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QLD\_DMR\_LIB\_01A GLB L0g A\_ENGINEERING BOREHOLE LOG W LITHOLOGY TOWNSVILLE RING ROAD 4 KALYNDA PARADE. GPJ <<DrawningFile>> Datgel CPT Tool gint Add-in 17/10/2013 11:46

# **ENGINEERING**BOREHOLE LOG

BOREHOLE No	BH110
SHEET	_1_ of _5_
REFERENCE No	11469

	JECT					Road Section 4								
						Overpass							OORDINATES <u>467771.7 E; 7866527.1</u>	_N
						SURFACE R.L14.21m_ PLUNGE								
JOB	No	_26	8/1	<u> </u>		HEIGHT DATUM <u>AHD</u> BEARING _			•	DATE COM	PLETED _	<u>16/4/</u>	DRILLER <u>Cairns Drilling</u>	
DEPTH (m)	R.L. (m)	AUGER WASH BORING	CORE DRILLING	RQD ( )% CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA  AND  TEST RESULTS	SAMPLES TESTS
0		Ι.		NLO //	0,	Silty SAND (TOPSOIL) Brown, moist, loose. Some tree roots.	7/7	_						-
- - - - - - - - 1 - - -	13.81				A	Silty SAND with some Gravel Light brown to brown, slightly moist, loose. Fine to medium grained sand. Fine to medium grained gravel; subrounded to subangular.							2,3,3 N=6	SPT =
- - - - - -2					В	Becoming medium dense. Weakly cemented in part.					- · · · · · · · · · · · · · · · · · · ·		7,10,15 N=25	SPT -
- - - - - -				(0)	V	Becoming dense to very dense and with some clay.								-
- -3 - - - - - - - - - - - - - -				27 (0)										-
- - - - - - - - 5 -				100 (0)		Becoming iron stained.		(S	M)					- - - - - - - - - - - - - - - - - - -
- - - - - - - - - - -				100 (0)										- - - - - - - - -
- - - - - - - - - - - - - - - - - - -				90 (0)									14/06/13	
-	5.86			100 (0) 100		Clayey SAND Pale brown, slightly moist, very dense. Fine to medium grained sand.								-
—9 - - - - - -					С			(S	C)				16,26,30 N>50	SPT :
10										<u> </u>	- : : : : :			-
R	EMARKS	S <u>S</u> ta	<u>and</u>	pipe pie 	zome	eter installed.	 	<u> </u>	_ _				LOGGED BY VP	



QLD\_DMR\_LIB\_01A GLB L0g A\_ENGINEERING BOREHOLE LOG W LITHOLOGY TOWNSVILLE RING ROAD 4 KALYNDA PARADE. GPJ <<DrawningFile>> Datgel CPT Tool gint Add-in 17/10/2013 11:46

# **ENGINEERING**BOREHOLE LOG

BOREHOLE No	BH110
SHEET	_2_ of _5_
REFERENCE No	11469

						Road Section 4						407774.7.5.700007	
						Overpass 14.34m PUNCE						OORDINATES <u>467771.7 E; 7866527.</u>	
JOB N						SURFACE R.L. <u>14.21m</u> PLUNGE HEIGHT DATUM <u>AHD</u> BEARING							
DЕРТН (m)	R.L. (m)	1		RQD ( )%	SAMPLE	MATERIAL DESCRIPTION			INTACT STRENGTH	DEFECT	GRAPHIC LOG	ADDITIONAL DATA	S
10	4.21	AUG WAS	3	CORE REC %	SAM		Ę	USC	- 	78888	GRA	TEST RESULTS	SAMPLI
	3.41				-D-			(SC)	1			— 10.5-10.8m: Very dense layer 30/40 N>50; No recovery	- - - - - - - - - - - - - - - - - - -
- - 11 - - - - - - - - - - - - - - - - -					E	Silty SAND Brown, moist, very dense. Fine grained sand.  Fine to medium grained sand.						15,30/110 N>50	SPT
- - - - - - - - - - - - - - - - - - -					F	<u>-</u>						13,28,30/110 N>50	SPT -
- - - - - - - - - - - - - - - - - -					G	Iron stained in parts.		(SM)				9,17,26 N=43	SPT
- 16 	-3.29				Н							9,17,28 N=45	SPT =
- - - - - - - - - - - - - - - - - - -					J	Clayey SAND Pale brown, moist, dense. Fine to medium grained sand. Occasional coarse grained sand layers sizing up to 20mm.		(SC)				8,16,25 N=41	SPT -
- - - - - - 20	EMARKS	S <u>St</u>	and	lpipe pie	K	eter installed.						9,15,21 N=36 LOGGED BY	SPT -
		_										- VP	



