

Riverwalk Stage 31

GITA Inspection Verification Report

Prepared For: Excell Gray Bruni

Report Number D21683A V1

Version Release Date 24 Feb 2022

Report Released By Chris Caulfield

Title Project Manager

Signature



Table of Contents

1 Introduction 3

2 Scope of Work 3

 2.1 Area of Work 3

 2.2 Specification 3

 2.3 Limitations 4

3 Construction Method 5

 3.1 Subgrade Preparation 5

 3.2 Fill Placement 5

4 Construction Verification 5

5 Statement of Compliance 6

Appendices

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

1 Introduction

Terra Firma Laboratories was engaged by Excell Gray Bruni as the Geotechnical Inspection and Testing Authority (GITA) to provide Level 1 supervision and testing works on the earthworks component for Riverwalk Stage 31. This work was conducted over the period of 25/10/2021 to 02/02/2022.

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 3101 through to 3162 and Southern Local Park, bounded by streets Pandava Road, Shanti Circuit, Seva Lane, Duo Lane, Samba Lane, Prana Way and Priya Street. 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 Dalton Consulting Engineers (Drawing Reference: 10931FP01) and provided by Excell Gray Bruni.

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 Excell Gray Bruni 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 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.

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 300mm 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 300mm 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 (D21683D1, 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 84 density tests (Hilf method in accordance with 1289 5.7.1) were undertaken with 0 failed results. 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 31 at Riverwalk. For completed fill areas of greater than 300mm, and for works completed between 25/10/2021 and 02/02/2022, 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 31 of Riverwalk was observed to be constructed in compliance with the requirements of the Technical Specification.



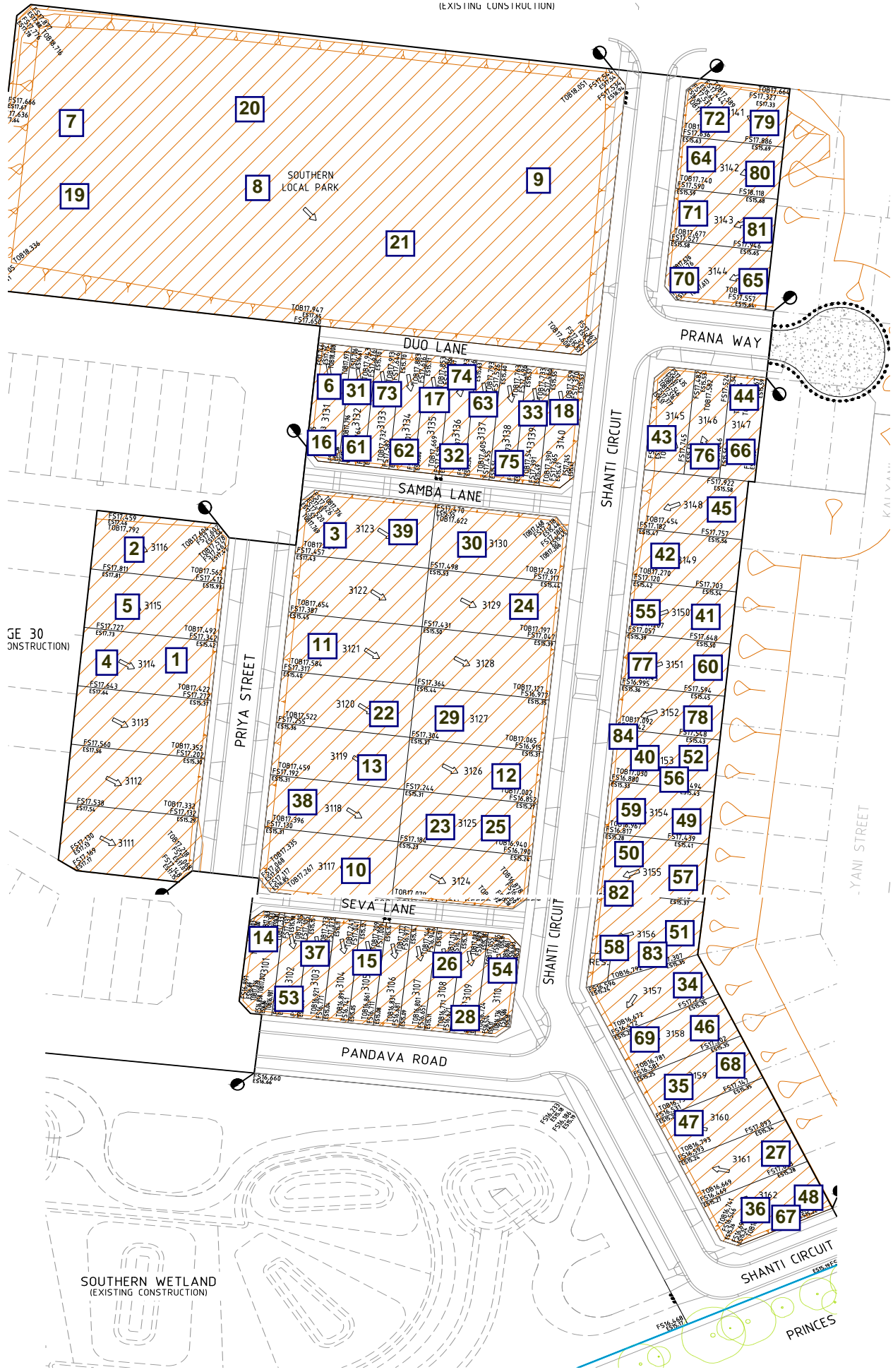
Your Worksite is Our Laboratory.

Appendix 1: Test Location Plan

Our Head Office
47 National Ave
Pakenham, VIC 3810

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

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Page 1 of 2



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: Excell Gray Bruni

Project: Riverwalk Stage 31

Reference: D21683 D1



Your Worksite is Our Laboratory.

