

Five Farms Stage 5

GITA Inspection Verification Report

Prepared For: Frazer Property Group

Report Number P231318A V2

Version Release Date 10 May 2023

Report Released By C Caulfield

Title Project Manager

Signature



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1 Introduction

Terra Firma Laboratories was engaged by Frazer Property Group as the Geotechnical Inspection and Testing Authority (GITA) to provide Level 1 supervision and testing works on the earthworks component for Five Farms Stage 5. This work was conducted over the period of 01/02/2023 to 25/03/2023.

This report presents that the allotment earthworks was carried out in accordance with AS3798-2007 *Guidelines for Earthworks for Commercial and Residential Development* and in compliance with the compaction control specifications established by the contractor.

2 Scope of Work

2.1 Area of Work

The areas of work included lots 501 to 510 and 512 to 527, bounded by streets Thicket Loop, Glebe Approach and Shearjoy Loop. The site will be a Residential development.

The area on which fill was placed is shown on site plan (Appendix 1: *Test Location Plan*) based on drawings prepared by Beveridge Williams (Drawing Reference: 172037 05 010 A) and provided by Frazer Property Group.

The supervision work by the GITA involved both inspection of sub grade preparation work and full time inspection and testing of fill placement.

2.2 Specification

The technical specification (Reference from Drawings) for compaction control requirements was provided by Frazer Property Group and established that:

Test Rolling is required for all layers of structural fill and materials within 150mm of permanent subgrade level so as to withstand test rolling without visible deformation or springing. Corrective action is required where unstable areas exceed 20% of the area being considered by test rolling.

Section 5.2 of AS3798-2007 (Section 5.2) establishes a specification requirement for a minimum density ratio of not less than 95% noting that soils containing more than 20% of particles coarser than 37.5mm cannot be tested for relative compaction using the procedures of AS1289 5.1.1 and AS1289 5.2.1.

In accordance with Table 8.1 (AS3798), for large scale operations, (greater than 1500m²), the minimum testing frequency is 1 test per layer per material type per 2500m² or 1 test per 500m³ distributed reasonable evenly throughout full depth and area or 3 tests per lot. AS3798 defines a lot as “an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work”. All three of these test frequencies must be achieved and this is typically confirmed to have been achieved when 3 tests per visit (day) have been completed.

2.3 Limitations

Terra Firma Laboratories cannot verify any works completed by others outside of the time period specified in the introduction. Uncontrolled works may include, but are not limited to trenching for services, cut and fill works for slab preparation or subsequent removal of vegetation and back fill of holes unless specified in section 2.1 of this report.

Terra Firma Laboratories cannot verify that the material used as a filling medium is free from chemical or other contamination. The scope and the period of Terra Firma Laboratories as described in the introduction are subject to restrictions and limitations. Terra Firma Laboratories did not perform a complete assessment of all possible conditions and circumstances that may exist at the site. If a service is not expressly indicated, do not assume it has been provided. If a matter is not addressed, do not assume that any determination has been made by Terra Firma Laboratories.

Verification of finished surface level to design levels is outside of the scope of the GITA report.

Any drawings or marked locations presented in this report should be considered only as pictorial evidence of our work. Therefore, unless otherwise stated, any dimensions should not be used for accurate calculations or dimensioning.

Where data has been supplied by the client or a third party, it is assumed that the information is correct unless otherwise stated. No responsibility is accepted by Terra Firma Laboratories for incomplete or inaccurate data supplied by others.

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3 Construction Method

3.1 Subgrade Preparation

At the time of subgrade inspection the following was observed:

- Subgrade preparation involved stripping the site of topsoil, vegetation and organic matter to a depth of approximately 200mm below existing levels.
- The site was cleared of all trees and stumps to the extent necessary for the fill placement to proceed
- The roots of all trees and any debris was removed from site prior to any fill placement
- The underlying silt was removed until the clay subgrade was located
- The same depth of clay was then removed to mirror the silt material that was removed

The sub-grade area was then proof-rolled to confirm it was capable of withstanding test rolling without visible deformation or springing and any areas observed to be soft or otherwise unsuitable were rectified. The sub-grade was watered and scarified prior to fill placement to aid layer bonding.

3.2 Fill Placement

The contractor was observed to have suitable construction equipment and plant available on-site during the construction period for use in the fill placement.

After the silt and clay was removed from the fill area, the materials were blended together to create a 50/50 silty clay blend material and used to fill the blocks.

All fill was placed in layers of thicknesses not exceeding 300mm. At the completion of a placed layer, compaction testing was performed to confirm appropriate compaction had been achieved and supported the observations made. It should be noted that the compaction tests are representative samples of the fill placed and support the visual assessment of the works completed. Each house lot does not necessarily require a compaction test to have been conducted within the house allotment but may have been verified by testing conducted within up to a 2500m² area of the house lot.

Final fill placement levels were verified against design level by others. For the purposes of this report, it was observed that finished levels were in accordance with levels marked on site by survey markers.

