

Riverwalk Stage 32

GITA Inspection Verification Report

Prepared For: Excell Gray Bruni Pty Ltd

Report Number D22741A V1

Version Release Date 8 Apr 2022

Report Released By C Caulfield

Title Project Manager

Signature



Table of Contents

1 Introduction 3

2 Scope of Work 3

 2.1 Area of Work 3

 2.2 Specification 3

 2.3 Limitations 4

3 Construction Method 5

 3.1 Subgrade Preparation 5

 3.2 Fill Placement 5

4 Construction Verification 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 Pty Ltd as the Geotechnical Inspection and Testing Authority (GITA) to provide Level 1 supervision and testing works on the earthworks component for Riverwalk Stage 32. This work was conducted over the period of 03/02/2022 to 31/03/2022.

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 3201 through to 3270, bounded by streets Coliban Road, Dargo Road, Glenelg Road, Laxmi Link, Kalyani Street, Shanti Circuit, Rawson Circuit, Prana Way and Tulsi Avenue. 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: 10932FP01) and provided by Excell Gray Bruni Pty Ltd.

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 Pty Ltd 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 (D22741D1, 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 76 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 32 at Riverwalk. For completed fill areas of greater than 300mm, and for works completed between 03/02/2022 and 31/03/2022, 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 32 of Riverwalk was observed to be constructed in compliance with the requirements of the Technical Specification.



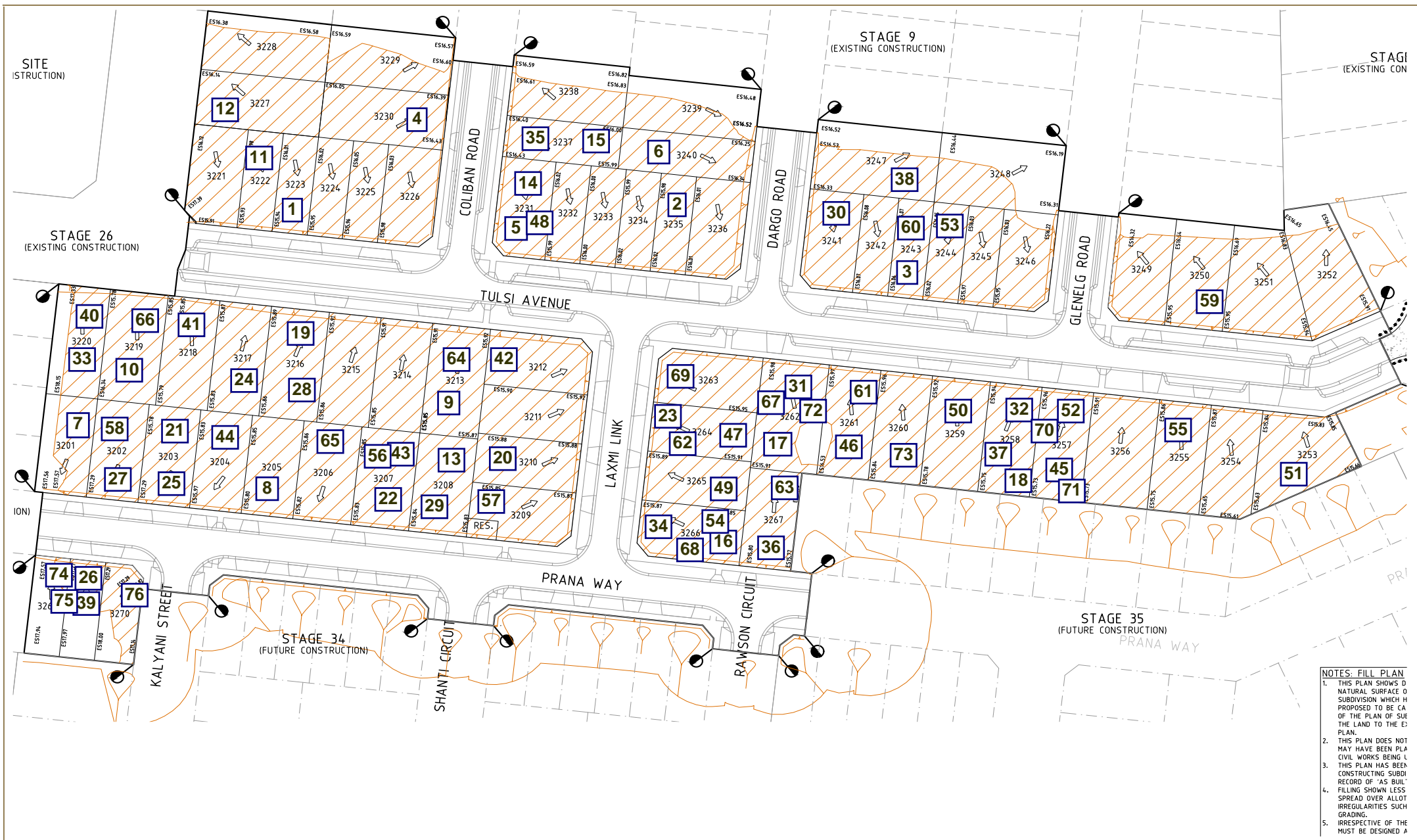
Your Worksite is Our Laboratory.

