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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 **BH25**

SHEET **1** of **5**

REFERENCE No **H9574**

PROJECT **GATEWAY BRIDGE DUPLICATION FOUNDATION INVESTIGATION - GATEWAY UPGRADE PROJECT**

LOCATION **PIER 13 - DOWN STREAM END**

COORDINATES **9980.4 E; 168404.9 N**

PROJECT No **FG5388**

SURFACE R.L. **4.51**

DATE STARTED **26/5/05**

DATUM **SETP**

JOB No

DATUM **AHD**

DATE COMPLETED **28/5/05**

DRILLER **R&D DRILLING PTY LTD**

DEPTH (m)	R.L. (m)	ROD () %	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
0	4.51									
0.391			SILTY GRAVEL (FILL ?)		GP				Driller's record only.	
0.901			SAND (FILL ?) Black, moist, medium dense fine grained.		SP				Driller's record only.	
1.901			ESTUARINE WEATHERED OC CRUST Dark grey to mottled grey, moist, firm.		OL				1,2,4 N=6	SPT
2.901			ESTUARINE SILTY CLAY Dark grey to dark grey brown, moist, very soft to soft. High plasticity; minor fissuring throughout.						HW, - N<1	SPT
4.901					OH				0,2,1 N=3	SPT
6.901									0,0,1 N=1	SPT
8.901									RW, - N<1	SPT
9.419			SILTY SAND Grey brown to brown, wet, mainly medium dense. Fine to medium grained sand.		SP-SM				1,6,7 N=13	SPT
10.419										

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

LOGGED BY
A. DISSANAYAKE (DISS)



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ENGINEERING BOREHOLE

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BOREHOLE No **BH25**

SHEET **2** of **5**

REFERENCE No **H9574**

PROJECT **GATEWAY BRIDGE DUPLICATION FOUNDATION INVESTIGATION - GATEWAY UPGRADE PROJECT**

LOCATION **PIER 13 - DOWN STREAM END**

COORDINATES **9980.4 E; 168404.9 N**

PROJECT No **FG5388**

SURFACE R.L. **4.51**

DATE STARTED **26/5/05**

DATUM **SETP**

JOB No

DATUM **AHD**

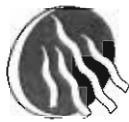
DATE COMPLETED **28/5/05**

DRILLER **R&D DRILLING PTY LTD**

DEPTH (m)	R.L. (m)	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
10	-5.49				SILTY SAND (As above).								
11							SP-SM					6,6,5 N=11	SPT
12	-6.99				ESTUARINE SILTY CLAY Dark grey to dark grey brown, moist, very soft. High plasticity; minor silty sand interbeds; occasional shell fragments.							RW, - N<1	SPT
13							OH						
14	-9.09				SILTY SAND Grey brown to brown, wet, loose to medium dense. Fine to medium grained sand.		SP-SM					2,7,3 N=10	SPT
15	-9.99				ESTUARINE SILTY CLAY Dark grey to dark grey brown, moist, mainly very soft to soft. High plasticity; some fissuring throughout; occasional shell fragments; minor sandy interbeds.							RW, - N<1	SPT
16							OH						
17	-12.39				SILTY SAND Grey brown, wet, loose to mainly medium dense. Some organic fragments; occasional calcareously cemented sandy nodules.							0,0,2 N=2	SPT
18							SM					7,10,12 N=22	SPT
19	-14.59				ESTUARINE SILTY CLAY Dark grey to dark grey brown, moist, very soft. High plasticity; minor silty sand interbeds; occasional shell fragments.							RW, - N<1	SPT
20	-15.49						OH						

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BOREHOLE No BH25

SHEET 3 of 5

REFERENCE No H9574

PROJECT GATEWAY BRIDGE DUPLICATION FOUNDATION INVESTIGATION - GATEWAY UPGRADE PROJECT

LOCATION PIER 13 - DOWN STREAM END

COORDINATES 9980.4 E; 168404.9 N

PROJECT No FG5388

SURFACE R.L. 4.51

DATE STARTED 26/5/05

DATUM SETP

JOB No

DATUM AHD

DATE COMPLETED 28/5/05

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	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES	TESTS
20	-15.49					ESTUARINE SILTY CLAY (As above). Occasional shell fragments; minor fissuring throughout.									
21															
22															
23															
24						Gravel bands (<20mm) containing high shell content.									
25															
26															
27															
28															
29	-24.14					SILTY SAND Pale grey brown to brown, wet, medium dense. Fine to coarse sand.									
30	-25.49														

