

Five Farms Stage 21

GITA Inspection Verification Report

Prepared For: Frasers Property

Report Number P231368A V1

Version Release Date 14 Jul 2023

Report Released By C Caulfield

Title Project Manager

Signature



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1 Introduction

Terra Firma Laboratories was engaged by Fraser Property as the Geotechnical Inspection and Testing Authority (GITA) to provide Level 1 supervision and testing works on the earthworks component for Five Farms Stage 21. This work was conducted over the period of 10/03/2023 to 14/07/2023.

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 2105 to 2146 and the Superlot, bounded by streets Comraeship Court, Duetz Lane Heart Loop and Wild Goose Way. 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: 1702037 21 010 and 011) and provided by Fraser Property .

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 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 (P231368D1, 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 11 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 21 at Five Farms. For completed fill areas of greater than 300mm, and for works completed between 10/03/2023 and 14/07/2023, 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 21 of Five Farms was observed to be constructed in compliance with the requirements of the Technical Specification.



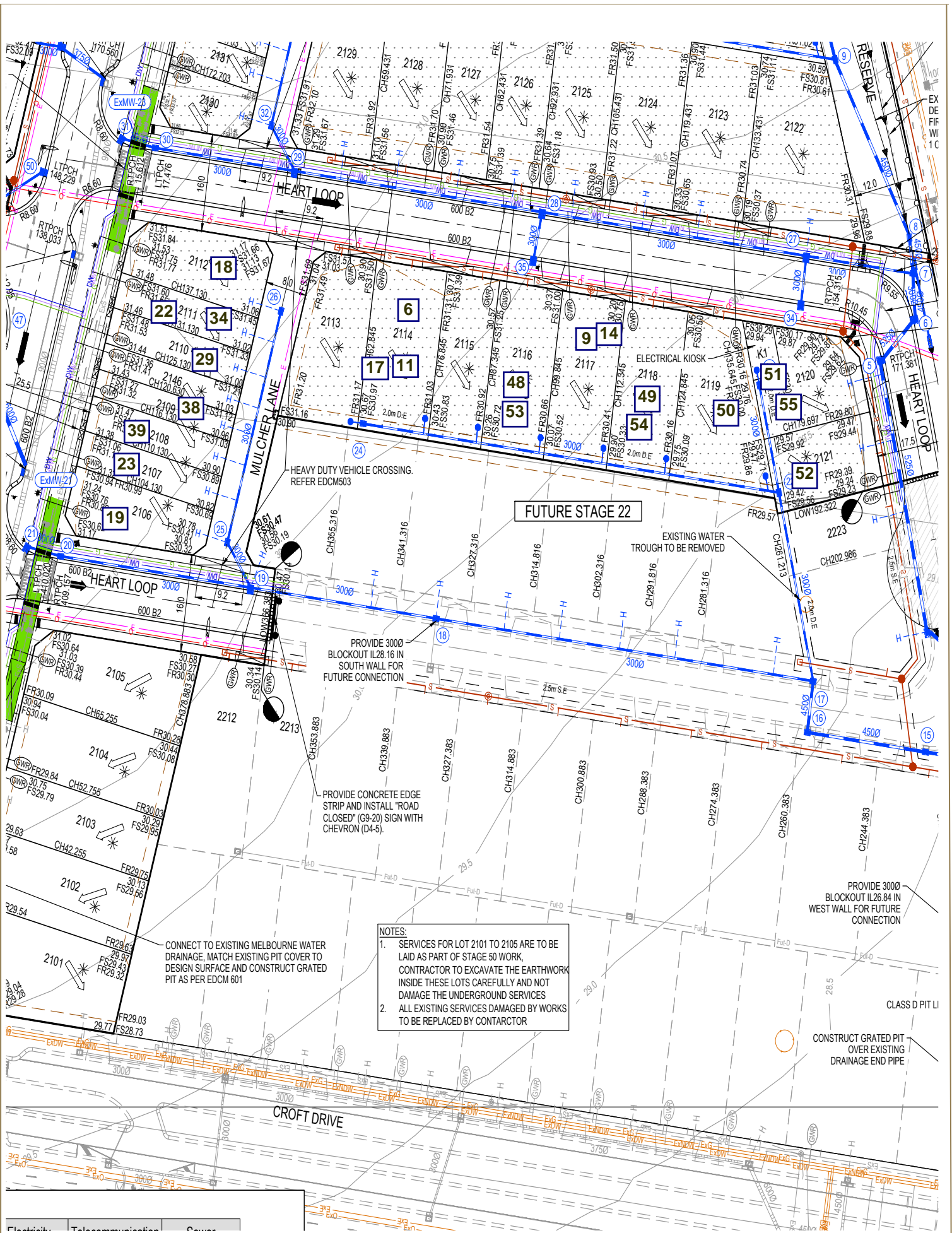
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Appendix 1: Test Location Plan

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



NOTES:

- SERVICES FOR LOT 2101 TO 2105 ARE TO BE LAID AS PART OF STAGE 50 WORK. CONTRACTOR TO EXCAVATE THE EARTHWORK INSIDE THESE LOTS CAREFULLY AND NOT DAMAGE THE UNDERGROUND SERVICES
- ALL EXISTING SERVICES DAMAGED BY WORKS TO BE REPLACED BY CONTRACTOR

CONNECT TO EXISTING MELBOURNE WATER DRAINAGE. MATCH EXISTING PIT COVER TO DESIGN SURFACE AND CONSTRUCT GRATED PIT AS PER EDMC 601

PROVIDE 3000 BLOCKOUT IL28.16 IN SOUTH WALL FOR FUTURE CONNECTION

PROVIDE CONCRETE EDGE STRIP AND INSTALL "ROAD CLOSED" (G9-20) SIGN WITH CHEVRON (D4-5).