QLD\_DMR\_LIB\_01A GLB L0g A\_ENGINEERING BOREHOLE LOG W LITHOLOGY TOWNSVILLE RING ROAD 4 KALYNDA PARADE. GPJ <<DrawningFile>> Datgel CPT Tool gint Add-in 17/10/2013 11:46

# **ENGINEERING**BOREHOLE LOG

BOREHOLE No	BH110
SHEET	_3_ of _5_
REFERENCE No	11469

PROJECT		<u>Tow</u>	nsville R	Ring F	Road Section 4									
LOCATIO					Over <u>pass</u>					(	COORDI	NATES <u>46777</u>	1.7 E; 7866527.	<u>1 N</u>
PROJECT	No	F <u>G</u> 6	020		SURFACE R.L. 14.21m PLUNGE					15/	4/13	GRID DATUM	GDA 94	
JOB No		268	<u>/10M/5</u>		HEIGHT DATUM <u>AHD</u> BEARING _		_	_	DATE COMPLETED	16/	4/13	DRILLER	Cairns Drilling	
R.L (m)	 ) <u>Q</u>	WASH BORING CORE DRILLING	RQD ()%	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	30	EATHERING	INTACT DEFECT STRENGTH SPACING (mm)  TITINITY  REPORT OF THE PROPERTY OF THE	GRAPHICLOG		ADDITIONAL AND TEST RESU		SAMPLES
20 -5	.79	₹≶8 ■□	REC %	δ	Claver CAND (Contid)	777	5	>		<u> </u>	5			% <u>₽</u>
- - - - - - - - - - - - - - - - - - -				L	Clayey SAND (Cont'd)  20.3-20.8m: Sandy Clay layer. Pale brown, moist, hard.  Becoming medium to coarse grained sand.		(S	SC)					7,15,16 N=31	SPT -
-22 -7 -22 -7 	.79			М	Sandy CLAY Pale brown, slightly moist, hard. Fine grained sand.								13,18,28 N=46	SPT -
				N			(C	CL)					12,17,27 N=44	SPT :
- 25 	20			Р									14,25,30/110 N>50	SPT -
				Q	Silty SAND Brown, moist, very dense. Fine to medium grained sand.		(S	M)					14,21,30/115 N>50	SPT -
28	.79			R	Sandy CLAY Pale brown, moist, hard. Fine grained sand. Occasional sub rounded, medium sized gravel. Low plasticity.		(S	SC)					13,22,33 N>50	SPT -
-														- -
REMA	RKS	Stan	dpipe pie	ezome	eter installed.		<u>_</u>	_			 		LOGGED BY VP	
							_	_				L		



QLD\_DMR\_LIB\_01A.GLB Log A\_ENGINEERING BOREHOLE LOG WLITHOLOGY TOWNSVILLE RING ROAD 4 KALYNDA PARADE.GPJ <<DrawngFile>> Datgel CPT Tool giNt Add-In 17/10/2013 11:46