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



- NOTES: FILL PLAN**
1. THIS PLAN SHOWS THE NATURAL SURFACE OF THE SUBDIVISION WHICH IS PROPOSED TO BE CALLED 'AS BUILT' RECORD OF 'AS BUILT' FILLING SHOWN LESS SPREAD OVER ALLOT IRREGULARITIES SUCH GRADING.
 2. THIS PLAN DOES NOT MAY HAVE BEEN PLANNED CIVIL WORKS BEING CONSTRUCTING SUBDI
 3. THIS PLAN HAS BEEN RECORD OF 'AS BUILT' FILLING SHOWN LESS SPREAD OVER ALLOT IRREGULARITIES SUCH GRADING.
 4. IRRESPECTIVE OF THE MUST BE DESIGNED A



Our Head Office
 47 National Ave
 Pakenham, VIC 3810

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 Deer Park 03 8348 5596
 Bibra Lake 08 9395 7220

Test Location Plan
not to scale

Client: Excell Gray Bruni Pty Ltd

Project: Riverwalk Stage 32

Reference: D22741 D1



Your Worksite is Our Laboratory.

Appendix 2: Compaction Test Register and Test Certificates

Our Head Office
47 National Ave
Pakenham, VIC 3810

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

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Compaction Test Register

Client: Excell Gray Bruni Pty Ltd
Project: Riverwalk Stage 32

Project No: D22741
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
3/02/2022	1	Layer 1		102.0%	Pass	Lot 3223	D22741-1
3/02/2022	2	Layer 1		97.0%	Pass	Lot 3235	D22741-1
3/02/2022	3	Layer 1		98.0%	Pass	Lot 3243	D22741-1
4/02/2022	4	Layer 2		97.5%	Pass	Lot 3230	D22741-2
4/02/2022	5	Layer 2		98.0%	Pass	Lot 3231	D22741-2
4/02/2022	6	Layer 2		103.0%	Pass	Lot 3240	D22741-2
7/02/2022	7	Layer 2		102.5%	Pass	Lot 3201	D22741-3
7/02/2022	8	Layer 2		99.5%	Pass	Lot 3205	D22741-3
7/02/2022	9	Layer 2		107.5%	Pass	Lot 3213	D22741-3
8/02/2022	10	Layer 3		98.5%	Pass	Lot 3219	D22741-4
8/02/2022	11	Layer 3		104.5%	Pass	Lot 3222	D22741-4
8/02/2022	12	Layer 3		102.0%	Pass	Lot 3227	D22741-4
9/02/2022	13	Layer 4		95.5%	Pass	Lot 3208	D22741-5
9/02/2022	14	Layer 4		97.0%	Pass	Lot 3231	D22741-5
9/02/2022	15	Layer 4		105.5%	Pass	Lot 3237	D22741-5
10/02/2022	16	Layer 1		102.5%	Pass	Lot 3266	D22741-6
10/02/2022	17	Layer 1		106.5%	Pass	Lot 3262	D22741-6
10/02/2022	18	Layer 1		102.5%	Pass	Lot 3258	D22741-6
11/02/2022	19	Layer 5		97.0%	Pass	Lot 3216	D22741-7
11/02/2022	20	Layer 5		97.5%	Pass	Lot 3210	D22741-7
11/02/2022	21	Layer 5		100.5%	Pass	Lot 3203	D22741-7
14/02/2022	22	Layer 6		101.0%	Pass	Lot 3207	D22741-8
14/02/2022	23	Layer 6		98.5%	Pass	Lot 3264	D22741-8
15/02/2022	24	Layer 7		104.5%	Pass	Lot 3217	D22741-9
15/02/2022	25	Layer 7		104.5%	Pass	Lot 3203	D22741-9
15/02/2022	26	Layer 7		103.5%	Pass	Lot 3269	D22741-9
16/02/2022	27	Layer 8		100.5%	Pass	Lot 3202	D22741-10
16/02/2022	28	Layer 8		107.0%	Pass	Lot 3216	D22741-10
16/02/2022	29	Layer 7		100.5%	Pass	Lot 3208	D22741-10
17/02/2022	30	Layer 3		97.5%	Pass	Lot 3241	D22741-11
17/02/2022	31	Layer 3		106.5%	Pass	Lot 3262	D22741-11
17/02/2022	32	Layer 3		99.5%	Pass	Lot 3258	D22741-11
18/02/2022	33	Layer 8		102.5%	Pass	Lot 3220	D22741-12
18/02/2022	34	Layer 9		101.5%	Pass	Lot 3266	D22741-12
18/02/2022	35	Layer 9		104.0%	Pass	Lot 3227	D22741-12
21/02/2022	36	Layer 5		99.0%	Pass	Lot 3267	D22741-13
21/02/2022	37	Layer 5		96.5%	Pass	Lot 3258	D22741-13
21/02/2022	38	Layer 4		96.0%	Pass	Lot 3247	D22741-13
22/02/2022	39	Layer 9		100.5%	Pass	Lot 3269	D22741-14
22/02/2022	40	Layer 9		98.5%	Pass	Lot 3220	D22741-14
22/02/2022	41	Layer 8		99.5%	Pass	Lot 3218	D22741-14



