

# The Junction Stage 1

## GITA Inspection Verification Report

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<b>Prepared For:</b>	Streetworks Pty Ltd
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<b>Report Number</b>	P20414A V1
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<b>Version Release Date</b>	12 January 2021
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<b>Report Released By</b>	Chris Caulfield
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<b>Title</b>	Project Manager
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**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 1. This work was conducted over the period of 30/11/2020 to 15/12/2020.

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 101,102,105-117,120-128,134,135, bounded by streets Bowervine Road and Bandicoot Boulevard. 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\_1/R 04) 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 1500m<sup>2</sup>), the minimum testing frequency is 1 test per layer per material type per 2500m<sup>2</sup> or 1 test per 500m<sup>3</sup> distributed reasonable evenly throughout full depth and area or 3 tests per lot. AS3798 defines a lot as “an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work”. All three of these test frequencies must be achieved and this is typically confirmed to have been achieved when 3 tests per visit (day) have been completed.

### 2.3 Limitations

Terra Firma Laboratories cannot verify any works completed by others outside of the time period specified in the introduction. Uncontrolled works may include, but are not limited to trenching for services, cut and fill works for slab preparation or subsequent removal of vegetation and back fill of holes unless specified in section 2.1 of this report.

Terra Firma Laboratories cannot verify that the material used as a filling medium is free from chemical or other contamination. The scope and the period of Terra Firma Laboratories as described in the introduction are subject to restrictions and limitations. Terra Firma Laboratories did not perform a complete assessment of all possible conditions and circumstances that may exist at the site. If a service is not expressly indicated, do not assume it has been provided. If a matter is not addressed, do not assume that any determination has been made by Terra Firma Laboratories.

Verification of finished surface level to design levels is outside of the scope of the GITA report.

Any drawings or marked locations presented in this report should be considered only as pictorial evidence of our work. Therefore, unless otherwise stated, any dimensions should not be used for accurate calculations or dimensioning.

Where data has been supplied by the client or a third party, it is assumed that the information is correct unless otherwise stated. No responsibility is accepted by Terra Firma Laboratories for incomplete or inaccurate data supplied by others.

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### 3 Construction Method

#### 3.1 Subgrade Preparation

At the time of subgrade inspection the following was observed:

- Subgrade preparation involved stripping the site of topsoil, vegetation and organic matter to a depth of approximately 200mm below existing levels.
- The site was cleared of all trees and stumps to the extent necessary for the fill placement to proceed
- The roots of all trees and any debris was removed from site prior to any fill placement

The sub-grade area was then proof-rolled to confirm it was capable of withstanding test rolling without visible deformation or springing and any areas observed to be soft or otherwise unsuitable were rectified. The sub-grade was watered and scarified prior to fill placement to aid layer bonding.

#### 3.2 Fill Placement

The contractor was observed to have suitable construction equipment and plant available on-site during the construction period for use in the fill placement.

All fill was placed in layers of thicknesses not exceeding 300mm. At the completion of a placed layer, compaction testing was performed to confirm appropriate compaction had been achieved and supported the observations made. It should be noted that the compaction tests are representative samples of the fill placed and support the visual assessment of the works completed. Each house lot does not necessarily require a compaction test to have been conducted within the house allotment but may have been verified by testing conducted within up to a 2500m<sup>2</sup> area of the house lot.

Final fill placement levels were verified against design level by others. For the purposes of this report, it was observed that finished levels were in accordance with levels marked on site by survey markers.

The final 300mm of material placed across the site was placed as a topsoil layer or growing medium and should be considered as non-structural, as it was placed in an uncontrolled manner, as allowed by specifications and placement of the final 300mm of fill 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 (P20414D1, 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 26 density tests (Hilf method in accordance with 1289 5.7.1) were undertaken with 0 failed results. The results summarised in the compaction test register (Appendix 2) confirm that for every layer of fill placed in a specific work area, satisfactory testing was completed.

## 5 Statement of Compliance

The intention of this report is to provide a description of the earthworks construction for Stage 1 at The Junction. For completed fill areas of greater than 300mm, and for works completed between 30/11/2020 and 15/12/2020, 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 1 of The Junction was observed to be constructed in compliance with the requirements of the Technical Specification.

