

Five Farms Stage 8

GITA Inspection Verification Report

Prepared For: Fraser Property Group

Report Number P231336A V1

Version Release Date 12 May 2023

Report Released By C Caulfield

Title Project Manager

Signature



Table of Contents

1 Introduction 3

2 Scope of Work 3

 2.1 Area of Work 3

 2.2 Specification 3

 2.3 Limitations 4

3 Construction Method 5

 3.1 Subgrade Preparation 5

 3.2 Fill Placement 5

4 Construction Verification 6

5 Statement of Compliance 6

Appendices

- Appendix 1 Test Location Plan
- Appendix 2 Compaction Test Register and Test Certificates

1 Introduction

Terra Firma Laboratories was engaged by Fraser 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 8. This work was conducted over the period of 13/02/2023 to 10/05/2023.

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 801 through to 819, 826 through to 841 and 847 through to 856, bounded by streets Heather Grove, Glebe Approach, Thicket Loop and Shelter Place. 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: 1702027 08 010 C and 011 D) and provided by Fraser 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 Fraser 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 (P231336D1 and D2, 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 55 density tests (Hilf method in accordance with 1289 5.7.1) were undertaken with 7 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 8 at Five Farms. For completed fill areas of greater than 300mm, and for works completed between 13/02/2023 and 10/05/2023, 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 8 of Five Farms was observed to be constructed in compliance with the requirements of the Technical Specification.



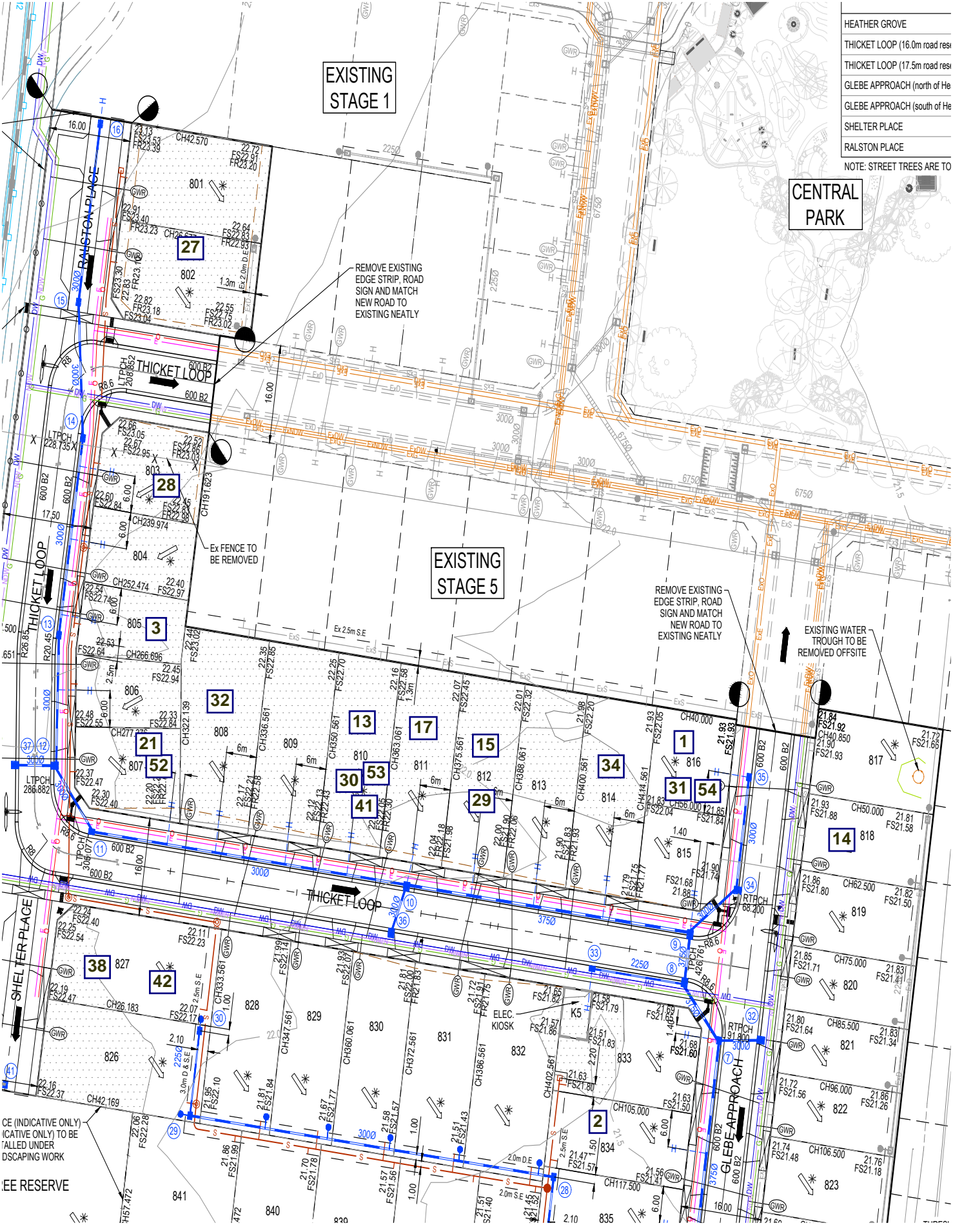
Your Worksite is Our Laboratory.