Compaction Test Register

Client: Excell Gray Bruni Pty Ltd
Project: Riverwalk Stage 32

Project No: D22741
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
23/02/2022	42	Layer 10		97.0%	Pass	Lot 3212	D22741-15
23/02/2022	43	Layer 10		101.5%	Pass	Lot 3207	D22741-15
23/02/2022	44	Layer 10		100.0%	Pass	Lot 3204	D22741-15
24/02/2022	45	Layer 6		101.0%	Pass	Lot 3257	D22741-16
24/02/2022	46	Layer 6		100.5%	Pass	Lot 3261	D22741-16
24/02/2022	47	Layer 6		100.5%	Pass	Lot 3264	D22741-16
25/02/2022	48	Layer 5		102.5%	Pass	Lot 3231	D22741-17
25/02/2022	49	Layer 9		101.5%	Pass	Lot 3265	D22741-17
25/02/2022	50	Layer 9		101.0%	Pass	Lot 3259	D22741-17
28/02/2022	51	Layer 8		102.0%	Pass	Lot 3253	D22741-18
28/02/2022	52	Layer 8		101.5%	Pass	Lot 3257	D22741-18
28/02/2022	53	Layer 10		101.5%	Pass	Lot 3244	D22741-18
3/03/2022	54	Layer 10		96.0%	Pass	Lot 3266	D22741-19
3/03/2022	55	Layer 11		102.0%	Pass	Lot 3255	D22741-19
4/03/2022	56	Layer 11		98.0%	Pass	Lot 3207	D22741-20
4/03/2022	57	Layer 11		102.0%	Pass	Lot 3209	D22741-20
4/03/2022	58	Layer 11		100.5%	Pass	Lot 3202	D22741-20
9/03/2022	59	Layer 1		99.0%	Pass	Lot 3250	D22741-21
10/03/2022	60	Layer 10		102.5%	Pass	Lot 3243	D22741-22
10/03/2022	61	Layer 11		98.0%	Pass	Lot 3261	D22741-22
11/03/2022	62	Layer 11		98.0%	Pass	Lot 3264	D22741-23
11/03/2022	63	Layer 11		99.5%	Pass	Lot 3267	D22741-23
12/03/2022	64	Layer 12		99.5%	Pass	Lot 3213	D22741-24
12/03/2022	65	Layer 12		99.0%	Pass	Lot 3206	D22741-24
12/03/2022	66	Layer 12		96.5%	Pass	Lot 3219	D22741-24
16/03/2022	67	Layer 12		101.5%	Pass	Lot 3262	D22741-25
23/03/2022	68	Layer 13		100.5%	Pass	Lot 3266	D22741-26
23/03/2022	69	Layer 13		101.0%	Pass	Lot 3263	D22741-26
23/03/2022	70	Layer 12		99.0%	Pass	Lot 3257	D22741-26
28/03/2022	71	Layer 14		101.0%	Pass	Lot 3257	D22741-27
28/03/2022	72	Layer 14		99.5%	Pass	Lot 3262	D22741-27
28/03/2022	73	Layer 14		98.5%	Pass	Lot 3260	D22741-27
31/03/2022	74	Layer 11		98.0%	Pass	Lot 3268	D22741-28
31/03/2022	75	Layer 11		101.5%	Pass	Lot 3269	D22741-28
31/03/2022	76	Layer 11		100.5%	Pass	Lot 3270	D22741-28

Material Test Report

Report Number: D22741-1
Issue Number: 1
Date Issued: 07/02/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4204
Date Sampled: 03/02/2022 14:30
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 32 - Level one
Material: Silty 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	D22-4204A	D22-4204B	D22-4204C
Test Number	1	2	3
Date Tested	03/02/2022	03/02/2022	03/02/2022
Time Tested	02:10	02:15	02:30
Test Request #/Location	LOT 3223	LOT 3235	LOT 3243
Layer / Reduced Level	Layer 1	Layer 1	Layer 1
Thickness of Layer (mm)	300	300	300
Soil Description	Silty Clay	Silty Clay	Silty Clay
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	4	2	3
Field Wet Density (FWD) t/m ³	1.98	1.88	1.88
Field Moisture Content %	21.5	21.5	22.6
Field Dry Density (FDD) t/m ³	1.63	1.54	1.53
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	1.95	1.93	1.91
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	2.5	3.0	2.0
Hilf Density Ratio (%)	102.0	97.0	98.0
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

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

Material Test Report


Report Number: D22741-2
Issue Number: 1
Date Issued: 08/02/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4209
Date Sampled: 04/02/2022 14:30
Dates Tested: 04/02/2022 - 07/02/2022
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 32 - Level one
Material: Silty 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	D22-4209A	D22-4209B	D22-4209C
Test Number	4	5	6
Date Tested	04/02/2022	04/02/2022	04/02/2022
Time Tested	14:30	14:45	15:00
Test Request #/Location	LOT 3230	LOT 3231	LOT 3240
Layer / Reduced Level	Layer2	Layer2	Layer2
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	1.86	1.82	1.99
Field Moisture Content %	18.0	14.7	25.1
Field Dry Density (FDD) t/m ³	1.58	1.58	1.59
Peak Converted Wet Density t/m ³	1.91	1.85	1.93
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	18.4	17.6	25.6
Adj. Field Moisture Content % (AS1289.5.4.1)	18.0	14.7	25.1
Moisture Ratio % (AS1289.5.4.1)	98.0	84.0	98.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.5	3.0	0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	97.5	98.0	103.0
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: D22741-3
Issue Number: 1
Date Issued: 09/02/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4212
Date Sampled: 07/02/2022 14:30
Dates Tested: 07/02/2022 - 08/02/2022
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 32 - 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	D22-4212A	D22-4212B	D22-4212C
Test Number	7	8	9
Date Tested	07/02/2022	07/02/2022	07/02/2022
Time Tested	14:30	14:45	15:00
Test Request #/Location	LOT 3201	LOT 3205	LOT 3213
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 (%)	0	0	8
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	**
Field Wet Density (FWD) t/m ³	1.94	1.93	2.09
Field Moisture Content %	18.0	18.7	12.2
Field Dry Density (FDD) t/m ³	1.65	1.63	1.88
Peak Converted Wet Density t/m ³	1.90	1.94	**
Adjusted Peak Converted Wet Density t/m ³	**	**	1.95
Adj. Optimum Moisture Content % (AS1289.5.4.1)	20.9	20.9	13.5
Adj. Field Moisture Content % (AS1289.5.4.1)	18.0	18.7	11.2
Moisture Ratio % (AS1289.5.4.1)	86.5	90.0	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	83.5
Moisture Variation (Wv) %	3.0	2.0	**
Adjusted Moisture Variation %	**	**	2.5
Hilf Density Ratio (%)	102.5	99.5	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: D22741-4
Issue Number: 1
Date Issued: 10/02/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4225
Date Sampled: 08/02/2022 14:15
Dates Tested: 08/02/2022 - 09/02/2022
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 32 - 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

