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	<b>Queensland</b> Government
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# GEOTECHNICAL BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 FINAL 02/11/2017

BOREHOLE No BH06

Sheet 1 of 4

REFERENCE No

H12967

PROJE	СТ	Boyne River Bridge Repalcement												
LOCAT	ION	Ρ	ier	2, RHS							C	OORDINATES 323461.5	E; 715992	11.4 N
PROJE	CT No	-	GG	5482		SURFACE RL 114.46m	SURFACE RL 114.46m PLUNGE 90° DATE STARTED 02/09/201					GRID DATUM	MGA Z56	
JOB N	D	2	49,	/435/37	7555	60 HEIGHT DATUM AHD	BEA	RING		DATE COMPLE	ETED 04/09/2017	DRILLER	NorthCoas	t Drilling
DEPTH (m)	R.L. (m)	AUGER CASING	WASH BORING CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH 표,독,᠇,독,-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	DEFECT SPACING	,	ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
- - - - - - - - - - - - - - - - - - -	<u>114.16</u> <u>113.46</u>				A	Sandy Silty CLAY (Topsoil) Brown, moist, firm, medium plasticity. Trace root fibres. Sandy GRAVEL and Cobbles (Alluvium) Brown, moist, very loose. Medium to coarse grained sand, fine to medium grained gravel, sub rounded. Sandy GRAVEL and Cobbles		(CI) (GP)					2, 2, 2 N=4	SPT
2	111.66				В	(Alluvium) Brown, wet, very loose. Medium to coarse grained sand, fine to medium grained gravel, sub rounded.		(GP)					hw, 1, hw N=1	SPT
- - - - - - - -	111.00	-			с	Sandy GRAVEL and Cobbles (Alluvium) Brown grey, wet, medium dense. Medium to coarse grained sand, fine to medium grained gravel, sub	0 0 0 0 0 0 0						14, 11, 7 N=18	SPT
- - - - - - -					D	angular. Trace silt. 4.1m: Cobble	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0	2-0, - 0-9, - 0-8, - 0-8, -					30/100	 
- - - - - - -					E		0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0	(GP)					16, 8, 9 N=17	SPT
- - - - - - - -					F		0 0 0 0 0 0 0 0	14 0.0 0.0 0.0.					7, 9, 10 N=19	SPT
- - - - - - -	<u>107.31</u>	-			G	Silty SAND (Alluvium) Brown grey, wet, medium dense. Fine to medium grained sand. Low	X X 4 5 7	(SM)					8, 5, 6 N=11	SPT
- - - - - -	<u>106.46</u> 105.96				н	plasticity fines. Trace fine grained gravel. Silty Clayey SAND (Alluvium) Grey, brown, wet, very dense. Fine to medium grained sand. Trace fine	× × THE	(SC)	-				9, 10, 30/140	SPT
- - - - - - - -					I	to medium grained sand. Indee inte to medium grained gravel. Silty CLAY with Sand (Residual) Brown grey, moist, hard. High plasticity. Fine grained sand.		(СН)					13, 30/140	SPT
-	104.46													
						Continued on next sheet				·	·		I	
R	EMAR	KS:		Je1 - E	ver	green Formation.						LOGGED BY	REVIE	WED BY
												M. de Gee	S.	Foley
						TMR	GEOTEC	HNICAL B	OREHOLE LOG - CREATED V	VITH HOLEBASE SI				

	Queen		GEOTECI BOREHO	-
B	🕅 Govern	ment	FOR GEOTECHNIC SYMBOLS REFER FORM	
PROJECT	Boyne River Bridge R	epalcement		
LOCATION	Pier 2, RHS			
PROJECT No	FG6482	SURFACE RL 114.46m	plunge 90°	DATE S
JOB No	249/435/375550	HEIGHT DATUM AHD	BEARING	DATE COM

