

Five Farms Stage 6

GITA Inspection Verification Report

Prepared For: Frazer Property Group

Report Number P231307A V1

Version Release Date 28 Apr 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 6. This work was conducted over the period of 24/01/2023 to 10/03/2023.

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 616 through to 641, bounded by streets Tines Way 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 06 010 and 011 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 (P231307 D1 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 57 density tests (Hilf method in accordance with 1289 5.7.1) were undertaken with 13 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 6 at Five Farms. For completed fill areas of greater than 300mm, and for works completed between 24/01/2023 and 10/03/2023, 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 6 of Five Farms was observed to be constructed in compliance with the requirements of the Technical Specification.



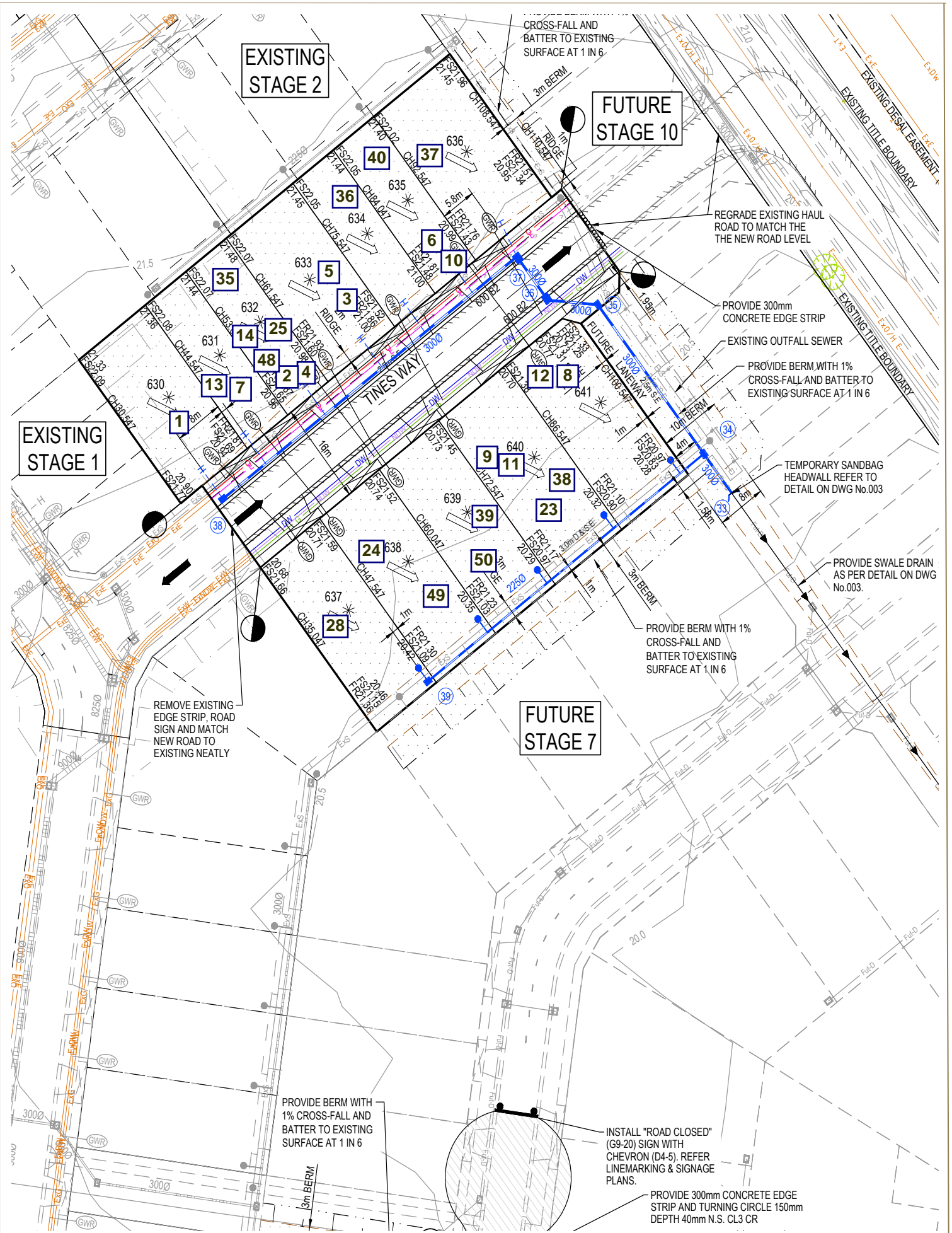
Your Worksite is Our Laboratory.

