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## GEOTECHNICAL BOREHOLE LOG

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

**FINAL** 18/03/2016

BOREHOLE No BH266

Sheet 1 of 4

REFERENCE No H12275

Mackay Ring Road PROJECT Fursden Creek Bridge, Pier 3, (LHS) COORDINATES 721484.8 E; 7661478.3 N LOCATION FG6184 SURFACE RL 4.21m PLUNGE 90° DATE STARTED 27/07/2015 GRID DATUM GDA 94 / MGA Z55 PROJECT No 242/10G/906 DRILLER Saxon Drilling HEIGHT DATUM A.H.D. BEARING ° DATE COMPLETED 29/07/2015 JOB No USCS WEATHERING ADDITIONAL DATA INTACT DEFECT SPACING SAMPLES TESTS Ê LITHOLOGY AND TEST RESULTS STRENGTH RΙ DEPTH SAMP MATERIAL DESCRIPTION (m) CORE REC % Engineered fill (pad) 3.81 Sandy SILT trace gravel (Topsoil) Dark brown, moist, firm. (ML) SPT Trace rootlets. 3.21 Sandy CLAY (Alluvium) Dark brown, moist, stiff. N=11 Fine grained sand, low plasticity, (CL) with tree roots. SPT N=12 2.11 Silty Sandy CLAY (Alluvium) SPT Mottled orange, brown and grey, (CI) moist, firm to stiff. Fine grained Вх sand, medium plasticity, with tree SPT 1.31 roots Sandy CLAY trace gravel (Alluvium) SPT Dark grey, moist, soft to firm. (CH) High plasticity, with tree roots and 0.51 organics. SPT Clayey Silty SAND (Alluvium) N=10 Dark grey, wet, very loose to loose. Medium grained sand, with SPT mangrove roots. (SM) Dx SPT 3. 3. 4 -1.09 SPT Silty SAND trace gravel (Alluvium) Grey, wet, very loose to loose. (SM) SPT Fine to coarse grained sand. 1.1.1 -1.89 Silty CLAY trace sand (Alluvium) SPT Mottled pale grey and orange, moist N=13 to wet, stiff to very stiff. Fine grained sand, medium N=15 plasticity. (CI) SPT N=18 7.40m: trace gravel, rounded to subrounded grains. SPT 8, 10, 13 -3.79 GRANODIORITE (Kgwu) SPT XW: Recovered as grey, brown and 10, 12, 19 pink, moist, dense to very dense, clayey sand. Fine to coarse grained SPT 14, 21, 30 XW SPT 18, 21, 27 N=48 Continued on next sheet REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** C.Boyes S.Foley TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

## GEOTECHNICAL BOREHOLE LOG

**FINAL** 18/03/2016

BOREHOLE No BH266

Sheet 2 of 4

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 H12275 REFERENCE No Mackay Ring Road PROJECT Fursden Creek Bridge, Pier 3, (LHS) COORDINATES 721484.8 E; 7661478.3 N LOCATION FG6184 SURFACE RL 4.21m PLUNGE 90° DATE STARTED 27/07/2015 GRID DATUM GDA 94 / MGA Z55 PROJECT No 242/10G/906 DRILLER Saxon Drilling HEIGHT DATUM A.H.D. DATE COMPLETED 29/07/2015 JOB No BEARING ADDITIONAL DATA AND TEST RESULTS USCS WEATHERING INTACT STRENGTH DEFECT SPACING SAMPLES TESTS Ξ LITHOLOGY SAMPLE DEPTH ( RΙ MATERIAL DESCRIPTION (m) CORE REC % ᇁᆂᆂᆂᅬᅿᅿᆿᅟᅴᇜᇰᄓॾᇂᆘᇹᄪ GRANODIORITE (Kgwu) SPT 17, 24, 30/75 HW: Speckled grey, dark grey, green, coarse grained, porphyritic, very low SPT 20, 30/70 HW SPT 29, 30/120 13 30/90 -9.49 (0) MICRODIORITE (Kgwu) MW: Grey, fine grained, massive, ☐ 13.95m-14.00m: Clay band, 40° MW low to very high strength. Clay ☐ 14.15m-14.20m: Clay ban throughout. Js: 20° to 30°; (8/m); PI/Sm; OP; Cly SW 14.60m-14.65m: Cly ba 14.70m-14.85m: Brecciated, Cly, Fault zone? or CA Vr: -10.59 (0) ls: 50° to 80°; (<3/m); PI/Sm-Ro; OP; 14.85m: contact 15 Cly or CA Vr; GRANODIORITE (Kgwu) нw D (15.30m) HW: Speckled pink, grey and dark Is(50)=0.06 MPa A (15.35m) grey, coarse grained, massive, extremely low to very low strength. 83 15.80 to 16.60m: CORE LOSS 16 17 HW 69 17.53 to 17.60m: CORE LOSS HW 17.75 to 17.90m: CORE LOSS нw 19 N SPT 30/120 (20.00m) Continued on next sheet UCS=49.30 MPa REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** C.Boyes 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 FINAL 18/03/2016

