

Octave Estate Stage 4

GITA Inspection Verification Report

Prepared For: Streetworks Pty Ltd

Report Number P21883A V1

Version Release Date 23 May 2022

Report Released By C Caulfield

Title Project Manager

Signature



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1 Introduction

Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical Inspection and Testing Authority (GITA) to provide Level 1 supervision and testing works on the earthworks component for Octave Estate Stage 4. This work was conducted over the period of 14/12/2021 to 08/03/2022.

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 401 through to 419, 427 through to 428, 431 through to 433, 441 through to 455 and 459 through to 472, bounded by streets Treble Street, Rondo Street, Vivaldi Drive, Riverwood Drive, Sonata Way, Largo Circuit and Clavier Street. The site will be a Residential development.

The area on which fill was placed is shown on site plan (Appendix 1: *Test Location Plan*) based on drawings prepared by GPR Consulting Pty Ltd (Drawing Reference: 0329-04-Ro2 through to R04) and provided by Streetworks 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 Streetworks 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

A small dam, mostly located on lot 407, was cleaned out. The base was inspected and approved for fill.

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 150mm of material placed across the site was placed as a topsoil layer or growing medium and should be considered as non-structural, as it was placed in an uncontrolled manner, as allowed by specifications and placement of the final 150mm of material was not observed by the GITA.

4 Construction Verification

Compaction Verification testing is summarized in a detailed test register with test certificates attached provided in Appendix 2: *Compaction Test Register and Test Certificates*. A test location plan (P21883D1, 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 65 density tests (Hilf method in accordance with 1289 5.7.1) were undertaken with 13 failed results. The contractor was notified of any failed tests and the failed areas were ripped, watered, compacted and then re-tested to confirm compliance with the specification. The results summarised in the compaction test register (Appendix 2) confirm that for every layer of fill placed in a specific work area, satisfactory testing was completed.