Appendix 2: Compaction Test Register and Test Certificates



Compaction Test Register

Client: Excell Gray Bruni **Project No:** D21683
Project: Riverwalk Stage 31 **Specification:** 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail	Lot No:	Report No:
25/10/2021	1	Layer 1		101.0%	Pass	Lot 3114	D21683-1
25/10/2021	2	Layer 1		103.5%	Pass	Lot 3116	D21683-1
25/10/2021	3	Layer 1		104.5%	Pass	Lot 3123	D21683-1
26/10/2021	4	Layer 2		105.0%	Pass	Lot 3114	D21683-2
26/10/2021	5	Layer 2		103.0%	Pass	Lot 3115	D21683-2
26/10/2021	6	Layer 2		104.0%	Pass	Lot 3131	D21683-2
28/10/2021	7	Layer 03		105.0%	Pass	Park	D21683-3
28/10/2021	8	Layer 03		103.5%	Pass	Park	D21683-3
28/10/2021	9	Layer 03		103.5%	Pass	Park	D21683-3
23/11/2021	10	Layer 3		98.5%	Pass	Lot 3117	D21683-4
23/11/2021	11	Layer 3		100.5%	Pass	Lot 3121	D21683-4
23/11/2021	12	Layer 3		98.5%	Pass	Lot 3126	D21683-4
24/11/2021	13	Layer 04		105.5%	Pass	Lot 3119	D21683-5
24/11/2021	14	Layer 04		103.0%	Pass	Lot 3101	D21683-5
24/11/2021	15	Layer 04		105.0%	Pass	Lot 3105	D21683-5
29/11/2021	16	Layer 01		104.0%	Pass	Lot 3131	D21683-6
29/11/2021	17	Layer 01		101.5%	Pass	Lot 3135	D21683-6
29/11/2021	18	Layer 01		100.5%	Pass	Lot 3140	D21683-6
1/12/2021	19	Layer 04		102.5%	Pass	Park	D21683-7
1/12/2021	20	Layer 04		103.5%	Pass	Park	D21683-7
1/12/2021	21	Layer 04		101.5%	Pass	Park	D21683-7
2/12/2021	22	Layer 04		105.0%	Pass	Lot 3120	D21683-8
2/12/2021	23	Layer 04		105.0%	Pass	Lot 3125	D21683-8
2/12/2021	24	Layer 04		104.0%	Pass	Lot 3129	D21683-8
3/12/2021	25	Layer 4		99.0%	Pass	Lot 3125	D21683-9
3/12/2021	26	Layer 4		97.0%	Pass	Lot 3108	D21683-9
3/12/2021	27	Layer 1		98.5%	Pass	Lot 3161	D21683-9
6/12/2021	28	Layer 5		104.5%	Pass	Lot 3109	D21683-10
6/12/2021	29	Layer 5		101.5%	Pass	Lot 3127	D21683-10
6/12/2021	30	Layer 5		98.0%	Pass	Lot 3130	D21683-10
8/12/2021	31	Layer 03		101.5%	Pass	Lot 3132	D21683-11
8/12/2021	32	Layer 03		102.5%	Pass	Lot 3136	D21683-11
8/12/2021	33	Layer 03		104.5%	Pass	Lot 3139	D21683-11
11/12/2021	34	Layer 02		103.0%	Pass	Lot 3157	D21683-12
11/12/2021	35	Layer 02		102.5%	Pass	Lot 3159	D21683-12
11/12/2021	36	Layer 02		104.0%	Pass	Lot 3162	D21683-12
13/12/2021	37	Layer 6		106.5%	Pass	Lot 3103	D21683-13
13/12/2021	38	Layer 6		104.5%	Pass	Lot 3118	D21683-13
13/12/2021	39	Layer 6		104.5%	Pass	Lot 3123	D21683-13
14/12/2021	40	Layer 4		105.0%	Pass	Lot 3153	D21683-14
14/12/2021	41	Layer 4		104.5%	Pass	Lot 3150	D21683-14



Compaction Test Register

Client: Excell Gray Bruni
Project: Riverwalk Stage 31

Project No: D21683
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail	Lot No:	Report No:
14/12/2021	42	Layer 4		105.0%	Pass	Lot 3149	D21683-14
15/12/2021	43	Layer 3		105.0%	Pass	Lot 3145	D21683-15
15/12/2021	44	Layer 3		105.5%	Pass	Lot 3147	D21683-15
15/12/2021	45	Layer 3		105.5%	Pass	Lot 3148	D21683-15
17/12/2021	46	Layer 04		102.0%	Pass	Lot 3158	D21683-16
17/12/2021	47	Layer 04		104.5%	Pass	Lot 3160	D21683-16
17/12/2021	48	Layer 04		104.0%	Pass	Lot 3162	D21683-16
18/12/2021	49	Layer 6		103.5%	Pass	Lot 3154	D21683-17
18/12/2021	50	Layer 6		104.0%	Pass	Lot 3155	D21683-17
18/12/2021	51	Layer 6		104.0%	Pass	Lot 3156	D21683-17
13/01/2022	52	Layer 7		106.0%	Pass	Lot 3153	D21683-18
13/01/2022	53	Layer 6		105.5%	Pass	Lot 3102	D21683-18
13/01/2022	54	Layer 6		105.0%	Pass	Lot 3110	D21683-18
18/01/2022	55	Layer 08		105.5%	Pass	Lot 3150	D21683-19
18/01/2022	56	Layer 08		100.5%	Pass	Lot 3153	D21683-19
18/01/2022	57	Layer 08		105.5%	Pass	Lot 3155	D21683-19
18/01/2022	58	Layer 09		102.0%	Pass	Lot 3156	D21683-19
18/01/2022	59	Layer 09		101.5%	Pass	Lot 3154	D21683-19
18/01/2022	60	Layer 09		99.0%	Pass	Lot 3151	D21683-19
20/01/2022	61	Layer 4		101.5%	Pass	Lot 3132	D21683-20
20/01/2022	62	Layer 4		103.0%	Pass	Lot 3134	D21683-20
20/01/2022	63	Layer 4		102.5%	Pass	Lot 3137	D21683-20
21/01/2022	64	Layer 3		103.5%	Pass	Lot 3142	D21683-21
21/01/2022	65	Layer 3		100.0%	Pass	Lot 3144	D21683-21
21/01/2022	66	Layer 8		100.5%	Pass	Lot 3147	D21683-21
21/01/2022	67	Layer 8		100.5%	Pass	Lot 3162	D21683-21
21/01/2022	68	Layer 8		99.0%	Pass	Lot 3159	D21683-21
21/01/2022	69	Layer 8		99.5%	Pass	Lot 3158	D21683-21
24/01/2022	70	layer 4		103.5%	Pass	Lot 3144	D21683-22
24/01/2022	71	layer 4		99.0%	Pass	Lot 3143	D21683-22
24/01/2022	72	layer 4		97.5%	Pass	Lot 3141	D21683-22
25/01/2022	73	Layer 5		100.5%	Pass	Lot 3133	D21683-23
25/01/2022	74	Layer 5		102.0%	Pass	Lot 3136	D21683-23
25/01/2022	75	Layer 5		102.0%	Pass	Lot 3138	D21683-23
31/01/2022	75	Layer 10		106.5%	Pass	Lot 3146	D21683-24
31/01/2022	76	Layer 10		103.5%	Pass	Lot 3151	D21683-24
31/01/2022	77	Layer 10		107.5%	Pass	Lot 3152	D21683-24
1/02/2022	78	Layer 5		102.0%	Pass	Lot 3141	D21683-25
1/02/2022	79	Layer 5		101.0%	Pass	Lot 3142	D21683-25
1/02/2022	80	Layer 5		101.0%	Pass	Lot 3143	D21683-25
2/02/2022	81	Layer 11		103.5%	Pass	Lot 3155	D21683-26



