

Riverwalk Stage 34

GITA Inspection Verification Report

Prepared For: Excell Gray Bruni

Report Number D22774A V1

Version Release Date 21 Apr 2023

Report Released By C Caulfield

Title Project Manager

Signature



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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 34. This work was conducted over the period of 16/03/2022 to 02/08/2022.

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 3401 to 3473, bounded by streets Kalyani Street, Shanti Circuit and Rawson Circuit. The site will be a Residential development.

The majority of the fill placed on lots 3427 to 3432 and 3454 to 3459 was placed and compacted under level 1 supervision of stage 32 (level 1 report number D22741A).

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: 10934FP01 Rev C) 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 (D22774D1, 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 74 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 34 at Riverwalk. For completed fill areas of greater than 300mm, and for works completed between 16/03/2022 and 02/08/2022, 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 34 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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Our Head Office
47 National Ave
Pakenham, VIC 3810

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

Test Location Plan

not to scale

Client: Excell Gray Bruni

Project: Riverwalk, Stage 34

Reference: D22774 D1



Your Worksite is Our Laboratory.

Appendix 2: Compaction Test Register and Test Certificates



Compaction Test Register

Client: Excell Gray Bruni
Project: Riverwalk Stage 34

Project No: D22774
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
16/03/2022	1	Layer 8		97.0%	Pass	Lot 3431	D22774-1
16/03/2022	2	Layer 3		97.0%	Pass	Lot 3457	D22774-1
22/03/2022	3	Layer 1		98.5%	Pass	Lot 3406	D22774-2
22/03/2022	4	Layer 1		101.0%	Pass	Lot 3401	D22774-2
22/03/2022	5	Layer 1		98.0%	Pass	Lot 3415	D22774-2
1/04/2022	6	layer 9		96.0%	Pass	Lot 3433	D22774-3
1/04/2022	7	layer 2		96.5%	Pass	Lot 3411	D22774-3
1/04/2022	8	layer 2		96.5%	Pass	Lot 3437	D22774-3
5/04/2022	9	Layer 3		96.5%	Pass	Lot 3411	D22774-4
5/04/2022	10	Layer 3		102.5%	Pass	Lot 3406	D22774-4
5/04/2022	11	Layer 3		97.0%	Pass	Lot 3438	D22774-4
7/04/2022	12	Layer 4		101.5%	Pass	Lot 3438	D22774-5
7/04/2022	13	Layer 4		102.5%	Pass	Lot 3408	D22774-5
7/04/2022	14	Layer 4		100.0%	Pass	Lot 3425	D22774-5
8/04/2022	15	Layer 5		102.5%	Pass	Lot 3435	D22774-7
8/04/2022	16	Layer 5		102.0%	Pass	Lot 3420	D22774-7
8/04/2022	17	Layer 5		100.5%	Pass	Lot 3411	D22774-7
9/04/2022	18	Layer 6		101.0%	Pass	Lot 3426	D22774-6
9/04/2022	19	Layer 6		102.0%	Pass	Lot 3436	D22774-6
9/04/2022	20	Layer 6		99.5%	Pass	Lot 3413	D22774-6
11/04/2022	21	LAYER 10		100.0%	Pass	Lot 3427	D22774-8
11/04/2022	22	LAYER 2		102.0%	Pass	Lot 3452	D22774-8
11/04/2022	23	LAYER 9		99.5%	Pass	Lot 3454	D22774-8
13/04/2022	24	LAYER 10		100.0%	Pass	Lot 3455	D22774-9
13/04/2022	25	LAYER 10		102.0%	Pass	Lot 3456	D22774-9
13/04/2022	26	LAYER 10		98.0%	Pass	Lot 3459	D22774-9
5/05/2022	27	Layer 2		99.5%	Pass	Lot 3419	D22774-10
5/05/2022	28	Layer 2		97.5%	Pass	Lot 3439	D22774-10
5/05/2022	29	Layer 10		99.0%	Pass	Lot 3464	D22774-10
15/06/2022	30	LAYER 4		102.5%	Pass	Lot 3473	D22774-11
15/06/2022	31	LAYER 4		102.0%	Pass	Lot 3470	D22774-11
15/06/2022	32	LAYER 4		102.0%	Pass	Lot 3462	D22774-11
20/06/2022	33	LAYER 5		101.5%	Pass	Lot 3450	D22774-12
20/06/2022	34	LAYER 6		101.5%	Pass	Lot 3422	D22774-12
20/06/2022	35	LAYER 3		98.5%	Pass	Lot 3441	D22774-12
25/06/2022	36	Layer 6		98.0%	Pass	Lot 3402	D22774-13
25/06/2022	37	Layer 5		99.0%	Pass	Lot 3414	D22774-13
25/06/2022	38	Layer 6		96.0%	Pass	Lot 3417	D22774-13
29/06/2022	39	Layer 6		102.5%	Pass	Lot 3445	D22774-14
29/06/2022	40	Layer 3		101.0%	Pass	Lot 3666	D22774-14
29/06/2022	41	Layer 3		98.5%	Pass	Lot 3668	D22774-14



