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# Queensland Government

# GEOTECHNICAL BOREHOLE LOG

**FINAL** 18/03/2016

BOREHOLE No BH229

Sheet 1 of 3

FOR GEOTECHNICAL TERMS AND H12238 REFERENCE No SYMBOLS REFER FORM F:GEOT 017/8-2014 Mackay Ring Road PROJECT Pioneer River Bridge, Pier 9 (CL) COORDINATES 721321.5 E; 7660315.4 N LOCATION DATE STARTED 21/10/2015 FG6184 PLUNGE 90° GRID DATUM GDA 94 / MGA Z55 SURFACE RL 3.47m PROJECT No 242/10G/906 DATE COMPLETED 23/10/2015 **DRILLER Saxon Drilling** JOB No HEIGHT DATUM A.H.D. BEARING ADDITIONAL DATA AND TEST RESULTS USCS WEATHERING INTACT DEFECT SPACING SAMPLES TESTS Ê LITHOLOGY STRENGTH RΙ DEPTH SAMP MATERIAL DESCRIPTION (m) CORE REC % 듀主프기국교 [800년동생] SAND trace gravel (Fill) Pale orange, moist, very loose to loose. Fine to coarse grained sand. 2.00m: becomes loose 3.00m-3.45m: Casing dropping with SPT SPT SPT 4, 6, 3 SPT -1.03 Sandy GRAVEL (Alluvium) SPT Pale orange grey, wet, medium 8, 15, 19 dense to dense. Fine to coarse grained sand, fine to C SPT 8, 11, 4 N=15 (GP) medium grained gravel, rounded to subrounded grains. 5.50m: gravel becomes medium to SPT coarse grained, rounded <40mm 13, 10, 9 -2.63 Silty SAND (Alluvium) D SPT Pale grey, moist to wet, medium N=23 dense. Fine to medium grained sand. 15, 16, 13 6.70m: trace clay 7.00 to 7.25m: Sandy CLAY: Pale grey, wet, very soft. Medium SPT plasticity. Fine grained sand. N=13 SPT 5, 12, 14 (SM) SPT 7, 11, 13 N=22 8.50m: Clay content no longer SPT 9. 8. 8 9.00m: Sand becomes fine to G coarse grained. Trace clay. SPT 10, 10, 7 N=17 -6.03Sandy CLAY trace gravel (Alluvium) G> SPT (CL) Continued on next sheet REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** S.Foley C.Boyes TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

# Queensland Government

## **GEOTECHNICAL BOREHOLE LOG**

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014

FINAL 18/03/2016

**BH229** BOREHOLE No

Sheet 2 of 3

H12238 REFERENCE No

Mackay Ring Road PROJECT Pioneer River Bridge, Pier 9 (CL) COORDINATES 721321.5 E; 7660315.4 N LOCATION FG6184 PLUNGE 90° DATE STARTED 21/10/2015 GRID DATUM GDA 94 / MGA Z55 SURFACE RL 3.47m PROJECT No 242/10G/906 DRILLER Saxon Drilling HEIGHT DATUM A.H.D. DATE COMPLETED 23/10/2015 JOB No BEARING USCS WEATHERING ADDITIONAL DATA INTACT DEFECT SPACING SAMPLES TESTS Ê LITHOLOGY AND TEST RESULTS STRENGTH RΙ DEPTH SAMP MATERIAL DESCRIPTION CORE REC % ᅾᆂᆂᆂᄀᅺᆿᆙᇝᇰᄓᄫᇂᆘᇂᇕ Sandy CLAY trace gravel (Alluvium) 8, 11, 13 (Cont'd) Pale grey and brown, moist, (CL) very stiff. Fine to medium grained -7.23 sand, fine grained gravel, rounded SPT 7, 11, 17 grains, medium plasticity. N=28 Gravelly Sandy CLAY (Residual) Pale grey and grey, moist, firm. SPT 11. 6. 11 Fine grained gravel, angular grains, (CH) N=17 medium to high plasticity. SPT -8.53 Silty Clayey SAND (Residual) (SC) SPT Green grey, moist, medium dense. -8.93 Fine grained sand, Medium plasticity clay. SPT 11, 15, 30/140 MICRODIORITE (Kgwu) XW: Recovered as pale green grey, moist, very dense, clayey sand. Fine grained sand. -10.03 SPT MICRODIORITE (Kgwu) HW: Grey, fine grained, massive, 30/100 very low to low strength. HW SPT 20, 17, 30/100 15 (0) MW 30/80 -12.53 GRANODIORITE (Kgwu) HW HW: Brown and grey, medium to coarse grained, massive, extremely 67 -13.13 low to very low strength. MICRODIORITE (Kgwu) XW: Recovered as brown, moist, SPT very dense gravelly sandy clay. Fine to medium grained sand. 30/90 -15.53 19.00m: No sample recovered (70) MICRODIORITE (Kgwu) SW SW: Green grey, fine to medium grained, massive, very high strength. Is(50)=2.00 MPa A (19.70m) Js: 5° to 15°; (6/m); PI/Sm; OP; Cn or SW Is(50)=5.30 MPa D (19.90m) Continued on next sheet REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** C.Boyes S.Foley TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

