53		(2.00) 11.67	PALE PINK-CREAM SANDSTONE	c2	
				155.53		(2.00) 13.67	PALE PINK-WHITE SANDST+CLAY PARTINGS	c2	
				153.53		(2.00) 15.67	WHITE-PALE PINK SANDSTONE	c2	
				151.53		(2.00) 17.67	PALE PINK SANDSTONE	c2	
				149.53		(2.00) 19.67	PALE PINK-PURPLE-PINK SANDSTONE	c2	
				147.53		(2.00) 21.67	PINK-DARK MAUVE SANDSTONE	c2	
				145.53		(2.00) 23.67	PINK SANDSTONE+LOOSE SAND SEAM	c2	
				143.53		(2.00) 25.67	PINK-PALE PINK SANDSTONE+LOOSE SAND	c2	
				141.53		(2.00) 27.67	PINK FRACTURED SANDSTONE	c2	
				139.53		(2.00) 29.67	PINK SANDSTONE	c2	
				137.53		(2.00) 31.67	PALE PINK-MAUVE SANDSTONE	c2	
				135.53		(2.00) 33.67	PINK SANDSTONE	c2	
				134.01		35.19	PINK-MAUVE-PURPLE SANDST+SHALE FRAGS	c2	
				133.90		35.30	PURPLE SHALE	c3	

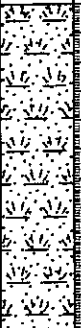
Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
								Drillers descriptions for WBB extension assessment	
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 92020	
Job No 418040	Date	Ground level (m) 177.38	Co-Ordinates () E 404,103.0 N 346,097.0		
Method/Plant Used Openhole					Sheet 1 of 2

SAMPLES & TESTS			Water	STRATA			Geology	Instrument/Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)		
						(21.40)		
				155.98		21.40		
				153.38		(2.60) 24.00	c2	
				151.38		(2.00) 26.00	c2	
				149.38		(2.00) 28.00	c2	
				147.38		(2.00) 30.00	c2	
				145.38		(2.00) 32.00	c2	
				143.38		(2.00) 34.00	c2	
				141.38		(2.00) 36.00	c2	
				139.38		(2.00) 38.00	c2	
				137.38		(2.00) 40.00	c2	

Boring Progress and Water Observations							GENERAL REMARKS Drillers descriptions for WBB extension assessment		92020 
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
All dimensions in metres Scale 1:250			Client Laver Leisure			Contractor (Ref. 55)		Logged By	

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BOREHOLE LOG

Abbeydale
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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 92020	
Job No 418040	Date	Ground level (m) 177.38	Co-Ordinates () E.404,103.0 N.346,097.0		
Method/Plant Used Openhole				Sheet 2 of 2	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				135.38		(2.00) 42.00	WHITE PALE PINK SANDSTONE	c2	
				133.38		(2.00) 44.00	PALE PINK GREY-YELLOW SANDSTONE	c2	
				131.38		(2.00) 46.00	YELLOW-PINK YELLOWSANDSTONE	c2	
				130.44		46.94	LOOSE SAND (CORE LOST)	b1	
				127.39		(3.05) 49.99	PINK FRACTURED SANDSTONE	c2	

Boring Progress and Water Observations							GENERAL REMARKS	 92020
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)		
							Drillers descriptions for WBB extension assessment	

All dimensions in metres Scale 1:250	Client Laver Leisure	Contractor (Ref. 55)	Logged By
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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 92021	
Job No 418040	Date	Ground level (m) 180.83	Co-Ordinates () E 404,101.0 N 345,998.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA			Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)		
						(6.00)		
				174.83		6.00 (25.00) 31.00	b2 c1	
				149.83				

Boring Progress and Water Observations							GENERAL REMARKS		N  92021
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Drillers descriptions for WBB extension assessment		

All dimensions in metres Scale 1:250	Client Laver Leisure	Contractor (Ref. 55)	Logged By
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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 92022	
Job No 418040	Date	Ground level (m) 179.71	Co-Ordinates () E 404,000.0 N 346,415.0		
Method/Plant Used Openhole					Sheet 1 of 1

SAMPLES & TESTS			STRATA					
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	Geology
				179.41		0.30	TOPSOIL	b3
				178.11		1.60	SANDY CLAY	b2
				176.11		(2.00) 3.60	PALE PINK-DARK PURPLE SANDST+SHALE	c2
				174.11		(2.00) 5.60	DARK PURPLE-PALE MAUVE SST+SILTST	c2
						(2.00) 7.60	PALE MAUVE SANDSTONE	c2
				172.11		(2.00) 9.60	MAUVE SANDSTONE	c2
				170.11		(2.00) 11.60	PALE MAUVE SANDSTONE	c2
				168.11		(2.00) 13.60	PALE MAUVE SANDSTONE	c2
				166.11		(2.00) 15.60	PALE MAUVE SANDSTONE	c2
				164.11		(2.00) 17.60	PALE PINK SANDSTONE	c2
				162.11		(2.00) 19.60	PINK SANDSTONE	c2
				160.11		(2.00) 21.60	PINK-DARK PINK SANDSTONE	c2
				158.11		(2.05) 23.65	PINK-DARK PINK SANDSTONE	c2
				156.06		(2.19) 25.84	LOOSE SAND+CLAY	b1
				153.87		(8.87)	ESTIMATED BASE OF GS	c2
				145.00		34.71		c3
				144.71		35.00		

Boring Progress and Water Observations							GENERAL REMARKS	
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Drillers descriptions for WBB extension assessment 92022	
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By	

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 92023	
Job No 418040	Date	Ground level (m) 171.40	Co-Ordinates () E 404,000.0 N 346,300.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				171.10		0.30	TOPSOIL-ORANGE CLAY+LOOSE SAND	b3	
						(2.90)	ORANGE CLAY & LOOSE SAND	b1	
				168.20		3.20			
						(2.00)	PINK GREY SANDST/SILTST+SHALE	c2	
				166.20		5.20			
						(2.00)	MAUVE PINK GREY SILTST+SHALE	c2	
				164.20		7.20			
						(2.00)	PALE MAUVE SILTSTONE/SANDSTONE	c2	
				162.20		9.20			
						(2.00)	PALE PINK SILTST-PINK WHITE SANDST	c2	
				160.20		11.20			
						(2.00)	OFF WHITE PINK SANDSTONE	c2	
				158.20		13.20			
						(2.00)	PALE PINK-DARK PURPLE SANDSTONE	c2	
				156.20		15.20			
						(2.00)	PALE MAUVE-MAUVE SANDSTONE	c2	
				154.20		17.20			
						(2.00)	MAUVE-DARK MAUVE SANDSTONE	c2	
				152.20		19.20			
						(2.80)	MAUVE SANDSTONE	c2	
				149.40		22.00			
							ORANGE PINK SANDSTONE	c2	
				147.56		23.84			
						(9.56)	ESTIMATED BASE OF GS	c2	
				138.00		33.40		c3	
				137.40		34.00			

Boring Progress and Water Observations							GENERAL REMARKS Drillers descriptions for WBB extension assessment		 92023
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 92024	
Job No 418040	Date	Ground level (m) 162.52	Co-Ordinates () E.404,003.0 N.346,202.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				162.22		0.30	TOPSOIL	b3	
						(2.90)	RED/BROWN CLAY	b2	
				159.32		3.20			
						(2.00)	PALE PINK-PINK SANDST+SHALE PARTINGS	c2	
				157.32		5.20			
						(2.00)	PALE PINK MAUVE JOINTED SST+CL SEAM	c2	
				155.32		7.20			
						(2.00)	PALE PINK MAUVE SANDSTONE	c2	
				153.32		9.20			
						(2.00)	PALE MAUVE-YELLOW CREAM SST+SHALE	c2	
				151.32		11.20			
						(2.00)	PINK SANDSTONE	c2	
				149.32		13.20			
						(2.00)	PINK SANDSTONE	c2	
				147.32		15.20			
						(2.00)	PALE PINK SANDSTONE	c2	
				145.32		17.20			
						(2.00)	PALE PINK SANDSTONE	c2	
				143.32		19.20			
						(2.00)	PALE PINK-CREAM SANDSTONE	c2	
				141.32		21.20			
						(2.00)	PALE PINK JOINTED SST+LOOSE SAND	b1	
				139.32		23.20			
							PALE PINK SANDSTONE	c2	
				138.02		24.50			
							ESTIMATED BASE OF GS		
						(10.55)		c2	
				127.47		35.05			
				126.52		36.00		c3	

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Boring Progress and Water Observations							GENERAL REMARKS	
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)		
							Drillers descriptions for WBB extension assessment	
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By	

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 92025	
Job No 418040	Date	Ground level (m) 170.61	Co-Ordinates () E 404,004.0 N 346,095.0		
Method/Plant Used Openhole				Sheet 1 of 2	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						(19.77)	CLAY-MUDSTONE-PURPLE SILTY MUDSTONE	c1	
				150.84		19.77	WHITE PINK SANDSTONE	c2	
				148.61		(2.23) 22.00	WHITE PINK MICACEOUS SANDSTONE	c2	
				146.61		(2.00) 24.00	WHITE PINK MICACEOUS SST+SILT PARTS	c2	
				144.61		(2.00) 26.00	WHITE PINK PURPLE MICACIOUS SANDST	c2	
				142.61		(2.00) 28.00	PALE PURPLE MICACEOUS-WHITE SANDST	c2	
				140.61		(2.00) 30.00	WHITE PALE PINK SANDST+SILT BANDS	c2	
				138.61		(2.00) 32.00	WHITE PALE PINK SANDSTONE	c2	
				136.61		(2.00) 34.00	WHITE PALE PINK SANDSTONE	c2	
				134.61		(2.00) 36.00	WHITE PALE PINK SANDSTONE	c2	
				132.61		(2.00) 38.00	WHITE PALE PINK-GREY PURPLE SANDST	c2	
				130.61		(2.00) 40.00			

Boring Progress and Water Observations							GENERAL REMARKS		92025
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)	Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure			Contractor (Ref. 55)		Logged By	

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 92025	
Job No 418040	Date	Ground level (m) 170.61	Co-Ordinates () E.404,004.0 N.346,095.0		
Method/Plant Used Openhole					Sheet 2 of 2

SAMPLES & TESTS			STRATA						
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	Geology	Instrument/Backfill
				128.61		(2.00) 42.00	GREY SANDSTONE	c2	
				126.61		(2.00) 44.00	GREY SPECKLED SANDSTONE	c2	
				124.61		(2.00) 46.00	GREY SPECKLED-PURPLE SANDSTONE	c2	
				122.61		(2.00) 48.00	PINK PURPLE MICACEOUS FRACTURED SST	c2	
				120.61		(2.00) 50.00	PINK PURPLE MICACEOUS FRACTURED SST	c2	
				119.27		51.34	PINK PURPLE MICACEOUS SANDSTONE	c2	
				119.12		51.49	PURPLE CLAY	b2	

ABEC SHELL & AUGER 418040.GPJ ABEC TEMPLATE GDT 18/3/11

Boring Progress and Water Observations							GENERAL REMARKS	N ↑
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)		
							Drillers descriptions for WBB extension assessment	92025
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By	

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 92027	
Job No 418040	Date	Ground level (m) 169.17	Co-Ordinates () E 403,900.0 N 346,300.0		
Method/Plant Used Openhole					Sheet 1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				168.87		0.30	TOPSOIL	b3	
				166.33		(2.54) 2.84	BROWN CLAY & SILTSTONE	b2	
				164.30		(2.03) 4.87	WHITE-DARK PINK SANDSTONE	c2	
				162.30		(2.00) 6.87	PALE PINK MAUVE SANDSTONE	c2	
				160.30		(2.00) 8.87	PALE MAUVE PINK SANDSTONE+SHALE SEAM	c2	
				158.30		(2.00) 10.87	MAUVE SANDSTONE	c2	
				156.30		(2.00) 12.87	MAUVE PALE PINK SST+SHALE PARTINGS	c2	
				154.30		(2.00) 14.87	PINK-DARK PINK SANDSTONE	c2	
				152.30		(2.00) 16.87	PINK-PALE PINK-WHITE JOINTED SANDST	c2	
				150.30		(2.00) 18.87	PALE PINK-MAUVE JOINTED SANDSTONE	c2	
				148.30		(2.00) 20.87	PINK-DARK PINK SANDSTONE	c2	
				146.30		(2.00) 22.87	PINK SANDSTONE+LOOSE SAND	c2	
				144.30		(2.00) 24.87	PALE PINK-PINK SANDSTONE	c2	
				142.30		(2.00) 26.87	PINK SANDSTONE	c2	
				140.30		(2.00) 28.87	PINK-PALE MAUVE SANDSTONE	c2	
				138.30		(2.00) 30.87	PALE PINK SANDSTONE	c2	
				136.30		(2.00) 32.87	PALE PINK-PINK SANDSTONE	c2	
				134.30		(2.00) 34.87	PINK SANDSTONE	c2	
				132.30		(2.00) 36.87	PINK PALE MAUVE SANDSTONE	c2	
				130.44		38.73	MAUVE PINK WHITE SANDSTONE	c2	
				129.32		39.85	PURPLE SHALE	c3	

