Connell Wagner

Borehole Number: CW-01

Commenced: 29/07/08
Completed: 29/07/08
Location: CH 32600
Easting: 468739m
Northing: 7054092m
Elevation: Not Surveyed
Inclination: 90°

Datum: UTM - Zone 56J
Sheet: 1 of 5

Client: Department of Main Roads
Project: Maleny To Kenilworth
Project Number: 37009-001-01
File Name: P:\WP\37009\Winlog

Drilling Information				Soil Description			Testing		Strata Information		
Groundwater	Drilling Method	Sample Type	Elevation (m LAT)	USC	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	Moisture Content	Consistency/ Relative Density (VS S F St VSt H / VL L MD D VD C)	Comments/ Test Results/ Origin	SPT Values	Graphic Log	Elevation (m LAT)	Depth (m)
	RC			FILL	**FILL (Sandy GRAVEL)** Black, loose	M		Embankment Fill				
				ML	**Gravelly SILT** Pale yellow, medium plasticity, stiff	D						
		SPT							SPT @ 0.50m to 0.95m (5, 7, 6) N = 13			
		SPT							SPT @ 1.00m to 1.45m (6, 8, 18) N = 26			1.0
		SPT		MH (XW)	**Gravelly SILT** Reddish brown stained black, red and yellow, high plasticity, sub-rounded to rounded gravel, very stiff (Extremely weathered CONGLOMERATE)	D		Residual Material	SPT @ 1.50m to 1.95m (5, 17, 24) N = 41			2.0
		SPT		(HW)	Pale yellow brown, decomposed clasts, sub-rounded to rounded, in red clayey matrix, high plasticity, very stiff (Highly Weathered CONGLOMERATE)				SPT @ 2.50m to 2.80m (10, 30/145mm) N* = 62			3.0
		SPT			Brown, red and black clasts, up to 5mm diameter, very stiff				SPT @ 4.00m to 4.45m (12, 20, 30/145mm) N* = 51			4.0
												5.0

Driller: GEODRILL
Remarks:
Logged By: JSM
Date Logged: 29/07/08

Drill Type: Truck Mounted Hydrapower
Support: Casing - 2.50m
Checked By: MS
Date Checked: 12/08/08

Connell Wagner

Borehole Number: CW-01

Commenced: 29/07/08
Completed: 29/07/08
Location: CH 32600
Easting: 468739m
Northing: 7054092m
Elevation: Not Surveyed
Inclination: 90°

Datum: UTM - Zone 56J
Sheet: 2 of 5

Client: Department of Main Roads
Project: Maleny To Kenilworth
Project Number: 37009-001-01
File Name: P:\WP\37009\Winlog

Drilling Information				Soil Description			Testing		Strata Information		
Groundwater	Drilling Method	Sample Type	Elevation (m LAT)	USC	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	Moisture Content	Consistency/ Relative Density (VS VL, S L, F MD, St D, VSt VD, H C)	Comments/ Test Results/ Origin	SPT Values	Graphic Log	Elevation (m LAT)	Depth (m)
	RC			MH (HW)	**Gravelly SILT (Continued)** Pale yellow brown, decomposed clasts, sub-rounded to subrounded, in red clayey matrix, high plasticity, very stiff	D						
					(Highly Weathered CONGLOMERATE)							
		SPT		MH (XW/ HW)	White grey, high plasticity, with very stiff clasts, up to 100mm diameter, in red clayey sand matrix, very stiff to hard				SPT @ 5.50m to 5.95m (6, 16, 24) N = 40			
					(Extremely to highly weathered CONGLOMERATE)							6.0
		SPT							SPT @ 7.00m to -7.12m (30/115mm) N* = 76			7.0
												8.0
		SPT			As previous, very stiff to hard				SPT @ 8.50m to -8.77m (17, 30/115mm) N* = 78			9.0
												10.0

Driller: GEODRILL **Remarks:** **Logged By:** JSM **Date Logged:** 29/07/08

Drill Type: Truck Mounted Hydrapower **Support:** Casing - 2.50m **Checked By:** MS **Date Checked:** 12/08/08

Connell Wagner

Borehole Number: CW-01

Commenced: 29/07/08
Completed: 29/07/08
Location: CH 32600
Easting: 468739m
Northing: 7054092m
Elevation: Not Surveyed
Inclination: 90°

Datum: UTM - Zone 56J
Sheet: 3 of 5

Client: Department of Main Roads
Project: Maleny To Kenilworth
Project Number: 37009-001-01
File Name: P:\WP\37009\Winlog

