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ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND
SYMBOLS REFER FORM F:GEOT 017/8-2014

BOREHOLE No BH7
SHEET 1 of 5
REFERENCE No H12014

PROJECT Mt Whitestone: Slope Instability Investigation - Preliminary Inclinator Boreholes
LOCATION Above tension features COORDINATES 416442.6 E; 6937619.6 N
PROJECT No FG6128 SURFACE R.L. 306.52m PLUNGE _____ DATE STARTED 17/11/14 GRID DATUM MGA94
JOB No _____ HEIGHT DATUM AHD BEARING _____ DATE COMPLETED 19/11/14 DRILLER Hinterland

DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD () %	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING	INTACT STRENGTH (AS1726)	DEFECT SPACING (AS1726)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
0	306.52												
1						Clayey SILT (COLLUVIUM) Red brown, moist, stiff. With traces of angular gravel up to 5mm in size.							
2					A							7,12,12	SPT
3					B		(ML)					13,17,21	SPT
4					C							8,9,10	SPT
5													
6	300.52				D	Silty SAND (COLLUVIUM) Red brown, moist, dense. With traces of angular gravel up to 15mm in size.						21,30/150mm	SPT
7					E		(SM)					21,30/110mm	SPT
8	298.62					Sandy CLAY with Cobbles (COLLUVIUM) Orange brown, moist. Generally comprises a very stiff Sandy Clay which contains high strength cobbles up to 130mm size.							
9				100			(CI)						
10				75									

REMARKS *Load cell used does not comply with the test method requirements.

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DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD () %	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING	INTACT STRENGTH (AS1726)	DEFECT SPACING (AS1726)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
10	296.52												
11			58									Sandstone cobble	
12			35 0				(C)					PP(Su)kPa = 30 Slightly dispersive material. PP(Su)kPa = 25	
13			46										
13			37										
13			83										
14	292.92		88			Sandy CLAY with Cobbles and Boulders (COLLUVIUM) Orange brown, moist. Generally comprises a hard Sandy Clay of intermediate plasticity which contains a mix of high strength cobbles and boulders up to 200mm size. Becoming light grey mottled orange						Sandstone cobble Soft clay seam	PP(Su)kPa = 185
15			100									Sandstone cobble	PP(Su)kPa = 185
16			94									Soft clay seam	
16												Sandstone cobble	PP(Su)kPa = 160 PP(Su)kPa = 200 PP(Su)kPa = 155
17			100				(C)					PP(Su)kPa = 230 (unwrapped sample) Dispersive material. PP(Su)kPa = 200 (unwrapped sample) PP(Su)kPa = 200 (unwrapped sample)	
18			100									PP(Su)kPa = 185 PP(Su)kPa = 105	
19												PP(Su)kPa = 140 PP(Su)kPa = 205 PP(Su)kPa = 255 PP(Su)kPa = 230 PP(Su)kPa = 185 PP(Su)kPa = 215 PP(Su)kPa = 230	
20						19.7 - 20.6m trace organic material							

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BOREHOLE No BH7
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DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD () %	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING	INTACT STRENGTH (AS1728)	DEFECT SPACING (AS1728)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
20	286.52												
21	285.04		98				(C)					PP(Su)kPa > 300 Dispersive material. PP(Su)kPa = 275 %Pass 2.360mm = 98 %Pass 0.075mm = 54 Fracture at 25° planar, polished, tight & clean %Pass 0.002mm = 24 PP(Su)kPa = 160	
22	284.52		98			Clayey SAND (COLLUVIUM) Orange brown, moist. Generally comprises a medium dense Clayey Sand which contains high strength rock fragments.	(C)					PP(Su)kPa = 85 Highly dispersive material.	
23						Sandy CLAY with Cobbles and Boulders (COLLUVIUM) Light grey brown, moist. Generally comprises a hard Sandy Clay of intermediate plasticity which contains a mix of high strength cobbles and boulders up to 650mm size. Heavily iron stained and soft clay seams throughout.						PP(Su)kPa = 85 PP(Su)kPa = 125 Total circulation loss Sandstone boulder Sandstone cobble PP(Su)kPa = 70 PP(Su)kPa = 40 PP(Su)kPa = 45 PP(Su)kPa = 50 Sandstone boulder	
24			100									PP(Su)kPa = 40 PP(Su)kPa = 135 LL = 29; PI = 16; LS = 8.6; MC = 15%; Emerson Class 1 PP(Su)kPa = 180 PP(Su)kPa = 230 Sandstone cobble	
25												PP(Su)kPa = 115 Sandstone cobble	
26			100				(C)					PP(Su)kPa = 160 PP(Su)kPa = 210	
27												PP(Su)kPa = 190 PP(Su)kPa = 150 PP(Su)kPa = 170 PP(Su)kPa = 100	
28													
29			97										
30						29.6m Permeability test: 8.9×10^{-7} m/s							

