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GEOTECHNICAL BOREHOLE LOG

FINAL 18/03/2016

BH241 BOREHOLE No

Sheet 1 of 4

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 H12250 REFERENCE No Mackay Ring Road PROJECT COORDINATES 721343.3 E; 7660454.1 N Pioneer River Bridge, Pier 13 (CL) LOCATION DATE STARTED 03/12/2015 FG6184 PLUNGE 90° GRID DATUM GDA 94 / MGA Z55 SURFACE RL 3.69m PROJECT No 242/10G/906 DRILLER Cairns Drilling HEIGHT DATUM A.H.D. DATE COMPLETED 05/12/2015 JOB No BEARING USCS WEATHERING ADDITIONAL DATA AND TEST RESULTS INTACT STRENGTH DEFECT SPACING SAMPLES TESTS Ξ LITHOLOGY SAMPLE RΙ DEPTH MATERIAL DESCRIPTION CORE REC % ᇁᆂᆂᆂᅿᅿᅿᆿᆸᆔᇬᄓᄫᇂᇂᇦ SAND (Fill) Brown, moist, very loose to loose. Fine to coarse grained; trace gravel. (SW) 2, 3, 3 SPT SPT 2, 2, 2 В SPT N=6 SPT SPT -1.81 SAND (Alluvium) N=6 C1 SPT Brown, wet, loose. Fine to medium grained; trace silt; 3, 3, 3 trace gravel. D SPT (SW) -3.31 Silty SAND (Alluvium) N=15 SPT Ε Pale grey brown, wet, medium Fine to medium grained. N=26 SPT 8, 9, 13 SPT (SM) N=21 SPT 4, 7, 12 9.0m: Becoming fine to coarse G grained; trace clay and gravel. SPT 13, 17, 18 N=35 9.5m: Becoming dense. G1 SPT Continued on next sheet REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** M. Ensor S.Foley TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

GEOTECHNICAL BOREHOLE LOG

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

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BH241 BOREHOLE No

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H12250

REFERENCE No Mackay Ring Road PROJECT Pioneer River Bridge, Pier 13 (CL) COORDINATES 721343.3 E; 7660454.1 N LOCATION DATE STARTED 03/12/2015 FG6184 SURFACE RL 3.69m PLUNGE 90° GRID DATUM GDA 94 / MGA Z55 PROJECT No 242/10G/906 DRILLER Cairns Drilling HEIGHT DATUM A.H.D. DATE COMPLETED 05/12/2015 JOB No BEARING USCS WEATHERING ADDITIONAL DATA AND TEST RESULTS INTACT DEFECT SPACING SAMPLES TESTS Ξ LITHOLOGY STRENGTH RΙ DEPTH SAMPI MATERIAL DESCRIPTION (m) CORE REC % ᇁᆂᆂᆂᅬᅿᅿᆿᅟᅴᇜᇰᄓॾᇂᆘᇹᄪ Sandy CLAY (Alluvium) Pale grey and brown, wet, hard. Low (CL) plasticity; fine to coarse grained -6.91 SPT Clayey SAND (Alluvium) Pale grey and brown, wet, medium 9, 13, 19 (SC) N=32 dense to dense. Fine to medium SPT grained sand. 7, 11, 20 N=31 -8.01 SPT Silty CLAY (Alluvium) Pale grey, brown and white, moist 12 17, 25, 30/90mm SPT Medium plasticity; trace sand; trace gravel; trace calcite nodules. 10, 14, 20 N=34 (CI) SPT 22, 23, 23 SPT -11.01 GRANODIORITE (Kgwu) XW: Recovered as Sandy Gravelly 15 30/130mm Ν CLAY. Brown and grey, moist, hard. Low plasticity; sand is fine to coarse grained; fine gravel, angular. Calcite throughout; OCcasional Dolerite fragments. 22, 30/140mn 16 SPT XW 15, 27, 30/120mm SPT 17, 25, 26 R SPT -15.31 30/120mm SPT S GRANODIORITE (Kgwu) HW: Brown and grey, medium to coarse grained, massive, extremely HW low to low strength. Continued on next sheet REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** M. Ensor S.Foley TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