Drilling Information				Soil Description				Testing		Strata Information		
Groundwater	Drilling Method	Sample Type	Elevation (m LAT)	USC	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	Moisture Content	Consistency/ Relative Density (VS VL, S L, F MD, St D, VSt VD, H C)	Comments/ Test Results/ Origin	SPT Values	Graphic Log	Elevation (m LAT)	Depth (m)
	RC	SPT		HW	**CONGLOMERATE** Pale yellow brown, some red, white and black nodules, fine grained, some black stained infill of defects, stiff	D			SPT @ 10.00m to 10.11m (30/110mm) N* = 82			
					Sequence of extremely low to low strength CONGLOMERATE at 200mm and 50mm intervals							11.0
		SPT			**Begin NMLC Rock Log @ 11.53m**				SPT @ 11.50m to 11.54m (30/35mm) N* = 257 Nil Sample			12.0
												13.0
												14.0
												15.0

Driller: GEODRILL
Remarks:
Logged By: JSM
Date Logged: 29/07/08

Drill Type: Truck Mounted Hydrapower
Support: Casing - 2.50m
Checked By: MS
Date Checked: 12/08/08

Connell Wagner

Borehole Number: CW-01

Commenced: 29/07/08
Completed: 29/07/08
Location: CH 32600
Easting: 468739m
Northing: 7054092m
Elevation: Not Surveyed
Inclination: 90°

Datum: UTM - Zone 56J
Sheet: 4 of 5

Client: Department of Main Roads
Project: Maleny to Kenilworth
Project Number: 37009-001-01
File Name: P:\WP\37009\Winlog

Drilling Information				Rock Description			Intact Strength			Rock Mass Defects		Strata Information		
Groundwater	Drilling Method	Core Recovery	Elevation (m LAT)	Weathering	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	RQD (%)	Estimated Strength (EL, VL, L, M, H, VH)	Is(50) A/Ir/D(MPa)	UCS (MPa)	Defect Spacing (m) (0.006, 0.02, 0.06, 0.2, 0.6)	Defect Description (depth, type, angle, roughness, infill, thickness)	Graphic Log	Elevation (m LAT)	Depth (m)
					Start NMLC Rock Core Log @ 11.53m									11.0
	NMLC	98		MW/SW	**CONGLOMERATE** Yellow brown mottled dark blue and white, fine grained matrix, clasts up to 10mm diameter, stained and smoothed defects, moderate to slightly weathered, high strength	72					Refer to attached sheet for defect descriptions			12.0
				HW/MW	Moderately to highly weathered, medium strength						12.06m Highly to moderately weathered			
					Infilled seam of yellow and white clay, 150mm thick, high plasticity, hard									
		90		MW	**CORE LOSS - 100mm** 12.50m to 12.60m	32								13.0
				HW/MW	**CONGLOMERATE** Crushed seams infilled with white grey clay, high plasticity, with some crushed, highly weathered, rock, very soft									
		100			**SANDSTONE** Yellow brown, fine grained, some infilled seams of white, high plasticity, clay fines, highly to moderately weathered, low strength	66					13.80m Crushed Seam mark @ 330°			14.0
		100		HW	Highly weathered, medium strength	63								
		86				83								15.0

Driller: GEODRILL **Remarks:** **Logged By:** JSM **Date Logged:** 29/07/08

Drill Type: Truck Mounted Hydrapower **Support:** Casing - 2.50m **Checked By:** MS **Date Checked:** 12/08/08

Connell Wagner

Borehole Number: CW-01

Commenced: 29/07/08
Completed: 29/07/08
Location: CH 32600
Easting: 468739m
Northing: 7054092m
Elevation: Not Surveyed
Inclination: 90°

Datum: UTM - Zone 56J
Sheet: 5 of 5

Client: Department of Main Roads
Project: Maleny to Kenilworth
Project Number: 37009-001-01
File Name: P:\WP\37009\Winlog

Drilling Information				Rock Description			Intact Strength			Rock Mass Defects		Strata Information		
Groundwater	Drilling Method	Core Recovery	Elevation (m LAT)	Weathering	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	RQD (%)	Estimated Strength (EL, VL, L, M, H, VH)	Is(50) A/Ir/D(MPa)	UCS (MPa)	Defect Spacing (m) (0.006, 0.02, 0.06, 0.2, 0.6)	Defect Description (depth, type, angle, roughness, infill, thickness)	Graphic Log	Elevation (m LAT)	Depth (m)
	NMLC	86		MW	**SANDSTONE (Continued)** Yellow brown, fine grained, moderately weathered, medium strength	83					Refer to attached sheet for defect descriptions			
		88		MW	**CORE LOSS - 100mm** 15.10m to 15.20m **SANDSTONE** Yellow brown, fine grained, some infilled seams of white, high plasticity, clay fines, highly weathered, medium strength	65								
		100		SW	**CONGLOMERATE** Yellow brown mottled red, blue and white, fine grained matrix, moderately weathered, medium strength	76								16.0
					CORE LOSS - 80mm 15.80m to 15.88m									
					CONGLOMERATE Yellow brown mottled red, blue and white, fine grained matrix, slightly weathered, high strength									17.0
					End of Borehole @ 16.53m									18.0
														19.0
														20.0

