

The Junction Stage 6

GITA Inspection Verification Report

Prepared For: Streetworks Pty Ltd

Report Number P221271A V1

Version Release Date 9 May 2023

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 The Junction Stage 6. This work was conducted over the period of 01/12/2022 to 03/05/2023.

This report presents that the allotment earthworks was carried out in accordance with AS3798-2007 *Guidelines for Earthworks for Commercial and Residential Development* and in compliance with the compaction control specifications established by the contractor.

2 Scope of Work

2.1 Area of Work

The areas of work included lots 1 to 22, bounded by streets Ashcombe Terrace and Craig Road. 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 Charlton Degg (Drawing Reference: 1432_6/R04 D) 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. In some areas the roots from the removed trees were still present so subgrade was excavated to remove them
- 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 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 (P221271D1, 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 46 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 6 at The Junction. For completed fill areas of greater than 300mm, and for works completed between 01/12/2022 and 03/05/2023, earthworks construction activities were conducted under the full time supervision of the Geotechnical Inspection and Testing Authority. Inspections and testing of the fill areas at this site indicate that both sub grade preparation and fill placement have been conducted in accordance with the specification. The earthworks construction for Stage 6 of The Junction was observed to be constructed in compliance with the requirements of the Technical Specification.



Your Worksite is Our Laboratory.

Appendix 1: Test Location Plan

Our Head Office
47 National Ave
Pakenham, VIC 3810

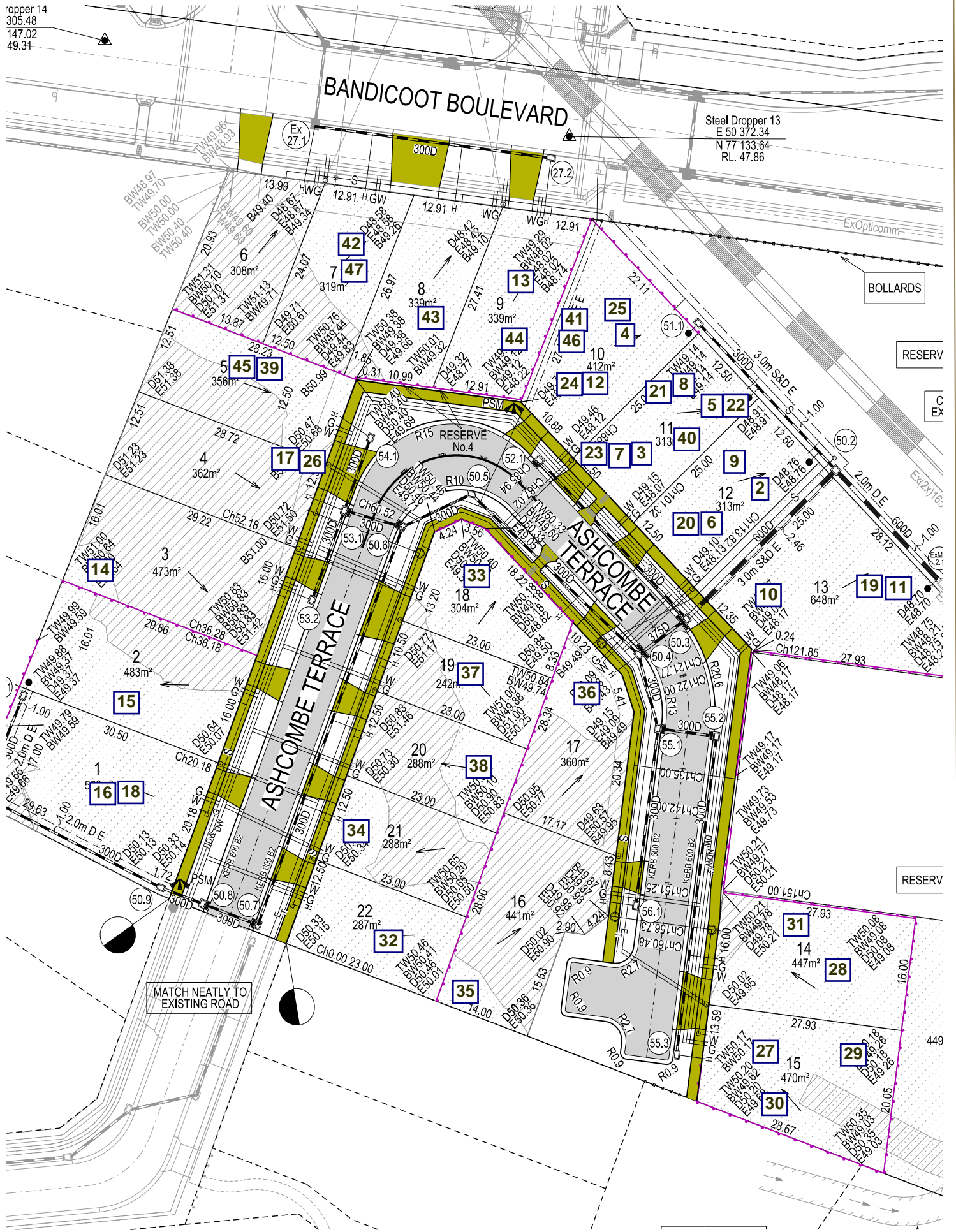
Our Laboratories
Pakenham 03 9769 5799
Deer Park 03 8348 5596
Bibra Lake 08 9395 7220

