Foundation Specialists Group

Engineering Borehole Log

BHX4

Sheet: 1 of 4

Commenced:	21/09/2015	**Easting (MGA94 56):**	530377.043	**Client:**	Seymour Whyte Constructions Pty Ltd
Completed	21/09/2015	**Northing (MGA94 56)**	6918508.327	**Project:**	M1 Exit 54 Coomera Interchange Upgrade
Logged By:	DJ	**Surface RL (m):**	17.753	**Project No.:**	1831
Checked By:	PM	**Inclination (°):**	90	**Location:**	W202 pile P07

DRILLING INFORMATION					MATERIAL DESCRIPTION		STRENGTH		OBSERVATIONS AND TESTING		STRATA		
Groundwater	Method	(TCR) RQD	Samples	Depth (m)	USC / Weathering	Soil Description: Soil type, colour, plasticity and particle characteristics, secondary and minor components. Rock Description: Rock type, colour, grain size, structure	Cons-Density Strength	Defect Spacing (mm) 6 20 60 200 600 2m	Additional Comments Origin, Structure, Defect Descriptions	Testing Results	Graphic Log	Elevation (m)	Depth (m)
Groundwater Not Encountered	Auger TC-bit		SPT	0	GM	FILL: Silty Sandy GRAVEL (GM): Orange brown, fine to coarse grained sub-angular, fine to coarse grained sand, trace fines, moist	MD		Fill			17	0
			SPT	1	SC	FILL: Gravelly Clayey SAND (SC): Grey, Orange brown, fine grained, sub-angular gravel, medium plasticity clay, moist, properties of Stiff Clay				SPT 1.00 2, 2, 4 N=6		16	1
			SPT	2	SC	FILL: Gravelly Clayey SAND (SC): Grey brown, fine grained, fine to medium grained sub-angular gravel, medium plasticity clay, moist, properties of Stiff Clay				SPT 2.50 1, 1, 2 N=3		15	2
			SPT	3	CH	FILL: Gravelly Sandy CLAY (CH): Dark brown mottled orange brown, high plasticity, fine to medium grained sub-angular gravel, moist	VSt			SPT 4.00 3, 4, 7 N=11		14	3
			SPT	4	CH	FILL: Sandy Silty CLAY (CH): Dark brown, orange brown, grey, high plasticity, with fine to medium grained sub-angular gravel, moist				SPT 5.50 5, 5, 5 N=10		13	4
				5								12	5
				6									6

Additional Remarks

Driller: Schneider Drilling

Drill Rig:

QMS-6021.0-A

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Sheet: 2 of 4

Commenced:	21/09/2015	**Easting (MGA94 56):**	530377.043	**Client:**	Seymour Whyte Constructions Pty Ltd
Completed	21/09/2015	**Northing (MGA94 56)**	6918508.327	**Project:**	M1 Exit 54 Coomera Interchange Upgrade
Logged By:	DJ	**Surface RL (m):**	17.753	**Project No.:**	1831
Checked By:	PM	**Inclination (°):**	90	**Location:**	W202 pile P07

