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Queensland

GEOTECHNICAL BOREHOLE LOG

FINAL 18/03/2016

BOREHOLE No BH255

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		J.		GO	Vŧ	ernment	SY		R GEOTECHNICAL TE S REFER FORM F:GE			REFERENCE No	H:	12264
PROJE	СТ	N	Лас	kay Ring	g Ro	ad								
LOCATION Pioneer River Bridge, Pier 1		ridge, Pier 18 (LHS)	8 (LHS)					COORDINATES 721356.5 E; 7660627.8 N						
PROJE	CT No	F	G6:	184		SURFACE RL 5.61m	PL	UNGE	90°	DATE STAF	RTED 06/07/2014	GRID DATUM	GDA 94 / N	MGA Z55
JOB No		2	242/10G/906			HEIGHT DATUM A.H.D.	BEA	BEARING °		DATE COMPLI	ETED 08/07/2015	DRILLER Saxon Drilling		ling
DEPTH (m)	R.L. (m)	AUGER CASING	WASH BORING CORE DRILLING	RQD ()%	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH ボストストラー	DEFECT SPACING		ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
-						Silty Sandy CLAY (Topsoil)	×-	(611)	_	_				_
- - -	5.11					Dark brown, moist, soft. Fine grained sand, high plasticity.	X.	(CH)		_				=
- - - - - - -						Sandy SILT trace clay (Topsoil) Dark brown mottled orange brow	m ×	×		-				=
						moist, firm.	(1), (X)	(ML	_	<u>-</u>				_
1 					Α	Fine grained sand, trace organic matter.	×	× (IVIL)] =	_			2, 3, 3 N=6	SPT
_	3.91						×	: >	_	_				-
_						Silty SAND (Alluvium) Pale brown, dry, very loose.	×] =					=
— 2 - -					В	Fine grained sand, poorly graded.	Ŷ.		=	_			3, 1, 1	SPT
- - - - - - - - - 3							×	>	_				N=2	_
_							×	}	=					=
_ 3		Н	Н				x.	>		<u>-</u> -				
- - -					С	3.30 to 3.35m: dark brown, moist,	×	(SM)	=	_			2, 1, 1 N=2	SPT
- - - - - - - - - -						very soft, sand lens.	×			<u>-</u> -				=
-							×		=	_				-
— 4 - -					D	4.00m: becomes loose. Fine to medium grained sand.	X. X	;		_			3, 5, 4	SPT
- - - - - - - - - 5							Ω. X.	>	=	<u>-</u> -			N=9	_
-	0.91	1				SAND trace sand (Alluvium)	. X		-	<u>-</u>				- - -
- - 5						Brown, wet, medium dense.			_	_				_
-					Ε	Medium grained sand.			_	_			2, 8, 7 N=15	SPT
_									-	_			=-	=
- - - - 6									=					=
— 6 - -					F	6.00m: becomes fine to medium grained sand.		(SP)	-	_			1, 4, 7	SPT
-						<u> </u>				_			N=11	
- - - - - - -										_				_
- - 7						7.00m: becomes medium to coars	و ا		_	_				_
7 - 7 8					G	grained sand, trace fine to medium grained gravel, rounded to			=	<u>-</u>			8, 12, 12 N=24	SPT
_	-2.09					subrounded grains.			=				11-2-4	-
_		11				Clayey SAND (Alluvium)	1] =					=
— 8 - -					Н	Brown and pale grey, moist, medium dense.				_			7, 6, 10	SPT
_						Fine grained sand.	3		_	-			N=16	
-														_
- - 9 -						9.00m: occasional mottled orange		(SC)	_	_				_
- - - -					1	brown layers.] =	-			7, 5, 6 N=11	SPT
<u>-</u> -							7		=	<u></u>			==	-
-	-4.39								=	<u>-</u>				=
	Continued on next sheet													
R	REMARKS: Kgwu = Wundaru Granodiorite LOGGED BY REVIEWE							WED BY						
												C.Boyes	S.	Foley
						Ţ	MR GEOTE	CHNICAL E	OREHOLE LOG - CREATED	VITH HOLEBASE SI			1	