Compaction Test Register

Client: Excell Gray Bruni
Project: Riverwalk Stage 34

Project No: D22774
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
30/06/2022	42	Layer 7		102.5%	Pass	Lot 3415	D22774-15
30/06/2022	43	Layer 4		102.5%	Pass	Lot 3467	D22774-15
30/06/2022	44	Layer 4		102.0%	Pass	Lot 3469	D22774-15
1/07/2022	45	Layer 4		102.0%	Pass	Lot 3446	D22774-16
1/07/2022	46	Layer 8		101.5%	Pass	Lot 3443	D22774-16
1/07/2022	47	Layer 8		99.0%	Pass	Lot 3403	D22774-16
2/07/2022	48	Layer 9		99.5%	Pass	Lot 3404	D22774-17
2/07/2022	49	Layer 9		98.0%	Pass	Lot 3416	D22774-17
2/07/2022	50	Layer 9		101.0%	Pass	Lot 3440	D22774-17
4/07/2022	51	Layer 5		102.5%	Pass	Lot 3444	D22774-18
4/07/2022	52	Layer 5		101.5%	Pass	Lot 3466	D22774-18
4/07/2022	53	Layer 5		103.0%	Pass	Lot 3468	D22774-18
5/07/2022	54	Layer 7		101.5%	Pass	Lot 3423	D22774-19
5/07/2022	55	Layer 6		100.5%	Pass	Lot 3448	D22774-19
5/07/2022	56	Layer 6		102.0%	Pass	Lot 3463	D22774-19
6/07/2022	57	Layer 10		104.5%	Pass	Lot 3418	D22774-20
6/07/2022	58	Layer 10		105.0%	Pass	Lot 3440	D22774-20
6/07/2022	59	Layer 6		104.0%	Pass	Lot 3465	D22774-20
7/07/2022	60	Layer 6		99.5%	Pass	Lot 3445	D22774-21
7/07/2022	61	Layer 6		102.0%	Pass	Lot 3465	D22774-21
7/07/2022	62	Layer 6		102.0%	Pass	Lot 3469	D22774-21
19/07/2022	63	Layer 7		100.5%	Pass	Lot 3451	D22774-22
19/07/2022	64	Layer 7		101.5%	Pass	Lot 3462	D22774-22
19/07/2022	65	Layer 7		99.0%	Pass	Lot 3471	D22774-22
20/07/2022	66	Layer 7		105.0%	Pass	Lot 3448	D22774-23
20/07/2022	67	Layer 7		103.0%	Pass	Lot 3447	D22774-23
20/07/2022	68	Layer 7		102.5%	Pass	Lot 3465	D22774-23
21/07/2022	69	Layer 10		99.5%	Pass	Lot 3404	D22774-24
21/07/2022	70	Layer 10		96.5%	Pass	Lot 3405	D22774-24
21/07/2022	71	Layer 7		103.0%	Pass	Lot 3446	D22774-24
2/08/2022	72	Layer 10		99.5%	Pass	Lot 3463	D22774-25
2/08/2022	73	Layer 10		99.5%	Pass	Lot 3465	D22774-25
2/08/2022	74	Layer 10		99.5%	Pass	Lot 3446	D22774-25

Material Test Report

Report Number: D22774-1
Issue Number: 1
Date Issued: 18/03/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4394
Date Sampled: 16/03/2022 9:00
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 34 - Level one
Material: Silty Clay
Material Source: On-site



Deer Park Laboratory
 17 Walhalla Way Ravenhall VIC 3023
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 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	D22-4394A	D22-4394B	
Test Number	1	2	
Date Tested	16/03/2022	16/03/2022	
Time Tested	09:05	09:20	
Test Request #/Location	LOT 3431	LOT 3457	
Layer / Reduced Level	Layer 8	Layer 3	
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	1.98	1.95	
Field Moisture Content %	18.4	16.8	
Field Dry Density (FDD) t/m ³	1.67	1.67	
Peak Converted Wet Density t/m ³	2.03	2.02	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	19.1	17.2	
Adj. Field Moisture Content % (AS1289.5.4.1)	18.4	16.8	
Moisture Ratio % (AS1289.5.4.1)	96.5	98.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	0.5	0.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	97.0	97.0	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