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Page 1 of 2

opper 14
305.48
147.02
49.31

BANDICOOT BOULEVARD

Steel Dropper 13
E 50 372.34
N 77 133.64
RL. 47.86



Our Head Office
47 National Ave
Pakenham, VIC 3860

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

Test Location Plan

not to scale

Client: Streetworks Pty Ltd

Project: The Junction, Stage 6

Reference: P221271 D1



Your Worksite is Our Laboratory.

Appendix 2: Compaction Test Register and Test Certificates



Compaction Test Register

Client: Streetworks Pty Ltd
Project: The Junction Stage 6

Project No: P221271
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
1/12/2022	2	Layer 2		98.0%	Pass	Lot 12	P221271-1
1/12/2022	3	Layer 1		94.0%	Fail	Lot 11	P221271-1
2/12/2022	4	Layer 3		91.0%	Fail	Lot 10	P221271-2
2/12/2022	5	Layer 4		91.5%	Fail	Lot 11	P221271-2
2/12/2022	6	Layer 5		93.5%	Fail	Lot 12	P221271-2
3/12/2022	7	Layer 1	Test #3	93.0%	Fail	Lot 11	P221271-3
3/12/2022	8	Layer 7		94.5%	Fail	Lot 11	P221271-3
3/12/2022	9	Layer 8		96.5%	Pass	Lot 12	P221271-3
3/12/2022	10	Layer 3		96.0%	Pass	Lot 13	P221271-3
5/12/2022	11	Layer 6		87.0%	Fail	Lot 13	P221271-4
5/12/2022	12	Layer 9		94.5%	Fail	Lot 10	P221271-4
5/12/2022	13	Layer 3		97.5%	Pass	Lot 9	P221271-4
7/12/2022	14	Layer 1		100.0%	Pass	Lot 3	P221271-5
7/12/2022	15	Layer 1		97.0%	Pass	Lot 2	P221271-5
7/12/2022	16	Layer 1		94.5%	Fail	Lot 1	P221271-5
7/12/2022	17	Layer 1		88.0%	Fail	Lot 4	P221271-5
20/01/2023	18	Layer 1	Test #16	99.0%	Pass	Lot 1	P221271-6
20/01/2023	19	Layer 6	Test #11	100.5%	Pass	Lot 13	P221271-6
20/01/2023	20	Layer 5	Test #6	100.0%	Pass	Lot 12	P221271-6
20/01/2023	21	Layer 7	Test #8	100.0%	Pass	Lot 11	P221271-6
20/01/2023	22	Layer 4	Test #5	102.0%	Pass	Lot 11	P221271-6
20/01/2023	23	Layer 1	Test #7	101.0%	Pass	Lot 11	P221271-6
20/01/2023	24	Layer 9	Test #12	99.5%	Pass	Lot 10	P221271-6
20/01/2023	25	Layer 3	Test #4	98.5%	Pass	Lot 10	P221271-6
15/02/2023	26	Layer 1	Test #17	95.5%	Pass	Lot 4	P221271-7
15/02/2023	27	Layer 1		97.5%	Pass	Lot 15	P221271-7
15/02/2023	28	Layer 3		102.5%	Pass	Lot 14	P221271-7
16/02/2023	29	Layer 1		103.5%	Pass	Lot 15	P221271-8
16/02/2023	30	Layer 2		101.0%	Pass	Lot 15	P221271-8
16/02/2023	31	Layer 3		103.0%	Pass	Lot 14	P221271-8
31/03/2023	32	Layer 2		101.0%	Pass	Lot 22	P221271-9
31/03/2023	33	Layer 1		99.0%	Pass	Lot 18	P221271-9
31/03/2023	34	FSL		101.0%	Pass	Lot 21	P221271-9
1/04/2023	35	FSL		96.0%	Pass	Lot 16	P221271-10
1/04/2023	36	FSL		95.0%	Pass	Lot 17	P221271-10
1/04/2023	37	FSL		97.0%	Pass	Lot 19	P221271-10
1/04/2023	38	FSL		97.0%	Pass	Lot 20	P221271-10
1/04/2023	39	FSL		93.0%	Fail	Lot 5	P221271-10
21/04/2023	40	FSL		93.0%	Fail	Lot 11	P221271-12
21/04/2023	41	FSL		98.5%	Pass	Lot 10	P221271-12
28/04/2023	42	FSL		91.0%	Fail	Lot 7	P221271-11



