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GEOTECHNICAL BOREHOLE LOG

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

FINAL 18/03/2016

BH228 BOREHOLE No

Sheet 1 of 3

H12237 REFERENCE No

Mackay Ring Road PROJECT Pioneer River Bridge, Pier 9 (LHS) COORDINATES 721312.7 E; 7660316.5 N LOCATION FG6184 SURFACE RL 3.33m PLUNGE 90° DATE STARTED 24/10/2015 GRID DATUM GDA 94 / MGA Z55 PROJECT No 242/10G/906 DRILLER Saxon Drilling HEIGHT DATUM A.H.D. DATE COMPLETED 25/10/2015 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 % Silty SAND trace gravel (Fill) Pale orange grey, moist to wet, loose to medium dense. Fine to coarse grained sand, fine to coarse grained gravel, rounded -0.17 Gravelly SAND trace cobbles (Alluvium) Pale orange grey and dark grey, wet, medium dense. SPT 6, 8, 10 Fine to medium grained sand, fine to coarse grained gravel, rounded to (SP) subrounded grains. 5.00m: becoming fine to coarse grained sand, fine grained gravel. SPT -2.37 Silty SAND trace gravel (Alluvium) Pale grey, moist to wet, dense. Fine to medium grained sand, fine SPT 6, 22, 30/90 to medium grained gravel, rounded. 7.00m: trace clay, no more gravel. SPT D Becoming medium dense. N=30 (SM) 8.0m: Becoming dense. Е SPT 9, 12, 12 N=24 SPT 11, 13, 13 N=24 -6.37Sandy CLAY (Alluvium) (CI) 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

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 FINAL 18/03/2016

BH228 BOREHOLE No

Sheet 2 of 3

H12237 REFERENCE No Mackay Ring Road PROJECT COORDINATES 721312.7 E; 7660316.5 N Pioneer River Bridge, Pier 9 (LHS) LOCATION FG6184 SURFACE RL 3.33m PLUNGE 90° DATE STARTED 24/10/2015 GRID DATUM GDA 94 / MGA Z55 PROJECT No 242/10G/906 HEIGHT DATUM A.H.D. DATE COMPLETED 25/10/2015 DRILLER Saxon Drilling JOB No BEARING USCS WEATHERING ADDITIONAL DATA INTACT DEFECT SPACING SAMPLES TESTS Ê LITHOLOGY AND TEST RESULTS STRENGTH RΙ DEPTH SAMP MATERIAL DESCRIPTION (m) CORE REC % ᅾᆂᆂᆂᆋᆛᅿᆿᅵᇊᆼᇅᆂᇰᅎᇕ Brown grey and brown, moist, very G 10, 9, 13 (CI) Fine grained sand, medium -7.37 plasticity. Sandy CLAY (Alluvium) (CI) Silty CLAY trace sand (Alluvium) SPT 8. 8. 24 -8.07 Green grey, moist, very stiff to hard. N=32 Medium grained sand, low to medium plasticity. Gravelly CLAY (Residual) (CH) Pale white grey, moist, hard. SPT Fine to medium grained gravel, 14, 18, 20 angular grains, high plasticity. -9.37 Clayey GRAVEL (Residual) Pale grey and dark grey, moist, very SPT 19, 26, 30/75 Fine to medium grained gravel, (GC) angular grains, high plasticity. SPT -10.87 25, 30/85 GRANODIORITE (Kgwu) XW: Recovered as grey and brown, moist, very dense, clayey silty sand. Fine to medium grained sand, low 15 to medium plasticity. XW 16 М 30/125 -13.67 17.00m; No sample recovered MICRODIORITE (Kgwu) hŧ XW: Grey, fine grained, massive, extremely low to very low strength. XW XW 18.30m-18.55m: Granodiorite ban 180 MW 18.35m: Contact: 70°; PI/Sm; From 19.57m: Becoming SW Js: 5°-20°(<4/m); PI/Sm; OP; Fe St or CA Vr <1mm; 19 Js: 30°-50° (<4/m); PI/Sm; OP; Fe SW St or CA Vr <1mm; Is(50)=5.20 MPa A (19.24m) 16.24 GRANODIORITE (Kgwu) SW SW: Continued on next sheet REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** S.Foley C.Boyes TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