The final 150mm of material placed across the site was placed as a topsoil layer or growing medium and should be considered as non-structural, as it was placed in an uncontrolled manner, as allowed by specifications and placement of the final 150mm of material was not observed by the GITA.

4 Construction Verification

Compaction Verification testing is summarized in a detailed test register with test certificates attached provided in Appendix 2: *Compaction Test Register and Test Certificates*. A test location plan (P231318D1, Appendix 1) providing a schematic of test locations across the extent of scope of works for every placed layer of fill is also documented.

A total of 49 density tests (Hilf method in accordance with 1289 5.7.1) were undertaken with 8 failed results. The contractor was notified of any failed tests and the failed areas were ripped, watered, compacted and then re-tested to confirm compliance with the specification. The results summarised in the compaction test register (Appendix 2) confirm that for every layer of fill placed in a specific work area, satisfactory testing was completed.

5 Statement of Compliance

The intention of this report is to provide a description of the earthworks construction for Stage 5 at Five Farms. For completed fill areas of greater than 300mm, and for works completed between 01/02/2023 and 25/03/2023, earthworks construction activities were conducted under the full time supervision of the Geotechnical Inspection and Testing Authority. Inspections and testing of the fill areas at this site indicate that both sub grade preparation and fill placement have been conducted in accordance with the specification. The earthworks construction for Stage 5 of Five Farms was observed to be constructed in compliance with the requirements of the Technical Specification.



Your Worksite is Our Laboratory.

Appendix 1: Test Location Plan

Our Head Office
47 National Ave
Pakenham, VIC 3810

Our Laboratories
Pakenham 03 9769 5799
Deer Park 03 8348 5596
Bibra Lake 08 9395 7220

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Your Worksite is Our Laboratory.

Appendix 2: Compaction Test Register and Test Certificates

Our Head Office
47 National Ave
Pakenham, VIC 3810

Our Laboratories
Pakenham 03 9769 5799
Deer Park 03 8348 5596
Bibra Lake 08 9395 7220

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Page 2 of 2



Compaction Test Register

Client: Frazer Property Group
Project: Five Farms Stage 5

Project No: P231318
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
1/02/2023	1	Layer 1		90.0%	Fail	Lot 526	P231318-1
1/02/2023	2	Layer 1		101.5%	Pass	Lot 524	P231318-1
1/02/2023	3	Layer 2		96.0%	Pass	Lot 525	P231318-2
1/02/2023	4	Layer 1		93.0%	Fail	Lot 520	P231318-2
3/02/2023	5	Layer 3		97.5%	Pass	Lot 523	P231318-3
3/02/2023	6	Layer 2		99.0%	Pass	Lot 521	P231318-3
6/02/2023	7	Layer 4		99.0%	Pass	Lot 522	P231318-4
7/02/2023	8	Layer 3		99.5%	Pass	Lot 520	P231318-5
8/02/2023	9	Layer 5		96.0%	Pass	Lot 524	P231318-6
9/02/2023	10	Layer 1	Test #1	96.0%	Pass	Lot 526	P231318-7
10/02/2023	11	Layer 1		95.5%	Pass	Lot 519	P231318-8
10/02/2023	12	Layer 2		100.0%	Pass	Lot 524	P231318-8
10/02/2023	13	Layer 1	Test #4	97.5%	Pass	Lot 520	P231318-8
10/02/2023	14	Layer 3		103.5%	Pass	Lot 523	P231318-8
10/02/2023	15	Layer 1		95.5%	Pass	Lot 516	P231318-8
13/02/2023	16	Layer 3		103.5%	Pass	Lot 521	P231318-9
13/02/2023	17	Layer 4		100.0%	Pass	Lot 523	P231318-9
13/02/2023	18	Layer 4		96.0%	Pass	Lot 520	P231318-10
13/02/2023	19	Layer 4		97.0%	Pass	Lot 523	P231318-10
21/02/2023	20	Layer 2		97.5%	Pass	Lot 513	P231318-11
24/02/2023	21	Layer 1		97.5%	Pass	Lot 507	P231318-12
27/02/2023	22	Layer 5		98.0%	Pass	Lot 525	P231318-13
27/02/2023	23	Layer 5		94.5%	Fail	Lot 526	P231318-13
27/02/2023	24	Layer 1		100.5%	Pass	Lot 510	P231318-13
28/02/2023	25	Layer 2		94.0%	Fail	Lot 507	P231318-14
28/02/2023	26	Layer 2		97.5%	Pass	Lot 510	P231318-14
28/02/2023	27	Layer 3		99.5%	Pass	Lot 527	P231318-14
28/02/2023	28	Layer 6		93.0%	Fail	Lot 523	P231318-14
1/03/2023	29	Layer 4		98.0%	Pass	Lot 507	P231318-15
1/03/2023	30	Layer 4		96.5%	Pass	Lot 505	P231318-15
2/03/2023	31	Layer 1		93.5%	Fail	Lot 502	P231318-16
3/03/2023	32	Layer 2		95.5%	Pass	Lot 503	P231318-17
3/03/2023	33	Layer 3		98.5%	Pass	Lot 501	P231318-17
3/03/2023	34	Layer 1		97.5%	Pass	Lot 509	P231318-17
4/03/2023	35	Layer 1		98.5%	Pass	Lot 507	P231318-18
4/03/2023	36	Layer 1		94.0%	Fail	Lot 504	P231318-18
4/03/2023	37	Layer 3		98.0%	Pass	Lot 509	P231318-18
6/03/2023	38	Layer 2	Test #31	96.0%	Pass	Lot 502	P231318-19
6/03/2023	39	Layer 3		101.5%	Pass	Lot 506	P231318-19
7/03/2023	40	Layer 1		94.5%	Fail	Lot 518	P231318-20
8/03/2023	41	Layer 4		98.0%	Pass	Lot 505	P231318-21