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## **Appendix 1: Test Location Plan**





## **Appendix 2: Compaction Test Register and Test Certificates**



## Compaction Test Register

**Client:** Streetworks Pty Ltd  
**Project:** The Junction Stage 1

**Project No:** P20414  
**Specification:** 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
30/11/2020	1	Layer 1		99.5%	Pass	Lot 113	P20414-4
30/11/2020	2	Layer 1		97.5%	Pass	Lot 114	P20414-4
30/11/2020	3	Layer 1		98.0%	Pass	Lot 115	P20414-4
30/11/2020	4	Layer 1		97.0%	Pass	Lot 116	P20414-4
30/11/2020	5	Layer 1		97.0%	Pass	Lot 117	P20414-4
4/12/2020	6	Layer 1		108.5%	Pass	Lot 126	P20414-1
4/12/2020	7	Layer 1		98.0%	Pass	Lot 127	P20414-1
4/12/2020	8	Layer 1		95.0%	Pass	Lot 128	P20414-1
5/12/2020	9	Layer 1		96.0%	Pass	Lot 120	P20414-2
5/12/2020	10	Layer 1		99.5%	Pass	Lot 121	P20414-2
5/12/2020	11	Layer 1		100.5%	Pass	Lot 122	P20414-2
5/12/2020	12	Layer 1		96.0%	Pass	Lot 124	P20414-2
5/12/2020	13	Layer 1		96.0%	Pass	Lot 125	P20414-2
9/12/2020	14	Layer 1		96.0%	Pass	Lot 101	P20414-3
9/12/2020	15	Layer 1		98.5%	Pass	Lot 102	P20414-3
9/12/2020	16	Layer 1		95.0%	Pass	Lot 134	P20414-3
9/12/2020	17	Layer 1		97.0%	Pass	Lot 135	P20414-3
14/12/2020	18	Layer 1		97.0%	Pass	Lot 112	P20414-5
14/12/2020	19	Layer 1		105.5%	Pass	Lot 111	P20414-5
14/12/2020	20	Layer 1		105.5%	Pass	Lot 110	P20414-5
14/12/2020	21	Layer 1		109.0%	Pass	Lot 109	P20414-5
14/12/2020	22	Layer 1		104.5%	Pass	Lot 108	P20414-5
15/12/2020	23	Layer 1		102.0%	Pass	Lot 107	P20414-6
15/12/2020	24	Layer 1		105.0%	Pass	Lot 106	P20414-6
15/12/2020	25	Layer 1		105.0%	Pass	Lot 105	P20414-6
15/12/2020	26	Layer 1		100.5%	Pass	Lot 123	P20414-6

# Material Test Report

**Report Number:** P20414-1  
**Issue Number:** 2 - This version supersedes all previous issues  
**Reissue Reason:** Correct Project Name Added  
**Date Issued:** 12/01/2021  
**Client:** Street Works Pty Ltd  
 45 Commercial Drive, Pakenham Vic 3810  
**Project Number:** P20414  
**Project Name:** The Junction Stage 1  
**Project Location:** Cranbourne  
**Work Request:** 4985  
**Date Sampled:** 04/01/2021 16:00  
**Dates Tested:** 07/12/2020 - 07/12/2020  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Specification:** 95%  
**Material:** sand  
**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	P20-4985A	P20-4985B	P20-4985C
Test Number	6	7	8
Date Tested	04/12/2020	04/12/2020	04/12/2020
Time Tested	16:00	16:15	16:30
Test Request #/Location	Lot 126	Lot 127	Lot 128
Layer / Reduced Level	Layer 1	Layer 1	Layer 1
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 <sup>3</sup>	2.14	2.00	1.93
Field Moisture Content %	4.7	5.3	5.9
Field Dry Density (FDD) t/m <sup>3</sup>	2.04	1.90	1.82
Peak Converted Wet Density t/m <sup>3</sup>	1.97	2.03	2.03
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	8.9	8.2	9.5
Adj. Field Moisture Content % (AS1289.5.4.1)	4.7	5.3	5.9
Moisture Ratio % (AS1289.5.4.1)	53.0	64.5	62.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	4.5	3.0	3.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	108.5	98.0	95.0
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:** P20414-2  
**Issue Number:** 2 - This version supersedes all previous issues  
**Reissue Reason:** Correct Project Name Added  
**Date Issued:** 12/01/2021  
**Client:** Street Works Pty Ltd  
 45 Commercial Drive, Pakenham Vic 3810  
**Project Number:** P20414  
**Project Name:** The Junction Stage 1  
**Project Location:** Cranbourne  
**Work Request:** 4986  
**Date Sampled:** 05/12/2020 1:00  
**Dates Tested:** 06/12/2020 - 07/12/2020  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Specification:** 95%  
**Material:** SAND  
**Material Source:** Onsite - Stockpile



