

CLIENT: STATE RAIL				Borehole Location: SEE PLAN		BOREHOLE: MW39D	
PROJECT: MACDONALDTOWN RISK ASSESSMENT				Surface RL: 15.73m Datum: AHD		SHEET 1 of 2	
LOCATION: RAILWAY PARADE, MACDONALDTOWN				Drill Rig: EDSON 3000		Logged by: AK	
JOB N°: EN01669				Inclination: V		Date: 17.02.05	
Easting: 332350.058 Northing: 6247620.928				Direction: N/A		Checked by:	
				Borehole Diameter: 125mm		Date:	

DRILLING DATA				SAMPLING DATA		MATERIAL DATA									
METHOD	PENETRATION RESISTANCE	WATER	RL	DEPTH (M)	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	WELL DETAILS	STRUCTURE AND ADDITIONAL OBSERVATIONS	
AUGER TC BIT	H	V	V	0.0					BITUMEN 40mm thick FILL: Gravelly SAND, fine to medium grained, grey, fine to medium igneous gravel	D/M	D			PAVEMENT Road box installed in concrete BASE	
				0.5				FILL: Gravelly Clayey SAND, fine to medium grained, grey, low plasticity fines, fine to medium igneous gravel	M	MD		SUB-BASE Loose backfill material			
				1m					CI-CH	Silty CLAY, medium to high plasticity, orange brown and grey, trace of fine gravel of ironstone	M/W	F			NATURAL ALLUVIUM Ø50mm PVC blank screen
				1.5											
				2m											
				2.5						Silty CLAY, medium to high plasticity, red-brown with grey laminae, trace of fine gravel of ironstone	M	St			
3m															
3.5															
4m						Silty CLAY, medium to high plasticity, red-brown with grey laminae, trace of fine to medium ironstone gravel						Bentonite			
4.5															
5m															
5.5						Silty CLAY, medium to high plasticity, grey stained red-brown and yellow-brown						Bentonite			
6m															
6.5															
7m						Silty CLAY, medium to high plasticity, pink-brown and grey, with some fine ironstone gravel						Bentonite			
7.5															
8m															

Report of borehole must be read in conjunction with accompanying notes and abbreviations

BOREHOLE REPORT

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CLIENT: STATE RAIL				Borehole Location: SEE PLAN				BOREHOLE: MW39D						
PROJECT: MACDONALDTOWN RISK ASSESSMENT				Surface RL: 15.73m Datum: AHD				SHEET 2 of 2						
LOCATION: RAILWAY PARADE, MACDONALDTOWN				Drill Rig: EDSON 3000				Logged by: AK						
JOB N°: EN01669				Inclination: V				Date: 17.02.05						
Easting: 332350.058 Northing: 6247620.928				Direction: N/A				Checked by:						
Borehole Diameter: 125mm				Date:										
DRILLING DATA			SAMPLING DATA		MATERIAL DATA									
METHOD	PENETRATION RESISTANCE	WATER	RL	DEPTH (M)	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	WELL DETAILS	STRUCTURE AND ADDITIONAL OBSERVATIONS
AUGER TC BIT	M	V		8m	PID 834ppm		[Pattern]	CI-CH	Silty CLAY, medium to high plasticity, pink brown and grey, with some fine ironstone gravel	M/W	[Pattern]	[Pattern]	[Pattern]	ALLUVIUM, with regular bands of ironstone; on withdrawal of augers, groundwater contained slicks of a dark brown substance
			8.5			[Pattern]	CI	Silty CLAY, medium plasticity, grey stained red-brown, with some fine ironstone gravel and weakly iron-cemented material						
			9m			[Pattern]								
	L/M		9.5			[Pattern]	CI-CH	Silty CLAY, medium to high plasticity, grey stained red brown and pink brown, with some fine to medium ironstone gravel	M	[Pattern]	[Pattern]	RESIDUAL SOIL /EXTREMELY WEATHERED SHALE; green-brown liquid on augers		
	10m		[Pattern]	CI	Silty CLAY, medium plasticity, grey, becoming Shaley CLAY with depth									
M	10.5		[Pattern]											
				11m	Sample ~10.5m Glass Jar		[Pattern]						[Pattern]	
				11.5			[Pattern]						[Pattern]	
				12m			[Pattern]						[Pattern]	
				12.5			[Pattern]						[Pattern]	
				13m									[Pattern]	
				13.5									[Pattern]	
				14m									[Pattern]	
				14.5									[Pattern]	
				15m									[Pattern]	
				15.5									[Pattern]	
				16m									[Pattern]	
END of BOREHOLE at 12.0m, limit of investigation														
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CLIENT: STATE RAIL