Compaction Test Register

Client: Frazer Property Group
Project: Five Farms Stage 5

Project No: P231318
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
3/8/2023	42	Layer 2		101.5%	Pass	Lot 503	P231318-21
9/03/2023	43	Layer 3		101.5%	Pass	Lot 502	P231318-22
20/03/2023	44	Layer 4		106.5%	Pass	Lot 503	P231318-23
25/03/2023	45	Layer 1	Test #40	98.5%	Pass	Lot 518	P231318-24
25/03/2023	46	Layer 2	Test #25	99.5%	Pass	Lot 507	P231318-24
25/03/2023	47	Layer 1	Test #36	98.0%	Pass	Lot 504	P231318-24
25/03/2023	48	Layer 6	Test #28	98.5%	Pass	Lot 523	P231318-24
25/03/2023	49	Layer 5	Test #23	100.0%	Pass	Lot 526	P231318-24

Material Test Report

Report Number: P231318-1
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 19/02/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Work Request: 11414
Date Sampled: 01/02/2023 9:00
Dates Tested: 02/02/2023 - 03/02/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level 1
Material: SILTY CLAY 50/50 BLEND
Material Source: Onsite

Pakenham Laboratory
 47 National Avenue Pakenham VIC 3810
 Phone: (03) 9769 5799
 Email: ccaulfield@terrafirmalabs.com.au



Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11414A	P23-11414B	
Test Number	1	2	
Date Tested	01/02/2023	01/02/2023	
Time Tested	**	**	
Test Request #/Location	Lot 526	Lot 524	
Layer / Reduced Level	Layer 1	Layer 1	
Thickness of Layer (mm)	300	300	
Soil Description	Silty Clay Blend	Silty Clay Blend	
Test Depth (mm)	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	
Field Wet Density (FWD) t/m ³	1.89	2.05	
Field Moisture Content %	11.6	17.2	
Field Dry Density (FDD) t/m ³	1.69	1.75	
Peak Converted Wet Density t/m ³	2.10	2.02	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	12.6	17.3	
Adj. Field Moisture Content % (AS1289.5.4.1)	11.6	17.2	
Moisture Ratio % (AS1289.5.4.1)	92.0	99.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	1.0	0.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	90.0	101.5	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-2
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 19/02/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Work Request: 11417
Date Sampled: 01/02/2023 16:00
Dates Tested: 02/02/2023 - 02/02/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level 1
Material: SILTY CLAY 50/50 BLEND
Material Source: Onsite

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Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11417A	P23-11417B	
Test Number	3	4	
Date Tested	01/02/2023	01/02/2023	
Time Tested	**	**	
Test Request #/Location	Lot 525	Lot520	
Layer / Reduced Level	2	1	
Thickness of Layer (mm)	300	300	
Soil Description	Silty Clay Blend	Silty Clay Blend	
Test Depth (mm)	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	
Field Wet Density (FWD) t/m ³	1.95	1.90	
Field Moisture Content %	20.4	11.7	
Field Dry Density (FDD) t/m ³	1.62	1.70	
Peak Converted Wet Density t/m ³	2.03	2.05	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	20.1	13.9	
Adj. Field Moisture Content % (AS1289.5.4.1)	20.4	11.7	
Moisture Ratio % (AS1289.5.4.1)	101.5	84.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	-0.5	2.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	96.0	93.0	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-3
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 19/02/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Client Reference: 08803
Work Request: 11425
Date Sampled: 03/02/2023 10:00
Dates Tested: 03/02/2023 - 03/02/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Remarks: 3/2/23 AZ
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level 1
Material: silty clay 50/50 blend
Material Source: Onsite

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Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11425A	P23-11425B	
Test Number	5	6	
Date Tested	03/02/2023	03/02/2023	
Time Tested	**	**	
Test Request #/Location	Lot 523	Lot 521	
Layer / Reduced Level	3	2	
Thickness of Layer (mm)	300	300	
Soil Description	Silty Clay Blend	Silty Clay Blend	
Test Depth (mm)	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	**	**	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	
Field Wet Density (FWD) t/m ³	2.04	2.02	
Field Moisture Content %	16.1	20.7	
Field Dry Density (FDD) t/m ³	1.76	1.67	
Peak Converted Wet Density t/m ³	2.10	2.04	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	
Adj. Field Moisture Content % (AS1289.5.4.1)	**	**	
Moisture Ratio % (AS1289.5.4.1)	104.0	101.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	-0.5	-0.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	97.5	99.0	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

