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BOREHOLE ENGINEERING LOG

BOREHOLE NO.

BH58

SHEET 1 OF 4

Client: QUEENSLAND MAIN ROADS
Project: TUGUN BYPASS GEOTECHNICAL INVESTIGATION
Borehole Location: Hidden Valley Bridges; Abutment A RHS;
Project Number: 2134070C

Date Commenced: 20/6/05
Date Completed: 20/6/05
Recorded By: AO
Log Checked By: *DAW*

Drill Model/Mounting: EAZE-CAT TRACKED RIG Hole Angle: 90° Surface RL: 31.6 m AHD
Borehole Diameter: 80 mm Bearing: --- Co-ords: E 47994 N 89263.3 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
TC	C	W						CH	Silty CLAY: high plasticity, brown, some fine grained sand, trace of fine gravel.	M			RESIDUAL SOIL
			31	1									
			30	1.20	SPT 6,9,9 N=18	SPT			ARGILLITE: very fine grained, pale grey, partially stained light orange, extremely weathered with the consistency of high plasticity silty clay, extremely low strength.				WEATHERED ROCK MC=20.6%, LL=46% PI=20%, LS=6.5 % passing 0.425mm=98% % passing 0.075mm=92%
			29	2					...mostly stained orange-brown below 2.65m. trace of sand and fine to medium gravel.				1.6m: 70° planar defects visible.
			28	3.00	SPT 12,14,17 N=31	SPT			Interbedded ARGILLITE and GREYWACKE: fine grained greywacke interbedded with argillite, pale grey, mostly stained light orange, extremely weathered with the consistency of medium plasticity sandy silty clay, extremely low strength.				Thin foliations and bedding planes dipping at approximately 70° visible.
			27	4	SPT 11,22,22 N=44	SPT							
			26	5									
			25	6	SPT 13,15,21 N=36	SPT							Thinly bedded at approximately 60°. numerous sub-horizontal, fairly planar defects.
			24	7.15	SPT 6,18,20 N=38	SPT			GREYWACKE with ARGILLITE Interbeds fine grained, pale grey, mostly stained orange-brown, extremely weathered with the consistency of medium plasticity sandy silty clay, argillite occurs as interbeds up to 10mm thick and very thin laminae less than 2mm thick, extremely low strength.				65° bedding and 35° planar joints visible.
			23	8									
			22	9	SPT 9,16,19 N=35	SPT							65° bedding visible.

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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	SOIL/ROCK MATERIAL FIELD DESCRIPTION	MOISTURE	RELATIVE DENSITY / CONSISTENCY	HAND PENETROMETER (kPa)	STRUCTURE AND ADDITIONAL OBSERVATIONS
									VS FL ST H	FB VL LD MD VD		
TC				10.15	SPT 5, 12, 14 N=26	SPT		Interbedded GREYWACKE and ARGILLITE: fine grained greywacke and very fine grained argillite, pale grey, mostly stained orange, extremely weathered with the consistency of medium plasticity silty clay or sandy silty clay, extremely low strength.				Thin laminations dipping 65°.
				21								
				11								
				20	SPT 7, 12, 18 N=30	SPT		...greywacke is stained dark red below 11.5m.				Thin laminations dipping 70°. MC=24.5% % passing 0.425mm=98% % passing 0.075mm=4%.
				12								
				19								
				13								
				13.38	SPT 18, 28, 30 /115mm	SPT		ARGILLITE With GREYWACKE Interbeds, very fine grained, pale grey, with some orange staining, extremely weathered with the consistency of medium plasticity silty clay, extremely low strength, some thin fine grained greywacke interbeds throughout, pale grey mostly stained red-brown.				
				18								
				14								
				17								
	WB			15	SPT 12, 27, 30 /110mm	SPT						
	Nil			16								
				16								
				15	SPT 17, 30 /120mm	SPT		...approaching highly weathered, very low strength rock.				Steeply dipping slightly contorted bedding.
				17								
				14								
				18	SPT 30 /130mm	SPT		REFER TO CORED BOREHOLE LOG				
				13								
				19								
				12								

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CORED BOREHOLE ENGINEERING LOG

BOREHOLE NO.

BH58

SHEET 3 OF 4

Client: QUEENSLAND MAIN ROADS
Project: TUGUN BYPASS GEOTECHNICAL INVESTIGATION
Borehole Location: Hidden Valley Bridges; Abutment A RHS;
Project Number: 2134070C

Date Commenced: 20/6/05
Date Completed: 20/6/05
Recorded By: AO
Log Checked By: *DAW*

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Borehole Diameter: 80 mm Bearing: --- Co-ords: E 47994 N 89263.3 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) AHD	DEPTH(m)	GRAPHIC LOG	SOIL/ROCK MATERIAL FIELD DESCRIPTION	WEATHERING	INFERRED STRENGTH (σ 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			

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CORED BOREHOLE ENGINEERING LOG

BOREHOLE NO.

BH58

SHEET 4 OF 4

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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) AHD	DEPTH(m)	GRAPHIC LOG	SOIL/ROCK MATERIAL FIELD DESCRIPTION	WEATHERING	INFERRED STRENGTH $I_p(50)$ MPa	AVERAGE DEFECT SPACING mm	STRUCTURE AND ADDITIONAL OBSERVATIONS
NM/C												

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Project: Tugun Bypass Geotechnical Investigation
Borehole: BH58
Start Depth: 17.93m
Finish Depth: 22.97m