Sample Number	D22-4225A	D22-4225B	D22-4225C
Test Number	10	11	12
Date Tested	08/02/2022	08/02/2022	08/02/2022
Time Tested	14:15	14:30	14:45
Test Request #/Location	LOT 3219	LOT 3222	LOT 3227
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	1.88	1.97	1.98
Field Moisture Content %	20.8	22.8	20.2
Field Dry Density (FDD) t/m ³	1.56	1.61	1.65
Peak Converted Wet Density t/m ³	1.91	1.88	1.94
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	22.1	24.4	22.5
Adj. Field Moisture Content % (AS1289.5.4.1)	20.8	22.8	20.2
Moisture Ratio % (AS1289.5.4.1)	94.0	93.0	90.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	1.0	1.5	2.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	98.5	104.5	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: D22741-5
Issue Number: 1
Date Issued: 11/02/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4230
Date Sampled: 09/02/2022 14:30
Dates Tested: 09/02/2022 - 10/02/2022
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 32 - Level one
Material: Silty 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	D22-4230A	D22-4230B	D22-4230C
Test Number	13	14	15
Date Tested	09/02/2022	09/02/2022	09/02/2022
Time Tested	14:00	14:15	14:30
Test Request #/Location	Lot 3208	Lot 3231	Lot 3237
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	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0
Field Wet Density (FWD) t/m ³	1.84	1.84	2.06
Field Moisture Content %	19.2	14.2	16.9
Field Dry Density (FDD) t/m ³	1.54	1.61	1.76
Peak Converted Wet Density t/m ³	1.93	1.90	1.95
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	21.8	16.8	19.5
Adj. Field Moisture Content % (AS1289.5.4.1)	19.2	14.2	16.9
Moisture Ratio % (AS1289.5.4.1)	88.0	84.5	86.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	2.5	2.5	2.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	95.5	97.0	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: D22741-6
Issue Number: 1
Date Issued: 14/02/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4239
Date Sampled: 10/02/2022 14:30
Dates Tested: 10/02/2022 - 11/02/2022
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 32 - 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	D22-4239A	D22-4239B	D22-4239C
Test Number	16	17	18
Date Tested	10/02/2022	10/02/2022	10/02/2022
Time Tested	14:30	14:45	15:00
Test Request #/Location	Lot 3266	Lot 3262	Lot 3258
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	10	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	**	0
Field Wet Density (FWD) t/m ³	1.95	2.12	1.96
Field Moisture Content %	14.5	14.3	14.3
Field Dry Density (FDD) t/m ³	1.70	1.88	1.71
Peak Converted Wet Density t/m ³	1.90	**	1.91
Adjusted Peak Converted Wet Density t/m ³	**	1.99	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	16.7	14.8	16.7
Adj. Field Moisture Content % (AS1289.5.4.1)	14.5	12.9	14.3
Moisture Ratio % (AS1289.5.4.1)	87.0	**	86.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	86.5	**
Moisture Variation (Wv) %	2.0	**	2.5
Adjusted Moisture Variation %	**	2.0	**
Hilf Density Ratio (%)	102.5	106.5	102.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

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

Material Test Report


Report Number: D22741-7
Issue Number: 1
Date Issued: 15/02/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4244
Date Sampled: 11/02/2022 14:30
Dates Tested: 11/02/2022 - 14/02/2022
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 32 - 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	D22-4244A	D22-4244B	D22-4244C
Test Number	19	20	21
Date Tested	11/02/2022	11/02/2022	11/02/2022
Time Tested	14:30	14:40	14:50
Test Request #/Location	Lot 3216	Lot 3210	Lot 3203
Layer / Reduced Level	Layer 05	Layer 05	Layer 05
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 (%)	4	4	6
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	1.94	1.97	1.99
Field Moisture Content %	15.4	16.9	16.4
Field Dry Density (FDD) t/m ³	1.69	1.69	1.73
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	1.99	2.01	1.98
Adj. Optimum Moisture Content % (AS1289.5.4.1)	17.2	15.8	17.7
Adj. Field Moisture Content % (AS1289.5.4.1)	14.8	16.2	15.4
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	86.0	103.0	87.5
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	2.5	-0.5	2.0
Hilf Density Ratio (%)	97.0	97.5	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: D22741-8
Issue Number: 1
Date Issued: 18/02/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4251
Date Sampled: 14/02/2022 14:30
Dates Tested: 14/02/2022 - 17/02/2022
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 32 - 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	D22-4251A	D22-4251B	
Test Number	22	23	
Date Tested	14/02/2022	14/02/2022	
Time Tested	14:30	14:45	
Test Request #/Location	LOT 3207	LOT 3264	
Layer / Reduced Level	Layer 06	Layer 06	
Thickness of Layer (mm)	300	300	
Soil Description	Silty Clay	Silty Clay	
Test Depth (mm)	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	5	4	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	
Field Wet Density (FWD) t/m ³	2.08	2.02	
Field Moisture Content %	17.2	**	
Field Dry Density (FDD) t/m ³	1.79	**	
Peak Converted Wet Density t/m ³	**	**	
Adjusted Peak Converted Wet Density t/m ³	2.06	2.05	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	18.8	14.4	
Adj. Field Moisture Content % (AS1289.5.4.1)	16.4	**	
Moisture Ratio % (AS1289.5.4.1)	**	**	
Adjusted Moisture Ratio % (AS1289.5.4.1)	87.5	83.5	
Moisture Variation (Wv) %	**	**	
Adjusted Moisture Variation %	2.5	2.5	
Hilf Density Ratio (%)	101.0	98.5	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