**BH266** 

Sheet 3 of 4

BOREHOLE No

H12275

REFERENCE No Mackay Ring Road PROJECT Fursden Creek Bridge, Pier 3, (LHS) COORDINATES 721484.8 E; 7661478.3 N LOCATION FG6184 SURFACE RL 4.21m DATE STARTED 27/07/2015 GRID DATUM GDA 94 / MGA Z55 PLUNGE 90° PROJECT No 242/10G/906 DRILLER Saxon Drilling HEIGHT DATUM A.H.D. DATE COMPLETED 29/07/2015 JOB No BEARING USCS WEATHERING ADDITIONAL DATA INTACT DEFECT SPACING SAMPLES TESTS Ê LITHOLOGY STRENGTH TEST RESULTS RΙ DEPTH MATERIAL DESCRIPTION CORE REC % ᄪᅩᆂᅚᇑᄀᅿᆿᇛᇬᇬᄧᇂᇂᇕ (44) MICRODIORITE (Kgwu) SW: Grey, fine to medium grained, SW A (20.37m)massive, generally medium to high Is(50)=0.56 MPa strength. MW -16.59 Js: 5° -20°(<4/m); PI/Sm; OP; Cn or 100 \$inf; HW (0) GRANODIORITE (Kgwu) 21.20m-22.00m: CORE LOSS HW: Speckled pink, grey and dark grey, coarse grained, massive, very low strength. Js: 5° to 15°; (<3/m); PI/Sm-Ro; OP; 100 22 some Sinf; (44)Is(50)=0.29 MPa D (22.20m) HW -18.49 GRANODIORITE (Kgwu) SW: Speckled pink, grey and dark 23 Is(50)=2.50 MPa A (23.05m) grey, coarse grained, massive, high SW Is(50)=5.00 MPa D (23.10m) to very high strength. 100 -19.39 -Js; 5-15° (<3/m); Pl/Sm-Ro, OP, (64) some SInf. GRANODIORITE (Kgwu) MW: Speckled pink, grey and dark Is(50)=0.53 MPa A (24.10m)-MW grey, coarse grained, massive, high 100 to very high strength. -Js; 5-15° (<3/m); Pl-Un/Ro, Op Is(50)=1.50 MPa D (24.66m) -20.64 Is(50)=1.00 MPa A (24.71m) MICRODIORITE (Kgwu) 25 SW: Green-grey, fine to medium grained, massive, very high (100) UCS=13.50 MPa (25.43m) strength. E=11.7 GPa Calcite veining throughout. Altered 100 throughout. SW 26 - Js; 5-15° (<3/m); Pl/Sm-Ro, Op, Cn Is(50)=1.30 MPa A (26.13m) or CA Vn Is(50)=2.90 MPa D (26.23m) 100 (48) 27 -22.94 Is(50)=4.00 MPa D (27.07m)-Is(50)=2.60 MPa GRANODIORITE (Kgwu) A (27.14m)\_ SW: Speckled pink, dark grey and grey, coarse grained, massive, generally medium to high strength. SW · Js; 5-15° (<5/m); Pl/Ro-Sm, Ti, 28 D (28.10m) Is(50)=3.50 MPa some Sinf -Js; 50-60° (<4/m); PI/Ro-Sm, Op, Cn -24.19 or Sinf MW GRANODIORITE (Kgwu) HW MW: Speckled pink, dark grey and 29 grey, coarse grained, massive, D (29 20m) generally low to high strength. Is(50)=1.70 MPa MW Is(50)=0.39 MPa - Js; 30-60° (10/m); Pl/Ro, Op, some A (29.26m) Sinf -25.49MICRODIORITE (Kgwu) SW (59) UCS=69.40 MPa (29.99m) Continued on next sheet REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** C.Boyes 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