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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Page 1 of 2



- HEATHER GROVE
- THICKET LOOP (16.0m road rest)
- THICKET LOOP (17.5m road rest)
- GLEBE APPROACH (north of He
- GLEBE APPROACH (south of He
- SHELTER PLACE
- RALSTON PLACE
- NOTE: STREET TREES ARE TO

CENTRAL PARK

EXISTING STAGE 1

EXISTING STAGE 5

CE (INDICATIVE ONLY)
ICATIVE ONLY) TO BE
ALLED UNDER
DSCAPING WORK

EE RESERVE



Our Head Office
47 National Ave
Pakenham, VIC 3860

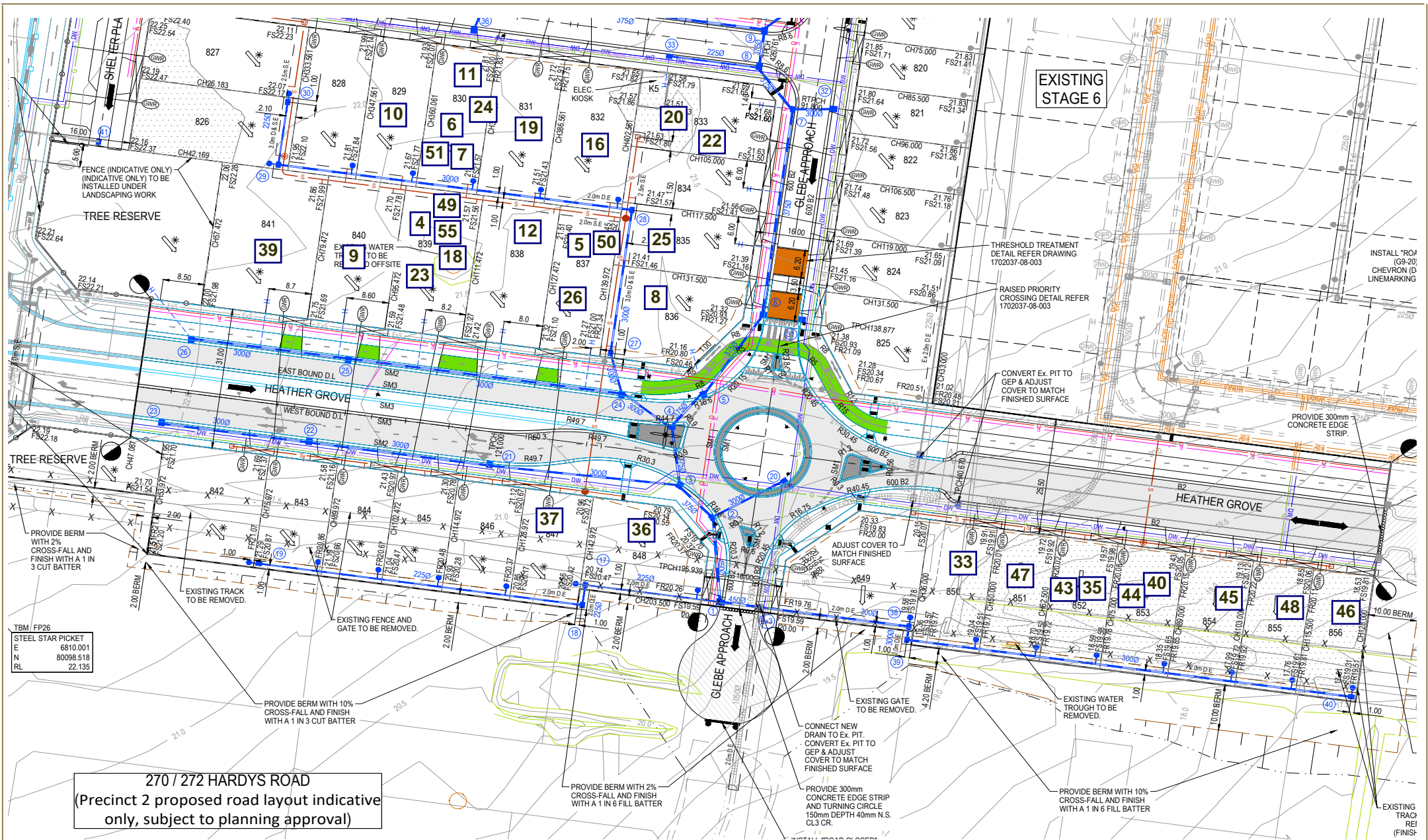
Our Laboratories
Pakenham 03 9769 5799
Deer Park 03 8348 5596
Bibra Lake 08 9395 7220

Test Location Plan
not to scale

Client: Fraser Property Group

Project: Five Farms, Stage 8

Reference: P231336 D1



270 / 272 HARDYS ROAD
(Precinct 2 proposed road layout indicative
only, subject to planning approval)