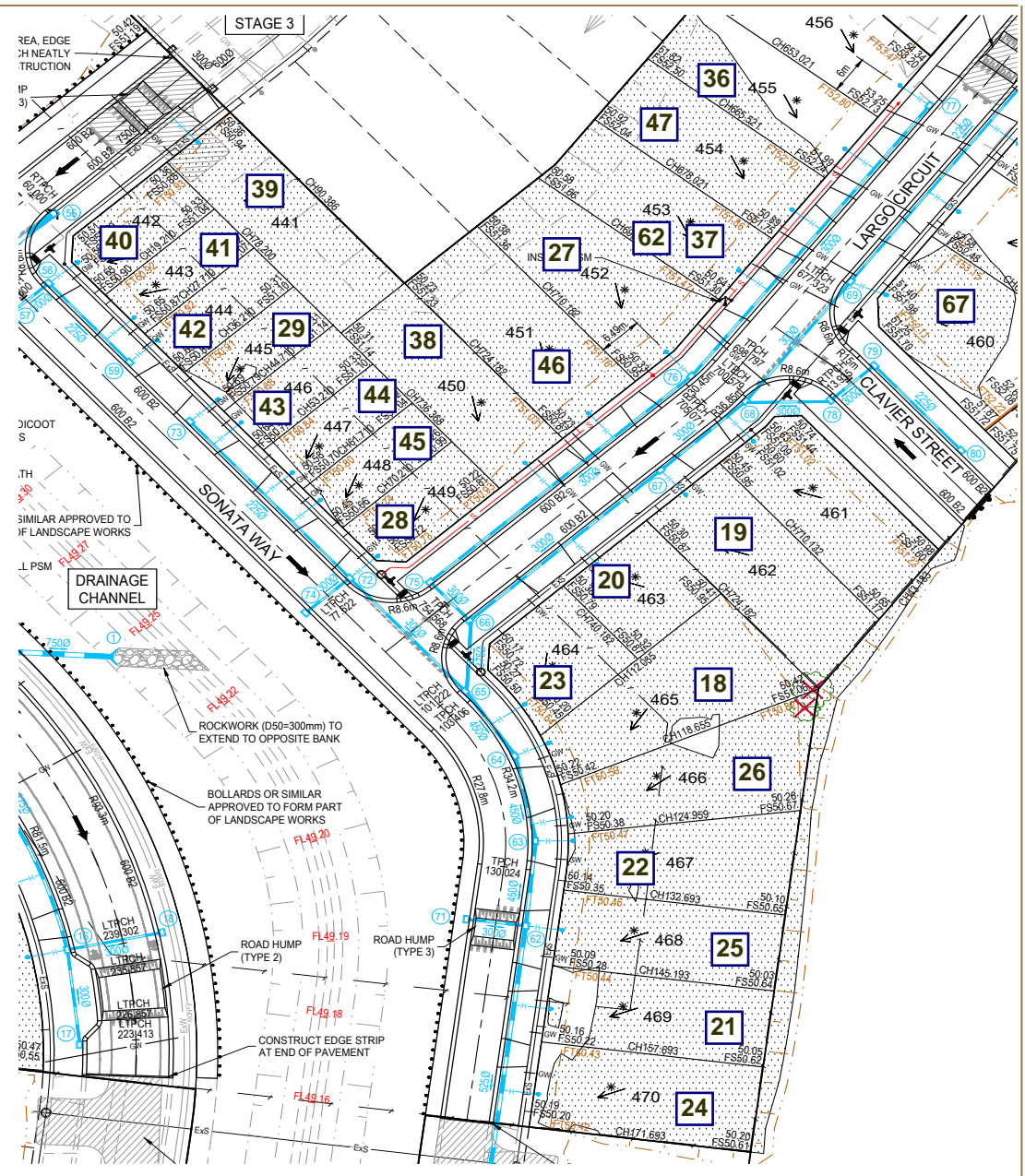
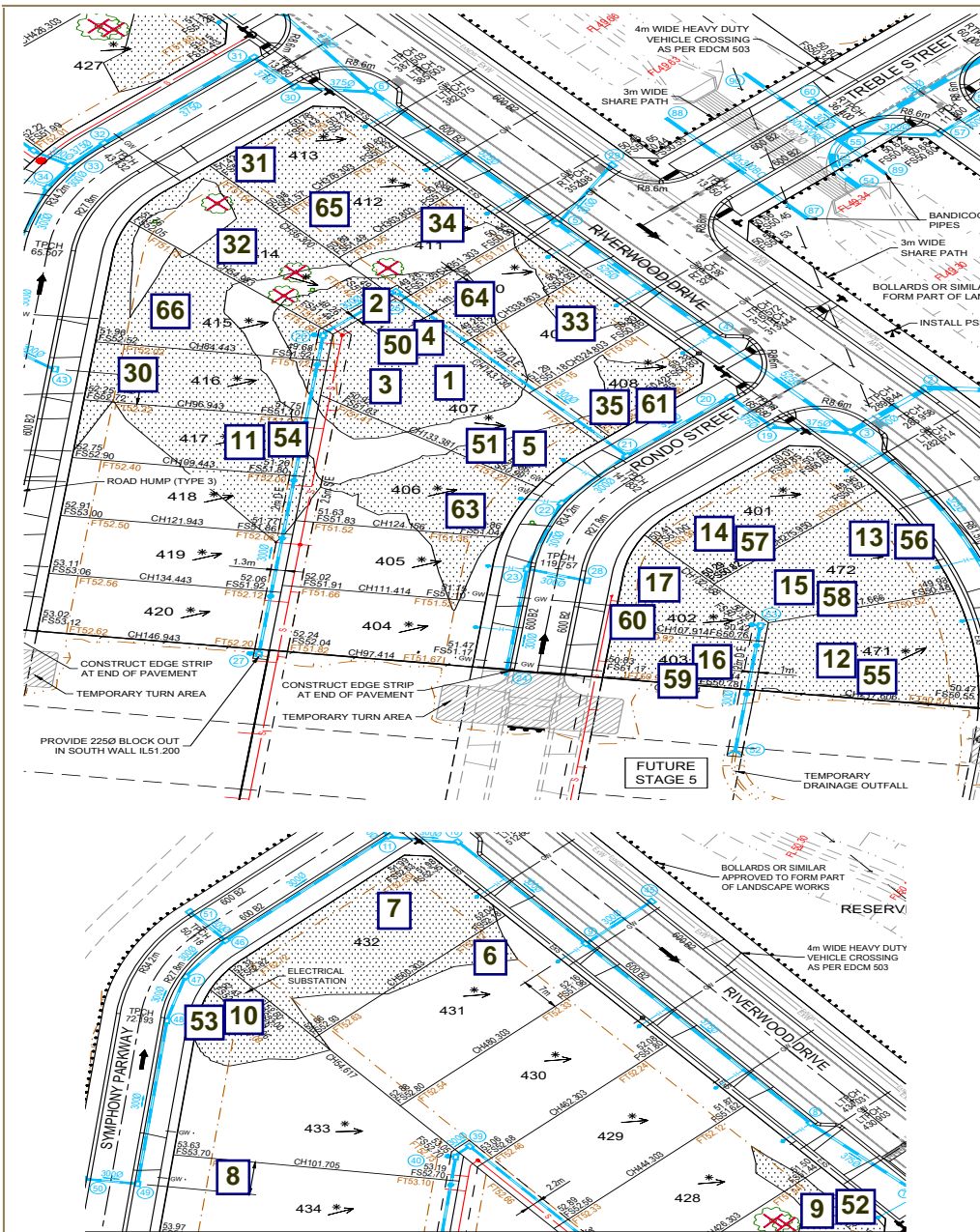
5 Statement of Compliance

The intention of this report is to provide a description of the earthworks construction for Stage 4 at Octave Estate. For completed fill areas of greater than 300mm, and for works completed between 14/12/2021 and 08/03/2022, 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 4 of Octave Estate 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

Test Location Plan

not to scale

Client: Streetworks Pty Ltd

Project: Octave Estate, Stage 4

Reference: P21883 D1

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Appendix 2: Compaction Test Register and Test Certificates