**FINAL** 18/03/2016

BOREHOLE No BH266

Sheet 4 of 4

EFERENCE No **H12275** 

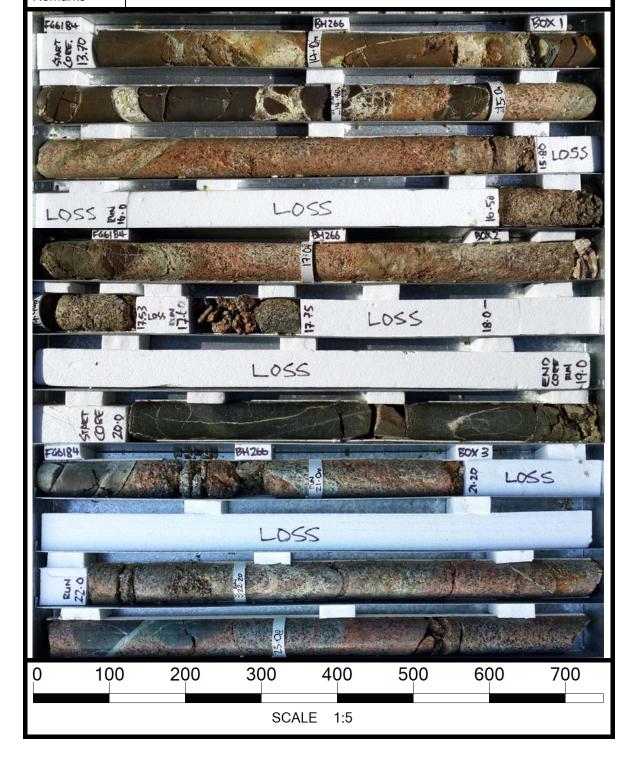
AUDAS AT	PIDILIS			SYMB	OLS	REFER FORM F:GE	OT 017/8-2014		KEFE	KENCE NO		
PROJECT	Mackay Ring R	oad										
LOCATION	Fursden Creek	Bridge, Pier 3, (LHS)							COORDINAT	ES 721484.8	E; 76614	78.3 N
PROJECT No	FG6184	SURFACE RL	4.21m	PLUNG	SE 90	0°	DATE STAR	27/07/201	.5	GRID DATUM	GDA 94 / N	MGA Z55
JOB No	242/10G/906	242/10G/906 HEIGHT DATUM A.H.D.		BEARING			DATE COMPLETED <u>29/07/2015</u>		.5	DRILLER 5	Saxon Drill	ing
DEPTH (m)	AUGEN COSE DRILLING CONE DRILLING CONE DRILLING SAMPLE	MATERIAL DESC	CRIPTION	LITHOLOGY	WEATHERING	INTACT STRENGTH 프	DEFECT SPACING		ADDITIONA AND TEST RES	1		SAMPLES TESTS
	100 (93)	SW: Pale green-grey, massive, very high sti MICRODIORITE (Kgwing Sw: Green-grey, fine grained, massive, verstrength.  - Js; 5-15° (3/m)PI/Ro (A Vn or Sinf \	rength. u) to medium y high o-Sm, Op, Some im, Op, CA Vn ru) ark grey and massive, strength. so, Op u) to medium y high ko, Op (Ro, Op, CA Vn	* * * * * * * * * * * * * * * * * * *	sw sw	VH		30.45m-30.80m: (MW)  32.85m-33.00m: 6		Is(   Is(5	50)=1.80 MPa 0)=10.00 MPa 50)=3.10 MPa 50)=8.00 MPa	A (31.08m)- D (31.18m)  D (32.88m)- A (32.93m)
REMARKS: Kgwu = Wundaru Granodiorite							LOG	GED BY	REVIE	WED BY		
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#### **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	29/07/15
Borehole No.	BH 266	TMR H No.	H12275
Location	Fursden Creek Bridge	Start Depth (m)	24.35
Detail	Pier 3, LHS	Finish Depth (m)	33.17
Chainage		Submitted By	M.Ensor
Remarks			



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



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Detail	Pier 3, LHS	Finish Depth (m)	33.17
Chainage		Submitted By	M.Ensor
Remarks			
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