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

Test Location Plan
not to scale

Client: Fraser Property Group

Project: Five Farms, Stage 8

Reference: P231336 D2



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Appendix 2: Compaction Test Register and Test Certificates



Compaction Test Register

Client: Fraser Property Group
Project: Five Farms Stage 8

Project No: P231336
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
13/02/2023	1	Layer 1		96.5%	Pass	Lot 816	P231336-1
13/02/2023	2	Layer 1		103.5%	Pass	Lot 834	P231336-1
17/02/2023	3	Layer 1		98.0%	Pass	Lot 805	P231336-2
17/02/2023	4	Layer 1		90.5%	Fail	Lot 839	P231336-2
17/02/2023	5	Layer 1		91.0%	Fail	Lot 837	P231336-2
17/02/2023	6	Layer 1		95.0%	Pass	Lot 830	P231336-2
17/02/2023	7	Layer 1		94.5%	Fail	Lot 830	P231336-2
18/02/2023	8	Layer 2		96.0%	Pass	Lot 836	P231336-3
18/02/2023	9	Layer 2		103.5%	Pass	Lot 840	P231336-3
18/02/2023	10	Layer 2		102.5%	Pass	Lot 829	P231336-3
20/02/2023	11	Layer 3		97.0%	Pass	Lot 830	P231336-4
20/02/2023	12	Layer 4		95.0%	Pass	Lot 838	P231336-4
21/02/2023	13	Layer 1		95.5%	Pass	Lot 810	P231336-5
21/02/2023	14	Layer 1		98.0%	Pass	Lot 818	P231336-5
21/02/2023	15	Layer 2		100.0%	Pass	Lot 812	P231336-5
22/02/2023	16	Layer 1		97.0%	Pass	Lot 832	P231336-6
22/02/2023	17	Layer 3		96.5%	Pass	Lot 811	P231336-6
22/02/2023	18	Layer 1		99.0%	Pass	Lot 839	P231336-6
22/02/2023	19	Layer 1		105.5%	Pass	Lot 831	P231336-6
22/02/2023	20	Layer 2		103.0%	Pass	Lot 833	P231336-6
22/02/2023	21	Layer 4		94.5%	Fail	Lot 807	P231336-6
23/02/2023	22	Layer 3		102.0%	Pass	Lot 833	P231336-7
23/02/2023	23	Layer 2		98.0%	Pass	Lot 839	P231336-7
23/02/2023	24	Layer 2		98.0%	Pass	Lot 830	P231336-7
23/02/2023	25	Layer 4		102.5%	Pass	Lot 835	P231336-7
23/02/2023	26	Layer 3		95.0%	Pass	Lot 837	P231336-7
24/02/2023	27	Layer 1		95.0%	Pass	Lot 802	P231336-8
28/02/2023	28	Layer 2		96.5%	Pass	Lot 803	P231336-10
1/03/2023	29	Layer 1		95.0%	Pass	Lot 812	P231336-11
1/03/2023	30	Layer 2		93.0%	Fail	Lot 810	P231336-11
1/03/2023	31	Layer 3		94.0%	Fail	Lot 816	P231336-11
2/03/2023	32	Layer 5		96.0%	Pass	Lot 808	P231336-12
2/03/2023	33	Layer 1		99.0%	Pass	Lot 850	P231336-12
3/03/2023	34	Layer 4		97.5%	Pass	Lot 814	P231336-13
3/03/2023	35	Layer 2		96.5%	Pass	Lot 852	P231336-13
3/03/2023	36	Layer 1		98.0%	Pass	Lot 848	P231336-13
6/03/2023	37	Layer 1		100.5%	Pass	Lot 847	P231336-14
6/03/2023	38	Layer 1		98.0%	Pass	Lot 827	P231336-14
7/03/2023	39	Layer 2		95.0%	Pass	Lot 841	P231336-15
7/03/2023	40	Layer 2		100.5%	Pass	Lot 853	P231336-15
8/03/2023	41	Layer 5		102.0%	Pass	Lot 810	P231336-16



Compaction Test Register

Client: Fraser Property Group
Project: Five Farms Stage 8

Project No: P231336
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
9/03/2023	42	Layer 3		101.0%	Pass	Lot 827	P231336-9
9/03/2023	43	Layer 3		104.0%	Pass	Lot 852	P231336-9
10/03/2023	44	Layer 4		99.0%	Pass	Lot 853	P231336-17
14/03/2023	45	Layer 5		103.5%	Pass	Lot 854	P231336-18
15/03/2023	46	Layer 6		108.0%	Pass	Lot 856	P231336-19
17/03/2023	47	F/L		97.0%	Pass	Lot 851	P231336-20
17/03/2023	48	F/L		96.0%	Pass	Lot 855	P231336-20
5/05/2023	49	Layer 1	Test #4	93.5%	Fail	Lot 839	P231336-21
5/05/2023	50	Layer 1	Test #5	95.0%	Pass	Lot 837	P231336-21
5/05/2023	51	Layer 1	Test #7	100.0%	Pass	Lot 830	P231336-21
5/05/2023	52	Layer 4	Test #21	97.5%	Pass	Lot 807	P231336-21
5/05/2023	53	Layer 2	Test #30	96.5%	Pass	Lot 810	P231336-21
5/05/2023	54	Layer 3	Test #31	98.5%	Pass	Lot 816	P231336-21
10/05/2023	55	Layer 1	Test #49	100.0%	Pass	Lot 839	P231336-22