Compaction Test Register

Client: Streetworks Pty Ltd
Project: Octave Estate Stage 4

Project No: P21883
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:
14/12/2021	1	Layer 1		98.0%	Pass	Lot 407
14/12/2021	2	Layer 3		95.0%	Pass	Lot 407
15/12/2021	3	layer 5		98.5%	Pass	Lot 407
15/12/2021	4	layer 6		84.5%	Fail	Lot 407
15/12/2021	5	layer 7		79.5%	Fail	Lot 407
17/12/2021	6	Layer 2		97.5%	Pass	Lot 431
17/12/2021	7	Layer 2		99.5%	Pass	Lot 432
17/12/2021	8	Layer 2		95.5%	Pass	Lot 434
18/12/2021	9	Final Layer		92.0%	Fail	Lot 427
18/12/2021	10	Final Layer		91.0%	Fail	Lot 433
18/12/2021	11	Final Layer		85.0%	Fail	Lot 417
21/12/2021	12	Layer 2		93.5%	Fail	Lot 471
21/12/2021	13	Layer 2		93.5%	Fail	Lot 472
21/12/2021	14	Layer 2		91.5%	Fail	Lot 401
21/12/2021	15	Layer 3		88.0%	Fail	Lot 472
21/12/2021	16	Layer 3		87.5%	Fail	Lot 403
21/12/2021	17	Layer 3		89.0%	Fail	Lot 402
24/01/2022	18	Layer 1		95.5%	Pass	Lot 465
24/01/2022	19	Layer 1		95.0%	Pass	Lot 462
24/01/2022	20	Layer 1		101.0%	Pass	Lot 463
25/01/2022	21	Layer 2		97.5%	Pass	Lot 469
25/01/2022	22	Layer 2		100.5%	Pass	Lot 467
25/01/2022	23	Layer 2		98.5%	Pass	Lot 464
27/01/2022	24	Layer 3		101.0%	Pass	Lot 470
27/01/2022	25	Layer 3		103.0%	Pass	Lot 468
27/01/2022	26	Layer 3		103.5%	Pass	Lot 466
28/01/2022	27	Layer 1		97.0%	Pass	Lot 452
28/01/2022	28	Layer 1		95.5%	Pass	Lot 449
28/01/2022	29	Layer 1		97.5%	Pass	Lot 445
31/01/2022	30	Layer 2		96.5%	Pass	Lot 416
31/01/2022	31	Layer 2		96.0%	Pass	Lot 413
31/01/2022	32	Layer 2		98.5%	Pass	Lot 414
2/02/2022	33	Final Layer		98.0%	Pass	Lot 409
2/02/2022	34	Final Layer		100.0%	Pass	Lot 411
2/02/2022	35	Final Layer		94.5%	Fail	Lot 408
2/02/2022	36	Final Layer		96.0%	Pass	Lot 455
2/02/2022	37	Final Layer		94.5%	Fail	Lot 453
2/02/2022	38	Final Layer		96.0%	Pass	Lot 450
4/02/2022	39	Layer 1		95.0%	Pass	Lot 441
17/02/2022	40	Final Layer		96.5%	Pass	Lot 442
17/02/2022	41	Final Layer		99.0%	Pass	Lot 443



Compaction Test Register

Client: Streetworks Pty Ltd
Project: Octave Estate Stage 4

Project No: P21883
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:
17/02/2022	42	Final Layer		99.5%	Pass	Lot 444
17/02/2022	43	Final Layer		98.0%	Pass	Lot 446
17/02/2022	44	Final Layer		98.5%	Pass	Lot 447
17/02/2022	45	Final Layer		101.0%	Pass	Lot 448
17/02/2022	46	Final Layer		95.5%	Pass	Lot 451
17/02/2022	47	Final Layer		99.5%	Pass	Lot 454
8/03/2022	50	Layer 6	Test #4	95.5%	Pass	Lot 407 RE #4
8/03/2022	51	Layer 7	Test #5	96.0%	Pass	Lot 407 RE #5
8/03/2022	52	FSL	Test #9	96.0%	Pass	Lot 430 RE #9
8/03/2022	53	FSL	Test #10	98.0%	Pass	Lot 433 RE #10
8/03/2022	54	FSL	Test #11	97.0%	Pass	Lot 434 RE #11
8/03/2022	55	Layer 2	Test #12	99.5%	Pass	Lot 471 RE #12
8/03/2022	56	Layer 2	Test #13	98.0%	Pass	Lot 472 RE #13
8/03/2022	57	Layer 2	Test #14	98.0%	Pass	Lot 401 RE #14
8/03/2022	58	Layer 3	Test #15	97.5%	Pass	Lot 472 RE #15
8/03/2022	59	Layer 3	Test #16	98.0%	Pass	Lot 403 RE #16
8/03/2022	60	Layer 3	Test #17	96.0%	Pass	Lot 402 RE #17
8/03/2022	61	FSL	Test #35	97.0%	Pass	Lot 408 RE #35
8/03/2022	62	FSL	Test #37	96.5%	Pass	Lot 453 RE #37
8/03/2022	63	FSL		97.5%	Pass	Lot 406
8/03/2022	64	FSL		97.0%	Pass	Lot 410
8/03/2022	65	FSL		96.0%	Pass	Lot 412
8/03/2022	66	FSL		96.0%	Pass	Lot 415
8/03/2022	67	FSL		96.0%	Pass	Lot 460

Material Test Report

Report Number: P21883-1
Issue Number: 1
Date Issued: 16/12/2021
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P21883
Project Name: Octave Estate Stage 4
Project Location: Cranbourne
Client Reference: 07118
Work Request: 7571
Date Sampled: 14/12/2021
Dates Tested: 15/12/2021 - 15/12/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Octave stage 4
Material: CLAY
Material Source: Onsite



Pakenham Laboratory
 47 National Avenue Pakenham VIC 3810
 Phone: (03) 9769 5799
 Email: ccaulfield@terrafirmalabs.com.au



Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P21-7571A	P21-7571B	
Test Number	1	2	
Date Tested	14/12/2021	14/12/2021	
Time Tested	15:30	15:45	
Test Request #/Location	Lot 407	Lot 407	
Layer / Reduced Level	Layer 1	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	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	0	
Field Wet Density (FWD) t/m ³	2.03	1.99	
Field Moisture Content %	20.8	19.6	
Field Dry Density (FDD) t/m ³	1.68	1.67	
Peak Converted Wet Density t/m ³	2.07	2.10	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	16.4	
Adj. Field Moisture Content % (AS1289.5.4.1)	**	19.6	
Moisture Ratio % (AS1289.5.4.1)	110.5	119.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	-2.0	-3.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	98.0	95.0	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P21883-2
Issue Number: 1
Date Issued: 04/01/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P21883
Project Name: Octave Estate Stage 4
Project Location: Cranbourne
Client Reference: 07705
Work Request: 7577
Date Sampled: 15/12/2021
Dates Tested: 15/12/2021 - 17/12/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Octave Estate Stage 4 Level One
Material: Clay
Material Source: Onsite



Pakenham Laboratory
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Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Janaka Somaratne
 Lab Manager
 NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P21-7577A	P21-7577B	P21-7577C
Test Number	3	4	5
Date Tested	15/12/2021	15/12/2021	15/12/2021
Time Tested	**	**	**
Test Request #/Location	Lot 407	Lot 407	Lot 407
Layer / Reduced Level	layer 5	layer 6	layer 7
Thickness of Layer (mm)	300	300	300
Soil Description	Clay sand	Clay sand	Clay sand
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	2
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	**	**
Field Wet Density (FWD) t/m ³	2.06	1.90	1.89
Field Moisture Content %	7.3	8.4	11.5
Field Dry Density (FDD) t/m ³	1.92	1.75	1.70
Peak Converted Wet Density t/m ³	2.09	2.25	**
Adjusted Peak Converted Wet Density t/m ³	**	**	2.38
Adj. Optimum Moisture Content % (AS1289.5.4.1)	9.9	10.4	12.8
Adj. Field Moisture Content % (AS1289.5.4.1)	7.3	8.4	11.3
Moisture Ratio % (AS1289.5.4.1)	73.0	80.5	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	88.0
Moisture Variation (Wv) %	3.0	2.0	**
Adjusted Moisture Variation %	**	**	1.5
Hilf Density Ratio (%)	98.5	84.5	79.5
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: P21883-3
Issue Number: 1
Date Issued: 04/01/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P21883
Project Name: Octave Estate Stage 4
Project Location: Cranbourne
Work Request: 7606
Date Sampled: 17/12/2021
Dates Tested: 17/12/2021 - 22/12/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Octave Estate stage 4 - level 1
Material: CLAY
Material Source: Onsite



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Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Janaka Somaratne
 Lab Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P21-7606A	P21-7606B	P21-7606C
Test Number	6	7	8
Date Tested	17/12/2021	17/12/2021	17/12/2021
Time Tested	**	**	**
Test Request #/Location	Lot No. 431	Lot No. 432	Lot No. 434
Layer / Reduced Level	Layer 2	Layer 2	Layer 2
Thickness of Layer (mm)	300	300	300
Soil Description	CLAY	CLAY	CLAY
Test Depth (mm)	275	275	225
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	2.08	2.00
Field Moisture Content %	8.9	5.7	8.3
Field Dry Density (FDD) t/m ³	1.96	1.97	1.85
Peak Converted Wet Density t/m ³	2.19	2.10	2.10
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	9.7	7.7	10.4
Adj. Field Moisture Content % (AS1289.5.4.1)	8.9	5.7	8.3
Moisture Ratio % (AS1289.5.4.1)	92.0	73.5	80.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	1.0	2.0	2.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	97.5	99.5	95.5
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: P21883-4
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Correct Lot Numbers
Date Issued: 23/05/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P21883
Project Name: Octave Estate Stage 4
Project Location: Cranbourne
Work Request: 7628
Date Sampled: 18/12/2021 12:00
Dates Tested: 20/12/2021 - 20/12/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Octave Estate Stage 4- Level 1
Material: Sandy CLAY
Material Source: Onsite



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Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P21-7628A	P21-7628B	P21-7628C
Test Number	9	10	11
Date Tested	18/12/2021	18/12/2021	18/12/2021
Time Tested	**	**	**
Test Request #/Location	Lot 427	Lot 433	Lot 417
Layer / Reduced Level	Final Layer	Final Layer	Final Layer
Thickness of Layer (mm)	300	300	300
Soil Description	Sandy CLAY	Sandy CLAY	Sandy CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0
Field Wet Density (FWD) t/m ³	1.93	1.88	1.76
Field Moisture Content %	7.7	7.3	7.9
Field Dry Density (FDD) t/m ³	1.79	1.76	1.63
Peak Converted Wet Density t/m ³	2.10	2.07	2.08
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	9.3	8.9	10.6
Adj. Field Moisture Content % (AS1289.5.4.1)	7.7	7.3	7.9
Moisture Ratio % (AS1289.5.4.1)	83.0	82.0	74.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	1.5	1.5	3.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	92.0	91.0	85.0
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: P21883-5
Issue Number: 1
Date Issued: 17/01/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P21883
Project Name: Octave Estate Stage 4
Project Location: Cranbourne
Work Request: 7662
Date Sampled: 21/12/2021 9:00
Dates Tested: 22/12/2021 - 10/01/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Octave Estate Stage 4- Level 1
Material: Sandy CLAY
Material Source: Onsite