Borehole Location: SEE PLAN

BOREHOLE: MW40S

PROJECT: MACDONALDTOWN RISK ASSESSMENT

Surface RL: 16.024m
Datum: AHD

SHEET 1 of 1

LOCATION: RAILWAY PARADE, MACDONALDTOWN

Drill Rig: EDSON 3000

Logged by: AK

JOB N°: EN01669

Inclination: V

Date: 17.02.05

Easting: 332418.926

Northing: 6247660.227

Direction: N/A

Checked by:

Borehole Diameter: 125mm

Date:

DRILLING DATA				SAMPLING DATA		MATERIAL DATA												
METHOD	PENETRATION RESISTANCE	WATER	RL	DEPTH (M)	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	WELL DETAILS	STRUCTURE AND ADDITIONAL OBSERVATIONS				
AUGER TC-BIT				0.0					BITUMEN 20mm thick	D/M	D			PAVEMENT				
					FILL: Sandy GRAVEL, fine to medium grained, dark grey, fine to coarse sand					Road box installed in concrete	BASE							
				0.5	FILL: Gravelly Sandy CLAY, low plasticity, grey, fine to coarse sand, fine to medium gravel	M		D		Bentonite	SUB-BASE							
				1m	FILL: Gravelly SAND of crushed SANDSTONE, fine to coarse grained sand, fine to coarse gravel			MD		Ø50mm PVC blank section	FILL							
				1.5	FILL: Gravelly Sandy CLAY, medium plasticity, brown, fine to medium grained sand, fine gravel			F		Ø50mm PVC screen section	FILL, gravel is igneous							
				2m	FILL: Crushed bricks, fine to coarse sand, fine to coarse gravel													
				2.5	FILL: Gravelly Sandy CLAY, low to medium plasticity, dark grey, fine to coarse sand, fine to medium gravel, charcoal/ash fragments													
				3m	FILL: Silty CLAY, medium to high plasticity, brown and grey, with some fine to medium sand, trace of fine gravel, inclusions of charcoal up to fine gravel size													
				3.5				W										
				4m				M	St									ALLUVIUM; gravel is angular and sub-angular
													End cap					
				4m					END of BOREHOLE at 4.0m, limit of investigation									
				4.5														
				5m														
				5.5														
				6m														
				6.5														
				7m														
				7.5														
				8m														

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CLIENT: STATE RAIL				Borehole Location: SEE PLAN		BOREHOLE: MW40D											
PROJECT: MACDONALDTOWN RISK ASSESSMENT				Surface RL: 16.005m Datum: AHD		SHEET 1 of 2											
LOCATION: RAILWAY PARADE, MACDONALDTOWN				Drill Rig: EDSON 3000		Logged by: AK											
JOB N*: EN01669				Inclination: V		Date: 17.02.05											
Easting: 332417.691 Northing: 6247659.115				Direction: N/A		Checked by:											
				Borehole Diameter: 125mm		Date:											
DRILLING DATA		SAMPLING DATA		MATERIAL DATA													
METHOD	PENETRATION RESISTANCE	WATER	RL	DEPTH (M)	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	WELL DETAILS	STRUCTURE AND ADDITIONAL OBSERVATIONS			
AUGER TO BIT	M	V	V	0.0			[Cross-hatched pattern]		BITUMEN 40mm thick	D/M	MD		[Pattern with dots]	PAVEMENT			
				0.5					FILL: Gravelly Sandy CLAY mixture, low to medium plasticity, black, grey, red-brown and yellow brown, fine to coarse sand, fine to coarse gravel of both crushed sandstone and brick fragments, with some ash fines						Road box installed in concrete		
				1.0													
				1.5													
				2.0													
				2.5													
3.0																	
3.5																	
4.0																	
4.5																	
5.0																	
5.5																	
6.0																	
6.5																	
7.0																	
7.5																	
8.0																	

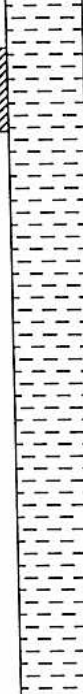
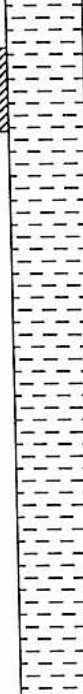
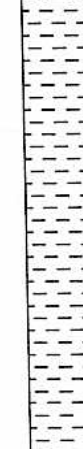
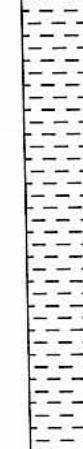
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BOREHOLE REPORT