GEOTECHNICAL BOREHOLE LOG

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FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 H12250 REFERENCE No Mackay Ring Road PROJECT Pioneer River Bridge, Pier 13 (CL) COORDINATES 721343.3 E; 7660454.1 N LOCATION FG6184 PLUNGE 90° DATE STARTED 03/12/2015 GRID DATUM GDA 94 / MGA Z55 SURFACE RL 3.69m PROJECT No 242/10G/906 DRILLER Cairns Drilling HEIGHT DATUM A.H.D. DATE COMPLETED 05/12/2015 JOB No BEARING USCS WEATHERING ADDITIONAL DATA AND TEST RESULTS INTACT DEFECT SPACING SAMPLES TESTS Ê LITHOLOGY SAMPLE STRENGTH RΙ DEPTH MATERIAL DESCRIPTION (m) CORE REC % ᇁᆂᆂᆂᅬᅿᅿᆿᅟᅴᇜᇰᄓॾᇂᆘᇹᄪ GRANODIORITE (Kgwu) HW: Cont'd. ht 22 30/80mm ht нw 23 30/50mn hł 30/50mn hł -20.86 (46) GRANODIORITE (Kgwu) A (24.66m)-SW: Grey and pale red, coarse Is(50)=0.21 MPa D (24.82m) Is(50)=0.92 MPa grained, massive, generally very 25 high strength. - Js: 5°-20° (5-7/m) Pl/Ro, Tl, Fe St - Js: 40°-60° (<1/m) Pl/Ro, CD, Fe ST, SInf LICS=5 50 MPa (25.76m) UCS=11.40 MPa (25.93m)_ 26 SW 27 Is(50)=4.40 MPa A (27.15m) Is(50)=3.60 MPa D (27.25m) CM A (27.66m) -24.21 GRANODIORITE (Kgwu) MW: Grey and pale red, coarse 28.20m: J: 50°, Gravel infill, Fe St Is(50)=0.68 MPa D (28.30m) grained, massive, generally medium 28.50m-28.70m: CA VN, Un, 70° to high strength. MW Js: 5°-15° (4/m) Pl-Stp/RO, TI, Cly С Ct, Fe St 28.95m-29.40m; CA VN. 90°. 29 - Js: 60°-90° (2/m) Pl-Un/Sm, CD, Cly 10mm, Cly -25.71 (57) GRANODIORITE (Kgwu) 29.50m-29.70m: CA VN, 60°, 10mm Is(50)=1.30 MPa A (29.50m) SW: Grey pale red, coarse grained, SW Is(50)=12.00 MPa D (29.80m) massive, very high strength. Continued on next sheet REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** M. Ensor S.Foley TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

GEOTECHNICAL BOREHOLE LOG

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BOREHOLE No BH241

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FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 H12250 REFERENCE No Mackay Ring Road PROJECT Pioneer River Bridge, Pier 13 (CL) COORDINATES 721343.3 E; 7660454.1 N LOCATION DATE STARTED 03/12/2015 GRID DATUM GDA 94 / MGA Z55 FG6184 SURFACE RL 3.69m PLUNGE 90° PROJECT No 242/10G/906 BEARING ° DRILLER Cairns Drilling HEIGHT DATUM A.H.D. DATE COMPLETED 05/12/2015 JOB No USCS WEATHERING ADDITIONAL DATA AND TEST RESULTS INTACT STRENGTH DEFECT SPACING LITHOLOGY SAMPLES TESTS Ξ SAMPLE DEPTH (RΙ MATERIAL DESCRIPTION CORE REC % ᇁᆂᆂᆇᆛᅿᆿᇛᇰᆟᇗᇂᇂᇕ GRANODIORITE (Kgwu) SW 30.15m-30.24m: XW, sandy clay 30.24m-30.40m: Recovered as SW: Cont'd. MW Gravel, DI? - Js: 15°-35° (3/m) PI-Stp/Sm-Ro, TI, - Js: 40°-70° (2/m) PI/Sm, TI, Cly Ct UCS=65.00 MPa E=0.016 GPa (30.83m) 31 SW -27.91 100 Is(50)=5.20 MPa A (31.50m) Borehole completed at 31.60m 33 35 37 REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** M. Ensor S.Foley 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	05/12/15
Borehole No.	BH 241	TMR H No.	H12250
Location	Pioneer River Bridge	Start Depth (m)	24.55
Detail	Pier 13, centreline	Finish Depth (m)	31.60
Chainage		Submitted By	M.Ensor
Remarks			