Compaction Test Register

Client: Streetworks Pty Ltd
Project: The Junction Stage 6

Project No: P221271
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
28/04/2023	43	FSL		96.0%	Pass	Lot 8	P221271-11
28/04/2023	44	FSL		98.0%	Pass	Lot 9	P221271-11
3/05/2023	45	FSL	Test #39	99.0%	Pass	Lot 5	P221271-13
3/05/2023	46	FSL	Test #40	98.5%	Pass	Lot 11	P221271-13
3/05/2023	47	FSL	Test #42	97.5%	Pass	Lot 7	P221271-13

Material Test Report

Report Number: P221271-1
Issue Number: 1
Date Issued: 08/12/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P221271
Project Name: The Junction Stage 6 Level 1
Project Location: Junction Village
Work Request: 10988
Date Sampled: 01/12/2022
Dates Tested: 01/12/2022 - 05/12/2022
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: The Junction Stage 6 - Level One
Material: Sandy CLAY
Material Source: Onsite



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 Phone: (03) 9769 5799
 Email: jsomaradne@terrafirmalabs.com.au



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	P22-10988A	P22-10988B	
Test Number	2	3	
Date Tested	01/12/2022	01/12/2022	
Time Tested	**	**	
Test Request #/Location	1 Lot 12	2 Lot 11	
Layer / Reduced Level	Layer 2	Layer 1	
Thickness of Layer (mm)	300	300	
Soil Description	Sandy CLAY	Sandy 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	
Field Wet Density (FWD) t/m ³	2.06	2.05	
Field Moisture Content %	15.1	15.3	
Field Dry Density (FDD) t/m ³	1.79	1.78	
Peak Converted Wet Density t/m ³	2.10	2.18	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	12.9	
Adj. Field Moisture Content % (AS1289.5.4.1)	15.1	15.3	
Moisture Ratio % (AS1289.5.4.1)	99.5	119.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	0.0	-2.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	98.0	94.0	
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: P221271-2
Issue Number: 1
Date Issued: 08/12/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P221271
Project Name: The Junction Stage 6 Level 1
Project Location: Junction Village
Work Request: 10999
Date Sampled: 02/12/2022 14:02
Dates Tested: 02/12/2022 - 05/12/2022
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: The Junction Stage 6 - Level One
Material: soil with clay
Material Source: Onsite



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 Lab Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	P22-10999A	P22-10999B	P22-10999C
Test Number	4	5	6
Date Tested	02/12/2022	02/12/2022	02/12/2022
Time Tested	14:15	14:25	14:35
Test Request #/Location	1 Lot 10	2 Lot 11	3 Lot 12
Layer / Reduced Level	3	4	5
Thickness of Layer (mm)	300	300	300
Soil Description	Soil with clay	Soil with clay	Soil with clay
Test Depth (mm)	275	275	275
Fraction Tested (mm)	19.0	19.0	19.0
Oversize (wet basis) %	0	0	13
Oversize (dry basis) %	0	0	10
Curing Hours	**	**	**
Method used to Determine Plasticity	**	**	Visual Assessment
Field Wet Density t/m ³	2.06	2.04	2.07
Field Moisture Content %	12.8	17.7	24.1
Field Dry Density t/m ³	1.83	1.73	1.67
Maximum Dry Density t/m ³	2.01	1.90	**
Adjusted Maximum Dry Density t/m ³	**	**	1.79
Optimum Moisture Content (OMC) %	10.0	13.0	**
Adjusted Optimum Moisture Content (OMC) %	**	**	12.0
Moisture Variation %	-3.0	-4.5	-12.5
Moisture Ratio %	130.5	136.5	203.5
Density Ratio %	91.0	91.5	93.5
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: P221271-3
Issue Number: 1
Date Issued: 08/12/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P221271
Project Name: The Junction Stage 6 Level 1
Project Location: Junction Village
Work Request: 11011
Date Sampled: 03/12/2022 8:00
Dates Tested: 05/12/2022 - 05/12/2022
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: The Junction Stage 6 Level 1
Lot Number: 8-13
Material: Sandy CLAY