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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Our Head Office
47 National Ave
Pakenham, VIC 3860

Our Laboratories
Pakenham 03 9769 5799
Deer Park 03 8348 5596
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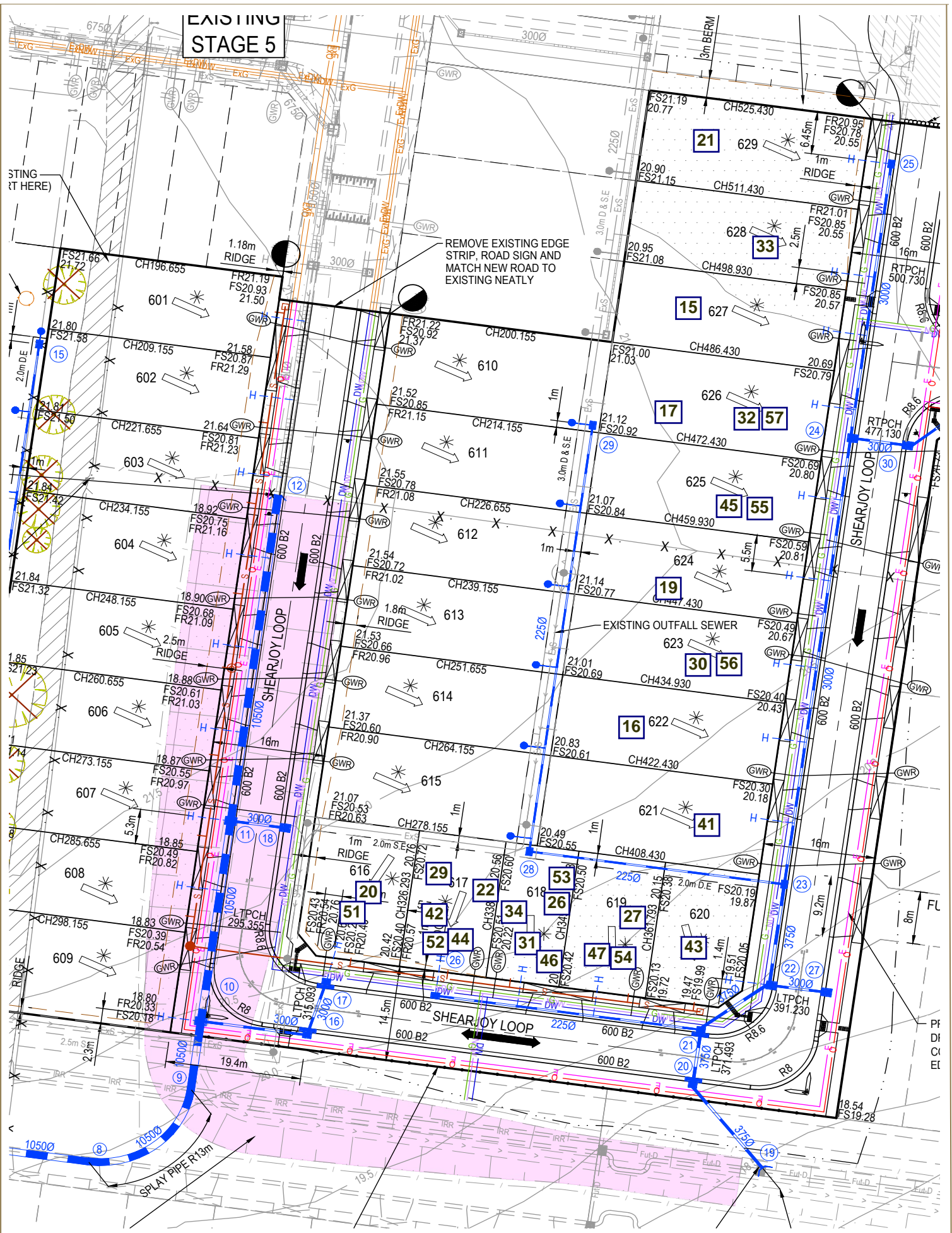
Test Location Plan
not to scale

Client: Fraser Property Group

Project: Five Farms, Stage 6

Reference: P231307 D1

**EXISTING
STAGE 5**



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 6
Reference:	P231307 D2

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TEST LOCATION PLAN D2



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Appendix 2: Compaction Test Register and Test Certificates

Our Head Office
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Our Laboratories
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Deer Park 03 8348 5596
Bibra Lake 08 9395 7220