Compaction Test Register

Client: Excell Gray Bruni
Project: Riverwalk Stage 31

Project No: D21683
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail	Lot No:	Report No:
2/02/2022	82	Layer 11		103.0%	Pass	Lot 3156	D21683-26
2/02/2022	83	Layer 11		101.0%	Pass	Lot 3153	D21683-26

Material Test Report

Report Number: D21683-1
Issue Number: 1
Date Issued: 28/10/2021
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 3862
Date Sampled: 25/10/2021 9:30
Dates Tested: 25/10/2021 - 27/10/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Site Selection: Selected by Client
Location: Riverwalk Estate Stage 31 - Level one
Material: Clay
Material Source: Imported



Deer Park Laboratory
 17 Walhalla Way Ravenhall VIC 3023
 Phone: 0435 751 756
 Email: ehippola@terrafirmalabs.com.au



Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Eranda Hippola
 Laboratory Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	D21-3862A	D21-3862B	D21-3862C
Test Number	1	2	3
Date Tested	25/10/2021	25/10/2021	25/10/2021
Time Tested	12:00	12:00	12:00
Test Request #/Location	LOT 3114	LOT 3116	LOT 3123
Layer / Reduced Level	Layer 1	Layer 1	Layer 1
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	Clay
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	6	8	6
Field Wet Density (FWD) t/m ³	2.02	2.09	2.10
Field Moisture Content %	23.5	22.5	25.1
Field Dry Density (FDD) t/m ³	1.63	1.71	1.67
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	1.99	2.02	2.01
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	2.0	2.0	2.0
Hilf Density Ratio (%)	101.0	103.5	104.5
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: D21683-2
Issue Number: 1
Date Issued: 03/11/2021
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 3868
Date Sampled: 26/10/2021
Dates Tested: 26/10/2021 - 29/10/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Site Selection: Selected by Client
Location: Riverwalk Estate Stage 31 - Level one
Material: Clay
Material Source: Import



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 17 Walhalla Way Ravenhall VIC 3023
 Phone: 0435 751 756
 Email: ehippola@terrafirmalabs.com.au



Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Eranda Hippola
 Laboratory Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D21-3868A	D21-3868B	D21-3868C
Test Number	4	5	6
Date Tested	26/10/2021	26/10/2021	26/10/2021
Time Tested	15:51	15:51	15:51
Test Request #/Location	Lot 3114	Lot 3115	Lot 3131
Layer / Reduced Level	Layer 2	Layer 2	Layer 2
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	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
Field Wet Density (FWD) t/m ³	1.96	1.99	2.07
Field Moisture Content %	24.8	24.6	23.9
Field Dry Density (FDD) t/m ³	1.57	1.60	1.67
Peak Converted Wet Density t/m ³	1.87	1.93	1.99
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Moisture Variation (Wv) %	3.0	2.0	2.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	105.0	103.0	104.0
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: D21683-3
Issue Number: 1
Date Issued: 03/11/2021
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 3881
Date Sampled: 28/10/2021
Dates Tested: 28/10/2021 - 29/10/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Site Selection: Selected by Client
Location: Riverwalk Estate Stage 31 - Level one
Material: Clay
Material Source: Import



Deer Park Laboratory
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Accredited for compliance with ISO/IEC 17025 - Testing


 Approved Signatory: Eranda Hippola
 Laboratory Manager
 NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D21-3881A	D21-3881B	D21-3881C
Test Number	7	8	9
Date Tested	28/10/2021	28/10/2021	28/10/2021
Time Tested	13:00	13:15	13:30
Test Request #/Location	**	**	**
Easting	292331	292362	292396
Northing	580085	580081	580082
Layer / Reduced Level	Layer 03	Layer 03	Layer 03
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	2.04	2.02
Field Moisture Content %	21.5	18.7	19.2
Field Dry Density (FDD) t/m ³	1.70	1.72	1.70
Peak Converted Wet Density t/m ³	1.96	1.98	1.95
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	24.4	21.5	21.5
Adj. Field Moisture Content % (AS1289.5.4.1)	21.5	18.7	19.2
Moisture Ratio % (AS1289.5.4.1)	88.0	87.0	89.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	3.0	2.5	2.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	105.0	103.5	103.5
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: D21683-4
Issue Number: 1
Date Issued: 25/11/2021
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 3976
Date Sampled: 23/11/2021
Dates Tested: 23/11/2021 - 24/11/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Site Selection: Selected by Client
Location: Riverwalk Estate Stage 31 - Level one
Material: Silty Clay
Material Source: Imported