Material Test Report

Report Number: P231336-1
Issue Number: 1
Date Issued: 19/02/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Client Reference: 08856
Work Request: 11544
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 8 Level One
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	P23-11544A	P23-11544B	
Test Number	1	2	
Date Tested	13/02/2023	13/02/2023	
Time Tested	**	**	
Test Request #/Location	Lot 816	Lot 834	
Layer / Reduced Level	1	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)	**	**	
Field Wet Density (FWD) t/m ³	2.04	1.98	
Field Moisture Content %	12.6	19.6	
Field Dry Density (FDD) t/m ³	1.81	1.66	
Peak Converted Wet Density t/m ³	2.12	1.92	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	
Adj. Field Moisture Content % (AS1289.5.4.1)	12.6	19.6	
Moisture Ratio % (AS1289.5.4.1)	82.0	85.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	2.5	3.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	96.5	103.5	
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: P231336-2
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Lot number Added
Date Issued: 12/05/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Client Reference: 08578
Work Request: 11605
Date Sampled: 17/02/2023
Dates Tested: 17/02/2023 - 22/02/2023
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 8
Material: Silty Clay 50/50 Blend
Material Source: Onsite

Pakenham Laboratory
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 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	P23-11605A	P23-11605B	P23-11605C	P23-11605D	P23-11605E
Test Number	3	4	5	6	7
Date Tested	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Time Tested	**	**	**	**	**
Test Request #/Location	Lot 805	Lot 839	Lot 837	Lot 830	Lot 830
Layer / Reduced Level	Layer 1	Layer 1	Layer 1	Layer 1	Layer 1
Thickness of Layer (mm)	200	200	200	200	200
Soil Description	Silty Clay Blend	Silty Clay Blend	Silty Clay Blend	Silty Clay Blend	Silty Clay Blend
Test Depth (mm)	175	175	175	175	175
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	1.94	2.00	1.99	1.93	2.03
Field Moisture Content %	13.4	11.5	7.5	17.7	8.7
Field Dry Density (FDD) t/m ³	1.71	1.79	1.85	1.64	1.87
Peak Converted Wet Density t/m ³	1.99	2.21	2.19	2.04	2.14
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	13.4	11.5	7.5	17.7	8.7
Moisture Ratio % (AS1289.5.4.1)	80.5	105.5	79.5	90.0	85.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**
Moisture Variation (Wv) %	3.5	-0.5	2.0	2.0	1.5
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	98.0	90.5	91.0	95.0	94.5
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: P231336-3
Issue Number: 1
Date Issued: 27/02/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Client Reference: 08579
Work Request: 11617
Date Sampled: 18/02/2023
Dates Tested: 18/02/2023 - 20/02/2023
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 8 Level One
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	P23-11617A	P23-11617B	P23-11617C
Test Number	8	9	10
Date Tested	18/02/2023	18/02/2023	18/02/2023
Time Tested	**	**	**
Test Request #/Location	Lot 836	Lot 840	Lot 829
Layer / Reduced Level	Layer 2	Layer 2	Layer 2
Thickness of Layer (mm)	200	200	200
Soil Description	Silty Clay Blend	Silty Clay Blend	Silty Clay Blend
Test Depth (mm)	175	175	175
Sieve used to determine oversize (mm)	19.0	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	1.84	2.14	2.07
Field Moisture Content %	21.6	19.3	14.6
Field Dry Density (FDD) t/m ³	1.51	1.80	1.80
Peak Converted Wet Density t/m ³	**	2.07	2.02
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	19.6	16.5
Adj. Field Moisture Content % (AS1289.5.4.1)	21.6	19.3	14.6
Moisture Ratio % (AS1289.5.4.1)	**	98.5	88.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	**	0.0	2.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	96.0	103.5	102.5
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: P231336-4
Issue Number: 1
Date Issued: 27/02/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Client Reference: 08584
Work Request: 11622
Date Sampled: 20/02/2023
Dates Tested: 20/02/2023 - 21/02/2023
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 8 Level One
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	P23-11622A	P23-11622B	
Test Number	11	12	
Date Tested	20/02/2023	20/02/2023	
Time Tested	**	**	
Test Request #/Location	Lot 830	Lot 838	
Layer / Reduced Level	3	4	
Thickness of Layer (mm)	200	200	
Soil Description	Silty Clay Blend	Silty Clay Blend	
Test Depth (mm)	175	175	
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	2.01	2.06	
Field Moisture Content %	11.0	12.0	
Field Dry Density (FDD) t/m ³	1.81	1.84	
Peak Converted Wet Density t/m ³	2.07	2.17	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	
Adj. Field Moisture Content % (AS1289.5.4.1)	11.0	12.0	
Moisture Ratio % (AS1289.5.4.1)	83.0	101.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	2.5	0.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	97.0	95.0	
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: P231336-5
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Lot Number Added
Date Issued: 12/05/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Client Reference: 08585
Work Request: 11634
Date Sampled: 21/02/2023
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 8 Level One
Material: Silty Clay 50/50 Blend
Material Source: Onsite

