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**Queensland
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Main Roads

ENGINEERING BOREHOLE

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

BOREHOLE No **BH123**

SHEET **1** of **3**

REFERENCE No **H9432**

PROJECT GATEWAY UPGRADE PROJECT GEOTECHNICAL INVESTIGATION - NORTHERN SECTION
 LOCATION CONTROL LINE: MCEO - Ch. 228 - OFFSET 10.3 R COORDINATES 9548.0 E; 172674.1 N
 PROJECT No FM2055 SURFACE R.L. 1.77 DATE STARTED 30/6/04 DATUM SETP
 JOB No DATUM AHD DATE COMPLETED 1/7/04 DRILLER R&D DRILLING PTY LTD

DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
0	1.77					GRAVELLY SILTY CLAY - FILL Brown, moist, firm.		GC					
1	0.77					ESTUARINE WEATHERED OC CRUST Grey brown to mottled brown, moist, firm, sensitive to extra sensitive. High organic content, high plasticity, partly decomposed roots throughout.		CH-CI				MC=48.4%, WD=1.70t/m3, DD=1.16t/m3, LL=55.0%, PI=29.0%, LS=15.8% APD=2.717t/m3, OC=9.20% MS=8.8kPa	U100
2	-0.23					ESTUARINE SILTY CLAY Dark grey, moist, mainly soft, medium sensitive to extra-sensitive. High organic content, high plasticity, occasional poorly decomposed plant roots.		CI-CH				Peak Su=21.6kPa, Res Su=2.7kPa	FSV
3												MC=72.6%, WD=1.58t/m3, DD=0.92t/m3, LL=56.2%, PI=30.8%, LS=17.6% APD=2.699t/m3, MS=8.4kPa	U100
4												Peak Su=28.8kPa, Res Su=8.1kPa	FSV
5	-3.03					ESTUARINE CLAYEY/SILTY SAND Pale grey to grey moist, loose. Fine to medium grained quartzitic sand, partly to unweathered shell fragments. Becoming clayey with depth.		SC-SM				MC=63.2%, WD=1.62t/m3, DD=1.00t/m3, LL=33.0%, PI=9.4%, LS=7.8% APD=2.710t/m3, OC=6.05% MS=8.4kPa	U100
6	-4.23					ESTUARINE SANDY SILTY CLAY Dark grey, moist, soft to firm, sensitive to medium sensitive. High plasticity, high shell content but decreasing with depth, high organic content, fine sand fraction and sand content decreases with depth.						Peak Su=23.4kPa, Res Su=4.0kPa	FSV
7												MC=39.2%, WD=1.84t/m3, DD=1.32t/m3, LL=38.8%, PI=20.0%, LS=11.0% APD=2.700t/m3, OC=4.95% MS=7.4kPa	U100
8								CI-CH				Peak Su=31.5kPa, Res Su=8.11kPa	FSV
9												MC=47.0%, WD=1.76t/m3, DD=1.20t/m3, LL=54.4%, PI=28.4%, LS=16.2% APD=2.733t/m3, OC=10.5% MS=8.9kPa	U100
10	-8.23												

REMARKS

LOGGED BY
B.Woodgate & A.Dissanayake



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BOREHOLE No **BH123**

SHEET **2** of **3**

REFERENCE No **H9432**

PROJECT **GATEWAY UPGRADE PROJECT GEOTECHNICAL INVESTIGATION - NORTHERN SECTION**

LOCATION **CONTROL LINE: MCEO - Ch. 228 - OFFSET 10.3 R**

COORDINATES **9548.0 E; 172674.1 N**

PROJECT No **FM2055**

SURFACE R.L. **1.77**

DATE STARTED **30/6/04**

DATUM **SETP**

JOB No

DATUM **AHD**

DATE COMPLETED **1/7/04**

DRILLER **R&D DRILLING PTY LTD**

DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
10	-8.23													
11						ESTUARINE SILTY CLAY Pale grey to grey, moist, mainly firm to stiff, medium sensitive to sensitive. Minor shell fragments and clasts of the alluviums (<15mm), partly decomposed plant roots.							MC=53.8%, WD=1.64t/m3, DD=1.06t/m3, APD=2.66t/m3, LL=67%, PI=43%, LS=15%, OC=10.10%, MS=11.5kPa Peak Su=35.2kPa, Res Su=12.8kPa	U100 FSV
12													MC=52.6%, WD=1.70t/m3, DD=1.12t/m3, APD=2.66t/m3, LL=66%, PI=43%, LS=15%, OC=12.10%, MS=15kPa	U100
13													Peak Su=44.8kPa, Res Su=12.8kPa	FSV
14							CH						MC=60.4%, WD=1.58t/m3, DD=0.98t/m3, OC=9.30%, MS=19.3kPa	U100
15													Peak Su=60.8kPa, Res Su=12.8kPa	FSV
16													MC=62.0%, APD=2.58t/m3, LL=93%, PI=62%, LS=19%, OC=15.95%, MS=29.5kPa	U100
17													Peak Su=80kPa, Res Su=19.2kPa	FSV
18	-16.23					ESTUARINE CLAYEY SAND Grey, wet very loose to loose. Minor silty clay interbeds (<30mm), occasional shell fragments, fine to medium grained sand.							APD=2.646t/m3	U100
19							GP						HW, 1-N<1	SPT
20	-17.93 -18.23					ESTUARINE SAND AND GRAVEL	GP							

REMARKS

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