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REPORT OF BOREHOLE: BH212

SHEET: 1 OF 4

DRILL RIG: FD500

CONTRACTOR: Foundril Pty Ltd

LOGGED: WJH DATE: 20/9/11

CHECKED: NK DATE: 26/9/11

CLIENT: McConnell Dowell Constructors (Aust) P/L COORDS: 82049.5 m E 61402.2 m N GCCC

PROJECT: Gold Coast Rapid Transit SURFACE RL: 15.35 m DATUM: AHD

LOCATION: Zone 2 INCLINATION: -90°

JOB NO: 117632047 HOLE DEPTH: 26.86 m

Drilling				Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	STRUCTURE AND ADDITIONAL OBSERVATIONS
ADV			0	15.35				FILL: CLAY high plasticity, brown, with some rubbish, plastic, wood and concrete	D - M	
			0.90	14.45					M (>PL)	
RT	M-H		1		SPT 1.00-1.45 m 4, 4, 8 N=12			rubbish, wood, plastic, concrete, dark grey		200 mm thick layer of concrete
			2							
			3		SPT 2.50-2.95 m 1, 2, 3 N=5					
			4		SPT 4.00-4.45 m 6, 7, 8 N=15				M - W	
			5							
WB	M		6		SPT 5.50-5.95 m 5, 5, 5 N=10					Local clays possibly used to seal the landfill from the natural sand
			6	6.00				FILL: Silty CLAY high plasticity, pale grey and brown		
			7	9.35						
			8		SPT 7.00-7.45 m 4, 6, 9 N=15				St - VSt	
			9		SPT 8.50-8.95 m 2, 3, 5 N=8				M	
			9	8.80				FILL: Sandy CLAY medium plasticity, grey		
			9	6.55					St	
			10	9.80						
			10	5.55			SP		D	

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GAP gINT FN. F01a
RL3



REPORT OF BOREHOLE: BH212

SHEET: 2 OF 4

DRILL RIG: FD500

CONTRACTOR: Foundril Pty Ltd

LOGGED: WJH DATE: 20/9/11

CHECKED: NK DATE: 26/9/11

CLIENT: McConnell Dowell Constructors (Aust) P/L COORDS: 82049.5 m E 61402.2 m N GCCC

PROJECT: Gold Coast Rapid Transit SURFACE RL: 15.35 m DATUM: AHD

LOCATION: Zone 2 INCLINATION: -90°

JOB NO: 117632047 HOLE DEPTH: 26.86 m

Drilling				Sampling		Field Material Description							
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION		MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
WB	M	Groundwater not observed	10		SPT 10.00-10.42 m 29, 30 N>30			SP	SAND fine grained, sub-rounded, pale grey	D	M		
			11	11.30 4.05	SW			SAND fine to coarse grained, sub-rounded to sub-angular, grey, with some clay, trace fine grained quartz gravel					
			12	12.00 3.35	CI			Sandy CLAY medium plasticity, red brown					
			12	12.40 2.95				brown and grey	VSt				
			13		SPT 13.00-13.45 m 6, 11, 16 N=27								
			14	14.00 1.35				SW	SAND fine to coarse grained, sub-rounded, pale grey	M - W	MD		
			14	14.80 0.55	SPT 14.50-14.95 m 6, 7, 12 N=19								
			15					ML-MH	Clayey SILT low to high plasticity, brown and pale grey	M (>PL)	H		
			15		SPT 15.50-15.60 m 30/100 mm								
								16					
			17										
			18										
			19										
			20										

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GAP gINT FN. F01a
RL3



REPORT OF BOREHOLE: BH212

SHEET: 3 OF 4

DRILL RIG: FD500

CONTRACTOR: Foundril Pty Ltd

LOGGED: WJH DATE: 20/9/11

CHECKED: NK DATE: 26/9/11

CLIENT: McConnell Dowell Constructors (Aust) P/L COORDS: 82049.5 m E 61402.2 m N GCCC