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Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P21-7662A	P21-7662B	P21-7662C
Test Number	12	13	14
Date Tested	21/12/2021	21/12/2021	21/12/2021
Time Tested	09:00	09:06	09:12
Test Request #/Location	Lot No. 471	Lot No. 472	Lot No. 401
Layer / Reduced Level	Layer 2	Layer 2	Layer 2
Thickness of Layer (mm)	300	300	300
Soil Description	Sandy CLAY	Sandy CLAY	Sandy CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	1.96	1.90	1.92
Field Moisture Content %	7.8	7.5	6.8
Field Dry Density (FDD) t/m ³	1.82	1.77	1.79
Peak Converted Wet Density t/m ³	2.10	2.03	2.09
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	9.1	**	8.4
Adj. Field Moisture Content % (AS1289.5.4.1)	7.8	7.5	6.8
Moisture Ratio % (AS1289.5.4.1)	85.5	73.0	80.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	1.5	3.0	1.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	93.5	93.5	91.5
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: P21883-6
Issue Number: 1
Date Issued: 17/01/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P21883
Project Name: Octave Estate Stage 4
Project Location: Cranbourne
Work Request: 7663
Date Sampled: 21/12/2021 14:00
Dates Tested: 22/12/2021 - 10/01/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Octave Estate Stage 4- Level 1
Material: Sandy CLAY
Material Source: Onsite



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 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P21-7663A	P21-7663B	P21-7663C
Test Number	15	16	17
Date Tested	21/12/2021	21/12/2021	21/12/2021
Time Tested	**	**	**
Test Request #/Location	Lot No. 472	Lot No. 403	Lot No. 402
Layer / Reduced Level	Layer 3	Layer 3	Layer 3
Thickness of Layer (mm)	300	300	300
Soil Description	Sandy CLAY	Sandy CLAY	Sandy CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	1.79	1.85	1.89
Field Moisture Content %	5.8	7.0	8.2
Field Dry Density (FDD) t/m ³	1.69	1.73	1.75
Peak Converted Wet Density t/m ³	2.04	2.11	2.12
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	8.4	8.7	9.7
Adj. Field Moisture Content % (AS1289.5.4.1)	5.8	7.0	8.2
Moisture Ratio % (AS1289.5.4.1)	69.0	81.0	85.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	2.5	1.5	1.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	88.0	87.5	89.0
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: P21883-7
Issue Number: 1
Date Issued: 02/02/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P21883
Project Name: Octave Estate Stage 4
Project Location: Cranbourne
Work Request: 8014
Date Sampled: 31/01/2022
Dates Tested: 01/02/2022 - 01/02/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Octave Estate stage 4- level 1
Material: Clayey SAND
Material Source: Onsite



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P22-8014A	P22-8014B	P22-8014C
Test Number	30	31	32
Date Tested	31/01/2022	31/01/2022	31/01/2022
Time Tested	**	**	**
Test Request #/Location	Lot No. 416	Lot No. 413	Lot No. 414
Layer / Reduced Level	Layer 2	Layer 2	Layer 2
Thickness of Layer (mm)	300	300	300
Soil Description	Clayey SAND	Clayey SAND	Clayey SAND
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0
Field Wet Density (FWD) t/m ³	2.03	2.00	2.01
Field Moisture Content %	7.3	8.2	11.0
Field Dry Density (FDD) t/m ³	1.89	1.85	1.81
Peak Converted Wet Density t/m ³	2.10	2.08	2.04
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	9.0	9.8	12.4
Adj. Field Moisture Content % (AS1289.5.4.1)	7.3	8.2	11.0
Moisture Ratio % (AS1289.5.4.1)	81.0	83.5	89.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	2.0	1.5	1.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	96.5	96.0	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: P21883-8
Issue Number: 1
Date Issued: 03/02/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P21883
Project Name: Octave Estate Stage 4
Project Location: Cranbourne
Work Request: 7933
Date Sampled: 24/01/2022
Dates Tested: 24/01/2022 - 31/01/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Octave Estate stage 4- level 1
Material: Sandy CLAY
Material Source: Onsite



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P22-7933A	P22-7933B	P22-7933C
Test Number	18	19	20
Date Tested	24/01/2022	24/01/2022	24/01/2022
Time Tested	**	**	**
Test Request #/Location	Lot No. 465	Lot No. 462	Lot No. 463
Layer / Reduced Level	Layer 1	Layer 1	Layer 1
Thickness of Layer (mm)	300	300	300
Soil Description	Sandy CLAY	Sandy CLAY	Sandy 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	**
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	**
Field Wet Density (FWD) t/m ³	2.01	2.00	2.12
Field Moisture Content %	6.8	7.0	8.4
Field Dry Density (FDD) t/m ³	1.89	1.87	1.95
Peak Converted Wet Density t/m ³	2.11	2.10	2.10
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	8.5	8.6	**
Adj. Field Moisture Content % (AS1289.5.4.1)	6.8	7.0	**
Moisture Ratio % (AS1289.5.4.1)	80.5	82.0	88.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	1.5	1.5	1.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	95.5	95.0	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: P21883-9
Issue Number: 1
Date Issued: 04/02/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P21883
Project Name: Octave Estate Stage 4
Project Location: Cranbourne
Work Request: 7959
Date Sampled: 25/01/2022
Dates Tested: 27/01/2022 - 28/01/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: octave Estate stage 4- Level 1
Material: Sandy CLAY
Material Source: Onsite



