

DOUGLAS PARTNERS PTY LTD

MACQUARIE VILLAGE

BORE 107 PROJECT 72138 13 DECEMBER 2010

NORTH RYDE 72138 BH107 START 1.50m



1.50 – 6.00 m

DOUGLAS PARTNERS PTY LTD

MACQUARIE VILLAGE

BORE 107 PROJECT 72138 13 DECEMBER 2010



6.00 – 11.00 m

DOUGLAS PARTNERS PTY LTD

MACQUARIE VILLAGE

BORE 107 PROJECT 72138 13 DECEMBER 2010



11.00 – 16.00 m

BORE No: 108
PROJECT No: 72138
DATE: 20/12/2010
SHEET 1 OF 2



Douglas Partners
Geotechnics | Environment | Groundwater

BOREHOLE LOG

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

SURFACE LEVEL: 75 AHD
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 108
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 %																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
65		SANDSTONE - high strength, highly and moderately weathered then slightly weathered, slightly fractured, red brown and light orange, medium to coarse grained sandstone <i>(continued)</i>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									

RIG: Bobcat

DRILLER: SS

LOGGED: PGH

CASING: HW to 1.50m

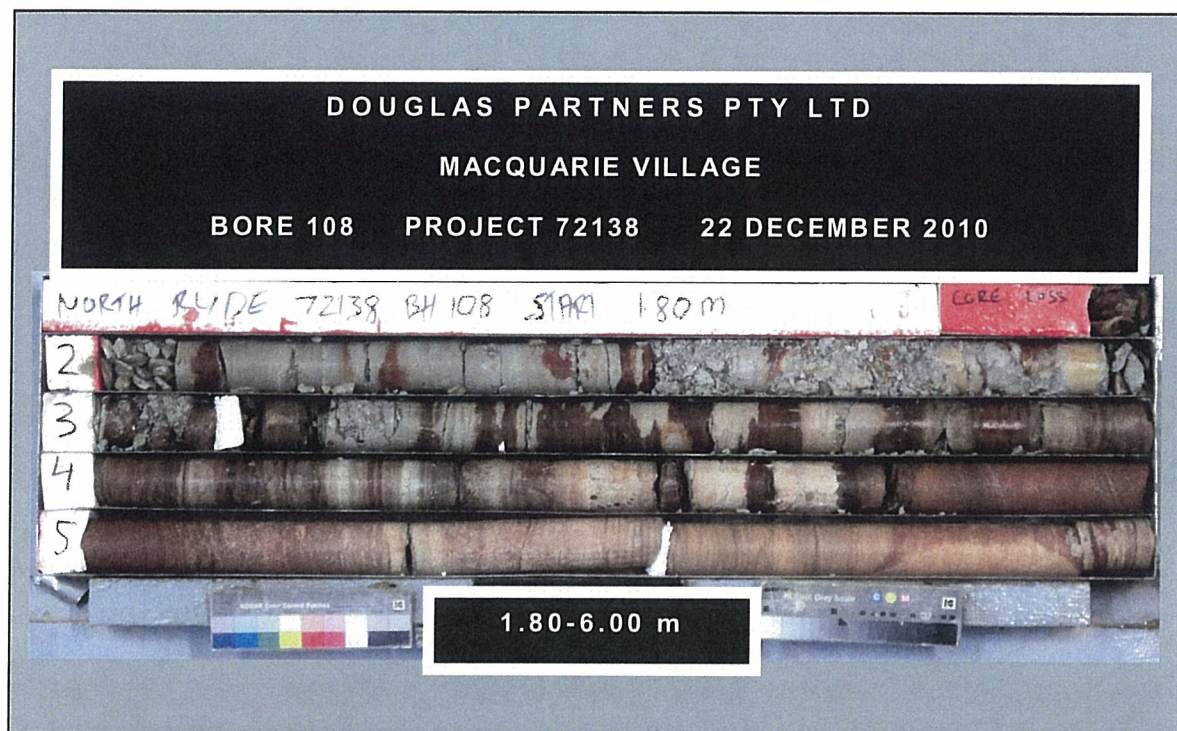
TYPE OF BORING: Solid flight auger (TC-bit) to 1.50m; Rotary (water) to 1.80m; NMLC-Coring to 17.55m

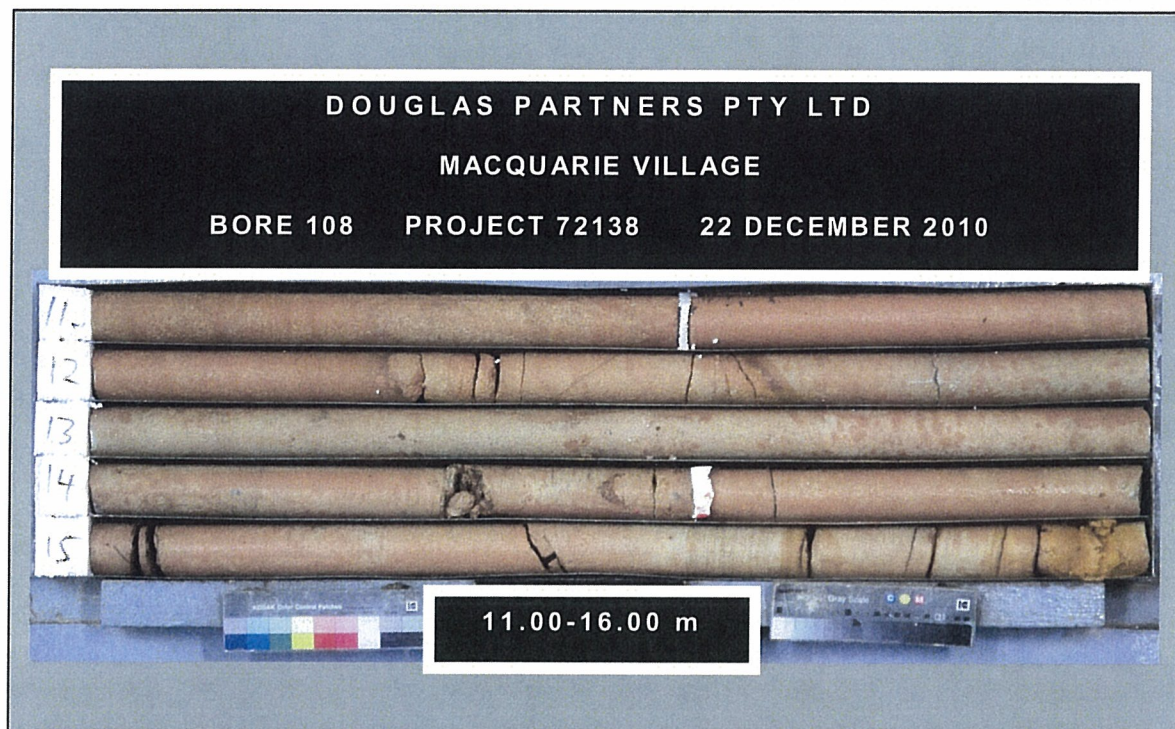
WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS:

SURVEY DATUM:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U _s	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)





BOREHOLE LOG

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

SURFACE LEVEL: 73.6 AHD
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 109
PROJECT No: 72138
DATE: 20/12/2010
SHEET 1 OF 2

[illegible]

RIG: Bobcat

DRILLER: SY/SS

LOGGED: PGH

CASING: HW to 1.40m

TYPE OF BORING: Solid flight auger (TC-bit) to 1.40m; NMLC-Coring to 16.18m

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	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W	Water seep
E	Environmental sample	W	Water level
		PLD	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)



BOREHOLE LOG

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

SURFACE LEVEL: 73.6 AHD
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 109
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				
			EW	HW	MW	SW		FS	Ex Low	Very Low	Low	Medium			High	Very High	Ex High	B - Bedding S - Shear	J - Joint F - Fault	Type
63	11	SANDSTONE - medium to high strength, slightly weathered and fresh, slightly fractured to unbroken, light orange and grey, medium to coarse grained sandstone (continued)													10.68m: J80°, pl, ro, fe	C	100	100	PL(A) = 0.9	
																			PL(A) = 0.8	
																				PL(A) = 1
62																				PL(A) = 1
61																				PL(A) = 1
13	14	Bore discontinued at 16.18m													13.4m: Cs, 10mm	C	100	100	PL(A) = 0.4	
60																			PL(A) = 0.7	
59																				PL(A) = 1.2
58																				
16																				
16.18	17	Bore discontinued at 16.18m																		
57																				
18																				
56																				
19																				
55	19	Bore discontinued at 16.18m																		
54																				