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Page 2 of 2



Compaction Test Register

Client: Fraser Property Group
Project: Five Farms Stage 6

Project No: P231307
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
24/01/2023	1	Layer 1		97.0%	Pass	Lot 630	P231307-1
24/01/2023	2	Layer 1		94.0%	Fail	Lot 632	P231307-1
24/01/2023	3	Layer 1		98.0%	Pass	Lot 633	P231307-1
25/01/2023	4	Layer 1	Test #2	96.5%	Pass	Lot 632	P231307-2
25/01/2023	5	Layer 3		96.5%	Pass	Lot 633	P231307-2
25/01/2023	6	Layer 3		94.5%	Fail	Lot 635	P231307-2
30/01/2023	7	Layer 4		92.0%	Fail	Lot 631	P231307-3
30/01/2023	8	Layer 1		94.0%	Fail	Lot 641	P231307-3
30/01/2023	9	Layer 1		89.5%	Fail	Lot 640	P231307-3
1/02/2023	10	Layer 1	Test #6	99.0%	Pass	Lot 635	P231307-4
1/02/2023	11	Layer 1	Test #9	98.5%	Pass	Lot 640	P231307-4
1/02/2023	12	Layer 1	Test #8	95.0%	Pass	Lot 641	P231307-4
1/02/2023	13	Layer 4	Test #7	99.0%	Pass	Lot 631	P231307-4
2/02/2023	14	Layer 3		94.5%	Fail	Lot 632	P231307-5
2/02/2023	15	Layer 1		102.5%	Pass	Lot 627	P231307-5
6/02/2023	16	Layer 2		97.0%	Pass	Lot 622	P231307-6
6/02/2023	17	Layer 2		97.0%	Pass	Lot 626	P231307-6
7/02/2023	18	Layer 4		98.5%	Pass	Lot 633	P231307-7
7/02/2023	19	Layer 3		98.5%	Pass	Lot 624	P231307-7
8/02/2023	20	Layer 1		94.5%	Fail	Lot 616	P231307-8
8/02/2023	21	Layer 3		98.5%	Pass	Lot 629	P231307-8
8/02/2023	22	Layer 2		95.5%	Pass	Lot 617	P231307-8
8/02/2023	23	Layer 2		99.0%	Pass	Lot 640	P231307-8
8/02/2023	24	Layer 1		99.0%	Pass	Lot 638	P231307-8
9/02/2023	25	Layer 3	Test #14	100.0%	Pass	Lot 632	P231307-9
9/02/2023	26	Layer 1		93.0%	Fail	Lot 618	P231307-9
10/02/2023	27	Layer 2		101.0%	Pass	Lot 619	P231307-10
10/02/2023	28	Layer 4		98.5%	Pass	Lot 637	P231307-10
10/02/2023	29	Layer 5		98.0%	Pass	Lot 617	P231307-10
10/02/2023	30	Layer 1		93.0%	Fail	Lot 623	P231307-10
13/02/2023	31	Layer 4		101.5%	Pass	Lot 618	P231307-11
13/02/2023	32	Layer 2		93.0%	Fail	Lot 626	P231307-11
13/02/2023	33	Layer 3		98.0%	Pass	Lot 628	P231307-11
13/02/2023	34	Layer 4		103.5%	Pass	Lot 618	P231307-11
14/02/2023	35	Layer 5		98.5%	Pass	Lot 632	P231307-12
14/02/2023	36	Layer 5		99.0%	Pass	Lot 634	P231307-12
14/02/2023	37	Layer 5		95.0%	Pass	Lot 636	P231307-12
15/02/2023	38	Layer 5		101.0%	Pass	Lot 640	P231307-13
15/02/2023	39	Layer 5		99.5%	Pass	Lot 639	P231307-13
16/02/2023	40	Layer 6		96.0%	Pass	Lot 635	P231307-14
16/02/2023	41	Layer 2		97.5%	Pass	Lot 621	P231307-14



Compaction Test Register

Client: Fraser Property Group
Project: Five Farms Stage 6

Project No: P231307
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
16/02/2023	42	Layer 3		99.5%	Pass	Lot 617	P231307-14
16/02/2023	43	Layer 3		99.0%	Pass	Lot 620	P231307-14
18/02/2023	44	Layer 1		91.0%	Fail	Lot 617	P231307-15
18/02/2023	45	Layer 2		91.0%	Fail	Lot 625	P231307-15
18/02/2023	46	Layer 3		97.5%	Pass	Lot 618	P231307-15
18/02/2023	47	Layer 4		93.0%	Fail	Lot 619	P231307-15
24/02/2023	48	Layer 1		97.0%	Pass	Lot 632	P231307-16
24/02/2023	49	Layer 1		95.0%	Pass	Lot 638	P231307-16
25/02/2023	50	Layer 2		98.5%	Pass	Lot 639	P231307-17
10/03/2023	51	Layer 1	Test #20	100.5%	Pass	Lot 616	P231307-18
10/03/2023	52	Layer 1	Test #44	98.5%	Pass	Lot 617	P231307-18
10/03/2023	53	Layer 1	Test #26	99.5%	Pass	Lot 618	P231307-18
10/03/2023	54	Layer 4	Test #47	100.5%	Pass	Lot 619	P231307-18
10/03/2023	55	Layer 2	Test #45	100.0%	Pass	Lot 625	P231307-18
10/03/2023	56	Layer 1	Test #30	104.5%	Pass	Lot 623	P231307-18
10/03/2023	57	Layer 2	Test #32	108.5%	Pass	Lot 626	P231307-18