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NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	P20-4986A	P20-4986B	P20-4986C	P20-4986D	P20-4986E
Test Number	9	10	11	12	13
Date Tested	05/12/2020	05/12/2020	05/12/2020	05/12/2020	05/12/2020
Time Tested	01:00	01:05	01:10	01:20	01:30
Test Request #/Location	Lot 120	Lot 121	Lot 122	Lot 124	Lot 125
Layer / Reduced Level	Layer 1	Layer 1	Layer 1	Layer 1	Layer 1
Thickness of Layer (mm)	300	300	300	300	300
Soil Description	SAND	SAND	SAND	SAND	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	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**	**	**
Field Wet Density (FWD) t/m <sup>3</sup>	2.02	2.04	2.01	1.79	1.89
Field Moisture Content %	8.4	7.2	8.4	5.2	8.0
Field Dry Density (FDD) t/m <sup>3</sup>	1.86	1.90	1.85	1.70	1.75
Peak Converted Wet Density t/m <sup>3</sup>	2.11	2.05	2.00	1.86	1.97
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	8.4	7.2	8.7	5.7	8.4
Adj. Field Moisture Content % (AS1289.5.4.1)	8.4	7.2	8.4	5.2	8.0
Moisture Ratio % (AS1289.5.4.1)	100.0	100.0	96.5	91.0	95.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**
Moisture Variation (Wv) %	0.0	0.0	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	96.0	99.5	100.5	96.0	96.0
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:** P20414-3  
**Issue Number:** 2 - This version supersedes all previous issues  
**Reissue Reason:** Correct Project Name Added  
**Date Issued:** 12/01/2021  
**Client:** Street Works Pty Ltd  
 45 Commercial Drive, Pakenham Vic 3810  
**Project Number:** P20414  
**Project Name:** The Junction Stage 1  
**Project Location:** Cranbourne  
**Work Request:** 5016  
**Date Sampled:** 09/12/2020 16:00  
**Dates Tested:** 09/12/2020 - 10/12/2020  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Specification:** 95%  
**Lot Number:** 101 - 135  
**Material:** SAND  
**Material Source:** Onsite - Stockpile



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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	P20-5016A	P20-5016B	P20-5016C	P20-5016D
Test Number	14	15	16	17
Date Tested	09/12/2020	09/12/2020	09/12/2020	09/12/2020
Time Tested	15:30	15:40	15:50	16:00
Test Request #/Location	Lot 101	Lot 102	Lot 134	Lot 135
Layer / Reduced Level	Layer 1	Layer 1	Layer 1	Layer 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)	**	**	**	**
Field Wet Density (FWD) t/m <sup>3</sup>	1.99	1.94	2.04	1.97
Field Moisture Content %	8.9	19.7	11.6	13.7
Field Dry Density (FDD) t/m <sup>3</sup>	1.83	1.62	1.83	1.74
Peak Converted Wet Density t/m <sup>3</sup>	2.07	1.97	2.14	2.04
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	9.2	20.4	10.5	15.0
Adj. Field Moisture Content % (AS1289.5.4.1)	8.9	19.7	11.6	13.7
Moisture Ratio % (AS1289.5.4.1)	96.5	96.5	110.5	91.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	-1.0	1.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	96.0	98.5	95.0	97.0
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:** P20414-4  
**Issue Number:** 2 - This version supersedes all previous issues  
**Reissue Reason:** Correct Project Name Added  
**Date Issued:** 12/01/2021  
**Client:** Street Works Pty Ltd  
 45 Commercial Drive, Pakenham Vic 3810  
**Project Number:** P20414  
**Project Name:** The Junction Stage 1  
**Project Location:** Cranbourne  
**Work Request:** 4955  
**Date Sampled:** 30/11/2020 15:30  
**Dates Tested:** 01/12/2020 - 02/12/2020  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Specification:** 95%  
**Material:** Sand  
**Material Source:** Onsite