[illegible]

CLIENT: STATE RAIL		Borehole Location: SEE PLAN	BOREHOLE: MW38D
PROJECT: MACDONALDTOWN RISK ASSESSMENT		Surface RL: 14.298m Datum: AHD	
LOCATION: BURREN STREET, MACDONALDTOWN		Drill Rig: EDSON 3000	Logged by: AK Date: 16.02.05 Checked by: Date:
JOB N°: EN01669		Inclination: V Direction: N/A	
Easting: 332368.045 Northing: 6247592.663		Borehole Diameter: 125mm	

DRILLING DATA				SAMPLING DATA		MATERIAL DATA							
METHOD	PENETRATION RESISTANCE	WATER	RL	DEPTH (M)	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	WELL DETAILS	STRUCTURE AND ADDITIONAL OBSERVATIONS
AUGER TC BIT	L			0.0	SPT 2,4,4 N = 8 PID 0.0ppm				FILL: Sandy GRAVEL, fine to medium grained, grey, fine to coarse sand, trace low plasticity fines	D/M	D		ROAD BASE material Road box installed in concrete Loose backfill material Marker layer NATURAL/ ALLUVIUM
				0.5									
				1m									
				1.5									
				2m									
				2.5									
				3m									
				3.5									
				4m									
				4.5									
				5m					Silty CLAY, medium to high plasticity, orange-brown and grey mottled, trace of fine ironstone gravel	M	F- St		Bentonite Ø50mm PVC blank screen
				5.5									
				6m									
				6.5									
				7m									
				7.5									
				8m									
	M			5.5				CH	Silty CLAY, medium to high plasticity, pink-brown mottled grey, trace of fine ironstone gravel	M/ W			Bentonite Ø50mm PVC blank screen
				6m									
				6.5									
				7m									
				7.5									
				8m									
				6m				CH	Silty CLAY, high plasticity, grey, with frequent ironstone bands containing fine to medium gravels, red-brown	M	VSt -H		Coarse sand Ø50mm PVC slotted screen RESIDUAL SOIL? banded structure
				6.5									
				7m									
				7.5									
				8m									

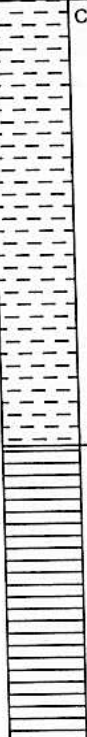
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BOREHOLE REPORT

CLIENT: STATE RAIL		Borehole Location: SEE PLAN	BOREHOLE: MW38D
PROJECT: MACDONALDTOWN RISK ASSESSMENT		Surface RL: 14.298m Datum: AHD	
LOCATION: BURREN STREET, MACDONALDTOWN		Drill Rig: EDSON 3000	Logged by: AK Date: 16.02.05 Checked by: Date:
JOB N°: EN01669		Inclination: V Direction: N/A	
Easting: 332368.045 Northing: 6247592.663		Borehole Diameter: 125mm	

DRILLING DATA				SAMPLING DATA		MATERIAL DATA									
METHOD	PENETRATION RESISTANCE	WATER	RL	DEPTH (M)	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	WELL DETAILS	STRUCTURE AND ADDITIONAL OBSERVATIONS		
AUGER TO BIT	M			8m				CH	Silty CLAY, high plasticity, grey, with frequent ironstone bands containing fine to medium gravels red-brown	M	VSt -H		RESIDUAL SOIL		
	M/H			8.5											
				9m											
				9.5											
TRI CONE				10m					Silty CLAY, high plasticity, grey stained red-brown by frequent ironstone bands containing fine to medium gravel						
	H/ NR			10.5					Clayey SHALE, low to medium strength, grey, dark grey, banded orange-brown and red-brown, with some ironstone inclusions		H		WEATHERED BEDROCK		
	<u>R</u> H			11m					SHALE, medium strength, grey				BEDROCK		
				11.5											
				12m					END of BOREHOLE at 12.0m, limit of investigation						
				12.5											
				13m											
				13.5											
				14m											
				14.5											
				15m											
				15.5											
				16m											

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Appendix B Summary Chemical Analysis Tables