Driller: GEODRILL
Remarks:
Logged By: JSM
Date Logged: 29/07/08

Drill Type: Truck Mounted Hydrapower
Support: Casing - 2.50m
Checked By: MS
Date Checked: 12/08/08

Maleny To Kenilworth

CW-01

37009-001-01

Depth (m)	Type	Dip (Degrees)	Aperture (mm)	Nature of Infilling	Infill Consistency	Roughness (Profile, JRC @ 100mm)
11.56	Joint	10	Moderately Narrow (20-60mm)	Surface Staining	Medium Strength	Rough - Undulating
11.64	Joint	70	Narrow (6-20mm)	Surface Staining	Medium Strength	Rough - Undulating
11.68	Joint	15	Moderately Narrow (20-60mm)	Surface Staining	Medium Strength	Rough - Undulating
11.72	Joint	10	Moderately Narrow (20-60mm)	Surface Staining	Medium Strength	Rough - Undulating
11.77	Joint	50	Tight	Surface Staining	Medium Strength	Smooth - Planar
11.92	Joint	5	Extremely Narrow (2mm)	Surface Staining	Medium Strength	Rough - Undulating
12.21	Joint	60	Tight	Surface Staining	Medium Strength	Smooth - Planar
12.27	Joint	75	Tight	Surface Staining	Medium Strength	Smooth - Planar
12.34 - 12.50	Crushed Core					
12.50 - 12.60	Core Loss					
12.60 - 12.90	Crushed Core					
12.94	Joint	15	Narrow (6-20mm)	Surface Staining	Soft / Loose	Rough - Undulating
13.2	Joint	70	Moderately Narrow (20-60mm)	Surface Staining	Soft / Loose	Rough - Planar
13.20-13.40	Crushed Core					
13.4	Joint	5	Very Narrow (2-6mm)	Surface Staining	Medium Strength	Rough - Undulating
13.45	Joint	75	Very Narrow (2-6mm)	Surface Staining	High Strength	Rough - Undulating
13.5	Joint	45	Narrow (6-20mm)	Surface Staining	High Strength	Rough - Planar
13.6	Joint	10	Very Narrow (2-6mm)	Surface Staining	High Strength	Smooth - Planar
13.65	Joint	30	Extremely Narrow (2mm)	Surface Staining	High Strength	Smooth - Planar
13.75	Joint	30	Very Narrow (2-6mm)	Surface Staining	High Strength	Rough - Planar
13.8	Joint	20	Extremely Narrow (2mm)	Surface Staining	High Strength	Rough - Planar
13.85	Joint	55	Extremely Narrow (2mm)	Surface Staining	High Strength	Smooth - Planar
14.01	Joint	55	Extremely Narrow (2mm)	Surface Staining	High Strength	Smooth - Planar
14.06	Joint	40	Extremely Narrow (2mm)	Surface Staining	High Strength	Smooth - Planar
14.1	Joint	50	Very Narrow (2-6mm)	Surface Staining	High Strength	Smooth - Planar
14.17	Joint	50	Very Narrow (2-6mm)	Surface Staining	High Strength	Rough - Planar
14.2	Joint	70	Very Narrow (2-6mm)	Surface Staining	High Strength	Rough - Undulating
14.20-14.30	Crushed Core					
14.3	Joint	55	Very Narrow (2-6mm)	Surface Staining	Medium Strength	Rough - Planar
14.35	Joint	15	Extremely Narrow (2mm)	Surface Staining	Medium Strength	Rough - Planar
14.44	Joint	70	Tight	Surface Staining	High Strength	Smooth - Planar
14.9	Joint	70	Extremely Narrow (2mm)	Surface Staining	High Strength	Rough - Undulating
15	Joint	60	Extremely Narrow (2mm)	Surface Staining	High Strength	Smooth - Planar
15.10-15.20	Core Loss					
15.44	Joint	70	Extremely Narrow (2mm)	Surface Staining	Medium Strength	Rough - Planar
15.52	Joint	30	Extremely Narrow (2mm)	Surface Staining	High Strength	Rough - Planar
15.56	Joint	30	Extremely Narrow (2mm)	Surface Staining	High Strength	Rough - Planar
15.62	Joint	80	Extremely Narrow (2mm)	Surface Staining	High Strength	Rough - Planar
15.8	Joint	25	Very Narrow (2-6mm)	Surface Staining	High Strength	Rough - Undulating
15.85-15.93	Core Loss					
16.09	Joint	35	Narrow (6-20mm)	Surface Staining	Firm / Med. Dense	Rough - Undulating
16.3	Joint	5	Very Narrow (2-6mm)	Surface Staining	High Strength	Rough - Undulating
16.44	Joint	25	Extremely Narrow (2mm)	Surface Staining	High Strength	Rough - Undulating

Connell Wagner

Grey Scale

Colour Scale

Borehole Number			BH01
Page	1	of	1
Depth	11.35	to	16.53
Project	Maleny to Kenilworth Slope Stability Investigation		
Number	37009-001-01		
Client	Department of Main Roads