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GEOTECHNICAL BOREHOLE LOG

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FOR GEOTECHNICAL TERMS AND H12264 REFERENCE No SYMBOLS REFER FORM F:GEOT 017/8-2014 Mackay Ring Road PROJECT Pioneer River Bridge, Pier 18 (LHS) COORDINATES 721356.5 E; 7660627.8 N LOCATION FG6184 SURFACE RL 5.61m PLUNGE 90° DATE STARTED 06/07/2014 GRID DATUM GDA 94 / MGA Z55 PROJECT No 242/10G/906 DATE COMPLETED 08/07/2015 DRILLER Saxon Drilling HEIGHT DATUM A.H.D. 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 % ᅾᆂᆂᆂᆋᆛᅿᆲᅵᇊᆼᇅᄛᇂᇂᇕ Clayey SAND (Alluvium) 7, 11, 12 Cont'd) N=23 10.10m: clay content decreasing, gravel content increasing. Fine to medium grained gravel, subrounded to rounded grains. 10.90m: becomes fine to medium grained sand. Occasional gravelly (SC) 8, 14, 12 lavers. N=26 SPT -6.89 CLAY trace sand (Residual) Pale green grey, moist, very stiff. Fine grained sand, medium to high (CI) plasticity. SPT N=24 -8.09 GRANODIORITE XW: Recovered as pale to dark grey and pink, moist, very dense, silty SPT 30, 30/100mr sand. Fine to medium grained sand. XW 15 O SPT 29, 30/90mm 16.00m: No sample recovered -10.64 D (16.20m) (12) 16.30m-16.37m: CZ 16.37m-16.39m: SZ; 30°, PI/Sm-Ro, MICRODIORITE Is(50)=3.00 MPa SW: Grey, fine grained, massive, OP, Cly FL, brecciated 16.67m-16.80m: BZ; medium to very high strength. SW Js: 10° to 30°; (>10/m); PI/Sm-Ro; OP; Cly Co (<20mm); -11.56 93 CORE LOSS GRANODIORITE XW: Recovered as pale grey and pale red, moist, very dense, silty sand. Medium to coarse grained 18.00m-18.45m: No sample sand. 0 SPT 1, 3, 7 N=10 xw 19 R SPT 11, 30/120mm 20.00m-20.21m: No sampl Continued on next sheet recovered REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** C.Boyes S.Foley

TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

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GEOTECHNICAL BOREHOLE LOG

FINAL 18/03/2016

BH255

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BOREHOLE No

FOR GEOTECHNICAL TERMS AND H12264 REFERENCE No SYMBOLS REFER FORM F:GEOT 017/8-2014 Mackay Ring Road PROJECT Pioneer River Bridge, Pier 18 (LHS) COORDINATES 721356.5 E; 7660627.8 N LOCATION FG6184 SURFACE RL 5.61m PLUNGE 90° DATE STARTED 06/07/2014 GRID DATUM GDA 94 / MGA Z55 PROJECT No 242/10G/906 DATE COMPLETED 08/07/2015 DRILLER Saxon Drilling HEIGHT DATUM A.H.D. 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 % ᇁᆂᆂᆂᅬᅿᅿᆿᅟᅴᇜᇰᄓᄫᇂᆘᇂᄪ GRANODIORITE SPT XW: (Cont'd) XW 30/110mm 22.00m-22.02m: No sample 30/20m -16.89 (74) MICRODIORITE ¬ 22.54m-22.61m: CZ; 70°, PI/Ro, OP, A (22.63m) CA VN; 22.73m-22.75m: BZ; 5°, OP Is(50)=2.30 MP SW: Grey, fine to medium grained, massive, very high strength. UCS=65.70 MPa (23.00m)-23 Js: 5° to 20°; (<3/m); Pl-Un/Ro; OP; E=56.1 GPa Is(50)=5.90 MPa Is(50)=8.00 MPa A (23.30m) D (23.40m) Js: 70° to 80°; (<1/m); PI/Ro-Sm; CD; 100 (100) TI; CA (<1mm); SW (40) Is(50)=11.00 MPa D (24.02m)_ 24.31m-24.85m: BZ; Cl 100 (46) 4.56m-24.57m: XW Cly zone VH 19.24 24.85m-24.96m: HW CZ GRANODIORITE 25 SW: Grey to dark grey and pale red, Is(50)=6.40 MPa Is(50)=6.90 MPa A (25.23m) coarse grained, massive, very high D (25.35m) strength. Js: 5° to 20°; (4/m); Pl-Un/Ro; OP; Cn to Fe St: SW Js: 55° to 75°; (1/m); Pl/Ro-Sm; OP; 26 Vr CA (<5mm) & Cn; Is(50)=11.00 MPa A (26.17m)-100 (51) UCS=77.20 MPa (26.31m) UCS=121.00 MPa (26.45m) 26.71m-27.15m: HW band, BZ; jointed at 65°-75°, PI/Sm-Ro, OP, -21.27 -21.39 CORE LOSS some CA VN; GRANODIORITE SW: (Cont'd) Is(50)=8.90 MPa D (27.55m) Is(50)=6.20 MPa A (27.70m) (87) Is(50)=11.00 MPa A (28.63m) D (28.70m)-29.06m: J; 55°, PI/Sm, OP, CA VN Is(50)=0.56 MPa A (29.40m) □ 29.76m-29.81m: CZ; 55°-70°, J; PI/ Sm, OP, CA VN Continued on next sheet REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** C.Boyes S.Foley

TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

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GEOTECHNICAL BOREHOLE LOG

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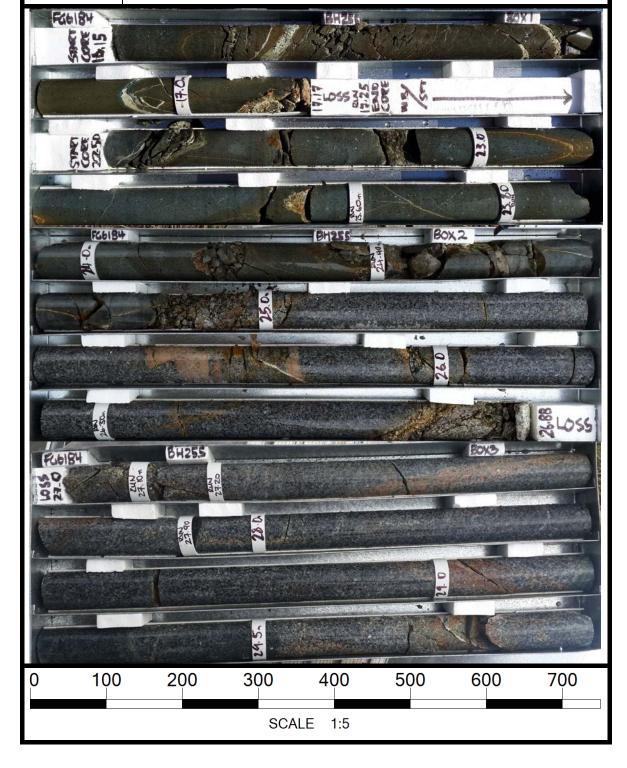
FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 H12264 REFERENCE No Mackay Ring Road PROJECT Pioneer River Bridge, Pier 18 (LHS) COORDINATES 721356.5 E; 7660627.8 N LOCATION DATE STARTED 06/07/2014 GRID DATUM GDA 94 / MGA Z55 FG6184 SURFACE RL 5.61m PLUNGE 90° PROJECT No 242/10G/906 DATE COMPLETED 08/07/2015 DRILLER Saxon Drilling HEIGHT DATUM A.H.D. BEARING ° JOB No USCS WEATHERING ADDITIONAL DATA AND TEST RESULTS INTACT STRENGTH DEFECT SPACING LITHOLOGY SAMPLES TESTS Ξ SAMPLE DEPTH (RΙ MATERIAL DESCRIPTION CORE REC % ᇁᆂᆂᄫᅴᅿᆿᆸᇝᇰᄓᄫᇂᇂᇕ GRANODIORITE SW: (Cont'd) SW Is(50)=11.00 MPa A (30.38m) -24.89 MICRODIORITE Is(50)=15.00 MPa D (30.55m)_ 100 SW: Grey, fine to medium grained, massive, very high strength. Js: 5° to 10°; (2/m); Pl-Un/Sm; OP; A (31.10m) ⊃ 31.15m-31.18m: Granodiorite band SW Js: 50° to 70°; (<2/m); PI/Sm; OP; Vr CA & Cn; UCS=65.70 MPa (31.83m) _ -26.49 100 32.05m-32.10m: Granodiorite ba Borehole completed at 32.10m 33 35 37 REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** C.Boyes 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	08/07/15
Borehole No.	BH 255	TMR H No.	H12264
Location	Pioneer River Bridge	Start Depth (m)	16.15
Detail	Pier 18, LHS	Finish Depth (m)	32.10
Chainage		Submitted By	M.Ensor
Remarks			



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