

DOUGLAS PARTNERS PTY LTD

MACQUARIE VILLAGE

BORE 109 PROJECT 72138 14 DECEMBER 2010



BOREHOLE LOG

CLIENT: Stamford Property Services Pty Ltd
PROJECT: Macquarie Village
LOCATION: 110-114 Herring Road, Macquarie Park

SURFACE LEVEL: 74 AHD
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/-

BORE No: 110
PROJECT No: 72138
DATE: 10/12/2010
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering					Graphic Log	Rock Strength					Water	Fracture Spacing (m)	Discontinuities		Sampling & In Situ Testing			
			EW	HW	MW	SW	FS		Ex Low	Very Low	Low	Medium	High	Very High		B - Bedding S - Shear	J - Joint F - Fault	Type	Core Rec. %	RCD %	Test Results & Comments
74		FILLING - poorly compacted, brown silty clay filling with organic matter, moist																A/E			
73	0.7	CONCRETE - 300mm thick																A/E			
73	1.0	LAMINITE - low strength, moderately weathered, brown laminite																S			
72	1.6	LAMINITE - high strength with low strength, bands, slightly and moderately weathered, fragmented to fractured, purple red and grey laminite																			PL(A) = 0.8
71	2.72-3.10m	extremely low strength band with 200mm thick clay seam																			
70	3.1	SANDSTONE - high strength, moderately weathered and fresh, fractured and slightly fractured, orange brown and light grey, medium grained sandstone																			
69	~ distinct laminations from 3.1m to 5.2m, 5.9m to 6.2m and 7.3m to 7.7m																				
68	5																				PL(A) = 3
67	6																				PL(A) = 1.4
66	7																				PL(A) = 1.4
65	8																				PL(A) = 1.4
64	9																				PL(A) = 1.6
63	9.3																				PL(A) = 1.4
62																					PL(A) = 1.9
61																					PL(A) = 0.6

RIG: Bobcat

DRILLER: SS

LOGGED: PGH

CASING: HW to 0.70m

TYPE OF BORING: Solid flight auger (TC-bit) to 0.70m; NMLC-Coring to 16.0m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Standpipe installed to 16.0m; Water level measured at 11.5m on 20/12/10 and 11.7m on 22/12/10

SURVEY DATUM:

SAMPLING & IN SITU TESTING LEGEND			
A Auger sample	G Gas sample	PID Photo ionisation detector (ppm)	
B Bulk sample	P Piston sample	PL(A) Point load axial test Is(50) (MPa)	
BLK Block sample	U ₁ Tube sample (x mm dia.)	PL(D) Point load diametral test Is(50) (MPa)	
C Core drilling	W Water sample	pp Pocket penetrometer (kPa)	
D Disturbed sample	Δ Water seep	S Standard penetration test	
E Environmental sample	≡ Water level	V Shear vane (kPa)	

BOREHOLE LOG

CLIENT: Stamford Property Services Pty Ltd
PROJECT: Macquarie Village
LOCATION: 110-114 Herring Road, Macquarie Park

SURFACE LEVEL: 74 AHD
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 110
PROJECT No: 72138
DATE: 10/12/2010
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering				Graphic Log	Rock Strength					Water	Fracture Spacing (m)	Discontinuities		Sampling & In Situ Testing			Test Results & Comments		
			EW	HW	MW	SW		FS	FR	Ex Low	Very Low	Low			Medium	High	Very High	Ex High	B - Bedding S - Shear		J - Joint F - Fault	Type
84																						
	10.7	SANDSTONE - medium then low strength with some extremely low strength zones, fresh then slightly and moderately weathered, slightly fractured, light grey and orange brown, medium grained sandstone (continued)														10.27m: Cs, 10mm		C	100			PL(A) = 0.2
63	11	SANDSTONE - high strength, fresh, slightly fractured, light grey, medium grained sandstone														10.63m: Cz, 50mm						PL(A) = 1
	11.66	SANDSTONE - medium strength, moderately weathered, slightly fractured, orange brown, medium grained sandstone														11.46m: Cs, 10mm 11.66m: Cs, 10mm 11.73m: J35°, pl, ro		C	100			PL(A) = 0.3
62	12																					PL(A) = 1.1
	13.1	SANDSTONE - high strength, slightly weathered and fresh, slightly fractured, light orange and grey, medium grained sandstone														12.5-12.54m: B (x2) 10°, pl, ro, cly						PL(A) = 1
61	13																					PL(A) = 1.3
60	14																					
59	15																	C	100			
58	16	Bore discontinued at 16.0m																				
57	17																					
56	18																					
55	19																					