Moisture Variation Note:

Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-4
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 19/02/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Work Request: 11451
Date Sampled: 06/02/2023 14:30
Dates Tested: 06/02/2023 - 07/02/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level 1
Material: Silty Clay 50/50 Blend
Material Source: Onsite

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Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11451A		
Test Number	7		
Date Tested	06/02/2023		
Time Tested	**		
Test Request #/Location	Lot 522		
Layer / Reduced Level	4		
Thickness of Layer (mm)	300		
Soil Description	Silty clay Blend		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0		
Field Wet Density (FWD) t/m ³	2.05		
Field Moisture Content %	19.7		
Field Dry Density (FDD) t/m ³	1.72		
Peak Converted Wet Density t/m ³	2.08		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	18.5		
Adj. Field Moisture Content % (AS1289.5.4.1)	19.7		
Moisture Ratio % (AS1289.5.4.1)	106.5		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	-1.0		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	99.0		
Compaction Method	Standard		
Report Remarks	**		

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-5
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 19/02/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Client Reference: 08851
Work Request: 11465
Date Sampled: 07/02/2023 13:30
Dates Tested: 07/02/2023 - 08/02/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level 1
Material: silty clay 50/50 blend
Material Source: Onsite

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Approved Signatory: Chris Caulfield
 Project Manager
 NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11465A		
Test Number	8		
Date Tested	07/02/2023		
Time Tested	**		
Test Request #/Location	Lot 520		
Layer / Reduced Level	3		
Thickness of Layer (mm)	300		
Soil Description	Silty Clay Blend		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**		
Field Wet Density (FWD) t/m ³	2.08		
Field Moisture Content %	15.1		
Field Dry Density (FDD) t/m ³	1.80		
Peak Converted Wet Density t/m ³	2.09		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	16.0		
Adj. Field Moisture Content % (AS1289.5.4.1)	15.1		
Moisture Ratio % (AS1289.5.4.1)	94.0		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	1.0		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	99.5		
Compaction Method	Standard		
Report Remarks	**		

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-6
Issue Number: 1
Date Issued: 19/02/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Client Reference: 08852
Work Request: 11482
Date Sampled: 08/02/2023 9:30
Dates Tested: 08/02/2023 - 10/02/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level 1
Material: silty clay 50/50 blend
Material Source: Onsite

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Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11482A		
Test Number	9		
Date Tested	08/02/2023		
Time Tested	**		
Test Request #/Location	Lot 524		
Layer / Reduced Level	5		
Thickness of Layer (mm)	300		
Soil Description	Silty Clay Blend		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**		
Field Wet Density (FWD) t/m ³	2.02		
Field Moisture Content %	15.4		
Field Dry Density (FDD) t/m ³	1.75		
Peak Converted Wet Density t/m ³	2.10		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	15.6		
Adj. Field Moisture Content % (AS1289.5.4.1)	15.4		
Moisture Ratio % (AS1289.5.4.1)	99.0		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	0.0		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	96.0		
Compaction Method	Standard		
Report Remarks	**		

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-7
Issue Number: 1
Date Issued: 19/02/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Client Reference: 08854
Work Request: 11493
Date Sampled: 09/02/2023
Dates Tested: 09/02/2023 - 10/02/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level 1
Material: silty clay 50/50 blend
Material Source: Onsite

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11493A		
Test Number	10		
Date Tested	09/02/2023		
Time Tested	**		
Test Request #/Location	Lot 526 Retest #1		
Layer / Reduced Level	Layer 1		
Thickness of Layer (mm)	300		
Soil Description	Silty clay		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**		
Field Wet Density (FWD) t/m ³	1.95		
Field Moisture Content %	21.7		
Field Dry Density (FDD) t/m ³	1.60		
Peak Converted Wet Density t/m ³	2.03		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**		
Adj. Field Moisture Content % (AS1289.5.4.1)	21.7		
Moisture Ratio % (AS1289.5.4.1)	95.5		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	1.0		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	96.0		
Compaction Method	Standard		
Report Remarks	**		

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-8
Issue Number: 1
Date Issued: 19/02/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Client Reference: 08855
Work Request: 11512
Date Sampled: 10/02/2023 9:00
Dates Tested: 10/02/2023 - 14/02/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level 1
Material: Silty clay 50/50 blend
Material Source: Onsite