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 Phone: (03) 9769 5799
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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	P23-11634A	P23-11634B	P23-11634C
Test Number	13	14	15
Date Tested	21/02/2023	21/02/2023	21/02/2023
Time Tested	**	**	**
Test Request #/Location	Lot 810	Lot 818	Lot 812
Layer / Reduced Level	Layer 1	Layer 1	Layer 2
Thickness of Layer (mm)	200	200	200
Soil Description	Silty Clay Blend	Silty Clay Blend	Silty Clay Blend
Test Depth (mm)	175	175	175
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	1.96	2.02	2.02
Field Moisture Content %	9.9	16.5	21.7
Field Dry Density (FDD) t/m ³	1.79	1.73	1.66
Peak Converted Wet Density t/m ³	2.06	2.05	2.01
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	13.2	16.7	20.7
Adj. Field Moisture Content % (AS1289.5.4.1)	9.9	16.5	21.7
Moisture Ratio % (AS1289.5.4.1)	75.0	98.5	104.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	3.5	0.5	-1.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	95.5	98.0	100.0
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: P231336-6
 Issue Number: 1
 Date Issued: 31/03/2023
 Client: Fraser Property



Project Number: P231336
 Project Name: Five Farms Stage 8 Level One
 Project Location: Clyde
 Client Reference: 08586
 Work Request: 11653
 Date Sampled: 22/02/2023
 Dates Tested: 22/02/2023 - 27/02/2023
 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 8 Level One
 Material: Silty Clay 50/50 Blend
 Material Source: Onsite - Existing Subgrade

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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	P23-11653A	P23-11653B	P23-11653C	P23-11653D	P23-11653E	P23-11653F
Test Number	16	17	18	19	20	21
Date Tested	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023	22/02/2023
Time Tested	**	**	**	**	**	**
Test Request #/Location	Lot 832	Lot 811	Lot 839	Lot 831	Lot 833	Lot 807
Layer / Reduced Level	Layer 1	Layer 3	Layer 1	Layer 1	Layer 2	Layer 4
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Clay 50% and Silty Calay 50% mix	Clay 50% and Silty Calay 50% mix	Clay 50% and Silty Calay 50% mix	Clay 50% and Silty Calay 50% mix	Clay 50% and Silty Calay 50% mix	Clay 50% and Silty Calay 50% mix
Test Depth (mm)	175	175	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**	0	0	0
Field Wet Density (FWD) t/m ³	1.92	1.93	2.09	1.96	2.00	1.97
Field Moisture Content %	18.8	18.7	13.7	22.2	217.3	19.8
Field Dry Density (FDD) t/m ³	1.62	1.62	1.84	1.60	0.63	1.64
Peak Converted Wet Density t/m ³	1.98	1.99	2.11	1.86	1.94	2.08
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**	26.4	222.0	19.4
Adj. Field Moisture Content % (AS1289.5.4.1)	18.8	18.7	13.7	22.2	217.3	19.8
Moisture Ratio % (AS1289.5.4.1)	100.0	96.0	99.5	84.0	98.0	102.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**	**
Moisture Variation (Wv) %	0.0	1.0	0.0	4.0	1.5	-0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	97.0	96.5	99.0	105.5	103.0	94.5
Compaction Method	Standard	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: P231336-7
Issue Number: 1
Date Issued: 27/02/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Client Reference: 08907
Work Request: 11671
Date Sampled: 23/02/2023 9:15
Dates Tested: 23/02/2023 - 24/02/2023
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 8 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	P23-11671A	P23-11671B	P23-11671C	P23-11671D	P23-11671E
Test Number	22	23	24	25	26
Date Tested	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023
Time Tested	**	**	**	**	**
Test Request #/Location	Lot 833	Lot 839	Lot 830	Lot 835	Lot 837
Layer / Reduced Level	Layer 3	Layer 2	Layer 2	Layer 4	Layer 3
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)	0	**	0	0	0
Field Wet Density (FWD) t/m ³	1.96	2.00	2.01	2.08	1.90
Field Moisture Content %	19.5	16.4	15.3	13.5	22.0
Field Dry Density (FDD) t/m ³	1.64	1.72	1.74	1.83	1.56
Peak Converted Wet Density t/m ³	1.92	2.03	2.05	2.03	2.00
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	22.4	**	17.4	15.0	21.9
Adj. Field Moisture Content % (AS1289.5.4.1)	19.5	16.4	15.3	13.5	22.0
Moisture Ratio % (AS1289.5.4.1)	87.0	92.0	87.5	90.0	100.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**
Moisture Variation (Wv) %	3.0	1.5	2.0	1.5	0.0
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	102.0	98.0	98.0	102.5	95.0
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