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Accredited for compliance with ISO/IEC 17025 - Testing


 Approved Signatory: Eranda Hippola
 Laboratory Manager
 NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D21-3976A	D21-3976B	D21-3976C
Test Number	10	11	12
Date Tested	23/11/2021	23/11/2021	23/11/2021
Time Tested	15:00	15:15	15:30
Test Request #/Location	Lot 3117	Lot 3121	Lot 3126
Layer / Reduced Level	Layer 3	Layer 3	Layer 3
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	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	1.93	2.00	1.92
Field Moisture Content %	21.5	21.9	22.3
Field Dry Density (FDD) t/m ³	1.59	1.64	1.57
Peak Converted Wet Density t/m ³	1.96	2.00	1.96
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	21.4	21.5	22.2
Adj. Field Moisture Content % (AS1289.5.4.1)	21.5	21.9	22.3
Moisture Ratio % (AS1289.5.4.1)	100.5	102.0	100.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.0	-0.5	0.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	98.5	100.5	98.5
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: D21683-5
Issue Number: 1
Date Issued: 29/11/2021
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 3985
Date Sampled: 24/11/2021
Dates Tested: 24/11/2021 - 26/11/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Site Selection: Selected by Client
Location: Riverwalk Estate Stage 31 - Level one
Material: Silty Clay
Material Source: Imported



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 NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D21-3985A	D21-3985B	D21-3985C
Test Number	13	14	15
Date Tested	24/11/2021	24/11/2021	24/11/2021
Time Tested	14:30	14:45	15:00
Test Request #/Location	Lot 3119	Lot 3101	Lot 3105
Layer / Reduced Level	Layer 04	Layer 04	Layer 04
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	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	8
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	**
Field Wet Density (FWD) t/m ³	1.97	1.93	2.02
Field Moisture Content %	19.5	18.5	17.8
Field Dry Density (FDD) t/m ³	1.65	1.63	1.74
Peak Converted Wet Density t/m ³	1.87	1.87	**
Adjusted Peak Converted Wet Density t/m ³	**	**	1.92
Adj. Optimum Moisture Content % (AS1289.5.4.1)	25.4	23.8	21.3
Adj. Field Moisture Content % (AS1289.5.4.1)	19.5	18.5	16.3
Moisture Ratio % (AS1289.5.4.1)	77.0	78.0	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	76.5
Moisture Variation (Wv) %	5.5	5.0	**
Adjusted Moisture Variation %	**	**	5.0
Hilf Density Ratio (%)	105.5	103.0	105.0
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: D21683-6
Issue Number: 1
Date Issued: 01/12/2021
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4005
Date Sampled: 29/12/2021
Dates Tested: 30/11/2021 - 30/11/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Site Selection: Selected by Client
Location: Riverwalk Estate Stage 31 - Level one
Material: Silty Clay
Material Source: Imported



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D21-4005A	D21-4005B	D21-4005C
Test Number	16	17	18
Date Tested	29/11/2021	29/11/2021	29/11/2021
Time Tested	14:30	14:45	15:00
Test Request #/Location	Lot 3131	Lot 3135	Lot 3140
Layer / Reduced Level	Layer 01	Layer 01	Layer 01
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	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	2.03	2.00	1.97
Field Moisture Content %	20.9	19.9	21.2
Field Dry Density (FDD) t/m ³	1.68	1.67	1.63
Peak Converted Wet Density t/m ³	1.96	1.97	1.96
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	23.0	21.6	23.0
Adj. Field Moisture Content % (AS1289.5.4.1)	20.9	19.9	21.2
Moisture Ratio % (AS1289.5.4.1)	91.0	92.0	92.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	2.0	1.5	1.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	104.0	101.5	100.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

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

Material Test Report


Report Number: D21683-7
Issue Number: 1
Date Issued: 06/12/2021
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4024
Date Sampled: 01/12/2021
Dates Tested: 01/12/2021 - 02/12/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Site Selection: Selected by Client
Location: Riverwalk Estate Stage 31 - Level one
Material: Silty Clay
Material Source: Imported



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D21-4024A	D21-4024B	D21-4024C
Test Number	19	20	21
Date Tested	01/12/2021	01/12/2021	01/12/2021
Time Tested	14:45	15:00	15:15
Test Request #/Location	Southern local Park	Southern local Park	Southern local Park
Easting	292321	292350	292368
Northing	5800085	5800088	5800074
Layer / Reduced Level	Layer 04	Layer 04	Layer 04
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	Clay
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	8	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0
Field Wet Density (FWD) t/m ³	2.03	2.04	1.98
Field Moisture Content %	27.9	18.6	16.7
Field Dry Density (FDD) t/m ³	1.61	1.72	1.69
Peak Converted Wet Density t/m ³	**	1.97	1.95
Adjusted Peak Converted Wet Density t/m ³	1.98	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	29.5	18.3	19.5
Adj. Field Moisture Content % (AS1289.5.4.1)	25.8	18.6	16.7
Moisture Ratio % (AS1289.5.4.1)	**	101.5	85.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	87.5	**	**
Moisture Variation (Wv) %	**	-0.5	2.5
Adjusted Moisture Variation %	1.5	**	**
Hilf Density Ratio (%)	102.5	103.5	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

Material Test Report


Report Number: D21683-8
Issue Number: 1
Date Issued: 06/12/2021
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4030
Date Sampled: 02/12/2021
Dates Tested: 02/12/2021 - 03/12/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Site Selection: Selected by Client
Location: Riverwalk Estate Stage 31 - Level one
Material: Silty Clay
Material Source: Imported