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	P23-11512A	P23-11512B	P23-11512C	P23-11512D	P23-11512E
Test Number	11	12	13	14	15
Date Tested	10/02/2023	10/02/2023	10/02/2023	10/02/2023	10/02/2023
Time Tested	**	**	**	**	**
Test Request #/Location	Lot 519	Lot 524	Lot 520 Retest #4	Lot 523	Lot 516
Layer / Reduced Level	1	2	1	3	1
Thickness of Layer (mm)	300	300	300	300	300
Soil Description	Silty Clay Blend	Silty Clay Blend	Silty Clay Blend	Silty Clay Blend	Silty Clay Blend
Test Depth (mm)	275	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**	0	0
Field Wet Density (FWD) t/m ³	1.93	2.05	1.96	2.09	1.98
Field Moisture Content %	18.0	18.9	19.0	17.8	11.6
Field Dry Density (FDD) t/m ³	1.63	1.73	1.65	1.77	1.78
Peak Converted Wet Density t/m ³	2.02	2.06	2.02	2.01	2.08
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**	19.0	14.0
Adj. Field Moisture Content % (AS1289.5.4.1)	18.0	18.9	19.0	17.8	11.6
Moisture Ratio % (AS1289.5.4.1)	92.0	98.0	96.0	94.0	83.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**
Moisture Variation (Wv) %	1.5	0.5	1.0	1.0	2.5
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	95.5	100.0	97.5	103.5	95.5
Compaction Method	Standard	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**	**

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-9
Issue Number: 1
Date Issued: 19/02/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Client Reference: 08856
Work Request: 11533
Date Sampled: 13/02/2023
Dates Tested: 13/02/2023 - 14/02/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level 1
Material: Silty clay 50/50 blend
Material Source: Onsite

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 Project Manager

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11533A	P23-11533B	
Test Number	16	17	
Date Tested	13/02/2023	13/02/2023	
Time Tested	**	**	
Test Request #/Location	Lot 521	Lot 523	
Layer / Reduced Level	3	4	
Thickness of Layer (mm)	300	300	
Soil Description	Silty Clay Blend	Silty Clay Blend	
Test Depth (mm)	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	
Field Wet Density (FWD) t/m ³	2.03	1.96	
Field Moisture Content %	16.9	15.0	
Field Dry Density (FDD) t/m ³	1.74	1.70	
Peak Converted Wet Density t/m ³	1.97	1.96	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	
Adj. Field Moisture Content % (AS1289.5.4.1)	16.9	15.0	
Moisture Ratio % (AS1289.5.4.1)	84.5	87.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	3.0	2.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	103.5	100.0	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-10
Issue Number: 1
Date Issued: 19/02/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Work Request: 11547
Date Sampled: 13/02/2023
Dates Tested: 13/02/2023 - 16/02/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level 1
Material: silty clay 50/50 blend
Material Source: Onsite

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Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11547A	P23-11547B	
Test Number	18	19	
Date Tested	13/02/2023	13/02/2023	
Time Tested	**	**	
Test Request #/Location	Lot 520	Lot 523	
Layer / Reduced Level	4	4	
Thickness of Layer (mm)	300	300	
Soil Description	Silty Clay Blend	Silty Clay Blend	
Test Depth (mm)	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	
Field Wet Density (FWD) t/m ³	1.98	1.91	
Field Moisture Content %	11.0	21.7	
Field Dry Density (FDD) t/m ³	1.78	1.57	
Peak Converted Wet Density t/m ³	2.06	1.97	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	13.4	**	
Adj. Field Moisture Content % (AS1289.5.4.1)	11.0	21.7	
Moisture Ratio % (AS1289.5.4.1)	81.5	99.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	2.5	0.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	96.0	97.0	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-11
Issue Number: 1
Date Issued: 21/03/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Client Reference: 08585
Work Request: 11639
Dates Tested: 21/02/2023 - 23/02/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level 1
Material: clay 50%: silty clay 50%

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Approved Signatory: Janaka Somaratne
 Lab Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11639A		
Test Number	20		
Date Tested	21/02/2023		
Time Tested	**		
Test Request #/Location	1 Lot 513		
Layer / Reduced Level	Layer 2		
Thickness of Layer (mm)	200		
Soil Description	Sandy silty CLAY 50% and Clay 50% mix		
Test Depth (mm)	175		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0		
Field Wet Density (FWD) t/m ³	1.89		
Field Moisture Content %	16.2		
Field Dry Density (FDD) t/m ³	1.63		
Peak Converted Wet Density t/m ³	1.94		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	20.8		
Adj. Field Moisture Content % (AS1289.5.4.1)	16.2		
Moisture Ratio % (AS1289.5.4.1)	78.0		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	4.5		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	97.5		
Compaction Method	Standard		
Report Remarks	**		

Moisture Variation Note:

Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-12
Issue Number: 1
Date Issued: 27/03/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Client Reference: 08587
Work Request: 11689
Date Sampled: 24/02/2023
Dates Tested: 24/02/2023 - 15/03/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level 1
Material: Silty Clay 50/50 Blend
Material Source: Onsite

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Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11689A		
Test Number	21		
Date Tested	24/02/2023		
Time Tested	**		
Test Request #/Location	Lot 507		
Layer / Reduced Level	Layer 1		
Thickness of Layer (mm)	200		
Soil Description	Silty Clay 50/50 Blend		
Test Depth (mm)	175		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**		
Field Wet Density (FWD) t/m ³	2.00		
Field Moisture Content %	15.8		
Field Dry Density (FDD) t/m ³	1.73		
Peak Converted Wet Density t/m ³	2.06		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	16.4		
Adj. Field Moisture Content % (AS1289.5.4.1)	15.8		
Moisture Ratio % (AS1289.5.4.1)	96.5		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	0.5		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	97.5		
Compaction Method	Standard		
Report Remarks	**		