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Time (hr)	Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

Abbeydale
Building Environment Consultants

Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 92028	
Job No 418040	Date	Ground level (m) 158.86	Co-Ordinates () E.403,903.0 N.346,202.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
				158.56		0.30	TOPSOIL	b3	
						(5.55)	ORANGE/GREY CLAY & MUDSTONE	c1	
				153.01		5.85			
						(2.15)	PINK PALE PURPLE FRACTURED SANDST	c2	
				150.86		8.00			
						(2.00)	PALE PINK WHITE SANDSTONE	c2	
				148.86		10.00			
						(2.00)	PALE PINK-PURPLE-PINK WHITE SANDST	c2	
				146.86		12.00			
						(2.00)	WHITE SANDSTONE	c2	
				144.86		14.00			
						(2.00)	WHITE-PALE PINK SANDSTONE	c2	
				142.86		16.00			
						(2.00)	PALE PINK WHITE SANDSTONE	c2	
				140.86		18.00			
						(2.00)	PALE PINK PURPLE MICACEOUS SANDST	c2	
				138.86		20.00			
						(2.00)	PALE PINK WHITE SANDSTONE	c2	
				136.86		22.00			
						(2.00)	GREY WHITE SPECKLED SANDSTONE	c2	
				134.86		24.00			
						(2.70)	GREY PINK SANDSTONE	c2	
				132.16		26.70			
						(2.00)	PURPLE MUDSTONE-SANDST-CLAY BANDS	c2	
				130.16		28.70			
						(2.00)	PALE PURPLE GREY SILTY SST+CL BANDS	c2	
				128.16		30.70			
						(2.00)	PALE PURPLE GREY SILTY-WHITE SST	c2	
				126.16		32.70			
							PURPLE SILTY MICACEOUS MUDSTONE	c1	
				124.94		33.92			

Boring Progress and Water Observations							GENERAL REMARKS		N ↑
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Drillers descriptions for WBB extension assessment	92028	
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

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Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 92030	
Job No 418040	Date	Ground level (m) 175.60	Co-Ordinates () E 404,376.0 N 345,996.0		
Method/Plant Used Openhole					Sheet 1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				175.35		0.25	TOPSOIL	b3	
						(3.08)	CLAY	b2	
				172.27		3.33			
						(2.00)	DARK PINK MAUVE PURPLE MICACEOUS SST	c2	
				170.27		5.33			
						(2.00)	PINK OFF WHITE SANDSTONE	c2	
				168.27		7.33			
						(2.00)	PINK-DARK PINK FRACTURED SANDSTONE	c2	
				166.27		9.33			
						(2.00)	PINK-PALE PINK SANDSTONE	c2	
				164.27		11.33			
						(2.00)	PINK CREAM SANDSTONE	c2	
				162.27		13.33			
						(2.00)	PINK SANDSTONE	c2	
				160.27		15.33			
						(2.00)	MAUVE MAROON MICACEOUS SANDSTONE	c2	
				158.27		17.33			
						(2.00)	PINK MAUVE FRACTURED SANDSTONE	c2	
				156.27		19.33			
						(2.00)	MAROON PURPLE SANDSTONE+LOOSE SAND	c2	
				154.27		21.33			
						(2.00)	PINK MAUVE SANDSTONE	c2	
				152.27		23.33			
						(2.00)	PINK MAUVE SANDSTONE	c2	
				150.27		25.33			
						(2.00)	MAUVE PINK SANDSTONE	c2	
				148.27		27.33			
						(2.00)	MAUVE PINK FRACTURED SANDSTONE	c2	
				146.27		29.33			
						(2.00)	PURPLE MAROON SANDSTONE+LOOSE SAND	c2	
				144.27		31.33			
						(2.00)	DARK PINK MAROON SANDSTONE	c2	
				142.27		33.33			

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure			Contractor (Ref. 55)			Logged By

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BOREHOLE LOG

Abbeydale
Building Environment Consultants

Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 92032	
Job No 418040	Date	Ground level (m) 170.38	Co-Ordinates () E.403,914.0 N.346,364.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				170.08		0.30	TOPSOIL	b3	
						(3.39)	LOOSE SAND	b1	
				166.69		3.69			
				164.88		5.50	PURPLE SILTY FRACTURED SANDSTONE	c2	
				162.88		(2.00) 7.50	PALE GREY-WHITE-PALE PURPLE SANDST	c2	
				160.88		(2.00) 9.50	PALE PURPLE GREY SANDSTONE	c2	
				158.88		(2.00) 11.50	PALE GREY-PURPLE SANDSTONE	c2	
				156.88		(2.00) 13.50	PALE PURPLE SANDSTONE	c2	
				154.88		(2.00) 15.50	PURPLE SANDSTONE	c2	
				152.88		(2.00) 17.50	PURPLE-PALE GREY SANDSTONE	c2	
				150.88		(2.00) 19.50	PALE GREY SANDSTONE	c2	
				148.88		(2.00) 21.50	PALE GREY-PALE PINK SANDSTONE	c2	
				146.88		(2.00) 23.50	PURPLE SANDSTONE	c2	
				144.62		(2.26) 25.76	PINK-PALE PINK SANDSTONE	c2	
				142.97		27.41	PINK SANDSTONE	c2	
						(5.97)	ESTIMATED BASE OF GS	c2	
				137.00		33.38		c3	
				136.38		34.00			

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Time (hr)			
								Drillers descriptions for WBB extension assessment	
All dimensions in metres Scale 1:250			Client Laver Leisure		Contractor (Ref. 55)		Logged By		

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BOREHOLE LOG

Abbeydale
Building Environment Consultants

Project Moneystone Quarry, Oakamoor, Staffordshire				BOREHOLE No 95013	
Job No 418040	Date	Ground level (m) 161.61	Co-Ordinates () E 404,029.0 N 346,170.0		
Method/Plant Used Openhole				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				161.31		0.30	TOPSOIL	b3	
						(3.45)	CLAY+LOOSE SAND	b1	
				157.86		3.75			
						(2.00)	WHITE-DARK RED BEDDED SANDSTONE	c2	
				155.86		5.75			
						(2.00)	DARK RED-DARK PINK SANDSTONE	c2	
				153.86		7.75			
						(2.00)	DARK-PALE PINK/PURPLE SANDSTONE	c2	
				151.86		9.75			
						(2.00)	PALE PINK/PURPLE-PALE PINK SANDSTONE	c2	
				149.86		11.75			
						(2.00)	PALE PINK-PINK SANDSTONE	c2	
				147.86		13.75			
						(2.00)	PINK SANDSTONE	c2	
				145.86		15.75			
						(2.00)	PINK-WHITE-PALE PINK SANDSTONE	c2	
				143.86		17.75			
						(2.00)	PINK-DARK PINK SANDSTONE	c2	
				141.86		19.75			
						(2.00)	DARK-PALE PINK SANDSTONE	c2	
				139.86		21.75			
							PALE PINK SANDSTONE	c2	
				139.11		22.50	ESTIMATED BASE OF GS		
						(9.11)		c2	
				130.00		31.61		c3	
				129.61		32.00			

Boring Progress and Water Observations							GENERAL REMARKS		
Date	Depth	Water Depth	Casing Depth	Casing Dia. mm	Chiselling Depth	Chiselling Time (hr)			
							Drillers descriptions for WBB extension assessment		
All dimensions in metres Scale 1:250			Client Laver Leisure			Contractor (Ref. 55)			Logged By

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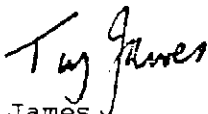
APPENDIX C - GEOTECHNICAL TEST RESULTS

Measurement Difficulties (Cont.)

These mishaps are reflected in the data for BH 1/2 C, BH 1/2 D, and BH 1/4 D. In these three cases the average rates of strain are about 1.0% per hour and the strain at failure was in each of the three cases less than the 4 corresponding samples run at a steady 0.5% per hour. The stress/strain curves show a characteristic raggedness.

- 2.2 A further problem arose in the shear tests of BH 002, 0 to 0.9 m specimen "C" and BH 002, 8.84 to 9.3 m specimens "C" and "D". An incorrectly fitted paper tape for the printer, stopped the recording of data around the peak stress in each of the three cases. This is evident from the straight line portions of the curves, Figs. 33, 42 and 44. Nevertheless we think the errors in the estimates of the peak deviator stress are probably less than 5%.
- 2.3 The records of the P₁W P dissipation curves show small scale variations of about $\pm 1 \text{ kN/m}^2$. These variations are caused by the normal fluctuation in the compressed air supply to the hydraulic systems and would not normally be noticed when the data is plotted manually. One particular test BH 002/A 0.0 to 0.9 m depth, Fig. 28-9 showed a larger variation of P W P which was found to be caused by a poor electrical connection to the transducer. Fortunately this intermittent fault seems to be absent at the peak deviator stress and we think that the effective stress values are probably correct.
- 2.4 One sample BH 1/2 proved to be non dispersive with the usual sodium hexameta phosphate reagent. Two other dispersing agents as suggested in B.S. 1377: 1975, were tried also unsuccessfully. This sample contained light grey material which we understand from Dr. Sutton proved to contain gypsum.

I apologise for the somewhat unsatisfactory nature of some of the data mostly caused by an extraordinary, and as yet unresolved, fault on one of the compression load frames.


A N James

Summary of Laboratory Test Results

Borehole/ Sample No.	Depth (m)	Moisture Content %	Liquid Limit %	Plastic Limit %	Specific Gravity	P.S.D. (fig. No.)	Oedometer (fig. No.)	38 mm C.U. TRIAXIAL TESTS		
								(fig. No.)	ϕ'	$C' \frac{2}{m}$ (KN/m)
1/2	1.52 - 2.52	113	87	47	2.75	NON DISPERSIVE	22 - 23	1 - 9 and 19	29	10
1/4	9.10 - 10.0	74	66	43	2.69		20 - 21	10 - 18	44	0
002	0 - 0.90	90	59	38	2.70	26	-	28 - 36	(A+B) 32 (C+D) 40	4 7
002	8.84 - 9.30	44	50	30	2.70	27	-	37 - 45	42	0

Samples taken by J.S. Sutton

002	0 - 0.90	145
002	7.0 - 7.90 (TOP)	36
002	7.0 - 7.90 (BASE)	28
002	14.63 - 15.09	34
002	11.95 - 12.05	45
002	3.94 - 4.40	77
1	12.84 - 13.40	15

Note 1. The asterisks (*) in figs. 6, 8 and 17 represent a nominal strain rate of 0.5%/hour which was actually on average 1.0%/hour (see sect. 2.1 of report).

Note 2. fig. No. 24 NOT included.

Borehole No. 1 Sample No. 2A Depth 1.52-2.52 m
 Soil Description Soft reddish brown SILT
 with some light grey clayey silt

SPECIMEN: ☒ Undisturbed ☐ Remoulded ☐ Compacted ☐ Reconsolidated as specified
☐ With filter drains ☒ Without filter drains ☐ Multistage

Diameter = 38.0 mm Volumetric strain = $\Delta v/v_0$ = 23.7 %
 Length = 76.0 mm
 Drainage path d = 73.0 mm Coefficient of volume change m_v = $\frac{\Delta v}{v_0/\Delta \sigma'}$ = $6.7 \times 10^{-3} \text{ m}^2$
 Change-in-effective-stress $\Delta \sigma'$ = 35 kN/m²