FINAL 02/11/2017

BH06

Sheet 2 of 4

BOREHOLE No

REFERENCE No

H12967

	_													
OCATION	F	Pier	2, F	RHS							C	OORDINATES 323461.5	E; 715993	11.4 N
PROJECT No		FGe	5482	2		SURFACE RL 114.46m	PLL	INGE S	90°	DATE STAI	rted 02/09/2017	GRID DATUM	MGA Z56	
OB No	2	249,	/435	5/37	555	0 HEIGHT DATUM AHD	BEA	RING °		DATE COMPL	ETED 04/09/2017	DRILLER	NorthCoas	t Drilling
DEPTH (m)	AUGER CASING	ASH BORING DRF DRITING	) ( C(	QD ) % DRE :C %	SAMPLE	MATERIAL DESCRIPTION	ГІТНОГОЄУ	USCS WEATHERING	INTACT STRENGTH ਜ਼ੵੑੑੑੑੑੑੑੑੑੑਸ਼ੑੑਙੑੑੑੑੑੑੑੑੵੑੑੑੑੑੑੑੑੵੑਗ਼ੑ		,	ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
	¥ D	i s c	6			Silty CLAY with Sand (Residual)	×		- - -			:	14, 23, 30/130	ODT
$- 11 \\ - 11 \\ - 12 \\ - 12 \\ - 13 \\ 101.3^{-1} \\ - 14 \\ 100.16 \\ - 15 \\ - 15 \\ - 16 \\ - 16 \\ - 16 \\ - 16 \\ - 16 \\ - 16 \\ - 100.10 \\$			1 (	00 0) 00 26)	J   K       Z   Z	Silty CLAY with Sand (Residual) Cont'd. Clayey SAND (Residual) Pale grey grey and brown, moist, very dense. Fine to coarse grained sand. Medium plasticity clay. SANDSTONE (Je1) HW: Grey minor brown, fine to medium grained, medium bedded, very low to low strength. Occasional siltstone layers up to 20mm. -BP: 10°-25° (6-7/m), Pl-Un/Ro, OP- Tl, Cn-Ct -Js: 45°-70° (2/m), Pl/Sm-Ro, OP, Cn- Vr		(CH) (SC) HW			] 14.95m-15.24m: HFZ ] 15.68m-16.05m: HFZ	15 15 15	14, 23, 30/130 15, 30/130 15, 30/145 10, 30/145 22, 30/140 50)=0.54 MPa 50)=0.28 MPa 50)=0.06 MPa 50)=0.07 MPa	SPT  SPT  SPT
- 17 - 17 - 18 - 19 - 94.46			(2			Continued on next sheet		HW MW HW			⊐ 16.80m-16.84m: XW ] 17.38m-17.46m: XW	IS( IS( IS( IS( IS( IS( IS( IS( IS( IS(	50)=0.19 MPa 50)=0.15 MPa 50)=0.13 MPa 50)=0.12 MPa 50)=0.17 MPa 50)=0.15 MPa 50)=0.19 MPa 50)=0.07 MPa	D (16.93m) A (16.94m) D (17.58m) A (17.59m) D (18.15m) A (18.17m) D (19.20m) A (19.21m) D (19.73m) A (19.75m)
REMAR	KS	: .	Je1	- E'	ver	green Formation.						LOGGED BY	REVIE	WED BY
						-						M. de Gee		Foley
						TMR G	EOTEC	HNICAL B	OREHOLE LOG - CREATED '	WITH HOLEBASE SI			5.	