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

Material Test Report

Report Number: D22774-2
Issue Number: 1
Date Issued: 24/03/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4417
Date Sampled: 22/03/2022 14:30
Dates Tested: 22/03/2022 - 23/03/2022
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 34 - Level one
Material: 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	D22-4417A	D22-4417B	D22-4417C
Test Number	3	4	5
Date Tested	22/03/2022	22/03/2022	22/03/2022
Time Tested	14:30	14:45	15:00
Test Request #/Location	LOT 3406	LOT 3401	LOT 3415
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 (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0
Field Wet Density (FWD) t/m ³	1.95	1.98	1.90
Field Moisture Content %	21.4	18.7	19.4
Field Dry Density (FDD) t/m ³	1.60	1.67	1.59
Peak Converted Wet Density t/m ³	1.98	1.95	1.93
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	24.8	22.0	22.4
Adj. Field Moisture Content % (AS1289.5.4.1)	21.4	18.7	19.4
Moisture Ratio % (AS1289.5.4.1)	86.5	85.0	86.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	3.0	3.0	3.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	98.5	101.0	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: D22774-3
Issue Number: 1
Date Issued: 05/04/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4486
Date Sampled: 01/04/2022 14:00
Dates Tested: 01/04/2022 - 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 Estate stage 34 - 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	D22-4486A	D22-4486B	D22-4486C
Test Number	6	7	8
Date Tested	01/04/2022	01/04/2022	01/04/2022
Time Tested	14:30	14:45	15:00
Test Request #/Location	LOT 3433	LOT 3411	LOT 3437
Layer / Reduced Level	layer 9	layer 2	layer 2
Thickness of Layer (mm)	300	300	300
Soil Description	Silty Clay	Silty Clay	Silty Clay
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	2	5	17
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	1.86	1.86	1.83
Field Moisture Content %	20.0	17.7	17.3
Field Dry Density (FDD) t/m ³	1.56	1.59	1.60
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	1.93	1.93	1.90
Adj. Optimum Moisture Content % (AS1289.5.4.1)	21.9	20.2	17.6
Adj. Field Moisture Content % (AS1289.5.4.1)	19.5	16.8	14.4
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	89.0	83.5	82.0
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	2.5	3.5	3.5
Hilf Density Ratio (%)	96.0	96.5	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: D22774-4
Issue Number: 1
Date Issued: 08/04/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4497
Date Sampled: 05/04/2022 14:30
Dates Tested: 05/04/2022 - 07/04/2022
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 stage 34 - Level One
Material: 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	D22-4497A	D22-4497B	D22-4497C
Test Number	9	10	11
Date Tested	05/04/2022	05/04/2022	05/04/2022
Time Tested	14:15	14:30	14:45
Test Request #/Location	LOT 3411	LOT 3406	LOT 3438
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	9	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	**	0
Field Wet Density (FWD) t/m ³	1.76	1.98	1.79
Field Moisture Content %	15.4	14.5	14.6
Field Dry Density (FDD) t/m ³	1.53	1.75	1.56
Peak Converted Wet Density t/m ³	1.83	**	1.85
Adjusted Peak Converted Wet Density t/m ³	**	1.93	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	20.6	17.1	18.3
Adj. Field Moisture Content % (AS1289.5.4.1)	15.4	13.2	14.6
Moisture Ratio % (AS1289.5.4.1)	74.5	**	79.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	77.0	**
Moisture Variation (Wv) %	5.0	**	4.0
Adjusted Moisture Variation %	**	4.0	**
Hilf Density Ratio (%)	96.5	102.5	97.0
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: D22774-5
Issue Number: 1
Date Issued: 19/04/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4512
Date Sampled: 07/04/2022 14:40
Dates Tested: 07/04/2022 - 14/04/2022
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 stage 34 - Level one
Material: 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	D22-4512A	D22-4512B	D22-4512C
Test Number	12	13	14
Date Tested	07/04/2022	07/04/2022	07/04/2022
Time Tested	14:40	14:53	15:12
Test Request #/Location	LOT 3438	LOT 3408	LOT 3425
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	1.89	1.93	1.89
Field Moisture Content %	15.4	15.1	15.6
Field Dry Density (FDD) t/m ³	1.64	1.67	1.63
Peak Converted Wet Density t/m ³	1.87	1.88	1.89
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	20.5	20.4	21.1
Adj. Field Moisture Content % (AS1289.5.4.1)	15.4	15.1	15.6
