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BOREHOLE ENGINEERING LOG

BOREHOLE NO.

BH38

SHEET 1 OF 5

Client: QUEENSLAND MAIN ROADS
Project: TUGUN BYPASS GEOTECHNICAL INVESTIGATION
Borehole Location: Airport Access Bridge; Abutment A on centreline;
Project Number: 2134070C

Date Commenced: 16/5/05
Date Completed: 16/5/05
Recorded By: DAW
Log Checked By: JAW

Drill Model/Mounting: LEWIS 350 TRACKED RIG Hole Angle: 90° Surface RL: 3.7 m AHD
Borehole Diameter: 100 mm Bearing: --- Co-ords: E 49634.8 N 87699.5 PMG

Borehole Information						Field Material Description							
1	2	3	4	5	6	7	8	9	10	11	12	13	
METHOD	SUPPORT	WATER	RL(m) AHD	DEPTH(m)	FIELD TEST	SAMPLE	GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL FIELD DESCRIPTION	MOISTURE	RELATIVE DENSITY / CONSISTENCY	HAND PENETROMETER (kPa)	STRUCTURE AND ADDITIONAL OBSERVATIONS
										VS FB VL L MD ST D H VD			
TC	C							SW	SAND: fine to coarse grained, grey.	M			ESTUARINE/ FLOODPLAIN/TIDAL DELTA DEPOSITS
				3									
				1									
				2	SPT 3,3,3 N=6	SPT							
WB	M			2									
				1									
				3	SPT 4,3,3 N=6	SPT							
				0									
				3.00				SW	Cemented Silty SAND (Coffee Rock): fine to coarse grained, dark brown, occasional medium angular gravel.				
				4									
				-1	SPT 16, 12 /50mm	SPT			... slightly clayey.	W			Hammer bouncing.
				5									
				-2									
				6.00	SPT 10, 23, 22 /100mm	SPT		SW	SAND: fine to coarse grained, brown.				
				-3									
				7									
				-4	SPT 32 /150mm	SPT							
				8					... becoming grey.				
				-5									
				9	SPT 30 /100mm	SPT							No sample recovered.
				-6									

This borehole log should be read in conjunction with Parsons Brinckerhoff's accompanying standard notes.



BOREHOLE ENGINEERING LOG

BOREHOLE NO.

BH38

SHEET 2 OF 5

Client: QUEENSLAND MAIN ROADS
Project: TUGUN BYPASS GEOTECHNICAL INVESTIGATION
Borehole Location: Airport Access Bridge; Abutment A on centreline;
Project Number: 2134070C

Date Commenced: 16/5/05
Date Completed: 16/5/05
Recorded By: DAW
Log Checked By: *TD*

Drill Model/Mounting: LEWIS 350 TRACKED RIG Hole Angle: 90° Surface RL: 3.7 m AHD
Borehole Diameter: 100 mm Bearing: — Co-ords: E 49634.8 N 87699.5 PMG

Borehole Information						Field Material Description						
1	2	3	4	5	6	7	8	9	10	11	12	13
METHOD	SUPPORT	WATER	RL(m) AHD	DEPTH(m)	FIELD TEST	SAMPLE	GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL FIELD DESCRIPTION	MOISTURE	RELATIVE DENSITY / CONSISTENCY	STRUCTURE AND ADDITIONAL OBSERVATIONS
WB										VS FB VL SL ST MD VST VD	HAND PENETROMETER (kPa)	
			10.10					SM	Silty SAND: fine to coarse grained, grey-brown, medium to high plasticity fines.			
			-7		SPT 6,5,12 N=17	SPT						
			11									
			-8									
			12		SPT 7,9,10 N=19	SPT						
			-9									
			13									
			13.20					SW	SAND: fine to coarse grained, brown.			
			-10		SPT 5,7,5 N=12	SPT						
			14									
			-11									
			15		SPT 10,19,25 N=44	SPT						
			-12									
			16									
			-13		SPT 6,12,19 N=31	SPT						
			17									
			-14					CL	Sandy CLAY: medium plasticity, brown, fine to coarse sand.	SMC-PL		
			17.60									
			18.048		SPT 9,7,8 N=15	SPT		SW	SAND: fine to coarse grained, grey.	SMC		
			-15									
			19									
			-16		SPT 7,13,17 N=30	SPT						

This borehole log should be read in conjunction with Parsons Brinckerhoff's accompanying standard notes.



BOREHOLE ENGINEERING LOG

BOREHOLE NO.