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 Lab Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	P22-11011A	P22-11011C	
Sample Number	P22-11011A	P22-11011C	
Test Number	7	9	
Date Tested	03/12/2022	03/12/2022	
Time Tested	12:00	12:26	
Test Request #/Location	A Lot 11 (Retest)	C Lot 12	
Layer / Reduced Level	2	8	
Thickness of Layer (mm)	300	300	
Soil Description	Clayey SAND	Clayey SAND	
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	2.04	2.11	
Field Moisture Content %	15.0	15.3	
Field Dry Density (FDD) t/m ³	1.78	1.83	
Peak Converted Wet Density t/m ³	2.19	2.19	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	11.6	12.0	
Adj. Field Moisture Content % (AS1289.5.4.1)	15.0	15.3	
Moisture Ratio % (AS1289.5.4.1)	129.0	127.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	-3.5	-3.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	93.0	96.5	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

Moisture Variation Note:

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

Material Test Report

Report Number: P221271-3
Issue Number: 1
Date Issued: 08/12/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P221271
Project Name: The Junction Stage 6 Level 1
Project Location: Junction Village
Work Request: 11011
Date Sampled: 03/12/2022 8:00
Dates Tested: 05/12/2022 - 06/12/2022
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: The Junction Stage 6 Level 1
Lot Number: 8-13
Material: Sandy CLAY



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Approved Signatory: Janaka Somaratne
 Lab Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	P22-11011B	P22-11011D	
Test Number	8	10	
Date Tested	03/12/2022	03/12/2022	
Time Tested	12:15	12:56	
Test Request #/Location	B Lot 11	D Lot 13	
Layer / Reduced Level	7	3	
Thickness of Layer (mm)	300	300	
Soil Description	Clayey SAND	Clayey SAND	
Test Depth (mm)	275	275	
Fraction Tested (mm)	19.0	19.0	
Oversize (wet basis) %	8	0	
Oversize (dry basis) %	9	0	
Curing Hours	**	**	
Method used to Determine Plasticity	**	**	
Field Wet Density t/m ³	2.12	2.08	
Field Moisture Content %	15.2	13.2	
Field Dry Density t/m ³	1.84	1.84	
Maximum Dry Density t/m ³	**	1.91	
Adjusted Maximum Dry Density t/m ³	1.94	**	
Optimum Moisture Content (OMC) %	**	12.0	
Adjusted Optimum Moisture Content (OMC) %	11.0	**	
Moisture Variation %	-4.5	-1.0	
Moisture Ratio %	139.0	109.0	
Density Ratio %	94.5	96.0	
Compaction Method	Standard	Standard	

Moisture Variation Note:

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

Material Test Report

Report Number: P221271-4
Issue Number: 1
Date Issued: 08/12/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P221271
Project Name: The Junction Stage 6 Level 1
Project Location: Junction Village
Client Reference: 08709
Work Request: 11021
Date Sampled: 05/12/2022 8:00
Dates Tested: 05/12/2022 - 06/12/2022
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: The Junction - Junction vilage
Lot Number: 9-13
Material: Sandy CLAY
Material Source: Onsite - Stockpile



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 Lab Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P22-11021C		
Test Number	13		
Date Tested	05/12/2022		
Time Tested	12:27		
Test Request #/Location	3 Lot 9		
Layer / Reduced Level	Layer 3		
Thickness of Layer (mm)	300		
Soil Description	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	2.14		
Field Moisture Content %	12.4		
Field Dry Density (FDD) t/m ³	1.90		
Peak Converted Wet Density t/m ³	2.20		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	11.0		
Adj. Field Moisture Content % (AS1289.5.4.1)	12.4		
Moisture Ratio % (AS1289.5.4.1)	113.0		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	-1.5		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	97.5		
Compaction Method	Standard		
Report Remarks	**		

Moisture Variation Note:

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

Material Test Report

Report Number: P221271-4
Issue Number: 1
Date Issued: 08/12/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P221271
Project Name: The Junction Stage 6 Level 1
Project Location: Junction Village
Client Reference: 08709
Work Request: 11021
Date Sampled: 05/12/2022 8:00
Dates Tested: 05/12/2022 - 06/12/2022
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: The Junction - Junction vilage
Lot Number: 9-13
Material: Sandy CLAY
Material Source: Onsite - Stockpile