PROVIDE 3000 BLOCKOUT IL26.84 IN WEST WALL FOR FUTURE CONNECTION

CONSTRUCT GRATED PIT OVER EXISTING DRAINAGE END PIPE

Electricity Telecommunications Sewer



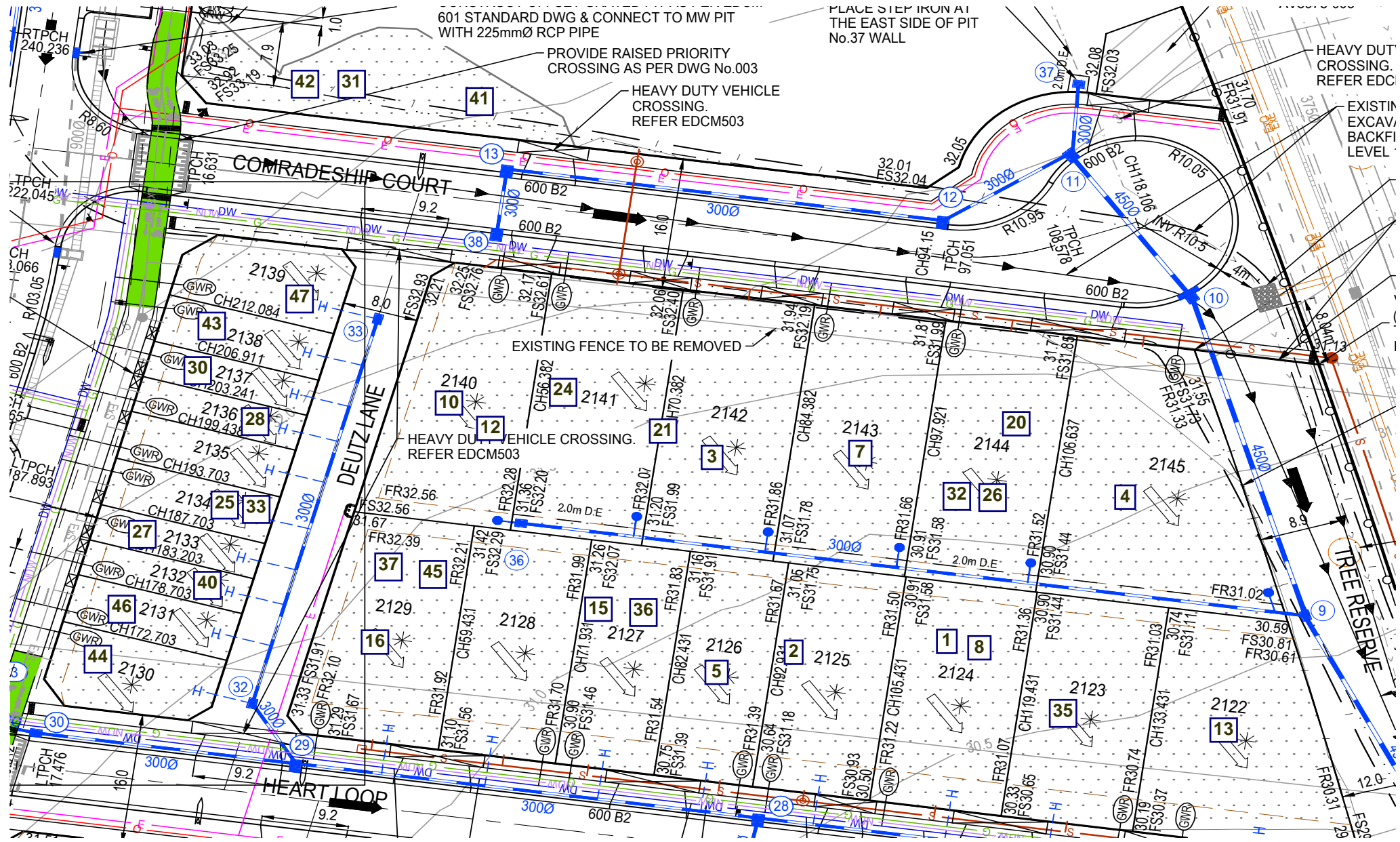
Our Head Office
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Pakenham, VIC 3860

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Deer Park 03 8348 5596
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Test Location Plan
not to scale