Moisture Ratio % (AS1289.5.4.1)	75.5	74.0	74.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	5.0	5.5	5.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	101.5	102.5	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: D22774-6
Issue Number: 1
Date Issued: 19/04/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4525
Date Sampled: 09/04/2022 11:30
Dates Tested: 09/04/2022 - 14/04/2022
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 34 - 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	D22-4525A	D22-4525B	D22-4525C
Test Number	18	19	20
Date Tested	09/04/2022	09/04/2022	09/04/2022
Time Tested	11:50	11:50	11:50
Test Request #/Location	LOT 3426	LOT 3436	LOT 3413
Layer / Reduced Level	Layer 6	Layer 6	Layer 6
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	2.13	2.14	2.07
Field Moisture Content %	14.2	18.0	17.3
Field Dry Density (FDD) t/m ³	1.86	1.81	1.77
Peak Converted Wet Density t/m ³	2.11	2.10	2.08
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	19.5	22.4	21.5
Adj. Field Moisture Content % (AS1289.5.4.1)	14.2	18.0	17.3
Moisture Ratio % (AS1289.5.4.1)	73.0	80.5	80.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	5.0	4.0	4.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	101.0	102.0	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: D22774-7
Issue Number: 1
Date Issued: 20/04/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4521
Date Sampled: 08/04/2022 12:30
Dates Tested: 08/04/2022 - 19/04/2022
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 34 - 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	D22-4521A	D22-4521B	D22-4521C
Test Number	15	16	17
Date Tested	08/04/2022	08/04/2022	08/04/2022
Time Tested	12:30	12:45	13:00
Test Request #/Location	LOT 3435	LOT 3420	LOT 3411
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	2.03	1.94
Field Moisture Content %	18.4	18.1	17.7
Field Dry Density (FDD) t/m ³	1.72	1.72	1.65
Peak Converted Wet Density t/m ³	1.98	1.99	1.94
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	23.6	23.2	22.7
Adj. Field Moisture Content % (AS1289.5.4.1)	18.4	18.1	17.7
Moisture Ratio % (AS1289.5.4.1)	78.0	78.0	78.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	5.0	4.5	4.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	102.5	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: D22774-8
Issue Number: 1
Date Issued: 20/04/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4527
Date Sampled: 11/04/2022 14:30
Dates Tested: 11/04/2022 - 19/04/2022
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 34 - 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	D22-4527A	D22-4527B	D22-4527C
Test Number	21	22	23
Date Tested	11/04/2022	11/04/2022	11/04/2022
Time Tested	14:30	14:45	15:00
Test Request #/Location	LOT 3427	LOT 3452	LOT 3454
Layer / Reduced Level	LAYER 10	LAYER 2	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	1.97	2.05	1.92
Field Moisture Content %	15.2	15.8	16.2
Field Dry Density (FDD) t/m ³	1.71	1.77	1.65
Peak Converted Wet Density t/m ³	1.97	2.01	1.93
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	19.9	20.8	21.1
Adj. Field Moisture Content % (AS1289.5.4.1)	15.2	15.8	16.2
Moisture Ratio % (AS1289.5.4.1)	76.5	76.0	77.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	4.5	4.5	4.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	100.0	102.0	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: D22774-9
Issue Number: 1
Date Issued: 20/04/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4539
Date Sampled: 13/04/2022 14:15
Dates Tested: 13/04/2022 - 19/04/2022
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 34 - level 1
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	D22-4539A	D22-4539B	D22-4539C
Test Number	24	25	26
Date Tested	13/04/2022	13/04/2022	13/04/2022
Time Tested	14:15	14:30	14:45
Test Request #/Location	LOT 3455	LOT 3456	LOT 3459
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	1.91	1.96	1.90
Field Moisture Content %	17.8	17.6	18.5
Field Dry Density (FDD) t/m ³	1.62	1.67	1.60
Peak Converted Wet Density t/m ³	1.91	1.92	1.93
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	22.8	23.1	24.1
Adj. Field Moisture Content % (AS1289.5.4.1)	17.8	17.6	18.5
Moisture Ratio % (AS1289.5.4.1)	78.0	76.0	76.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	5.0	5.0	5.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	100.0	102.0	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: D22774-10
Issue Number: 1
Date Issued: 09/05/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4603
Date Sampled: 05/05/2022
Dates Tested: 05/05/2022 - 09/05/2022
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 34 - Level one
Material: Clay
Material Source: Imported