Material Test Report

Report Number: P231307-1
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 19/02/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Work Request: 11338
Date Sampled: 24/01/2023
Dates Tested: 24/01/2023 - 25/01/2023
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 6 Level One
Material: Silty Clay 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	P23-11338A	P23-11338B	P23-11338C
Test Number	1	2	3
Date Tested	24/01/2023	24/01/2023	24/01/2023
Time Tested	15:13	15:30	15:45
Test Request #/Location	LOT 630	LOT 632	LOT 633
Layer / Reduced Level	1	1	1
Thickness of Layer (mm)	275	275	275
Soil Description	Sandy silty CLAY	Sandy silty CLAY	Sandy silty CLAY
Test Depth (mm)	250	**	**
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	1.90	1.89	1.94
Field Moisture Content %	16.0	18.1	18.3
Field Dry Density (FDD) t/m ³	1.64	1.60	1.64
Peak Converted Wet Density t/m ³	1.95	2.01	1.98
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	15.2	18.9	21.4
Adj. Field Moisture Content % (AS1289.5.4.1)	16.0	18.1	18.3
Moisture Ratio % (AS1289.5.4.1)	105.5	95.5	85.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-1.0	1.0	3.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	97.0	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: P231307-2
Issue Number: 3 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 19/02/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Work Request: 11346
Date Sampled: 25/01/2023 9:30
Dates Tested: 25/01/2023 - 30/01/2023
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 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	P23-11346A	P23-11346B	P23-11346C
Test Number	4	5	6
Date Tested	25/01/2023	25/01/2023	25/01/2023
Time Tested	**	**	**
Test Request #/Location	Lot 632 Retest #2	Lot 633	Lot 635
Layer / Reduced Level	Layer 1	Layer 3	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	2.00	2.01	1.95
Field Moisture Content %	16.9	16.0	20.5
Field Dry Density (FDD) t/m ³	1.71	1.73	1.62
Peak Converted Wet Density t/m ³	2.07	2.08	2.07
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	16.8	15.7	17.7
Adj. Field Moisture Content % (AS1289.5.4.1)	16.9	16.0	20.5
Moisture Ratio % (AS1289.5.4.1)	101.0	102.0	115.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.0	-0.5	-2.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	96.5	96.5	94.5
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: P231307-3
Issue Number: 3 - This version supersedes all previous issues
Reissue Reason: Lot Numbers Added
Date Issued: 02/05/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Work Request: 11412
Date Sampled: 01/02/2023 9:00
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 6 Level One
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	P23-11412A	P23-11412B	P23-11412C
Test Number	10	11	12
Date Tested	01/02/2023	01/02/2023	01/02/2023
Time Tested	**	**	**
Test Request #/Location	LOT 635 Retest #6	Lot 640 Retest #9	Lot 641 Retest #8
Layer / Reduced Level	Layer 1	Layer 1	Layer 1
Thickness of Layer (mm)	300	300	300
Soil Description	Silty Clay Blend	Silty Clay Blend	Silty Clay Blend
Test Depth (mm)	25	25	25
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	2.08	2.02	1.99
Field Moisture Content %	16.6	14.8	15.2
Field Dry Density (FDD) t/m ³	1.78	1.76	1.73
Peak Converted Wet Density t/m ³	2.10	2.06	2.09
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	15.6	14.5	**
Adj. Field Moisture Content % (AS1289.5.4.1)	16.6	14.8	**
Moisture Ratio % (AS1289.5.4.1)	106.5	102.0	87.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-1.0	-0.5	2.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	99.0	98.5	95.0
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: P231307-4
Issue Number: 3 - This version supersedes all previous issues
Reissue Reason: Lot Number Added
Date Issued: 02/05/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Work Request: 11416
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
Remarks: 2/2/23 AZ
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 6 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	P23-11416A		
Test Number	13		
Date Tested	01/02/2023		
Time Tested	**		
Test Request #/Location	Lot 631 Retest #7		
Layer / Reduced Level	Layer 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	2.01		
Field Moisture Content %	14.7		
Field Dry Density (FDD) t/m ³	1.75		
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)	16.8		
Adj. Field Moisture Content % (AS1289.5.4.1)	14.7		
Moisture Ratio % (AS1289.5.4.1)	87.0		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	2.0		
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: P231307-5
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 19/02/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Work Request: 11426
Date Sampled: 02/02/2023 11:00
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
Remarks: 2/2/23
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 6 Level One
Material: Silty Clay 50/50 blend
Material Source: Onsite

Pakenham Laboratory
 47 National Avenue Pakenham VIC 3810
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 Email: ccaulfield@terrafirmalabs.com.au