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-13
Issue Number: 1
Date Issued: 27/03/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Client Reference: 08910
Work Request: 11713
Date Sampled: 27/02/2023 9:00
Dates Tested: 27/02/2023 - 06/03/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level 1
Material: Silty CLAY
Material Source: Onsite

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11713A	P23-11713B	P23-11713C
Test Number	22	23	24
Date Tested	27/02/2023	27/02/2023	27/02/2023
Time Tested	**	**	**
Test Request #/Location	Lot 525	Lot 526	Lot 510
Layer / Reduced Level	Layer 5	Layer 5	Layer 1
Thickness of Layer (mm)	300	300	300
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	2.08	1.96	1.91
Field Moisture Content %	16.0	13.1	21.3
Field Dry Density (FDD) t/m ³	1.79	1.73	1.58
Peak Converted Wet Density t/m ³	2.13	2.07	1.90
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	16.0	13.1	21.3
Moisture Ratio % (AS1289.5.4.1)	100.0	87.5	90.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.0	2.0	2.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	98.0	94.5	100.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-14
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 01/05/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Client Reference: 08913
Work Request: 11733
Date Sampled: 28/02/2023 9:00
Dates Tested: 28/02/2023 - 02/03/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level One
Material: Silty CLAY
Material Source: Onsite

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	P23-11733A	P23-11733B	P23-11733C	P23-11733D
Test Number	25	26	27	28
Date Tested	28/02/2023	28/02/2023	28/02/2023	28/02/2023
Time Tested	**	**	**	**
Test Request #/Location	Lot 507	Lot 510	Lot 527	Lot 523
Layer / Reduced Level	Layer 2	Layer 2	Layer 3	Layer 6
Thickness of Layer (mm)	300	300	300	300
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0	0
Field Wet Density (FWD) t/m ³	1.90	1.95	1.97	1.91
Field Moisture Content %	18.6	18.6	26.9	15.3
Field Dry Density (FDD) t/m ³	1.60	1.64	1.55	1.66
Peak Converted Wet Density t/m ³	2.02	1.99	1.98	2.05
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	19.3	19.4	28.4	16.2
Adj. Field Moisture Content % (AS1289.5.4.1)	18.6	18.6	26.9	15.3
Moisture Ratio % (AS1289.5.4.1)	96.0	96.0	94.5	95.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**
Moisture Variation (Wv) %	0.5	1.0	1.5	1.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	94.0	97.5	99.5	93.0
Compaction Method	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-15
Issue Number: 1
Date Issued: 27/03/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Client Reference: 08915
Work Request: 11751
Date Sampled: 01/03/2023 8:30
Dates Tested: 01/03/2023 - 03/03/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level One
Material: Silty CLAY
Material Source: Onsite

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 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11751A	P23-11751B	
Test Number	29	30	
Date Tested	01/03/2023	01/03/2023	
Time Tested	**	**	
Test Request #/Location	Lot 507	Lot 505	
Layer / Reduced Level	Layer 4	Layer 4	
Thickness of Layer (mm)	300	300	
Soil Description	Silty CLAY	Silty CLAY	
Test Depth (mm)	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	
Field Wet Density (FWD) t/m ³	2.02	1.98	
Field Moisture Content %	20.2	17.5	
Field Dry Density (FDD) t/m ³	1.68	1.69	
Peak Converted Wet Density t/m ³	2.06	2.05	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	
Adj. Field Moisture Content % (AS1289.5.4.1)	20.2	17.5	
Moisture Ratio % (AS1289.5.4.1)	103.0	96.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	-0.5	0.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	98.0	96.5	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-16
Issue Number: 1
Date Issued: 27/03/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Work Request: 11765
Date Sampled: 02/03/2023 9:00
Dates Tested: 02/03/2023 - 15/03/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level 1
Material: Silty CLAY 50/50 Blend
Material Source: Onsite

Pakenham Laboratory
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Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11765A		
Test Number	31		
Date Tested	02/03/2023		
Time Tested	**		
Test Request #/Location	Lot 502		
Layer / Reduced Level	Layer 1		
Thickness of Layer (mm)	300		
Soil Description	Silty CLAY 50/50 Blend		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**		
Field Wet Density (FWD) t/m ³	1.85		
Field Moisture Content %	14.8		
Field Dry Density (FDD) t/m ³	1.61		
Peak Converted Wet Density t/m ³	1.97		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	17.6		
Adj. Field Moisture Content % (AS1289.5.4.1)	14.8		
Moisture Ratio % (AS1289.5.4.1)	84.0		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	3.0		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	93.5		
Compaction Method	Standard		
Report Remarks	**		