RIG: Bobcat

DRILLER: SS

LOGGED: PGH

CASING: HW to 0.70m

TYPE OF BORING: Solid flight auger (TC-bit) to 0.70m; NMLC-Coring to 16.0m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Standpipe installed to 16.0m; Water level measured at 11.5m on 20/12/10 and 11.7m on 22/12/10

SURVEY DATUM:

SAMPLING & IN SITU TESTING LEGEND			
A Auger sample	G Gas sample	PID Photo ionisation detector (ppm)	
B Bulk sample	P Piston sample	PL(A) Point load axial test Is(50) (MPa)	
BLK Block sample	U Tube sample (x mm dia.)	PL(D) Point load diametral test Is(50) (MPa)	
C Core drilling	W Water sample	pp Pocket penetrometer (kPa)	
D Disturbed sample	Δ Water seep	S Standard penetration test	
E Environmental sample	≡ Water level	V Shear vane (kPa)	

DOUGLAS PARTNERS PTY LTD

MACQUARIE VILLAGE

BORE 110 PROJECT 72138 10 DECEMBER 2010

NORTH RYDE 10 12-10 START
72138 BH 110 BOX 1/4 1.4m

2

3

4

5

1.40 – 6.00 m

DOUGLAS PARTNERS PTY LTD

MACQUARIE VILLAGE

BORE 110 PROJECT 72138 10 DECEMBER 2010

6

7

8

9

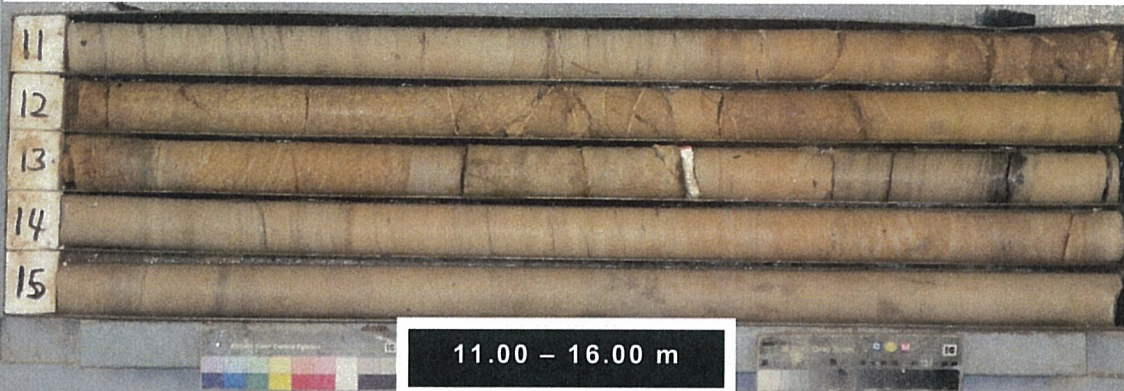
10

6.00 – 11.00 m

DOUGLAS PARTNERS PTY LTD

MACQUARIE VILLAGE

BORE 110 PROJECT 72138 10 DECEMBER 2010



BOREHOLE LOG

CLIENT: Stamford Property Services Pty Ltd
PROJECT: Macquarie Village
LOCATION: 110-114 Herring Road, Macquarie Park