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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	P23-11426A	P23-11426B	
Test Number	14	15	
Date Tested	02/02/2023	02/02/2023	
Time Tested	**	**	
Test Request #/Location	Lot 632	Lot 627	
Layer / Reduced Level	3	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	1.97	1.94	
Field Moisture Content %	14.0	18.3	
Field Dry Density (FDD) t/m ³	1.73	1.64	
Peak Converted Wet Density t/m ³	2.09	1.89	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	15.4	22.1	
Adj. Field Moisture Content % (AS1289.5.4.1)	14.0	18.3	
Moisture Ratio % (AS1289.5.4.1)	91.0	82.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	1.5	3.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	94.5	102.5	
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: P231307-6
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 02/05/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Client Reference: 06590
Work Request: 11385
Date Sampled: 30/01/2023 9:00
Dates Tested: 31/01/2023 - 31/01/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Location: Five Farms Stage 6 Level One
Material: Silty CLAY 50/50 Blend
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	P23-11385A	P23-11385B	P23-11385C
Test Number	7	8	9
Date Tested	30/01/2023	30/01/2023	30/01/2023
Time Tested	**	**	**
Test Request #/Location	Lot 631	Lot 641	Lot 640
Layer / Reduced Level	Layer 4	Layer 1	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	1.92	2.01	1.86
Field Moisture Content %	13.5	15.7	12.6
Field Dry Density (FDD) t/m ³	1.69	1.74	1.66
Peak Converted Wet Density t/m ³	2.08	2.14	2.08
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	13.7	13.5	13.2
Adj. Field Moisture Content % (AS1289.5.4.1)	13.5	15.7	12.6
Moisture Ratio % (AS1289.5.4.1)	99.0	116.5	95.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.0	-2.5	0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	92.0	94.0	89.5
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: P231307-7
Issue Number: 1
Date Issued: 19/02/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Work Request: 11455
Date Sampled: 06/02/2023 15:00
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 6 Level One
Material: Silty Clay Blend
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	P23-11455A	P23-11455B	
Test Number	16	17	
Date Tested	06/02/2023	06/02/2023	
Time Tested	**	**	
Test Request #/Location	Lot 622	Lot 626	
Layer / Reduced Level	2	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 (%)	0	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	
Field Wet Density (FWD) t/m ³	2.00	1.99	
Field Moisture Content %	20.7	20.0	
Field Dry Density (FDD) t/m ³	1.66	1.66	
Peak Converted Wet Density t/m ³	2.07	2.06	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	19.3	20.4	
Adj. Field Moisture Content % (AS1289.5.4.1)	20.7	20.0	
Moisture Ratio % (AS1289.5.4.1)	107.0	98.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	-1.5	0.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	97.0	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: P231307-8
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Lot Number Added
Date Issued: 02/05/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Client Reference: 08851
Work Request: 11464
Date Sampled: 07/02/2023 13:30
Dates Tested: 07/02/2023 - 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 6 Level One
Material: Silty Clay Blend
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	P23-11464A	P23-11464B	
Test Number	18	19	
Date Tested	07/02/2023	07/02/2023	
Time Tested	**	**	
Test Request #/Location	Lot 633	Lot 624	
Layer / Reduced Level	4	3	
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	2.02	2.02	
Field Moisture Content %	18.8	19.4	
Field Dry Density (FDD) t/m ³	1.70	1.69	
Peak Converted Wet Density t/m ³	2.05	2.05	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	17.6	19.5	
Adj. Field Moisture Content % (AS1289.5.4.1)	18.8	19.4	
Moisture Ratio % (AS1289.5.4.1)	106.5	99.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	-1.0	0.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	98.5	98.5	
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: P231307-9
Issue Number: 1
Date Issued: 19/02/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Client Reference: 08852
Work Request: 11484
Date Sampled: 08/02/2023 9:30
Dates Tested: 08/02/2023 - 09/02/2023
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 6 Level One
Material: silty clay 50/50 blend
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	P23-11484A	P23-11484B	
Test Number	20	21	
Date Tested	08/02/2023	08/02/2023	
Time Tested	**	**	
Test Request #/Location	Lot 616	Lot 629	
Layer / Reduced Level	1	3	
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	**	
Field Wet Density (FWD) t/m ³	1.98	2.06	
Field Moisture Content %	15.8	16.2	
Field Dry Density (FDD) t/m ³	1.71	1.77	
Peak Converted Wet Density t/m ³	2.10	2.09	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	16.5	16.5	
Adj. Field Moisture Content % (AS1289.5.4.1)	15.8	16.2	
Moisture Ratio % (AS1289.5.4.1)	95.5	98.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	0.5	0.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	94.5	98.5	
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: P231307-10
Issue Number: 1
Date Issued: 19/02/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Client Reference: 08853
Work Request: 11487
Date Sampled: 08/02/2023
Dates Tested: 08/02/2023 - 09/02/2023
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 6 Level One
Material: silty clay 50/50 blend
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	P23-11487A	P23-11487B	P23-11487C
Test Number	22	23	24
Date Tested	08/02/2023	08/02/2023	08/02/2023
Time Tested	**	**	**
Test Request #/Location	Lot 617	Lot 640	Lot 638
Layer / Reduced Level	2	2	1
Thickness of Layer (mm)	300	300	300
Soil Description	Silty Clay Blend	Silty Clay Blend	Silty Clay 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)	**	**	**
Field Wet Density (FWD) t/m ³	2.00	2.10	2.07
Field Moisture Content %	16.3	17.0	15.0
Field Dry Density (FDD) t/m ³	1.72	1.80	1.80
Peak Converted Wet Density t/m ³	2.09	2.13	2.09
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	16.3	17.0	15.0
Moisture Ratio % (AS1289.5.4.1)	97.5	111.0	98.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.5	-1.5	0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	95.5	99.0	99.0
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: P231307-11
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 02/05/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Client Reference: 08854
Work Request: 11494
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 6 Level One
Material: silty clay 50/50 blend
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	P23-11494A	P23-11494B	
Test Number	25	26	
Date Tested	09/02/2023	09/02/2023	
Time Tested	**	**	
Test Request #/Location	Lot 632 Retest #14	Lot 618	
Layer / Reduced Level	Layer 3	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)	**	**	
Field Wet Density (FWD) t/m ³	2.05	1.93	
Field Moisture Content %	20.1	14.3	
Field Dry Density (FDD) t/m ³	1.71	1.69	
Peak Converted Wet Density t/m ³	2.05	2.08	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	
Adj. Field Moisture Content % (AS1289.5.4.1)	20.1	14.3	
Moisture Ratio % (AS1289.5.4.1)	109.0	88.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	-1.5	2.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	100.0	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: P231307-12
 Issue Number: 1
 Date Issued: 19/02/2023
 Client: Fraser Property