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-17
Issue Number: 1
Date Issued: 27/03/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Work Request: 11776
Date Sampled: 03/03/2023 8:30
Dates Tested: 03/03/2023 - 09/03/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level One
Material: Silty CLAY 50/50 Blend
Material Source: Onsite

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	P23-11776A	P23-11776B	P23-11776C
Sample Number			
Test Number	32	33	34
Date Tested	03/03/2023	03/03/2023	03/03/2023
Time Tested	**	**	**
Test Request #/Location	Lot 503	Lot 501	Lot 509
Layer / Reduced Level	Layer 2	Layer 3	Layer 1
Thickness of Layer (mm)	300	300	300
Soil Description	Silty CLAY 50/50 Blend	Silty CLAY 50/50 Blend	Silty CLAY 50/50 Blend
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0
Field Wet Density (FWD) t/m ³	1.97	2.05	1.94
Field Moisture Content %	14.8	18.0	20.9
Field Dry Density (FDD) t/m ³	1.71	1.73	1.60
Peak Converted Wet Density t/m ³	2.05	2.08	1.99
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	15.8	17.6	21.7
Adj. Field Moisture Content % (AS1289.5.4.1)	14.8	18.0	20.9
Moisture Ratio % (AS1289.5.4.1)	93.5	102.5	96.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	1.0	-0.5	0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	95.5	98.5	97.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-18
 Issue Number: 1
 Date Issued: 27/03/2023
 Client: Fraser Property



Project Number: P231318
 Project Name: Five Farms Stage 5 Level 1
 Project Location: Clyde
 Work Request: 11791
 Date Sampled: 04/03/2023
 Dates Tested: 04/03/2023 - 06/03/2023
 Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
 Specification: 95%
 Site Selection: Selected by Client
 Location: Five Farms Stage 5
 Material: Silty Clay 50/50 Blend
 Material Source: Onsite

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11791A	P23-11791B	P23-11791C
Test Number	35	36	37
Date Tested	04/03/2023	04/03/2023	04/03/2023
Time Tested	**	**	**
Test Request #/Location	Lot 507	Lot 504	Lot 509
Layer / Reduced Level	Layer 1	Layer 1	Layer 3
Thickness of Layer (mm)	300	300	300
Soil Description	Silty Clay 50/50 Blend	Silty Clay 50/50 Blend	Silty Clay 50/50 Blend
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	**
Field Wet Density (FWD) t/m ³	1.95	1.95	1.96
Field Moisture Content %	19.6	14.4	23.8
Field Dry Density (FDD) t/m ³	1.63	1.70	1.58
Peak Converted Wet Density t/m ³	1.97	2.07	2.00
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	20.6	14.3	**
Adj. Field Moisture Content % (AS1289.5.4.1)	19.6	14.4	23.8
Moisture Ratio % (AS1289.5.4.1)	95.5	100.5	102.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	1.0	0.0	-0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	98.5	94.0	98.0
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-19
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 28/04/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Work Request: 11798
Date Sampled: 06/03/2023 8:30
Dates Tested: 06/03/2023 - 10/03/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 - Level One
Material: Silty CLAY
Material Source: Onsite

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11798A	P23-11798B	
Test Number	38	39	
Date Tested	06/03/2023	06/03/2023	
Time Tested	**	**	
Test Request #/Location	Lot 501 Retest #31	Lot 506	
Layer / Reduced Level	Layer 1	Layer 3	
Thickness of Layer (mm)	300	300	
Soil Description	Silty CLAY	Silty CLAY	
Test Depth (mm)	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	
Field Wet Density (FWD) t/m ³	1.98	2.00	
Field Moisture Content %	9.6	24.8	
Field Dry Density (FDD) t/m ³	1.81	1.61	
Peak Converted Wet Density t/m ³	2.06	1.97	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	
Adj. Field Moisture Content % (AS1289.5.4.1)	9.6	24.8	
Moisture Ratio % (AS1289.5.4.1)	87.5	100.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	1.5	0.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	96.0	101.5	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-20
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 01/05/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Work Request: 11820
Date Sampled: 07/03/2023 9:00
Dates Tested: 07/03/2023 - 09/03/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level One
Material: Silty CLAY 50/50 Blend
Material Source: Onsite

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11820A		
Test Number	40		
Date Tested	07/03/2023		
Time Tested	**		
Test Request #/Location	Lot 518		
Layer / Reduced Level	Layer 1		
Thickness of Layer (mm)	300		
Soil Description	Silty CLAY 50/50 Blend		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0		
Field Wet Density (FWD) t/m ³	1.90		
Field Moisture Content %	14.7		
Field Dry Density (FDD) t/m ³	1.66		
Peak Converted Wet Density t/m ³	2.01		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	18.5		
Adj. Field Moisture Content % (AS1289.5.4.1)	14.7		
Moisture Ratio % (AS1289.5.4.1)	79.5		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	3.5		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	94.5		
Compaction Method	Standard		
Report Remarks	**		

