

			Open Excavation Log				Test Pit No: TP1		
Connell Wagner Limited 195 Hereford St, PO Box 1061 Christchurch, New Zealand Telephone: +64 3 366 8821 Facsimile: +64 3 319 6555			Client: Maurice Coffey		Location: Prebbleton		Date: 5-Sep-2007		
Project: Cairnbrae Drive, Prebbleton			Logged By: MH		Weather Conditions: rain, cold		Job Number: 29731-003		
Water	Depth (m)	Soil Symbol	FACE 1/2		Water	Depth (m)	Soil Symbol	FACE 2/2	
			SOIL DESCRIPTION: Colour, structure, weathering, subordinate/ main / minor COMPONENTS.					SOIL DESCRIPTION: Colour, structure, weathering, subordinate/ main / minor COMPONENTS.	
			TOPSOIL, dark brown, with roots					Undrained Shear Strength (kPa) • Measured Using a Hand Held Shear Vane ¹ 25 50 75 100 125 150	
	0.5		Sandy SILT, light brown, stiff to firm			3.5			
	1					4		Sandy GRAVEL, coarse, rounded, medium dense to dense, light brown, grey, with minor silt	
	1.5					4.5			
	2					5		End of Test Pit 5.0m	
	2.5		Sandy GRAVEL, rounded, medium dense to dense			5.5			
	3		Sandy SILT with gravel, light brown, firm to stiff						
Test Description 1 - Hand held shear vane test in accordance with BS1377:1990 2 - Scala Penetrometer Test in accordance with NZS4402:1986 for the first three meters									

			Open Excavation Log				Test Pit No. TP2		
Client Maurice Coffey			Location Prebbleton		Date 5-Sep-2007				
Project Permeability tests			Logged By MH	Weather Conditions rain, cold	Job Number 29731-003				
Water	Depth (m)	Soil Symbol	FACE 1/2		Water	Depth (m)	Soil Symbol	FACE 2/2	
			SOIL DESCRIPTION: Colour, structure, weathering, subordinate/ main / minor COMPONENTS.					SOIL DESCRIPTION: Colour, structure, weathering, subordinate/ main / minor COMPONENTS.	
			TOPSOIL, dark brown, with roots					Undrained Shear Strength (kPa) • Measured Using a Hand Held Shear Vane ¹ 25 50 75 100 125 150	
	0.5		Sandy SILT, light brown, stiff to very stiff			3.5		Sca Penetrometer Test ² ✕ (Blows/ 150mm) 2 4 6 8 10 12	
	1					4			
	1.5					4.5			
	2					5			
	2.5		Sandy GRAVEL, with frequent cobbles. Light brown, grey			5.5			
	3								
End of Test Pit 5.0m									

Test Description
 1 - Hand held shear vane test in accordance with BS1377:1990
 2 - Sca Penetrometer Test in accordance with NZS4402:1986 for the first three meters

			Open Excavation Log				Test Pit No. TP3	
Client: Maurice Coffey Project: Permeability tests			Location: Prebbleton Logged By: MH		Date: 5-Sep-2007 Sub Number: 29731-003			
Telephone: +64 3 306 0821 Facsimile: +64 3 379 6955 195 Hereford St, PO Box 1061 Christchurch, New Zealand			Weather Conditions: rain, cold		Undrained Shear Strength (kPa) Measured Using a Hand Held Shear Vane ¹ 25 50 75 100 125 150 Scala Penetrometer Test ² (Blows/ 150mm) 2 4 6 8 10 12			
Water	Depth (m)	Soil Symbol	FACE 1/2	Water	Depth (m)	Soil Symbol	FACE 2/2	
			SOIL DESCRIPTION: Colour, structure, weathering, subordinate/ main / minor COMPONENTS.				SOIL DESCRIPTION: Colour, structure, weathering, subordinate/ main / minor COMPONENTS.	
			TOPSOIL, dark brown, with roots					
	0.5		Sandy SILT, light brown, light grey, with minor clay		3.5			
	1				4			
	1.5				4.5			
	2				5		Soil sample taken at 5.0m	
	2.5		Silty SAND, light brown, interbedded with layers of sandy silt		5.5		End of Test Pit 5.2m	
	3							

Test Description

1 - Hand held shear vane test in accordance with BS1377:1990

2 - Scala Penetrometer Test in accordance with NZS4402:1986 for the first three meters

