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GEOTECHNICAL BOREHOLE LOG

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

BOREHOLE No **BH01**

Sheet 1 of 4

REFERENCE No **H13321**

PROJECT Centenary Bridge Upgrade

LOCATION 27 Vidgen Lane, Kenmore, M5 Centenary Motorway, Jindalee to Kenmore

COORDINATES 494758.62 E; 6955263.92 N

PROJECT No FG18012

SURFACE RL 18.34m

PLUNGE 90°

DATE STARTED 14/02/2019

GRID DATUM MGA94 56J

JOB No 498/05038

HEIGHT DATUM m AHD

BEARING

DATE COMPLETED 20/02/2019

DRILLER All Tech 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
	18.04			A	Clayey SAND trace organics (TOPSOIL) Yellow-brown, moist, loose. 60% fine to medium grained sand, 25% clay, low to medium plasticity. 15% organic material (tree roots etc.)	(SC)			7, 2, 3 N=5	SPT
1				C	Clayey SAND with gravel (Alluvium) Brown mottled orange-brown, dry, medium dense-dense. 31% clay, low to medium plasticity. 42% fine to medium grained sand. 27% fine grained gravel, sub-angular grains. From 2.0m: Becoming dense.	SC			7, 7, 9 N=16 ECN= 4	SPT
2				E					13, 16, 22 N=38 LL=36% PI= 18% MC=6.7% LS=8% <75µm= 31%	SPT
3				G	From 3.0m: Becoming very dense.				22, 30/130mm	SPT
4	14.84			I	CLAY trace sand and gravel (Residual) Brown and red-brown, dry, hard. 75% clay, low to medium plasticity 15% fine grained sand 10% fine grained gravel, angular grains. From 4.0m: Becoming moist.	(CI)			23, 30/100mm	SPT
5	13.25			K	AGGLOMERATE HW: Brown and red-brown, medium to thickly bedded, fine to coarse grained clasts in a fine grained ash matrix, very low to low strength, clasts are sub- angular to sub-rounded, medium to high strength.	HW			30/90mm Is(50)=0.04 MPa Is(50)=0.05 MPa	SPT D (5.25m) A (5.26m)
6				100 (0)					Is(50)=0.01 MPa Is(50)=0.24 MPa	D (5.84m) A (5.85m)
7				100 (17)						
8	10.34			100 (25)	AGGLOMERATE MW: Red-brown to yellow-brown, green-grey, fine to coarse grained clasts in a fine grained ash matrix, very low strength, clasts are sub-angular to sub- rounded, medium to high strength. Js: 20°-40° (4-6/m), Ro, TI, Fe Stn	MW			Is(50)=0.08 MPa Is(50)=0.26 MPa	D (7.90m) A (7.92m)
9									Is(50)=0.15 MPa Is(50)=0.55 MPa	D (8.68m) A (8.70m)
	8.34								Is(50)=0.12 MPa Is(50)=0.07 MPa Is(50)=0.08 MPa	A (9.50m) D (9.72m) A (9.73m)

REMARKS: Test location back filled with compacted Type 2.3 material and compacted hot mix asphalt and joint sealant

LOGGED BY

H. Menon

REVIEWED BY

S. Foley



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GEOTECHNICAL BOREHOLE LOG

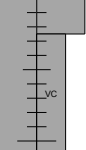
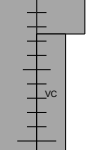
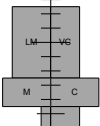
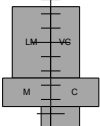
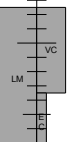
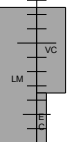
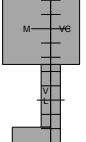
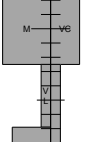
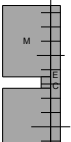
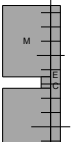
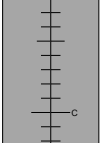
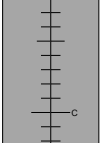
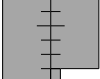
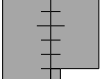
FOR GEOTECHNICAL TERMS AND SYMBOLS
REFER TO TMR FORM F:GEOT 017/10 - 2019