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Approved Signatory: Janaka Somaratne
 Lab Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1

	P22-11021A	P22-11021B	
Sample Number	P22-11021A	P22-11021B	
Test Number	11	12	
Date Tested	05/12/2022	05/12/2022	
Time Tested	12:00	12:15	
Test Request #/Location	1 Lot 13	2 Lot 10	
Layer / Reduced Level	Layer 6	Layer 9	
Thickness of Layer (mm)	300	300	
Soil Description	SAND	SAND	
Test Depth (mm)	275	275	
Fraction Tested (mm)	19.0	19.0	
Oversize (wet basis) %	0	0	
Oversize (dry basis) %	0	0	
Curing Hours	**	**	
Method used to Determine Plasticity	Visual Assessment	Visual Assessment	
Field Wet Density t/m ³	2.00	2.08	
Field Moisture Content %	17.4	15.1	
Field Dry Density t/m ³	1.70	1.81	
Maximum Dry Density t/m ³	1.95	1.91	
Adjusted Maximum Dry Density t/m ³	**	**	
Optimum Moisture Content (OMC) %	11.5	11.5	
Adjusted Optimum Moisture Content (OMC) %	**	**	
Moisture Variation %	-6.0	-3.5	
Moisture Ratio %	153.5	131.0	
Density Ratio %	87.0	94.5	
Compaction Method	Standard	Standard	
Binding Time (hrs)	26	**	

Moisture Variation Note:

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

Material Test Report

Report Number: P221271-5
Issue Number: 1
Date Issued: 09/12/2022
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P221271
Project Name: The Junction Stage 6 - Level 1
Project Location: Junction Village
Client Reference: 08710
Work Request: 11045
Date Sampled: 07/12/2022 8:44
Dates Tested: 08/12/2022 - 08/12/2022
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: The Junction- Craig rd Junction village
Material: SAND
Material Source: Onsite - Stockpile



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	P22-11045A	P22-11045B	P22-11045C	P22-11045D
Test Number	14	15	16	17
Date Tested	07/12/2022	07/12/2022	07/12/2022	07/12/2022
Time Tested	08:44	08:44	08:44	08:44
Test Request #/Location	A Lot 3	B Lot 2	C Lot 1	D Lot 4
Layer / Reduced Level	1	1	1	1
Thickness of Layer (mm)	300	300	300	300
Soil Description	SAND	SAND	SAND	SAND
Test Depth (mm)	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	**	0	**
Field Wet Density (FWD) t/m ³	1.71	1.79	1.72	1.79
Field Moisture Content %	3.2	5.0	5.0	8.9
Field Dry Density (FDD) t/m ³	1.66	1.70	1.63	1.64
Peak Converted Wet Density t/m ³	1.72	1.84	1.82	2.03
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	4.5	**	4.8	**
Adj. Field Moisture Content % (AS1289.5.4.1)	3.2	5.0	5.0	8.9
Moisture Ratio % (AS1289.5.4.1)	69.5	143.5	104.0	80.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**
Moisture Variation (Wv) %	2.0	-2.0	0.0	2.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	100.0	97.0	94.5	88.0
Compaction Method	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**

Moisture Variation Note:

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

Material Test Report

Report Number: P221271-6
Issue Number: 4 - This version supersedes all previous issues
Reissue Reason: Correct Layer Numbers Added
Date Issued: 09/05/2023
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P221271
Project Name: The Junction Stage 6 - Level 1
Project Location: Junction Village
Client Reference: 8572
Work Request: 11319
Date Sampled: 20/01/2023
Dates Tested: 23/01/2023 - 24/01/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: The Junction Stage 6 -Retests
Material: SAND/gravelly CLAY
Material Source: Onsite



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	P23-11319A	P23-11319B	P23-11319C	P23-11319D
Test Number	18	19	20	21
Date Tested	20/01/2023	20/01/2023	20/01/2023	20/01/2023
Time Tested	**	**	**	**
Test Request #/Location	Lot 1 (RT of 16)	Lot 13 (RT of 11)	Lot 12 (RT of 6)	Lot 11 (RT of 8)
Layer / Reduced Level	Layer 1	FSL	Layer 5	Layer 7
Thickness of Layer (mm)	300	300	300	300
Soil Description	SAND	Gravelly CLAY	Gravelly CLAY	Gravelly CLAY
Test Depth (mm)	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0	0
Field Wet Density (FWD) t/m ³	1.79	2.14	2.19	2.16
Field Moisture Content %	4.5	15.0	14.1	15.3
Field Dry Density (FDD) t/m ³	1.71	1.86	1.92	1.88
Peak Converted Wet Density t/m ³	1.81	2.13	2.19	2.17
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	5.5	14.8	13.5	12.3
Adj. Field Moisture Content % (AS1289.5.4.1)	4.5	15.0	14.1	15.3
Moisture Ratio % (AS1289.5.4.1)	82.0	101.5	104.5	124.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**
Moisture Variation (Wv) %	1.0	0.0	-0.5	-3.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	99.0	100.5	100.0	100.0
Compaction Method	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**

