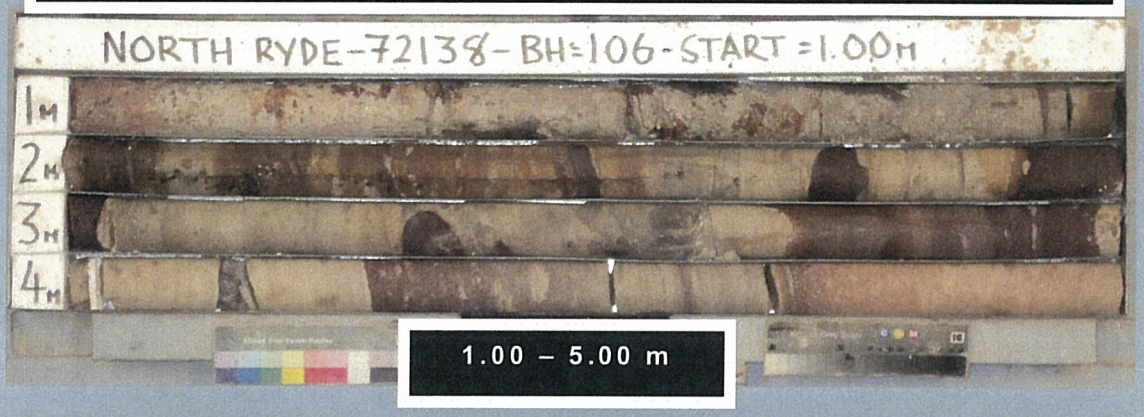
DOUGLAS PARTNERS PTY LTD

MACQUARIE VILLAGE

BORE 106 PROJECT 72138 16 DECEMBER 2010

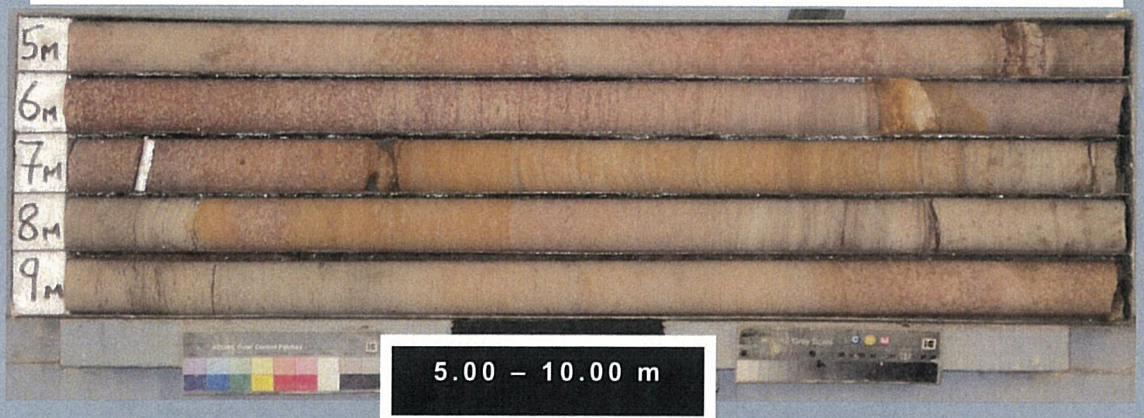


1.00 – 5.00 m

DOUGLAS PARTNERS PTY LTD

MACQUARIE VILLAGE

BORE 106 PROJECT 72138 10 DECEMBER 2010



5.00 – 10.00 m

DOUGLAS PARTNERS PTY LTD

MACQUARIE VILLAGE

BORE 106 PROJECT 72138 13 DECEMBER 2010

10.00 – 15.00 m

BOREHOLE LOG

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

SURFACE LEVEL: 74.6 AHD
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 107
PROJECT No: 72138
DATE: 13/12/2010
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
74	0.05	ASPHALT - 50mm thick							A/E			
	0.45	FILLING (ROADBASE) - sub-angular blue metal gravel filling							A/E			
	0.7	FILLING - red brown, silty clay filling with some blue metal gravel, dry						Note: Unless otherwise stated, rock is fractured along rough planar bedding planes dipping 0°- 10°				
1		SHALY CLAY - hard, highly weathered, grey shaly clay with ironstone bands							S/E			9,21,25 N = 46
73	1.6							1.5m: CORE LOSS: 100mm				
	1.83	LAMINITE - medium strength with medium to high strength ironstone bands, highly and moderately weathered, fractured and slightly fractured, grey with purple red bands laminite							C	96	90	PL(A) = 0.3
2												
72												PL(A) = 1.5
3												
71												
4	4.0	SANDSTONE - high strength, moderately weathered, slightly fractured, purple red with grey bands, medium grained sandstone with distinct laminations										PL(A) = 1.6
70												
5												
69									C	100	95	PL(A) = 1.4
6												
68								6.3m: B10°, pl, ro, fe 6.36m: B10°, pl, ro, fe				PL(A) = 1.6
7	7.0	SANDSTONE - high strength, slightly and moderately weathered with some fresh stained zones, slightly fractured, light grey and orange, medium grained sandstone										
67												PL(A) = 1.4
8												
66								8.41m: B0°, pl, ro, fe	C	100		PL(A) = 2.2