Moisture Variation Note:

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

Material Test Report

Report Number: D22741-9
Issue Number: 1
Date Issued: 18/02/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4258
Date Sampled: 15/02/2022 14:30
Dates Tested: 15/02/2022 - 16/02/2022
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 32 - 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	D22-4258A	D22-4258B	D22-4258C
Test Number	24	25	26
Date Tested	15/02/2022	15/02/2022	15/02/2022
Time Tested	14:40	14:55	15:10
Test Request #/Location	LOT 3217	LOT 3203	LOT 3269
Layer / Reduced Level	Layer 7	Layer 7	Layer 7
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	5	5
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	1.97	1.97	1.97
Field Moisture Content %	14.8	14.8	13.7
Field Dry Density (FDD) t/m ³	1.73	1.72	1.74
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	1.88	1.89	1.90
Adj. Optimum Moisture Content % (AS1289.5.4.1)	19.0	19.3	15.9
Adj. Field Moisture Content % (AS1289.5.4.1)	14.3	14.1	13.0
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	75.5	73.0	82.0
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	4.5	5.0	3.0
Hilf Density Ratio (%)	104.5	104.5	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: D22741-10
Issue Number: 1
Date Issued: 18/02/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4265
Date Sampled: 16/02/2022 14:30
Dates Tested: 16/02/2022 - 17/02/2022
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 32 - 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	D22-4265A	D22-4265B	D22-4265C
Test Number	27	28	29
Date Tested	16/02/2022	16/02/2022	16/02/2022
Time Tested	02:30	02:42	03:01
Test Request #/Location	LOT 3202	LOT 3216	LOT 3208
Layer / Reduced Level	Layer 8	Layer 8	Layer 7
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	9	5
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	1.93	2.08	1.92
Field Moisture Content %	18.3	18.5	18.6
Field Dry Density (FDD) t/m ³	1.64	1.78	1.63
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	1.92	1.95	1.91
Adj. Optimum Moisture Content % (AS1289.5.4.1)	20.3	20.0	19.5
Adj. Field Moisture Content % (AS1289.5.4.1)	17.3	16.9	17.6
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	85.0	84.5	90.0
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	3.0	3.0	2.0
Hilf Density Ratio (%)	100.5	107.0	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: D22741-11
Issue Number: 1
Date Issued: 21/02/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4271
Date Sampled: 17/02/2022 15:00
Dates Tested: 17/02/2022 - 18/02/2022
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 32 - 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	D22-4271A	D22-4271B	D22-4271C
Test Number	30	31	32
Date Tested	17/02/2022	17/02/2022	17/02/2022
Time Tested	14:30	14:45	15:00
Test Request #/Location	Lot 3241	Lot 3262	Lot 3258
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	1.96	2.16	1.98
Field Moisture Content %	13.0	11.7	12.2
Field Dry Density (FDD) t/m ³	1.74	1.94	1.77
Peak Converted Wet Density t/m ³	2.01	2.03	2.00
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	14.6	13.7	14.2
Adj. Field Moisture Content % (AS1289.5.4.1)	13.0	11.7	12.2
Moisture Ratio % (AS1289.5.4.1)	88.5	85.5	86.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	1.5	2.0	2.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	97.5	106.5	99.5
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: D22741-12
Issue Number: 1
Date Issued: 22/02/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4277
Date Sampled: 18/02/2022 14:30
Dates Tested: 18/02/2022 - 21/02/2022
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 32 - 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	D22-4277A	D22-4277B	D22-4277C
Test Number	33	34	35
Date Tested	18/02/2022	18/02/2022	18/02/2022
Time Tested	14:30	14:45	14:55
Test Request #/Location	LOT 3220	LOT 3266	LOT 3227
Layer / Reduced Level	Layer 8	Layer 9	Layer 9
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 (%)	18	13	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	0
Field Wet Density (FWD) t/m ³	2.08	2.01	1.89
Field Moisture Content %	17.1	17.1	17.8
Field Dry Density (FDD) t/m ³	1.82	1.75	1.60
Peak Converted Wet Density t/m ³	**	**	1.82
Adjusted Peak Converted Wet Density t/m ³	2.03	1.98	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	18.2	19.2	22.8
Adj. Field Moisture Content % (AS1289.5.4.1)	14.1	14.8	17.8
Moisture Ratio % (AS1289.5.4.1)	**	**	78.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	77.5	77.5	**
Moisture Variation (Wv) %	**	**	5.0
Adjusted Moisture Variation %	4.0	4.0	**
Hilf Density Ratio (%)	102.5	101.5	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: D22741-13
Issue Number: 1
Date Issued: 23/02/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4281
Date Sampled: 21/02/2022 14:30
Dates Tested: 21/02/2022 - 22/02/2022
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 32 - 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	D22-4281A	D22-4281B	D22-4281C
Test Number	36	37	38
Date Tested	21/02/2022	21/02/2022	21/02/2022
Time Tested	14:30	14:45	14:50
Test Request #/Location	Lot 3267	Lot 3258	Lot 3247
Layer / Reduced Level	Layer 5	Layer 5	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 (%)	5	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	0	0
Field Wet Density (FWD) t/m ³	1.94	1.84	1.83
Field Moisture Content %	17.6	18.4	18.5
Field Dry Density (FDD) t/m ³	1.66	1.56	1.54
Peak Converted Wet Density t/m ³	**	1.91	1.90
Adjusted Peak Converted Wet Density t/m ³	1.96	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	18.1	19.8	19.6
Adj. Field Moisture Content % (AS1289.5.4.1)	16.7	18.4	18.5
Moisture Ratio % (AS1289.5.4.1)	**	93.0	94.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	92.0	**	**
Moisture Variation (Wv) %	**	1.5	1.0
Adjusted Moisture Variation %	1.5	**	**
Hilf Density Ratio (%)	99.0	96.5	96.0
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: D22741-14
Issue Number: 1
Date Issued: 24/02/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4285
Date Sampled: 22/02/2022 14:30
Dates Tested: 22/02/2022 - 23/02/2022
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 32 - Level one
Material: Silty 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	D22-4285A	D22-4285B	D22-4285C
Test Number	39	40	41
Date Tested	22/02/2022	22/02/2022	22/02/2022
Time Tested	14:30	14:45	14:50
Test Request #/Location	Lot 3269	Lot 3220	Lot 3218
Layer / Reduced Level	Layer 9	Layer 9	Layer 8
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	1.96	1.87	1.91
Field Moisture Content %	18.3	18.7	19.7
Field Dry Density (FDD) t/m ³	1.66	1.57	1.59
Peak Converted Wet Density t/m ³	1.95	1.89	1.92
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	21.6	22.0	22.9
Adj. Field Moisture Content % (AS1289.5.4.1)	18.3	18.7	19.7
Moisture Ratio % (AS1289.5.4.1)	84.5	85.5	86.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	3.0	3.0	3.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	100.5	98.5	99.5
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: D22741-15
Issue Number: 1
Date Issued: 28/02/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4299
Date Sampled: 23/02/2022 14:30
Dates Tested: 23/02/2022 - 25/02/2022
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 32 - 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	D22-4299A	D22-4299B	D22-4299C
Test Number	42	43	44
Date Tested	23/02/2022	23/02/2022	23/02/2022
Time Tested	14:30	14:45	15:10
Test Request #/Location	Lot 3212	Lot 3207	Lot 3204
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 (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0
Field Wet Density (FWD) t/m ³	1.81	1.92	1.86
Field Moisture Content %	19.3	17.4	19.6
Field Dry Density (FDD) t/m ³	1.52	1.63	1.56
Peak Converted Wet Density t/m ³	1.86	1.88	1.86
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	22.1	20.5	22.9
Adj. Field Moisture Content % (AS1289.5.4.1)	19.3	17.4	19.6
Moisture Ratio % (AS1289.5.4.1)	87.5	85.0	85.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	3.0	3.0	3.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	97.0	101.5	100.0
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