Project Number: P231307
 Project Name: Five Farms Stage 6 Level One
 Project Location: Clyde
 Client Reference: 08855
 Work Request: 11511
 Date Sampled: 10/02/2023 9:00
 Dates Tested: 10/02/2023 - 13/02/2023
 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 6 Level One
 Material: silty clay 50/50 blend
 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	P23-11511A	P23-11511B	P23-11511C	P23-11511D
Test Number	27	28	29	30
Date Tested	10/02/2023	10/02/2023	10/02/2023	10/02/2023
Time Tested	**	**	**	**
Test Request #/Location	Lot 619	Lot 637	Lot 617	Lot 623
Layer / Reduced Level	Layer 2	Layer 4	Layer 5	Layer 1
Thickness of Layer (mm)	300	300	300	300
Soil Description	Silty Clay Blend	Silty Clay Blend	Silty Clay Blend	Silty Clay Blend
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	2.20	2.10	2.07	1.89
Field Moisture Content %	14.9	13.8	39.3	16.9
Field Dry Density (FDD) t/m ³	1.91	1.84	1.48	1.62
Peak Converted Wet Density t/m ³	2.17	2.13	2.11	2.04
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	14.4	13.5	39.2	18.7
Adj. Field Moisture Content % (AS1289.5.4.1)	14.9	13.8	39.3	16.9
Moisture Ratio % (AS1289.5.4.1)	103.0	102.0	100.5	90.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**
Moisture Variation (Wv) %	-0.5	-0.5	0.0	2.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	101.0	98.5	98.0	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: P231307-13
Issue Number: 1
Date Issued: 19/02/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Client Reference: 08856
Work Request: 11536
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 6 Level One
Material: Silty Clay Blend
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	P23-11536A	P23-11536B	
Test Number	31	32	
Date Tested	13/02/2023	13/02/2023	
Time Tested	**	**	
Test Request #/Location	Lot 618	Lot 626	
Layer / Reduced Level	4	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 (%)	0	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	
Field Wet Density (FWD) t/m ³	2.10	1.81	
Field Moisture Content %	12.2	15.3	
Field Dry Density (FDD) t/m ³	1.87	1.57	
Peak Converted Wet Density t/m ³	2.07	1.95	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	
Adj. Field Moisture Content % (AS1289.5.4.1)	12.2	15.3	
Moisture Ratio % (AS1289.5.4.1)	84.5	81.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	2.0	3.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	101.5	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: P231307-14
Issue Number: 1
Date Issued: 19/02/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Work Request: 11548
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 6 Level One
Material: Silty Clay 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	P23-11548A	P23-11548B	
Test Number	33	34	
Date Tested	13/02/2023	13/02/2023	
Time Tested	**	**	
Test Request #/Location	Lot 628	Lot 618	
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)	0	0	
Field Wet Density (FWD) t/m ³	1.94	2.12	
Field Moisture Content %	19.0	13.6	
Field Dry Density (FDD) t/m ³	1.63	1.87	
Peak Converted Wet Density t/m ³	1.98	2.05	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	20.8	15.9	
Adj. Field Moisture Content % (AS1289.5.4.1)	19.0	13.6	
Moisture Ratio % (AS1289.5.4.1)	91.0	85.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	2.0	2.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	98.0	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: P231307-15
 Issue Number: 1
 Date Issued: 07/03/2023
 Client: Fraser Property