			Open Excavation Log				Test Pit No: TP4		
Connell Wagner Limited 126 Hereford St, PO Box 1061 Dunedin, New Zealand			Client Maurice Coffey		Location Prebbleton		Date 5-Sep-2007		
Telephone: +64 3 366 0821 Fax: +64 3 319 6355			Project Cairnbrae Drive, Prebbleton		Logged By MH		Weather Conditions rain, cold		
							Alt Number 29731-003		
Water	Depth (m)	Soil Symbol	FACE 1/2		Water	Depth (m)	Soil Symbol	FACE 2/2	
			SOIL DESCRIPTION: Colour, structure, weathering, subordinate/ main / minor COMPONENTS.					SOIL DESCRIPTION: Colour, structure, weathering, subordinate/ main / minor COMPONENTS.	
			TOPSOIL, dark brown, with roots					Undrained Shear Strength (kPa) • Measured Using a Hand Held Shear Vane ¹ 25 50 75 100 125 150	
	0.5		Sandy SILT, light brown, light grey, orange mottling			3.5		Scala Penetrometer Test ² × (Blows/ 150mm) 2 4 6 8 10 12	
	1					4			
	1.5					4.5			
	2					5			
	2.5		Sandy GRAVEL, coarse, rounded, with cobbles, light brown, grey			5.5			
	3								
End of Test Pit 4.9m									

Test Description
 1 - Hand held shear vane test in accordance with BS1377:1990
 2 - Scala Penetrometer Test in accordance with NZS4402:1986 for the first three meters

		Open Excavation Log				TP5	
Connell Wagner Limited 196 Horeford St, PO Box 1061 Christchurch New Zealand		Client: Maurice Coffey Project:		Location: Prebbleton Logged By:		Date: 5-Sep-2007 Test Pit No.:	
		Permeability tests		MH		Weather Conditions: rain, cold Job Number: 29731-003	
Water	Depth (m)	Soil Symbol	FACE 1/2	Water	Depth (m)	Soil Symbol	FACE 2/2
			SOIL DESCRIPTION: Colour, structure, weathering, subordinate/ main / minor COMPONENTS.				SOIL DESCRIPTION: Colour, structure, weathering, subordinate/ main / minor COMPONENTS.
			TOPSOIL, dark brown, with roots				Undrained Shear Strength (kPa) • Measured Using a Hand Held Shear Vane ¹ 25 50 75 100 125 150 Scala Penetrometer Test ² × (Blows/ 150mm) 2 4 6 8 10 12
	0.5		Sandy SILT, light brown, light grey, with orange mottling		3.5		
	1				4		
	1.5				4.5		
	2				5		
	2.5		Sandy GRAVEL, with frequent cobbles, dense		5.5		
	3						End of Test Pit 4.7m
Test Description 1 - Hand held shear vane test in accordance with BS1377:1990 2 - Scala Penetrometer Test in accordance with NZS4402:1986 for the first three meters							

			Open Excavation Log			TP6		
Connell Wagner Limited 196 Hereford St, PO Box 1061 Christchurch, New Zealand			Telephone: +64 3 356 0821 Facsimile: +64 3 379 6955			Test Pit No.:		
Client: Maurice Coffey			Location: Prebbleton			Date: 5-Sep-2007		
Project:			Logged By:			Weather Conditions:		
Permeability tests			MH			rain, cold		
Job Number: 29731-003			Undrained Shear Strength (kPa) (Measured Using a Hand Held Shear Vane)			25 50 75 100 125 150		
Scala Penetrometer Test ¹ (Blows/ 150mm)			2 4 6 8 10 12			×		

FACE 1/2			FACE 2/2		
Water	Depth (m)	Soil Symbol	Water	Depth (m)	Soil Symbol
		SOIL DESCRIPTION: Colour, structure, weathering, subordinate/ main / minor COMPONENTS.			SOIL DESCRIPTION: Colour, structure, weathering, subordinate/ main / minor COMPONENTS.
		TOPSOIL, dark brown, with roots			
	0.5	Sandy SILT, light brown, light grey, with orange mottling		3.5	
	1			4	
	1.5			4.5	
	2			5	
	2.5	GRAVEL with sand and cobbles, medium dense		5.5	
	3				

End of Test Pit 4.5m

Test Description

1 - Hand held shear vane test in accordance with BS1377:1990

2 - Scala Penetrometer Test in accordance with NZS4402:1986 for the first three meters