Moisture Variation Note:

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

Material Test Report

Report Number: P221271-6
Issue Number: 4 - This version supersedes all previous issues
Reissue Reason: Correct Layer Numbers Added
Date Issued: 09/05/2023
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P221271
Project Name: The Junction Stage 6 - Level 1
Project Location: Junction Village
Client Reference: 8572
Work Request: 11319
Date Sampled: 20/01/2023
Dates Tested: 23/01/2023 - 24/01/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: The Junction Stage 6 -Retests
Material: SAND/gravelly CLAY
Material Source: Onsite



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	P23-11319E	P23-11319F	P23-11319G	P23-11319H
Test Number	22	23	24	25
Date Tested	20/01/2023	20/01/2023	20/01/2023	20/01/2023
Time Tested	**	**	**	**
Test Request #/Location	Lot 11 (RT of 5)	Lot 11 (RT of 7)	Lot 10 (RT of 12)	Lot 10 (RT of 4)
Layer / Reduced Level	Layer 4	FSL	Layer 9	Layer 3
Thickness of Layer (mm)	300	300	300	300
Soil Description	Gravelly CLAY	Gravelly CLAY	Gravelly CLAY	Gravelly CLAY
Test Depth (mm)	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	6
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0	**
Field Wet Density (FWD) t/m ³	2.20	2.16	2.16	2.23
Field Moisture Content %	11.2	11.7	12.9	11.7
Field Dry Density (FDD) t/m ³	1.98	1.93	1.91	2.01
Peak Converted Wet Density t/m ³	2.16	2.14	2.17	**
Adjusted Peak Converted Wet Density t/m ³	**	**	**	2.27
Adj. Optimum Moisture Content % (AS1289.5.4.1)	11.8	12.1	12.0	11.0
Adj. Field Moisture Content % (AS1289.5.4.1)	11.2	11.7	12.9	11.0
Moisture Ratio % (AS1289.5.4.1)	95.5	96.5	107.5	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	99.5
Moisture Variation (Wv) %	0.5	0.5	-1.0	**
Adjusted Moisture Variation %	**	**	**	0.0
Hilf Density Ratio (%)	102.0	101.0	99.5	98.5
Compaction Method	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**

Moisture Variation Note:

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

Material Test Report

Report Number: P221271-7
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: Retest Added
Date Issued: 09/05/2023
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P221271
Project Name: The Junction Stage 6 - Level 1
Project Location: Junction Village
Client Reference: 7134
Work Request: 11579
Date Sampled: 15/02/2023
Dates Tested: 15/02/2023 - 17/02/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: The Junction Stage 6 - Level 1
Material: SAND
Material Source: Onsite



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NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11579A	P23-11579B	P23-11579C
Test Number	26	27	28
Date Tested	15/02/2023	15/02/2023	15/02/2023
Time Tested	16:34	16:42	16:42
Test Request #/Location	Lot 4 Retest #17	Lot 15	Lot 14
Layer / Reduced Level	Layer 1	Layer 1	Layer 3
Thickness of Layer (mm)	300	300	300
Soil Description	SAND	SAND	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)	**	**	**
Field Wet Density (FWD) t/m ³	1.78	1.91	1.99
Field Moisture Content %	6.1	9.8	8.0
Field Dry Density (FDD) t/m ³	1.67	1.74	1.84
Peak Converted Wet Density t/m ³	1.86	1.96	1.94
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	6.1	9.8	8.0
Moisture Ratio % (AS1289.5.4.1)	66.5	94.0	89.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	3.5	0.5	1.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	95.5	97.5	102.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

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

Material Test Report

Report Number: P221271-8
Issue Number: 1
Date Issued: 09/03/2023
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P221271
Project Name: The Junction Stage 6 - Level 1
Project Location: Junction Village
Work Request: 11591
Date Sampled: 16/02/2023
Dates Tested: 16/02/2023 - 17/02/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: The Junction Stage 6 - Level 1
Material: SAND
Material Source: Onsite