RIG: Bobcat

DRILLER: SY/SS

LOGGED: PGH

CASING: HW to 1.40m

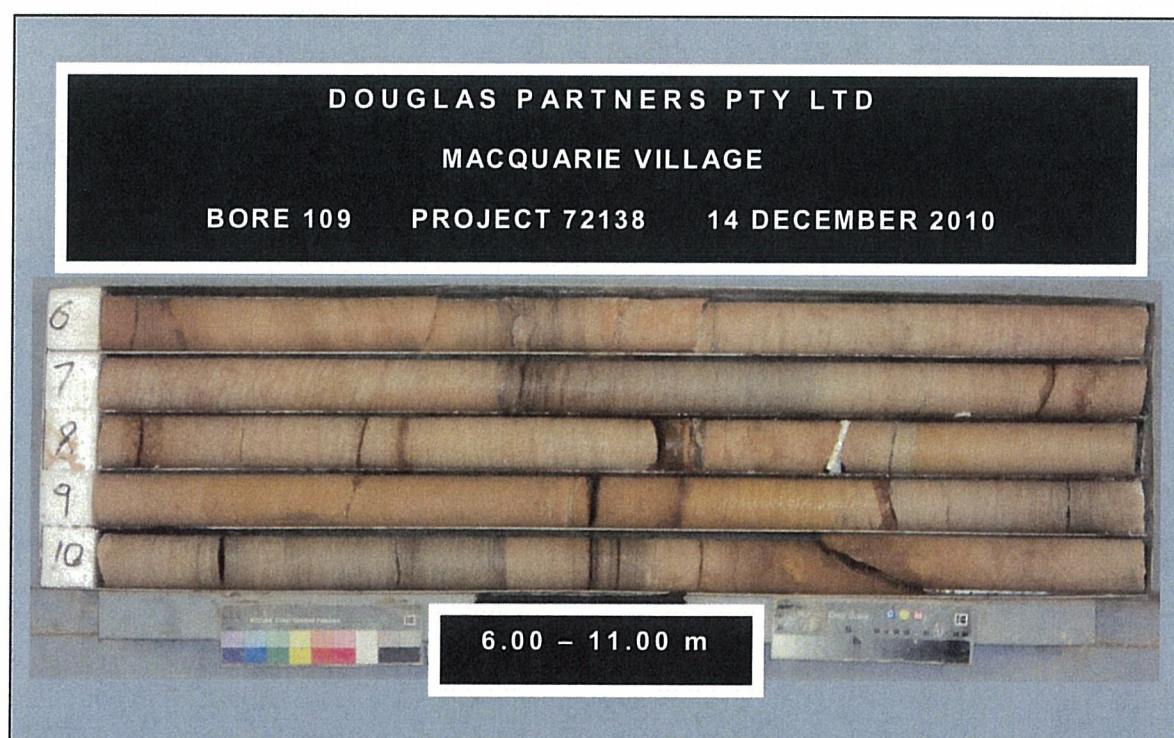
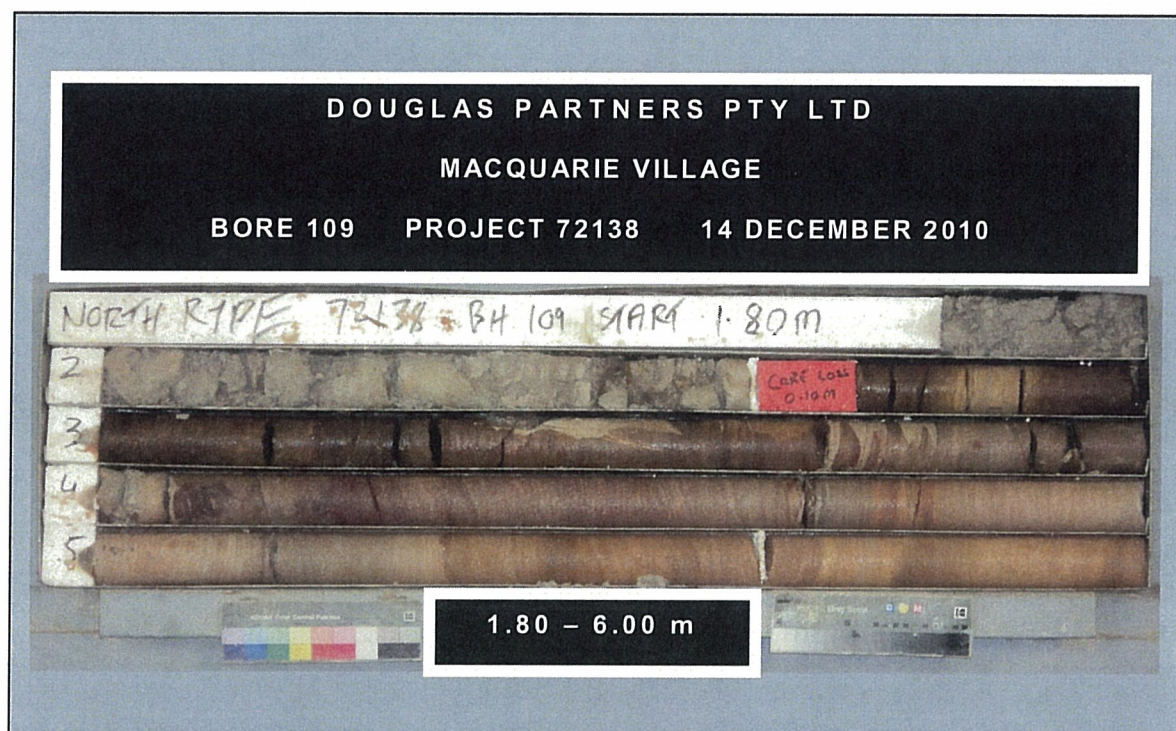
TYPE OF BORING: Solid flight auger (TC-bit) to 1.40m; NMLC-Coring to 16.18m