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GEOTECHNICAL BOREHOLE LOG

FINAL 18/03/2016

BOREHOLE No BH228

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FOR GEOTECHNICAL TERMS AND H12237 REFERENCE No SYMBOLS REFER FORM F:GEOT 017/8-2014 Mackay Ring Road PROJECT Pioneer River Bridge, Pier 9 (LHS) COORDINATES 721312.7 E; 7660316.5 N LOCATION FG6184 SURFACE RL 3.33m PLUNGE 90° DATE STARTED 24/10/2015 GRID DATUM GDA 94 / MGA Z55 PROJECT No 242/10G/906 DRILLER Saxon Drilling HEIGHT DATUM A.H.D. DATE COMPLETED 25/10/2015 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 % 듀놀프로그렇다 [850호호) GRANODIORITE (Kgwu) 20.12m-20.34m: B SW: (Cont'd) Grey and dark grey, medium to coarse grained, porphyritic, extremely high (46) SW Is(50)=2.20 MPa D (20.72m) strength. Js: 5° to 15° (<6/m); PI/Sm; OP; Fe St or Cn: -18.04 Js: 30° to 50°; (<4/m); PI/Sm; OP; Fe 21.37m: Contact: 70°; PI/Sm; St or Cn; (21.62m) _ MICRODIORITE (Kgwu) SW = 21.76m-21.79m; CZ; E=49.9 GPa v= 0.21 SW: Grey, fine grained, massive, very high strength. 7 22.08m-22.24m: HFZ: some Cly FL; MW -19.01 Js: 5° to 20°; (<6/m); PI/Sm; Fe St, 22.34m: Contact: 70°; PI/Sm some Sinf: s: 30° to 55°; (<7/m); OP; Fe St or ¢A Vr; Is(50)=7.30 MPa A (22.82m) GRANODIORITE (Kgwu) 23 SW SW: Grey, dark grey and pale red, Is(50)=10.00 MPa D (23.23m) (50) medium to coarse grained, porphyritic, extremely high strength. ⇒ 23.70m-23.73m: HFZ: Js: 5° to 15°; (<4/m); PI/Sm-Ro; OP; -20.67 24.00m: Contact: 30°; PI/Sm; OP Fe St or Cn: ls: 30° to 55°; (<2/m); PI/Sm; Fe St Is(50)=6.00 MPa D (24.36m)or Sinf; Is(50)=6.70 MPa A (24.42m) s: 70° to 90°; (1/m); Pl-Un/Ro; OP; fe St; SW = 24.87m-24.88m: XW Cly zone MICRODIORITE (Kgwu) 25 SW: Pale grey, fine grained, massive, very high strength. Js: 5° to 15°; (<6/m); PI-Un/Sm; OP; -22.35 25.60m: Contact: 70°; PI/Sm; Fe St; Fe St, some Sinf; 25.81m-26.17m: HFZ: Sinf; s: 20° to 30°; (<2/m); PI/Sm; OP; Fe 100 MW 26 (0) GRANODIORITE (Kgwu) MW: Pale grey and dark grey, 26.40m-26.70m: HW CZ: Sinf; (0) HW medium to coarse grained, porphyritic, generally medium to MW high strength. Fractured 27 -23.77 100 throughout. Js: 5° to 15°; (<10/m); PI/Sm-Ro; Fe St and Sinf; ls: 30° to 50°; (<20/m); PI/Sm-Ro; OP; Fe St and Sinf; Borehole completed at 27.10m 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	25/10/15
Borehole No.	BH 228	TMR H No.	H12237
Location	Pioneer River Bridge	Start Depth (m)	18.30
Detail	Pier 9, LHS	Finish Depth (m)	27.10
Chainage		Submitted By	M.Ensor
Remarks			
19.30 19.30 19.30	M.R.E SHZZE		BOX 1