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

Material Test Report


Report Number: D22741-16
Issue Number: 1
Date Issued: 28/02/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4307
Date Sampled: 24/02/2022 14:30
Dates Tested: 24/02/2022 - 25/02/2022
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 32 - 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	D22-4307A	D22-4307B	D22-4307C
Test Number	45	46	47
Date Tested	24/02/2022	24/02/2022	24/02/2022
Time Tested	14:34	14:45	14:57
Test Request #/Location	Lot 3257	Lot 3261	Lot 3264
Layer / Reduced Level	Layer 06	Layer 06	Layer 06
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	1.76	1.92	1.96
Field Moisture Content %	13.3	15.1	18.3
Field Dry Density (FDD) t/m ³	1.55	1.66	1.66
Peak Converted Wet Density t/m ³	1.74	1.91	1.95
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	18.0	19.9	23.1
Adj. Field Moisture Content % (AS1289.5.4.1)	13.3	15.1	18.3
Moisture Ratio % (AS1289.5.4.1)	74.0	76.0	79.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	5.0	4.5	4.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	101.0	100.5	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: D22741-17
Issue Number: 1
Date Issued: 01/03/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4313
Date Sampled: 25/02/2022 14:30
Dates Tested: 25/02/2022 - 28/02/2022
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 32 - 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	D22-4313A	D22-4313B	D22-4313C
Test Number	48	49	50
Date Tested	25/02/2022	25/02/2022	25/02/2022
Time Tested	14:35	14:45	14:59
Test Request #/Location	Lot 3231	Lot 3265	Lot 3259
Layer / Reduced Level	Layer 5	Layer9	Layer 9
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	2.20	2.04	2.03
Field Moisture Content %	17.0	16.6	19.5
Field Dry Density (FDD) t/m ³	1.88	1.75	1.70
Peak Converted Wet Density t/m ³	2.14	2.02	2.01
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	19.9	19.4	22.8
Adj. Field Moisture Content % (AS1289.5.4.1)	17.0	16.6	19.5
Moisture Ratio % (AS1289.5.4.1)	85.5	85.5	85.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	2.5	2.5	3.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	102.5	101.5	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: D22741-18
Issue Number: 1
Date Issued: 02/03/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4319
Date Sampled: 28/02/2022 14:30
Dates Tested: 28/02/2022 - 01/03/2022
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 32 - 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	D22-4319A	D22-4319B	D22-4319C
Test Number	51	52	53
Date Tested	28/02/2022	28/02/2022	28/02/2022
Time Tested	14:30	14:45	14:58
Test Request #/Location	Lots 3253	Lots 3257	Lots 3244
Layer / Reduced Level	Layer 8	Layer 8	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 (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0
Field Wet Density (FWD) t/m ³	1.96	1.90	1.99
Field Moisture Content %	19.5	20.2	20.3
Field Dry Density (FDD) t/m ³	1.64	1.58	1.65
Peak Converted Wet Density t/m ³	1.92	1.88	1.95
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	22.3	23.2	23.3
Adj. Field Moisture Content % (AS1289.5.4.1)	19.5	20.2	20.3
Moisture Ratio % (AS1289.5.4.1)	87.5	86.5	87.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	2.5	3.0	3.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	102.0	101.5	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: D22741-19
Issue Number: 1
Date Issued: 08/03/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4336
Date Sampled: 03/03/2022 14:45
Dates Tested: 03/03/2022 - 07/03/2022
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 32 - 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	D22-4336A	D22-4336B	
Test Number	54	55	
Date Tested	03/03/2022	03/03/2022	
Time Tested	14:45	15:00	
Test Request #/Location	LOT 3266	LOT 3255	
Layer / Reduced Level	LAYER 10	LAYER 11	
Thickness of Layer (mm)	300	300	
Soil Description	Clay	Clay	
Test Depth (mm)	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	
Field Wet Density (FWD) t/m ³	1.93	2.08	
Field Moisture Content %	17.0	20.4	
Field Dry Density (FDD) t/m ³	1.65	1.72	
Peak Converted Wet Density t/m ³	2.02	2.03	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	17.8	21.3	
Adj. Field Moisture Content % (AS1289.5.4.1)	17.0	20.4	
Moisture Ratio % (AS1289.5.4.1)	95.5	95.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	1.0	1.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	96.0	102.0	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