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MR LIBRARY FILE 2014.GLB Log A-ENGINEERING BOREHOLE LOG W/LITHOLOGY FG6128 MT WHITESTONE COMBINED GPJ <<DrawingFile>> Datagel CPT Tool g/Nt Add-In 11/11/2015 15:28													
DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD () %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING	INTACT STRENGTH (AS1726)	DEFECT SPACING (AS1726)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS	
30	276.52												
					Sandy CLAY with Cobbles and Boulders (COLLUVIUM) as before		(CI)				Sandstone boulder	PP(Su)kPa = 285 PP(Su)kPa = 160 PP(Su)kPa = 290 PP(Su)kPa = 280 PP(Su)kPa = 250 PP(Su)kPa = 200 Soft clay seam with rock fragments PP(Su)kPa > 300 PP(Su)kPa = 180 Soft clay seam with rock fragments PP(Su)kPa = 195 PP(Su)kPa > 300 PP(Su)kPa > 300 PP(Su)kPa = 295 PP(Su)kPa = 225 PP(Su)kPa = 255 Highly dispersive material. PP(Su)kPa > 300 LL = 39; PI = 23; LS = 12.6; DD = 1.82t/m³; WD = 2.11t/m³; MC = 14.5%; c _u = 68kPa; Emerson Class 1 Shrink Swell Index 0.8%pF	
											Sandstone boulder		
											Soft clay seam with rock fragments		
											Sandstone boulder		
		100											
											Soft clay seam with rock fragments		
			</										

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DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD () %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH	DEFECT SPACING	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES	TESTS	
									(AS1728)	(AS1728)					
40	266.52				LP: 0°- 5°(1/m); PI/Ro, TI Js: 10°- 15°(2/m); Stp-PI/Ro, TI Js: 50°- 80°(3/m); Un-PI/Ro, TI Js: 20°(<1/m); Stp/Ro, OP, ClyFL Js: 20°- 30°(3/m); Un-PI/Ro, TI							Soft clay seam			
41	265.26		100		CLAYSTONE MW: Grey, very low - extremely low strength with some iron staining. Minor organic material. Defects: LP: 0°- 5°(2/m); PI/Ro, TI-OP, ClyFL Js: 0°- 10°(5/m); Un-PI/Ro, OP, ClyFL Js: 30°- 40°(4/m); PI/Sm-Ro, TI-OP, ClyFL Js: 65°- 85°(2/m); PI/Sm, TI-OP, ClyFL							Broken zone			
42	264.13				Interbedded CLAYSTONE, SILTSTONE and SANDSTONE MW:Light grey brown, very low strength. Fine laminations at 0-5°. LP: 0-5° (1/m); Un/Ro, OP, ClyFL J: 75° (1/m); PI/Ro, OP, ClyFL							Soft clay seam Broken zone Broken zone Broken zone			
43	263.41		90		Core Loss SANDSTONE MW:Light grey brown, fine grained, generally low to medium strength. Fractured in parts. Defects: J: 0° (1/m); Un/Ro, OP J: 15° (1/m); PI/Ro, OP J: 45° (1/m); Un/Ro, OP J: 70° (1/m); Un/Ro, OP Becoming high strength and heavily ironstained.	MW						Broken zone Minor HCl reaction with sandstone and siltstone. Broken zone Highly dispersive material.			
44	262.92		77		Interbedded CLAYSTONE, SILTSTONE and SANDSTONE MW:Grey brown, low to medium strength. Iron stained with thin laminations at 0-5°. defects: LP: 0°- 5° (2/m); Un/Ro, OP, ClyFL J: 90° (1/m), Un/Ro, TI, ClyFL							Soft clay seam with rock fragments Broken zone Broken zone Broken zone			
45	261.38		82		Borehole terminated at 45.7m							Is(50) = 2.10MPa Is(50) = 3.10MPa 200mm core slipped out of catcher, not retrievable due to casing advancement Inclinometer installed	x o L L		
46	260.82														
47															
48															
49															
50															

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