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D21-4030A	D21-4030B	D21-4030C
Test Number	22	23	24
Date Tested	02/12/2021	02/12/2021	02/12/2021
Time Tested	14:30	14:45	15:00
Test Request #/Location	Lot 3120	Lot 3125	Lot 3129
Layer / Reduced Level	Layer 04	Layer 04	Layer 04
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	Clay
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	11	7	7
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	2.01	1.98	1.98
Field Moisture Content %	23.5	23.2	22.8
Field Dry Density (FDD) t/m ³	1.66	1.62	1.63
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	1.91	1.88	1.90
Adj. Optimum Moisture Content % (AS1289.5.4.1)	22.3	23.6	22.6
Adj. Field Moisture Content % (AS1289.5.4.1)	20.8	21.6	21.2
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	93.5	92.0	93.5
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	1.5	2.0	1.5
Hilf Density Ratio (%)	105.0	105.0	104.0
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: D21683-9
Issue Number: 1
Date Issued: 07/12/2021
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4035
Date Sampled: 03/12/2021
Dates Tested: 03/12/2021 - 06/12/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Site Selection: Selected by Client
Location: Riverwalk Estate Stage 31 - Level One
Material: Clay
Material Source: Imported



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D21-4035A	D21-4035B	D21-4035C
Test Number	25	26	27
Date Tested	03/12/2021	03/12/2021	03/12/2021
Time Tested	16:17	16:17	16:17
Test Request #/Location	Lot 3125	Lot 3108	Lot 3161
Layer / Reduced Level	Layer 4	Layer 4	Layer 1
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	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
Field Wet Density (FWD) t/m ³	1.88	1.84	1.88
Field Moisture Content %	18.4	18.9	19.2
Field Dry Density (FDD) t/m ³	1.59	1.55	1.58
Peak Converted Wet Density t/m ³	1.90	1.90	1.91
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Moisture Variation (Wv) %	-2.5	0.0	1.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	99.0	97.0	98.5
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: D21683-10
Issue Number: 1
Date Issued: 08/12/2021
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4041
Date Sampled: 06/12/2021
Dates Tested: 06/12/2021 - 07/12/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Location: Riverwalk Estate Stage 31 - Level One
Material: Silty Clay
Material Source: Imported



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D21-4041A	D21-4041B	D21-4041C
Test Number	28	29	30
Date Tested	06/12/2021	06/12/2021	06/12/2021
Time Tested	14:30	14:45	15:00
Test Request #/Location	Lot 3109	Lot 3127	Lot 3130
Layer / Reduced Level	Layer 5	Layer 5	Layer 5
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	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	2.03	1.99	1.94
Field Moisture Content %	22.3	21.9	22.7
Field Dry Density (FDD) t/m ³	1.66	1.63	1.58
Peak Converted Wet Density t/m ³	1.94	1.96	1.99
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	25.2	24.8	25.4
Adj. Field Moisture Content % (AS1289.5.4.1)	22.3	21.9	22.7
Moisture Ratio % (AS1289.5.4.1)	88.5	88.5	89.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	2.5	2.5	2.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	104.5	101.5	98.0
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

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

Material Test Report

Report Number: D21683-11
Issue Number: 1
Date Issued: 10/12/2021
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4049
Date Sampled: 08/12/2021 2:30
Dates Tested: 08/12/2021 - 09/12/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Site Selection: Selected by Client
Location: Riverwalk Estate Stage 31 - Level One
Material: Silty Clay
Material Source: Imported



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	D21-4049A	D21-4049B	D21-4049C
Sample Number			
Test Number	31	32	33
Date Tested	08/12/2021	08/12/2021	08/12/2021
Time Tested	14:30	14:45	15:00
Test Request #/Location	Lot 3132	Lot 3136	Lot 3139
Layer / Reduced Level	Layer 03	Layer 03	Layer 03
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	Clay
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	3	9	9
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	1.94	1.98	2.03
Field Moisture Content %	19.2	20.4	19.0
Field Dry Density (FDD) t/m ³	1.64	1.67	1.73
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	1.91	1.93	1.95
Adj. Optimum Moisture Content % (AS1289.5.4.1)	20.9	20.3	18.5
Adj. Field Moisture Content % (AS1289.5.4.1)	18.6	18.6	17.3
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	89.0	91.5	93.5
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	2.5	1.5	1.0
Hilf Density Ratio (%)	101.5	102.5	104.5
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: D21683-12
Issue Number: 1
Date Issued: 14/12/2021
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4059
Date Sampled: 11/12/2021
Dates Tested: 11/12/2021 - 13/12/2021
Sampling Method: AS 1289.1.3.1 3.1.4 (b) - Open-drive samplers - piston samplers - floating type
Specification: 95% STD
Location: Riverwalk Estate Stage 31 - Level one
Material: Silty Clay
Material Source: Imported



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D21-4059A	D21-4059B	D21-4059C
Test Number	34	35	36
Date Tested	11/12/2021	11/12/2021	11/12/2021
Time Tested	12:00	12:15	12:30
Test Request #/Location	Lot 3157	Lot 3159	Lot 3162
Layer / Reduced Level	Layer 02	Layer 02	Layer 02
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	Clay
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	7	10	11
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	1.98	2.02	2.04
Field Moisture Content %	21.9	19.9	21.1
Field Dry Density (FDD) t/m ³	1.64	1.72	1.72
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	1.91	1.97	1.97
Adj. Optimum Moisture Content % (AS1289.5.4.1)	20.3	16.9	19.2
Adj. Field Moisture Content % (AS1289.5.4.1)	20.3	17.9	18.8
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	100.0	106.0	98.0
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	0.0	-1.0	0.5
Hilf Density Ratio (%)	103.0	102.5	104.0
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: D21683-13
Issue Number: 1
Date Issued: 15/12/2021
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4063
Date Sampled: 13/12/2021 2:30
Dates Tested: 13/12/2021 - 14/12/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Location: Riverwalk Estate Stage 31 - Level one
Material: Clay
Material Source: Imported