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	D22-4603A	D22-4603B	D22-4603C
Sample Number	D22-4603A	D22-4603B	D22-4603C
Test Number	27	28	29
Date Tested	05/05/2022	05/05/2022	05/05/2022
Time Tested	10:20	10:30	13:00
Test Request #/Location	Lot 3419	Lot 3439	Lot 3464
Layer / Reduced Level	Layer 2	Layer 2	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 (%)	3	7	7
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	2.10	2.07	2.12
Field Moisture Content %	15.5	16.1	13.8
Field Dry Density (FDD) t/m ³	1.83	1.80	1.87
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	2.11	2.12	2.13
Adj. Optimum Moisture Content % (AS1289.5.4.1)	13.9	14.3	12.9
Adj. Field Moisture Content % (AS1289.5.4.1)	14.9	15.0	12.9
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	107.5	104.5	99.5
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	-1.0	-0.5	0.0
Hilf Density Ratio (%)	99.5	97.5	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: D22774-11
Issue Number: 1
Date Issued: 17/06/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4750
Date Sampled: 15/06/2022 14:30
Dates Tested: 15/06/2022 - 16/06/2022
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 34 - 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	D22-4750A	D22-4750B	D22-4750C
Test Number	30	31	32
Date Tested	15/06/2022	15/06/2022	15/06/2022
Time Tested	14:30	14:45	15:00
Test Request #/Location	LOT 3473	LOT 3470	LOT 3462
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 (%)	9	9	8
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	2.02	2.02	2.00
Field Moisture Content %	20.7	20.5	34.5
Field Dry Density (FDD) t/m ³	1.70	1.70	1.51
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	1.97	1.98	1.95
Adj. Optimum Moisture Content % (AS1289.5.4.1)	23.0	23.2	37.4
Adj. Field Moisture Content % (AS1289.5.4.1)	18.9	18.6	31.9
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	82.0	80.0	85.5
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	4.0	4.5	4.5
Hilf Density Ratio (%)	102.5	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: D22774-12
Issue Number: 1
Date Issued: 22/06/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4763
Date Sampled: 20/06/2022 14:30
Dates Tested: 20/06/2022 - 21/06/2022
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 34 - 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	D22-4763A	D22-4763B	D22-4763C
Test Number	33	34	35
Date Tested	20/06/2022	20/06/2022	20/06/2022
Time Tested	14:30	14:45	15:00
Test Request #/Location	LOT 3450	LOT 3422	LOT 3441
Layer / Reduced Level	LAYER 5	LAYER 6	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 (%)	7	11	5
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	1.96	1.99	1.91
Field Moisture Content %	20.3	20.5	20.8
Field Dry Density (FDD) t/m ³	1.65	1.68	1.60
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	1.93	1.96	1.94
Adj. Optimum Moisture Content % (AS1289.5.4.1)	21.3	20.8	21.2
Adj. Field Moisture Content % (AS1289.5.4.1)	18.9	18.3	19.7
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	88.5	88.0	93.0
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	2.5	2.5	1.5
Hilf Density Ratio (%)	101.5	101.5	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: D22774-13
Issue Number: 1
Date Issued: 28/06/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4788
Date Sampled: 25/06/2022 14:00
Dates Tested: 25/06/2022 - 27/06/2022
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 34 - Level One
Material: Clay
Material Source: Imported