DRILLING INFORMATION					MATERIAL DESCRIPTION		STRENGTH		OBSERVATIONS AND TESTING		STRATA		
Groundwater	Method	(TCR) RQD	Samples	Depth (m)	USC / Weathering	Soil Description: Soil type, colour, plasticity and particle characteristics, secondary and minor components. Rock Description: Rock type, colour, grain size, structure	Cons-Density Strength	Defect Spacing (mm) 6 20 60 200 600 2m	Additional Comments Origin, Structure, Defect Descriptions	Testing Results	Graphic Log	Elevation (m)	Depth (m)
Groundwater Not Encountered	WB blade-bit			6	CH	(continued) FILL: Sandy Silty CLAY (CH): Dark brown, orange brown, grey, high plasticity, with fine to medium grained sub-angular gravel, moist	VSt		(continued) Fill			11	6
				7	CH	FILL: Silty CLAY (CH): Dark grey brown mottled orange brown, high plasticity, with sub-angular gravel, trace sand				SPT 7.00 2, 3, 5 N=8			7
			SPT		CH	Silty CLAY (CH): Dark grey, red grey, high plasticity, minor organics (OM), moist	VSt-H		Residual Soil	SPT 7.50 3, 6, 30/100mm		10	
						ARGILLITE: Pale to dark grey, mottled orange brown	ELS		Weathered Rock (Neranleigh Fernvale)				8
				8	XW	SANDSTONE: Orange brown and grey mottled dark grey, fine to medium grained	VLS			SPT 8.50 12, 30/140mm		9	
			SPT	9	HW		LS						9
	NMLC	(100) 72			MW	SANDSTONE: Pale brown mottled grey, fine to medium grained	MS		9.43 Jo 30° Ir clay 3mm 9.51 Jo 45° Pl clay 3-5mm				
					HW		LS-MS		9.61 Jo 45° Ir Ro cn 9.64 Jo 30° Ir Ro sn Fe 9.67 Jo 30° Ir Ro sn Fe 9.70 Jo 60° Pl Ro sn Fe			8	
				10		SANDSTONE: Brown grey, pale brown, fine to medium grained, minor argillite inclusions	MS-HS		9.88 Jo 20° Un Sm sn Fe				10
							MS		10.25 Jo 45° Ir cg clay 5mm 10.31 Jo 45° Ir cg clay 5mm 10.33 Jo 20° Ir cg clay 5mm 10.37 Jo x2 75° Pl Ro sn Fe				
					MW		MS-HS		10.66 Jo 50° St Ro cn 10.77 Ds 5° St clay 10-20mm 10.80 Jo 20° Pl Ro sn Fe 10.98 Jo 20° Pl Sm sn Fe 11.10 Jo 20° Pl cg clay 1mm 11.13 Jo 20° Pl cg clay 1mm 11.17 Jo 10° Ir cg clay 3-5mm 11.19 Jo 70° Ir Ro vn clay cross joint 11.43 Jo 45° Pl Sm sn Fe			7	
				11					11.62 Jo 45° Ir Ro cg clay 3mm 11.70 Jo 45° Ir Ro sn Fe			6	11
		(100) 70		12					11.88 Jo 30° Ir Ro cn 11.96 Jo 60° Pl Ro vn Fe				12

Additional Remarks

Driller: Schneider Drilling

Drill Rig:

QMS-6021.0-A

Foundation Specialists Group

Engineering Borehole Log

BHX4

Sheet: 3 of 4

Commenced:	21/09/2015	**Easting (MGA94 56):**	530377.043	**Client:**	Seymour Whyte Constructions Pty Ltd
Completed	21/09/2015	**Northing (MGA94 56)**	6918508.327	**Project:**	M1 Exit 54 Coomera Interchange Upgrade
Logged By:	DJ	**Surface RL (m):**	17.753	**Project No.:**	1831
Checked By:	PM	**Inclination (°):**	90	**Location:**	W202 pile P07

DRILLING INFORMATION | **MATERIAL DESCRIPTION** | **STRENGTH** | **OBSERVATIONS AND TESTING** | **STRATA**

Groundwater: Groundwater Not Encountered

Method: NMLC

(TCR) RQD: (100) 70; (100) 81; (100) 84

Samples

Depth (m): 12, 13, 14, 15, 16, 17, 18

USC / Weathering: MW; MW-SW

Soil Description
Soil type, colour, plasticity and particle characteristics, secondary and minor components

Rock Description
Rock type, colour, grain size, structure

(continued) SANDSTONE: Brown grey, pale brown, fine to medium grained, minor argillite inclusions

ARGILLITE: Dark grey, grey brown, minor intercalated fine grained sandstone

SANDSTONE: Grey, dark grey, orange brown, fine grained, with periodic argillite bands

ARGILLITE: Dark grey, grey, intercalated fine grained sandstone

SANDSTONE: Grey, fine to medium grained, with minor dark grey argillite inclusions