Material Test Report

Report Number: P231336-8
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Lot Number Added
Date Issued: 12/05/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Client Reference: 08587
Work Request: 11694
Date Sampled: 24/02/2023
Dates Tested: 24/02/2023 - 27/02/2023
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 8 Level One
Material: Clay 50% and Silty Caly 50% Mix
Material Source: Onsite - Existing Subgrade

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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	P23-11694A		
Test Number	27		
Date Tested	24/02/2023		
Time Tested	**		
Test Request #/Location	Lot 802		
Layer / Reduced Level	Layer 1		
Thickness of Layer (mm)	200		
Soil Description	Clay 50% and Silty 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	1.95		
Field Moisture Content %	15.6		
Field Dry Density (FDD) t/m ³	1.68		
Peak Converted Wet Density t/m ³	2.05		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	16.3		
Adj. Field Moisture Content % (AS1289.5.4.1)	15.6		
Moisture Ratio % (AS1289.5.4.1)	96.0		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	0.5		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	95.0		
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: P231336-9
Issue Number: 1
Date Issued: 21/03/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Work Request: 11850
Date Sampled: 09/03/2023 9:00
Dates Tested: 09/03/2023 - 10/03/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Location: Five Farms Stage 8 Level One
Material: Silty CLAY
Material Source: Onsite

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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	P23-11850A	P23-11850B	
Test Number	42	43	
Date Tested	09/03/2023	09/03/2023	
Time Tested	**	**	
Test Request #/Location	1 Lot 827	2 Lot 852	
Layer / Reduced Level	Layer 3	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)	0	0	
Field Wet Density (FWD) t/m ³	2.04	2.10	
Field Moisture Content %	20.7	18.7	
Field Dry Density (FDD) t/m ³	1.69	1.77	
Peak Converted Wet Density t/m ³	2.02	2.02	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	20.3	18.6	
Adj. Field Moisture Content % (AS1289.5.4.1)	20.7	18.7	
Moisture Ratio % (AS1289.5.4.1)	101.5	101.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	-0.5	0.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	101.0	104.0	
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: P231336-10
Issue Number: 1
Date Issued: 21/03/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Client Reference: 08913
Work Request: 11736
Date Sampled: 28/02/2023 9:00
Dates Tested: 28/02/2023 - 03/03/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Location: Five Farms Stage 8 Level One
Material: Silty CLAY
Material Source: Onsite

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Accredited for compliance with ISO/IEC 17025 - Testing

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	P23-11736A		
Test Number	28		
Date Tested	28/02/2023		
Time Tested	09:00		
Test Request #/Location	1 Lot 803		
Layer / Reduced Level	Layer 2		
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)	0		
Field Wet Density (FWD) t/m ³	1.93		
Field Moisture Content %	22.8		
Field Dry Density (FDD) t/m ³	1.57		
Peak Converted Wet Density t/m ³	2.00		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	21.8		
Adj. Field Moisture Content % (AS1289.5.4.1)	22.8		
Moisture Ratio % (AS1289.5.4.1)	105.0		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	-1.0		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	96.5		
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: P231336-11
 Issue Number: 1
 Date Issued: 21/03/2023
 Client: Fraser Property



Project Number: P231336
 Project Name: Five Farms Stage 8 Level One
 Project Location: Clyde
 Client Reference: 08915
 Work Request: 11752
 Date Sampled: 01/03/2023 8:30
 Dates Tested: 01/03/2023 - 02/03/2023
 Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
 Specification: 95%
 Location: Five Farms Stage 8 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	P23-11752A	P23-11752B	P23-11752C
Test Number	29	30	31
Date Tested	01/03/2023	01/03/2023	01/03/2023
Time Tested	**	**	**
Test Request #/Location	1 Lot 812	2 Lot 810	3 Lot 816
Layer / Reduced Level	Layer 1	Layer 2	Layer 3
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)	0	0	0
Field Wet Density (FWD) t/m ³	1.81	1.81	1.88
Field Moisture Content %	21.2	14.2	17.9
Field Dry Density (FDD) t/m ³	1.49	1.58	1.60
Peak Converted Wet Density t/m ³	1.90	1.95	2.00
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	24.2	18.1	19.1
Adj. Field Moisture Content % (AS1289.5.4.1)	21.2	14.2	17.9
Moisture Ratio % (AS1289.5.4.1)	87.5	78.5	94.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	3.0	4.0	1.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	95.0	93.0	94.0
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: P231336-12
Issue Number: 1
Date Issued: 21/03/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Work Request: 11764
Date Sampled: 02/03/2023 9:00
Dates Tested: 02/03/2023 - 09/03/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Location: Five Farms Stage 8 Level One
Material: Silty CLAY
Material Source: Onsite