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	D22-4788A	D22-4788B	D22-4788C
Sample Number			
Test Number	36	37	38
Date Tested	25/06/2022	25/06/2022	25/06/2022
Time Tested	14:00	14:00	14:00
Test Request #/Location	Lot 3402	Lot 3414	Lot 3417
Layer / Reduced Level	Layer 6	Layer 5	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	1.86	1.89	1.85
Field Moisture Content %	24.6	23.6	23.1
Field Dry Density (FDD) t/m ³	1.49	1.53	1.50
Peak Converted Wet Density t/m ³	1.90	1.90	1.92
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	26.8	25.8	23.2
Adj. Field Moisture Content % (AS1289.5.4.1)	24.6	23.6	23.1
Moisture Ratio % (AS1289.5.4.1)	92.0	91.5	99.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	2.0	2.0	0.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	98.0	99.0	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: D22774-14
Issue Number: 1
Date Issued: 01/07/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4803
Date Sampled: 29/06/2022 14:00
Dates Tested: 29/06/2022 - 30/06/2022
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 34 - 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	D22-4803A	D22-4803B	D22-4803C
Test Number	39	40	41
Date Tested	29/06/2022	29/06/2022	29/06/2022
Time Tested	14:00	14:00	14:00
Test Request #/Location	Lot 3445	Lot 3666	Lot 3668
Layer / Reduced Level	Layer 6	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 (%)	4	6	5
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	1.99	1.94	1.90
Field Moisture Content %	19.8	22.0	23.2
Field Dry Density (FDD) t/m ³	1.67	1.61	1.55
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	1.95	1.92	1.92
Adj. Optimum Moisture Content % (AS1289.5.4.1)	24.4	25.2	25.8
Adj. Field Moisture Content % (AS1289.5.4.1)	19.0	20.7	22.1
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	78.0	82.0	85.5
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	5.0	4.0	3.5
Hilf Density Ratio (%)	102.5	101.0	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: D22774-15
Issue Number: 1
Date Issued: 04/07/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4810
Dates Tested: 30/06/2022 - 01/07/2022
Location: Riverwalk Estate Stage 34 - Level One