Project Number: P231307
 Project Name: Five Farms Stage 6 Level One
 Project Location: Clyde
 Client Reference: 08809
 Work Request: 11560
 Date Sampled: 14/02/2023
 Dates Tested: 14/02/2023 - 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 6 - 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	P23-11560A	P23-11560B	P23-11560C
Test Number	35	36	37
Date Tested	14/02/2023	14/02/2023	14/02/2023
Time Tested	**	**	**
Test Request #/Location	Lot No. 632	Lot No. 634	Lot No. 636
Layer / Reduced Level	Layer 5	Layer 5	Layer 5
Thickness of Layer (mm)	300	300	300
Soil Description	Silty Clay Blend	Silty Clay Blend	Silty Clay 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)	**	**	**
Field Wet Density (FWD) t/m ³	2.02	2.06	2.02
Field Moisture Content %	10.4	12.2	10.4
Field Dry Density (FDD) t/m ³	1.83	1.84	1.83
Peak Converted Wet Density t/m ³	2.06	2.08	2.13
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	14.1	**
Adj. Field Moisture Content % (AS1289.5.4.1)	10.4	12.2	10.4
Moisture Ratio % (AS1289.5.4.1)	78.5	87.0	85.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	3.0	2.0	2.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	98.5	99.0	95.0
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: P231307-16
Issue Number: 1
Date Issued: 07/03/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Client Reference: 08810
Work Request: 11567
Date Sampled: 15/02/2023
Dates Tested: 15/02/2023 - 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 6 - 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	P23-11567A	P23-11567B	
Test Number	38	39	
Date Tested	15/02/2023	15/02/2023	
Time Tested	**	**	
Test Request #/Location	Lot No. 640	Lot No. 639	
Layer / Reduced Level	Layer 5	Layer 5	
Thickness of Layer (mm)	300	300	
Soil Description	Sandy CLAY	Sandy 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	2.06	2.06	
Field Moisture Content %	20.4	**	
Field Dry Density (FDD) t/m ³	1.71	**	
Peak Converted Wet Density t/m ³	2.04	2.07	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	
Adj. Field Moisture Content % (AS1289.5.4.1)	20.4	**	
Moisture Ratio % (AS1289.5.4.1)	98.0	**	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	0.5	3.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	101.0	99.5	
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: P231307-17
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Lot Number Added
Date Issued: 02/05/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Work Request: 11590
Date Sampled: 16/02/2023
Dates Tested: 16/02/2023 - 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 6 - Level One
Material: Sandy silty CLAY
Material Source: Onsite

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	P23-11590A	P23-11590B	P23-11590C	P23-11590D
Test Number	40	41	42	43
Date Tested	16/02/2023	16/02/2023	16/02/2023	16/02/2023
Time Tested	**	**	**	**
Test Request #/Location	Lot No. 635	Lot No. 621	Lot No. 617	Lot No. 620
Layer / Reduced Level	Layer 6	Layer 2	Layer 3	Layer 3
Thickness of Layer (mm)	300	300	300	300
Soil Description	Sandy silty CLAY	Sandy silty CLAY	Sandy silty CLAY	Sandy 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)	**	**	**	**
Field Wet Density (FWD) t/m ³	2.00	1.95	2.06	2.08
Field Moisture Content %	16.7	22.1	19.0	16.9
Field Dry Density (FDD) t/m ³	1.72	1.60	1.73	1.78
Peak Converted Wet Density t/m ³	2.09	2.01	2.07	2.10
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	16.7	22.1	19.0	16.9
Moisture Ratio % (AS1289.5.4.1)	95.5	98.0	101.5	100.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**
Moisture Variation (Wv) %	1.0	0.5	-0.5	0.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	96.0	97.5	99.5	99.0
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: P231307-18
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Lot Number Added
Date Issued: 02/05/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Client Reference: 08581
Work Request: 11618
Date Sampled: 18/02/2023
Dates Tested: 18/02/2023 - 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 6
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	P23-11618A	P23-11618B	P23-11618C	P23-11618D
Test Number	44	45	46	47
Date Tested	18/02/2023	18/02/2023	18/02/2023	18/02/2023
Time Tested	**	**	**	**
Test Request #/Location	Lot 617	Lot 625	Lot 618	Lot 619
Layer / Reduced Level	Layer 1	Layer 2	Layer 3	Layer 4
Thickness of Layer (mm)	200	200	200	200
Soil Description	clay	clay	clay	clay
Test Depth (mm)	175	175	175	175
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)	**	**	**	**
Field Wet Density (FWD) t/m ³	1.91	2.00	2.00	2.01
Field Moisture Content %	13.5	10.9	16.8	16.2
Field Dry Density (FDD) t/m ³	1.68	1.81	1.71	1.73
Peak Converted Wet Density t/m ³	2.09	2.20	2.05	2.16
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	13.5	10.9	16.8	16.2
Moisture Ratio % (AS1289.5.4.1)	100.0	102.0	91.5	111.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**
Moisture Variation (Wv) %	0.0	0.0	1.5	-1.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	91.0	91.0	97.5	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: P231307-19
Issue Number: 1
Date Issued: 07/03/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Client Reference: 08587
Work Request: 11693
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 6 Level One
Material: Clay 50% and Silty Clay 50. Mix
Material Source: Onsite - Existing Subgrade

