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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 BH3

SHEET 1 of 2

REFERENCE No H9552

PROJECT GATEWAY UPGRADE PROJECT - GATEWAY BRIDGE FOUNDATION INVESTIGATION

LOCATION PIER 1 - DOWNSTREAM/RIGHTHAND SIDE COORDINATES 10536.1 E; 167314.6 N

PROJECT No FG5388 SURFACE R.L. 8.60 DATE STARTED 21/4/05 DATUM SETP

JOB No 0405 DATUM AHD DATE COMPLETED 20/4/05 DRILLER GEO DRILLING PTY LTD

BOREHOLE WITH LITHOLOGY 24. 5. 2005 - BORELOGS FOR SOUTHERN APPROACH PIERS AND ABUT A GPJ ENGINEERING BOREHOLE 09. 04.GDT. 31/8/05

DEPTH (m)	R.L. (m)	AUGER 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
									EH	VH	H	M	J				
0	8.60					SILT (TOPSOIL) - Grey											
	8.10					SILTY SAND - Pale Grey, fine grained.											
	7.80					SANDSTONE PALE GREY MEDIUM TO COARSE GRAINED SEDIMENTARY ROCK MW - SW : Pale grey to prange brown, massive to slightly laminated, mainly medium to coarse grained, low to medium strength	XW								Carbonaceous laminations parallel to bedding.	Is(50)=0.08 MPa Is(50)=0.06 MPa	x x
1				(100)		Minor orange iron staining and thin carbonaceous interlamination parallel to bedding in parts.	SW								Is(50)=0.19 MPa Is(50)=0.20 MPa	x o	
2				(100)		Defects : Bedding/lamination partings 10-20°. Occasional joints 70-90° Defect surfaces are mostly planar, smooth - slightly rough, clean or with a thin clayey film.	MW								JT, 10°, PL, SM, iron stained.	Is(50)=0.16 MPa Is(50)=0.41 MPa	x o
3				(100)			SW								Is(50)=0.19 MPa Is(50)=0.22 MPa	x o	
4				(100)			MW								Partings on carbonaceous laminations, 0-10°, rough. Partings on Carb Lams 0-10°, Rough JT, 0-10°, R, iron stained.	Is(50)=0.30 MPa Is(50)=0.48 MPa	o x
5				(100)			SW								Is(50)=0.09 MPa Is(50)=0.17 MPa Is(50)=0.22 MPa Is(50)=0.23 MPa	x o x o	
6				(100)			SW								Is(50)=0.52 MPa Is(50)=0.27 MPa	x o	
7				(100)		Minor yellow iron staining. Becoming coarse grained with minor fine gravel and wispy carbonerous interlamination.	SW								JT, 80-90°, T, thin clay infill, minor iron stains.	Is(50)=0.61 MPa Is(50)=0.28 MPa Is(50)=0.05 MPa Is(50)=0.06 MPa	x o x o
8	0.71			(100)		INTERBEDDED MUDSTONE & SANDSTONE (MUDSTONE DOMINANT) SW : Pale grey to dark grey, laminated, fine grained, very low to low strength. Minor carbonerous interlamination in parts.									JT, 70°, PL, T, 5mm vertical displacement.	Is(50)=0.36 MPa Is(50)=0.28 MPa Is(50)=0.56 MPa Is(50)=0.18 MPa	x o o x
9				(100)		Defects: Bedding/lamination partings 10-20°. Occasional joints @ 30° or 70°	SW								JT, 30°, PL, SR, CN. 2 Joints, 70°, PL, SM, CN.	Is(50)=0.01 MPa Is(50)=0.52 MPa Is(50)=0.04 MPa Is(50)=0.28 MPa	x o x o
10	-1.02					Defects are mostly parallel to bedding (some may be lamination partings). Defect surfaces are mostly planar, smooth -									Is(50)=0.02 MPa Is(50)=0.03 MPa	x o	
	-1.40														Is(50)=0.24 MPa Is(50)=0.23 MPa	x o	

REMARKS

LOGGED BY

J. LESTER & A. DISSANAYAKE (DIS)



**ENGINEERING BOREHOLE**

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

BOREHOLE No BH3  
SHEET 2 of 2  
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LOCATION PIER 1 - DOWNSTREAM/RIGHTHAND SIDE COORDINATES 10536.1 E; 167314.6 N  
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DEPTH (m)	R.L. (m)	ALTER 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
10	-1.40					slightly rough and clean. <b>SANDSTONE SW</b> : Pale grey to minor yellow iron staining (see next page). <b>SANDSTONE SW</b> : Fine to medium grained, laminated, low to medium strength. Defects : Bedding/lamination partings 10-20°, occasionally @ 30°.	SW					Is(50)=0.35 MPa Is(50)=0.43 MPa	x	o
11	-3.20				(98)							Is(50)=0.52 MPa Is(50)=0.74 MPa	x	o
12	-3.80				(26) (42) (100)	<b>INTERBEDDED COAL &amp; MUDSTONE HW</b> : Brown and dark grey. Fractured and sheared in parts. Contains some clay or extremely weathered bands. <b>INTERBEDDED MUDSTONE &amp; SANDSTONE SW</b> : Dark grey and grey, fine grained.	HW				Clay band, yellow-brown, stiff. Clay band as above. Clay band as above.	JT, 30°, PL, R, CN. JT, 30°, PL, SM, CN. JT, 30°, PL, SM, CN, crushed. Sheared seam 2mm	x	o
13	-4.40					<b>SANDSTONE SW</b> : Grey and dark grey, thinly laminated, fine grained, low strength. Frequent thin mudstone interbeds and some thin coal interlamination.	SW					Is(50)=0.03 MPa	x	o
14	-6.12					Defects : Lamination/bedding partings 10-20°. Defects mostly lamination partings parallel to bedding.						Is(50)=0.02 MPa Is(50)=0.24 MPa Is(50)=0.04 MPa Is(50)=0.13 MPa	x	o
15						Borehole terminated at 14.72m								