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D22-4810A	D22-4810B	D22-4810C
Test Number	42	43	44
Date Tested	30/06/2022	30/06/2022	30/06/2022
Time Tested	03:30	03:30	03:30
Test Request #/Location	LOT 3415	LOT 3467	LOT 3469
Layer / Reduced Level	Layer 7	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 (%)	6	9	7
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	2.16	2.18	2.15
Field Moisture Content %	20.1	20.4	19.7
Field Dry Density (FDD) t/m ³	1.82	1.84	1.82
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	2.10	2.13	2.11
Adj. Optimum Moisture Content % (AS1289.5.4.1)	21.0	21.4	21.1
Adj. Field Moisture Content % (AS1289.5.4.1)	18.9	18.5	18.3
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	90.0	86.5	87.0
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	2.0	2.5	2.5
Hilf Density Ratio (%)	102.5	102.5	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: D22774-16
Issue Number: 1
Date Issued: 05/07/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4818
Date Sampled: 01/07/2022 14:30
Dates Tested: 01/07/2022 - 05/07/2022
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 34 - Level One
Material: Clay
Material Source: Imptrtd



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NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D22-4818A	D22-4818B	D22-4818C
Test Number	45	46	47
Date Tested	01/07/2022	01/07/2022	01/07/2022
Time Tested	14:30	14:30	14:30
Test Request #/Location	Lot 3446	Lot 3443	Lot 3403
Layer / Reduced Level	Layer 4	Layer 8	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	6	7
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	**	**
Field Wet Density (FWD) t/m ³	1.89	1.92	1.89
Field Moisture Content %	20.7	20.9	19.8
Field Dry Density (FDD) t/m ³	1.56	1.61	1.60
Peak Converted Wet Density t/m ³	1.85	**	**
Adjusted Peak Converted Wet Density t/m ³	**	1.90	1.91
Adj. Optimum Moisture Content % (AS1289.5.4.1)	22.7	22.5	20.0
Adj. Field Moisture Content % (AS1289.5.4.1)	20.7	19.6	18.5
Moisture Ratio % (AS1289.5.4.1)	91.0	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	87.0	92.5
Moisture Variation (Wv) %	2.0	**	**
Adjusted Moisture Variation %	**	3.0	1.5
Hilf Density Ratio (%)	102.0	101.5	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: D22774-17
Issue Number: 1
Date Issued: 06/07/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4823
Date Sampled: 02/07/2022 13:15
Dates Tested: 02/07/2022 - 06/07/2022
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 34 - 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	D22-4823A	D22-4823B	D22-4823C
Test Number	48	49	50
Date Tested	02/07/2022	02/07/2022	02/07/2022
Time Tested	13:15	13:15	13:15
Test Request #/Location	Lot 3404	Lot 3416	Lot 3440
Layer / Reduced Level	Layer 9	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 (%)	0	0	10
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	**
Field Wet Density (FWD) t/m ³	1.88	1.87	1.90
Field Moisture Content %	24.3	26.6	23.3
Field Dry Density (FDD) t/m ³	1.51	1.47	1.57
Peak Converted Wet Density t/m ³	1.89	1.91	**
Adjusted Peak Converted Wet Density t/m ³	**	**	1.88
Adj. Optimum Moisture Content % (AS1289.5.4.1)	25.7	26.7	22.7
Adj. Field Moisture Content % (AS1289.5.4.1)	24.3	26.6	21.1
Moisture Ratio % (AS1289.5.4.1)	94.5	99.5	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	93.0
Moisture Variation (Wv) %	1.5	0.0	**
Adjusted Moisture Variation %	**	**	1.5
Hilf Density Ratio (%)	99.5	98.0	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: D22774-18
Issue Number: 1
Date Issued: 07/07/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4827
Date Sampled: 04/07/2022 14:20
Dates Tested: 04/07/2022 - 06/07/2022
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 34 - 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	D22-4827A	D22-4827B	D22-4827C
Test Number	51	52	53
Date Tested	04/07/2022	04/07/2022	04/07/2022
Time Tested	14:10	14:10	14:10
Test Request #/Location	Lot 3444	Lot 3466	Lot 3468
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 (%)	10	0	10
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	0	**
Field Wet Density (FWD) t/m ³	1.93	1.87	1.93
Field Moisture Content %	21.7	22.3	22.0
Field Dry Density (FDD) t/m ³	1.62	1.53	1.61
Peak Converted Wet Density t/m ³	**	1.85	**
Adjusted Peak Converted Wet Density t/m ³	1.88	**	1.87
Adj. Optimum Moisture Content % (AS1289.5.4.1)	23.1	25.6	23.4
Adj. Field Moisture Content % (AS1289.5.4.1)	19.6	22.3	19.8
Moisture Ratio % (AS1289.5.4.1)	**	87.0	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	85.0	**	84.5
Moisture Variation (Wv) %	**	3.0	**
Adjusted Moisture Variation %	3.5	**	3.5
Hilf Density Ratio (%)	102.5	101.5	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: D22774-19
Issue Number: 1
Date Issued: 08/07/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4832
Date Sampled: 05/07/2022 14:10
Dates Tested: 05/07/2022 - 07/07/2022
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 34 - 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	D22-4832A	D22-4832B	D22-4832C
Test Number	54	55	56
Date Tested	05/07/2022	05/07/2022	05/07/2022
Time Tested	14:10	14:10	14:10
Test Request #/Location	Lot 3423	Lot 3448	Lot 3463
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 (%)	9	6	10
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	2.08	2.04	2.09
Field Moisture Content %	24.2	20.8	17.7
Field Dry Density (FDD) t/m ³	1.71	1.71	1.81
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	2.05	2.03	2.05
Adj. Optimum Moisture Content % (AS1289.5.4.1)	23.7	22.1	18.0
Adj. Field Moisture Content % (AS1289.5.4.1)	21.9	19.5	15.9
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	92.5	88.5	88.5
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	1.5	2.5	2.0
Hilf Density Ratio (%)	101.5	100.5	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: D22774-20
Issue Number: 1
Date Issued: 11/07/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4839
Date Sampled: 06/07/2022 15:00
Dates Tested: 06/07/2022 - 08/07/2022
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 34 - 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	D22-4839A	D22-4839B	D22-4839C
Test Number	57	58	59
Date Tested	06/07/2022	06/07/2022	06/07/2022
Time Tested	15:00	15:00	15:00
Test Request #/Location	Lot 3418	Lot 3440	Lot 3465
Layer / Reduced Level	Layer 10	Layer 10	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 (%)	10	6	3
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	2.09	2.07	2.06
Field Moisture Content %	23.0	24.3	20.5
Field Dry Density (FDD) t/m ³	1.73	1.69	1.71
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	2.00	1.97	1.98
Adj. Optimum Moisture Content % (AS1289.5.4.1)	22.5	24.4	22.0
Adj. Field Moisture Content % (AS1289.5.4.1)	20.8	22.8	20.0
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	92.5	93.5	91.0
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	1.5	1.5	2.0
Hilf Density Ratio (%)	104.5	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: D22774-21
Issue Number: 1
Date Issued: 11/07/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4844
Date Sampled: 07/07/2022 14:45
Dates Tested: 07/07/2022 - 08/07/2022
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 34 - 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	D22-4844A	D22-4844B	D22-4844C
Test Number	60	61	62
Date Tested	07/07/2022	07/07/2022	07/07/2022
Time Tested	14:45	14:45	14:45
Test Request #/Location	Lot 3445	Lot 3465	Lot 3469
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 (%)	16	3	7
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	2.02	2.00	2.03
Field Moisture Content %	21.7	21.4	22.1
Field Dry Density (FDD) t/m ³	1.71	1.65	1.68
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	2.02	1.96	1.98
Adj. Optimum Moisture Content % (AS1289.5.4.1)	18.7	21.6	22.6
Adj. Field Moisture Content % (AS1289.5.4.1)	18.3	20.8	20.6
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	97.5	96.0	91.5
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	0.5	1.0	2.0
Hilf Density Ratio (%)	99.5	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: D22774-22
Issue Number: 1
Date Issued: 22/07/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4873
Date Sampled: 19/07/2022 14:30
Dates Tested: 19/07/2022 - 21/07/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Location: Riverwalk Estate Stage 34 - Level one - Werribee
Material: Clay
Material Source: Imported