# **ENGINEERING**BOREHOLE LOG

BOREHOLE No	BH110
SHEET	_4_ of _5_
REFERENCE No	11469

PROJI	ECT	_Tow	<u>nsville R</u>	ing F	Road Section 4					
LOCA	TION	<u>Kalynda Parade Overpass</u> COORDINATES <u>467771.7 E; 7866527.1 N</u>								
PROJI	ECT No	<u>FG</u> 6	<u> </u>		SURFACE R.L. <u>14.21m</u> PLUNGE			DATE STARTED	15/4/	I/ <u>13</u> GRID DATUM <u>GDA 94</u>
JOB N	0	<u>268</u>	/ <u>10M/5</u>	- — -	HEIGHT DATUM <u>AHD</u> BEARING			DATE COMPLETED	16/4/	1/13 DRILLER <u>Cairns Drilling</u>
DЕРТН (m)	R.L. (m)	VOGEK VASH BORING SORE DRILLING	RQD ( )%  CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	JSC	INTACT DEFECT STRENGTH SPACING (mm) (mm) 00000000000000000000000000000	GRAPHIC LOG	ADDITIONAL DATA  AND TEST RESULTS  SUBJECT:  S
30	-15.79		REC %		Sandy CLAY (Cont'd)		داد			13 21 20
- - - - - - - - - - - - - -				S						N=50
- 32 - 32 				Т	Silty SAND layer. Fine to medium grained, approximately 300mm thick.		(SC			13,21,27 N=48
- - - - - - - - - 34	-20.09			U	Clayey SAND					12,21,26 N=47
	<u>-21.59</u>				Pale brown, slightly moist, very dense. Medium to coarse grained sand.  Silty SAND		(SC	)		13,24,30/120 N>50 SPT =
- 36 - - - - - - - - - - - - - - - - - - -	-22.99			w	Pale brown, iron stained, slightly moist, very dense. Medium to coarse grained sand.  GRANITE		(SM			13,22,31 N>50
- - - - - - - - - - - - - - - - - - -				^	Medium to coarse grained, intrusive, igneous rock of felsic composition.  XW: Generally exhibits engineering properties of a pale red brown, slightly moist, very dense to extremely low strength Clayey Sand.	- · · · · · · · · · · · · · · · · · · ·	XW			30/50 N>50
- - - 39 - - - - - - - - - - - - - - - -				Υ		- + - - + - - + - - + - - + -				30/60 N>50
RE	MARKS	Stan	dpipe pie	zo <u>m</u> e	eter installed.					_ LOGGED BY
										- VP



# **ENGINEERING**BOREHOLE LOG

BOREHOLE No	BH110
SHEET	_ <u>5</u> _ of _ <u>5</u> _
REFERENCE No	11469

PROJECT	_Tow	ns <u>vi</u> ll <u>e</u> F	Ring I	Road Section 4		_								
LOCATION	<u>Kaly</u>	<u>nda Par</u>	ade_	Overpass		_				CC	OORDINATES	467771.7 E;	7 <u>866527.</u>	<u>1 N</u>
PROJECT N	lo <u>FG6</u>	<u>020</u>		SURFACE R.L. 14.21m PL	UNGE	_		DATE S	TARTED _	<u> 15/4/</u>	13 GRID D	ATUM <u>GD</u> A	<u> 94</u>	
JOB No	<u>268/</u>	10M/5		HEIGHT DATUM <u>AHD</u> BE	ARING	_		DATE COM	IPLETED _	16/4/	<u>13</u> DR	ILLER <u>Cair</u>	ns Drilling	ㄴ
R.L. (m)	AUGER WASH BORING CORE DRILLING	RQD ()%	SAMPLE	MATERIAL DESCRIPTION	гиногоех	SC	VEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG		IONAL DATA AND FRESULTS		SAMPLES
40 -25.7		REC %	0)	GRANITE		1	' >	<del>                                     </del>						00 F
-26.3				XW: (Cont'd)	[+	4	(W						30/40	
20.3			Z	Borehole terminated at 40.54m		T		<del></del>				N>50; No		SPT
- 41 41 														
- - - -														
- 42 -														
- 42 43 43 44 45 46 47 47 48 49 49														
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	Stan	dpipe pie	zom	eter installed.								LOGG	ED BY	
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DEPARTMENT OF TRANSPORT & MAIN ROADS Geotechnical Branch
35 Butterfield Street HERSTON Old 4006

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**SCALE** 



5 Butterfield Street, none 07 3066 3336	HERSTON QId 4006	Dep. Tra	artment of ns port and Main Ro
Project Name	Townsville Ring Road Section 4		
Project No	FG 6020	Date	15/04/13
Borehole No	BH 110	TMR H No	11469
Location	Kalynda Parade Overpass	Start Depth (m)	2.5
Detail	Abutment B (Left)	Finish Depth (m)	9.0
Chainage		Submitted By	VP
Remarks			
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