REMARKS

LOGGED BY  
J. LESTER & A. DISSANAYAKE (D)

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

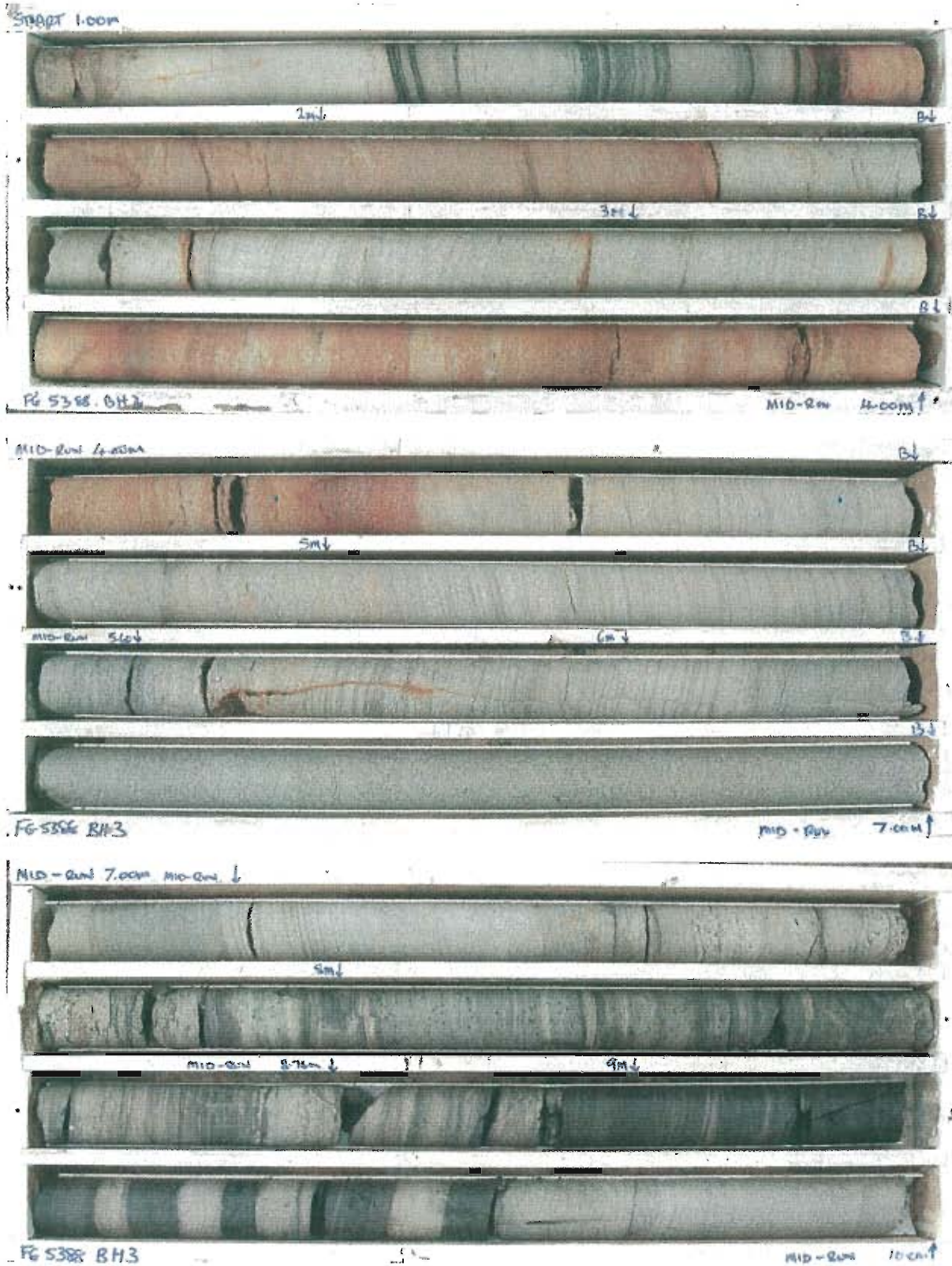
Borehole No: **BH 3**

Start Depth: 1.00m

Finish Depth: 14.72m

Project No: FG 5388

H No: 9552





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

Borehole No: **BH 3**

Start Depth: 1.00m

Finish Depth: 14.72m

Project No: FG 5388

H No: 9552