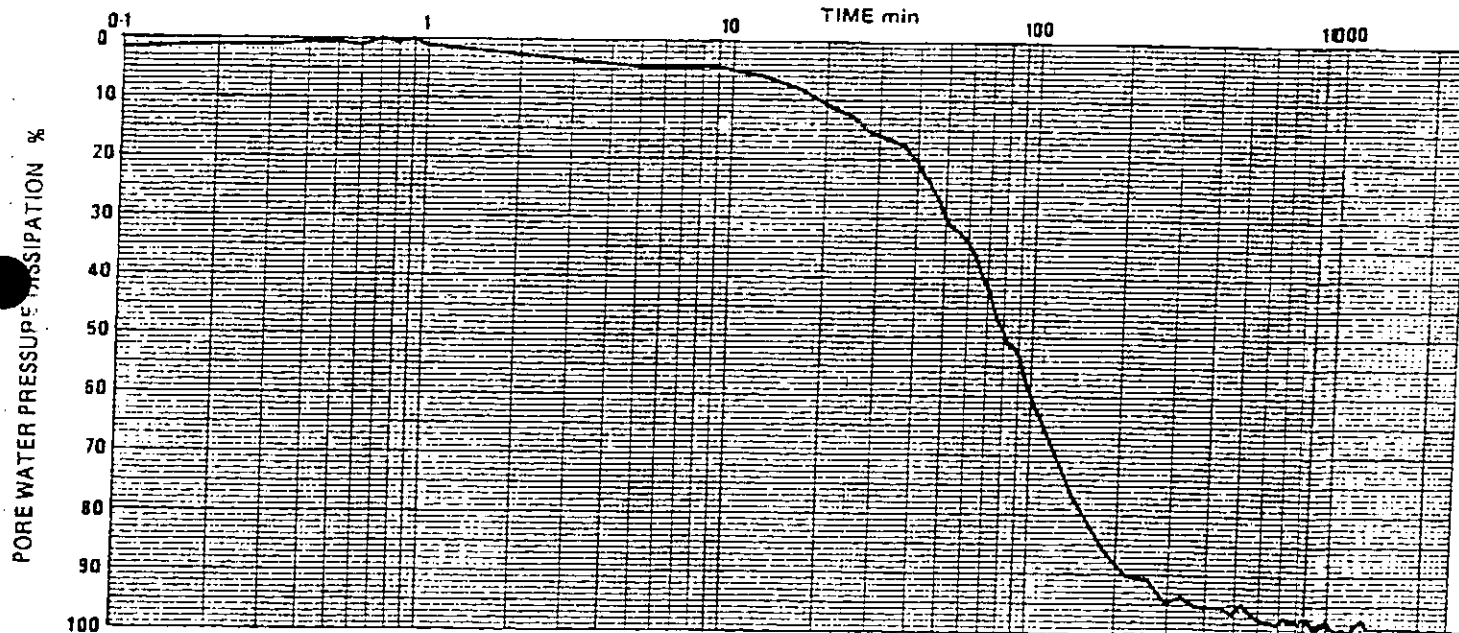
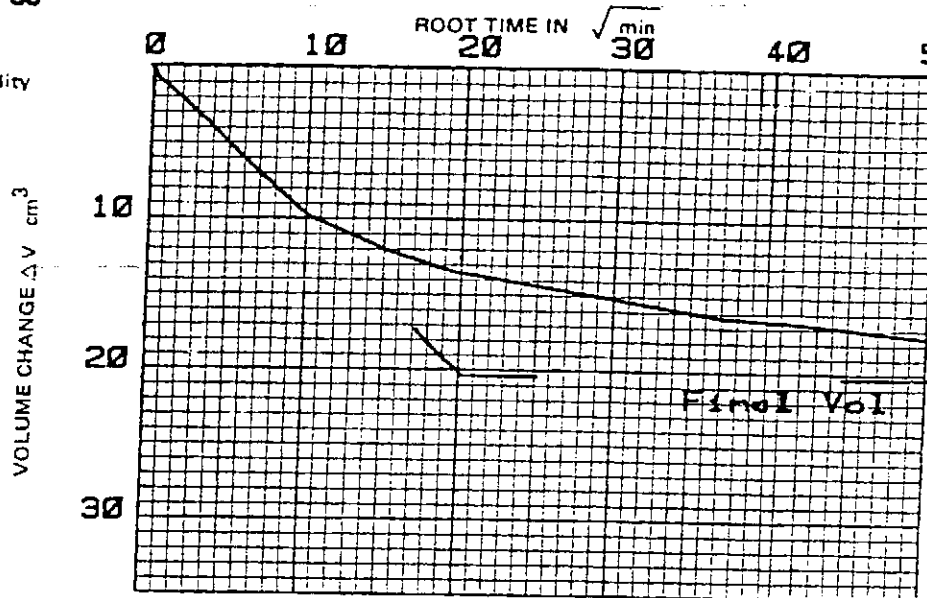
Coefficients of consolidation and permeability

(a) Root time curve (volume)

t_{100} = 410 min
 C_v = (0.426) d^2/t_{100}
 C_v = 5.6 m^2/yr
 k = $3.1 m_v C_v \times 10^{-7}$
 k = $1.2 \times 10^{-8} \text{ m/s}$

(b) Log time curve (dissipation)

t_{50} = 83 min
 C_v = (0.20) d^2/t_{50}
 C_v = 13 m^2/yr
 k = $2.7 \times 10^{-8} \text{ m/s}$



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TRIAXIAL TEST CONSOLIDATION STAGE

Lab. Ref. No:

L184

Tested by:

A.M.

Date:

MAR 81

Fig:

1

Borehole No.

1

Sample No.

2A

Depth

1.52-2.52

m

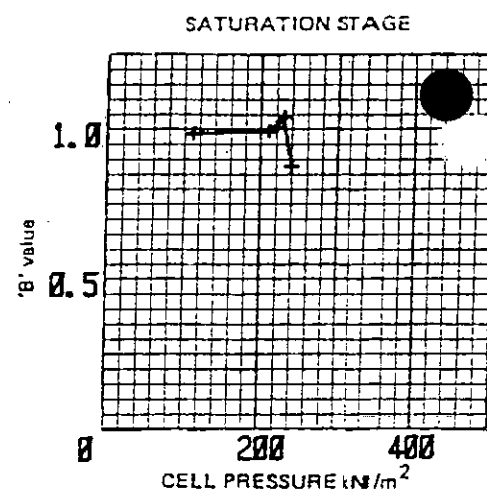
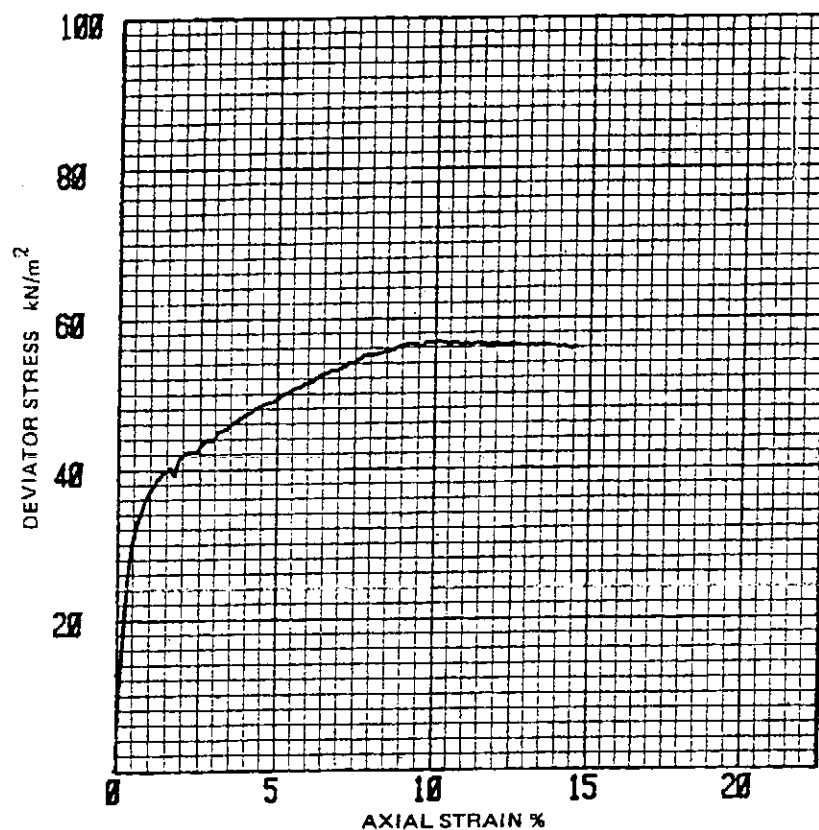
Soil Description

Soft reddish brown SILT
with some light grey clayey silt

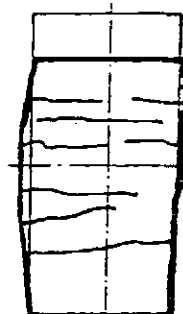
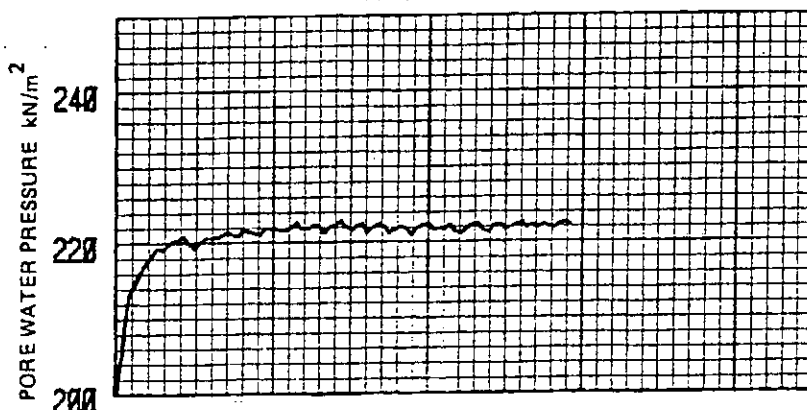
SPECIMEN: ☒ Undisturbed ☐ Remoulded ☐ Compacted ☐ Recompacted as specified
☒ 38 mm dia x 76 mm ☐ 100 mm dia x 200 mm ☐ Multistage

Initial moisture content = 109 %
Initial wet density = 1500 kg/m³
Initial dry density = 717 kg/m³
Final moisture content = 83 %
Final wet density = 1690 kg/m³
Final dry density = 924 kg/m³
Initial cell pressure = 235 kN/m²
Initial pore pressure = 200 kN/m²
Initial effective cell pressure = 35 kN/m²

Cell pressure at failure = 235 kN/m²
Pore pressure at failure = 221 kN/m²
Effective cell pressure at failure = 14 kN/m²
Rate of strain = 0.5 %/h
Axial strain at failure = 10 %
Membrane correction = 3 kN/m²
Filter drain correction = - kN/m²
Maximum deviator stress = 57 kN/m²
Net maximum deviator stress = 54 kN/m²



PRESATURATED AT BACK PRESSURE
OF: 200 kN/m²



Made after failure

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CONSOLIDATED UNDRAINED TRIAXIAL SHEAR TEST

Lab. Ref. No:

L184

Tested by:

A. M.

Date:

MAR 81

Fig:

2

Borehole No. 1 Sample No. 2B Depth 1.52-2.52 m
 Soil Description Soft reddish brown SILT
 with some light grey clayey silt

SPECIMEN: ☒ Undisturbed ☐ Remoulded ☐ Compacted ☐ Recompacted as specified
☐ With filter drains ☒ Without filter drains ☐ Multistage

Diameter = 38.0 mm Volumetric strain $= \Delta v/v_0 = 24.8\%$
 Length = 76.0 mm
 Drainage path d = 72.4 mm Coefficient of volume change $m_v = \frac{\Delta v/v_0}{\Delta \sigma'_3} = 3.4 \times 10^{-3} \text{ m}^3/\text{kN}$
 Change in effective stress $\Delta \sigma'_3 = 74 \text{ kN/m}^2$

Coefficients of consolidation and permeability

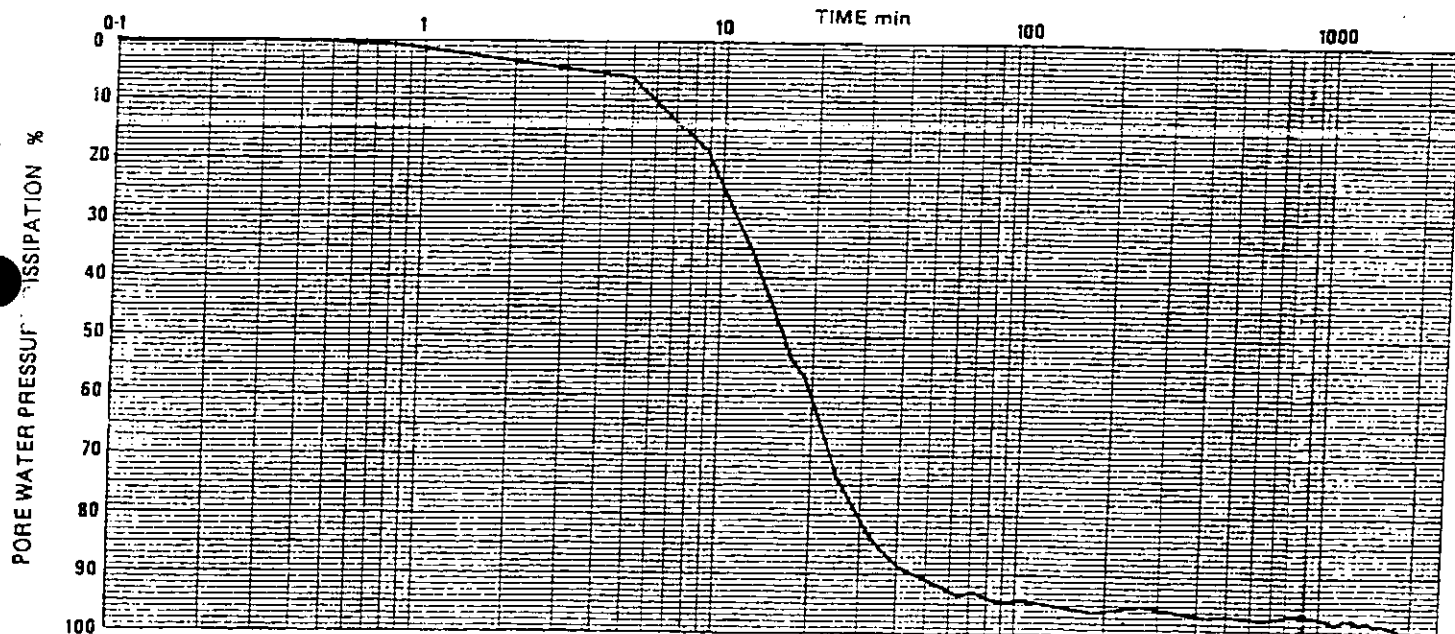
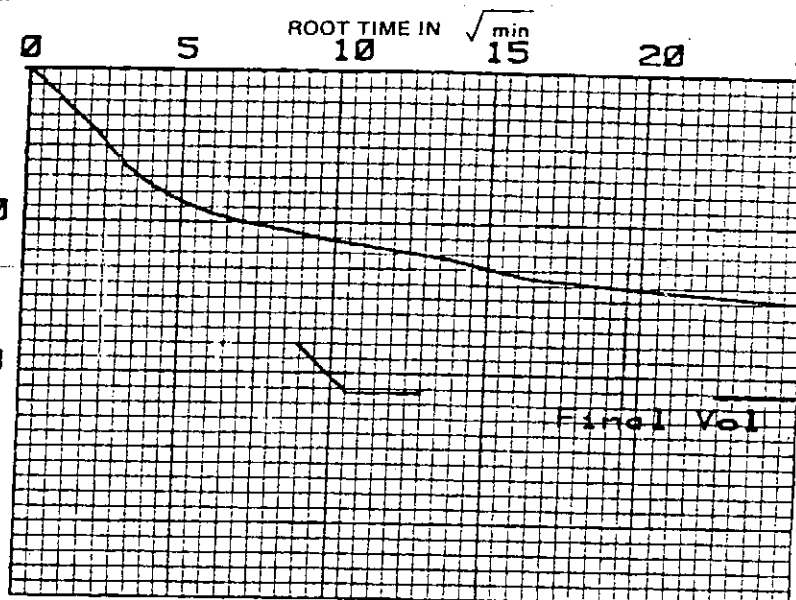
(a) Root time curve (volume)