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D21-4063A	D21-4063B	D21-4063C
Test Number	37	38	39
Date Tested	13/12/2021	13/12/2021	13/12/2021
Time Tested	14:30	14:45	15:00
Test Request #/Location	Lot 3103	Lot 3118	Lot 3123
Layer / Reduced Level	Layer 6	Layer 6	Layer 6
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	Clay
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	11	11	9
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	2.02	2.00	2.00
Field Moisture Content %	25.2	23.6	23.3
Field Dry Density (FDD) t/m ³	1.65	1.66	1.65
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	1.90	1.91	1.92
Adj. Optimum Moisture Content % (AS1289.5.4.1)	25.4	23.2	24.2
Adj. Field Moisture Content % (AS1289.5.4.1)	22.4	20.9	21.2
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	88.5	90.5	88.0
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	3.0	2.0	3.0
Hilf Density Ratio (%)	106.5	104.5	104.5
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: D21683-14
Issue Number: 1
Date Issued: 17/12/2021
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4067
Date Sampled: 14/12/2021
Dates Tested: 14/12/2021 - 16/12/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Location: Riverwalk Estate Stage 31 - Level one
Material: Clay
Material Source: Imported



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 Laboratory Manager
 NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D21-4067A	D21-4067B	D21-4067C
Test Number	40	41	42
Date Tested	14/12/2021	14/12/2021	14/12/2021
Time Tested	12:00	12:15	12:30
Test Request #/Location	Lot 3153	Lot 3150	Lot 3149
Layer / Reduced Level	Layer 4	Layer 4	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	0
Field Wet Density (FWD) t/m ³	1.94	1.95	1.94
Field Moisture Content %	21.8	21.3	24.9
Field Dry Density (FDD) t/m ³	1.59	1.61	1.55
Peak Converted Wet Density t/m ³	1.85	1.87	1.85
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	26.5	26.3	29.1
Adj. Field Moisture Content % (AS1289.5.4.1)	21.8	21.3	24.9
Moisture Ratio % (AS1289.5.4.1)	82.0	81.0	85.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	4.5	4.5	4.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	105.0	104.5	105.0
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: D21683-15
Issue Number: 1
Date Issued: 17/12/2021
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4073
Date Sampled: 15/12/2021
Dates Tested: 15/12/2021 - 16/12/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Location: Riverwalk Estate Stage 31 - Level one
Material: Clay
Material Source: Imported



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D21-4073A	D21-4073B	D21-4073C
Test Number	43	44	45
Date Tested	15/12/2021	15/12/2021	15/12/2021
Time Tested	14:30	14:45	15:00
Test Request #/Location	Lot 3145	Lot 3147	Lot 3148
Layer / Reduced Level	Layer 3	Layer 3	Layer 3
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	Clay
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	6	0	6
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	0	**
Field Wet Density (FWD) t/m ³	2.04	1.94	2.06
Field Moisture Content %	20.8	20.6	21.0
Field Dry Density (FDD) t/m ³	1.70	1.61	1.72
Peak Converted Wet Density t/m ³	**	1.84	**
Adjusted Peak Converted Wet Density t/m ³	1.94	**	1.95
Adj. Optimum Moisture Content % (AS1289.5.4.1)	24.7	24.9	23.7
Adj. Field Moisture Content % (AS1289.5.4.1)	19.5	20.6	19.7
Moisture Ratio % (AS1289.5.4.1)	**	82.5	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	79.0	**	83.0
Moisture Variation (Wv) %	**	4.0	**
Adjusted Moisture Variation %	5.0	**	4.0
Hilf Density Ratio (%)	105.0	105.5	105.5
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: D21683-16
Issue Number: 1
Date Issued: 21/12/2021
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4084
Date Sampled: 17/12/2021
Dates Tested: 17/12/2021 - 20/12/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Location: Riverwalk Estate Stage 31 - Level one
Material: Clay
Material Source: Imported



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D21-4084A	D21-4084B	D21-4084C
Test Number	46	47	48
Date Tested	17/12/2021	17/12/2021	17/12/2021
Time Tested	14:30	14:45	15:00
Test Request #/Location	Lot 3158	Lot 3160	Lot 3162
Layer / Reduced Level	Layer 04	Layer 04	Layer 04
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	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	1.95	2.03	1.96
Field Moisture Content %	21.1	18.9	23.1
Field Dry Density (FDD) t/m ³	1.61	1.71	1.60
Peak Converted Wet Density t/m ³	1.91	1.94	1.89
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	24.1	21.4	26.3
Adj. Field Moisture Content % (AS1289.5.4.1)	21.1	18.9	23.1
Moisture Ratio % (AS1289.5.4.1)	87.5	88.0	88.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	3.0	2.5	3.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	102.0	104.5	104.0
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: D21683-17
Issue Number: 1
Date Issued: 21/12/2021
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4087
Date Sampled: 18/12/2021
Dates Tested: 18/12/2021 - 20/12/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Location: Riverwalk Estate stage - Stage 31
Material: Clay
Material Source: Imported



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D21-4087A	D21-4087B	D21-4087C
Test Number	49	50	51
Date Tested	18/12/2021	18/12/2021	18/12/2021
Time Tested	14:30	14:45	15:00
Test Request #/Location	Lot 3154	Lot 3155	Lot 3156
Layer / Reduced Level	Layer 6	Layer 6	Layer 6
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	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	1.98	1.94	1.97
Field Moisture Content %	21.5	22.2	20.8
Field Dry Density (FDD) t/m ³	1.63	1.59	1.63
Peak Converted Wet Density t/m ³	1.91	1.86	1.90
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	24.8	24.2	23.8
Adj. Field Moisture Content % (AS1289.5.4.1)	21.5	22.2	20.8
Moisture Ratio % (AS1289.5.4.1)	87.0	92.0	87.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	3.0	2.0	3.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	103.5	104.0	104.0
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: D21683-18
Issue Number: 1
Date Issued: 17/01/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4122
Date Sampled: 13/01/2022 13:30
Dates Tested: 13/01/2022 - 14/01/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Site Selection: Selected by Client
Location: Riverwalk Estate Stage 31 - Level one
Material: Clay
Material Source: Import