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 Lab Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	P23-11591A	P23-11591B	
Sample Number			
Test Number	29	30	
Date Tested	16/02/2023	16/02/2023	
Time Tested	14:57	14:57	
Test Request #/Location	1 Lot 15	2 Lot 15	
Layer / Reduced Level	Layer 1	Layer 2	
Thickness of Layer (mm)	300	300	
Soil Description	SAND	SAND	
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	1.96	1.98	
Field Moisture Content %	9.8	9.2	
Field Dry Density (FDD) t/m ³	1.78	1.81	
Peak Converted Wet Density t/m ³	1.89	1.96	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	12.5	10.8	
Adj. Field Moisture Content % (AS1289.5.4.1)	9.8	9.2	
Moisture Ratio % (AS1289.5.4.1)	79.0	85.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	3.0	1.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	103.5	101.0	
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: P221271-9
Issue Number: 1
Date Issued: 24/04/2023
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P221271
Project Name: The Junction Stage 6 - Level 1
Project Location: Junction Village
Client Reference: 08921
Work Request: 12082
Date Sampled: 31/03/2023 9:00
Dates Tested: 31/03/2023 - 03/04/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Location: The Junction Stage 6 Level One
Material: Silty SAND
Material Source: Onsite



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-12082A	P23-12082B	P23-12082C
Test Number	32	33	34
Date Tested	31/03/2023	31/03/2023	31/03/2023
Time Tested	**	**	**
Test Request #/Location	32 Lot 22	33 Lot 18	34 Lot 21
Layer / Reduced Level	Layer 2	Layer 1	FSL
Thickness of Layer (mm)	300	300	300
Soil Description	Silty SAND	Silty SAND	Silty 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	1.90	1.97	1.92
Field Moisture Content %	6.3	10.4	6.1
Field Dry Density (FDD) t/m ³	1.79	1.79	1.81
Peak Converted Wet Density t/m ³	1.89	1.99	1.89
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	10.5	11.6	10.8
Adj. Field Moisture Content % (AS1289.5.4.1)	6.3	10.4	6.1
Moisture Ratio % (AS1289.5.4.1)	60.5	89.0	56.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	4.5	1.5	5.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	101.0	99.0	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: P221271-10
Issue Number: 1
Date Issued: 24/04/2023
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P221271
Project Name: The Junction Stage 6 - Level 1
Project Location: Junction Village
Work Request: 12089
Date Sampled: 01/04/2023
Dates Tested: 01/04/2023 - 03/04/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: The Junction Stage 6 - Level 1
Material: SAND
Material Source: Onsite



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P23-12089A	P23-12089B	P23-12089C	P23-12089D	P23-12089E
Test Number	35	36	37	38	39
Date Tested	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023
Time Tested	**	**	**	**	**
Test Request #/Location	35 Lot 16	36 Lot 17	37 Lot 19	38 Lot 20	39 Lot 5
Layer / Reduced Level	FSL	FSL	FSL	FSL	FSL
Thickness of Layer (mm)	200	200	300	300	300
Soil Description	SAND	SAND	SAND	SAND	SAND
Test Depth (mm)	175	175	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	**	**
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0	**	**
Field Wet Density (FWD) t/m ³	1.83	1.85	1.90	1.92	1.92
Field Moisture Content %	7.3	10.1	9.9	8.9	6.3
Field Dry Density (FDD) t/m ³	1.70	1.68	1.72	1.76	1.80
Peak Converted Wet Density t/m ³	1.91	1.95	1.96	1.98	2.07
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	8.3	10.5	11.0	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	7.3	10.1	9.9	**	**
Moisture Ratio % (AS1289.5.4.1)	87.5	96.5	89.5	80.5	77.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**
Moisture Variation (Wv) %	1.0	0.5	1.0	2.0	2.0
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	96.0	95.0	97.0	97.0	93.0
Compaction Method	Standard	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**	**

Moisture Variation Note:

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

Material Test Report

Report Number: P221271-11
Issue Number: 1
Date Issued: 05/05/2023
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P221271
Project Name: The Junction Stage 6 - Level 1
Project Location: Junction Village
Client Reference: 08954
Work Request: 12305
Date Sampled: 28/04/2023
Dates Tested: 28/04/2023 - 01/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: The Junction Stage 6 - Level 1
Material: CLAY