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7632 00000 PAK0224

Client:	Fraser Property
Project:	Five Farms Stage 21
Reference:	P231368 D1



601 STANDARD DWG & CONNECT TO MW PIT WITH 225mmØ RCP PIPE

PROVIDE RAISED PRIORITY CROSSING AS PER DWG No.003

HEAVY DUTY VEHICLE CROSSING. REFER EDCM503

PLACE STEP IRON AT THE EAST SIDE OF PIT No.37 WALL

HEAVY DUTY CROSSING. REFER EDCM503

EXISTING EXCAV/BACKFILL LEVEL

EXISTING FENCE TO BE REMOVED

HEAVY DUTY VEHICLE CROSSING. REFER EDCM503



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Test Location Plan
not to scale

Client: Fraser Property

Project: Five Farms Stage 21

Reference: P231368 D2



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Appendix 2: Compaction Test Register and Test Certificates



Compaction Test Register

Client: Fraser Property Group
Project: Five Farms Stage 21

Project No: P231368
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
10/03/2023	1	Layer 1		94.5%	Fail	Lot 2124	P231368-1
14/03/2023	2	Layer 2		95.5%	Pass	Lot 2125	P231368-2
14/03/2023	3	Layer 1		98.0%	Pass	Lot 2142	P231368-2
14/03/2023	4	Layer 2		101.0%	Pass	Lot 2145	P231368-2
14/03/2023	5	Layer 3		95.5%	Pass	Lot 2126	P231368-2
15/03/2023	6	Layer 1		103.5%	Pass	Lot 2114	P231368-3
16/03/2023	7	Layer 3		99.5%	Pass	Lot 2143	P231368-4
16/03/2023	8	Layer 1	Test #1	96.5%	Pass	Lot 2124	P231368-4
16/03/2023	9	Layer 2		92.5%	Fail	Lot 2117	P231368-4
16/03/2023	10	Layer 4		94.5%	Fail	Lot 2140	P231368-4
17/03/2023	11	Layer 5		93.0%	Fail	Lot 2114	P231368-5
17/03/2023	12	Layer 4	Test #10	103.5%	Pass	Lot 2140	P231368-5
18/03/2023	13	Layer 4		96.5%	Pass	Lot 2122	P231368-6
20/03/2023	14	Layer 2	Test #9	100.5%	Pass	Lot 2117	P231368-7
21/03/2023	15	Layer 2		93.0%	Fail	Lot 2127	P231368-8
22/03/2023	16	Layer 3		95.0%	Pass	Lot 2129	P231368-9
22/03/2023	17	Layer 5	Test #11	96.5%	Pass	Lot 2114	P231368-9
22/03/2023	18	Layer 1		99.5%	Pass	Lot 2112	P231368-9
22/03/2023	19	Layer 1		98.5%	Pass	Lot 2106	P231368-9
22/03/2023	20	Layer 1		98.5%	Pass	Lot 2144	P231368-9
22/03/2023	21	Layer 2		98.0%	Pass	Lot 2142	P231368-9
22/03/2023	22	Layer 2		96.5%	Pass	Lot 2111	P231368-9
22/03/2023	23	Layer 2		97.5%	Pass	Lot 2107	P231368-9
23/03/2023	24	Layer 3		101.0%	Pass	Lot 2141	P231368-10
23/03/2023	25	Layer 1		94.5%	Fail	Lot 2134	P231368-10
23/03/2023	26	Layer 4		94.0%	Fail	Lot 2144	P231368-10
24/03/2023	27	Layer 3		98.0%	Pass	Lot 2133	P231368-11
24/03/2023	28	Layer 1		96.0%	Pass	Lot 2136	P231368-11
24/03/2023	29	Layer 3		97.5%	Pass	Lot 2110	P231368-11
24/03/2023	30	Layer 4		96.5%	Pass	Lot 2137	P231368-11
24/03/2023	31	Layer 1		96.0%	Pass	Super Lot	P231368-11
25/03/2023	32	Layer 4	Test #26	99.5%	Pass	Lot 2144	P231368-12
25/03/2023	33	Layer 1	Test #25	98.0%	Pass	Lot 2134	P231368-12
25/03/2023	34	Layer 3		100.0%	Pass	Lot 2111	P231368-12
25/03/2023	35	FSL		105.0%	Pass	Lot 2123	P231368-12
25/03/2023	36	Layer 2	Test #15	97.0%	Pass	Lot 2127	P231368-12
25/03/2023	37	FSL		93.0%	Fail	Lot 2129	P231368-12
27/03/2023	38	FSL		97.5%	Pass	Lot 2109	P231368-13
27/03/2023	39	FSL		100.0%	Pass	Lot 2108	P231368-13
27/03/2023	40	Layer 4		99.0%	Pass	Lot 2132	P231368-13
27/03/2023	41	Layer 2		100.5%	Pass	Super Lot	P231368-13



