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GEOTECHNICAL BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS
REFER TO TMR FORM F:GEOT 017/10 - 2019

BOREHOLE No **BH18**

Sheet 1 of 4

REFERENCE No **H13338**

PROJECT	Centenary Bridge Upgrade			COORDINATES	494726.95 E; 6954978.09 N	
LOCATION	Koorngal Drive Park, Jindalee, M5 Centenary Motorway, Jindalee to Kenmore					
PROJECT No	FG18012	SURFACE RL	11.28m	PLUNGE	90°	DATE STARTED 04/03/2019
JOB No	498/05038	HEIGHT DATUM	m AHD	BEARING		DATE COMPLETED 06/03/2019
						GRID DATUM MGA94 56J
						DRILLER Schneider Drilling

DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING CORE REC %	RQD (%) %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	GROUP SYMBOL / WEATHERING	INTACT STRENGTH					DEFECT SPACING					ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
								EH _L_VH	H _H	M _M	VL _L_VL	EC _L_VC	C _C	M _M	W _W	VW _VW			
	10.53				Silty Sandy CLAY (FILL) Brown, moist, stiff. 50% clay, medium plasticity. 35% fine to medium grained sand, sub- angular grains.		(CI)												
1				A	15% silt, medium plasticity. Silty SAND trace clay (FILL) Orange/brown, moist, very loose. 80% fine grained sand, sub-angular grains.		(SM)										2, 1, 1 N=2	SPT	
2	9.48			B	15% silt, low plasticity. 5% clay. Silty CLAY trace sand (Alluvium) Brown and pale brown, moist, very stiff.		(CI)										10, 11, 13 N=24	SPT	
3	8.38			C	70% clay, medium to high plasticity. 25% silt, medium plasticity. 5% fine grained sand. Sandy CLAY (Alluvium) Brown and pale brown, moist, very stiff.												3, 9, 10 N=19 LL=26% Pl= 9% MC=10.8% LS=3% <75µm= 48%	SPT	
4				D	48% low to medium plasticity fines. 52% fine grained sand.		CI										5, 10, 12 N=22	SPT	
5	5.78			E													8, 10, 13 N=23	SPT	
6				F	Silty SAND trace clay (Alluvium) Pale brown, moist, medium dense. 76% fine to medium grained sand. 24% fines, low to medium plasticity.												5, 7, 7 N=14	SPT	
7				G													4, 5, 9 N=14	SPT	
8				H			SM										5, 7, 10 N=17 MC=19.2% <75µm= 24%	SPT	
9				I													6, 8, 9 N=17	SPT	
	1.28																		

REMARKS:

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GEOTECHNICAL BOREHOLE LOG

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BOREHOLE No **BH18**

Sheet 2 of 4

REFERENCE No **H13338**

PROJECT Centenary Bridge Upgrade

LOCATION Kooringal Drive Park, Jindalee, M5 Centenary Motorway, Jindalee to Kenmore COORDINATES 494726.95 E; 6954978.09 N

PROJECT No FG18012 SURFACE RL 11.28m PLUNGE 90° DATE STARTED 04/03/2019 GRID DATUM MGA94 56J

JOB No 498/05038 HEIGHT DATUM m AHD BEARING DATE COMPLETED 06/03/2019 DRILLER Schneider Drilling

DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD (%) CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	GROUP SYMBOL / WEATHERING	INTACT STRENGTH				DEFECT SPACING				ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
								EH _L_VH _H _M _L_VL				EC _VC _C _M _W_VW					
11				J	Silty SAND trace clay (Alluvium) Pale brown, moist, medium dense. 80% fine to medium grained sand, sub- rounded grains. 15% silt, medium plasticity. 5% clay, low plasticity.	SM								5, 7, 7 N=14	SPT		
				K											2, 5, 5 N=10	SPT	
12				L	From 12.0m: Becoming grey and pale brown, fine to coarse grained sand, very loose to loose.										3, 1, 2 N=3	SPT	
13				M												1, 3, 3 N=6	SPT
14				N												4, 4, 4 N=8	SPT
15				O												1, 2, 2 N=4	SPT
16				P	From 15.6m: Becoming grey, loose to medium dense.										3, 4, 7 N=11	SPT	
17				Q											4, 3, 2 N=5	SPT	
18	-6.62			R	Sandy CLAY (Alluvium) Dark grey, moist, very soft. 68% fines, high plasticity. 32% fine grained sand.	CH									1, hw, hw N<1 MC=28.2% <75µm= 68%	SPT	
19	-8.72			S	From 19.0m: Becoming stiff.											Su(PP)=67 kPa	U75

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BOREHOLE No **BH18**

Sheet 3 of 4

REFERENCE No **H13338**

PROJECT	Centenary Bridge Upgrade				
LOCATION	Koorngal Drive Park, Jindalee, M5 Centenary Motorway, Jindalee to Kenmore			COORDINATES 494726.95 E; 6954978.09 N	
PROJECT No	FG18012	SURFACE RL	11.28m	PLUNGE	90°
				DATE STARTED	04/03/2019
				GRID DATUM	MGA94 56J
JOB No	498/05038	HEIGHT DATUM	m AHD	BEARING	
				DATE COMPLETED	06/03/2019
				DRILLER	Schneider Drilling

DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY GROUP SYMBOL / WEATHERING	INTACT STRENGTH	DEFECT SPACING	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
21					T	Silty CLAY trace sand (Alluvium) Dark grey, moist, stiff to very stiff. 60% clay, high plasticity. 35% silt, low plasticity. 5% fine grained sand.				Su(PP)=72 kPa	U75
					U	From 21.0m: Becoming very stiff.				5, 8, 12 N=20	SPT
22					V		(CH)			4, 6, 9 N=15	SPT
23					W					5, 9, 13 N=22	SPT
24					X					5, 10, 15 N=25	SPT
-13.42											
-13.72					Y	Clayey GRAVEL (Residual) Pale brown, moist, very dense. 70% fine to medium grained gravel, sub-angular grains. 30% medium plasticity clay.	(GP)			30/10mm hb	SPT
					(55)		HW			Is(50)=0.57 MPa	A (25.40m)
-14.68						ARGILLITE HW: Pale orange/brown, fine grained, medium strength. ARGILLITE MA: Blue/grey, fine grained, very high strength. Quartz inclusion. Js: 5-20° (2-5/m), Ro, OP, Cn, Fe Stn.				Is(50)=0.47 MPa	D (25.66m)
26											
27					100 (99)					Is(50)=2.20 MPa Is(50)=2.20 MPa	A (26.53m) D (26.55m)
28							MA			Is(50)=1.40 MPa Is(50)=4.30 MPa	A (27.86m) D (27.92m)
29						From 28.88m: Js: 5-20° (1-3/m), Ro, OP, Cn.				Is(50)=2.30 MPa Is(50)=4.30 MPa	D (28.64m) A (28.71m)
-18.72					100 (100)					Is(50)=1.60 MPa Is(50)=4.10 MPa	D (29.73m) A (29.74m)

25.40m: Js: 5-20° (4-6/m),
Ro, TI-OP, Fe Stn, Cly Vr.
25.48m-25.52m: XW band.
25.48m: 40mm shear zone,
comprising Gravelly CLAY.
25.89m-25.96m: XW band.
25.89m: 70mm shear zone,
comprising Gravelly CLAY.

REMARKS:

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BOREHOLE No **BH18**

Sheet 4 of 4

REFERENCE No **H13338**

PROJECT	Centenary Bridge Upgrade				
LOCATION	Koorlingal Drive Park, Jindalee, M5 Centenary Motorway, Jindalee to Kenmore			COORDINATES 494726.95 E; 6954978.09 N	
PROJECT No	FG18012	SURFACE RL	11.28m	PLUNGE	90°
				DATE STARTED	04/03/2019
				GRID DATUM	MGA94 56J
JOB No	498/05038	HEIGHT DATUM	m AHD	BEARING	
				DATE COMPLETED	06/03/2019
				DRILLER	Schneider Drilling

DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD (%) CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY GROUP SYMBOL / WEATHERING	INTACT STRENGTH	DEFECT SPACING	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
31					ARGILLITE MA: Blue/grey, fine grained, very high strength. Quartz inclusion. Js: 5-20° (1-3/m), Ro, OP, Cn.				Is(50)=1.40 MPa Is(50)=2.60 MPa	D (30.81m) A (30.83m)
32										
33			100 (67)		From 32.25m: Js: 30-50° (0-2/m), Ro, OP, Cn.				Is(50)=3.10 MPa Is(50)=2.00 MPa UCS=25.30 MPa E=20.6 GPa Is(50)=2.50 MPa Is(50)=1.50 MPa	A (32.10m) D (32.20m) (32.40m) A (32.62m) D (32.65m)
34					From 33.03m Js: 30-50° (4-8/m), Ro, OP, Cn.	MA	H-VH		Is(50)=1.20 MPa Is(50)=2.40 MPa	A (33.57m) D (33.60m)
35									Is(50)=1.10 MPa Is(50)=2.90 MPa	D (34.30m) A (34.32m)
36			100 (100)						Is(50)=0.97 MPa Is(50)=2.80 MPa	D (35.36m) A (35.39m)
37	-25.72		100		Borehole completed at 37.00 m				Is(50)=2.90 MPa Is(50)=1.10 MPa	A (36.27m) D (36.28m)
38										
39										

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CORE PHOTO LOG

DEPARTMENT OF TRANSPORT AND MAIN ROADS
GEOTECHNICAL SECTION

Project Name	Centenary Bridge Upgrade - Geotechnical Investigation		
Project No.	FG18012	Date	04-06/03/2019
Borehole No.	BH18	Reference No.	H13338
Location	Koorinal Drive Park, Jindalee	Start Depth (m)	25.40
Submitted By	M. Hayes	Finish Depth (m)	37.00