$t_{100} = 110 \text{ min}$
 $C_v = (0.426) d^2/t_{100}$
 $C_v = 20 \text{ m}^2/\text{yr}$
 $k = 3.1 m_v C_v \times 10^{-7}$
 $k = 2.1 \times 10^{-8} \text{ m/s}$

(b) Log time curve (dissipation)

$t_{50} = 16 \text{ min}$
 $C_v = (0.20) d^2/t_{50}$
 $C_v = 65 \text{ m}^2/\text{yr}$
 $k = 6.8 \times 10^{-8} \text{ m/s}$

VOLUME CHANGE $\Delta V \text{ cm}^3$



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TRIAXIAL TEST CONSOLIDATION STAGE

Lab. Ref. No:

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Tested by:

A.M.

Date:

MAR 81

Fig:

3

Borehole No.

1

Sample No.

2B

Depth

1.52-2.52

m

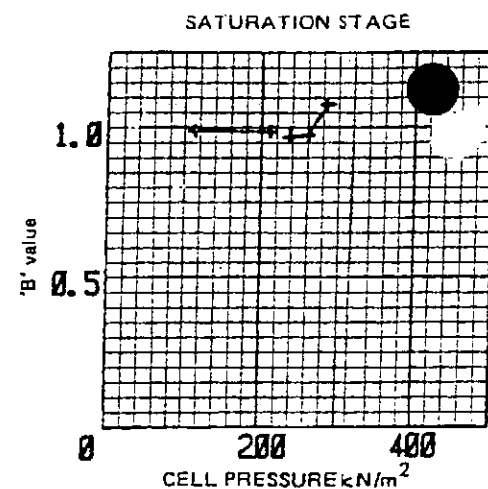
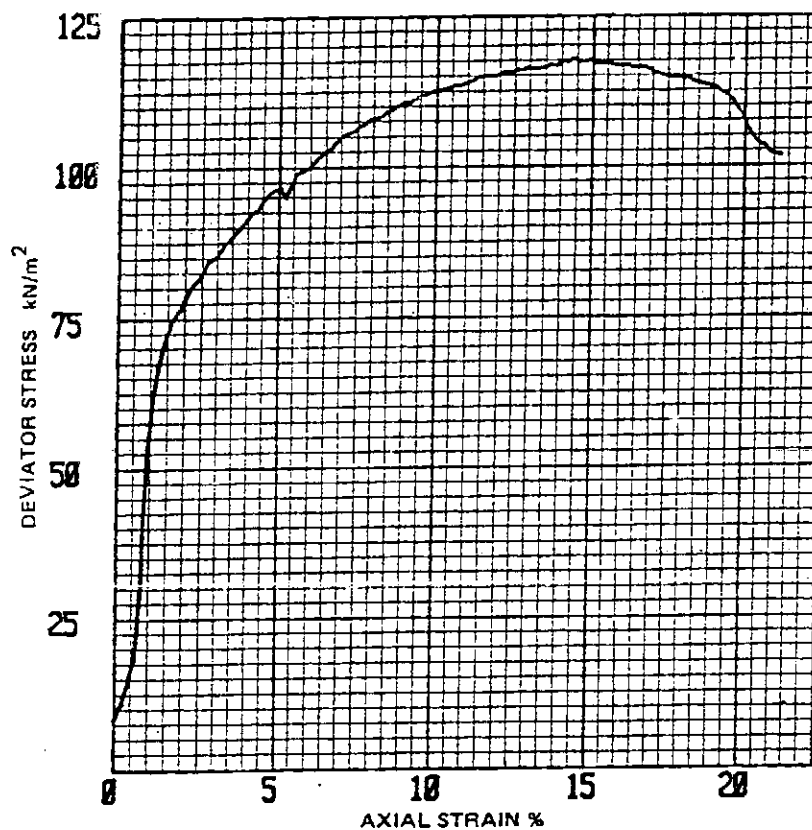
Soil Description

Soft reddish brown SILT
with some light grey clayey silt

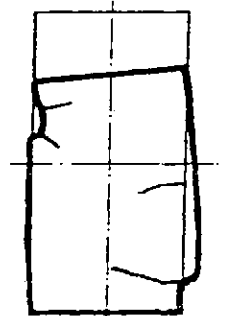
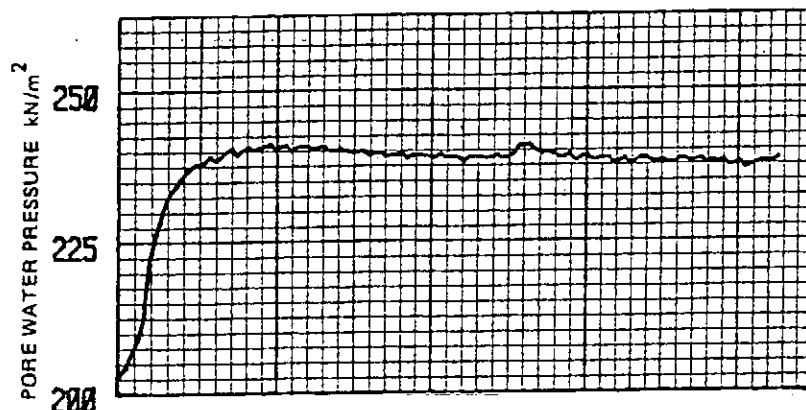
SPECIMEN: ☒ Undisturbed ☐ Remoulded ☐ Compacted ☐ Recompacted as specified
☒ 38 mm dia x 76 mm ☐ 100 mm dia x 200 mm ☐ Multistage

Initial moisture content = 94 %
Initial wet density = 1540 kg/m³
Initial dry density = 796 kg/m³
Final moisture content = 70 %
Final wet density = 1840 kg/m³
Final dry density = 1080 kg/m³
Initial cell pressure = 280 kN/m²
Initial pore pressure = 202 kN/m²
Initial effective cell pressure = 78 kN/m²

Cell pressure at failure = 280 kN/m²
Pore pressure at failure = 239 kN/m²
Effective cell pressure at failure = 41 kN/m²
Rate of strain = 0.5 %/h
Axial strain at failure = 14 %
Membrane correction = 4 kN/m²
Filter drain correction = - kN/m²
Maximum deviator stress = 119 kN/m²
Net maximum deviator stress = 115 kN/m²



PRESATURATED AT BACK PRESSURE
OF: 200 kN/m²



Mode after failure

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CONSOLIDATED UNDRAINED TRIAXIAL SHEAR TEST

Lab. Ref. No:

L184

Tested by:

A. M.

Date:

MAR 81

Fig:

4

Borehole No. 1 Sample No. 2C Depth 1.52-2.52 m
 Soil Description Soft reddish brown SILT
 with some light grey clayey silt

SPECIMEN: ☒ Undisturbed ☐ Remoulded ☐ Compacted ☐ Recompacted as specified
☐ With filter drains ☒ Without filter drains ☐ Multistage

Diameter = 38.0 mm Volumetric strain = $\Delta v/v_0$ = 25.5 %
 Length = 76.0 mm
 Drainage path d = 72.8 mm Coefficient of volume change m_v = $\frac{\Delta v}{v_0} / \Delta \sigma_3' = 2.2 \times 10^{-3} \text{ m}^2$
 Change in effective stress $\Delta \sigma_3'$ = 117 kN/m²

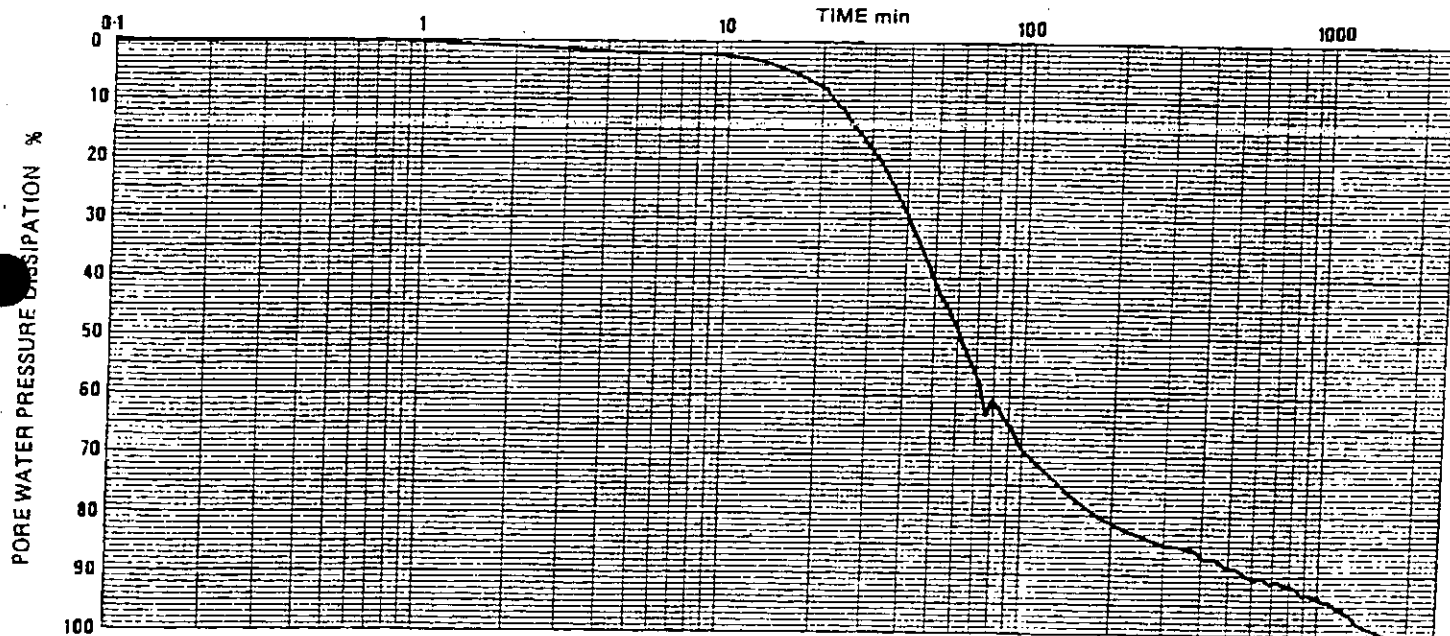
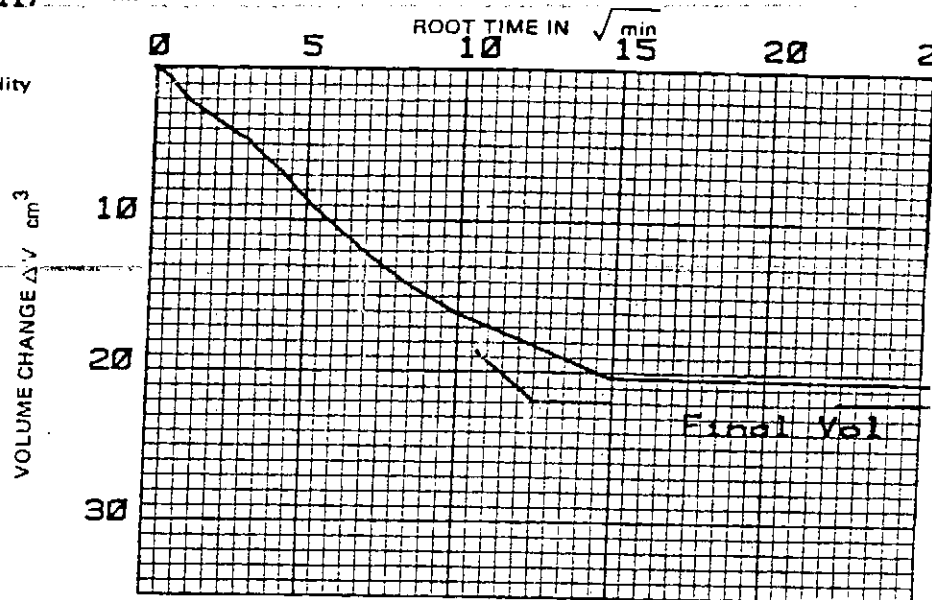
Coefficients of consolidation and permeability