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	D22-4122A	D22-4122B	D22-4122C
Sample Number			
Test Number	52	53	54
Date Tested	13/01/2022	13/01/2022	13/01/2022
Time Tested	13:30	13:30	13:30
Test Request #/Location	Lot 3153	Lot 3102	Lot 3110
Layer / Reduced Level	Layer 7	Layer 6	Layer 6
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	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
Field Wet Density (FWD) t/m ³	2.06	2.07	2.06
Field Moisture Content %	24.1	21.9	21.6
Field Dry Density (FDD) t/m ³	1.66	1.70	1.69
Peak Converted Wet Density t/m ³	1.95	1.96	1.96
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Moisture Variation (Wv) %	2.0	2.5	2.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	106.0	105.5	105.0
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: D21683-19
Issue Number: 1
Date Issued: 21/01/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4132
Date Sampled: 18/01/2022 8:55
Dates Tested: 18/01/2022 - 21/01/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Location: Riverwalk Estate Stage 31- Level one
Material: Clay
Material Source: Imported



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	D22-4132A	D22-4132B	D22-4132C	D22-4132D	D22-4132E	D22-4132F
Test Number	55	56	57	58	59	60
Date Tested	18/01/2022	18/01/2022	18/01/2022	18/01/2022	18/01/2022	18/01/2022
Time Tested	09:00	09:15	09:30	14:45	15:00	15:15
Test Request #/Location	LOT 3150	LOT 3153	LOT 3155	LOT 3156	LOT 3154	LOT 3151
Layer / Reduced Level	Layer 08	Layer 08	Layer 08	Layer 09	Layer 09	Layer 09
Thickness of Layer (mm)	300	300	300	300	300	300
Soil Description	Clay	Clay	Clay	Clay	Clay	Clay
Test Depth (mm)	275	275	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	10	6	13	6	8	4
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**	**	**	**
Field Wet Density (FWD) t/m ³	2.20	2.05	2.21	2.10	2.09	2.00
Field Moisture Content %	18.6	18.3	17.8	18.4	18.1	18.4
Field Dry Density (FDD) t/m ³	1.88	1.75	1.91	1.79	1.79	1.70
Peak Converted Wet Density t/m ³	**	**	**	**	**	**
Adjusted Peak Converted Wet Density t/m ³	2.08	2.04	2.09	2.06	2.05	2.02
Adj. Optimum Moisture Content % (AS1289.5.4.1)	21.2	22.1	19.6	20.8	20.2	21.6
Adj. Field Moisture Content % (AS1289.5.4.1)	16.7	17.2	15.6	17.3	16.6	17.7
Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	78.5	77.5	79.0	83.0	82.0	82.0
Moisture Variation (Wv) %	**	**	**	**	**	**
Adjusted Moisture Variation %	4.0	4.5	4.0	3.5	3.5	3.5
Hilf Density Ratio (%)	105.5	100.5	105.5	102.0	101.5	99.0
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: D21683-20
Issue Number: 1
Date Issued: 24/01/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4150
Date Sampled: 20/01/2022 9:50
Dates Tested: 20/01/2022 - 21/01/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Location: Riverwalk Estate Stage 31- Level one
Material: Silty Clay
Material Source: Imported



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D22-4150A	D22-4150B	D22-4150C
Test Number	61	62	63
Date Tested	20/01/2022	20/01/2022	20/01/2022
Time Tested	09:03	09:03	09:03
Test Request #/Location	LOT 3132	LOT 3134	LOT 3137
Layer / Reduced Level	Layer 4	Layer 4	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 (%)	15	12	11
Field Wet Density (FWD) t/m ³	2.05	2.08	2.07
Field Moisture Content %	16.6	13.8	14.0
Field Dry Density (FDD) t/m ³	1.76	1.83	1.81
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	2.02	2.03	2.02
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	2.5	3.0	3.0
Hilf Density Ratio (%)	101.5	103.0	102.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

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

Material Test Report


Report Number: D21683-21
Issue Number: 1
Date Issued: 25/01/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4157
Date Sampled: 21/01/2022
Dates Tested: 21/01/2022 - 24/01/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Location: Riverwalk Estate Stage 31- Level one
Material: Silty Clay
Material Source: Imported



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	D22-4157A	D22-4157B	D22-4157C	D22-4157D	D22-4157E	D22-4157F
Test Number	64	65	66	67	68	69
Date Tested	21/01/2022	21/01/2022	21/01/2022	21/01/2022	21/01/2022	21/01/2022
Time Tested	10:00	10:15	10:30	14:30	14:45	15:00
Test Request #/Location	LOT 3142	LOT 3144	LOT 3147	LOT 3162	LOT 3159	LOT 3158
Layer / Reduced Level	Layer 3	Layer 3	Layer 8	Layer 8	Layer 8	Layer 8
Thickness of Layer (mm)	300	300	300	300	300	300
Soil Description	Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay
Test Depth (mm)	275	275	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	7	7	6	7	8	5
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**	**	**	**
Field Wet Density (FWD) t/m ³	2.06	1.93	1.95	1.96	1.94	1.93
Field Moisture Content %	17.3	17.8	19.7	17.6	19.1	17.7
Field Dry Density (FDD) t/m ³	1.77	1.66	1.64	1.68	1.65	1.65
Peak Converted Wet Density t/m ³	**	**	**	**	**	**
Adjusted Peak Converted Wet Density t/m ³	1.98	1.93	1.94	1.95	1.95	1.94
Adj. Optimum Moisture Content % (AS1289.5.4.1)	19.3	20.6	23.6	20.2	21.1	19.0
Adj. Field Moisture Content % (AS1289.5.4.1)	16.1	16.5	18.5	16.4	17.7	16.8
Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	83.5	80.0	78.5	81.5	83.5	88.0
Moisture Variation (Wv) %	**	**	**	**	**	**
Adjusted Moisture Variation %	3.0	4.0	5.0	3.5	3.5	2.0
Hilf Density Ratio (%)	103.5	100.0	100.5	100.5	99.0	99.5
Compaction Method	Standard	Standard	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**	**	**

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

Material Test Report


Report Number: D21683-22
Issue Number: 1
Date Issued: 27/01/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4164
Date Sampled: 24/01/2022
Dates Tested: 24/01/2022 - 27/01/2022
Sampling Method: AS 1289.1.2.1 6.4 (a) - Sampling from layers in earthworks or pavement - uncompacted
Specification: 95% STD
Location: Riverwalk Estate Stage 31- Level one
Material: Silty Clay
Material Source: Imported