									_		FINAL 0	2/11/2017
A THE	àc.					GE	OTECHN	IICAL		BOREHOLE No	В	BH06
				ensland		BO	REHOLE	LOG		Shee	et 3 of 4	
B		Go	Ve	ernment	SY		GEOTECHNICAL TE REFER FORM F:GE			REFERENCE No	H	12967
PROJECT	Bov	ne River	Bri	dge Repalcement								
LOCATION		2, RHS								COORDINATES 323461.	5 E: 71599	11.4 N
PROJECT No		482		surface rl 114.46m	PLU	JNGE 9	0°	DATE STA	RTED 02/09/2017			
JOB No	249,	/435/37	′555		BEA	RING °			ETED 04/09/2017		NorthCoas	t Drilling
		RQD										
(m) HLLA HLA HLA HLA HLA HLA HLA HLA HLA HL	AUGER CASING WASH BORING CORE DRILLING		SAMPLE	MATERIAL DESCRIPTION	гітногобу	USCS WEATHERING	INTACT STRENGTH	DEFECT SPACING		ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
_	AUG	REC //		SANDSTONE (Je1)	::		<sup>₩</sup> ╄ <sub>┙┺</sub> ╺┙┙	<u>, , , , , , , , , , , , , , , , , , , </u>				
-				HW: Cont'd.		MW		с				
-		100			::	нw		EC	20.60m-20.75m: BZ			-
21		(62)			::	мw	VL-L	VC				-
-					· · · · ·	xw		č				-
-					· · · · · ·			с		!	s(50)=0.04 MPa s(50)=0.08 MPa	 D (21.66m)
22					· · · · ·	нw				'	s(50)=0.08 IVIPa	A (21.67m)
-					::		LM	vc				
		100 (45)			::			с				
23		(40)			· · · · · · · · · · · · · · · · · · ·	мw				1	s(50)=0.33 MPa s(50)=0.10 MPa	D (22.90m) A (22.92m)
-					· · · · ·	нw		EC			s(50)=0.36 MPa	D (23.40m)-
					· · · · ·						s(50)=0.27 MPa	A (23.41m)-
24 90.36					::	MW	L	с				-
-				SILTSTONE (Je1) MW: Pale grey grey, fine grained,	× × × × × × × ×	N 434/		E	24.36m-24.50m: HFZ	1		-
-				thinly bedded, very low to low strength. With sandstone interbed	(×××	MW		vc				-
25		100		up to 200mm. -BP: 5°-20° (6-7/m), PI/Ro, OP-TI, Vr	×××			E C				-
-		(54)		Ct	× × × × × × ×					1	s(50)=0.62 MPa s(50)=0.43 MPa	D (25.25m)_ A (25.26m) <sup>_</sup>
				-Js: 45°-70° (2/m), Pl/Sm, OP-CD, Cn-Vr	(×××	нw	LM	с			UCS=3.93 MPa	(25.44m) –
26					****		L		26.05m-26.45m: HFZ	1	s(50)=0.25 MPa s(50)=0.18 MPa	D (25.81m) A (25.82m)
-		96	CORE		~~~~~		EL-	E C				-
		(12)	LOSS		****		L	vc			s(50)=0.10 MPa	 D (26.75m)
27					~ × × ×					I	s(50)=0.07 MPa	A (26.77m <u>)</u>
-					* * * * *	MW	VL	vc		I	s(50)=0.06 MPa	D (27.14m)
-					****	1847		E C	27.60m-28.03m: HFZ			
28		97 (0)	CORE- LOSS		* * * *	нw мw			28.03m-28.12m: XW			
-					× × × × ×	HW	L	E	28.30m-28.52m: HFZ			
-		97	CORE		× × × × × ×	HW	VL					
- - - 29		(25)	LOSS		× × × × × ×			с				
					* * * *	MW		EC	29.15m-29.40m: HFZ			
-					× × × × × ×			C			s(50)=0.11 MPa s(50)=0.22 MPa	D (29.54m)_ A (29.55m) <sup>_</sup>
84.46				Continued on post-that	× × × × × ×			č				
REMAR	KS:	le1 - F	ver	Continued on next sheet green Formation.						LOGGED BY	RE\/IE	WED BY
				<u> </u>						M. de Gee		Foley
				TMR	GEOTEC	HNICAL BO	DREHOLE LOG - CREATED	WITH HOLEBASE SI				,