Moisture Variation Note:

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

Material Test Report


Report Number: D22741-20
Issue Number: 1
Date Issued: 08/03/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4344
Date Sampled: 04/03/2022 14:30
Dates Tested: 04/03/2022 - 07/03/2022
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 32 - 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	D22-4344A	D22-4344B	D22-4344C
Test Number	56	57	58
Date Tested	04/03/2022	04/03/2022	04/03/2022
Time Tested	14:30	14:45	15:05
Test Request #/Location	LOT 3207	LOT 3209	LOT 3202
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 (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0
Field Wet Density (FWD) t/m ³	1.76	1.96	1.88
Field Moisture Content %	14.0	13.7	13.9
Field Dry Density (FDD) t/m ³	1.55	1.73	1.65
Peak Converted Wet Density t/m ³	1.80	1.92	1.87
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	16.9	18.3	16.9
Adj. Field Moisture Content % (AS1289.5.4.1)	14.0	13.7	13.9
Moisture Ratio % (AS1289.5.4.1)	82.5	75.0	82.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	3.0	4.5	3.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	98.0	102.0	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: D22741-21
Issue Number: 1
Date Issued: 11/03/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4368
Date Sampled: 09/03/2022 14:30
Dates Tested: 09/03/2022 - 10/03/2022
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 32 - 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	D22-4368A		
Test Number	59		
Date Tested	09/03/2022		
Time Tested	14:30		
Test Request #/Location	LOT 3250		
Layer / Reduced Level	Layer 1		
Thickness of Layer (mm)	300		
Soil Description	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	1.90		
Field Moisture Content %	18.3		
Field Dry Density (FDD) t/m ³	1.60		
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)	22.0		
Adj. Field Moisture Content % (AS1289.5.4.1)	18.3		
Moisture Ratio % (AS1289.5.4.1)	83.0		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	3.5		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	99.0		
Compaction Method	Standard		
Report Remarks	**		

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

Material Test Report

Report Number: D22741-22
Issue Number: 1
Date Issued: 15/03/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4373
Date Sampled: 10/03/2022 14:35
Dates Tested: 10/03/2022 - 11/03/2022
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 32 - 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	D22-4373A	D22-4373B	
Test Number	60	61	
Date Tested	10/03/2022	10/03/2022	
Time Tested	14:30	14:43	
Test Request #/Location	LOT 3243	LOT 3261	
Layer / Reduced Level	Layer 10	Layer 11	
Thickness of Layer (mm)	300	300	
Soil Description	Clay	Clay	
Test Depth (mm)	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	9	3	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	
Field Wet Density (FWD) t/m ³	2.04	1.90	
Field Moisture Content %	22.3	24.7	
Field Dry Density (FDD) t/m ³	1.69	1.53	
Peak Converted Wet Density t/m ³	**	**	
Adjusted Peak Converted Wet Density t/m ³	1.99	1.93	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	22.2	27.1	
Adj. Field Moisture Content % (AS1289.5.4.1)	20.3	23.9	
Moisture Ratio % (AS1289.5.4.1)	**	**	
Adjusted Moisture Ratio % (AS1289.5.4.1)	91.5	88.5	
Moisture Variation (Wv) %	**	**	
Adjusted Moisture Variation %	2.0	3.0	
Hilf Density Ratio (%)	102.5	98.0	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

Moisture Variation Note:

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

Material Test Report

Report Number: D22741-23
Issue Number: 1
Date Issued: 16/03/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4378
Date Sampled: 11/03/2022 14:45
Dates Tested: 11/03/2022 - 15/03/2022
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 32 - Level one
Material: Silty 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	D22-4378A	D22-4378B	
Test Number	62	63	
Date Tested	11/03/2022	11/03/2022	
Time Tested	14:45	15:00	
Test Request #/Location	LOT 3264	LOT 3267	
Layer / Reduced Level	Layer 11	Layer 11	
Thickness of Layer (mm)	300	300	
Soil Description	Clay	Clay	
Test Depth (mm)	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	19	18	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	
Field Wet Density (FWD) t/m ³	2.01	2.06	
Field Moisture Content %	23.3	22.6	
Field Dry Density (FDD) t/m ³	1.69	1.74	
Peak Converted Wet Density t/m ³	**	**	
Adjusted Peak Converted Wet Density t/m ³	2.04	2.07	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	24.8	24.4	
Adj. Field Moisture Content % (AS1289.5.4.1)	18.9	18.5	
Moisture Ratio % (AS1289.5.4.1)	**	**	
Adjusted Moisture Ratio % (AS1289.5.4.1)	76.5	75.5	
Moisture Variation (Wv) %	**	**	
Adjusted Moisture Variation %	1.5	1.5	
Hilf Density Ratio (%)	98.0	99.5	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

Moisture Variation Note:

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

Material Test Report

Report Number: D22741-24
Issue Number: 1
Date Issued: 16/03/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4382
Date Sampled: 12/03/2022
Dates Tested: 12/03/2022 - 15/03/2022
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 32 - Level One
Material: Clay
Material Source: On site