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11693A	P23-11693B	
Test Number	48	49	
Date Tested	24/02/2023	24/02/2023	
Time Tested	**	**	
Test Request #/Location	Lot 632	Lot 638	
Layer / Reduced Level	Layer 1	Layer 1	
Thickness of Layer (mm)	200	200	
Soil Description	Clay 50% and Silty Clay 50% Mix	Clay 50% and Silty Clay 50% Mix	
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	1.96	
Field Moisture Content %	15.8	18.6	
Field Dry Density (FDD) t/m ³	1.73	1.65	
Peak Converted Wet Density t/m ³	2.07	2.06	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	
Adj. Field Moisture Content % (AS1289.5.4.1)	15.8	18.6	
Moisture Ratio % (AS1289.5.4.1)	97.5	103.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	0.5	-0.5	
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: P231307-20
Issue Number: 1
Date Issued: 07/03/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Work Request: 11702
Date Sampled: 25/02/2023
Dates Tested: 25/02/2023 - 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 6 Level One
Material: Clay 50% and Silty Clay 50% Mix
Material Source: Onsite - Existing Roadbase

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11702A		
Test Number	50		
Date Tested	25/02/2023		
Time Tested	**		
Test Request #/Location	Lot 639		
Layer / Reduced Level	Layer 2		
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)	**		
Field Wet Density (FWD) t/m ³	2.11		
Field Moisture Content %	15.8		
Field Dry Density (FDD) t/m ³	1.82		
Peak Converted Wet Density t/m ³	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)	15.8		
Moisture Ratio % (AS1289.5.4.1)	108.5		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	-1.0		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	98.5		
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: P231307-21
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Lot Number Added
Date Issued: 02/05/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Work Request: 11867
Date Sampled: 10/03/2023 10:45
Dates Tested: 10/03/2023 - 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 6 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	P23-11867A	P23-11867B	P23-11867C	P23-11867D
Test Number	51	52	53	54
Date Tested	10/03/2023	10/03/2023	10/03/2023	10/03/2023
Time Tested	**	**	**	**
Test Request #/Location	Retest of 20 Lot 616 Retest #20	Retest of 44 Lot 617 Retest #44	Retest of 26 Lot 618 Retest #26	Retest of 47 Lot 619 Retest #47
Layer / Reduced Level	Layer 1	Layer 1	Layer 1	Layer 4
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)	**	**	**	**
Field Wet Density (FWD) t/m ³	2.09	2.02	2.01	2.10
Field Moisture Content %	18.6	14.8	8.8	13.2
Field Dry Density (FDD) t/m ³	1.76	1.75	1.84	1.86
Peak Converted Wet Density t/m ³	2.08	2.05	2.01	2.10
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	18.6	14.8	8.8	13.2
Moisture Ratio % (AS1289.5.4.1)	105.5	88.5	66.0	91.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**
Moisture Variation (Wv) %	-1.0	2.0	4.5	1.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	100.5	98.5	99.5	100.5
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: P231307-21
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Lot Number Added
Date Issued: 02/05/2023
Client: Fraser Property



Project Number: P231307
Project Name: Five Farms Stage 6 Level One
Project Location: Clyde
Work Request: 11867
Date Sampled: 10/03/2023 10:45
Dates Tested: 10/03/2023 - 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 6 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	P23-11867E	P23-11867F	P23-11867G
Test Number	55	56	57
Date Tested	10/03/2023	10/03/2023	10/03/2023
Time Tested	**	**	**
Test Request #/Location	Retest of 45 Lot 625 Retest #45	Retest of 30 Lot 623 Retest #30	Retest of 32 Lot 626 Retest #32
Layer / Reduced Level	Layer 2	Layer 1	Layer 2
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	2.06	2.10	2.18
Field Moisture Content %	10.9	14.8	13.2
Field Dry Density (FDD) t/m ³	1.86	1.83	1.92
Peak Converted Wet Density t/m ³	2.06	2.02	2.00
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	10.9	14.8	13.2
Moisture Ratio % (AS1289.5.4.1)	79.5	85.5	77.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	3.0	2.5	4.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	100.0	104.5	108.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

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