BOREHOLE No **BH01**

Sheet 2 of 4

REFERENCE No **H13321**

PROJECT	Centenary Bridge Upgrade				
LOCATION	27 Vidgen Lane, Kenmore, M5 Centenary Motorway, Jindalee to Kenmore			COORDINATES 494758.62 E; 6955263.92 N	
PROJECT No	FG18012	SURFACE RL	18.34m	PLUNGE	90°
				DATE STARTED	14/02/2019
				GRID DATUM	MGA94 56J
JOB No	498/05038	HEIGHT DATUM	m AHD	BEARING	
				DATE COMPLETED	20/02/2019
				DRILLER	All Tech Drilling

DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD (%)	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	GROUP SYMBOL / WEATHERING	INTACT STRENGTH	DEFECT SPACING	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS	
												EH _LH _VH _H _M _L _VL
11	7.25		100 (0)		AGGLOMERATE MW: Continued.		MW			Is(50)=0.27 MPa Is(50)=0.55 MPa	D (10.78m) A (10.79m)	
12	6.59			CORE LOSS (11.09-11.75m)								
			57 (0)		AGGLOMERATE MW: Continued.		MW			11.75m: Highly fractured.		
13	6.00			CORE LOSS (12.34-12.75m)						12.26m-12.34m: Clay band.		
			59 (22)		ARGILLITE (DCf) MA: Green-grey, fine grained, foliated, low to medium strength. Js: 20°-40° (4-6/m), Ro, TI, Fe Stn.		HA MA XA			13.20m: Becoming green-grey. 13.45m-13.59m: Becoming green-grey, medium plasticity, CLAY.	Is(50)=0.34 MPa Is(50)=0.23 MPa Is(50)=0.12 MPa Is(50)=0.34 MPa	D (13.04m) A (13.05m) D (13.32m) A (13.33m)
14	4.75		84 (0)		ARGILLITE (DCf) HA: Green-grey mottled white, foliated, generally low to medium strength. Mineral alteration (chlorite and albite), shear zone. Js: 0°-15° (10-15/m), Ro, TI-FL, Fe Stn.		HA			14.00m-14.33m: Js: 70°-90°, TI, Fe Stn. 14.33m-14.45m: Extremely closely fractured zone.		
15	4.59		100 (0)				MA HA XA			15.40m-15.69m: Becoming green-grey, medium to high plasticity, CLAY	Is(50)=0.12 MPa Is(50)=0.13 MPa	D (15.20m) A (15.21m)
16	1.84		100 (0)				HA XA			16.25m-16.50m: Becoming green-grey, medium to high plasticity CLAY.	Is(50)=0.04 MPa Is(50)=0.06 MPa	D (16.36m) A (16.37m)
17	1.19			CORE LOSS (16.5-17.15m)								
			53 (0)		ARGILLITE (DCf) MA: Green-grey with white veining, fine grained, foliated, medium strength. Js: 10°-20° (10-15/m), Ro, TI-OP, Cn.		MA			17.65m-17.73m: High plasticity clay.		
18			84 (39)		Js: 45° (2-4/m), Sm, TI, Cn. From 18.0m: Becoming medium to high strength.		MA			Is(50)=0.41 MPa Is(50)=1.20 MPa	D (18.24m) A (18.25m)	
19			100 (40)							Is(50)=0.01 MPa Is(50)=0.84 MPa	D (19.54m) A (19.55m)	
	-1.66											

REMARKS: Test location back filled with compacted Type 2.3 material and compacted hot mix asphalt and joint sealant