Compaction Test Register

Client: Fraser Property Group
Project: Five Farms Stage 21

Project No: P231368
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
27/03/2023	42	Layer 3		98.5%	Pass	Super Lot	P231368-13
27/03/2023	43	Layer 5		101.0%	Pass	Lot 2138	P231368-13
27/03/2023	44	Layer 5		101.0%	Pass	Lot 2130	P231368-13
5/04/2023	45	FSL	Test #37	96.5%	Pass	Lot 2129	P231368-14
5/04/2023	46	FSL		99.0%	Pass	Lot 2131	P231368-14
5/04/2023	47	FSL		102.0%	Pass	Lot 2139	P231368-14
5/04/2023	48	FSL		94.0%	Fail	Lot 2116	P231368-14
5/04/2023	49	FSL		89.5%	Fail	Lot 2118	P231368-14
5/04/2023	50	FSL		100.5%	Pass	Lot 2119	P231368-14
5/04/2023	51	FSL		94.0%	Fail	Lot 2120	P231368-14
5/04/2023	52	FSL		98.5%	Pass	Lot 2121	P231368-14
14/07/2023	53	FSL	Test #48	103.0%	Pass	Lot 2116	P231368-15
14/07/2023	54	FSL	Test #49	100.5%	Pass	Lot 2118	P231368-15
14/07/2023	55	FSL	Test #51	101.5%	Pass	Lot 2120	P231368-15

Material Test Report

Report Number: P231368-1
Issue Number: 1
Date Issued: 20/03/2023
Client: Fraser Property



Project Number: P231368
Project Name: Five Farms Stage 21 Level One
Project Location: Clyde
Work Request: 11866
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%
Site Selection: Selected by Client
Location: Five Farms Stage 21 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	P23-11866A		
Test Number	1		
Date Tested	10/03/2023		
Time Tested	**		
Test Request #/Location	Lot 2124		
Layer / Reduced Level	Layer 1		
Thickness of Layer (mm)	300		
Soil Description	Silty CLAY		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0		
Field Wet Density (FWD) t/m ³	1.91		
Field Moisture Content %	18.1		
Field Dry Density (FDD) t/m ³	1.62		
Peak Converted Wet Density t/m ³	2.02		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	19.8		
Adj. Field Moisture Content % (AS1289.5.4.1)	18.1		
Moisture Ratio % (AS1289.5.4.1)	91.5		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	1.5		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	94.5		
Compaction Method	Standard		
Report Remarks	**		

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

Material Test Report

Report Number: P231368-2
Issue Number: 1
Date Issued: 23/03/2023
Client: Fraser Property



Project Number: P231368
Project Name: Five Farms Stage 21 Level One
Project Location: Clyde
Work Request: 11882
Date Sampled: 07/03/2023 9:00
Dates Tested: 14/03/2023 - 16/03/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Location: Five Farms Stage 21 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	P23-11882A	P23-11882B	P23-11882C	P23-11882D
Test Number	2	3	4	5
Date Tested	14/03/2023	14/03/2023	14/03/2023	14/03/2023
Time Tested	**	**	**	**
Test Request #/Location	1 Lot 2125	2 Lot 2142	3 Lot 2145	4 Lot 2126
Layer / Reduced Level	Layer 2	Layer 1	Layer 2	Layer 3
Thickness of Layer (mm)	300	300	300	300
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0	0
Field Wet Density (FWD) t/m ³	1.91	1.92	2.08	2.01
Field Moisture Content %	16.0	20.1	12.3	-10.8
Field Dry Density (FDD) t/m ³	1.65	1.60	1.86	2.25
Peak Converted Wet Density t/m ³	2.00	1.95	2.06	2.10
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	18.4	22.1	14.9	-8.8
Adj. Field Moisture Content % (AS1289.5.4.1)	16.0	20.1	12.3	-10.8
Moisture Ratio % (AS1289.5.4.1)	87.0	91.0	83.0	122.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**
Moisture Variation (Wv) %	2.5	2.0	2.5	2.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	95.5	98.0	101.0	95.5
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: P231368-3
Issue Number: 1
Date Issued: 23/03/2023
Client: Fraser Property



Project Number: P231368
Project Name: Five Farms Stage 21 Level One
Project Location: Clyde
Work Request: 11897
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%
Location: Five Farms Stage 21 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	P23-11897A		
Test Number	6		
Date Tested	15/03/2023		
Time Tested	**		
Test Request #/Location	1 Lot 2114		
Layer / Reduced Level	Layer 1		
Thickness of Layer (mm)	300		
Soil Description	Silty CLAY		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0		
Field Wet Density (FWD) t/m ³	1.98		
Field Moisture Content %	24.6		
Field Dry Density (FDD) t/m ³	1.59		
Peak Converted Wet Density t/m ³	1.92		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	25.3		
Adj. Field Moisture Content % (AS1289.5.4.1)	24.6		
Moisture Ratio % (AS1289.5.4.1)	97.5		
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: P231368-4
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Retest # Added
Date Issued: 14/07/2023
Client: Fraser Property