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-21
Issue Number: 1
Date Issued: 27/03/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Work Request: 11832
Date Sampled: 08/03/2023 9:00
Dates Tested: 08/03/2023 - 15/03/2023
Sampling Method: AS 1289.1.3.1 3.1.4 (b) - Open-drive samplers - piston samplers - floating type
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level One
Material: Silty CLAY
Material Source: Onsite

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NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11832A	P23-11832B	
Test Number	41	42	
Date Tested	08/03/2023	08/03/2023	
Time Tested	**	**	
Test Request #/Location	Lot 505	Lot 503	
Layer / Reduced Level	Layer 4	Layer 2	
Thickness of Layer (mm)	300	300	
Soil Description	Silty CLAY	Silty CLAY	
Test Depth (mm)	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	
Field Wet Density (FWD) t/m ³	2.02	2.09	
Field Moisture Content %	20.8	9.8	
Field Dry Density (FDD) t/m ³	1.67	1.90	
Peak Converted Wet Density t/m ³	2.05	2.06	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	18.4	12.1	
Adj. Field Moisture Content % (AS1289.5.4.1)	20.8	9.8	
Moisture Ratio % (AS1289.5.4.1)	113.5	81.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	-2.5	2.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	98.0	101.5	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-22
Issue Number: 1
Date Issued: 28/04/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Work Request: 11853
Date Sampled: 09/03/2023 10:00
Dates Tested: 09/03/2023 - 17/03/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level One
Material: Silty CLAY
Material Source: Onsite

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Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11853A		
Test Number	43		
Date Tested	09/03/2023		
Time Tested	**		
Test Request #/Location	1 Lot 502		
Layer / Reduced Level	Layer 3		
Thickness of Layer (mm)	300		
Soil Description	Silty CLAY		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**		
Field Wet Density (FWD) t/m ³	2.04		
Field Moisture Content %	9.8		
Field Dry Density (FDD) t/m ³	1.86		
Peak Converted Wet Density t/m ³	2.02		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**		
Adj. Field Moisture Content % (AS1289.5.4.1)	9.8		
Moisture Ratio % (AS1289.5.4.1)	100.0		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	0.0		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	101.0		
Compaction Method	Standard		
Report Remarks	**		

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-23
Issue Number: 1
Date Issued: 31/03/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Work Request: 11939
Date Sampled: 20/03/2023 8:45
Dates Tested: 20/03/2023 - 23/03/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level One
Material: Silty CLAY
Material Source: Onsite

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 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11939A		
Test Number	44		
Date Tested	20/03/2023		
Time Tested	**		
Test Request #/Location	Lot 503		
Layer / Reduced Level	Layer 4		
Thickness of Layer (mm)	300		
Soil Description	Silty CLAY		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**		
Field Wet Density (FWD) t/m ³	1.99		
Field Moisture Content %	18.2		
Field Dry Density (FDD) t/m ³	1.69		
Peak Converted Wet Density t/m ³	1.87		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**		
Adj. Field Moisture Content % (AS1289.5.4.1)	18.2		
Moisture Ratio % (AS1289.5.4.1)	82.5		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	4.0		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	106.5		
Compaction Method	Standard		
Report Remarks	**		

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P231318-24
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 01/05/2023
Client: Fraser Property



Project Number: P231318
Project Name: Five Farms Stage 5 Level 1
Project Location: Clyde
Work Request: 12028
Date Sampled: 25/03/2023
Dates Tested: 25/03/2023 - 03/04/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 5 Level 1
Material: Silty Clay
Material Source: Onsite

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NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	P23-12028A	P23-12028B	P23-12028C	P23-12028D	P23-12028E
Test Number	45	46	47	48	49
Date Tested	25/03/2023	25/03/2023	25/03/2023	25/03/2023	25/03/2023
Time Tested	**	**	**	**	**
Test Request #/Location	Lot 518 Retest #40	Lot 507 Retest #25	Lot 504 Retest #36	Lot 523 Retest #28	Lot 526 Retest #23
Layer / Reduced Level	Layer 1	Layer 2	Layer 1	Layer 6	Layer 5
Thickness of Layer (mm)	300	300	300	300	300
Soil Description	Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay
Test Depth (mm)	275	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**	**	**
Field Wet Density (FWD) t/m ³	2.02	2.02	1.94	2.10	2.06
Field Moisture Content %	12.8	12.5	11.0	8.4	13.8
Field Dry Density (FDD) t/m ³	1.79	1.80	1.75	1.93	1.81
Peak Converted Wet Density t/m ³	2.05	2.03	1.98	2.13	2.05
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	14.5	15.3	15.6	11.1	**
Adj. Field Moisture Content % (AS1289.5.4.1)	12.8	12.5	11.0	8.4	13.8
Moisture Ratio % (AS1289.5.4.1)	88.5	81.5	70.5	76.0	87.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**
Moisture Variation (Wv) %	1.5	3.0	4.5	2.5	2.0
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	98.5	99.5	98.0	98.5	100.0
Compaction Method	Standard	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**	**

Moisture Variation Note:
 Positive values = test is dry of OMC
 Negative values = test is wet of OMC