LOGGED BY

H. Menon

REVIEWED BY

S. Foley



**Queensland
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GEOTECHNICAL BOREHOLE LOG

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BOREHOLE No **BH01**

Sheet 3 of 4

REFERENCE No **H13321**

PROJECT	Centenary Bridge Upgrade				
LOCATION	27 Vidgen Lane, Kenmore, M5 Centenary Motorway, Jindalee to Kenmore			COORDINATES 494758.62 E; 6955263.92 N	
PROJECT No	FG18012	SURFACE RL	18.34m	PLUNGE	90°
				DATE STARTED	14/02/2019
				GRID DATUM	MGA94 56J
JOB No	498/05038	HEIGHT DATUM	m AHD	BEARING	
				DATE COMPLETED	20/02/2019
				DRILLER	All Tech 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	-3.66		100 (0)		ARGILLITE (DCf) MA: Continued.	MA			20.10m-20.90m: Extremely to very closely fractured zone.	
			100 (58)		From 20.80m: Foliation at 30°-50° FP: 30°-50° (1-4/m), Pln, Sm, TI-OP				Is(50)=0.22 MPa Is(50)=0.25 MPa	D (20.73m) A (20.74m)
22			100 (89)		ARGILLITE (DCf) SA: Green-grey, fine grained, foliated, mainly medium strength. Js: 10°-20° (4-5/m), Sm, TI, Cn. Js: 45° (2-4/m), Sm, TI, Cn.				Is(50)=0.48 MPa Is(50)=0.06 MPa	D (21.57m) A (21.60m)
23			100 (30)			SA			Is(50)=0.24 MPa Is(50)=0.52 MPa	D (22.55m) A (22.56m)
24			100 (73)						Is(50)=0.07 MPa Is(50)=0.59 MPa	D (23.15m) A (23.16m)
25									23.95m: 60° Crushed seam	
26									Is(50)=0.21 MPa Is(50)=0.53 MPa	D (24.65m) A (24.66m)
27									25.70m: Crushed seam.	
28	-9.16		100 (92)		ARGILLITE (DCf) MA: Green with white veining, trace red mottling, fine grained, foliated, mainly medium strength. Js: 45° (3/m) Sm, TI, Cn Js: 10°-20° (1-2/m), Ro, FL, Cn, Calcite.	MA			Is(50)=0.12 MPa Is(50)=0.10 MPa Is(50)=0.24 MPa Is(50)=0.33 MPa UCS=15.00 MPa	D (25.75m) A (25.76m) D (26.10m) A (26.11m)
29									Is(50)=0.74 MPa Is(50)=0.39 MPa Is(50)=0.04 MPa Is(50)=0.23 MPa	D (26.92m) A (26.93m) A (27.10m)
	-11.66								Is(50)=0.17 MPa Is(50)=0.70 MPa	D (28.59m) A (28.60m) D (29.50m) A (29.51m)

REMARKS: Test location back filled with compacted Type 2.3 material and compacted hot mix asphalt and joint sealant

LOGGED BY

H. Menon

REVIEWED BY

S. Foley



**Queensland
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GEOTECHNICAL BOREHOLE LOG

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

BOREHOLE No **BH01**

Sheet 4 of 4

REFERENCE No **H13321**

PROJECT Centenary Bridge Upgrade

LOCATION 27 Vidgen Lane, Kenmore, M5 Centenary Motorway, Jindalee to Kenmore COORDINATES 494758.62 E; 6955263.92 N

PROJECT No FG18012 SURFACE RL 18.34m PLUNGE 90° DATE STARTED 14/02/2019 GRID DATUM MGA94 56J

JOB No 498/05038 HEIGHT DATUM m AHD BEARING DATE COMPLETED 20/02/2019 DRILLER All Tech 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	_VH	_H	_M	_L	_VL			_EC	_VC	_C	_M	_W	_VW
	-12.56		100		ARGILLITE (DCf) MA: Continued.	 MA														
31					Borehole completed at 30.90 m													Is(50)=0.84 MPa Is(50)=0.18 MPa	D (30.80m) A (30.81m)	
32																				
33																				
34																				
35																				
36																				
37																				
38																				
39																				

REMARKS: Test location back filled with compacted Type 2.3 material and compacted hot mix asphalt and joint sealant

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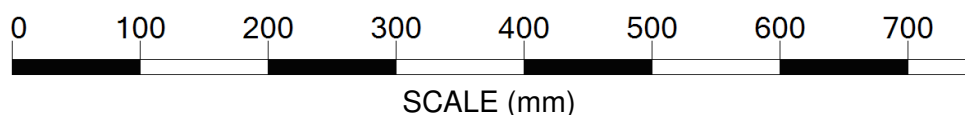
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S. Foley

CORE PHOTO LOG

DEPARTMENT OF TRANSPORT AND MAIN ROADS
GEOTECHNICAL SECTION

Project Name	Centenary Bridge Upgrade - Geotechnical Investigation		
Project No.	FG18012	Date	14-20/02/2019
Borehole No.	BH01	Reference No.	H13321
Location	27 Vidgen Lane, Kenmore	Start Depth (m)	5.09
Submitted By	M. Hayes	Finish Depth (m)	30.90



CORE PHOTO LOG

DEPARTMENT OF TRANSPORT AND MAIN ROADS
GEOTECHNICAL SECTION

Project Name	Centenary Bridge Upgrade - Geotechnical Investigation		
Project No.	FG18012	Date	14-20/02/2019
Borehole No.	BH01	Reference No.	H13321
Location	27 Vidgen Lane, Kenmore	Start Depth (m)	5.09
Submitted By	M. Hayes	Finish Depth (m)	30.90