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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	P23-11764A	P23-11764B	
Test Number	32	33	
Date Tested	02/03/2023	02/03/2023	
Time Tested	**	**	
Test Request #/Location	1 Lot 808	2 Lot 850	
Layer / Reduced Level	Layer 5	Layer 1	
Thickness of Layer (mm)	300	300	
Soil Description	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	1.92	2.06	
Field Moisture Content %	14.1	15.7	
Field Dry Density (FDD) t/m ³	1.69	1.78	
Peak Converted Wet Density t/m ³	2.00	2.08	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	14.3	14.2	
Adj. Field Moisture Content % (AS1289.5.4.1)	14.1	15.7	
Moisture Ratio % (AS1289.5.4.1)	98.0	111.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	0.5	-1.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	96.0	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: P231336-13
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Lot Numbers Added
Date Issued: 12/05/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Work Request: 11775
Date Sampled: 03/03/2023 8:30
Dates Tested: 03/03/2023 - 14/03/2023
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 8 Level One
Material: Silty CLAY
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	P23-11775A	P23-11775B	P23-11775C
Test Number	34	35	36
Date Tested	03/03/2023	03/03/2023	03/03/2023
Time Tested	**	**	**
Test Request #/Location	Lot 814	Lot 852	Lot 848
Layer / Reduced Level	Layer 4	Layer 2	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)	0	0	0
Field Wet Density (FWD) t/m ³	2.19	2.10	2.16
Field Moisture Content %	14.5	15.1	15.3
Field Dry Density (FDD) t/m ³	1.91	1.83	1.87
Peak Converted Wet Density t/m ³	2.25	2.18	2.20
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	13.8	13.2	15.1
Adj. Field Moisture Content % (AS1289.5.4.1)	14.5	15.1	15.3
Moisture Ratio % (AS1289.5.4.1)	105.0	114.5	101.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-0.5	-2.0	0.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	97.5	96.5	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: P231336-14
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Lot Numbers Added
Date Issued: 12/05/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Work Request: 11800
Date Sampled: 06/03/2023 8:30
Dates Tested: 06/03/2023 - 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 8 - Level One
Material: Silty CLAY
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	P23-11800A	P23-11800B	
Test Number	37	38	
Date Tested	06/03/2023	06/03/2023	
Time Tested	**	**	
Test Request #/Location	1 Lot 847	2 Lot 827	
Layer / Reduced Level	Layer 1	Layer 1	
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	2.03	1.81	
Field Moisture Content %	17.7	29.9	
Field Dry Density (FDD) t/m ³	1.73	1.39	
Peak Converted Wet Density t/m ³	2.02	1.84	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	15.1	30.1	
Adj. Field Moisture Content % (AS1289.5.4.1)	17.7	29.9	
Moisture Ratio % (AS1289.5.4.1)	117.0	99.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	-2.5	0.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	100.5	98.0	
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: P231336-15
Issue Number: 1
Date Issued: 21/03/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Work Request: 11821
Date Sampled: 07/03/2023 9:00
Dates Tested: 07/03/2023 - 14/03/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Location: Five Farms Stage 8 Level One
Material: Silty CLAY
Material Source: Onsite

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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	P23-11821A	P23-11821B	
Test Number	39	40	
Date Tested	07/03/2023	07/03/2023	
Time Tested	**	**	
Test Request #/Location	1 Lot 841	2 Lot 853	
Layer / Reduced Level	Layer 2	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	1.98	2.16	
Field Moisture Content %	22.3	10.9	
Field Dry Density (FDD) t/m ³	1.62	1.95	
Peak Converted Wet Density t/m ³	2.09	2.15	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	24.0	12.0	
Adj. Field Moisture Content % (AS1289.5.4.1)	22.3	10.9	
Moisture Ratio % (AS1289.5.4.1)	93.0	90.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	1.5	1.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	95.0	100.5	
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: P231336-16
Issue Number: 1
Date Issued: 21/03/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Work Request: 11833
Date Sampled: 08/03/2023 9:00
Dates Tested: 08/03/2023 - 15/03/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Location: Five Farms Stage 8 Level One
Material: Silty CLAY
Material Source: Onsite

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 Lab Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11833A		
Test Number	41		
Date Tested	08/03/2023		
Time Tested	**		
Test Request #/Location	1 Lot 810		
Layer / Reduced Level	Layer 5		
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)	0		
Field Wet Density (FWD) t/m ³	2.08		
Field Moisture Content %	21.4		
Field Dry Density (FDD) t/m ³	1.71		
Peak Converted Wet Density t/m ³	2.04		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	21.4		
Adj. Field Moisture Content % (AS1289.5.4.1)	21.4		
Moisture Ratio % (AS1289.5.4.1)	99.5		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	0.0		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	102.0		
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: P231336-17
Issue Number: 1
Date Issued: 21/03/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Work Request: 11865
Date Sampled: 10/03/2023 9:00
Dates Tested: 10/03/2023 - 15/03/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Location: Five Farms Stage 8 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	P23-11865A		
Test Number	44		
Date Tested	10/03/2023		
Time Tested	**		
Test Request #/Location	1 Lot 853		
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)	0		
Field Wet Density (FWD) t/m ³	2.08		
Field Moisture Content %	20.2		
Field Dry Density (FDD) t/m ³	1.73		
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)	20.9		
Adj. Field Moisture Content % (AS1289.5.4.1)	20.2		
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 (%)	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: P231336-18
Issue Number: 1
Date Issued: 21/03/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Work Request: 11884
Date Sampled: 14/03/2023 9:00
Dates Tested: 14/03/2023 - 15/03/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Location: Five Farms Stage 8 Level One
Material: Silty CLAY
Material Source: Onsite