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

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BOREHOLE No **BH25**

SHEET **4** of **5**

REFERENCE No **H9574**

PROJECT **GATEWAY BRIDGE DUPLICATION FOUNDATION INVESTIGATION - GATEWAY UPGRADE PROJECT**

LOCATION **PIER 13 - DOWN STREAM END**

COORDINATES **9980.4 E; 168404.9 N**

PROJECT No **FG5388**

SURFACE R.L. **4.51**

DATE STARTED **26/5/05**

DATUM **SETP**

JOB No

DATUM **AHD**

DATE COMPLETED **28/5/05**

DRILLER **R&D DRILLING PTY LTD**

DEPTH (m)	R.L. (m)	USER LOGGING WASH BORING CORE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING	INTACT STRENGTH (kPa)	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
30	-25.49					SILTY SAND As above. Occasional gravel sizing up to 20mm.		SM				7,12,12 N=24	SPT
31	-26.74					SAND AND GRAVEL Grey to grey brown, wet, mainly dense to very dense with depth. Sub-angular to sub-rounded quartzitic and lithic fragments sizing up to 50mm, minor clay fraction; gravel size increases with depth. (Gravel fraction > Sand fraction)		GP-GM				14,22,18 N=40	SPT
32												12,17,19 N=36	SPT
33												6,15,6 N=21	SPT
34												25,30/70 N>50	SPT
35	-30.89												
36			(0) 27 (48)			INTERBEDDED MUDSTONE AND SANDSTONE MW : White, pale grey to dark grey, thinly laminated and bedded, very low to medium strength. Defects - Generally rare. - Occasional drilling induced lamination partings <20° (1-2/m) - Joints @ 70°-80° (1/m).		MW				Is(50)=0.08 MPa	x
37												Is(50)=0.06 MPa	x
38	-33.64		92 (0)									Is(50)=0.38 MPa Is(50)=0.08 MPa	o x
39			100 (88)			SW : White, pale grey to dark grey, thinly laminated and bedded, low to mainly medium strength. Defects - Generally rare. - Occasional drilling induced lamination partings <20° (1-2/m).		SW				Is(50)=0.77 MPa Is(50)=0.15 MPa	o x
40	-35.29 -35.49					SANDSTONE (See next page)		SW				Is(50)=8.16 MPa	x

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

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BOREHOLE No BH25

SHEET 5 of 5

REFERENCE No H9574

PROJECT GATEWAY BRIDGE DUPLICATION FOUNDATION INVESTIGATION - GATEWAY UPGRADE PROJECT

LOCATION PIER 13 - DOWN STREAM END

COORDINATES 9980.4 E; 168404.9 N

PROJECT No FG5388

SURFACE R.L. 4.51

DATE STARTED 26/5/05

DATUM SETP

JOB No

DATUM AHD

DATE COMPLETED 28/5/05

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	EH VH H M L VL	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
40	-35.49					SW : Pale grey to grey, laminated, high to mainly very high strength.	SW						Is(50)=6.19 MPa	o
	-35.77					INTERBEDDED MUDSTONE AND SANDSTONE							Is(50)=1.06 MPa	o
						SW : White, pale grey to dark grey, thinly laminated and bedded, mainly low to medium strength with occasional high to very high strength sandstone bands.	SW						Is(50)=0.15 MPa	x
41	-36.59		100			Defects : - Occasional drilling induced lamination partings <20° (1-2/m) & joint @ 60°-70° (1/m).							Is(50)=0.17 MPa	x
						Borehole terminated at 41.1m							Is(50)=0.19 MPa	o
42														
43														
44														
45														
46														
47														
48														
49														
50														

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Project: **Gateway Upgrade Project - Gateway Bridge**

Borehole No: **BH 25**

Start Depth: 35.40m

Finish Depth: 41.10m

Project No: FG 5388

H No: 9574

