Queensland Government
Department of Main Roads

ENGINEERING BOREHOLE

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

BOREHOLE No BH28
SHEET 1 of 4
REFERENCE No H9577

PROJECT GATEWAY BRIDGE DUPLICATION FOUNDATION INVESTIGATION - GATEWAY UPGRADE PROJECT
LOCATION PIER 16 - DOWN STREAM END
COORDINATES 9889.1 E; 168596.5 N
PROJECT No FG5388
SURFACE R.L. 3.77
DATE STARTED 09/02/05
DATUM SETP
JOB No
DATUM AHD
DATE COMPLETED 10/02/05
DRILLER R&D DRILLING PTY LTD

DEPTH (m)	R.L. (m)	AUGER / CASING / WASH BORING / CORE DRILLING	RQD ( )% CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH (EH VH H M L VL EL)	DEFECT SPACING (mm) (20 60 200 600 2000)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
0	3.77				**FILL** Brown to grey, moist, stiff, gravelly clay. Occasional lithic fragments.		GC					Drilling records only	
	3.02				**ESTUARINE WEATHERED OC CRUST** Dark grey to mottled grey, slightly moist, soft to mainly firm.		OL					1,2,2 N=4	SPT
1	2.02				**ESTUARINE SILTY CLAY** Dark grey to dark brown, moist, very soft. High plasticity, slightly organic.							1,1,- N<1	SPT
2													
3													
4												HW,-,- N<1	SPT
5							OH						
6												HW,-,- N<1	SPT
7												RW,HW,- N<1	SPT
8	-4.23				**SANDY SILT** Dark grey to black, wet, very soft to soft. Very fine grained sand.								
9							SM					RW,-,2 N<1	SPT
10	-6.23												

BOREHOLE WITH LITHOLOGY GATEWAY UPGRADE PROJECT.GPJ ENGINEERING BOREHOLE 09_04.GDT 31/08/05

REMARKS Defect angles have been measured with respect to a horizontal plane.

LOGGED BY
A. DISSANAYAKE (DISS)

Queensland Government
Department of Main Roads

ENGINEERING BOREHOLE

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

BOREHOLE No BH28
SHEET 2 of 4
REFERENCE No H9577

PROJECT GATEWAY BRIDGE DUPLICATION FOUNDATION INVESTIGATION - GATEWAY UPGRADE PROJECT
LOCATION PIER 16 - DOWN STREAM END
COORDINATES 9889.1 E; 168596.5 N
PROJECT No FG5388
SURFACE R.L. 3.77
DATE STARTED 09/02/05
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DRILLER R&D DRILLING PTY LTD

DEPTH (m)	R.L (m)	AUGER / CASING / WASH BORING / CORE DRILLING	RQD ( )% CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH (EH VH H M L VL EL)	DEFECT SPACING (mm) (20 60 200 600 2000)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
10	-6.23				**SANDY SILT** (As above)		SM					HW,-,- N<1	SPT
11	-7.23				**SILTY SAND** Dark grey to black, wet, medium dense. Occasional calcareous concretions and shell fragments.		SM					8,7,4 N=11	SPT
12	-8.73				**ESTUARINE SILTY CLAY** Dark grey to dark brown, moist to slightly wet, very soft. Partly decomposed shell fragments, minor fine grained sand fraction towards bottom.		OH					RW,-,- N<1	SPT
13													
14												HW,-,- N<1	SPT
15													
16												RW,-,- N<1	SPT
17													
18												RW,-,- N<1	SPT
19													
20	-16.23											RW,-,- N<1	SPT

BOREHOLE WITH LITHOLOGY GATEWAY UPGRADE PROJECT.GPJ ENGINEERING BOREHOLE 09_04.GDT 31/08/05

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ENGINEERING BOREHOLE

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

BOREHOLE No BH28
SHEET 3 of 4
REFERENCE No H9577

PROJECT GATEWAY BRIDGE DUPLICATION FOUNDATION INVESTIGATION - GATEWAY UPGRADE PROJECT
LOCATION PIER 16 - DOWN STREAM END
COORDINATES 9889.1 E; 168596.5 N
PROJECT No FG5388
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DEPTH (m)	R.L. (m)	AUGER / CASING / WASH BORING / CORE DRILLING	RQD ( )% CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH (EH VH H M L VL EL)	DEFECT SPACING (mm) (20 60 200 600 2000)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES / TESTS
20	-16.23				**ESTUARINE SILTY CLAY** (As above)							RW,-,HW N<1 N<1	SPT
21													
22												RW,-,- N<1	SPT
23													
24												RW,-,- N<1	SPT
25							OH						
26												RW,-,- N<1	SPT
27												RW,-,- N<1	SPT
28												1,-,- N<1	SPT
29													
30	-26.23											RW,-,- N<1	SPT

BOREHOLE WITH LITHOLOGY GATEWAY UPGRADE PROJECT.GPJ ENGINEERING BOREHOLE 09_04.GDT 31/08/05

REMARKS Defect angles have been measured with respect to a horizontal plane.

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ENGINEERING BOREHOLE

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BOREHOLE No BH28
SHEET 4 of 4
REFERENCE No H9577

PROJECT GATEWAY BRIDGE DUPLICATION FOUNDATION INVESTIGATION - GATEWAY UPGRADE PROJECT
LOCATION PIER 16 - DOWN STREAM END
COORDINATES 9889.1 E; 168596.5 N
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DEPTH (m)	R.L. (m)	AUGER / CASING / WASH BORING / CORE DRILLING	RQD ( )% CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH (EH VH H M L VL EL)	DEFECT SPACING (mm) (20 60 200 600 2000)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES	TESTS
30	-26.23				**ESTUARINE SILTY CLAY** (As above)		OH							
	-26.73				**INTERBEDDED MUDSTONE AND SANDSTONE** HW : Medium to high strength sandstone, rock kernels in silty sand matrix. Gradually grading into very low to low strength rock.		HW					High strength sandstone interbed		
31			(0) 53									Core loss		
32	-28.30		(73) 100		**MUDSTONE** FINE GRAINED, THINLY LAMINATED, WEAK, SEDIMENTARY ROCK. SW : Dark grey to black, thinly laminated, very low to mainly low strength.									
			(70) 100		Defects - - Frequent drilling induced lamination partings 30° (<5/m). - Joints at 60° (4-5/m).							Is(50)=1.60 MPa Is(50)=1.06 MPa	x o	
33			(72) 100				SW							
			(65) 100		Slightly broken and altered adjacent to defetcs.							High strength sandstone interbed		
34			(70) 100											
35	-31.53											Is(50)=0.31 MPa Is(50)=0.25 MPa	o x	
					Borehole terminated at 35.3m									
36														
37														
38														
39														
40														

BOREHOLE WITH LITHOLOGY GATEWAY UPGRADE PROJECT.GPJ ENGINEERING BOREHOLE 09_04.GDT 31/08/05

REMARKS Defect angles have been measured with respect to a horizontal plane.

LOGGED BY
A. DISSANAYAKE (DISS)

Project: **Gateway Bridge Duplication Investigation**

Borehole No: **BH 28**

Start Depth: **31.00**m
Finish Depth: 35.30m
Project No: FG5388
H No: 9459