													FINAL 0	2/11/2017
and the second	蜜							GE	OTECHN	IICAL		BOREHOLE No	E	BH06
NA NA		Ħ	Qu	ee	ensland			BO	REHOLE	LOG		She	et 4 of 4	
NS S	K	J.	Gov	ve	rnment		FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014					REFERENCE No	H:	12967
PROJECT		Boyr	ne River	Brid	ge Repalcement									
LOCATION	-	Pier	2, RHS									coordinates 323461	.5 E; 71599	11.4 N
PROJECT NO FG6482 SURFACE RL 114.46m				4.46m	PLU	nge 9	0°	DATE STA	 RTED 02/09/2013	7 GRID DATUM	1 MGA Z56			
JOB No	-	249/	435/375	5550	D HEIGHT DATUM AF	ID B	BEAF	RING °		DATE COMPL	ETED 04/09/201	7 DRILLEF	NorthCoas	st Drilling
			RQD					0				ADDITIONAL DATA		
(E) HLA HLA HLA HLA HLA HLA HLA HLA HLA HLA	UGER	WASH BORING CORE DRILLING	()% CORE REC%	SAMPLE	MATERIAL DESCRIF	PTION	LITHOLOGY	USCS WEATHERING				AND TEST RESULTS		SAMPLES TESTS
-	<u> </u>		100 (24)		SILTSTONE (Je1)	2	× × ×							
- - - - - - - - - - - - - - - - - - -					MW: Cont'd.	2	*******	мw	L	C			UCS=0.88 MPa Is(50)=0.20 MPa Is(50)=0.14 MPa Is(50)=0.20 MPa	(
-			100 (11)			2	× × × ×				31.30m-31.40m: XV			
- 32						22222	******	мw нw	L	vc	━ 31.81m-31.84m: Hf		ls(50)=0.30 MPa	D (31.60m) 
-			100 (18)	_		2	***	XW	E	E	32.30m-32.40m: HI		Is(50)=0.25 MPa	 D (32.45m)
			100		From 32.5m: With dark siltstone interbeds.	grey	******	MW		C	32.62m-32.66m: HI		Is(50)=0.38 MPa	A (32.46m)
- 33 - -			100 (21)			2	~ × × × ×	XW	E		33.10m-33.30m: HI	Z		-
-						3	× × × ×		м	E	33.40m-33.45m: HI		Is(50)=0.37 MPa Is(50)=0.41 MPa	 D (33.48m) A (33.49m)
-						2	× × × ×				33.86m-33.90m: XV			A (33.4911)_ 
34 			100 (36)			3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	* * * * * * *		VL		34.08m-34.13m: XV 34.13m-34.25m: Hł			-
- - - - 35							* * * * * * * *	MW		с			ls(50)=0.13 MPa ls(50)=0.16 MPa	D (34.88m)– A (34.89m)_
-						2	× × ×		L	c	35.17m-35.30m: HF	-2		-
			100			2	× × × × × ×				35.60m-36.00m: HI	Z		
- - 36			(0)			2	× × × × × × × ×	HW		EC				-
			100 (64)				* * * * * * *	XW	E L -	-	36.23m-36.55m: XV		Is(50)=0.08 MPa Is(50)=0.30 MPa	D (36.19m) A (36.20m)
- - 37 -						3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	* * * * * * *	MW	L	с			ls(50)=0.23 MPa ls(50)=0.11 MPa	D (37.07m)- A (37.08m)
						2	* * * * * * *		E	F	37.56m-37.70m: XV	N zone. Clv		-
76.76			100		Borehole completed at		××	XW						-
- 38 -										 				
-										-				
										-				-
39										 				
-									-	- - -				
										-				
								<u> </u>		l	I			
REMA	RKS	: J	e1 - Ev	/erg	green Formation.							LOGGED BY	REVIE	WED BY
												M. de Gee	S.	Foley
						TMR GEC	DTECH	INICAL BO	DREHOLE LOG - CREATED V	VITH HOLEBASE SI				

#### **CORE PHOTO LOG** DEPARTMENT OF TRANSPORT AND MAIN ROADS GEOTECHNICAL SECTION



Project Name	Boyne River Bridge Replacement		
Project No.	FG6482	Date	02/09/2017
Borehole No.	BH06	Reference No.	H12967
Location	Pier 2, RHS	Start Depth (m)	14.30
Submitted By	M. de Gee	Finish Depth (m)	37.70
Remarks		· · · · ·	
Remarks			
0 100	200 300 400	500 600	700
	SCALE (mm)		

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#### **CORE PHOTO LOG** DEPARTMENT OF TRANSPORT AND MAIN ROADS GEOTECHNICAL SECTION



Project Name	Boyne River Bridge Replacement		
Project No.	FG6482	Date	02/09/2017
Borehole No.	BH06	Reference No.	H12967
Location	Pier 2, RHS	Start Depth (m)	14.30
Submitted By	M. de Gee	Finish Depth (m)	37.70
Remarks			
0 100	200 300 400 SCALE (mm)	500 600	700

Page 2 of 3

#### **CORE PHOTO LOG** DEPARTMENT OF TRANSPORT AND MAIN ROADS GEOTECHNICAL SECTION



Project Name	Boyne River Bridge	Replacement		
Project No.	FG6482		Date	02/09/2017
Borehole No.	BH06		Reference No.	H12967
Location	Pier 2, RHS		Start Depth (m)	14.30
Submitted By	M. de Gee		Finish Depth (m)	37.70
Remarks				
		BH6 AT	37.70m	
0 100	200 30	0 400 SCALE (mm)	500 600	700

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