Queensland Government
Department of Main Roads

ENGINEERING BOREHOLE

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

BOREHOLE No BH30
SHEET 1 of 3
REFERENCE No H9579

PROJECT GATEWAY BRIDGE DUPLICATION FOUNDATION INVESTIGATION - GATEWAY UPGRADE PROJECT
LOCATION PIER 18 - DOWN STREAM END
COORDINATES 9825.4 E, 168723.5 N
PROJECT No FG5388
SURFACE R.L. 2.93
DATE STARTED 07/02/05
DATUM SETP
JOB No
DATUM AHD
DATE COMPLETED 08/02/05
DRILLER R&D DRILLING PTY LTD

DEPTH (m)	R.L. (m)	AUGER / CASING / 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	2.93				**ESTUARINE (?) WEATHERED OC CRUST** Dark grey brown to mottled grey, slightly moist, soft to mainly firm silty clay. High plasticity.							Gravel sizing up to 30mm on the surface	
1												1,2,2 N=4	SPT
2													U50
	0.43				**ESTUARINE SILTY CLAY** Dark grey to dark brown, moist, very soft sensitive. High plasticity, slightly organic throughout.		OH					HW,-,- N<1	SPT
3												Peak Su=28.8kPa, Res Su=5.85kPa	FSV
	-0.97												
4					**ESTUARINE SANDY SILT** Dark grey to dark brown, moist, very soft.							HW,-,- N<1	SPT
5							SM					1,1,- N<1	SPT
6												HW,-,- N<1	SPT
7	-4.07				**SILTY SAND** Dark grey to dark brown, wet, very loose. Fine grained sand with some shell fragments.							HW,-,- N<1	SPT
8												HW,-,- N<1	SPT
9							SM					1,HW,- N<1	SPT
10	-7.07												

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 BH30
SHEET 2 of 3
REFERENCE No H9579

PROJECT GATEWAY BRIDGE DUPLICATION FOUNDATION INVESTIGATION - GATEWAY UPGRADE PROJECT
LOCATION PIER 18 - DOWN STREAM END COORDINATES 9825.4 E; 168723.5 N
PROJECT No FG5388 SURFACE R.L. 2.93 DATE STARTED 07/02/05 DATUM SETP
JOB No DATUM AHD DATE COMPLETED 08/02/05 DRILLER R&D DRILLING PTY LTD

DEPTH (m)	R.L. (m)	AUGER / CASING / 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	-7.07				**ESTUARINE SILTY CLAY** Dark grey to dark brown, moist, very soft.							HW,-,- N<1	SPT
11												RW,-,- N<1	SPT
12													U50
13												RW,HW,- N<1	SPT
14					Some fissuring towards bottom.		OH						U50
15												RW,HW,- N<1	SPT
16													U50
17												RW,HW,- N<1	SPT
	-14.82												
18					**SILTY CLAY** Dark grey to dark brown, slightly moist, stiff.		CH					2,4,5 N=9	SPT
	-15.82												
19					**SILTY SAND** Brown to orange brown, moist becoming wet with depth, medium dense.		SM					6,10,9 N=19	SPT
20	-17.07												

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 BH30
SHEET 3 of 3
REFERENCE No H9579

PROJECT GATEWAY BRIDGE DUPLICATION FOUNDATION INVESTIGATION - GATEWAY UPGRADE PROJECT
LOCATION PIER 18 - DOWN STREAM END
COORDINATES 9825.4 E; 168723.5 N
PROJECT No FG5388
SURFACE R.L. 2.93
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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	-17.07				**SILTY SAND** As above. Very fine sand, high silt and clay content on the top, occasional gravel sizing up to 10mm.							5,14,11 N=25	SPT	
21														
22							SM					4,8,12 N=20	SPT	
23														
24												5,7,9 N=16	SPT	
	-21.52		(67)		**SANDSTONE** MW : Pale orange to white, cemented, massive high strength. Defects - Nil.		MW					Is(50)=1.78 MPa Is(50)=2.59 MPa	x o	
	-21.93				**INTERBEDDED SANDSTONE AND MUDSTONE. MUDSTONE DOMINANT**							Is(50)=2.96 MPa	x	
25							SW					Conglomerate band Is(50)=3.10 MPa	o	
	-22.60		100		SW : Pale grey to dark grey, thinly laminated and bedded, low to medium strength rock becoming high below 28.0m.									
			(47)		MW : Orange, very low strength rock, showing some medium dense sandy properties towards bottom.		MW							
26	-23.41		74											
			(60)		SW : Pale grey to dark grey, thinly laminted and bedded, low to mainly medium strength rock becoming high below 28.0m. Defects - Frequent drilling induced lamination partings <30° (5-10/m). - Joints - 45° (1-2/m). - Joints - 65° (1-2/m).									
27			100											
			(61)											
28			100				SW					Sheared and healed zone		
			(90)									Is(50)=0.34 MPa Is(50)=0.42 MPa	x o	
29					Becoming predominantly sandstone with depth.							Is(50)=0.82 MPa Is(50)=1.20 MPa	x o	
	-26.57		100											
30					Borehole terminated at 29.5m									

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 30**

Start Depth: **24.45**m
Finish Depth: 29.50m
Project No: FG5388
H No: 9457