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**Queensland  
Government**

Department of  
**Main Roads**

# ENGINEERING BOREHOLE

FOR GEOTECHNICAL TERMS AND  
SYMBOLS REFER FORM F:GEOT 01772-2004

BOREHOLE No   BH27  

SHEET   2   of   4  

REFERENCE No   H9576  

PROJECT   GATEWAY BRIDGE DUPLICATION FOUNDATION INVESTIGATION - GATEWAY UPGRADE PROJECT  

LOCATION   PIER 15 - DOWN STREAM END   COORDINATES   9920.9 E; 168533.1 N  

PROJECT No   FG5388   SURFACE R.L.   3.85   DATE STARTED   11/02/05   DATUM   SETP  

JOB No                      DATUM   AHD   DATE COMPLETED   14/02/05   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					DEFECT SPACING (mm)					GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
									EH	VH	HM	VL	EL	20	60	200	600	2000			
10	-6.15					<b>ESTUARINE SILTY CLAY</b> Dark grey to black, moist, very soft.		OH												RW,- N<1	SPT
11	-7.15					<b>SILTY SAND</b> Grey brown to brown, wet, very loose, becoming medium dense with depth.  Some shell fragments and calcareously cemented gravels sizing up to 20mm.		SM												1,2,-	SPT
12																					
13																				1,7,6 N=13	SPT
14	-10.05					<b>ESTUARINE SILTY CLAY</b> Dark grey to black, moist, very soft.  High plasticity, slightly organic throughout.														RW,HW,- N<1	SPT
15																		high organic content			
16																				RW,- N<1	SPT
17								OH													
18																				RW,- N<1	SPT
19																					
20	-16.15																			RW,- N<1	SPT

BOREHOLE WITH LITHOLOGY GATEWAY UPGRADE PROJECT.GPJ ENGINEERING BOREHOLE 09\_04.GDT 31.08/05

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.  

LOGGED BY  
**A. DISSANAYAKE (DISS)**





# ENGINEERING BOREHOLE

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

BOREHOLE No **BH27**  
SHEET **4** of **4**  
REFERENCE No **H9576**

PROJECT GATEWAY BRIDGE DUPLICATION FOUNDATION INVESTIGATION - GATEWAY UPGRADE PROJECT  
LOCATION PIER 15 - DOWN STREAM END COORDINATES 9920.9 E; 168533.1 N  
PROJECT No FG5388 SURFACE R.L. 3.85 DATE STARTED 11/02/05 DATUM SETP  
JOB No \_\_\_\_\_ DATUM AHD DATE COMPLETED 14/02/05 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	40	60	80	100	120					140	160
30	-26.15					SAND AND GRAVEL As above.														
31																		13,11,14 N=25	SPT	
32																				
33								GP-GM											6,8,6 N=14	SPT
34																				
35	-31.15					Becoming more larger gravel towards bottom.														
36	-31.95					INTERBEDDED MUDSTONE AND SANDSTONE		HW											Drilling records only	
37	-33.00				(80)	MUDSTONE FINE GRAINED, THINLY LAMINATED, WEAK SEDIMENTARY ROCK. SW : Dark grey to black, thinly laminated, mainly medium to high strength rock. Defects - Generally rare. - Occasional drilling induced lamination partings <20°.		SW										No recovery	30/60,- N>50	SPT
38	-33.75				100 (65)	SANDSTONE MEDIUM TO COARSE GRAINED, LAMINATED, CEMENTED SEDIMENTARY ROCK. SW : Pale grey to white, laminated, high strength. Defects : Drilling induced lamination partings <10° (2-3/m)		SW											Is(50)=0.47 MPa Is(50)=1.85 MPa Is(50)=0.45 MPa Is(50)=2.22 MPa	x o x o
39	-34.95				100	INTERBEDDED SANDSTONE AND MUDSTONE (SANDSTONE DOMINANT) SW : Pale grey to white grey, laminated, medium to high strength Defects - Fragment lamination partings <10° (5-10/m). Borehole terminated at 38.8m		SW											Is(50)=1.22 MPa Is(50)=1.41 MPa Is(50)=2.36 MPa Is(50)=1.95 MPa Is(50)=0.28 MPa Is(50)=0.66 MPa Is(50)=0.46 MPa Is(50)=1.21 MPa	x o x o x o x o
40																				

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.

LOGGED BY  
A. DISSANAYAKE (DISS)

Project: **Gateway Bridge Duplication Investigation**

Borehole No: **BH 27**

Start Depth: 35.80m

Finish Depth: 38.80m

Project No: FG5388

H No: 9460