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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	P23-11884A		
Test Number	45		
Date Tested	14/03/2023		
Time Tested	**		
Test Request #/Location	1 Lot 854		
Layer / Reduced Level	Layer 5		
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)	0		
Field Wet Density (FWD) t/m ³	2.11		
Field Moisture Content %	22.9		
Field Dry Density (FDD) t/m ³	1.72		
Peak Converted Wet Density t/m ³	2.05		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	23.3		
Adj. Field Moisture Content % (AS1289.5.4.1)	22.9		
Moisture Ratio % (AS1289.5.4.1)	98.0		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	0.5		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	103.5		
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: P231336-19
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Lot Number Added
Date Issued: 12/05/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Work Request: 11891
Date Sampled: 15/03/2023 8:45
Dates Tested: 15/03/2023 - 16/03/2023
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 8 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	P23-11891A		
Test Number	46		
Date Tested	15/03/2023		
Time Tested	**		
Test Request #/Location	Lot 856		
Layer / Reduced Level	Layer 6		
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)	0		
Field Wet Density (FWD) t/m ³	2.13		
Field Moisture Content %	25.1		
Field Dry Density (FDD) t/m ³	1.70		
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)	25.1		
Adj. Field Moisture Content % (AS1289.5.4.1)	25.1		
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 (%)	108.0		
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: P231336-20
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Lot Number Added
Date Issued: 12/05/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Client Reference: 08818
Work Request: 11941
Date Sampled: 17/03/2023
Dates Tested: 20/03/2023 - 20/03/2023
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 8, Clyde - Level One
Material: Sandy 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	P23-11941A	P23-11941B	
Test Number	47	48	
Date Tested	17/03/2023	17/03/2023	
Time Tested	**	**	
Test Request #/Location	1 Lot No. 851	2 Lot No. 855	
Layer / Reduced Level	F/L	F/L	
Thickness of Layer (mm)	300	300	
Soil Description	Sandy silty CLAY	Sandy silty CLAY	
Test Depth (mm)	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m ³	1.99	1.93	
Field Moisture Content %	14.7	16.3	
Field Dry Density (FDD) t/m ³	1.74	1.66	
Peak Converted Wet Density t/m ³	2.05	2.02	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Moisture Variation (Wv) %	1.0	1.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	97.0	96.0	
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: P231336-21
Issue Number: 1
Date Issued: 11/05/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Work Request: 12391
Date Sampled: 10/05/2023 13:45
Dates Tested: 10/05/2023 - 11/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Location: Five Farms Stage 8 Level One
Material: Sandy silty CLAY
Material Source: Onsite

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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	P23-12391A		
Test Number	55		
Date Tested	10/05/2023		
Time Tested	**		
Test Request #/Location	Retest of 49		
Layer / Reduced Level	Layer 1		
Thickness of Layer (mm)	300		
Soil Description	Sandy 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)	0		
Field Wet Density (FWD) t/m ³	2.19		
Field Moisture Content %	12.5		
Field Dry Density (FDD) t/m ³	1.95		
Peak Converted Wet Density t/m ³	2.20		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	12.0		
Adj. Field Moisture Content % (AS1289.5.4.1)	12.5		
Moisture Ratio % (AS1289.5.4.1)	103.5		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	-0.5		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	100.0		
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: P231336-22
Issue Number: 1
Date Issued: 12/05/2023
Client: Fraser Property



Project Number: P231336
Project Name: Five Farms Stage 8 Level One
Project Location: Clyde
Work Request: 12365
Date Sampled: 05/05/2023 13:30
Dates Tested: 05/05/2023 - 08/05/2023
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 8 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	P23-12365A	P23-12365B	P23-12365C	P23-12365D	P23-12365E	P23-12365F
Test Number	49	50	51	52	53	54
Date Tested	05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023
Time Tested	**	**	**	**	**	**
Test Request #/Location	Retest of 4	Retest of 5	Retest of 7	Retest of 21	Retest of 30	Retest of 31
Layer / Reduced Level	Layer 1	Layer 1	Layer 1	Layer 4	Layer 2	Layer 3
Thickness of Layer (mm)	300	300	300	300	300	300
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	275	275	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**	**	**	**
Field Wet Density (FWD) t/m ³	1.94	2.05	2.10	2.14	1.99	2.01
Field Moisture Content %	10.2	15.1	15.2	11.1	19.6	20.6
Field Dry Density (FDD) t/m ³	1.76	1.78	1.82	1.93	1.67	1.66
Peak Converted Wet Density t/m ³	2.08	2.15	2.10	2.19	2.07	2.04
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**	11.8	19.5	20.6
Adj. Field Moisture Content % (AS1289.5.4.1)	10.2	15.1	15.2	11.1	19.6	20.6
Moisture Ratio % (AS1289.5.4.1)	84.5	106.5	91.5	94.0	100.5	100.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**	**
Moisture Variation (Wv) %	2.0	-1.0	1.5	0.5	0.0	0.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	93.5	95.0	100.0	97.5	96.5	98.5
Compaction Method	Standard	Standard	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**	**	**

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