Queensland Government
Department of Main Roads

ENGINEERING BOREHOLE

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

BOREHOLE No BH130
SHEET 1 of 3
REFERENCE No H9439

PROJECT GATEWAY UPGRADE PROJECT GEOTECHNICAL INVESTIGATION - NORTHERN SECTION
LOCATION CONTROL LINE: MCAO - Ch. 23442.9 - OFFSET 0.4 R
COORDINATES 9431.1 E; 173692.0 N
PROJECT No FM2055
SURFACE R.L. 4.96
DATE STARTED 17/8/04
DATUM SETP
JOB No
DATUM AHD
DATE COMPLETED 17/8/04
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	4.96				**LANDFILL** Brown, moist, firm silty clay comprising bricks, glass, rocks, wood, rags, plastic and metals.								
1												3,7,8 N=15	SPT
2												1,4,3 N=7	SPT
3												1,3,4 N=7	SPT
4	0.66				Minor organic content.							Wood 150mm. Hammer bounced. 10/0,-,- N>50	SPT
5	-0.34				**SANDY SILTY CLAY / FILL (??)** Orange brown to dark grey brown, moist, firm.		CI					Sandy at base 2,2,4 N=6	SPT
6					**CLAYEY SANDY GRAVEL / FILL (??)** Orange brown to dark brown, moist to wet, loose.		GC					2,3,5 N=8	SPT
7	-2.04				**ESTUARINE SILTY CLAY** Dark grey, moist, firm, sensitive.							MC=60.2%,WD=1.66t/m3, PP=40kPa DD=1.04t/m3	U50
8					Minor organic content, high plasticity.							Peak Su=41.6kPa, Res Su=9.6kPa	FSV
9					Some cubic structures and fissuring towards bottom.		OH					APD=2.676t/m3, LL=77.8%, PI=47.2%, LS=19.8% PP=30kPa MC=71.6%,WD=1.62t/m3, DD=1.56t/m3; APD=2.676t/m3 LL=77.8%; PI=47.2%, LS=19.8	U50
10	-5.04												

BOREHOLE WITH LITHOLOGY GATEWAY NORTHERN UPGRADE.GPJ ENG BOREHOLE FINAL.GDT 30/4/05

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

LOGGED BY
B.Woodgate & A.Dissanayake

Queensland Government
Department of Main Roads

ENGINEERING BOREHOLE

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

BOREHOLE No BH130
SHEET 2 of 3
REFERENCE No H9439

PROJECT GATEWAY UPGRADE PROJECT GEOTECHNICAL INVESTIGATION - NORTHERN SECTION
LOCATION CONTROL LINE: MCAO - Ch. 23442.9 - OFFSET 0.4 R
COORDINATES 9431.1 E; 173692.0 N
PROJECT No FM2055
SURFACE R.L. 4.96
DATE STARTED 17/8/04
DATUM SETP
JOB No
DATUM AHD
DATE COMPLETED 17/8/04
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	-5.04				**ESTUARINE SILTY CLAY** (As above)							Peak Su=38.4, Res Su=6.4kPa	FSV
11							OH					MC=76.8, WD=1.56t/m3, PP=30kPa DD=0.88t/m3; APD=2.62t/m3	U50
12	-7.04				**SANDY CLAY - ALLUVIUM** Grey, moist, stiff. High plasticity, fine to medium grained sand.							Peak Su=112kPa, Res Su=9.6kPa	FSV
13							CL					3,5,8 N=13	SPT
14	-9.04				**SANDSTONE** FINE TO MEDIUM GRAINED, LAMINATED, POORLY CEMENTED SEDIMENTARY ROCK. HW : Generally exhibits engineering properties of pale green to mottled orange, dry, hard sandy silty clay gradually grading to low strength rock with depth.							11,22,30 N=52	SPT
15								HW					
16												12,19,28 N=47	SPT
17	-12.54												
18			(91)		**SILTSTONE** FINE GRAINED, THINLY LAMINATED, SEDIMENTARY ROCK. MW : Orange brown to grey brown, thinly laminated, very low to low strength with some low to medium strength bands.							Is(50)=0.08 MPa	o
19					Defects : - Frequent lamination parting <20deg (4-5/m).			MW				Sandstone bed Is(50)=0.70 MPa Is(50)=0.72 MPa Is(50)=0.06 MPa Is(50)=0.01 MPa	o x o x
			100										
20	-14.94		(92)										
	-15.04												

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

LOGGED BY
B.Woodgate & A.Dissanayake

BOREHOLE WITH LITHOLOGY GATEWAY NORTHERN UPGRADE.GPJ ENG BOREHOLE FINAL.GDT 30/4/05

Queensland Government
Department of Main Roads

ENGINEERING BOREHOLE

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

BOREHOLE No BH130
SHEET 3 of 3
REFERENCE No H9439

PROJECT GATEWAY UPGRADE PROJECT GEOTECHNICAL INVESTIGATION - NORTHERN SECTION
LOCATION CONTROL LINE: MCAO - Ch. 23442.9 - OFFSET 0.4 R
COORDINATES 9431.1 E; 173692.0 N
PROJECT No FM2055
SURFACE R.L. 4.96
DATE STARTED 17/8/04
DATUM SETP
JOB No
DATUM AHD
DATE COMPLETED 17/8/04
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
20	-15.04				**SANDSTONE** FINE TO MEDIUM GRAINED, LAMINATED, POORLY CEMENTED, SEDIMENTARY ROCK. MW : Orange brown to brown, thinly laminated to slightly massive, mainly medium to some high strength bands. Occasional carbonaceous up to 2-5mm. Defects : - Drilling induced lamination partings <25deg (1-2/m).			MW				Is(50)=0.40 MPa Is(50)=0.13 MPa Is(50)=0.38 MPa Is(50)=0.40 MPa Is(50)=0.51 MPa Is(50)=0.35 MPa Is(50)=1.11 MPa Is(50)=0.64 MPa	o x o x o x o x	
21								MW						
22	-17.54		100											
					Borehole terminated at 22.5m									
23														
24														
25														
26														
27														
28														
29														
30														

BOREHOLE WITH LITHOLOGY GATEWAY NORTHERN UPGRADE.GPJ ENG BOREHOLE FINAL.GDT 30/4/05

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

LOGGED BY
B.Woodgate & A.Dissanayake

Project: **Gateway Upgrade Project Geotechnical Investigation**

Borehole No: **BH 130**

Start Depth: 17.50m
Finish Depth: 22.50m
Project No: FM2055
H No: 9439