PROJECT: Gold Coast Rapid Transit SURFACE RL: 15.35 m DATUM: AHD

LOCATION: Zone 2 INCLINATION: -90°

JOB NO: 117632047 HOLE DEPTH: 26.86 m

Drilling					Field Material Description					Defect Information				
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH Is(50) MPa	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm)			
				10										
				11										
				12										
				13										
				14										
				15										
				15.60	-0.25		Continuation of Sheet 2	RS		15.60-15.80 m: DZ				
			100 17 (43)	16			ARGILLACEOUS SILTSTONE	EW		16.13 m: J, 45°, Pl, Ro, Sn-Vr				
			100 0 (100)	16.40	-1.05		fine grained, brown and grey	HW		16.20 m: J, 30°, Pl, Ro, Sn-Vr				
							becoming grey with pale grey bands	HW		16.28 m: J, 50°, Pl, Ro, Sn-Vr				
								MW		16.38 m: J, 50°, Pl, Ro, Sn-Vr				
			100 81 (96)	17						16.42 m: DB				
										16.48 m: J, 60°, Un, Ro, Sn-Vr				
										16.64 m: J, 60°, Pl, Ro, Sn-Vr				
										16.77 m: J, 45°, Pl, Ro, Sn-Vr				
										17.04 m: J, 45°, Pl, Ro, Vr				
										17.21 m: J, 59°, Pl, Ro, Sn-Vr				
										17.47 m: DB				
										17.53 m: J, 35°, Pl, Ro, Sn				
										17.58 m: J, 50°, Pl, Ro, Sn-Vr				
										17.85 m: J, 65°, Pl, Ro, Sn-Vr				
			100 57 (73)	18						18.18 m: J, 60°, Pl, Ro, Sn-Vr				
										18.23-18.30 m: FZ				
										18.38 m: J, 45°, Un, Ro, Sn-Ct				
										18.58 m: J, 50°, Pl, Ro, Sn-Vr				
										18.74-19.22 m: FZ				
			100 24 (58)	19						19.23-19.49 m: IS, 90°, Un, Ro, Ct				
										19.52-19.55 m: CS				
										19.82 m: HB				
				20	20.00									

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GAP gINT FN. F02a
RL3



REPORT OF BOREHOLE: BH212

SHEET: 4 OF 4

DRILL RIG: FD500

CONTRACTOR: Foundril Pty Ltd

LOGGED: WJH DATE: 20/9/11

CHECKED: NK DATE: 26/9/11

CLIENT: McConnell Dowell Constructors (Aust) P/L COORDS: 82049.5 m E 61402.2 m N GCCC

PROJECT: Gold Coast Rapid Transit SURFACE RL: 15.35 m DATUM: AHD

LOCATION: Zone 2 INCLINATION: -90°

JOB NO: 117632047 HOLE DEPTH: 26.86 m

Drilling					Field Material Description				Defect Information			
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH Is(50) MPa	DEFECT DESCRIPTION & Additional Observations		AVERAGE DEFECT SPACING (mm)
								EL 0.03 V 0.1 L 0.1 M 0.3 H 1 VH 10 EH 10				10 20 30 40 50 100 200 3000
NMLC	Groundwater not observed		100 33 (100)	20	-4.65		ARGILLACEOUS SILTSTONE	MW		20.06 m: J, 20°, Pl, Ro, Sn-Ct 20.08 m: J, 5°, Pl, Ro, Sn-Ct 20.38-20.64 m: J, 60°, Pl, Ro, Sn-Vr, sp = 50 mm 20.74 m: J, 80°, Un, Ro, Vr 20.85 m: J, 60°, Pl, Ro, Sn-Vr 21.27 m: HB 21.60 m: J, 30°, Pl, Ro, Sn-Vr 21.70 m: J, 70°, Pl, Ro, Vr 21.83-21.87 m: J, 15°, Pl, Ro, Vr, sp = 20 mm 21.94 m: J, 30°, Pl, Ro, Vr 22.29 m: HB 22.34 m: J, 45°, Pl, Ro, Sn-Vr 22.34-22.41 m: DB 22.44-22.70 m: FZ 22.77 m: J, 35°, Un, Ro, Vr 22.96 m: J, 30°, Ro, Vr 23.14 m: HB 23.18 m: HB 23.26-23.33 m: FZ 23.81 m: CS 23.84 m: J, 45°, Pl, Ro, Vr 24.10 m: J, 10°, Pl, Ro, Vr 24.25 m: J, 60°, Pl, Ro, Vr 24.36 m: J, 40°, Pl, Ro, Vr 24.60 m: DB 24.63 m: J, 30°, Pl, Ro, Vr 24.86 m: J, 50°, Pl, Cn 25.32 m: DB 25.43 m: J, 40°, Pl, Ro, Cn 25.65 m: J, 45°, Pl, Ro, Cn 25.74 m: J, 45°, Pl, Ro, Cn 25.76 m: J, 10°, Pl, Ro, Cn 25.80 m: J, 45°, Pl, Ro, Cn 26.09 m: J, 45°, Pl, Ro, Cn 26.20 m: J, 30°, Un, Ro 26.48 m: DB		
			100 64 (100)	21				SW				
			100 64 (71)	22								
			100 64 (71)	23								
			100 80 (100)	24	23.56 23.70 -8.35		5-10 mm thick quartz bands trace quartz bands					
			100 90 (100)	25								
				26								
				27	26.86 -11.51		END OF BOREHOLE @ 26.86 m TARGET DEPTH GROUNDWATER NOT OBSERVED					
				28								
				29								
				30								

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GAP gINT FN. F02a
RL3



REPORT OF PHOTOGRAPHS: BH212

CLIENT: McConnell Dowell Constructors
PROJECT: Gold Coast Rapid Transit
LOCATION: Zone 2
JOB NO: 117632047

COORDS: 82049.5 m E, 61402.2 m N
SURFACE RL: 15.35 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 26.86 m

DEPTH RANGE: 15.60 – 26.86 m
DRILL RIG: FD500
DRILLER: Foundril Pty Ltd
LOGGED: WJH DATE: 20/9/11
CHECKED: NK DATE: 26/9/11



15.60 – 26.86 m