## Queensland Government

# GEOTECHNICAL BOREHOLE LOG

FINAL 18/03/2016

BH229

Sheet 3 of 3

BOREHOLE No

FOR GEOTECHNICAL TERMS AND H12238 REFERENCE No SYMBOLS REFER FORM F:GEOT 017/8-2014 Mackay Ring Road PROJECT Pioneer River Bridge, Pier 9 (CL) COORDINATES 721321.5 E; 7660315.4 N LOCATION FG6184 PLUNGE 90° DATE STARTED 21/10/2015 GRID DATUM GDA 94 / MGA Z55 SURFACE RL 3.47m PROJECT No 242/10G/906 DRILLER Saxon Drilling DATE COMPLETED 23/10/2015 JOB No HEIGHT DATUM A.H.D. BEARING USCS WEATHERING ADDITIONAL DATA INTACT DEFECT SPACING SAMPLES TESTS Ê LITHOLOGY AND TEST RESULTS STRENGTH RΙ DEPTH SAMP MATERIAL DESCRIPTION (m) CORE REC % ᇁᆂᆂᆂᅿᅿᅿᆒᇅᇬᇬᆂᇂᇂᆒ Fe St; 20.26m-20.29m: HFZ s: 50° to 65°; (<2/m); PI/Sm; OP; Cn SW or CA; Is(50)=0.72 MPa A (20.52m)\_ MICRODIORITE (Kgwu) 20.65m-21.21m: HFZ -17.30 (0) \$W: (Cont'd) HW GRANODIORITE (Kgwu) 100 (0) MW: Pink and grey, medium to I (21.27m) Is(50)=1.70 MPa coarse grained, porphyritic, medium to high strength. Heavily jointed and 21.54m-21.90m: HFZ Cly fractured. (0) MW Js: 5° to 20°; (<20/m); PI/Ro; OP; Is(50)=0.59 MPa I (21.92m) Sinf: <u>-18.</u>73 100 Js: 40° to 70°; (<10/m); PI/Ro; OP; □ 22.31m-22.35m: XW Cly zone \$inf: XW MICRODIORITE (Kgwu) (0) W: Recovered as dark grey and XW rown, moist, very dense, sandy 23 ravel trace clay. Fine to coarse ΧW rained sand, fine to medium -20.13 90 grained gravel, angular grains. (0) 22.50 to 22.70m: CORE LOSS H-VH Is(50)=0.15 MPa I (23.75m) \_ 22.90 to 22.99m: CORE LOSS MW 23.50 to 23.60m: GRANODIORITE (XW-HW) 24.16m-24.30m: SZ; 50°, PI/Sm, FL, Cly; 100 LM MICRODIORITE (Kgwu) HW (82) MW: Green grey, fine to medium -21.17 grained, massive, generally medium 24.64m: Contact; 50°, PI/Ro; to high strength. Calcite veins throughout. 25 ls: 5° to 20°; (4/m); Pl-Un/Ro; OP; Fe \$t or CA; ls: 40° to 60°; (4/m); Pl-Un/Sm-Ro;  $\Phi$ P; Fe St or CA VN; MICRODIORITE (Kgwu) Is(50)=8.40 MPa A (25 95m) 26 SW: Blue grey, fine grained, Is(50)=13.00 MPa D (26.00m) massive, very high strength. Calcite veins throughout <10mm. С 100 s: 5° to 15°; (3/m); PI/Sm ;OP; Cn or М Is(50)=5.10 MPa D (26.72m) CA VN: s: 40° to 60°; (3/m); Pl-Un/Sm; TI; 27 SW Fe St or CA VN, some Sinf; 27.20m: GRANODIORITE clast, 26.43m: angular <50mm Is(50)=5.80 MPa D (27.37m) - Js; 5°-15° (~2/m); Pl/Sm, OP, Cn; A (27.46m)\_ Is(50)=7.90 MPa Is(50)=7.00 MPa D (28.80m) A (28.90m) 29 29.15m: J; 70°, PI/Sm, OP, CA VN <1mm; 29.22m: J; 80°, PI/Sm, OP, CA VN 100 29.64m: Contact; 65°, PI/Sm Granodiorite band -26.37 Borehole completed at 29.84m REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** S.Foley C.Boyes TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

### **CORE PHOTO LOG**

DEPARTMENT OF TRANSPORT AND MAIN ROADS Geotechnical Section 35 Butterfield Street, Herston Qld 4006 Phone 07 3066 3336



| Project Name | Mackay – Ring Road (Stage 2) |                  |          |
|--------------|------------------------------|------------------|----------|
| Project No.  | FG6184                       | Date             | 23/10/15 |
| Borehole No. | BH 229                       | TMR H No.        | H12238   |
| Location     | Pioneer River Bridge         | Start Depth (m)  | 15.60    |
| Detail       | Pier 9, centreline           | Finish Depth (m) | 29.84    |
| Chainage     |                              | Submitted By     | M.Ensor  |
| Remarks      |                              |                  |          |



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| Remarks      |                              |                  |          |