9												
65												PL(A) = 1.5

RIG: Bobcat **DRILLER:** SS **LOGGED:** PGH **CASING:** HW to 1.5m

TYPE OF BORING: Solid flight auger (TC-bit) to 1.5m; NMLC-Coring to 16.0m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: 15% Water loss at 8.90m; 90% water loss from 13.0m

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	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

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

SURFACE LEVEL: 74.6 AHD
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 107
PROJECT No: 72138
DATE: 13/12/2010
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
64	11	SANDSTONE - high strength, slightly and moderately weathered with some fresh stained zones, slightly fractured, light grey and orange, medium grained sandstone *(continued)*						10.68m: B11°, pl, ro, fe 10.78m: B11°, pl, ro, fe 10.85m: B11°, pl, ro, fe				PL(A) = 1.3
63	12							11.76m: B10°, pl, ro, fe 12.12m: B11°, pl, ro, fe 12.27m: B11°, pl, ro, fe	C	100	98	PL(A) = 1.4
62	13							12.58m: B11°, pl, ro, fe 12.72m: B11°, pl, ro, fe				PL(A) = 1.3
61	14							13.73-14.0m: J85°, pl, ro, fe	C	100	98	PL(A) = 1.2
60	15							14.6m: B15°, pl, ro, fe 15.25m: J45°, pl, ro, fe 15.5m: J70°, pl, ro, he & fe	C	100	100	PL(A) = 1.1
59	16 16.0											PL(A) = 1.4
58	17	Bore discontinued at 16.0m										
57	18											
56	19											
55												

RIG: Bobcat **DRILLER:** SS **LOGGED:** PGH **CASING:** HW to 1.5m

TYPE OF BORING: Solid flight auger (TC-bit) to 1.5m; NMLC-Coring to 16.0m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: 15% Water loss at 8.90m; 90% water loss from 13.0m

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_x	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	▷	Water seep	S	Standard penetration test
E	Environmental sample	▽	Water level	V	Shear vane (kPa)

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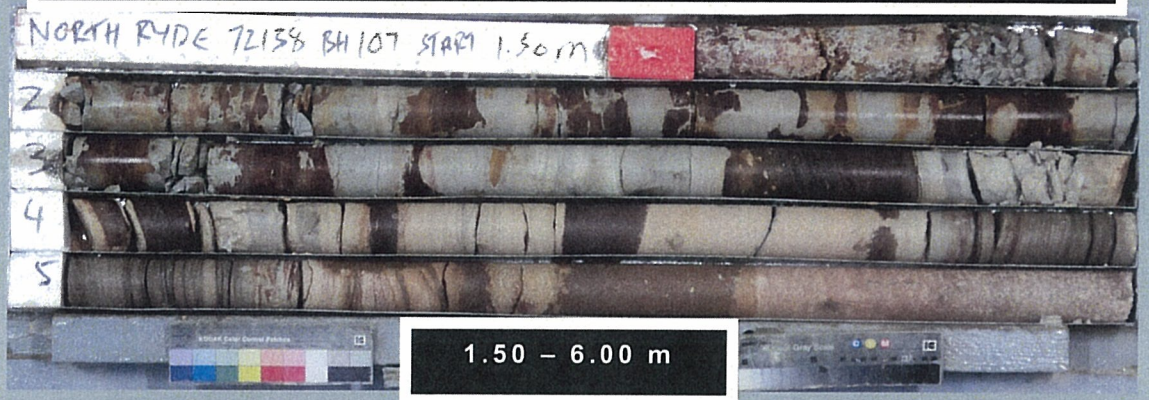
MACQUARIE VILLAGE

BORE 107 PROJECT 72138 13 DECEMBER 2010



1.50 – 6.00 m

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MACQUARIE VILLAGE

BORE 107 PROJECT 72138 13 DECEMBER 2010

6.00 – 11.00 m

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MACQUARIE VILLAGE

BORE 107 PROJECT 72138 13 DECEMBER 2010

11.00 – 16.00 m

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 1 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
75	0.05	ASPHALT - 50mm							A/E			
	0.2	FILLING (ROADBASE) - blue metal gravel							A/E			
		SILTY CLAY - red brown, silty clay						Note: Unless otherwise stated, rock is fractured along rough planar bedding planes dipping between 0°- 10°	A/E S			10/100mm refusal
74	1.1	LAMINITE - extremely low to very low strength, light grey siltstone										
73	1.93	LAMINITE - medium strength, moderately to highly weathered, unbroken, grey and red brown, fine grained laminite						1.8m: CORE LOSS: 130mm 1.93-2.07m: dib 2.53-2.80m: dib 2.96-3.05m: dib	C	90	92	PL(A) = 0.4
72												PL(A) = 0.9
71									C	100	97	PL(A) = 0.5
70	4.71	SANDSTONE - high strength, highly and moderately weathered then slightly weathered, slightly fractured, red brown and light orange, medium to coarse grained sandstone										PL(A) = 1
69												PL(A) = 1.6
68									C	100	98	
67												PL(A) = 1.2
												PL(A) = 0.8
66								8.4m: J55°, pl, ro, fe				
									C	100	96	PL(A) = 1

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	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	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	▷	Water seep	S	Standard penetration test
E	Environmental sample	▽	Water level	V	Shear vane (kPa)

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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 (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
65		SANDSTONE - high strength, highly and moderately weathered then slightly weathered, slightly fractured, red brown and light orange, medium to coarse grained sandstone *(continued)*						10.38m: B3°, pl, ro, cly	C	100	96	PL(A) = 1.3
64	11											
63	12											PL(A) = 1.1
62	13								C	100	100	PL(A) = 1.3
	13.5	SANDSTONE - medium strength, fresh, slightly fractured, light grey, medium to coarse grained sandstone										PL(A) = 1.2
61	14							14.34m: Cz				
60	15											PL(A) = 0.9
								15.4m: J25°, pl, ro, fe				PL(A) = 0.8
59	16							15.94m: Cs, 10mm	C	100	100	
												PL(A) = 0.9
58	17											
	17.55	Bore discontinued at 17.55m										PL(A) = 0.9
57	18											
56	19											

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	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	▷	Water seep	S	Standard penetration test
E	Environmental sample	⫢	Water level	V	Shear vane (kPa)

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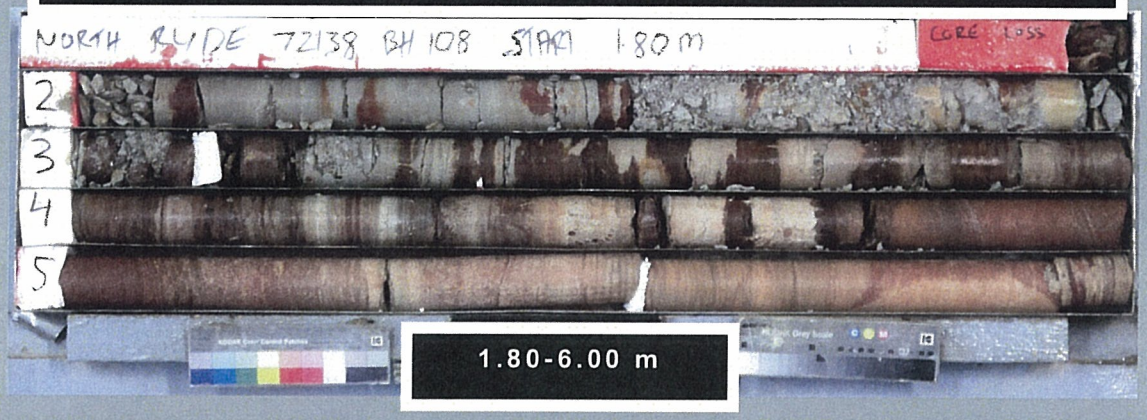
Geotechnics / Environment / Groundwater

DOUGLAS PARTNERS PTY LTD

MACQUARIE VILLAGE

BORE 108 PROJECT 72138 22 DECEMBER 2010

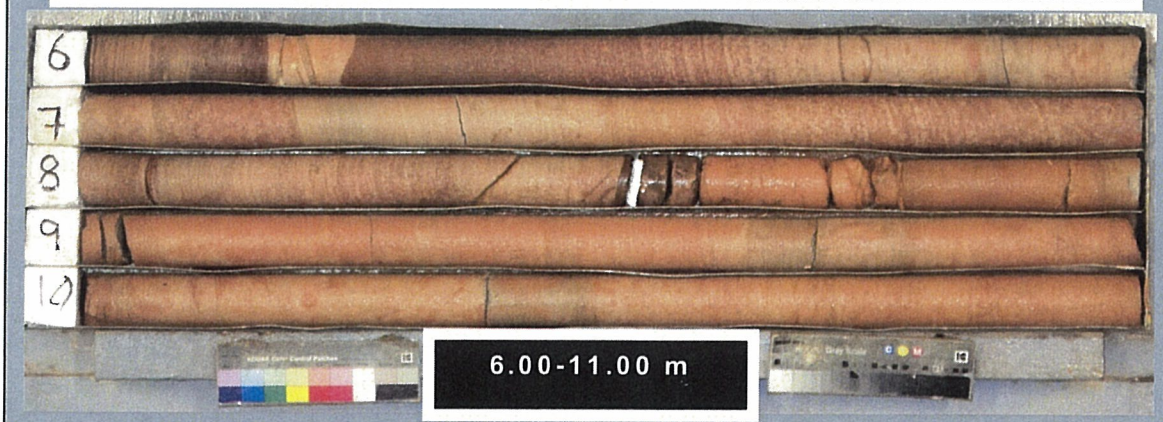


1.80-6.00 m

DOUGLAS PARTNERS PTY LTD

MACQUARIE VILLAGE

BORE 108 PROJECT 72138 22 DECEMBER 2010



6.00-11.00 m


DOUGLAS PARTNERS PTY LTD
MACQUARIE VILLAGE
BORE 108 PROJECT 72138 22 DECEMBER 2010
11
12
13
14
15
11.00-16.00 m


DOUGLAS PARTNERS PTY LTD
MACQUARIE VILLAGE
BORE 108 PROJECT 72138 22 DECEMBER 2010
16
17
16.00-17.60 m

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

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
73	0.2	ASPHALT & ROADBASE - 200mm							A/E			
	0.3	FILLING - gravelly sandy clay filling										
		FILLING - crushed sandstone gravel filling with some clay							A/E			
1								Note: Unless otherwise stated, rock is fractured along rough planar bedding planes dipping between 0°- 10°	A/E S			9,10/30mm refusal
	1.3	SANDSTONE - extremely low strength, extremely weathered sandstone										
72	1.8	SHALY CLAY - hard, grey shaly clay							C	100	11	PL(A) = 0.1
2	2.4	LAMINITE - very low strength, highly weathered, fragmented, grey, medium to coarse grained laminite										
71	2.73	SANDSTONE - medium to high and high strength, highly to slightly weathered, slightly fractured, purple red to light orange, medium to coarse grained sandstone						2.63m: CORE LOSS: 100mm				PL(A) = 0.9
3								3.38m: J85°, pl, ro, he				PL(A) = 5
70		- very high strength from 3.9-4.0m										
4								4.05m: Cs, 5mm	C	97	82	PL(A) = 0.9
69												PL(A) = 1
5												
68												PL(A) = 0.8
6												
67												PL(A) = 1.2
7									C	100	98	
66												PL(A) = 0.7
8												
	8.2	SANDSTONE - medium to high strength, slightly weathered and fresh, slightly fractured to unbroken, light orange and grey, medium to coarse grained sandstone										PL(A) = 1
65												
9												
64									C	100	100	PL(A) = 0.5

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	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	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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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 (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Type	Core Rec. %	RQD %	Test Results & Comments
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	12											PL(A) = 1
61	13								C	100	100	PL(A) = 1
60	14							13.4m: Cs, 10mm				PL(A) = 0.4
59	15											PL(A) = 0.7
58	16								C	100	100	PL(A) = 1.2
	16.18	Bore discontinued at 16.18m										
57	17											
56	18											
55	19											
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

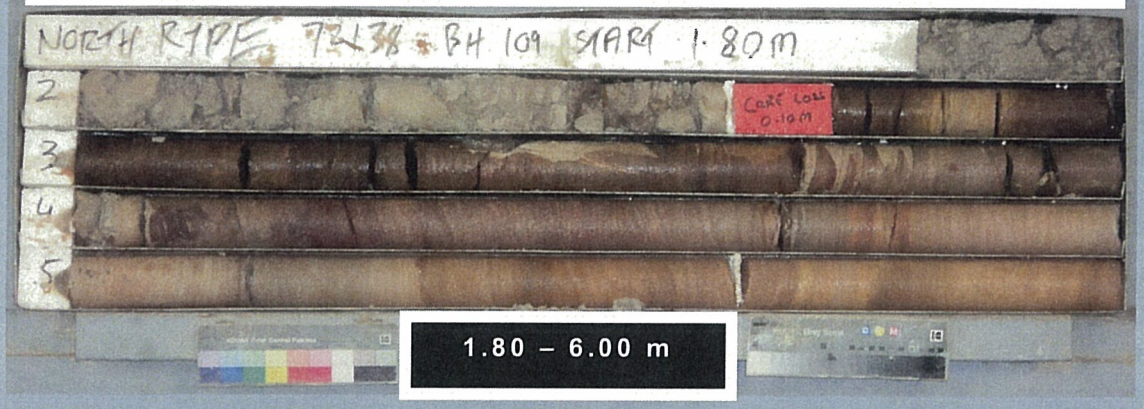
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample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

Douglas Partners
Geotechnics / Environment / Groundwater

DOUGLAS PARTNERS PTY LTD

MACQUARIE VILLAGE

BORE 109 PROJECT 72138 14 DECEMBER 2010

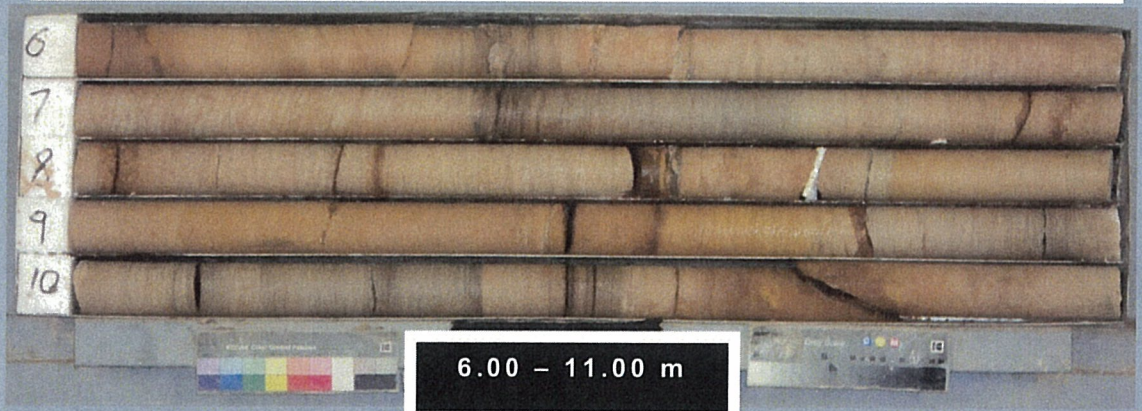


1.80 – 6.00 m

DOUGLAS PARTNERS PTY LTD

MACQUARIE VILLAGE

BORE 109 PROJECT 72138 14 DECEMBER 2010



6.00 – 11.00 m