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**Queensland
Government**

Department of
Main Roads

ENGINEERING BOREHOLE

FOR GEOTECHNICAL TERMS AND
SYMBOLS REFER FORM F:GEOT 017/2-2004

BOREHOLE No **BH29**
SHEET **1** of **4**
REFERENCE No **H9578**

PROJECT GATEWAY BRIDGE DUPLICATION FOUNDATION INVESTIGATION - GATEWAY UPGRADE PROJECT
LOCATION PIER 17 - DOWN STREAM END COORDINATES 9857.2 E; 168660.0 N
PROJECT No FG5388 SURFACE R.L. 3.10 DATE STARTED 08/02/05 DATUM SETP
JOB No DATUM AHD DATE COMPLETED 08/02/05 DRILLER R&D DRILLING PTY LTD

DEPTH (m)	R.L. (m)	ALGER CASING WASH BORING CORE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
0	3.10					ROAD BASE Crushed rock fill.						Drilling records only	
0.8	2.80					ESTUARINE WEATHERED OC CRUST Dark brown to mottled grey, slightly moist, soft to mainly firm, silty clay. High plasticity.		GC					
2.0								OL					2,2,2 N=4 SPT
3.2													2,2,2 N=4 SPT
3.6	-0.40					ESTUARINE SILTY CLAY Dark grey to dark brown, moist, very soft. High plasticity, slight organic throughout.							RW, - N<1 SPT
5.2								OH					RW, - N<1 SPT
6.0	-3.00					SILTY SAND / SAND Grey brown to grey, wet, very loose to loose. Fine sand becoming medium with depth.							2,1,1 N=2 SPT
8.0								SM					2,2,4 N=6 SPT
10.0	-6.90											Coarse grained gravel and some shells	

REMARKS SPT N values in clayey gravel can overestimate density due to influence of coarser size gravel particles. Defect angles have been measured with respect to a horizontal plane.

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A. DISSANAYAKE (DISS)



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BOREHOLE No **BH29**

SHEET **2** of **4**

REFERENCE No **H9578**

PROJECT GATEWAY BRIDGE DUPLICATION FOUNDATION INVESTIGATION - GATEWAY UPGRADE PROJECT

LOCATION PIER 17 - DOWN STREAM END COORDINATES 9857.2 E; 168660.0 N

PROJECT No FG5388 SURFACE R.L. 3.10 DATE STARTED 08/02/05 DATUM SETP

JOB No DATUM AHD DATE COMPLETED 08/02/05 DRILLER R&D DRILLING PTY LTD

DEPTH (m)	R.L. (m)	AUGER Casing Boring Wash Boring Core Drilling	ROD () %	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
10	-6.90					SILTY CLAY - ALLUVIUM Grey brown to orange brown, moist, firm. High plasticity and slightly lateritised.							2,3,4 N=7	SPT
11									CH					
12													4,3,5 N=8	SPT
13	-9.40					SANDY SILT / SILTY SAND Brown to orange brown, moist, loose to mainly medium dense. Very fine sand.							4,5,6 N=11	SPT
14														
15									SM				3,3,4 N=7	SPT
16													4,5,8 N=13	SPT
17	-13.90					SAND / SILTY SAND Brown to orange brown, wet, mainly medium dense with loose and dense bands. Fine sand becoming coarse quartizic gravels with depth.							4,4,5 N=9	SPT
18									SM					
19													4,5,9 N=14	SPT
20	-16.90													

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BOREHOLE No BH29

SHEET 3 of 4

REFERENCE No H9578

PROJECT GATEWAY BRIDGE DUPLICATION FOUNDATION INVESTIGATION - GATEWAY UPGRADE PROJECT

LOCATION PIER 17 - DOWN STREAM END COORDINATES 9857.2 E; 168660.0 N

PROJECT No FG5388 SURFACE R.L. 3.10 DATE STARTED 08/02/05 DATUM SETP

JOB No DATUM AHD DATE COMPLETED 08/02/05 DRILLER R&D DRILLING PTY LTD

DEPTH (m)	R.L. (m)	ALGER Casing Wash Boring Core Drilling	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
20	-16.90					SAND / SILTY SAND As above. More gravelly towards bottom.						Blade bit was used down to 20.5m. Roller sit was used below 20.5m.	
21												18,17,16 N=33	SPT
22								SM				10,12,9 N=21	SPT
23												10,14,15 N=29	SPT
24													
25	-21.50					SAND AND GRAVEL Orange brown, wet, very dense. Sub-angular to sub-rounded, quartz and litic fragments, sizing up to 30mm.						30/100,- N=50	SPT
26								GP- GM				30/25,- N>50	SPT
27	-23.90				(100)	INTERBEDDED MUDSTONE AND SANDSTONE. SANDSTONE DOMINANT SW : Grey to dark grey, thinly laminated and bedded, low to mainly medium strength. Defects - Generally rare. - Occasional drilling induced lamination partings <15° (1-2/m). Slightly broken towards bottom.						Sandstone interbed Is(50)=0.09 MPa Is(50)=0.40 MPa	x o
28					100 (75)			SW					
29													
30	-26.40					SANDSTONE FINE TO MEDIUM GRAINED, LAMINATED CEMENTED SEDIMRNARY		SW					
30	-26.90				100								

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BOREHOLE No BH29
SHEET 4 of 4
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LOCATION PIER 17 - DOWN STREAM END COORDINATES 9857.2 E; 168660.0 N
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DEPTH (m)	R.L. (m)	ALGER CASING WASH BORING CORE DRILLING	ROD () % CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
30	-26.90				ROCK SW : Pale grey to grey, laminated, mainly high strength. Defects - Generally rare. Borehole terminated at 30m								
31													
32													
33													
34													
35													
36													
37													
38													
39													
40													

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Project: **Gateway Bridge Duplication Investigation**

Borehole No: **BH 29**

Start Depth: 27.00m

Finish Depth: 29.90m

Project No: FG5388

H No: 9458