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Nalaka Bandara

Approved Signatory: Nalaka Bandara
Lab Tech

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D22-4873A	D22-4873B	D22-4873C
Test Number	63	64	65
Date Tested	19/07/2022	19/07/2022	19/07/2022
Time Tested	14:30	14:30	14:30
Test Request #/Location	Lot 3451	Lot 3462	Lot 3471
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 (%)	0	7	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	**	0
Field Wet Density (FWD) t/m ³	1.91	1.97	1.91
Field Moisture Content %	20.5	20.7	20.3
Field Dry Density (FDD) t/m ³	1.58	1.65	1.59
Peak Converted Wet Density t/m ³	1.89	**	1.93
Adjusted Peak Converted Wet Density t/m ³	**	1.95	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	23.4	22.1	23.2
Adj. Field Moisture Content % (AS1289.5.4.1)	20.5	19.3	20.3
Moisture Ratio % (AS1289.5.4.1)	87.5	**	87.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	87.5	**
Moisture Variation (Wv) %	3.0	**	3.0
Adjusted Moisture Variation %	**	2.5	**
Hilf Density Ratio (%)	100.5	101.5	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: D22774-23
Issue Number: 1
Date Issued: 22/07/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4878
Date Sampled: 20/07/2022 14:30
Dates Tested: 20/07/2022 - 21/07/2022
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 34 - Level one - Werribee
Material: Clay
Material Source: Imported



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Nalaka Bandara

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 Lab Tech

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	D22-4878A	D22-4878B	D22-4878C
Test Number	66	67	68
Date Tested	20/07/2022	20/07/2022	20/07/2022
Time Tested	14:30	14:30	14:30
Test Request #/Location	Lot 3448	Lot 3447	Lot 3465
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 (%)	6	7	7
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	**	**
Field Wet Density (FWD) t/m ³	1.96	1.95	1.94
Field Moisture Content %	19.8	21.3	21.4
Field Dry Density (FDD) t/m ³	1.65	1.63	1.61
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	1.86	1.89	1.89
Adj. Optimum Moisture Content % (AS1289.5.4.1)	24.7	24.3	24.0
Adj. Field Moisture Content % (AS1289.5.4.1)	18.5	19.8	19.9
Moisture Ratio % (AS1289.5.4.1)	**	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	75.0	81.0	83.0
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	5.0	4.5	4.0
Hilf Density Ratio (%)	105.0	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: D22774-24
Issue Number: 1
Date Issued: 28/07/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4882
Date Sampled: 21/07/2022 14:30
Dates Tested: 21/07/2022 - 28/07/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Location: Riverwalk stage 34 - 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	D22-4882A	D22-4882B	D22-4882C
Test Number	69	70	71
Date Tested	21/07/2022	21/07/2022	21/07/2022
Time Tested	14:30	14:30	14:30
Test Request #/Location	Lot 3404	Lot 3405	Lot 3446
Layer / Reduced Level	Layer 10	Layer 10	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	0	6
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	0	**
Field Wet Density (FWD) t/m ³	2.01	1.93	1.89
Field Moisture Content %	17.8	18.0	23.3
Field Dry Density (FDD) t/m ³	1.72	1.64	1.55
Peak Converted Wet Density t/m ³	**	2.00	**
Adjusted Peak Converted Wet Density t/m ³	2.02	**	1.84
Adj. Optimum Moisture Content % (AS1289.5.4.1)	19.0	19.4	26.7
Adj. Field Moisture Content % (AS1289.5.4.1)	16.8	18.0	21.9
Moisture Ratio % (AS1289.5.4.1)	**	93.0	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	88.5	**	82.0
Moisture Variation (Wv) %	**	1.5	**
Adjusted Moisture Variation %	2.0	**	4.5
Hilf Density Ratio (%)	99.5	96.5	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: D22774-25
Issue Number: 1
Date Issued: 05/08/2022
Client: Excell Gray Bruni
 12 Allied Drive, Tullamarine Vic 3043
Project Number: D22774
Project Name: Riverwalk Estate Stage 34 - Level one
Project Location: Werribee
Work Request: 4929
Date Sampled: 02/08/2022 13:00
Dates Tested: 02/08/2022 - 05/08/2022
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 34 - 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	D22-4929A	D22-4929B	D22-4929C
Test Number	72	73	74
Date Tested	02/08/2022	02/08/2022	02/08/2022
Time Tested	13:00	13:00	13:00
Test Request #/Location	Lot 3463	Lot 3465	Lot 3446
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	1.90	1.90	1.91
Field Moisture Content %	21.5	18.1	20.7
Field Dry Density (FDD) t/m ³	1.57	1.61	1.59
Peak Converted Wet Density t/m ³	1.91	1.91	1.92
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	23.7	20.4	23.3
Adj. Field Moisture Content % (AS1289.5.4.1)	21.5	18.1	20.7
Moisture Ratio % (AS1289.5.4.1)	91.0	89.0	88.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	2.0	2.0	2.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	99.5	99.5	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