(a) Root time curve (volume)

t_{100} = 160 min
 C_v = (0.426) d^2/t_{100} cm²/min
 C_v = 14 m²/yr
 k = $3.17 m_v C_v \times 10^{-7}$ m/s
 k = 9.7×10^{-9} m/s

(b) Log time curve (dissipation)

t_{50} = 63 min
 C_v = (0.20) d^2/t_{50} cm²/min
 C_v = 17 m²/yr
 k = 1.1×10^{-8} m/s



BINNIE & PARTNERS Geotechnical Laboratory London SW1	TRIAXIAL TEST CONSOLIDATION STAGE			
	Lab. Ref. No: L184	Tested by: A.H.	Date: MAR 81	Fig: 5

Borehole No. 1

Sample No. 2C

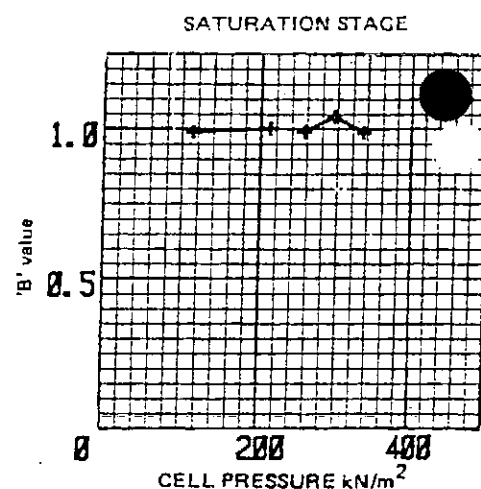
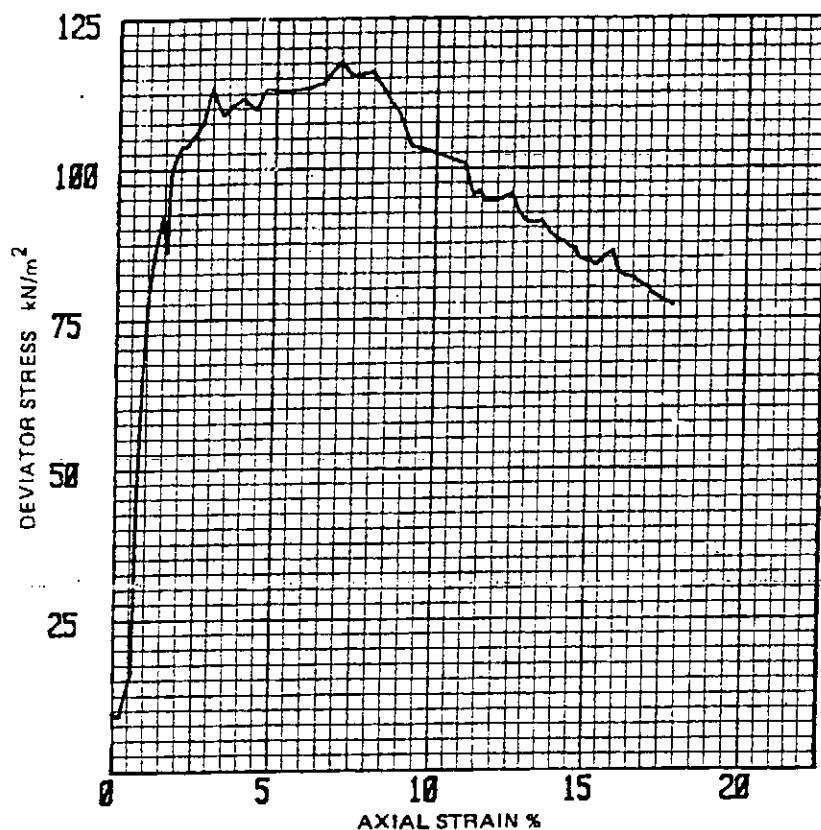
Depth 1.52-2.52 m

Soil Description **Soft reddish brown SILT**
with some light grey clayey silt

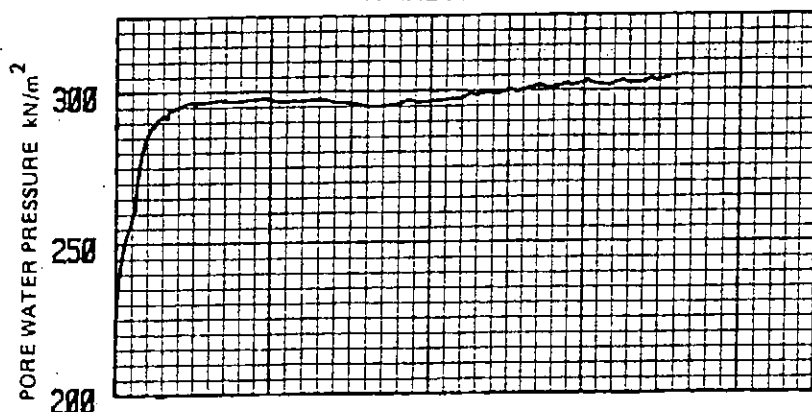
SPECIMEN: ☒ Undisturbed ☐ Remoulded ☐ Compacted ☐ Recompacted as specified
☒ 38 mm dia x 76 mm ☐ 100 mm dia x 200 mm ☐ Multistage

Initial moisture content = 98 %
 Initial wet density = 1510 kg/m³
 Initial dry density = 763 kg/m³
 Final moisture content = 68 %
 Final wet density = 1690 kg/m³
 Final dry density = 1010 kg/m³
 Initial cell pressure = 331 kN/m²
 Initial pore pressure = 217 kN/m²
 Initial effective cell pressure = 114 kN/m²

Cell pressure at failure = 331 kN/m²
 Pore pressure at failure = 296 kN/m²
 Effective cell pressure at failure = 35 kN/m²
 Rate of strain = 0.5 %/h *
 Axial strain at failure = 7.0 %
 Membrane correction = 2 kN/m²
 Filter drain correction = - kN/m²
 Maximum deviator stress = 119 kN/m²
 Net maximum deviator stress = 117 kN/m²



PRESATURATED AT BACK PRESSURE
 OF: 200 kN/m²



Mode after failure

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London SW1

CONSOLIDATED UNDRAINED TRIAXIAL SHEAR TEST

Lab. Ref. No:

L184

Tested by:

A. M.

Date:

MAR 81

Fig:

6

Borehole No. 1

Sample No. 20

Depth 1.52-2.52 m

Soil Description Soft reddish brown SILT
with some light grey clayey silt

SPECIMEN: ☒ Undisturbed ☐ Remoulded ☐ Compacted ☐ Recompacted as specified
☐ With filter drains ☒ Without filter drains ☐ Multistage

Diameter = 38.0 mm

Volumetric strain = $\Delta v/v_0$ = 28.4 %

Length = 76.0 mm

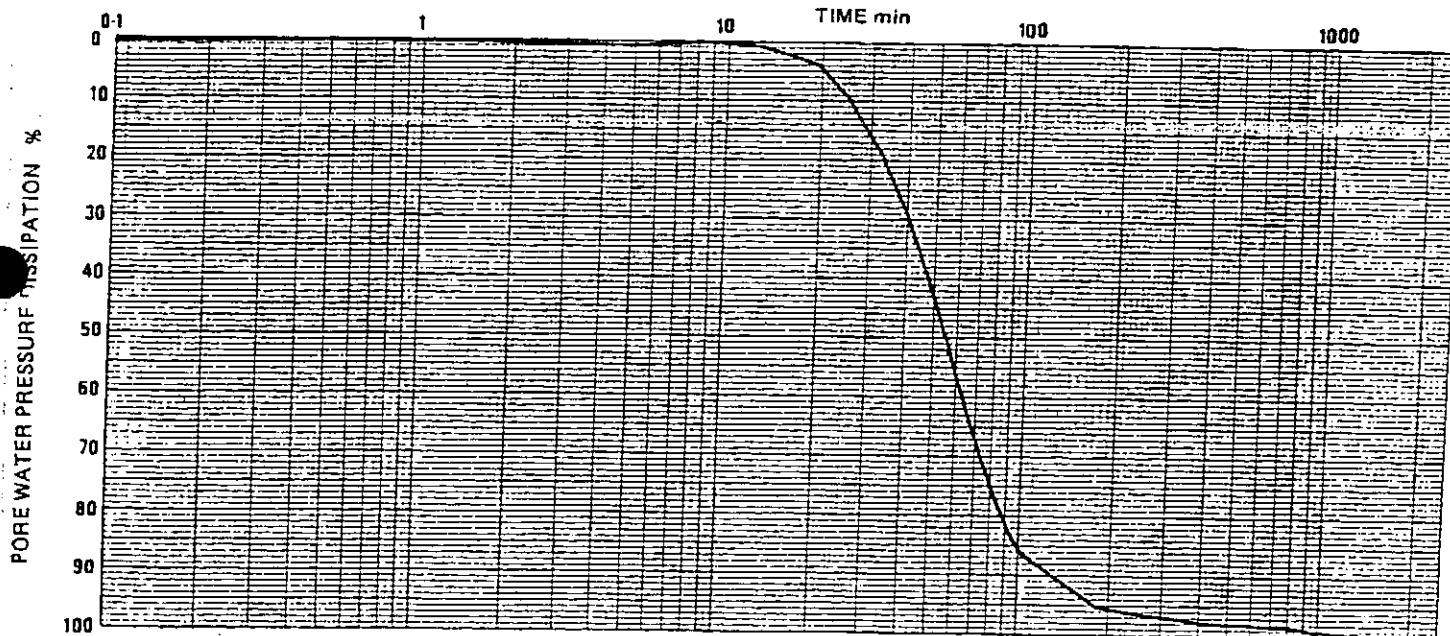
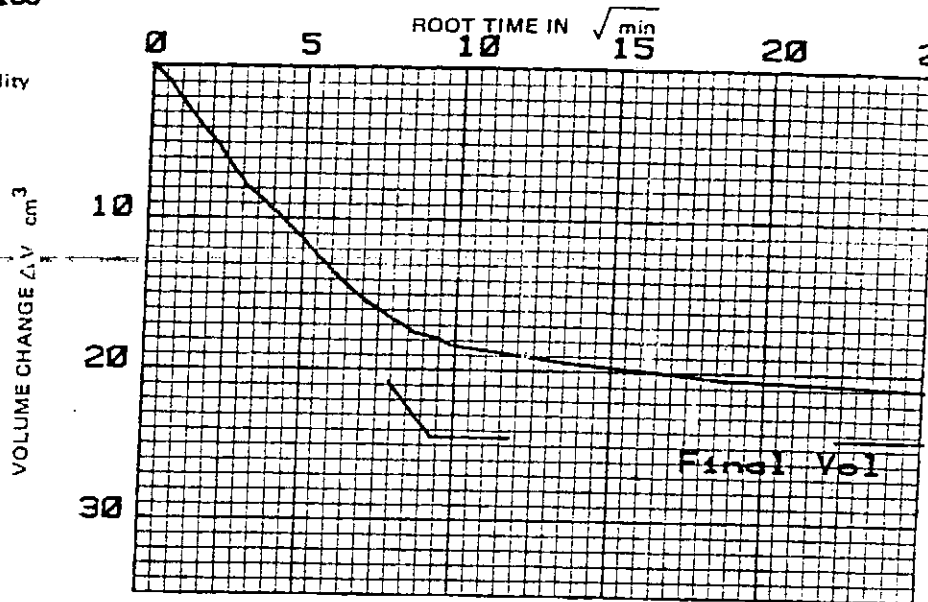
Drainage path d = 72.1 mmCoefficient of volume change m_v = $\frac{\Delta v}{v_0} / \Delta \sigma_3' = 1.4 \times 10^{-3} \text{ m}^2$ Change in effective stress $\Delta \sigma_3'$ = 199 kN/m^2

Coefficients of consolidation and permeability

(a) Root time curve (volume)

 t_{100} = 86 min C_v = (0.426) d^2/t_{100} cm^2 10 C_v = 26 m^2/yr k = $3.177 C_v \times 10^{-7}$ k = $1.1 \times 10^{-8} \text{ m/s}$