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Approved Signatory: Chris Caulfield  
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NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	P20-4955A	P20-4955B	P20-4955C	P20-4955D	P20-4955E
Test Number	1	2	3	4	5
Date Tested	30/11/2020	30/11/2020	30/11/2020	30/11/2020	30/11/2020
Time Tested	15:30	15:30	15:30	15:30	15:30
Test Request #/Location	Lot 113	Lot 114	Lot 115	Lot 116	Lot 117
Layer / Reduced Level	Layer 1	Layer 1	Layer 1	Layer 1	Layer 1
Thickness of Layer (mm)	300	200	200	200	200
Soil Description	Sand	Sand	Sand	Sand	Sand
Test Depth (mm)	275	175	175	175	175
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)	**	**	**	**	**
Field Wet Density (FWD) t/m <sup>3</sup>	1.91	2.00	1.96	1.97	2.01
Field Moisture Content %	7.6	9.6	8.2	8.8	9.6
Field Dry Density (FDD) t/m <sup>3</sup>	1.78	1.82	1.81	1.81	1.83
Peak Converted Wet Density t/m <sup>3</sup>	1.92	2.05	2.00	2.03	2.07
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	7.6	**	8.2	8.8	9.6
Moisture Ratio % (AS1289.5.4.1)	77.0	96.0	97.5	92.5	92.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**
Moisture Variation (Wv) %	2.5	0.5	0.0	1.0	1.0
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	99.5	97.5	98.0	97.0	97.0
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:** P20414-5  
**Issue Number:** 2 - This version supersedes all previous issues  
**Reissue Reason:** Correct Project Name Added  
**Date Issued:** 12/01/2021  
**Client:** Street Works Pty Ltd  
 45 Commercial Drive, Pakenham Vic 3810  
**Project Number:** P20414  
**Project Name:** The Junction Stage 1  
**Project Location:** Cranbourne  
**Client Reference:** P20414  
**Work Request:** 5081  
**Date Sampled:** 14/12/2020 15:30  
**Dates Tested:** 15/12/2020 - 16/12/2020  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Specification:** 95%  
**Lot Number:** 108-112  
**Material:** SAND  
**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	P20-5081A	P20-5081B	P20-5081C	P20-5081D	P20-5081E
Test Number	18	19	20	21	22
Date Tested	14/12/2020	14/12/2020	14/12/2020	14/12/2020	14/12/2020
Time Tested	15:00	15:15	15:30	15:45	16:00
Test Request #/Location	Lot 112	Lot 111	Lot 110	Lot 109	Lot 108
Chainage (m)	**	**	**	**	**
Location Offset (m)	**	**	**	**	**
Layer / Reduced Level	Layer 1	Layer 1	Layer 1	Layer 1	Layer 1
Thickness of Layer (mm)	300	300	300	300	300
Soil Description	SAND	SAND	SAND	SAND	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	11	5	5	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**	**	**
Field Wet Density (FWD) t/m <sup>3</sup>	1.98	2.21	2.22	2.21	1.99
Field Moisture Content %	12.9	8.8	9.1	7.4	7.5
Field Dry Density (FDD) t/m <sup>3</sup>	1.75	2.05	2.04	2.07	1.85
Peak Converted Wet Density t/m <sup>3</sup>	2.04	**	**	**	1.91
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	2.09	2.11	2.03	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	8.4	9.3	4.7	**
Adj. Field Moisture Content % (AS1289.5.4.1)	12.9	7.8	8.6	7.0	7.5
Moisture Ratio % (AS1289.5.4.1)	116.0	**	**	**	65.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	93.5	93.0	150.0	**
Moisture Variation (Wv) %	-2.0	**	**	**	4.0
Adjusted Moisture Variation %	**	0.5	0.5	-2.5	**
Hilf Density Ratio (%)	97.0	105.5	105.5	109.0	104.5
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:** P20414-6  
**Issue Number:** 2 - This version supersedes all previous issues  
**Reissue Reason:** Correct Project Name Added  
**Date Issued:** 12/01/2021  
**Client:** Street Works Pty Ltd  
 45 Commercial Drive, Pakenham Vic 3810  
**Project Number:** P20414  
**Project Name:** The Junction Stage 1  
**Project Location:** Cranbourne  
**Client Reference:** P20414  
**Work Request:** 5082  
**Date Sampled:** 15/12/2020 15:30  
**Dates Tested:** 15/12/2020 - 22/12/2020  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Specification:** 95%  
**Material:** SAND  
**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	P20-5082A	P20-5082B	P20-5082C	P20-5082D
Test Number	23	24	25	26
Date Tested	15/12/2020	15/12/2020	15/12/2020	15/12/2020
Time Tested	15:30	15:40	15:50	16:00
Test Request #/Location	Lot 107	Lot 106	Lot 105	Lot 123
Layer / Reduced Level	Layer 1	Layer 1	Layer 1	Layer 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)	**	**	**	**
Field Wet Density (FWD) t/m <sup>3</sup>	2.10	2.09	2.09	1.97
Field Moisture Content %	11.9	9.1	12.4	7.3
Field Dry Density (FDD) t/m <sup>3</sup>	1.87	1.91	1.86	1.83
Peak Converted Wet Density t/m <sup>3</sup>	2.06	1.99	2.00	1.95
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	11.9	9.1	12.4	7.3
Moisture Ratio % (AS1289.5.4.1)	89.0	81.5	88.0	83.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**
Moisture Variation (Wv) %	1.5	2.0	1.5	1.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	102.0	105.0	105.0	100.5
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