			Open Excavation Log				Test Pit No. TP7		
Connell Wagner Limited 166 Hereford St. (PO Box 1061) Christchurch, New Zealand Telephone: +64 3 366 0821 Facsimile: +64 3 379 6555			Client Maurice Coffey		Location Prebbleton		Date 5-Sep-2007		
Project Permeability tests			Logged By MH		Weather Conditions rain, cold		Job Number 29731-003		
Water	Depth (m)	Soil Symbol	FACE 1/2		Water	Depth (m)	Soil Symbol	FACE 2/2	
			SOIL DESCRIPTION: Colour, structure, weathering, subordinate/ main / minor COMPONENTS.					SOIL DESCRIPTION: Colour, structure, weathering, subordinate/ main / minor COMPONENTS.	
			TOPSOIL, dark brown, with roots					Undrained Shear Strength (kPa) • Measured Using a Hand Held Shear Vane ¹ 25 50 75 100 125 150	
	0.5	×	Sandy SILT, light brown, light grey, with orange mottling			3.5	○	Scala Penetrometer Test ² × (Blows/ 150mm) 2 4 6 8 10 12	
	1	×				4	○		
	1.5	×				4.5	○		
	2	×	Sandy GRAVEL, with cobbles, high density			5	○		
	2.5	○				5.5	○		
	3	○							
End of Test Pit 4.7m									

Test Description
 1 - Hand held shear vane test in accordance with BS1377:1990
 2 - Scala Penetrometer Test in accordance with NZS4402:1986 for the first three meters



Canterbury Laboratory
Fulton Hogan Ltd
325 Pound Rd, PO Box 16-064
Hornby, Christchurch
Phone (03) 349 9142
Facsimile (03) 349 9143
Toll Free 0800 LABORATORY
Email: martin.clay@fh.co.nz

Material Test Report

Report No: MAT:CAN07S-0737

Issue No: 1

Client: Connell Wagner Y
PO Box 1061
Christchurch 8140
NZ

Project: QA Testing - Aggregates



This Laboratory is accredited by International Accreditation New Zealand. The test (s) reported herein (unless indicated below) have been performed in accordance with the laboratory's scope of accreditation. This report may not be reproduced except in full.

Approved Signatory: Max Burford (Supervisor)

IANZ Accreditation No: 200
Date of Issue: 18/09/2007

Sample Details

Sample ID: CAN07S-0737
Client Sample: Maurice Coffey
Date Sampled: N/A
Source: Test Pit 4
Material: Insitu Gravel
Specification: No Specification
Sampling Method: Not Advised - Not IANZ Accredited

Other Test Results

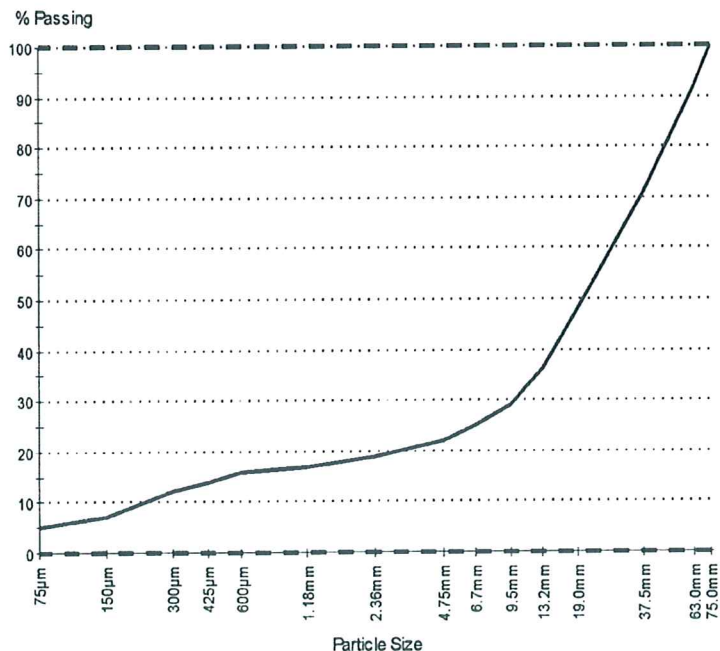
Description	Method	Result	Limits
-------------	--------	--------	--------

Particle Size Distribution

Method: NZS 4407:1991 Test 3.8.2

Drying by: Oven

Date Tested: 17/09/2007



Sieve Size	% Passing	Limits
75.0mm	100	0 - 100
63.0mm	92	0 - 100
37.5mm	71	0 - 100
19.0mm	48	0 - 100
13.2mm	36	0 - 100
9.5mm	29	0 - 100
6.7mm	25	0 - 100
4.75mm	22	0 - 100
2.36mm	19	0 - 100
1.18mm	17	0 - 100
600µm	16	0 - 100
425µm	14	0 - 100
300µm	12	0 - 100
150µm	7	0 - 100
75µm	5	0 - 100

Comments

N/A