Project Number: P231368
Project Name: Five Farms Stage 21 Level One
Project Location: Clyde
Work Request: 11905
Date Sampled: 16/03/2023 8:45
Dates Tested: 16/03/2023 - 20/03/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Location: Five Farms Stage 21 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	P23-11905A	P23-11905B	P23-11905C	P23-11905D
Test Number	7	8	9	10
Date Tested	16/03/2023	16/03/2023	16/03/2023	16/03/2023
Time Tested	**	**	**	**
Test Request #/Location	Lot 2143	Lot 2124 Retest #1	Lot 2117	Lot 2140
Layer / Reduced Level	Layer 3	Layer 1	Layer 2	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)	0	0	0	0
Field Wet Density (FWD) t/m ³	2.14	1.99	1.94	1.93
Field Moisture Content %	14.1	18.3	13.4	13.0
Field Dry Density (FDD) t/m ³	1.88	1.68	1.72	1.71
Peak Converted Wet Density t/m ³	2.15	2.06	2.11	2.04
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	12.4	17.4	13.4	15.7
Adj. Field Moisture Content % (AS1289.5.4.1)	14.1	18.3	13.4	13.0
Moisture Ratio % (AS1289.5.4.1)	114.0	105.0	99.5	83.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**
Moisture Variation (Wv) %	-1.5	-1.0	0.0	2.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	99.5	96.5	92.5	94.5
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: P231368-5
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Retest # Added
Date Issued: 14/07/2023
Client: Fraser Property



Project Number: P231368
Project Name: Five Farms Stage 21 Level One
Project Location: Clyde
Client Reference: 08817
Work Request: 11923
Date Sampled: 17/03/2023
Dates Tested: 17/03/2023 - 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 21, Clyde - Level One
Material: Sandy 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	P23-11923A	P23-11923B	
Test Number	11	12	
Date Tested	17/03/2023	17/03/2023	
Time Tested	**	**	
Test Request #/Location	Lot No. 2114	Lot No. 2140 Retest #10	
Layer / Reduced Level	Layer 5	Layer 4	
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	2.03	2.13	
Field Moisture Content %	14.9	16.5	
Field Dry Density (FDD) t/m ³	1.77	1.83	
Peak Converted Wet Density t/m ³	2.18	2.06	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Moisture Variation (Wv) %	-1.5	1.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	93.0	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: P231368-5
Issue Number: 1
Date Issued: 23/03/2023
Client: Fraser Property



Project Number: P231368
Project Name: Five Farms Stage 21 Level One
Project Location: Clyde
Client Reference: 08817
Work Request: 11923
Date Sampled: 17/03/2023
Dates Tested: 17/03/2023 - 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 21, Clyde - Level One
Material: Sandy 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	P23-11923A	P23-11923B	
Test Number	11	12	
Date Tested	17/03/2023	17/03/2023	
Time Tested	**	**	
Test Request #/Location	11 Lot No. 2114	12 Lot No. 2122	
Layer / Reduced Level	Layer 5	Layer 3	
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	2.03	2.13	
Field Moisture Content %	14.9	16.5	
Field Dry Density (FDD) t/m ³	1.77	1.83	
Peak Converted Wet Density t/m ³	2.18	2.06	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Moisture Variation (Wv) %	-1.5	1.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	93.0	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: P231368-6
Issue Number: 1
Date Issued: 23/03/2023
Client: Fraser Property



Project Number: P231368
Project Name: Five Farms Stage 21 Level One
Project Location: Clyde
Client Reference: 08820
Work Request: 11929
Date Sampled: 18/03/2023
Dates Tested: 18/03/2023 - 21/03/2023
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 21, Clyde - Level One
Material: Sandy 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	P23-11929A		
Test Number	13		
Date Tested	18/03/2023		
Time Tested	**		
Test Request #/Location	13 Lot No. 2122		
Layer / Reduced Level	Layer 4		
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		
Field Wet Density (FWD) t/m ³	2.02		
Field Moisture Content %	17.5		
Field Dry Density (FDD) t/m ³	1.72		
Peak Converted Wet Density t/m ³	2.09		
Adjusted Peak Converted Wet Density t/m ³	**		
Moisture Variation (Wv) %	-0.5		
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: P231368-7
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Retest # Added
Date Issued: 14/07/2023
Client: Fraser Property



Project Number: P231368
Project Name: Five Farms Stage 21 Level One
Project Location: Clyde
Work Request: 11944
Date Sampled: 20/03/2023 8:45
Dates Tested: 20/03/2023 - 24/03/2023
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 21 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	P23-11944A		
Test Number	14		
Date Tested	20/03/2023		
Time Tested	**		
Test Request #/Location	Lot 2117 Retest #9		
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)	**		
Field Wet Density (FWD) t/m ³	2.05		
Field Moisture Content %	16.0		
Field Dry Density (FDD) t/m ³	1.77		
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)	**		
Adj. Field Moisture Content % (AS1289.5.4.1)	16.0		
Moisture Ratio % (AS1289.5.4.1)	88.5		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	2.0		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	100.5		
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: P231368-8
 Issue Number: 1
 Date Issued: 31/03/2023
 Client: Fraser Property