BH38

SHEET 3 OF 5

Client: QUEENSLAND MAIN ROADS
Project: TUGUN BYPASS GEOTECHNICAL INVESTIGATION
Borehole Location: Airport Access Bridge; Abutment A on centreline;
Project Number: 2134070C

Date Commenced: 16/5/05
Date Completed: 16/5/05
Recorded By: DAW
Log Checked By: *AW*

Drill Model/Mounting: LEWIS 350 TRACKED RIG Hole Angle: 90° Surface RL: 3.7 m AHD
Borehole Diameter: 100 mm Bearing: --- Co-ords: E 49634.8 N 87699.5 PMG

Borehole Information						Field Material Description						
1	2	3	4	5	6	7	8	9	10	11	12	13
METHOD	SUPPORT	WATER	RL(m) AHD	DEPTH(m)	FIELD TEST	SAMPLE	GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL FIELD DESCRIPTION	MOISTURE	RELATIVE DENSITY / CONSISTENCY	STRUCTURE AND ADDITIONAL OBSERVATIONS
WB												
				20.40				SW	SAND: fine to coarse grained, grey.(continued)	W		
				17				CH	Silty CLAY: high plasticity, grey.	MC>PL		RESIDUAL SOIL
				21	SPT 5,7,9 N=16	SPT						380
				18		U50						370
				22								360
				19	SPT 5,20,8 /50mm	SPT						>400
				23					GREYWACKE: fine to coarse grained, grey, extremely weathered, extremely low strength with clay bands throughout.			Hammer bouncing.
				20								WEATHERED ROCK
				24	SPT 6 /10mm	SPT						Hammer bouncing.
				21								
				25								
				22	SPT 10 /5mm	SPT						Hammer bouncing
				26								No sample recovered.
				23								
				27	SPT 5 /3mm	SPT						Hammer bouncing
				24								No sample recovered.
				28								
				25					... becoming red-brown.			
				29								
				26								

This borehole log should be read in conjunction with Parsons Brinckerhoff's accompanying standard notes.



BOREHOLE ENGINEERING LOG

BOREHOLE NO.

BH38

SHEET 4 OF 5

Client: QUEENSLAND MAIN ROADS

Date Commenced: 16/5/05

Project: TUGUN BYPASS GEOTECHNICAL INVESTIGATION

Date Completed: 16/5/05

Borehole Location: Airport Access Bridge; Abutment A on centreline;

Recorded By: DAW

Project Number: 2134070C

Log Checked By: JAW

Drill Model/Mounting: LEWIS 350 TRACKED RIG

Hole Angle: 90°

Surface RL: 3.7 m AHD

Borehole Diameter: 100 mm

Bearing: ---

Co-ords: E 49634.8 N 87699.5 PMG

Borehole Information						Field Material Description						
1	2	3	4	5	6	7	8	9	10	11	12	13
METHOD	SUPPORT	WATER	RL(m) AHD	DEPTH(m)	FIELD TEST	SAMPLE	GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL FIELD DESCRIPTION	MOISTURE	RELATIVE DENSITY / CONSISTENCY	STRUCTURE AND ADDITIONAL OBSERVATIONS
										VS FB VL L ST ND VST O H VD	HAND PENETROMETER (kPa)	
			-27	31					GREYWACKE: fine to coarse grained, grey, extremely weathered, extremely low strength with clay bands throughout.(continued) ... becoming highly to moderately weathered, low to medium strength.			
			-28	32					REFER TO CORED BOREHOLE LOG			Near refusal to blade bit.
			-29	33								
			-30	34								
			-31	35								
			-32	36								
			-33	37								
			-34	38								
			-35	39								
			-36									

This borehole log should be read in conjunction with Parsons Brinckerhoff's accompanying standard notes.

Client: QUEENSLAND MAIN ROADS
Project: TUGUN BYPASS GEOTECHNICAL INVESTIGATION
Borehole Location: Airport Access Bridge; Abutment A on centreline;
Project Number: 2134070C

Date Commenced: 16/5/05
Date Completed: 16/5/05
Recorded By: DAW
Log Checked By: *[Signature]*

Drill Model/Mounting: LEWIS 350 TRACKED RIG
Borehole Diameter: 100 mm

Hole Angle: 90°
Bearing: ---

Surface RL: 3.7 m AHD
Co-ords: E 49634.8 N 87699.5 PMG

Borehole Information						Field Material Description					
1	2	3	4	5	6	7	8	9	10	11	12
METHOD	SUPPORT	WATER	CORE RECOVERY	RQD	RL(m) AND DEPTH(m)	GRAPHIC LOG	SOIL/ROCK MATERIAL FIELD DESCRIPTION	WEATHERING	INFERRED STRENGTH (50) MPa	AVERAGE DEFECT SPACING mm	STRUCTURE AND ADDITIONAL OBSERVATIONS
								EL 0.03 VL 0.1 L 0.3 M 1 H 3 VH 10 EH		10 30 100 300 1000 3000	
					-27 31						
					-28 31.74		COMMENCE CORING AT 31.5 m ARGILLITE	MW			31.50-31.74m: Non-intact core.
					-32.00 32		GREYWACKE: fine to medium grained, grey, ARGILLITE				32.00-32.27m: Non-intact core.
					-32.27		GREYWACKE: fine to medium grained, grey, END OF BOREHOLE AT 32.39 m				
					-29 33						
					-30 34						
					-31 35						
					-32 36						
					-33 37						
					-34 38						
					-35 39						
					-36						

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