SURFACE LEVEL: 72.2 AHD
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 111
PROJECT No: 72138
DATE: 9/12/2010
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering					Graphic Log	Rock Strength					Water	Fracture Spacing (m)	Discontinuities		Sampling & In Situ Testing			
			EW	HW	MW	SW	FS		Ext Low	Very Low	Low	Medium	High	Very High		B - Bedding S - Shear	J - Joint F - Fault	Type	Core Rec. %	RQD %	Test Results & Comments
72	0.15	CONCRETE - 150mm thick																A/E			
	0.5	FILLING - brown silty clay filling, with some organic matter (grass cuttings) and sub-rounded gravel																A/E			
	0.8	FILLING - light brown, silty clay filling with some angular gravel																A			
71	1.1	LAMINITE - extremely low strength extremely weathered, red purple laminite with some clay																S			20/40mm refusal
		LAMINITE - high strength with extremely low strength bands, highly weathered with extremely weathered bands, highly fractured to fractured, grey and red brown, medium grained laminite																C			PL(A) = 1.2
70	2																				
69	3																				PL(A) = 1.1
68	4																				
67	4.36	SANDSTONE - medium to high then high strength, slightly weathered then fresh, slightly fractured, light grey then orange brown, medium grained sandstone, thickly bedded with indistinct and distinct laminations																C	100	34	PL(A) = 1
66	5																				PL(A) = 0.9
65	6																				PL(A) = 0.9
64	7																				PL(A) = 1.5
63	8																	C	100	99	PL(A) = 1.1
	9																				PL(A) = 0.8
	9.0	SANDSTONE - high strength, slightly then moderately weathered, light grey then orange brown, slightly fractured, medium grained sandstone, thickly bedded with distinct laminations																C	100	92	PL(A) = 1.2

RIG: Bobcat

DRILLER: SY

LOGGED: PGH

CASING: HW to 1.0m

TYPE OF BORING: Diatube to 0.15m; Solid flight auger (TC-bit) to 1.0m; Rotary (water) to 1.10m; NMLC-Coring to 14.20m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS:

SURVEY DATUM:

SAMPLING & IN SITU TESTING LEGEND			
A Auger sample	G Gas sample	PID Photo ionisation detector (ppm)	
B Bulk sample	P Piston sample	PL(A) Point load axial test (s(50) (MPa)	
BLK Block sample	U Tube sample (x mm dia.)	PL(D) Point load diametral test (s(50) (MPa)	
C Core drilling	W Water sample	pp Pocket penetrometer (kPa)	
D Disturbed sample	W Water seep	S Standard penetration test	
E Environmental sample	W Water level	V Shear vane (kPa)	

BOREHOLE LOG

CLIENT: Stamford Property Services Pty Ltd
PROJECT: Macquarie Village
LOCATION: 110-114 Herring Road, Macquarie Park

SURFACE LEVEL: 72.2 AHD
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 111
PROJECT No: 72138
DATE: 9/12/2010
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering					Graphic Log	Rock Strength					Water	Fracture Spacing (m)	Discontinuities		Sampling & In Situ Testing					
			EW	HW	MW	SW	FS		FR	Ex Low	Very Low	Low	Medium			High	Very High	Ex High	B - Bedding S - Shear	J - Joint F - Fault	Type	Core Rec. %	RQD %
62		SANDSTONE - high strength, slightly then moderately weathered, light grey then orange brown, slightly fractured, medium grained sandstone, thickly bedded with distinct laminations (continued)																				PL(A) = 1.3	
11																							PL(A) = 1.2
61																							
12																							PL(A) = 1.3
60																							
13																							
59																							
14																						PL(A) = 1.4	
58	14.2	Bore discontinued at 14.2m																				PL(A) = 1	
15																							
57																							
16																							
56																							
17																							
55																							
18																							
54																							
19																							
53																							