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D22-4164A	D22-4164B	D22-4164C
Test Number	70	71	72
Date Tested	24/01/2022	24/01/2022	24/01/2022
Time Tested	14:30	14:45	15:00
Test Request #/Location	LOT 3144	LOT 3143	LOT 3141
Layer / Reduced Level	layer 4	layer 4	layer 4
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	clay	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	3
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	**
Field Wet Density (FWD) t/m ³	1.83	1.80	1.80
Field Moisture Content %	19.2	19.0	18.8
Field Dry Density (FDD) t/m ³	1.54	1.52	1.53
Peak Converted Wet Density t/m ³	1.77	1.83	**
Adjusted Peak Converted Wet Density t/m ³	**	**	1.85
Adj. Optimum Moisture Content % (AS1289.5.4.1)	23.3	23.3	19.8
Adj. Field Moisture Content % (AS1289.5.4.1)	19.2	19.0	18.1
Moisture Ratio % (AS1289.5.4.1)	82.5	81.5	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	92.0
Moisture Variation (Wv) %	4.0	4.5	**
Adjusted Moisture Variation %	**	**	1.5
Hilf Density Ratio (%)	103.5	99.0	97.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

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

Material Test Report


Report Number: D21683-23
Issue Number: 1
Date Issued: 28/01/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4171
Date Sampled: 25/01/2022 14:15
Dates Tested: 25/01/2022 - 27/01/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Location: Riverwalk Estate Stage 31- Level one
Material: Silty Clay
Material Source: Imported



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 Approved Signatory: Eranda Hippola
 Laboratory Manager
 NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	D22-4171A	D22-4171B	D22-4171C
Sample Number	D22-4171A	D22-4171B	D22-4171C
Test Number	73	74	75
Date Tested	25/01/2022	25/01/2022	25/01/2022
Time Tested	14:15	14:30	14:45
Test Request #/Location	LOT 3133	LOT 3136	LOT 3138
Layer / Reduced Level	Layer 5	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	1.87	1.93	1.97
Field Moisture Content %	21.5	24.8	18.9
Field Dry Density (FDD) t/m ³	1.54	1.55	1.66
Peak Converted Wet Density t/m ³	1.86	1.90	1.93
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	23.5	27.4	21.1
Adj. Field Moisture Content % (AS1289.5.4.1)	21.5	24.8	18.9
Moisture Ratio % (AS1289.5.4.1)	91.5	90.5	89.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	2.0	2.5	2.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	100.5	102.0	102.0
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: D21683-24
Issue Number: 1
Date Issued: 02/02/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4188
Date Sampled: 31/01/2022 13:50
Dates Tested: 31/01/2022 - 01/02/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Site Selection: Selected by Client
Location: Riverwalk Estate Stage 31 - Level one
Material: Caly
Material Source: Onsite



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D22-4188A	D22-4188B	D22-4188C
Test Number	75	76	77
Date Tested	31/01/2022	31/01/2022	31/01/2022
Time Tested	14:23	14:23	14:24
Test Request #/Location	LOT3146	LOT 3151	LOT 3152
Layer / Reduced Level	Layer 10	Layer 10	Layer 10
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	Clay
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	16	0	14
Field Wet Density (FWD) t/m ³	2.05	2.04	2.07
Field Moisture Content %	24.4	24.5	21.7
Field Dry Density (FDD) t/m ³	1.65	1.64	1.70
Peak Converted Wet Density t/m ³	**	1.97	**
Adjusted Peak Converted Wet Density t/m ³	1.93	**	1.93
Moisture Variation (Wv) %	**	2.5	**
Adjusted Moisture Variation %	1.5	**	2.0
Hilf Density Ratio (%)	106.5	103.5	107.5
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: D21683-25
Issue Number: 1
Date Issued: 03/02/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4192
Date Sampled: 01/02/2022 14:00
Dates Tested: 01/02/2022 - 02/02/2022
Sampling Method: AS 1289.1.3.1 3.1.4 (b) - Open-drive samplers - piston samplers - floating type
Specification: 95% STD
Location: Riverwalk Estate Stage 31 - Level one
Material: Silty Clay
Material Source: On Site



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D22-4192A	D22-4192B	D22-4192C
Test Number	78	79	80
Date Tested	01/02/2022	01/02/2022	01/02/2022
Time Tested	15:21	15:21	15:21
Test Request #/Location	LOT 3141	LOT 3142	LOT 3143
Layer / Reduced Level	Layer 5	Layer 5	Layer 5
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	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
Field Wet Density (FWD) t/m ³	1.98	1.99	1.98
Field Moisture Content %	25.0	20.7	23.5
Field Dry Density (FDD) t/m ³	1.58	1.65	1.60
Peak Converted Wet Density t/m ³	1.94	1.97	1.96
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Moisture Variation (Wv) %	2.5	2.5	3.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	102.0	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: D21683-26
Issue Number: 1
Date Issued: 04/02/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D21683
Project Name: Riverwalk Estate Stage 31 - Level one
Project Location: Werribee
Work Request: 4198
Date Sampled: 03/02/2022 12:50
Dates Tested: 03/02/2022 - 04/02/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Location: Riverwalk Estate Stage 31 - Level one
Material: Clay
Material Source: Imprtd



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D22-4198A	D22-4198B	D22-4198C
Test Number	81	82	83
Date Tested	02/02/2022	02/02/2022	02/02/2022
Time Tested	12:30	12:40	12:50
Test Request #/Location	LOT 3155	LOT 3156	LOT 3153
Layer / Reduced Level	Layer 11	Layer 11	Layer 11
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	Clay
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	6	5	4
Field Wet Density (FWD) t/m ³	2.03	2.03	2.01
Field Moisture Content %	19.4	20.1	19.1
Field Dry Density (FDD) t/m ³	1.70	1.69	1.69
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	1.96	1.98	1.99
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	2.5	2.5	3.0
Hilf Density Ratio (%)	103.5	103.0	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