(b) Log time curve (dissipation)

 t_{50} = 57 min C_v = (0.20) d^2/t_{50} cm^2 30 C_v = 18 m^2/yr k = $8.1 \times 10^{-9} \text{ m/s}$ 

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TRIAXIAL TEST CONSOLIDATION STAGE

Lab. Ref. No:

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Fig:

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Borehole No. 1

Sample No. 20

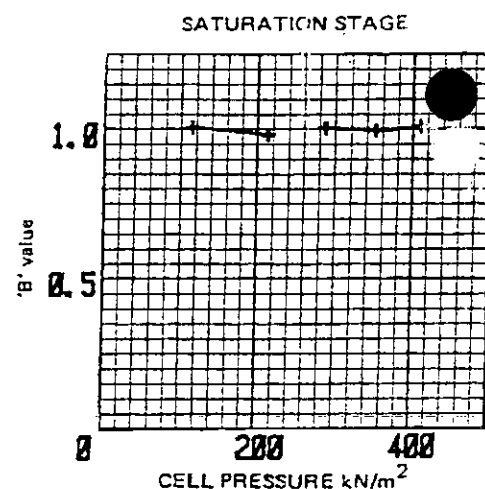
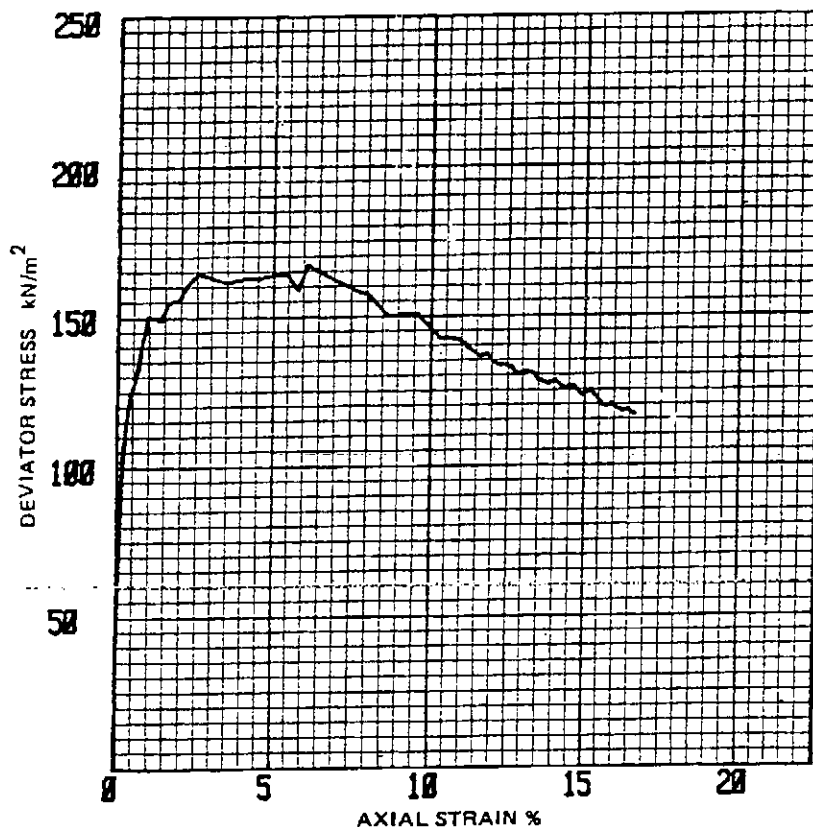
Depth 1.52-2.52 m

Soil Description **Soft reddish brown SILT**
with some light grey clayey silt

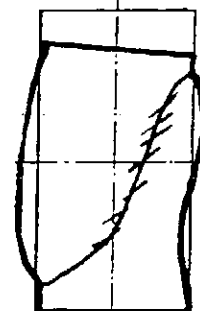
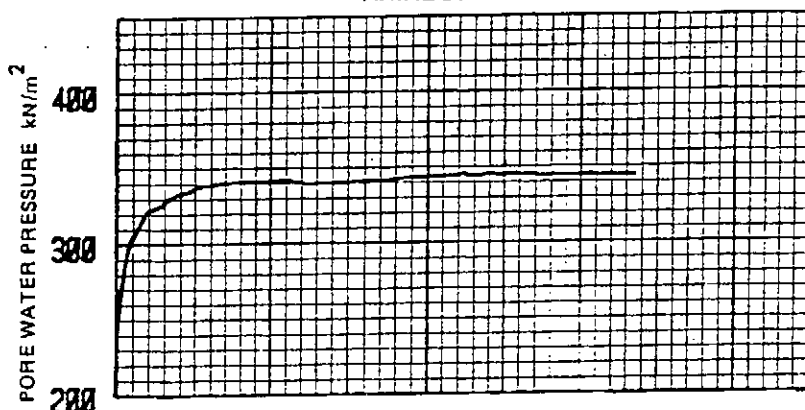
SPECIMEN: ☒ Undisturbed ☐ Remoulded ☐ Compacted ☐ Recompacted as specified
☒ 38 mm dia x 76 mm ☐ 100 mm dia x 200 mm ☐ Multistage

Initial moisture content = 86 %
 Initial wet density = 1550 kg/m³
 Initial dry density = 833 kg/m³
 Final moisture content = 55 %
 Final wet density = 1810 kg/m³
 Final dry density = 1170 kg/m³
 Initial cell pressure = 406 kN/m²
 Initial pore pressure = 205 kN/m²
 Initial effective cell pressure = 201 kN/m²

Cell pressure at failure = 406 kN/m²
 Pore pressure at failure = 338 kN/m²
 Effective cell pressure at failure = 68 kN/m²
 Rate of strain = 0.5 %/h
 Axial strain at failure = 8.2 %
 Membrane correction = 2 kN/m²
 Filter drain correction = - kN/m²
 Maximum deviator stress = 168 kN/m²
 Net maximum deviator stress = 166 kN/m²



PRESATURATED AT BACK PRESSURE
 OF: 200 kN/m²



Mode after failure

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CONSOLIDATED UNDRAINED TRIAXIAL SHEAR TEST

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Fig:
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Borehole No.

1

Sample No.

2

Depth

1.52-2.52

m

Soil Description

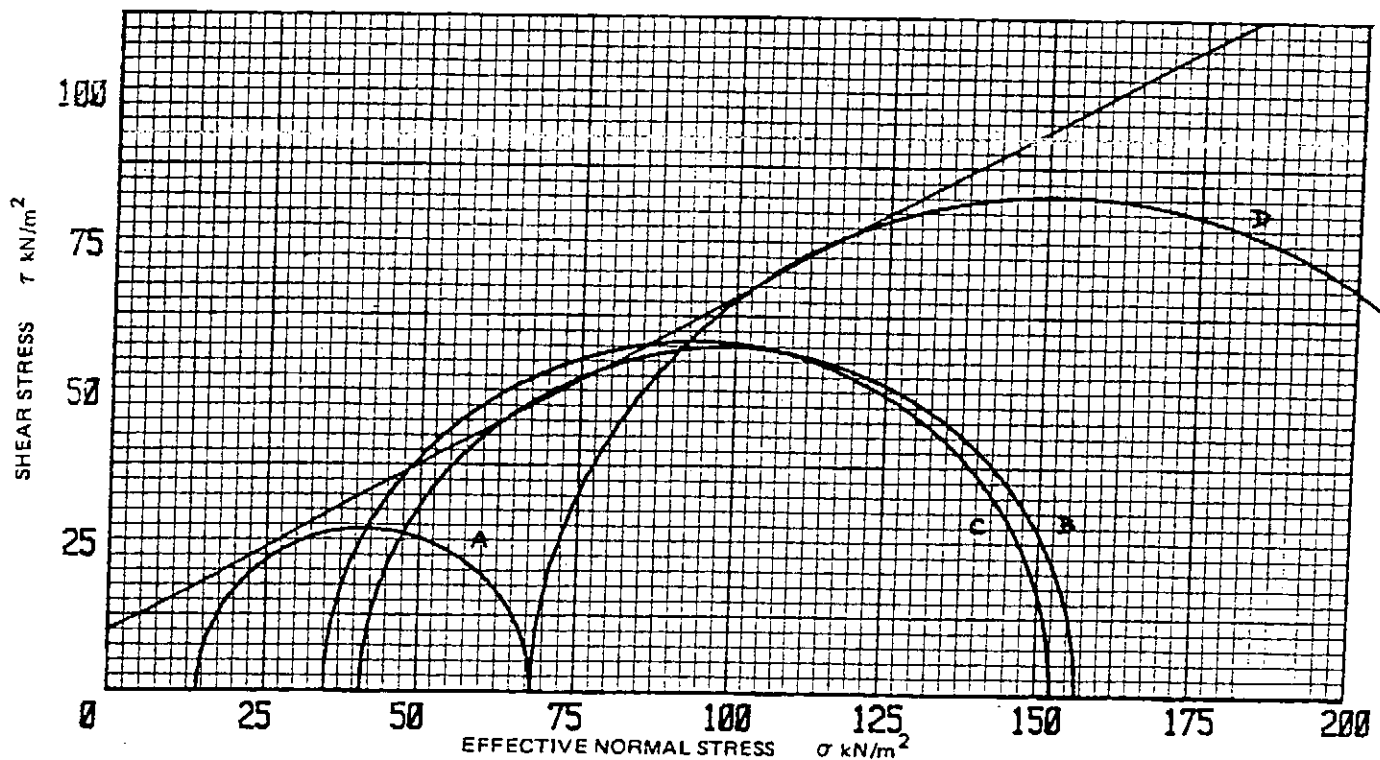
Soft reddish brown SILT
with some light grey clayey silt

Symbol	Borehole No.	Sample No.	Depth m	Soil Description	Fig. Ref.

SPECIMEN AND TEST DETAILS:

- ☒ 38 mm dia x 76 mm ☐ 100 mm dia x 200 mm
☒ Undisturbed ☐ Remoulded ☐ Compacted
☒ Presaturated by back pressure ☐ Recompacted to specified moisture content and density
☐ Undrained ☒ Consolidated undrained with measured pore pressures
☐ Consolidated drained ☐ Consolidated undrained without measured pore pressures
☒ Peak strength ☐ Residual strength ☐ Multistage

$\phi' = 29^\circ$
 $c' = 10 \text{ kN/m}^2$



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TRIAXIAL SHEAR TESTS MOHR CIRCLE ENVELOPE

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Fig:

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Borehole No. 1

Sample No. 4A

Depth 9.10-10.00 m

Soil Description Soft reddish brown SILT

SPECIMEN: ☒ Undisturbed ☐ Remoulded ☐ Compacted ☐ Recompacted as specified
☐ With filter drains ☒ Without filter drains ☐ Multistage

Diameter = 38.0 mm
 Length = 76.0 mm
 Drainage path d = 73.2 mm
 Change in effective stress $\Delta\sigma_3' = 29$ kN/m²

Volumetric strain $= \Delta v/v_0 = 22.2 \%$ Coefficient of volume change $m_v = \frac{\Delta v}{v_0/\Delta\sigma_3'} = 7.7 \times 10^{-3} \text{ m}^2$