Cons-Density Strength: MS-HS; MS; HS

Defect Spacing (mm): 6 20 60 200 600 2m

Additional Comments Origin, Structure, Defect Descriptions | **Testing Results**

12.00 Jo 15° Ir Ro cn
12.24 Jo 15° Ir Ro sn Fe
12.27 Jo 60° Pl Sm vn clay
12.31 Jo 30° Ir Ro sn Fe
12.66 Jo 60° Ir Ro cg clay 3mm
12.72 Jo 30° Pl cg clay 3mm
12.88 Jo 60° Ir Ro sn Fe
13.00 Jo 70° Ir Ro sn Fe
13.10 Jo x2 45° Ir Ro sn Fe
13.32 Jo 50° Pl Ro vn Fe
13.45 Jo 60° Un Ro sn Fe
13.56 Jo 30° Ir Ro cn
13.57 Jo 70° Ir Ro cg clay 3mm
13.66 Jo 45° Pl Sm cn
13.69 Jo 75° Ir Sm cn
13.87-13.95 Cs 80mm
14.01 Jo 60° St Sm vn clay
14.17 Jo 45° Ir Ro cg clay 3mm
14.62 Jo 20° St Ro cn
14.66 Jo 20° Ir Sm cn
14.71-14.75 Ds 30° clay 40mm
14.85 Jo 60° Pl Sm sn Fe
14.88 Jo 70° Cu Ro vn clay
15.03 Jo 75° Ir Sm vn clay
15.08 Jo 5° St Sm vn clay
15.18 Jo 80° Un Sm sn Fe clay
15.22 Jo 30° Ir Sm sn Fe
15.44 Jo 60° Pl Ro vn clay
15.46 Jo 60° Ir Ro vn clay
15.49 Jo 5° Ir Sm cn
15.78 Jo 4° Ir Sm vn Fe
15.82 Jo 45° Ir Ro vn Fe
15.95 Jo 45-90° St Ro sn Fe
16.00 Jo 45° Pl Sm sn Fe
16.25-16.31 Jo x3 45° Ir cg clay 2mm
16.38 Jo 20° Ir Ro sn Fe
16.58 Jo 30° Pl Ro cn
16.75 Jo 60° Ir Ro cn
17.23 Jo 30° St Ro cn
17.44 Jo 20° Ir Ro cg clay 3mm
17.64 Jo 45° Un Sm cn
17.71 Jo 20° Ir Ro cg clay 3mm
17.81 Jo 15° Un Ro cn
17.88 Jo 80° Un Ro sn Fe

Graphic Log

Elevation (m): 5, 4, 3, 2, 1, 0

Depth (m): 12, 13, 14, 15, 16, 17, 18

Additional Remarks

Driller: Schneider Drilling
Drill Rig:

QMS-6021.0-A

Foundation Specialists Group

Engineering Borehole Log

BHX4

Sheet: 4 of 4

Commenced: 21/09/2015
Completed 21/09/2015
Logged By: DJ
Checked By: PM

Easting (MGA94 56): 530377.043
Northing (MGA94 56) 6918508.327
Surface RL (m): 17.753
Inclination (°): 90

Client: Seymour Whyte Constructions Pty Ltd
Project: M1 Exit 54 Coomera Interchange Upgrade
Project No.: 1831
Location: W202 pile P07

DRILLING INFORMATION					MATERIAL DESCRIPTION		STRENGTH		OBSERVATIONS AND TESTING		STRATA		
Groundwater	Method	(TCR) RQD	Samples	Depth (m)	USC / Weathering	Soil Description: Soil type, colour, plasticity and particle characteristics, secondary and minor components. Rock Description: Rock type, colour, grain size, structure	Cons-Density Strength	Defect Spacing (mm) 6 20 60 200 600 2m	Additional Comments Origin, Structure, Defect Descriptions	Testing Results	Graphic Log	Elevation (m)	Depth (m)
Groundwater Not Encountere	NMLC	(100) 84		18	MW-SW	(continued) SANDSTONE: Grey, fine to medium grained, with minor dark grey argillite inclusions	HS		18.00 Jo 45° Pl Ro sn Fe 18.08 Jo 30° St Ro cn 18.12 Jo 5° Ir Ro cg clay 3mm 18.13 Jo 90° Ir Ro sn Fe 18.18 Jo 5° Ir Ro cn 18.55 Jo 15° Un Ro vn Fe clay 18.61 Jo 20° Ir Ro vn clay 18.72 Jo 20° Ir Ro vn clay			-1	18
						EOH 18.8 m: Target depth							

Additional Remarks

Driller: Schneider Drilling
Drill Rig:

QMS-6021.0-A

Foundation Specialists Group

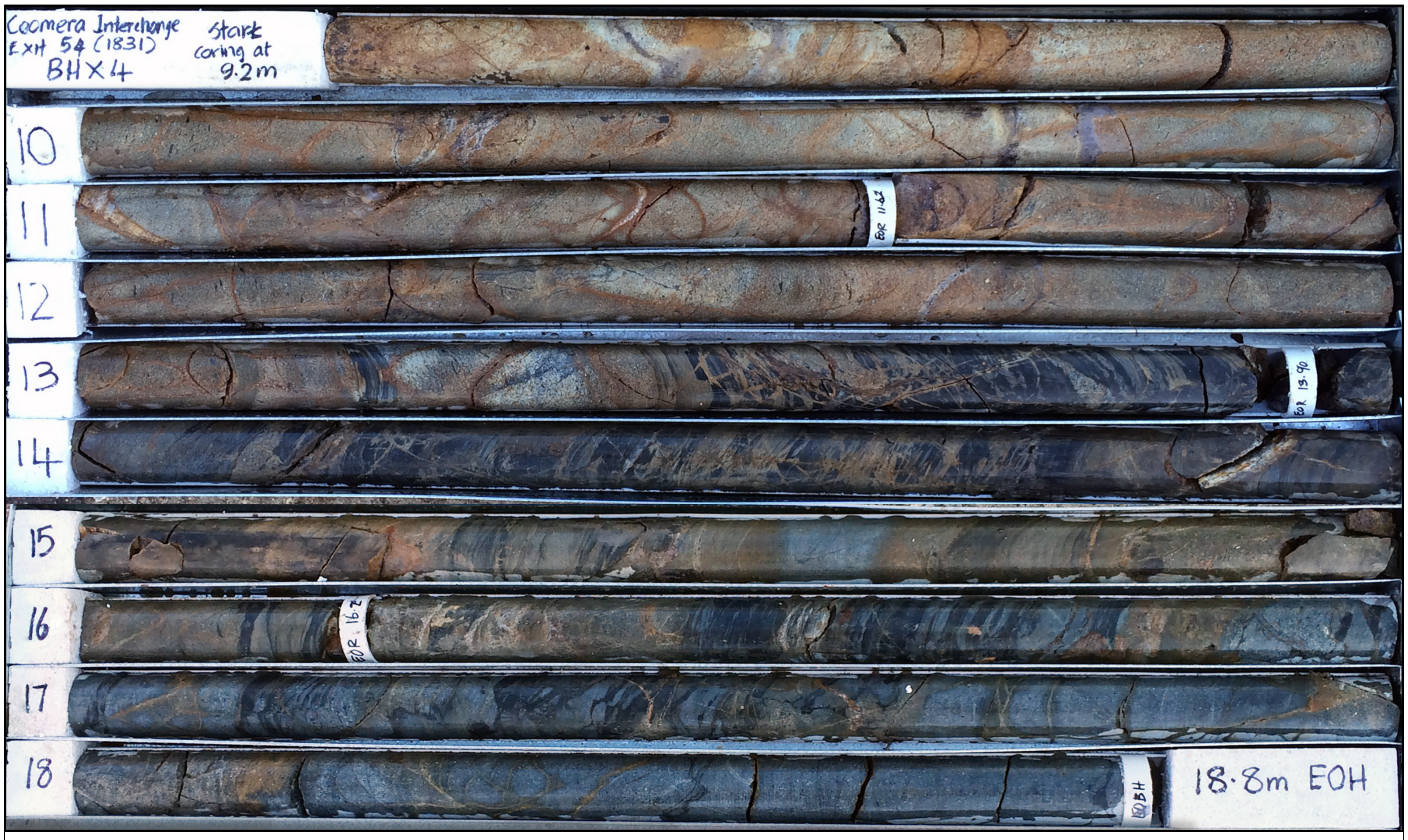
Photographic Log

BHX4

Sheet: 1 of 1

Commenced:	21/09/2015	**Easting (MGA94 56):**	530377.043	**Client:**	Seymour Whyte Constructions Pty Ltd
Completed:	21/09/2015	**Northing (MGA94 56):**	6918508.327	**Project:**	M1 Exit 54 Coomera Interchange Upgrade
Logged:	DJ	**Surface RL (m AHD):**	17.753	**Project No.:**	1831
Checked:	JP	**Inclination (°):**	90	**Location:**	W202 pile P07

Start Depth (m):	9.20	**Start RL (AHD):**	8.55
End Depth (m):	18.80	**End RL (AHD):**	-1.05



0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0

Approximate Scale (m)