Project Number: P231368
 Project Name: Five Farms Stage 21 Level One
 Project Location: Clyde
 Work Request: 11959
 Date Sampled: 21/03/2023 8:45
 Dates Tested: 21/03/2023 - 24/03/2023
 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 21 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	P23-11959A		
Test Number	15		
Date Tested	21/03/2023		
Time Tested	**		
Test Request #/Location	Lot 2127		
Layer / Reduced Level	Layer 2		
Thickness of Layer (mm)	300		
Soil Description	Silty CLAY 50/50 Blend		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**		
Field Wet Density (FWD) t/m ³	1.89		
Field Moisture Content %	14.3		
Field Dry Density (FDD) t/m ³	1.65		
Peak Converted Wet Density t/m ³	2.03		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**		
Adj. Field Moisture Content % (AS1289.5.4.1)	14.3		
Moisture Ratio % (AS1289.5.4.1)	83.5		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	2.5		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	93.0		
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: P231368-9
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Retest # Added
Date Issued: 14/07/2023
Client: Fraser Property



Project Number: P231368
Project Name: Five Farms Stage 21 Level One
Project Location: Clyde
Work Request: 11976
Date Sampled: 22/03/2023 9:15
Dates Tested: 22/03/2023 - 05/04/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Location: Five Farms Stage 21 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	P23-11976A	P23-11976B	P23-11976C	P23-11976D
Test Number	16	17	18	19
Date Tested	22/03/2023	22/03/2023	22/03/2023	22/03/2023
Time Tested	**	**	**	**
Test Request #/Location	Lot 2129	Lot 2114 Retest #11	Lot 2112	Lot 2106
Layer / Reduced Level	Layer 3	Layer 5	Layer 1	Layer 1
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	1.92	2.00	2.09	2.10
Field Moisture Content %	20.7	14.3	18.9	17.6
Field Dry Density (FDD) t/m ³	1.59	1.75	1.76	1.79
Peak Converted Wet Density t/m ³	2.03	2.08	2.10	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)	20.7	14.3	18.9	17.6
Moisture Ratio % (AS1289.5.4.1)	101.5	96.5	108.0	115.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**
Moisture Variation (Wv) %	-0.5	0.5	-1.5	-2.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	95.0	96.5	99.5	98.5
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: P231368-9
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Retest # Added
Date Issued: 14/07/2023
Client: Fraser Property



Project Number: P231368
Project Name: Five Farms Stage 21 Level One
Project Location: Clyde
Work Request: 11976
Date Sampled: 22/03/2023 9:15
Dates Tested: 22/03/2023 - 05/04/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Location: Five Farms Stage 21 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	P23-11976E	P23-11976F	P23-11976G	P23-11976H
Test Number	20	21	22	23
Date Tested	22/03/2023	22/03/2023	22/03/2023	22/03/2023
Time Tested	**	**	**	**
Test Request #/Location	Lot 2144	Lot 2142	Lot 2111	Lot 2107
Layer / Reduced Level	Layer 1	Layer 2	Layer 2	Layer 2
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
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	0	**	**
Field Wet Density (FWD) t/m ³	2.04	2.03	2.03	2.04
Field Moisture Content %	16.3	15.2	16.8	19.5
Field Dry Density (FDD) t/m ³	1.76	1.77	1.73	1.71
Peak Converted Wet Density t/m ³	2.07	2.07	2.10	2.10
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)	**	15.2	16.8	19.5
Moisture Ratio % (AS1289.5.4.1)	95.0	90.0	102.5	107.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**
Moisture Variation (Wv) %	1.0	1.5	-0.5	-1.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	98.5	98.0	96.5	97.5
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: P231368-10
 Issue Number: 1
 Date Issued: 31/03/2023
 Client: Fraser Property



Project Number: P231368
 Project Name: Five Farms Stage 21 Level One
 Project Location: Clyde
 Work Request: 11997
 Date Sampled: 23/03/2023 8:45
 Dates Tested: 23/03/2023 - 24/03/2023
 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 21 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	P23-11997A	P23-11997B	P23-11997C
Test Number	24	25	26
Date Tested	23/03/2023	23/03/2023	23/03/2023
Time Tested	**	**	**
Test Request #/Location	Lot 2141	Lot 2134	Lot 2144
Layer / Reduced Level	Layer 3	Layer 1	Layer 4
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	**
Field Wet Density (FWD) t/m ³	2.10	1.99	1.99
Field Moisture Content %	18.5	19.5	**
Field Dry Density (FDD) t/m ³	1.77	1.66	**
Peak Converted Wet Density t/m ³	2.08	2.10	2.11
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	17.3	17.8	**
Adj. Field Moisture Content % (AS1289.5.4.1)	18.5	19.5	**
Moisture Ratio % (AS1289.5.4.1)	107.0	109.0	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-1.0	-1.5	0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	101.0	94.5	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: P231368-11
Issue Number: 1
Date Issued: 31/03/2023
Client: Fraser Property