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P22-7959A	P22-7959B	P22-7959C
Test Number	21	22	23
Date Tested	25/01/2022	25/01/2022	25/01/2022
Time Tested	**	**	**
Test Request #/Location	Lot No. 469	Lot No. 467	Lot No. 464
Layer / Reduced Level	Layer 2	Layer 2	Layer 2
Thickness of Layer (mm)	300	300	300
Soil Description	Sandy CLAY	Sandy CLAY	Sandy CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	2.05	2.14	2.15
Field Moisture Content %	7.4	10.3	10.8
Field Dry Density (FDD) t/m ³	1.91	1.94	1.94
Peak Converted Wet Density t/m ³	2.10	2.13	2.17
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	8.3	9.7	9.9
Adj. Field Moisture Content % (AS1289.5.4.1)	7.4	10.3	10.8
Moisture Ratio % (AS1289.5.4.1)	89.5	106.0	108.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	1.0	-0.5	-1.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	97.5	100.5	98.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P21883-10
Issue Number: 1
Date Issued: 07/02/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P21883
Project Name: Octave Estate Stage 4
Project Location: Cranbourne
Work Request: 8065
Date Sampled: 02/02/2022 16:02
Dates Tested: 03/02/2022 - 05/02/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Octave Estate stage 4- Level 1
Material: Clayey SAND
Material Source: Onsite



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P22-8065A	P22-8065B	P22-8065C
Test Number	36	37	38
Date Tested	02/02/2022	02/02/2022	02/02/2022
Time Tested	**	**	**
Test Request #/Location	Lot No. 455	Lot No. 453	Lot No. 450
Layer / Reduced Level	Final Layer	Final Layer	Final Layer
Thickness of Layer (mm)	300	300	300
Soil Description	Clayey SAND	Clayey SAND	Clayey SAND
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	2.04	2.00	2.04
Field Moisture Content %	10.2	12.0	10.1
Field Dry Density (FDD) t/m ³	1.85	1.79	1.85
Peak Converted Wet Density t/m ³	2.13	2.12	2.12
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	10.9	13.5	11.4
Adj. Field Moisture Content % (AS1289.5.4.1)	10.2	12.0	10.1
Moisture Ratio % (AS1289.5.4.1)	93.5	89.0	88.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.5	1.5	1.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	96.0	94.5	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: P21883-11
Issue Number: 1
Date Issued: 07/02/2022
Client: Street Works Pty Ltd
45 Commercial Drive, Pakenham Vic 3810
Project Number: P21883
Project Name: Octave Estate Stage 4
Project Location: Cranbourne
Work Request: 7969
Date Sampled: 27/01/2022
Dates Tested: 27/01/2022 - 03/02/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Octave Estate stage 4- level 1
Material: Sandy CLAY
Material Source: Onsite



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P22-7969A	P22-7969B	P22-7969C
Test Number	24	25	26
Date Tested	27/01/2022	27/01/2022	27/01/2022
Time Tested	**	**	**
Test Request #/Location	Lot No. 470	Lot No. 468	Lot No. 466
Layer / Reduced Level	Layer 3	Layer 3	Layer 3
Thickness of Layer (mm)	300	300	300
Soil Description	Sandy CLAY	Sandy CLAY	Sandy 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
Field Wet Density (FWD) t/m ³	2.08	2.05	2.01
Field Moisture Content %	7.7	6.2	4.3
Field Dry Density (FDD) t/m ³	1.93	1.93	1.93
Peak Converted Wet Density t/m ³	2.06	1.99	1.94
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Moisture Variation (Wv) %	1.5	0.0	1.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	101.0	103.0	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: P21883-12
Issue Number: 1
Date Issued: 07/02/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P21883
Project Name: Octave Estate Stage 4
Project Location: Cranbourne
Work Request: 7992
Date Sampled: 28/01/2022
Dates Tested: 31/01/2022 - 31/01/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Octave Estate stage 4- level 1
Material: Clayey SAND
Material Source: Onsite



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P22-7992A	P22-7992B	P22-7992C
Test Number	27	28	29
Date Tested	28/01/2022	28/01/2022	28/01/2022
Time Tested	**	**	**
Test Request #/Location	Lot No. 452	Lot No. 449	Lot No. 445
Layer / Reduced Level	Layer 1	Layer 1	Layer 1
Thickness of Layer (mm)	300	300	300
Soil Description	Clayey SAND	Clayey SAND	Clayey SAND
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	0	0
Field Wet Density (FWD) t/m ³	2.06	2.00	2.08
Field Moisture Content %	11.8	23.0	7.8
Field Dry Density (FDD) t/m ³	1.85	1.62	1.93
Peak Converted Wet Density t/m ³	2.13	2.09	2.14
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	25.0	7.5
Adj. Field Moisture Content % (AS1289.5.4.1)	11.8	23.0	7.8
Moisture Ratio % (AS1289.5.4.1)	97.5	92.0	104.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.5	2.0	-0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	97.0	95.5	97.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P21883-13
Issue Number: 1
Date Issued: 07/02/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P21883
Project Name: Octave Estate Stage 4
Project Location: Cranbourne
Work Request: 8064
Date Sampled: 02/02/2022 11:00
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%
Site Selection: Selected by Client
Location: Octave Estate Stage 4- level 1
Material: Clayey SAND
Material Source: Onsite



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P22-8064A	P22-8064B	P22-8064C
Test Number	33	34	35
Date Tested	02/02/2022	02/02/2022	02/02/2022
Time Tested	**	**	**
Test Request #/Location	Lot No. 409	Lot No. 411	Lot No. 408
Layer / Reduced Level	Final Layer	Final Layer	Final Layer
Thickness of Layer (mm)	300	300	300
Soil Description	Clayey SAND	Clayey SAND	Clayey SAND
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	2.11	2.14	2.02
Field Moisture Content %	8.9	9.3	8.7
Field Dry Density (FDD) t/m ³	1.94	1.96	1.86
Peak Converted Wet Density t/m ³	2.16	2.14	2.13
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	8.7	8.9	9.6
Adj. Field Moisture Content % (AS1289.5.4.1)	8.9	9.3	8.7
Moisture Ratio % (AS1289.5.4.1)	102.0	105.0	90.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.0	-0.5	1.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	98.0	100.0	94.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P21883-14
Issue Number: 1
Date Issued: 23/05/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P21883
Project Name: Octave Estate Stage 4
Project Location: Cranbourne
Work Request: 8127
Date Sampled: 04/02/2022
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%
Site Selection: Selected by Client
Location: Octave Estate stage 4- level 1
Material: Clayey SAND
Material Source: Onsite



