

BORE REPORT

**BUTLER
PARTNERS**

Client: Multiplex Developments Australia Pty Ltd

Project: DPI & F Portside

Location: 19 Hercules Street, Hamilton

Project No: 03900G

BORE B18

Page No: 1 of 1

Date: 23 September 2006

Depth (m)	Description	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	BITUMEN - 50mm thick pavement					
	FILL - coarse gravel and rock		E	0.4	B18A	
				0.5		
	- coarse gravel and sand, with rounded rock fragments, occasional shell fragments, moist		E	0.9	B18B	
				1.0		
	SAND - brown, fine to medium grained, with clay, occasional shell fragments, low plasticity, moist					
			E	1.9	B18C	
				2.0		
			E	2.2	B18D	
				2.4		
	End of Bore at 2.6 m					
3						
4						
5						
6						

D Disturbed Sample
B Bulk Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Penetrometer Test (kPa)

E Environmental Sample
S Standard Penetrometer Test (SPT)
HB SPT Hammer Bouncing
() No Sample Recovery

C NMLC Coring
Is(50) Point Load Test Result (MPa)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test

Rig: 6610 D7 Geoprobe

Drilling Method: Pushtube

Groundwater: No free groundwater encountered during drilling

Remarks:

BORE REPORT

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Client: Multiplex Developments Australia Pty Ltd

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Location: 19 Hercules Street, Hamilton

Project No: 03900G

BORE B19

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Date: 23 September 2006

Depth (m)	Description	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	BITUMEN - 50mm thick pavement					
	FILL - gravel and rock fragments - brown, medium to coarse sand, occasional gravel and shell fragments		E	0.4 0.5	B19A	
1			E	1.0 1.2	B19B	
	- coarse sand					
2			E	1.8 2.0	B19C	
	- moist		E	2.2 2.4	B19D	
	End of Bore at 2.6 m					
3						
4						
5						
6						

D Disturbed Sample
B Bulk Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Penetrometer Test (kPa)

E Environmental Sample
S Standard Penetrometer Test (SPT)
HB SPT Hammer Bouncing
() No Sample Recovery

C NMLC Coring
Is(50) Point Load Test Result (MPa)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test

Rig: 6610 D7 Geoprobe

Drilling Method: Pushtube

Groundwater: No free groundwater encountered during drilling

Remarks:

BORE REPORT

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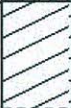
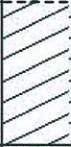
Location: 19 Hercules Street, Hamilton

Project No: 03900G

BORE B20

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Date: 23 September 2006

Depth (m)	Description	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	BITUMEN - 50mm thick pavement			0.25	B20A	
	CONCRETE - with reinforcement, 200mm thick slab		E	0.45		
	FILL - brown, coarse sand, with occasional shell fragments		E	0.9		
1	CLAY - very soft, grey, moderate plasticity, moist			1.1		
	- wet					
2			E	2.0		
	SAND - brown, coarse grained, with occasional shell fragments, wet			2.3		
	End of Bore at 2.4 m					
3						
4						
5						
6						

D Disturbed Sample
B Bulk Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Penetrometer Test (kPa)

E Environmental Sample
S Standard Penetrometer Test (SPT)
HB SPT Hammer Bouncing
() No Sample Recovery

C NMLC Coring
Is(50) Point Load Test Result (MPa)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test

Rig: 6610 D7 Geoprobe

Drilling Method: Pushtube

Groundwater: No free groundwater encountered during drilling

Remarks:

BORE REPORT

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Location: 19 Hercules Street, Hamilton

Project No: 03900G

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Date: 23 September 2006

Depth (m)	Description	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	CONCRETE - 100mm thick pavement		E	0.15 0.25	B21A	
	FILL - brown, coarse grained					
	CLAY - firm, grey, moist		E	0.9 1.1	B21B	
	SAND - brown, coarse grained, occasional gravel, wet		E	1.6 1.8	B21C	
	- loose, grey, medium to coarse, occasional shell fragments		E	2.3 2.4	B21D	
	End of Bore at 2.4 m					
3						
4						
5						
6						

D Disturbed Sample

B Bulk Sample

U Undisturbed Tube (50mm diameter)

pp Pocket Penetrometer Test (kPa)

E Environmental Sample

S Standard Penetrometer Test (SPT)

HB SPT Hammer Bouncing

() No Sample Recovery

C NMLC Coring

Is(50) Point Load Test Result (MPa)

(d) Diametral Point Load Strength Test

(a) Axial Point Load Strength Test

Rig: 6610 D7 Geoprobe

Drilling Method: Pushtube

Groundwater: No free groundwater encountered during drilling

Remarks:

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Location: 19 Hercules Street, Hamilton

Project No: 03900G

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Date: 23 September 2006

Depth (m)	Description	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results	
0	BITUMEN - 50mm thick pavement			0.3	B22A		
	FILL - gravel roadbase		E	0.5			
	- brown, coarse sand, moist				B22B		
	- occasional glass fragments, moist			1.2			
1	- wet		E	1.4	B22C		
2				E			2.0
	- occasional black-grey ash fragments			E	2.2		B22D
					2.3		
	End of Bore at 2.5 m				2.5		
3							
4							
5							
6							

D Disturbed Sample
B Bulk Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Penetrometer Test (kPa)

E Environmental Sample
S Standard Penetrometer Test (SPT)
HB SPT Hammer Bouncing
() No Sample Recovery

C NMLC Coring
Is(50) Point Load Test Result (MPa)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test

Rig: 6610 D7 Geoprobe

Drilling Method: Pushtube

Groundwater: No free groundwater encountered during drilling

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Date: 23 September 2006

Depth (m)	Description	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results	
0	BITUMEN - 50mm thick pavement			0.2	B23A		
	FILL - roadbase - brown, coarse sand, occasional gravel - moist		E	0.4			
1				1.6	B23B		
			E	1.8			
2			E	2.0	B23C		
			E	2.2	B23D		
			E	2.3			
			E	2.4			
	SAND - loose, brown and grey, medium to coarse grained, occasional clay, moist						
	End of Bore at 2.5 m						
3							
4							
5							
6							

D Disturbed Sample

B Bulk Sample

U Undisturbed Tube (50mm diameter)

pp Pocket Penetrometer Test (kPa)

E Environmental Sample

S Standard Penetrometer Test (SPT)

HB SPT Hammer Bouncing

() No Sample Recovery

C NMLC Coring

Is(50) Point Load Test Result (MPa)

(d) Diametral Point Load Strength Test

(a) Axial Point Load Strength Test

Rig: 6610 D7 Geoprobe

Drilling Method: Pushtube

Groundwater: No free groundwater encountered during drilling

Remarks:

BORE REPORT

**BUTLER
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Client: Multiplex Developments Australia Pty Ltd

Project: DPI & F Portside

Location: 19 Hercules Street, Hamilton

Project No: 03900G

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Date: 23 September 2006

Ground Surface Level: RL 3.04m*

Depth (m)	Description	RL (m)	Lithology	ASS Samples	ASS Sample Depth (m)	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	SAND - black, fine grained topsoil, humic matter	3.0		1	0.0	E	0.0	B24A	
	FILL - brown, medium grained sand			2	0.25		0.1		
	- coarse sand, with trace of grey ash			3	0.5	E	0.4	B24B	
	- moist			4	0.75		0.5		
1		2.0		5	1.0	E	0.9	B24C	
				6	1.25		1.0		
				7	1.5				
				8	1.75				
2	- wet	1.0		9	2.0	E	2.0	B24D	
				10	2.25		2.2		
	End of Bore at 2.4 m				2.4				
3		0.0							
4		-1.0							
5		-2.0							
6		-3.0							

D Disturbed Sample
B Bulk Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Penetrometer Test (kPa)

E Environmental Sample
S Standard Penetrometer Test (SPT)
HB SPT Hammer Bouncing
() No Sample Recovery

C NMLC Coring
Is(50) Point Load Test Result (MPa)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test

Rig: 6610 D7 Geoprobe

Drilling Method: Pushtube

Groundwater: No free groundwater encountered during drilling

Remarks: * Interpolated from unreferenced plan provided by Multiplex Developments Australia Pty Ltd

BORE REPORT

**BUTLER
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Client: Multiplex Developments Australia Pty Ltd

Project: DPI & F Portside

Location: 19 Hercules Street, Hamilton

Project No: 03900G

BORE B25

Page No: 1 of 1

Date: 23 September 2006

Ground Surface Level: RL 3.04m*

Depth (m)	Description	RL (m)	Lithology	ASS Samples	ASS Sample Depth (m)	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	SAND	3.0					0.0		
	FILL					E	0.1	B25A	
	- brown, medium grained sand			1	0.25				
	- coarse sand, with trace of grey ash			2	0.5				
	- moist								
1					1.0		1.0		
				3	1.2	E	1.3	B25B	
					1.5				
2	- wet			4	2.0	E	1.8	B25C	
					2.25		2.0		
				5	2.4		2.4	B25D	
					2.5	E			
				6	2.6		2.6		
					2.75				
				7	2.8				
3				8	3.0				
				9	3.2				
				10	3.5				
				11	3.6				
4				12	3.75				
				13	4.0				
				14	4.25				
				15	4.5				
					4.75				
5				16	5.0				
				17	5.25				
				18	5.5				
				19	5.75				
6	End of Bore at 6 m				6.0				

D Disturbed Sample

B Bulk Sample

U Undisturbed Tube (50mm diameter)

pp Pocket Penetrometer Test (kPa)

E Environmental Sample

S Standard Penetrometer Test (SPT)

HB SPT Hammer Bouncing

() No Sample Recovery

C NMLC Coring

Is(50) Point Load Test Result (MPa)

(d) Diametral Point Load Strength Test

(a) Axial Point Load Strength Test

Rig: 6610 D7 Geoprobe

Drilling Method: Pushtube

Groundwater: Free groundwater encountered at 3.0m depth

Remarks: * Interpolated from unreferenced plan provided by Multiplex Developments Australia Pty Ltd. Loose sands running into hole at 4.0m depth

BORE REPORT

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Project No: 03900G

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Date: 23 September 2006

Ground Surface Level: RL 3.04m*

Depth (m)	Description	RL (m)	Lithology	ASS Samples	ASS Sample Depth (m)	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	CLAY - grey, moderate plasticity	3.0				E	0.05 0.15	B26A	
	FILL - black, medium grained sand, with ash, slightly moist			2	0.25				
	- brown, coarse sand, with shell fragments			3	0.5	E	0.5	B26B	
				4	0.75		0.7		
1					1.0				
				6	1.25				
					1.5	E	1.5	B26C	
				8	1.75		1.7		
2				9	2.0				
					2.25	E	2.2	B26D	
	- fine grained sand, moist						2.4		
				12	2.75				
3	- fine grained clayey sand			13	3.0				
	- brown, medium grained sand, wet			14	3.25				
				15	3.5				
4				16	3.75				
				17	4.0				
	SAND - loose, brown, coarse grained, wet			18	4.25				
				19	4.5				
5				20	4.75				
				21	5.0				
					5.25				
	End of Bore at 5.25 m								
6									

D Disturbed Sample

B Bulk Sample

U Undisturbed Tube (50mm diameter)

pp Pocket Penetrometer Test (kPa)

E Environmental Sample

S Standard Penetrometer Test (SPT)

HB SPT Hammer Bouncing

() No Sample Recovery

C NMLC Coring

Is(50) Point Load Test Result (MPa)

(d) Diametral Point Load Strength Test

(a) Axial Point Load Strength Test

Rig: 6610 D7 Geoprobe

Drilling Method: Pushtube

Groundwater: No free groundwater encountered during drilling

Remarks: * Interpolated from unreferenced plan provided by Multiplex Developments Australia Pty Ltd

BORE REPORT

**BUTLER
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Client: Multiplex Developments Australia Pty Ltd

Project: DPI & F Portside

Location: 19 Hercules Street, Hamilton

Project No: 03900G

BORE B27

Page No: 1 of 1

Date: 23 September 2006

Ground Surface Level: RL 3.04m*

Depth (m)	Description	RL (m)	Lithology	ASS Samples	ASS Sample Depth (m)	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	CLAY - grey, moderate plasticity	3.0					0.05	B27A	
						E	0.15		
	FILL - medium grained sand, slightly moist						0.4	B27B	
	- brown, coarse sand					E	0.5		
1				4	0.75				
				5	1.0				
				6	1.25	E	1.2	B27C	
					1.5		1.4	D1 D2	
2									
				11	2.5				
				12	2.75				
3	- medium grained sand, minor clay, moist			13	3.0				
				14	3.25				
				15	3.5				
				16	3.75				
4	- fine grained sand, wet			17	4.0				
				18	4.25				
				19	4.5				
	SAND - loose, brown, coarse grained, wet			20	4.75				
5				21	5.0				
				22	5.25				
				23	5.5				
				24	5.65				
6	End of Bore at 5.8 m				5.8				

D Disturbed Sample

B Bulk Sample

U Undisturbed Tube (50mm diameter)

pp Pocket Penetrometer Test (kPa)

E Environmental Sample

S Standard Penetrometer Test (SPT)

HB SPT Hammer Bouncing

() No Sample Recovery

C NMLC Coring

Is(50) Point Load Test Result (MPa)

(d) Diametral Point Load Strength Test

(a) Axial Point Load Strength Test

Rig: 6610 D7 Geoprobe

Drilling Method: Pushtube

Groundwater: No free groundwater encountered during drilling

Remarks: * Interpolated from unreferenced plan provided by Multiplex Developments Australia Pty Ltd. Sands running into hole at 5.75m depth