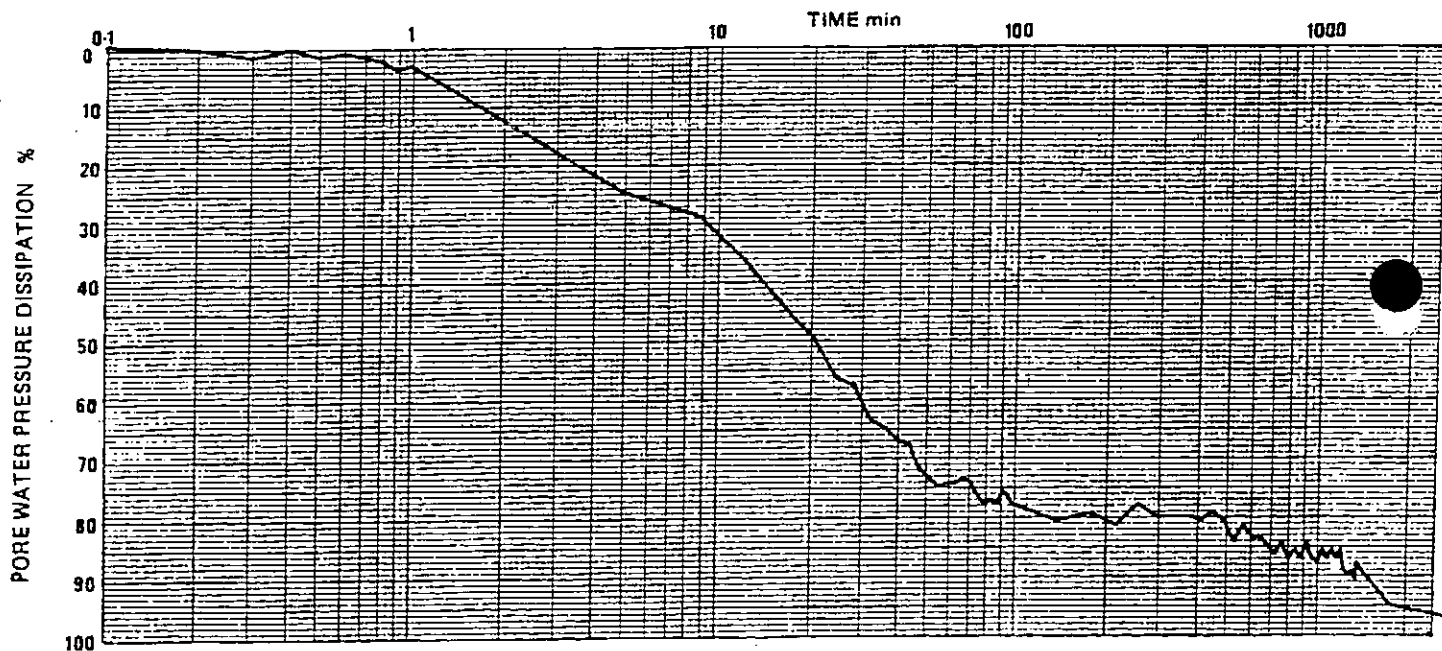
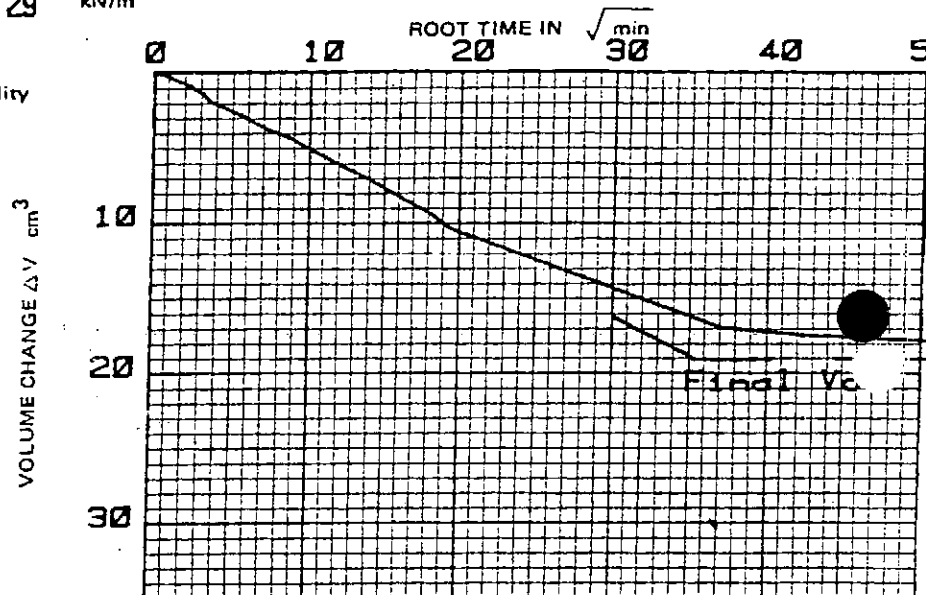
Coefficients of consolidation and permeability

(a) Root time curve (volume)

$t_{100} = 1300$ min
 $C_v = (0.426) d^2/t_{100}$
 $C_v = 1.8$ m²/yr
 $k = 3.1 m_v C_v \times 10^{-7}$
 $k = 4.3 \times 10^{-9}$ m/s

(b) Log time curve (dissipation)

$t_{50} = 21$ min
 $C_v = (0.20) d^2/t_{50}$
 $C_v = 51$ m²/yr
 $k = 1.2 \times 10^{-7}$ m/s



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TRIAXIAL TEST CONSOLIDATION STAGE

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Fig:

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JOB NO. 19/3

DATE 08/08/80

Borehole No. 1

Sample No. 4A

Depth 9.10-10.00 m

Soil Description Soft reddish brown SILT

SPECIMEN: ☒ Undisturbed ☐ Remoulded ☐ Compacted ☐ Recompact as specified
☒ 38 mm dia x 76 mm ☐ 100 mm dia x 200 mm ☐ Multistage

Initial moisture content = 56 %

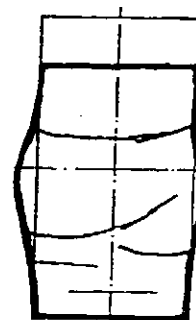
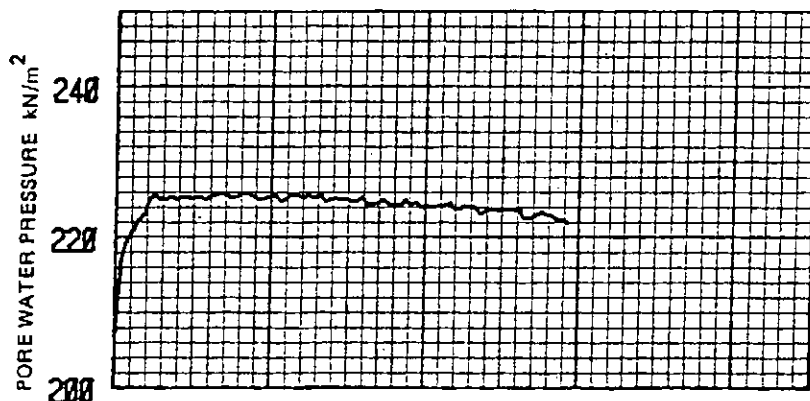
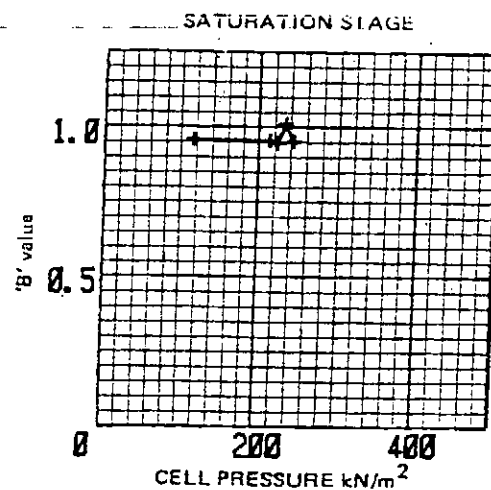
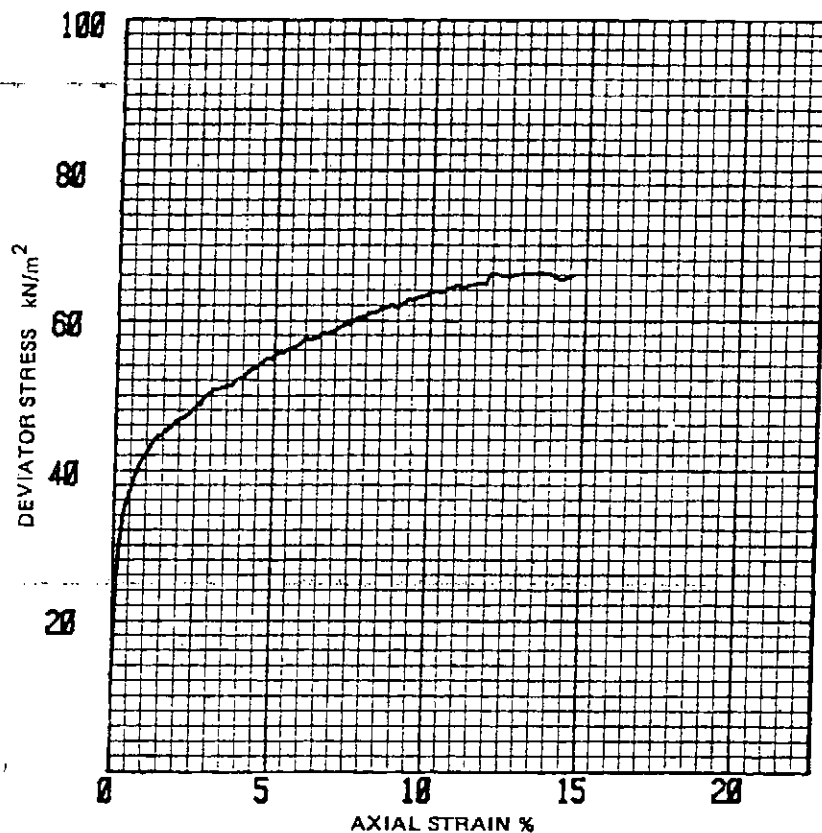
Initial wet density = 1680 kg/m³Initial dry density = 1080 kg/m³

Final moisture content = 50 %

Final wet density = 2050 kg/m³Final dry density = 1360 kg/m³Initial cell pressure = 237 kN/m²Initial pore pressure = 207 kN/m²Initial effective cell pressure = 30 kN/m²Cell pressure at failure = 237 kN/m²Pore pressure at failure = 223 kN/m²Effective cell pressure at failure = 14 kN/m²

Rate of strain = 0.5 %/h

Axial strain at failure = 13 %

Membrane correction = 4 kN/m²Filter drain correction = - kN/m²Maximum deviator stress = 67 kN/m²Net maximum deviator stress = 63 kN/m²

Mode after failure

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CONSOLIDATED UNDRAINED TRIAXIAL SHEAR TEST

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Fig:

11

Borehole No.

1

Sample No.

48

Depth 9.1-10.0

m

Soil Description

Soft reddish brown SILT

SPECIMEN: ☒ Undisturbed ☐ Remoulded ☐ Compacted ☐ Recompacted as specified
☐ With filter drains ☒ Without filter drains ☐ Multistage

Diameter = 38.0 mm
 Length = 76.0 mm
 Drainage path d = 72.8 mm
 Change in effective stress $\Delta\sigma_3'$ = 73 kN/m²

Volumetric strain = $\Delta V/V_0$ = 25.5 %
 Coefficient of volume change m_v = $\frac{\Delta V}{V_0} / \Delta\sigma_3' = 3.5 \times 10^{-3}$

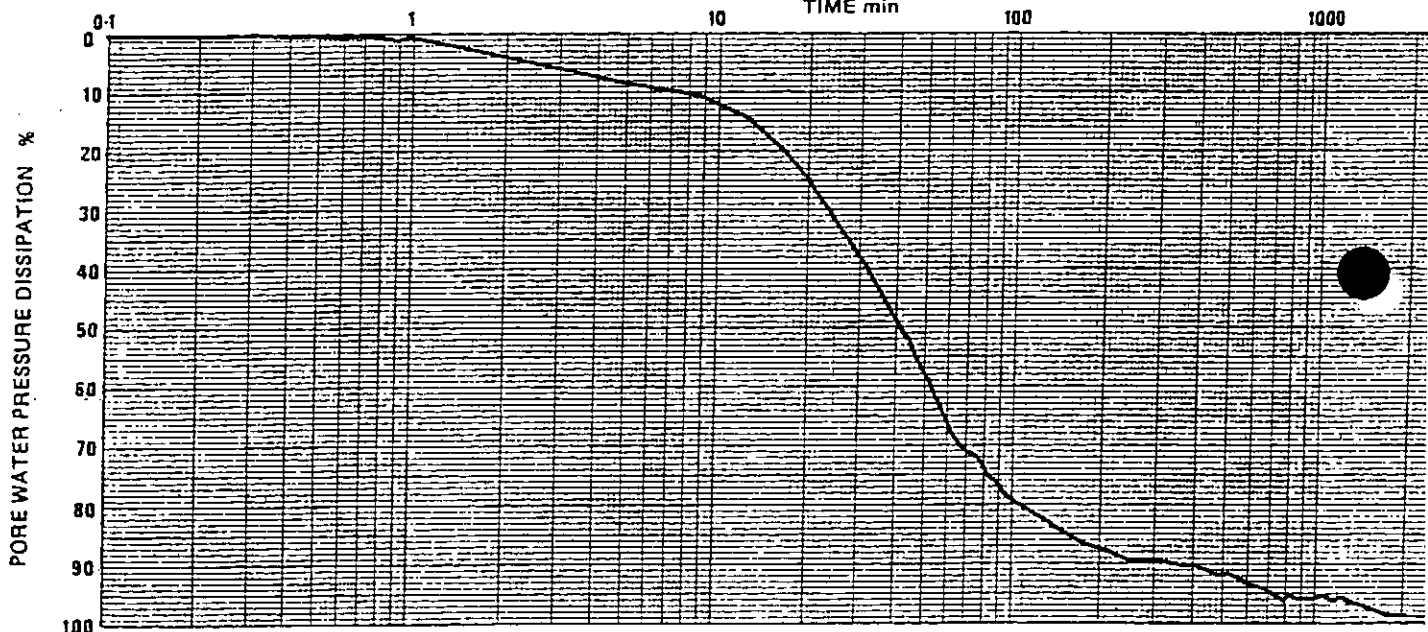
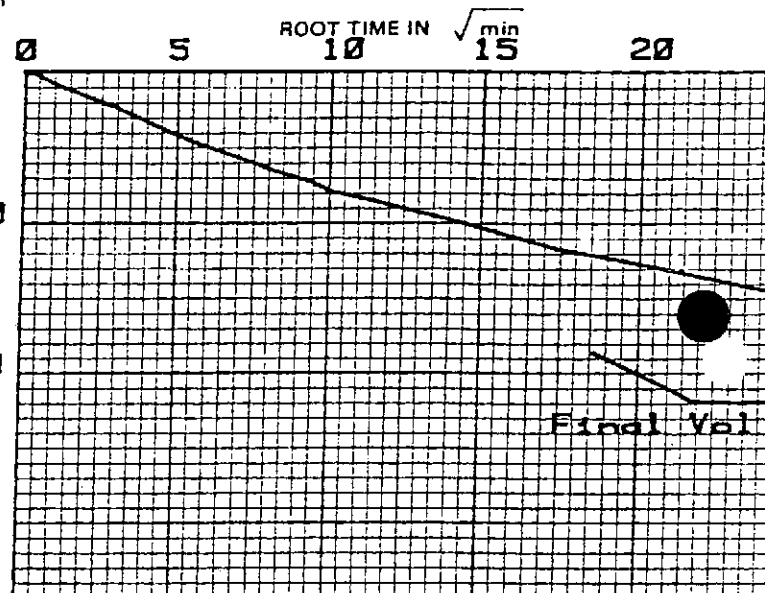
Coefficients of consolidation and permeability

