

**PINHOLE DISPERSION
TEST REPORT**



Project : **Barrhill Ponds - Phase 2**
Location : **Barrhill Ponds - Phase 2**
Sample ID/TP/Bore No : **TP-S2** Depth : **0.6m**
Client : **Rooney Earthmoving c/o Opus Christchurch**
Sampled by : **Not Advised** Date: **Unknown**
Sample description: **Silt/Top Soil**
Test sample condition : **As Received**

Test Sample Compaction: **Client Spec (Pd=1.66t/m³ at W/C=19%)**
Sample Curing time : **<24 Hrs**
Sample Cured Using: **Distilled Water**

Project No : **6-JROON.16**
Lab Ref No : **16/836/001**
Client Ref : **17506**

Test Results

<u>Test Sample Values</u>		As Rec'd	Target	As Tested	Post Test
Diameter of test specimen (mm) =	33.10	-	1.98	2.05	-
Length of test specimen (mm) =	37.04	12.8	19.0	18.8	30.7
Mass of compacted specimen (g) =	65.51	-	1.66	1.73	-

Pinhole test observations:

Head (mm)	Flow rate (ml/s)	Colour of outflow (Cloudiness)	Falling Particles
50	0.85	Moderately to slightly dark	Few
180	1.20	Moderately to slightly dark	Few
380	1.87	Dark	Few to heavy

Pinhole dimensions

Hole Diameter at start of test = **1.0** mm
Hole Diameter at end of test = **1.3** mm

Note : The pinhole when observed at the end of the test showed CHANGE in diameter of 1.3 mm.

PINHOLE TEST RESULT

Slightly to Moderately Dispersive

ND3

Test Method	Notes
ASTM D4647-93 (Reapproved 2006) Method A	Type of Pinhole Test: Method A. Fluid used in test: Distilled Water Fraction tested: Whole Soil

Date tested: 15/03/2016

Date reported: 22/03/2016

This report may only be reproduced in full

Signatory

Designation : **Senior Civil Engineering Technician**
Date : 22/03/2016

PINHOLE DISPERSION TEST REPORT



Project : **Barrhill Ponds - Phase 2**
 Location : **Barrhill Ponds - Phase 2**
 Sample ID/TP/Bore No : **TP-S4** Depth : **0.3m**
 Client : **Rooney Earthmoving**
 Sampled by : **Not Advised** Date: **Unknown**
 Sample description: **Silt/Top Soil**
 Test sample condition : **As Received**

Project No : **6-JROON.16**
 Lab Ref No : **16/836/001**
 Client Ref : **17509**

Test Sample Compaction: **Client Spec (Pd=1.47t/m³ at W/C=23%)**
 Sample Curing time : **>24 Hrs**
 Sample Cured Using: **Distilled Water**

Test Results

<u>Test Sample Values</u>		As Rec'd	Target	As Tested	Post Test
Diameter of test specimen (mm) =	33.10	-	1.81	1.84	-
Length of test specimen (mm) =	37.73	11.7	23.0	22.2	28.3
Mass of compacted specimen (g) =	59.73	-	1.47	1.51	-

Pinhole test observations:

Head (mm)	Flow rate (ml/s)	Colour of outflow (Cloudiness)	Falling Particles
50	0.45	Clear	Few
180	0.80	Slightly dark	Few
380	1.52	Clear	Few
1020	3.07	Clear	Few

Pinhole dimensions

Hole Diameter at start of test = **1.0** mm
 Hole Diameter at end of test = **1.3** mm

Note : The pinhole when observed at the end of the test showed CHANGE in diameter of 1.29 mm.

PINHOLE TEST RESULT

Non Dispersive

ND2

Test Method	Notes
ASTM D4647-93 (Reapproved 2006) Method A	Type of Pinhole Test: Method A. Fluid used in test: Distilled Water Fraction tested: Whole Soil

Date tested: 16/03/2016

Date reported: 22/03/2016

This report may only be reproduced in full

Signatory

Designation : **Senior Civil Engineering Technician**
 Date : **22/03/2016**

PINHOLE DISPERSION TEST REPORT



Project : **Barrhill Ponds - Phase 2**
 Location : **Barrhill Ponds - Phase 2**
 Sample ID/TP/Bore No : **TP-S4** Depth : **0.6m**
 Client : **Rooney Earthmoving**
 Sampled by : **Not Advised** Date: **Unknown**
 Sample description: **Silt/Top Soil**
 Test sample condition : **As Received**

Test Sample Compaction: **Client Spec (Pd=1.71t/m³ at W/C=18%)**
 Sample Curing time : **>24 Hrs**
 Sample Cured Using: **Distilled Water**

Project No : **6-JROON.16**
 Lab Ref No : **16/836/001**
 Client Ref : **17510**

Test Results

<u>Test Sample Values</u>		As Rec'd	Target	As Tested	Post Test
Diameter of test specimen (mm) =	33.10	-	2.02	2.03	-
Length of test specimen (mm) =	38.03	13.2	18.0	17.8	23.1
Mass of compacted specimen (g) =	66.43	-	1.71	1.72	-

Pinhole test observations:

Head (mm)	Flow rate (ml/s)	Colour of outflow (Cloudiness)	Falling Particles
50	0.54	Clear	None
180	0.65	Clear	None
380	1.20	Clear	None
1020	3.17	Slightly Dark	Very Few

Pinhole dimensions

Hole Diameter at start of test = **1.0** mm
 Hole Diameter at end of test = **1.2** mm

Note : The pinhole when observed at the end of the test showed CHANGE in diameter of 1.2 mm.

PINHOLE TEST RESULT

Non Dispersive

ND2

Test Method	Notes
ASTM D4647-93 (Reapproved 2006) Method A	Type of Pinhole Test: Method A. Fluid used in test: Distilled Water Fraction tested: Whole Soil

Date tested: 16/03/2016

Date reported: 22/03/2016

This report may only be reproduced in full

Signatory

Designation : **Senior Civil Engineering Technician**
 Date : **22/03/2016**

Page 1 of 1

Appendix D

ECan Site Flood Hazard Assessment

15 April 2016

Bill Veale
Damwatch
PO Box 1549
Wellington 6140

75 Church Street
PO Box 550
Timaru 7940
P. 03 687 7800
F. 03 687 7808
E. ecinfo@ecan.govt.nz
Customer Services
P. 0800 324 636
www.ecan.govt.nz

Dear Bill

**Flood Hazard Assessment – Proposed Irrigation Dam
Barkers Road, Methven, Lot 6 DP 1996, Valuation No. 24390 068 00**

This 121ha property is located on the western side of Barkers Road approximately halfway between Methven Township and the Rakaia River. The property is traversed by the Rangitata Diversion Race which is raised above surrounding ground level through this area.

The property is not floodable from the Rakaia River.

General flood hazard mapping carried out by the South Canterbury Catchment Board in 1986 indicates the property is also well clear of expected flooding from any major stream.

Environment Canterbury has no information on any local runoff flooding that may occur following periods of very heavy or prolonged rainfall, although the Rangitata Diversion Race will prevent any upstream overland runoff from affecting the proposed site.

Overall the flood risk to the site is very low.

I hope this information is of assistance. Please do not hesitate to contact me if you require any clarification.

Yours sincerely



Chris Fauth
Hazard Analyst

cc: Chief Building Inspector
Ashburton District Council

Attachments:

- Topographic map showing property location
- Aerial photograph of the property

Key Ref: 16062
Contact: Chris Fauth