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	P23-12305A	P23-12305B	P23-12305C
Sample Number	P23-12305A	P23-12305B	P23-12305C
Test Number	42	43	44
Date Tested	28/04/2023	28/04/2023	28/04/2023
Time Tested	**	**	**
Test Request #/Location	Lot 7	Lot 8	Lot 9
Layer / Reduced Level	Final Layer	Final Layer	Final Layer
Thickness of Layer (mm)	250	250	250
Soil Description	Sandy CLAY	Sandy CLAY	Sandy CLAY
Test Depth (mm)	225	225	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	1.91	1.86	2.14
Field Moisture Content %	12.1	6.8	12.3
Field Dry Density (FDD) t/m ³	1.70	1.74	1.90
Peak Converted Wet Density t/m ³	2.09	1.94	2.18
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	11.2	11.1	10.6
Adj. Field Moisture Content % (AS1289.5.4.1)	12.1	6.8	12.3
Moisture Ratio % (AS1289.5.4.1)	108.0	62.0	115.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-1.0	4.5	-1.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	91.0	96.0	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: P221271-12
Issue Number: 1
Date Issued: 08/05/2023
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P221271
Project Name: The Junction Stage 6 - Level 1
Project Location: Junction Village
Work Request: 12251
Date Sampled: 21/04/2023 13:40
Dates Tested: 21/04/2023 - 27/04/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: The Junction Stage 6 Level One
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	P23-12251B		
Test Number	41		
Date Tested	21/04/2023		
Time Tested	**		
Test Request #/Location	Lot 10		
Layer / Reduced Level	FSL		
Thickness of Layer (mm)	300		
Soil Description	Sandy CLAY		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0		
Field Wet Density (FWD) t/m ³	2.18		
Field Moisture Content %	12.6		
Field Dry Density (FDD) t/m ³	1.94		
Peak Converted Wet Density t/m ³	2.22		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	10.8		
Adj. Field Moisture Content % (AS1289.5.4.1)	12.6		
Moisture Ratio % (AS1289.5.4.1)	116.5		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	-2.0		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	98.5		
Compaction Method	Standard		
Report Remarks	**		

Moisture Variation Note:

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

Material Test Report

Report Number: P221271-12
Issue Number: 1
Date Issued: 08/05/2023
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P221271
Project Name: The Junction Stage 6 - Level 1
Project Location: Junction Village
Work Request: 12251
Date Sampled: 21/04/2023 13:40
Dates Tested: 21/04/2023 - 27/04/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: The Junction Stage 6 Level One
Material: Sandy CLAY
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	P23-12251A		
Test Number	40		
Date Tested	21/04/2023		
Time Tested	**		
Test Request #/Location	Lot 11		
Layer / Reduced Level	FSL		
Thickness of Layer (mm)	300		
Soil Description	Sandy CLAY		
Test Depth (mm)	275		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	**		
Method used to Determine Plasticity	Visual Assessment		
Field Wet Density t/m ³	2.07		
Field Moisture Content %	15.9		
Field Dry Density t/m ³	1.79		
Maximum Dry Density t/m ³	1.92		
Adjusted Maximum Dry Density t/m ³	**		
Optimum Moisture Content (OMC) %	11.5		
Adjusted Optimum Moisture Content (OMC) %	**		
Moisture Variation %	-4.0		
Moisture Ratio %	136.0		
Density Ratio %	93.0		
Compaction Method	Standard		

Moisture Variation Note:

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

Material Test Report

Report Number: P221271-13
Issue Number: 1
Date Issued: 09/05/2023
Client: Street Works Pty Ltd
 45 Commercial Drive, Pakenham Vic 3810
Project Number: P221271
Project Name: The Junction Stage 6 - Level 1
Project Location: Junction Village
Work Request: 12377
Date Sampled: 03/05/2023
Dates Tested: 08/05/2023 - 08/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: The Junction Stage 6 - Level 1
Material: Sand/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

	P23-12377A	P23-12377B	P23-12377C
Sample Number	P23-12377A	P23-12377B	P23-12377C
Test Number	45	46	47
Date Tested	03/05/2023	03/05/2023	03/05/2023
Time Tested	**	**	**
Test Request #/Location	Lot 5 Retest #39	Lot 11 Retest #40	Lot 7 Retest #42
Layer / Reduced Level	FSL	FSL	FSL
Thickness of Layer (mm)	300	300	300
Soil Description	Sand	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	1.95	1.89	1.86
Field Moisture Content %	9.8	15.0	18.4
Field Dry Density (FDD) t/m ³	1.77	1.64	1.57
Peak Converted Wet Density t/m ³	1.96	1.92	1.91
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	9.8	15.0	18.4
Moisture Ratio % (AS1289.5.4.1)	99.0	104.5	99.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.0	-0.5	0.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	99.0	98.5	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