Project Number: P231368
Project Name: Five Farms Stage 21 Level One
Project Location: Clyde
Work Request: 12012
Date Sampled: 24/03/2023 10:00
Dates Tested: 24/03/2023 - 28/03/2023
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 21 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	P23-12012A	P23-12012B	P23-12012C	P23-12012D	P23-12012E
Test Number	27	28	29	30	31
Date Tested	24/03/2023	24/03/2023	24/03/2023	24/03/2023	24/03/2023
Time Tested	**	**	**	**	**
Test Request #/Location	Lot 2133	Lot 2136	Lot 2110	Lot 2137	Super Lot
Layer / Reduced Level	Layer 3	Layer 1	Layer 3	Layer 4	Layer 1
Thickness of Layer (mm)	300	300	300	300	300
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	275	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**	**	**
Field Wet Density (FWD) t/m ³	2.06	2.06	1.99	2.02	2.02
Field Moisture Content %	19.1	15.4	22.7	18.0	13.5
Field Dry Density (FDD) t/m ³	1.73	1.78	1.62	1.71	1.78
Peak Converted Wet Density t/m ³	2.11	2.14	2.04	2.09	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)	19.1	15.4	22.7	18.0	13.5
Moisture Ratio % (AS1289.5.4.1)	107.5	106.5	107.5	103.5	96.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**
Moisture Variation (Wv) %	-1.5	-1.0	-1.5	-0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	98.0	96.0	97.5	96.5	96.0
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: P231368-12
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Retest # Added
Date Issued: 14/07/2023
Client: Fraser Property



Project Number: P231368
Project Name: Five Farms Stage 21 Level One
Project Location: Clyde
Work Request: 12029
Date Sampled: 25/03/2023
Dates Tested: 25/03/2023 - 30/03/2023
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 21 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	P23-12029A	P23-12029B	P23-12029C	P23-12029D	P23-12029E	P23-12029F
Test Number	32	33	34	35	36	37
Date Tested	25/03/2023	25/03/2023	25/03/2023	25/03/2023	25/03/2023	25/03/2023
Time Tested	**	**	**	**	**	**
Test Request #/Location	Lot 2144 Retest #26	Lot 2134 Retest #25	Lot 2111	Lot 2123	Lot 2127 Retest #15	Lot 2129
Layer / Reduced Level	Layer 4	Layer 1	Layer 3	FSL	Layer 2	FSL
Thickness of Layer (mm)	300	300	300	300	300	300
Soil Description	Silty Clay 50/50 Blend	Silty Clay 50/50 Blend	Silty Clay 50/50 Blend	Silty Clay 50/50 Blend	Silty Clay 50/50 Blend	Silty Clay 50/50 Blend
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	1.97	2.03	2.02	2.07	1.87	1.88
Field Moisture Content %	16.2	15.1	15.3	18.2	15.1	13.8
Field Dry Density (FDD) t/m ³	1.70	1.77	1.75	1.75	1.62	1.65
Peak Converted Wet Density t/m ³	1.98	2.08	2.02	1.98	1.93	2.02
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	18.7	16.4	17.3	20.4	17.5	13.5
Adj. Field Moisture Content % (AS1289.5.4.1)	16.2	15.1	15.3	18.2	15.1	13.8
Moisture Ratio % (AS1289.5.4.1)	87.0	92.0	88.0	89.0	86.0	101.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**	**
Moisture Variation (Wv) %	2.5	1.0	2.0	2.0	2.5	0.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	99.5	98.0	100.0	105.0	97.0	93.0
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: P231368-13
 Issue Number: 1
 Date Issued: 31/03/2023
 Client: Fraser Property



Project Number: P231368
 Project Name: Five Farms Stage 21 Level One
 Project Location: Clyde
 Work Request: 12034
 Date Sampled: 27/03/2023 8:45
 Dates Tested: 27/03/2023 - 29/03/2023
 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 21 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	P23-12034A	P23-12034B	P23-12034C	P23-12034D
Test Number	38	39	40	41
Date Tested	27/03/2023	27/03/2023	27/03/2023	27/03/2023
Time Tested	**	**	**	**
Test Request #/Location	Lot 2109	Lot 2108	Lot 2132	Super Lot
Layer / Reduced Level	FSL	FSL	Layer 4	Layer 2
Thickness of Layer (mm)	300	300	300	300
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0	0
Field Wet Density (FWD) t/m ³	2.00	2.04	2.10	2.08
Field Moisture Content %	14.7	17.5	16.7	16.1
Field Dry Density (FDD) t/m ³	1.74	1.73	1.80	1.79
Peak Converted Wet Density t/m ³	2.04	2.04	2.12	2.07
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	16.2	19.2	16.8	17.1
Adj. Field Moisture Content % (AS1289.5.4.1)	14.7	17.5	16.7	16.1
Moisture Ratio % (AS1289.5.4.1)	91.0	91.0	100.0	94.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**
Moisture Variation (Wv) %	1.5	1.5	0.0	1.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	97.5	100.0	99.0	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: P231368-13
 Issue Number: 1
 Date Issued: 31/03/2023
 Client: Fraser Property