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P22-8127A		
Test Number	39		
Date Tested	04/02/2022		
Time Tested	**		
Test Request #/Location	Lot 441		
Layer / Reduced Level	Layer 1		
Thickness of Layer (mm)	300		
Soil Description	Clayey SAND		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0		
Field Wet Density (FWD) t/m ³	2.00		
Field Moisture Content %	8.2		
Field Dry Density (FDD) t/m ³	1.85		
Peak Converted Wet Density t/m ³	2.10		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	9.0		
Adj. Field Moisture Content % (AS1289.5.4.1)	8.2		
Moisture Ratio % (AS1289.5.4.1)	91.5		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	1.0		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	95.0		
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: P21883-15
Issue Number: 1
Date Issued: 02/03/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P21883
Project Name: Octave Estate Stage 4
Project Location: Cranbourne
Work Request: 8332
Date Sampled: 17/02/2022
Dates Tested: 17/02/2022 - 24/02/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Octave Estate Stage 4 Level One
Material: Clayey SAND
Material Source: Onsite



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Approved Signatory: Janaka Somaratne
 Lab Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	P22-8332A	P22-8332C	P22-8332F	P22-8332G	P22-8332H
Test Number	40	42	45	46	47
Date Tested	17/02/2022	17/02/2022	17/02/2022	17/02/2022	17/02/2022
Time Tested	**	**	**	**	**
Test Request #/Location	Lot No. 442	Lot No. 444	Lot No. 448	Lot No. 451	Lot No. 454
Layer / Reduced Level	Final Layer	Final Layer	Final Layer	Final Layer	Final Layer
Thickness of Layer (mm)	300	300	300	300	300
Soil Description	Clayey SAND	Clayey SAND	Clayey SAND	Clayey SAND	Clayey SAND
Test Depth (mm)	275	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	**	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	0	0	0	0
Field Wet Density (FWD) t/m ³	1.98	1.97	2.07	1.99	2.08
Field Moisture Content %	7.1	5.5	6.4	8.4	6.8
Field Dry Density (FDD) t/m ³	1.85	1.87	1.95	1.84	1.95
Peak Converted Wet Density t/m ³	2.06	1.99	2.05	2.08	2.09
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	10.7	9.9	12.0	10.5
Adj. Field Moisture Content % (AS1289.5.4.1)	**	5.5	6.4	8.4	6.8
Moisture Ratio % (AS1289.5.4.1)	65.0	51.5	65.0	70.0	64.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**
Moisture Variation (Wv) %	4.0	5.5	3.5	3.5	4.0
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	96.5	99.5	101.0	95.5	99.5
Compaction Method	Standard	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P21883-15
Issue Number: 1
Date Issued: 02/03/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P21883
Project Name: Octave Estate Stage 4
Project Location: Cranbourne
Work Request: 8332
Date Sampled: 17/02/2022
Dates Tested: 17/02/2022 - 21/02/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Octave Estate Stage 4 Level One
Material: Clayey SAND
Material Source: Onsite



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Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1

Sample Number	P22-8332B	P22-8332D	P22-8332E
Test Number	41	43	44
Date Tested	17/02/2022	17/02/2022	17/02/2022
Time Tested	**	**	**
Test Request #/Location	Lot No. 443	Lot No. 446	Lot No. 447
Layer / Reduced Level	Final Layer	Final Layer	Final Layer
Thickness of Layer (mm)	300	300	300
Soil Description	Clayey SAND	Clayey SAND	Clayey SAND
Test Depth (mm)	275	275	275
Fraction Tested (mm)	19.0	19.0	19.0
Oversize (wet basis) %	**	**	**
Oversize (dry basis) %	**	**	**
Curing Hours	**	**	**
Method used to Determine Plasticity	Visual Assessment	Visual Assessment	Visual Assessment
Field Wet Density t/m ³	1.97	1.98	1.95
Field Moisture Content %	3.4	6.7	4.8
Field Dry Density t/m ³	1.90	1.86	1.86
Maximum Dry Density t/m ³	1.92	1.90	1.89
Adjusted Maximum Dry Density t/m ³	**	**	**
Optimum Moisture Content (OMC) %	9.5	10.5	10.5
Adjusted Optimum Moisture Content (OMC) %	**	**	**
Moisture Variation %	6.5	4.0	5.5
Moisture Ratio %	35.5	62.5	46.0
Density Ratio %	99.0	98.0	98.5
Compaction Method	Standard	Standard	Standard

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P21883-17
Issue Number: 1
Date Issued: 23/05/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P21883
Project Name: Octave Estate Stage 4
Project Location: Cranbourne
Work Request: 9458
Date Sampled: 18/03/2022
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%
Site Selection: Selected by Client
Location: Octave Stage 4
Material: Clayey SAND
Material Source: Onsite