RIG: Bobcat

DRILLER: SY

LOGGED: PGH

CASING: HW to 1.0m

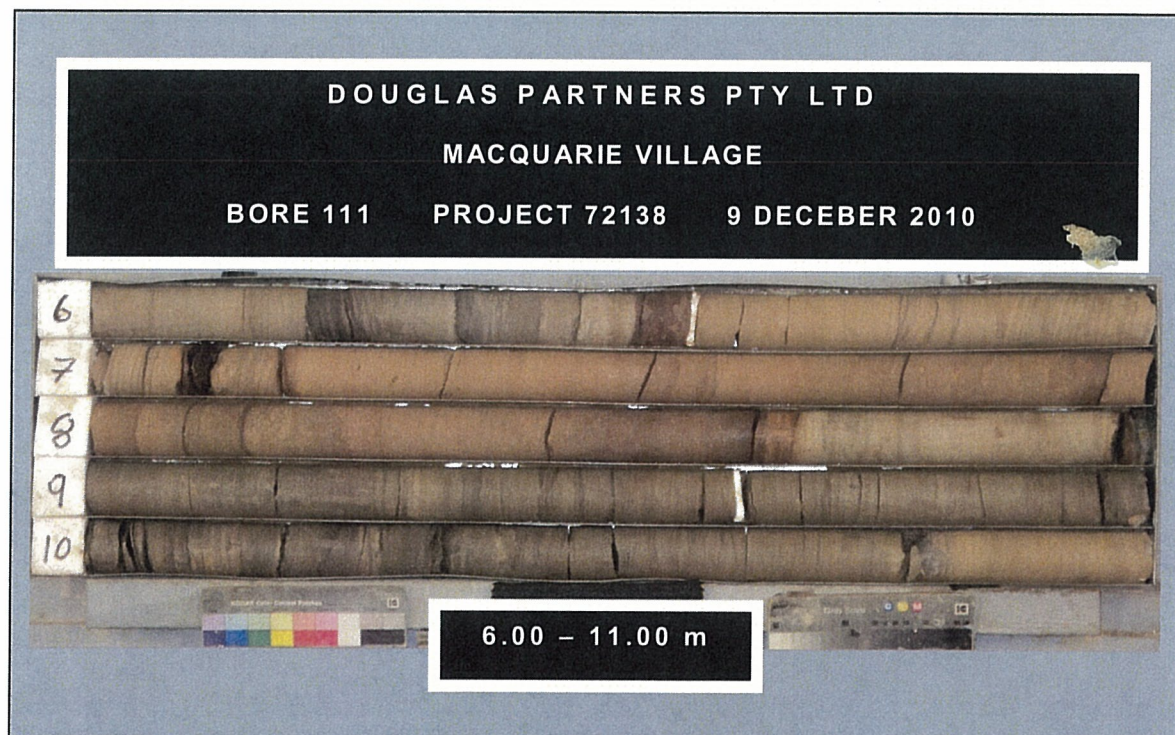
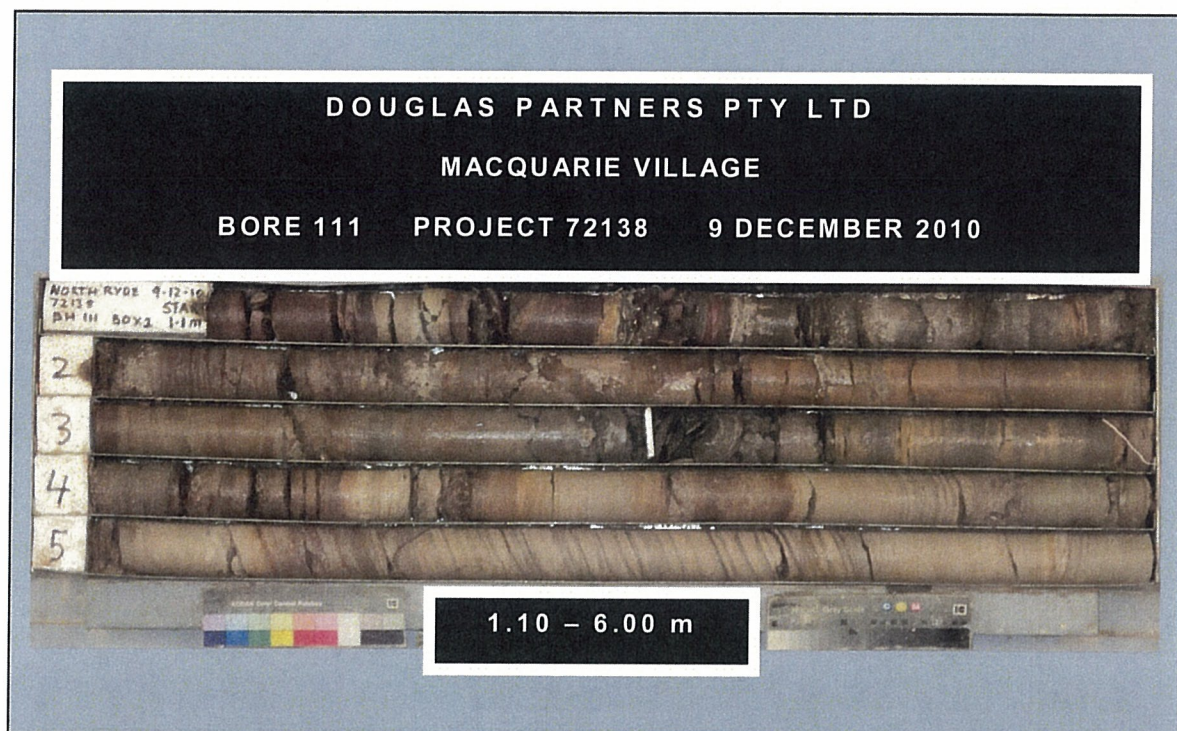
TYPE OF BORING: Diatube to 0.15m; Solid flight auger (TC-bit) to 1.0m; Rotary (water) to 1.10m; NMLC-Coring to 14.20m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS:

SURVEY DATUM:

SAMPLING & IN SITU TESTING LEGEND			
A Auger sample	G Gas sample	PID Photo ionisation detector (ppm)	
B Bulk sample	P Piston sample	PL(A) Point load axial test Is(50) (MPa)	
BLK Block sample	U _p Tube sample (x mm dia.)	PL(D) Point load diametral test Is(50) (MPa)	
C Core drilling	W Water sample	pp Pocket penetrometer (kPa)	
D Disturbed sample	W _s Water seep	S Standard penetration test	
E Environmental sample	W _l Water level	V Shear vane (kPa)	



DOUGLAS PARTNERS PTY LTD

MACQUARIE VILLAGE

BORE 111 PROJECT 72138 9 DECEMBER 2010

11

12

13

14

END OF BORE 14.2 m

11.00 - 14.20 m

BOREHOLE LOG

CLIENT: Stamford Property Services Pty Ltd
PROJECT: Macquarie Village
LOCATION: 110-114 Herring Road, Macquarie Park

SURFACE LEVEL: 72 AHD
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/-

BORE No: 112
PROJECT No: 72138
DATE: 20/12/2010
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering					Graphic Log	Rock Strength					Water	Fracture Spacing (m)	Discontinuities		Sampling & In Situ Testing				
			EW	HW	MW	SW	FS		FR	Ex Low	Very Low	Low	Medium			High	Very High	Ex High	B - Bedding S - Shear	J - Joint F - Fault	Type	Core Rec. %
72	0.08	PAVERS																				
	0.1	FILLING - yellow brown, sand filling																A/E			10,12/125mm refusal	
	0.2	FILLING (ROADBASE) - grey blue metal gravel filling																A/E				
		LAMINITE - extremely low strength, yellow brown laminite																S				
71	1	LAMINITE - medium and high strength, highly to moderately weathered, slightly fractured, orange brown, grey and purple red laminite																			2.93m: J45°, st, ro, cln	
	2	2.19-2.4m: fragmented zone																C	100	98		PL(A) = 0.8
	3																					PL(A) = 0.6
	4	3.83-3.95m: 130mm clay band																C	100	96		PL(A) = 1.4
	4.6	SANDSTONE - high strength, highly weathered to fresh, fractured to slightly fractured, orange brown and grey, medium to coarse grained sandstone																				PL(A) = 1.6
	5																					PL(A) = 1.5
	6																					PL(A) = 1
	7																	C	100	93		PL(A) = 1
	8																					PL(A) = 1
	9	9.45-11.20m: distinctly laminated																C	100	99	PL(A) = 1	

RIG: Multi-drill

DRILLER: SK

LOGGED: PGH

CASING: NW to 1.2m

TYPE OF BORING: Diatube to 0.1m; Solid flight auger (TC-bit) to 1.2m; NMLC-Coring to 14.0m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS:

SURVEY DATUM:

SAMPLING & IN SITU TESTING LEGEND			
A Auger sample	G Gas sample	PID Photo ionisation detector (ppm)	
B Bulk sample	P Piston sample	PL(A) Point load axial test Is(50) (MPa)	
BLK Block sample	U ₁ Tube sample (x mm dia.)	PL(D) Point load diametral test Is(50) (MPa)	
CC Core drilling	W Water sample	pp Pocket penetrometer (kPa)	
D Disturbed sample	W ₁ Water seep	S Standard penetration test	
E Environmental sample	W ₂ Water level	V Shear vane (kPa)	

BOREHOLE LOG

CLIENT: Stamford Property Services Pty Ltd
PROJECT: Macquarie Village
LOCATION: 110-114 Herring Road, Macquarie Park

SURFACE LEVEL: 72 AHD
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/-

BORE No: 112
PROJECT No: 72138
DATE: 20/12/2010
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering				Graphic Log	Rock Strength						Water	Fracture Spacing (m)	Discontinuities		Sampling & In Situ Testing			Test Results & Comments																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
			EW	HW	MW	SW		FS	FR	Ex Low	Very Low	Low	Medium			High	Very High	Ex High	B - Bedding S - Shear	J - Joint F - Fault		Type	Core Rec. %	RQD %																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
62		SANDSTONE - high strength, highly weathered to fresh, fractured to slightly fractured, orange brown and grey, medium to coarse grained sandstone (continued)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

RIG: Multi-drill

DRILLER: SK

LOGGED: PGH

CASING: NW to 1.2m

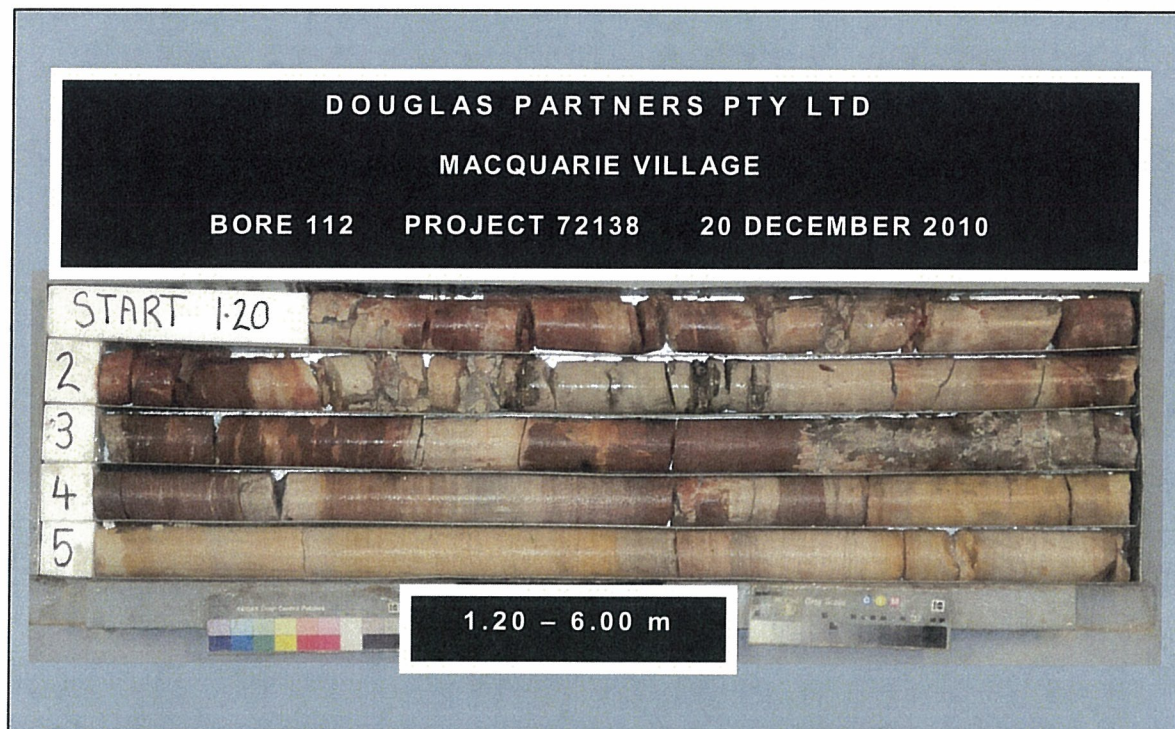
TYPE OF BORING: Diatube to 0.1m; Solid flight auger (TC-bit) to 1.2m; NMLC-Coring to 14.0m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS:

SURVEY DATUM:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U _t	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W _s	Water seep
E	Environmental sample	W _l	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



DOUGLAS PARTNERS PTY LTD

MACQUARIE VILLAGE

BORE 112 PROJECT 72138 20 DECEMBER 2010



11.00 – 14.00 m