(a) Root time curve (volume)

t_{100} = 480 min
 C_v = (0.426) d^2/t_{100}
 C_v = 4.7 m²/yr
 k = $3.1 m_v C_v \times 10^{-7}$
 k = 5.1×10^{-9} m/s

(b) Log time curve (dissipation)

t_{50} = 43 min
 C_v = (0.20) d^2/t_{50}
 C_v = 25 m²/yr
 k = 2.7×10^{-8} m/s

VOLUME CHANGE ΔV cm³

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Fig:

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Borehole No. 1

Sample No. 48

Depth 9.1-10.0 m

Soil Description Soft reddish brown SILT

SPECIMEN: ☒ Undisturbed ☐ Remoulded ☐ Compacted ☐ Reconsolidated as specified
☒ 38 mm dia x 76 mm ☐ 100 mm dia x 200 mm ☐ Multistage

Initial moisture content = 57 %

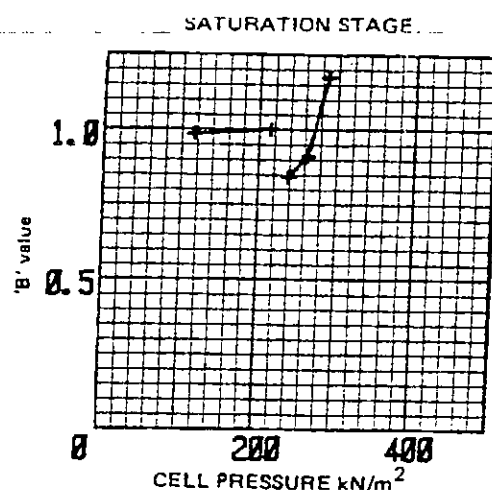
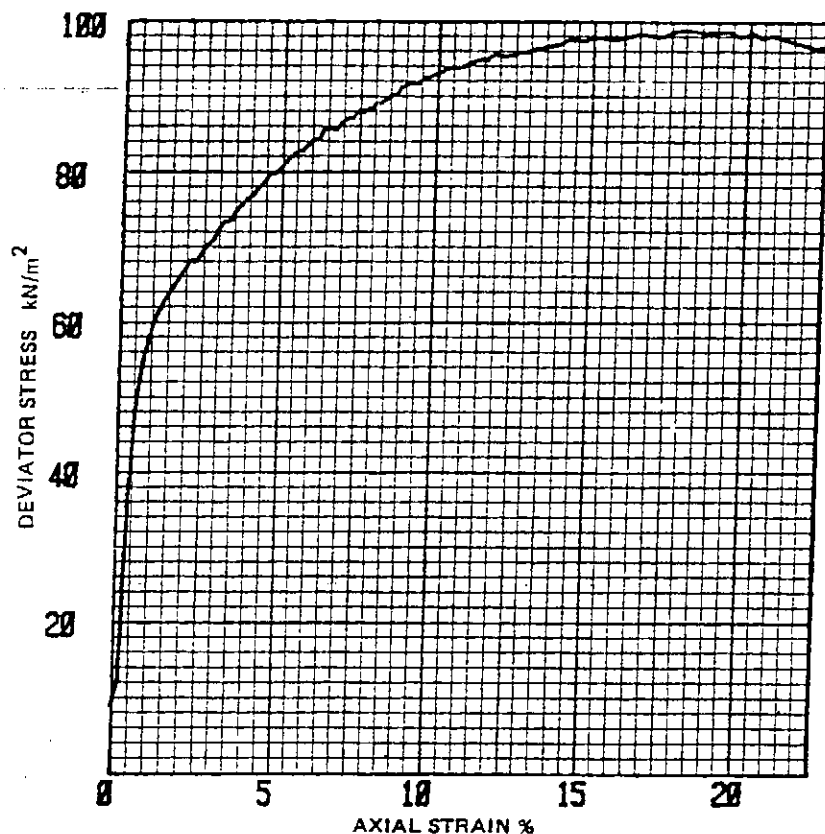
Initial wet density = 1700 kg/m³Initial dry density = 1080 kg/m³

Final moisture content = 48 %

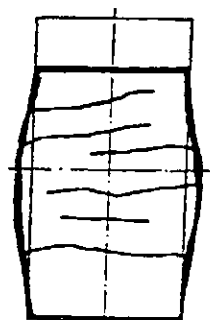
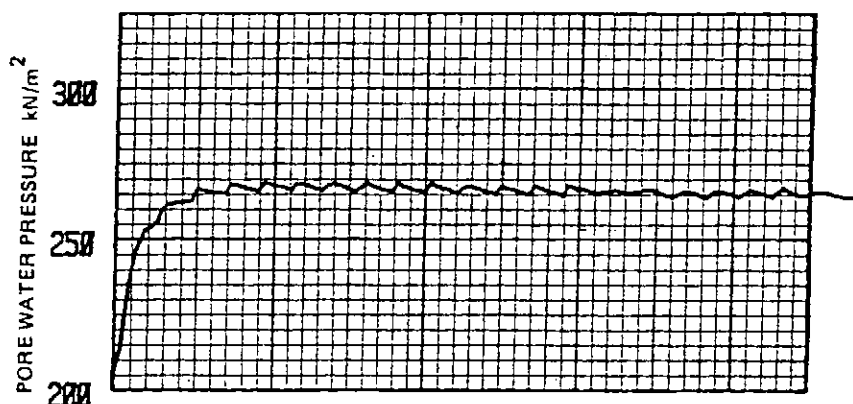
Final wet density = 2110 kg/m³Final dry density = 1420 kg/m³Initial cell pressure = 282 kN/m²Initial pore pressure = 205 kN/m²Initial effective cell pressure = 77 kN/m²Cell pressure at failure = 282 kN/m²Pore pressure at failure = 264 kN/m²Effective cell pressure at failure = 18 kN/m²

Rate of strain = 0.5 %/h

Axial strain at failure = 18 %

Membrane correction = 5 kN/m²Filter drain correction = - kN/m²Maximum deviator stress = 100 kN/m²Net maximum deviator stress = 95 kN/m²

PRESATURATED AT BACK PRESSURE
 OF: 200 kN/m²



Mode after failure

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Fig:
 13

Borehole No. 1

Sample No. 4C

Depth 9.1-10.0

m

Soil Description Soft reddish brown SILT

SPECIMEN: ☒ Undisturbed ☐ Remoulded ☐ Compacted ☐ Recompacted as specified
☐ With filter drains ☒ Without filter drains ☐ Multistage

Diameter = 38.0 mm
 Length = 76.0 mm
 Drainage path d = 72.7 mm
 Change in effective stress $\Delta\sigma_3'$ = 123 kN/m²

Volumetric strain = $\Delta v/v_0$ = 26.2 %Coefficient of volume change m_v = $\frac{\Delta v}{v_0} / \Delta\sigma_3' = 2.1 \times 10^{-3}$

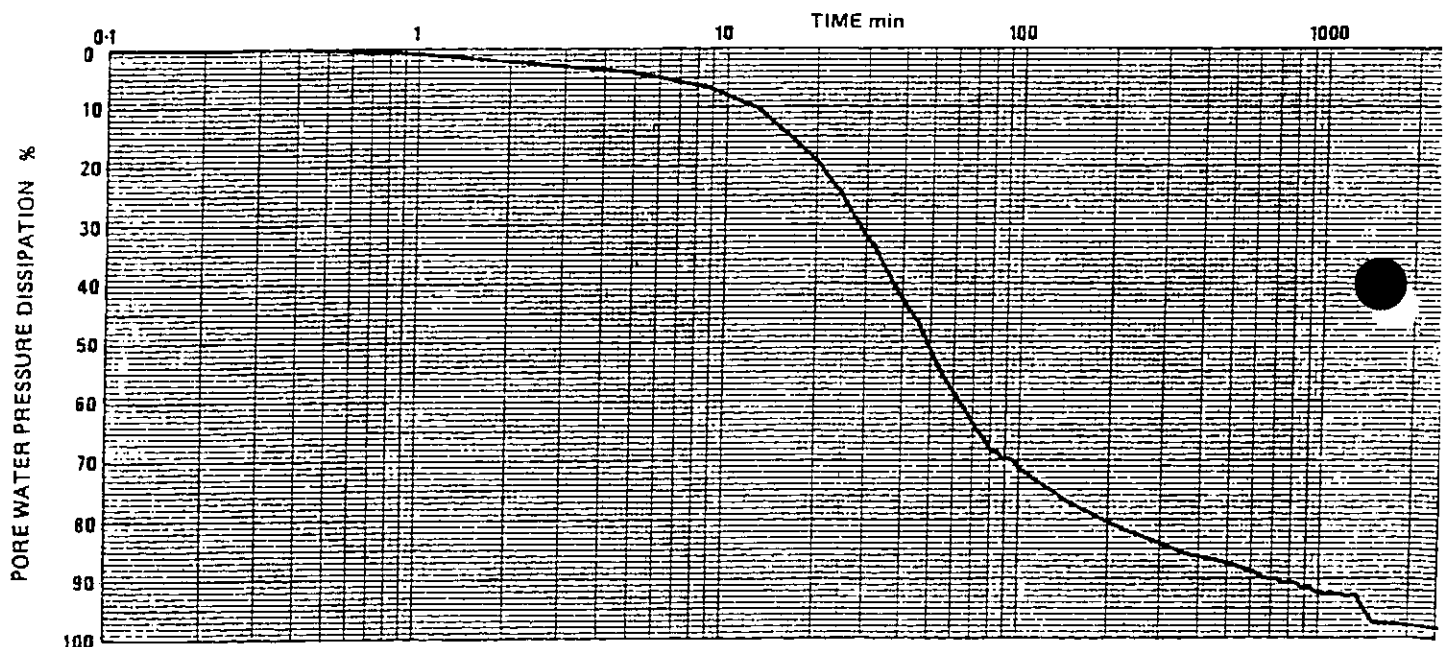
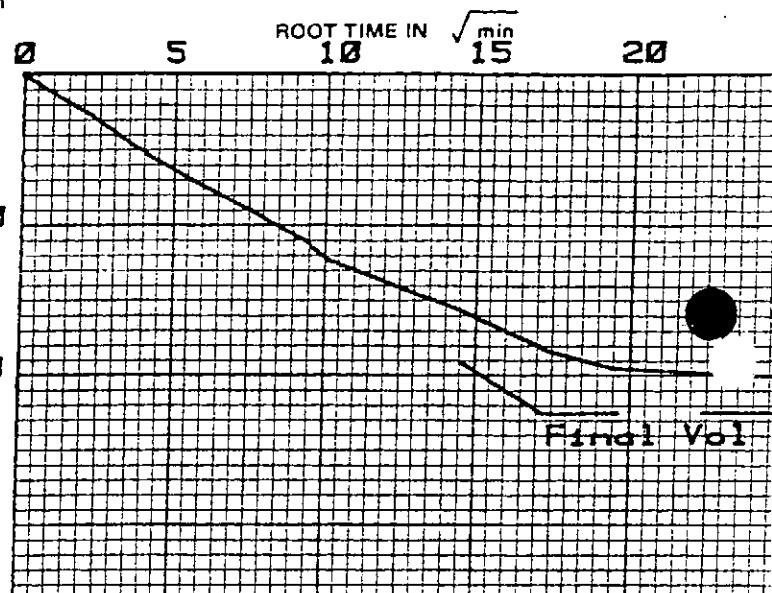
Coefficients of consolidation and permeability

(a) Root time curve (volume)

t_{100} = 300 min
 C_v = (0.426) d^2/t_{100}
 C_v = 7.6 m²/yr
 k = $3.1 m_v C_v \times 10^{-7}$
 k = 5.0×10^{-9} m/s

(b) Log time curve (dissipation)

t_{50} = 50 min
 C_v = (0.20) d^2/t_{50}
 C_v = 21 m²/yr
 k = 1.4×10^{-8} m/s

VOLUME CHANGE Δv cm³

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Fig:

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