Project Number: P231368
 Project Name: Five Farms Stage 21 Level One
 Project Location: Clyde
 Work Request: 12034
 Date Sampled: 27/03/2023 8:45
 Dates Tested: 27/03/2023 - 29/03/2023
 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 21 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	P23-12034E	P23-12034F	P23-12034G
Test Number	42	43	44
Date Tested	27/03/2023	27/03/2023	27/03/2023
Time Tested	**	**	**
Test Request #/Location	Super Lot	Lot 2138	Lot 2130
Layer / Reduced Level	Layer 3	Layer 5	Layer 5
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	2.06	2.07	2.05
Field Moisture Content %	16.7	20.4	18.2
Field Dry Density (FDD) t/m ³	1.77	1.72	1.73
Peak Converted Wet Density t/m ³	2.09	2.05	2.04
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	17.5	20.0	18.7
Adj. Field Moisture Content % (AS1289.5.4.1)	16.7	20.4	18.2
Moisture Ratio % (AS1289.5.4.1)	96.0	102.0	97.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.5	-0.5	0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	98.5	101.0	101.0
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: P231368-14
Issue Number: 1
Date Issued: 09/05/2023
Client: Fraser Property



Project Number: P231368
Project Name: Five Farms Stage 21 Level One
Project Location: Clyde
Work Request: 12122
Date Sampled: 05/04/2023 10:00
Dates Tested: 05/04/2023 - 06/04/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 21 Level One (Retest & Missed Lots)
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	P23-12122A	P23-12122B	P23-12122C	P23-12122D
Test Number	45	46	47	48
Date Tested	05/04/2023	05/04/2023	05/04/2023	05/04/2023
Time Tested	**	**	**	**
Test Request #/Location	Retest of 37	Lot 2131	Lot 2139	Lot 2116
Layer / Reduced Level	**	FSL	FSL	FSL
Thickness of Layer (mm)	300	300	300	300
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0	0
Field Wet Density (FWD) t/m ³	1.92	2.01	2.08	1.92
Field Moisture Content %	17.2	19.1	14.5	15.1
Field Dry Density (FDD) t/m ³	1.64	1.69	1.82	1.67
Peak Converted Wet Density t/m ³	1.99	2.03	2.04	2.05
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	19.7	18.8	14.3	14.3
Adj. Field Moisture Content % (AS1289.5.4.1)	17.2	19.1	14.5	15.1
Moisture Ratio % (AS1289.5.4.1)	87.5	101.5	101.5	106.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**
Moisture Variation (Wv) %	2.5	-0.5	0.0	-1.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	96.5	99.0	102.0	94.0
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: P231368-14
Issue Number: 1
Date Issued: 09/05/2023
Client: Fraser Property



Project Number: P231368
Project Name: Five Farms Stage 21 Level One
Project Location: Clyde
Work Request: 12122
Date Sampled: 05/04/2023 10:00
Dates Tested: 05/04/2023 - 06/04/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Five Farms Stage 21 Level One (Retest & Missed Lots)
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	P23-12122E	P23-12122F	P23-12122G	P23-12122H
Test Number	49	50	51	52
Date Tested	05/04/2023	05/04/2023	05/04/2023	05/04/2023
Time Tested	**	**	**	**
Test Request #/Location	Lot 2118	Lot 2119	Lot 2120	Lot 2121
Layer / Reduced Level	FSL	FSL	FSL	FSL
Thickness of Layer (mm)	300	300	300	300
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0	0
Field Wet Density (FWD) t/m ³	1.85	2.12	2.02	2.07
Field Moisture Content %	13.4	15.8	16.2	33.4
Field Dry Density (FDD) t/m ³	1.63	1.83	1.74	1.55
Peak Converted Wet Density t/m ³	2.06	2.10	2.15	2.10
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	14.6	15.7	16.3	34.3
Adj. Field Moisture Content % (AS1289.5.4.1)	13.4	15.8	16.2	33.4
Moisture Ratio % (AS1289.5.4.1)	91.5	101.0	99.5	97.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**
Moisture Variation (Wv) %	1.0	0.0	0.0	0.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	89.5	100.5	94.0	98.5
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: P231368-15
Issue Number: 1
Date Issued: 14/07/2023
Client: Fraser Property



Project Number: P231368
Project Name: Five Farms Stage 21 Level One
Project Location: Clyde
Work Request: 12836
Date Sampled: 14/07/2023
Dates Tested: 14/07/2023 - 14/07/2023
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 21
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	P23-12836A	P23-12836B	P23-12836C
Test Number	53	54	55
Date Tested	14/07/2023	14/07/2023	14/07/2023
Time Tested	09:20	09:36	09:45
Test Request #/Location	Lot 2116 Retest #48	Lot 2118 Retest #49	Lot 2120 Retest #51
Layer / Reduced Level	FSL	FSL	FSL
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	2.03	2.03	2.06
Field Moisture Content %	**	**	**
Field Dry Density (FDD) t/m ³	**	**	**
Peak Converted Wet Density t/m ³	1.97	2.02	2.03
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	**	**	**
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-0.5	0.0	0.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	103.0	100.5	101.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

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