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	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W	Water seep
E	Environmental sample	W	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 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		FR	Ex Low	Low	Very Low	Medium		High	Very High	Ex High	0.01	0.05	0.10	0.50	1.00	B - Bedding S - Shear	J - Joint F - Fault	Type	Core Rec. %
74		FILLING - poorly compacted, brown silty clay filling with organic matter, moist																				A/E				
	0.7	CONCRETE - 300mm thick																				A/E				
73	1.0	LAMINITE - low strength, moderately weathered, brown laminite																				S				
	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
72	2																									PL(A) = 3
	2.72-3.10m	extremely low strength band with 200mm thick clay seam																								
71	3.1	SANDSTONE - high strength, moderately weathered and fresh, fractured and slightly fractured, orange brown and light grey, medium grained sandstone																								PL(A) = 1.4
		~ distinct laminations from 3.1m to 5.2m, 5.9m to 6.2m and 7.3m to 7.7m																								
70	4																									PL(A) = 1.4
																										PL(A) = 1.6
69	5																									PL(A) = 1.4
																										PL(A) = 1.6
68	6																									PL(A) = 1.4
																										PL(A) = 1.9
67	7																									PL(A) = 0.6
66	8																									
65	9																									
	9.3																									

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
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W	Water seep
E	Environmental sample	W	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test (s(50) (MPa)
		PL(D)	Point load diametral test (s(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		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				
			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. %
84															0.01							
	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 PL(A) = 1.1
62	12																12.5-12.54m: B (x2) 10°, pl, ro, cly					
61	13	SANDSTONE - high strength, slightly weathered and fresh, slightly fractured, light orange and grey, medium grained sandstone																				PL(A) = 1.3
	13.1																					
60	14																					
59	15																		C	100		PL(A) = 1
58	16	Bore discontinued at 16.0m																				
57	17																					
56	18																					
55	19																					

RIG: Bobcat

DRILLER: SS

LOGGED: PGH

CASING: HW to 0.70m

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WATER OBSERVATIONS: No free groundwater observed whilst augering

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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)	