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Approved Signatory: Eranda Hippola
 Laboratory Manager

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D22-4382A	D22-4382B	D22-4382C
Test Number	64	65	66
Date Tested	12/03/2022	12/03/2022	12/03/2022
Time Tested	13:00	13:00	13:00
Test Request #/Location	Lot 3213	Lot 3206	Lot 3219
Layer / Reduced Level	Layer 12	Layer 12	Layer 12
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 (%)	18	18	17
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0
Field Wet Density (FWD) t/m ³	2.05	2.05	1.94
Field Moisture Content %	21.9	23.1	22.5
Field Dry Density (FDD) t/m ³	1.74	1.73	1.63
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	2.06	2.07	2.01
Adj. Optimum Moisture Content % (AS1289.5.4.1)	24.1	25.2	24.6
Adj. Field Moisture Content % (AS1289.5.4.1)	17.9	18.9	18.7
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	74.5	75.0	76.0
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	2.0	2.0	2.0
Hilf Density Ratio (%)	99.5	99.0	96.5
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: D22741-25
Issue Number: 1
Date Issued: 18/03/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4393
Date Sampled: 16/03/2022 14:30
Dates Tested: 16/03/2022 - 17/03/2022
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 32 - 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	D22-4393A		
Test Number	67		
Date Tested	16/03/2022		
Time Tested	14:30		
Test Request #/Location	LOT 3262		
Layer / Reduced Level	Layer 12		
Thickness of Layer (mm)	300		
Soil Description	Clay		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	10		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**		
Field Wet Density (FWD) t/m ³	2.19		
Field Moisture Content %	18.0		
Field Dry Density (FDD) t/m ³	1.89		
Peak Converted Wet Density t/m ³	**		
Adjusted Peak Converted Wet Density t/m ³	2.16		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	16.4		
Adj. Field Moisture Content % (AS1289.5.4.1)	16.2		
Moisture Ratio % (AS1289.5.4.1)	**		
Adjusted Moisture Ratio % (AS1289.5.4.1)	98.5		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	0.0		
Hilf Density Ratio (%)	101.5		
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: D22741-26
Issue Number: 1
Date Issued: 28/03/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4426
Date Sampled: 23/03/2022 14:30
Dates Tested: 23/03/2022 - 25/03/2022
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 32 - 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	D22-4426A	D22-4426B	D22-4426C
Test Number	68	69	70
Date Tested	23/03/2022	23/03/2022	23/03/2022
Time Tested	14:30	14:45	14:58
Test Request #/Location	LOT 3266	LOT 3263	LOT 3257
Layer / Reduced Level	Layer 13	Layer 13	Layer 12
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	6	7
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	2.03	2.04	1.78
Field Moisture Content %	17.3	17.6	17.2
Field Dry Density (FDD) t/m ³	1.75	1.76	1.53
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	2.02	2.03	1.80
Adj. Optimum Moisture Content % (AS1289.5.4.1)	20.8	21.3	18.7
Adj. Field Moisture Content % (AS1289.5.4.1)	16.2	16.5	16.1
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	78.0	77.5	86.0
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	4.5	4.5	3.0
Hilf Density Ratio (%)	100.5	101.0	99.0
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

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

Material Test Report


Report Number: D22741-27
Issue Number: 1
Date Issued: 01/04/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4449
Date Sampled: 26/03/2022
Dates Tested: 26/03/2022 - 01/04/2022
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 32 - Level one
Material: Clay
Material Source: On site



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D22-4449A	D22-4449B	D22-4449C
Test Number	71	72	73
Date Tested	28/03/2022	28/03/2022	28/03/2022
Time Tested	**	**	**
Test Request #/Location	Lot 3257	Lot 3262	Lot 3260
Layer / Reduced Level	Layer 14	Layer 14	Layer 14
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	1.96	1.92	1.89
Field Moisture Content %	9.5	9.5	9.8
Field Dry Density (FDD) t/m ³	1.79	1.76	1.72
Peak Converted Wet Density t/m ³	1.94	1.93	1.92
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	14.1	14.6	14.6
Adj. Field Moisture Content % (AS1289.5.4.1)	9.5	9.5	9.8
Moisture Ratio % (AS1289.5.4.1)	67.5	65.0	67.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	4.5	5.0	5.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	101.0	99.5	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: D22741-28
Issue Number: 1
Date Issued: 05/04/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22741
Project Name: Riverwalk Estate Stage 32 - Level one
Project Location: Werribee
Work Request: 4477
Date Sampled: 31/03/2022 14:00
Dates Tested: 31/03/2022 - 04/04/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Location: Riverwalk stage 32 - 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	D22-4477A	D22-4477B	D22-4477C
Test Number	74	75	76
Date Tested	31/03/2022	31/03/2022	31/03/2022
Time Tested	14:00	14:15	14:30
Test Request #/Location	LOT 3268	LOT 3269	LOT 3270
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 (%)	0	8	6
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	**	**
Field Wet Density (FWD) t/m ³	1.85	1.96	1.92
Field Moisture Content %	15.0	14.4	14.4
Field Dry Density (FDD) t/m ³	1.61	1.73	1.69
Peak Converted Wet Density t/m ³	1.89	**	**
Adjusted Peak Converted Wet Density t/m ³	**	1.93	1.91
Adj. Optimum Moisture Content % (AS1289.5.4.1)	17.2	16.2	15.2
Adj. Field Moisture Content % (AS1289.5.4.1)	15.0	13.2	13.5
Moisture Ratio % (AS1289.5.4.1)	87.5	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	82.0	89.0
Moisture Variation (Wv) %	2.0	**	**
Adjusted Moisture Variation %	**	3.0	2.0
Hilf Density Ratio (%)	98.0	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