12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 101

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 101 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm fill is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "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" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m<sup>2</sup> in area and across several house lots.

A GITA Inspection Verification report (Reference: P20414A) has been published on 12 Jan 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 102

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 102 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm fill is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "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" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m<sup>2</sup> in area and across several house lots.

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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 105

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 105 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm fill is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "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" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m<sup>2</sup> in area and across several house lots.

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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 106

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 106 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm fill is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 107

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 107 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm fill is considered top soil and organic matter and not controlled fill.
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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 108

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 108 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 109

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 109 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 110

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 110 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager



12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 111

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 111 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 112

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 112 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm fill is considered top soil and organic matter and not controlled fill.
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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 113

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 113 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm fill is considered top soil and organic matter and not controlled fill.
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A GITA Inspection Verification report (Reference: P20414A) has been published on 12 Jan 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 114

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 114 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm fill is considered top soil and organic matter and not controlled fill.
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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 115

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 115 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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A GITA Inspection Verification report (Reference: P20414A) has been published on 12 Jan 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 116

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 116 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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A GITA Inspection Verification report (Reference: P20414A) has been published on 12 Jan 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 117

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 117 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm fill is considered top soil and organic matter and not controlled fill.
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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 120

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 120 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm fill is considered top soil and organic matter and not controlled fill.
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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager



12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 121

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 121 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm fill is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "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" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m<sup>2</sup> in area and across several house lots.

A GITA Inspection Verification report (Reference: P20414A) has been published on 12 Jan 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 122

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 122 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm fill is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "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" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m<sup>2</sup> in area and across several house lots.

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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 123

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 123 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm fill is considered top soil and organic matter and not controlled fill.
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- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "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" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m<sup>2</sup> in area and across several house lots.

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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 124

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 124 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 125

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 125 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 126

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 126 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 127

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 127 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 128

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 128 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager



12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 134

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 134 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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For and on behalf of

**Terra Firma Laboratories**



Chris Caulfield  
Project Manager

12 Jan 2021

TO WHOM IT MAY CONCERN

Re: The Junction Stage 1  
Cranbourne  
Lot 135

*Terra Firma Laboratories was engaged by Streetworks Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for The Junction, Stage 1, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 135 as defined in drawing Ref 1432\_1/R 04 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm fill is considered top soil and organic matter and not controlled fill.
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Chris Caulfield  
Project Manager