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Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	P22-9458A	P22-9458B	P22-9458C	P22-9458D	P22-9458E	P22-9458F
Test Number	50	51	52	53	54	55
Date Tested	08/03/2022	08/03/2022	08/03/2022	08/03/2022	08/03/2022	08/03/2022
Time Tested	**	**	**	**	**	**
Test Request #/Location	Lot 407 RE #4	Lot 407 RE #5	Lot 430 RE #9	Lot 433 RE #10	Lot 434 RE #11	Lot 471 RE #12
Layer / Reduced Level	Layer 6	Layer 7	FSL	FSL	FSL	Layer 2
Thickness of Layer (mm)	300	300	300	300	300	300
Soil Description	Clayey Sand	Clayey Sand	Sandy CLAY	Sandy CLAY	Sandy CLAY	Sandy CLAY
Test Depth (mm)	275	275	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**	**	**	**
Field Wet Density (FWD) t/m ³	2.10	2.06	2.05	2.08	2.05	2.03
Field Moisture Content %	9.3	9.3	8.2	9.0	8.7	8.3
Field Dry Density (FDD) t/m ³	1.92	1.89	1.90	1.91	1.89	1.87
Peak Converted Wet Density t/m ³	2.20	2.16	2.14	2.12	2.11	2.04
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	9.3	9.3	8.2	9.0	8.7	8.3
Moisture Ratio % (AS1289.5.4.1)	146.0	147.0	160.0	153.0	154.5	144.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**	**
Moisture Variation (Wv) %	-3.0	-3.0	-3.5	-3.5	-3.5	-3.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	95.5	96.0	96.0	98.0	97.0	99.5
Compaction Method	Standard	Standard	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P21883-17
Issue Number: 1
Date Issued: 23/05/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P21883
Project Name: Octave Estate Stage 4
Project Location: Cranbourne
Work Request: 9458
Date Sampled: 18/03/2022
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%
Site Selection: Selected by Client
Location: Octave Stage 4
Material: Clayey SAND
Material Source: Onsite



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	P22-9458G	P22-9458H	P22-9458I	P22-9458J	P22-9458K	P22-9458L
Test Number	56	57	58	59	60	61
Date Tested	08/03/2022	08/03/2022	08/03/2022	08/03/2022	08/03/2022	08/03/2022
Time Tested	**	**	**	**	**	**
Test Request #/Location	Lot 472 RE #13	Lot 401 RE #14	Lot 472 RE #15	Lot 403 RE #16	Lot 402 RE #17	Lot 408 RE #35
Layer / Reduced Level	Layer 2	Layer 2	Layer 3	Layer 3	Layer 3	FSL
Thickness of Layer (mm)	300	300	300	300	300	300
Soil Description	Sandy CLAY	Sandy CLAY	Sandy CLAY	Sandy CLAY	Sandy CLAY	Clayey Sand
Test Depth (mm)	275	275	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**	**	**	**
Field Wet Density (FWD) t/m ³	2.08	2.02	2.06	2.08	2.07	2.06
Field Moisture Content %	8.8	8.9	9.1	9.2	8.7	9.6
Field Dry Density (FDD) t/m ³	1.92	1.86	1.89	1.90	1.91	1.88
Peak Converted Wet Density t/m ³	2.13	2.06	2.11	2.12	2.16	2.12
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	8.8	8.9	9.1	9.2	8.7	9.6
Moisture Ratio % (AS1289.5.4.1)	141.5	143.0	139.0	131.0	159.0	133.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**	**
Moisture Variation (Wv) %	-3.0	-3.0	-3.0	-2.5	-3.5	-2.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	98.0	98.0	97.5	98.0	96.0	97.0
Compaction Method	Standard	Standard	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P21883-17
Issue Number: 1
Date Issued: 23/05/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P21883
Project Name: Octave Estate Stage 4
Project Location: Cranbourne
Work Request: 9458
Date Sampled: 18/03/2022
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%
Site Selection: Selected by Client
Location: Octave Stage 4
Material: Clayey SAND
Material Source: Onsite



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	P22-9458M	P22-9458N	P22-9458O	P22-9458P	P22-9458Q	P22-9458R
Test Number	62	63	64	65	66	67
Date Tested	08/03/2022	08/03/2022	08/03/2022	08/03/2022	08/03/2022	08/03/2022
Time Tested	**	**	**	**	**	**
Test Request #/Location	Lot 453 RE #37	Lot 406	Lot 410	Lot 412	Lot 415	Lot 460
Layer / Reduced Level	FSL	FSL	FSL	FSL	FSL	FSL
Thickness of Layer (mm)	300	300	300	300	300	300
Soil Description	Clayey Sand	Clayey Sand	Clayey Sand	Clayey Sand	Clayey Sand	Clayey Sand
Test Depth (mm)	275	275	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**	**	**	**
Field Wet Density (FWD) t/m ³	2.05	2.07	2.08	2.05	2.05	2.04
Field Moisture Content %	8.5	9.0	9.2	9.1	8.7	9.2
Field Dry Density (FDD) t/m ³	1.88	1.90	1.91	1.88	1.89	1.86
Peak Converted Wet Density t/m ³	2.12	2.13	2.15	2.14	2.13	2.12
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	8.5	9.0	9.2	9.1	8.7	9.2
Moisture Ratio % (AS1289.5.4.1)	131.5	131.5	135.5	142.0	138.5	144.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**	**
Moisture Variation (Wv) %	-2.0	-2.5	-2.5	-3.0	-2.5	-3.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	96.5	97.5	97.0	96.0	96.0	96.0
Compaction Method	Standard	Standard	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC