

# Banyan Place Estate Stage 4

## GITA Inspection Verification Report

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**Prepared For:** Lojac Civil Pty Ltd

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**Report Number** P231328A V1

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**Version Release Date** 28 Aug 2023

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**Report Released By** C Caulfield

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**Title** Project Manager

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**Signature**



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## 1 Introduction

Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical Inspection and Testing Authority (GITA) to provide Level 1 supervision and testing works on the earthworks component for Banyan Place Estate Stage 4. This work was conducted over the period of 30/01/2023 to 03/04/2023.

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 401 to 441, bounded by streets Tulk Street, Blossom Street, Lempriere Road, Forge Street and Tussock Way. 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: 1470\_4/R04 and R05) and provided by Lojac Civil 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 Lojac Civil 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 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 (P231328D1 and D2, 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 38 density tests (Hilf method in accordance with 1289 5.7.1) were undertaken with 2 failed results. The contractor was notified of any failed tests and the failed areas were ripped, watered, compacted and then re-tested to confirm compliance with the specification. The results summarised in the compaction test register (Appendix 2) confirm that for every layer of fill placed in a specific work area, satisfactory testing was completed.

## 5 Statement of Compliance

The intention of this report is to provide a description of the earthworks construction for Stage 4 at Banyan Place Estate. For completed fill areas of greater than 300mm, and for works completed between 30/01/2023 and 03/04/2023, 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 4 of Banyan Place Estate was observed to be constructed in compliance with the requirements of the Technical Specification.

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Your Worksite is Our Laboratory.

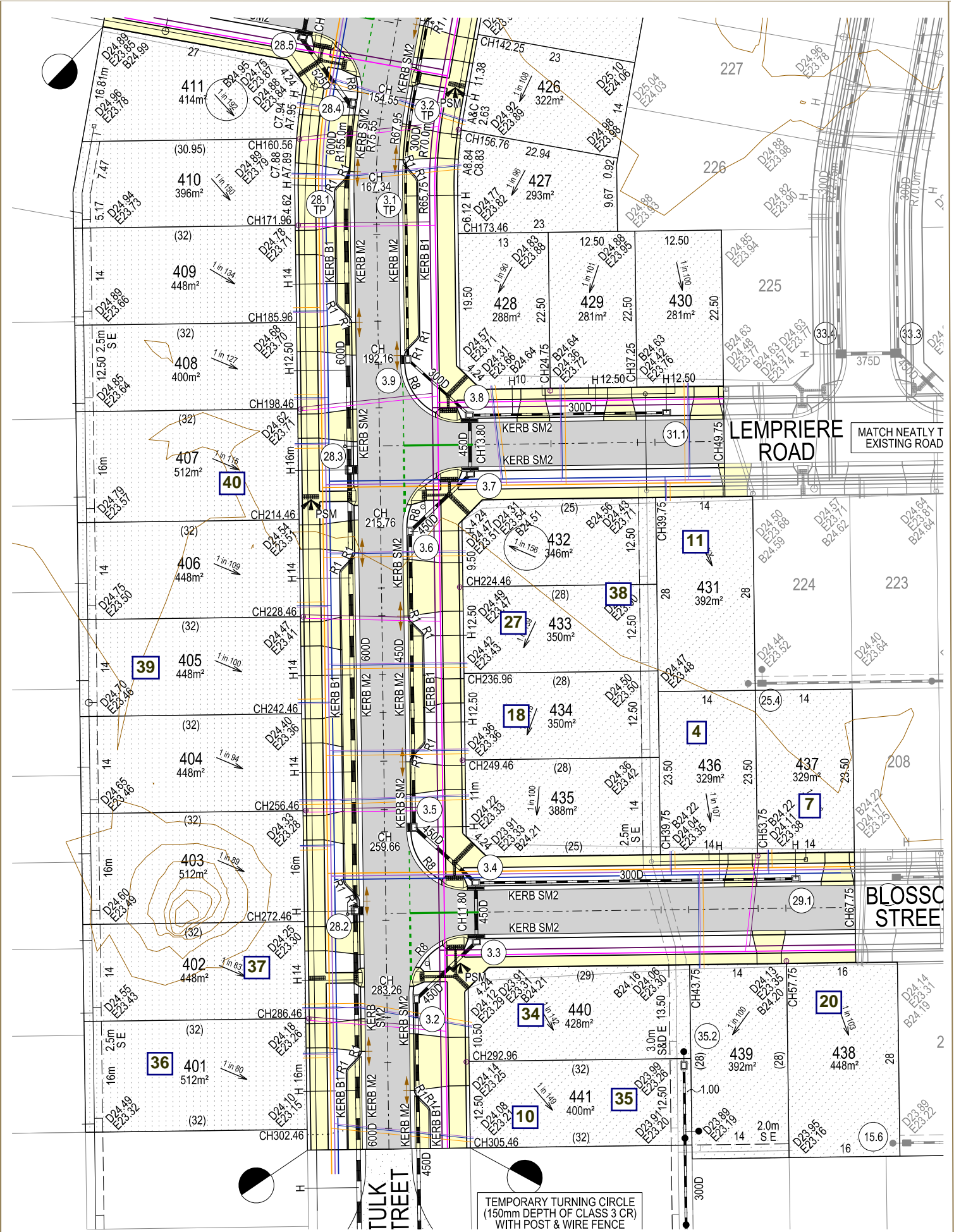
## Appendix 1: Test Location Plan

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





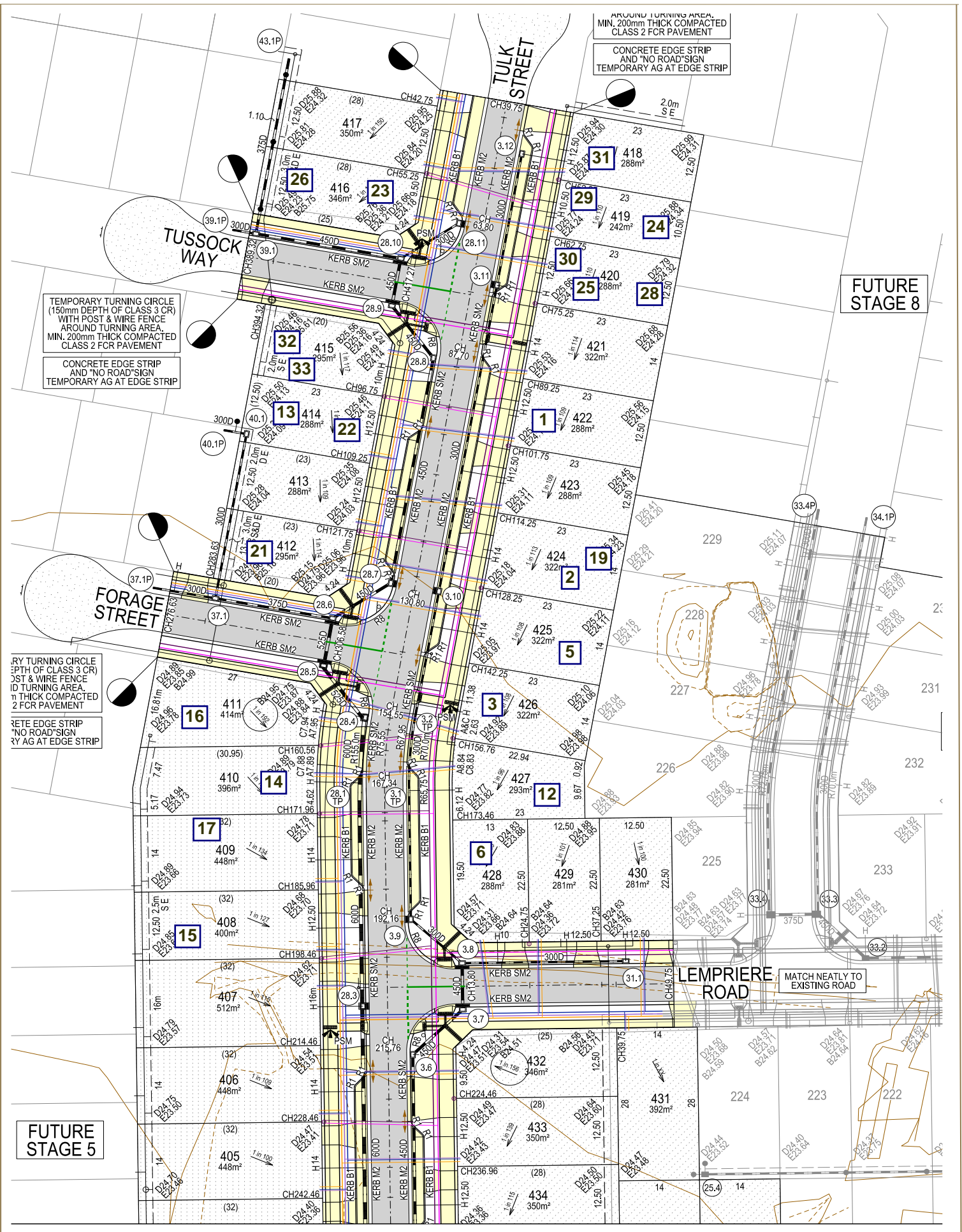
Our Head Office  
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Pakenham, VIC 3860

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

**Test Location Plan**  
*not to scale*

Client:	Lojac Civil Pty Ltd
Project:	Banyan Place Estate, Stage 4
Reference:	P231328 D1





TEMPORARY TURNING CIRCLE  
(150mm DEPTH OF CLASS 3 CR)  
WITH POST & WIRE FENCE  
AROUND TURNING AREA.  
MIN. 200mm THICK COMPACTED  
CLASS 2 FCR PAVEMENT

CONCRETE EDGE STRIP  
AND "NO ROAD" SIGN  
TEMPORARY AG AT EDGE STRIP

TEMPORARY TURNING CIRCLE  
(150mm DEPTH OF CLASS 3 CR)  
WITH POST & WIRE FENCE  
AROUND TURNING AREA.  
MIN. 200mm THICK COMPACTED  
CLASS 2 FCR PAVEMENT

CONCRETE EDGE STRIP  
AND "NO ROAD" SIGN  
TEMPORARY AG AT EDGE STRIP

FUTURE  
STAGE 5

FUTURE  
STAGE 8

AROUND TURNING AREA.  
MIN. 200mm THICK COMPACTED  
CLASS 2 FCR PAVEMENT

CONCRETE EDGE STRIP  
AND "NO ROAD" SIGN  
TEMPORARY AG AT EDGE STRIP

MATCH NEATLY TO  
EXISTING ROAD



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**Test Location Plan**  
*not to scale*

Client:	Lojac Civil Pty Ltd
Project:	Banyan Place Estate Stage 4
Reference:	P231328 D2



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## Appendix 2: Compaction Test Register and Test Certificates



## Compaction Test Register

**Client:** Lojac Civil Pty Ltd                      **Project No:** P231328  
**Project:** Banyan Place Estate Stage 4            **Specification:** 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
30/01/2023	1	Layer 1		95.5%	Pass	Lot 422	P231328-1
30/01/2023	2	Layer 1		92.5%	Fail	Lot 424	P231328-1
30/01/2023	3	Layer 1		105.0%	Pass	Lot 426	P231328-1
30/01/2023	4	Layer 1		100.5%	Pass	Lot 436	P231328-1
15/02/2023	5	Layer 2		97.5%	Pass	Lot 425	P231328-2
15/02/2023	6	Layer 2		97.0%	Pass	Lot 428	P231328-2
15/02/2023	7	Layer 2		102.5%	Pass	Lot 437	P231328-2
14/03/2023	10	Layer 2		102.5%	Pass	Lot 441	P231328-3
14/03/2023	11	Layer 3		104.5%	Pass	Lot 431	P231328-3
14/03/2023	12	Layer 3		106.0%	Pass	Lot 427	P231328-3
15/03/2023	13	Layer 3		99.5%	Pass	Lot 414	P231328-4
15/03/2023	14	Layer 1		100.0%	Pass	Lot 410	P231328-4
15/03/2023	15	Layer 1		99.0%	Pass	Lot 408	P231328-4
16/03/2023	16	Layer 3		95.0%	Pass	Lot 411	P231328-5
16/03/2023	17	Layer 3		97.0%	Pass	Lot 409	P231328-5
16/03/2023	18	Layer 1		106.5%	Pass	Lot 434	P231328-5
16/03/2023	19	Layer 1	Test #2	103.0%	Pass	Lot 424	P231328-5
16/03/2023	20	Layer 1		98.0%	Pass	Lot 438	P231328-5
20/03/2023	21	Layer 5		96.0%	Pass	Lot 412	P231328-6
20/03/2023	22	Layer 5		99.5%	Pass	Lot 414	P231328-6
20/03/2023	23	Layer 5		98.0%	Pass	Lot 416	P231328-6
20/03/2023	24	Layer 2		102.0%	Pass	Lot 419	P231328-7
20/03/2023	25	Layer 2		98.0%	Pass	Lot 420	P231328-7
20/03/2023	26	Layer 2		98.0%	Pass	Lot 416	P231328-7
21/03/2023	27	Layer 3		100.0%	Pass	Lot 433	P231328-8
21/03/2023	28	5th		100.5%	Pass	Lot 420	P231328-8
21/03/2023	29	5th		100.0%	Pass	Lot 419	P231328-8
24/03/2023	30	FSL		102.0%	Pass	Lot 420	P231328-9
24/03/2023	31	FSL		99.0%	Pass	Lot 418	P231328-9
24/03/2023	32	FSL		94.5%	Fail	Lot 415	P231328-9
29/03/2023	33	FSL	Test #32	99.0%	Pass	Lot 415	P231328-11
29/03/2023	34	Layer 3		95.5%	Pass	Lot 440	P231328-11
29/03/2023	35	Layer 3		97.5%	Pass	Lot 441	P231328-11
29/03/2023	36	Layer 3		95.0%	Pass	Lot 401	P231328-11
29/03/2023	37	Layer 4		98.0%	Pass	Lot 402	P231328-11
3/04/2023	38	FSL		100.5%	Pass	Lot 433	P231328-10
3/04/2023	39	FSL		100.5%	Pass	Lot 405	P231328-10
3/04/2023	40	FSL		99.0%	Pass	Lot 407	P231328-10

# Material Test Report

**Report Number:** P231328-1  
**Issue Number:** 2 - This version supersedes all previous issues  
**Reissue Reason:**  
**Date Issued:** 28/08/2023  
**Client:** Lojac Civil Pty Ltd  
 35/148 Chesterville Road, Moorabbin Vic 3189  
**Project Number:** P231328  
**Project Name:** Banyan Place Estate Stage 4 - Level One  
**Project Location:** 70-100 Lecky Road, Officer  
**Work Request:** 11373  
**Date Sampled:** 30/01/2023  
**Dates Tested:** 30/01/2023 - 03/02/2023  
**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:** Banyan Estate - 100 Lecky Rd Officer - Stage 4  
**Material:** Silty Clay  
**Material Source:** Imported



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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	P23-11373A	P23-11373B	P23-11373C	P23-11373D
Test Number	1	2	3	4
Date Tested	30/01/2023	30/01/2023	30/01/2023	30/01/2023
Time Tested	13:50	13:52	13:54	13:59
Test Request #/Location	1 Lot 422	2 Lot 424	3 Lot 426	4 Lot 436
Layer / Reduced Level	L1	L1	L1	L1
Thickness of Layer (mm)	300	300	300	300
Soil Description	**	**	**	**
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	5	4	**
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**	**
Field Wet Density (FWD) t/m <sup>3</sup>	2.00	1.92	2.05	2.01
Field Moisture Content %	17.3	15.2	13.6	10.8
Field Dry Density (FDD) t/m <sup>3</sup>	1.70	1.68	1.82	1.81
Peak Converted Wet Density t/m <sup>3</sup>	2.09	**	**	2.00
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	2.08	1.96	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	17.9	17.5	18.3	**
Adj. Field Moisture Content % (AS1289.5.4.1)	17.3	14.5	13.0	**
Moisture Ratio % (AS1289.5.4.1)	96.5	**	**	68.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	83.0	71.0	**
Moisture Variation (Wv) %	0.5	**	**	5.0
Adjusted Moisture Variation %	**	3.0	5.0	**
Hilf Density Ratio (%)	<b>95.5</b>	<b>92.5</b>	<b>105.0</b>	<b>100.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

### Moisture Variation Note:

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

# Material Test Report

**Report Number:** P231328-2  
**Issue Number:** 2 - This version supersedes all previous issues  
**Reissue Reason:**  
**Date Issued:** 28/08/2023  
**Client:** Lojac Civil Pty Ltd  
 35/148 Chesterville Road, Moorabbin Vic 3189  
**Project Number:** P231328  
**Project Name:** Banyan Place Estate Stage 4 - Level One  
**Project Location:** 70-100 Lecky Road, Officer  
**Work Request:** 11485  
**Date Sampled:** 15/02/2023  
**Dates Tested:** 13/02/2023 - 13/02/2023  
**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:** Banyan Place Estate Stage 4 - Level One  
**Material:** Silty Clay  
**Material Source:** Imported



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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

	P23-11485A	P23-11485B	P23-11485C
Sample Number			
Test Number	5	6	7
Date Tested	15/02/2023	15/02/2023	15/02/2023
Time Tested	**	**	**
Test Request #/Location	Lot 425	Lot 428	Lot 437
Layer / Reduced Level	Layer 2	Layer 2	Layer 2
Thickness of Layer (mm)	300	300	300
Soil Description	CLAY	CLAY	CLAY
Test Depth (mm)	275	275	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>	2.06	2.08	2.03
Field Moisture Content %	18.7	15.2	29.3
Field Dry Density (FDD) t/m <sup>3</sup>	1.74	1.80	1.57
Peak Converted Wet Density t/m <sup>3</sup>	2.11	2.14	1.98
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	16.8	15.3	26.6
Adj. Field Moisture Content % (AS1289.5.4.1)	18.7	15.2	29.3
Moisture Ratio % (AS1289.5.4.1)	111.5	99.5	110.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-2.0	0.0	-2.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	<b>97.5</b>	<b>97.0</b>	<b>102.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**

### Moisture Variation Note:

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



# Material Test Report

**Report Number:** P231328-3B  
**Issue Number:** 2 - This version supersedes all previous issues  
**Reissue Reason:**  
**Date Issued:** 28/08/2023  
**Client:** Lojac Civil Pty Ltd  
 35/148 Chesterville Road, Moorabbin Vic 3189  
**Project Number:** P231328  
**Project Name:** Banyan Place Estate Stage 4 - Level One  
**Project Location:** 70-100 Lecky Road, Officer  
**Work Request:** 11880  
**Date Sampled:** 14/03/2023  
**Dates Tested:** 14/03/2023 - 16/03/2023  
**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:** Banyan Estate Stage 4 - Level One  
**Material:** clay gravel  
**Material Source:** Imported



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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

	P23-11880C	P23-11880D	P23-11880E
Sample Number			
Test Number	10	11	12
Date Tested	14/03/2023	14/03/2023	14/03/2023
Time Tested	**	**	**
Test Request #/Location	Lot 441	Lot 431	Lot 427
Layer / Reduced Level	Layer 2	Layer 3	Layer 3
Thickness of Layer (mm)	300	300	300
Soil Description	CLAY	CLAY	CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.01	2.02	2.02
Field Moisture Content %	14.2	17.6	17.0
Field Dry Density (FDD) t/m <sup>3</sup>	1.76	1.71	1.72
Peak Converted Wet Density t/m <sup>3</sup>	1.96	1.93	1.90
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	17.7	21.8	22.0
Adj. Field Moisture Content % (AS1289.5.4.1)	14.2	17.6	17.0
Moisture Ratio % (AS1289.5.4.1)	80.0	80.5	77.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	3.5	4.0	5.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	<b>102.5</b>	<b>104.5</b>	<b>106.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**

### Moisture Variation Note:

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

# Material Test Report

**Report Number:** P231328-4  
**Issue Number:** 1  
**Date Issued:** 23/03/2023  
**Client:** Lojac Civil Pty Ltd  
 35/148 Chesterville Road, Moorabbin Vic 3189  
**Project Number:** P231328  
**Project Name:** Banyan Place Estate Stage 4 - Level One  
**Project Location:** 70-100 Lecky Road, Officer  
**Work Request:** 11892  
**Date Sampled:** 15/03/2023  
**Dates Tested:** 15/03/2023 - 16/03/2023  
**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:** Banyan Estate Stage 04 - Level One  
**Material:** Clayey GRAVEL  
**Material Source:** Imported



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Approved Signatory: Janaka Somaratne  
 Lab Manager

NATA Accredited Laboratory Number: 15357

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	P23-11892A	P23-11892B	P23-11892C
Sample Number	13	14	15
Test Number	13	14	15
Date Tested	15/03/2023	15/03/2023	15/03/2023
Time Tested	**	**	**
Test Request #/Location	13 Lot 414	14 Lot 410	15 Lot 408
Easting	361848	361774	361805
Northing	5783867	5783980	5783997
Layer / Reduced Level	3rd layer	1st Layer	1st Layer
Thickness of Layer (mm)	300	300	300
Soil Description	Clay	Clay	Clay
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.11	2.07	2.10
Field Moisture Content %	15.8	7.5	15.1
Field Dry Density (FDD) t/m <sup>3</sup>	1.82	1.93	1.82
Peak Converted Wet Density t/m <sup>3</sup>	2.12	2.07	2.12
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Moisture Variation (Wv) %	0.0	4.0	-0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	<b>99.5</b>	<b>100.0</b>	<b>99.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**

### Moisture Variation Note:

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



# Material Test Report

**Report Number:** P231328-5  
**Issue Number:** 2 - This version supersedes all previous issues  
**Reissue Reason:**  
**Date Issued:** 28/08/2023  
**Client:** Lojac Civil Pty Ltd  
 35/148 Chesterville Road, Moorabbin Vic 3189  
**Project Number:** P231328  
**Project Name:** Banyan Place Estate Stage 4 - Level One  
**Project Location:** 70-100 Lecky Road, Officer  
**Work Request:** 11904  
**Date Sampled:** 16/03/2023  
**Dates Tested:** 16/03/2023 - 17/03/2023  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Specification:** 95%  
**Location:** Banyan Estate Stage 04 - Level One  
**Material:** Clayey GRAVEL  
**Material Source:** Imported



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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	P23-11904A	P23-11904B	P23-11904C	P23-11904D	P23-11904E
Test Number	16	17	18	19	20
Date Tested	16/03/2023	16/03/2023	16/03/2023	16/03/2023	16/03/2023
Time Tested	**	**	**	**	**
Test Request #/Location	Lot 411	Lot 409	Lot 434	Lot 424 Retest #2	Lot 438
Layer / Reduced Level	3	3	1	1	1
Thickness of Layer (mm)	300	300	300	300	300
Soil Description	Clayey GRAVEL	Clayey GRAVEL	Clayey GRAVEL	Clayey GRAVEL	Clayey GRAVEL
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)	0	0	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.03	2.01	2.16	2.12	2.09
Field Moisture Content %	12.6	14.5	9.8	8.3	13.7
Field Dry Density (FDD) t/m <sup>3</sup>	1.80	1.76	1.97	1.95	1.84
Peak Converted Wet Density t/m <sup>3</sup>	2.13	2.07	2.02	2.06	2.13
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	12.5	14.2	12.9	11.4	14.2
Adj. Field Moisture Content % (AS1289.5.4.1)	12.6	14.5	9.8	8.3	13.7
Moisture Ratio % (AS1289.5.4.1)	101.0	102.0	76.0	73.0	97.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**
Moisture Variation (Wv) %	0.0	-0.5	3.0	3.0	0.5
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	<b>95.0</b>	<b>97.0</b>	<b>106.5</b>	<b>103.0</b>	<b>98.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**	**

## Moisture Variation Note:

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

# Material Test Report

**Report Number:** P231328-6  
**Issue Number:** 1  
**Date Issued:** 23/03/2023  
**Client:** Lojac Civil Pty Ltd  
 35/148 Chesterville Road, Moorabbin Vic 3189  
**Project Number:** P231328  
**Project Name:** Banyan Place Estate Stage 4 - Level One  
**Project Location:** 70-100 Lecky Road, Officer  
**Work Request:** 11918  
**Date Sampled:** 17/03/2023  
**Dates Tested:** 17/03/2023 - 21/03/2023  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Specification:** 95%  
**Location:** Banyan Estate Stage 04 - Level One  
**Material:** CLAY  
**Material Source:** Imported



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Approved Signatory: Janaka Somaratne  
 Lab Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11918A	P23-11918B	P23-11918C
Test Number	21	22	23
Date Tested	20/03/2023	20/03/2023	20/03/2023
Time Tested	**	**	**
Test Request #/Location	21 Lot 412	22 Lot 414	23 Lot 416
Easting	361785	361775	361782
Northing	5783953	5783956	5783995
Layer / Reduced Level	5th	5th	5th
Thickness of Layer (mm)	300	300	300
Soil Description	Clayey GRAVEL	Clayey GRAVEL	Clayey GRAVEL
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 <sup>3</sup>	2.01	2.02	1.99
Field Moisture Content %	8.9	16.4	13.1
Field Dry Density (FDD) t/m <sup>3</sup>	1.84	1.73	1.76
Peak Converted Wet Density t/m <sup>3</sup>	2.09	2.03	2.03
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	11.7	17.7	14.8
Adj. Field Moisture Content % (AS1289.5.4.1)	8.9	16.4	13.1
Moisture Ratio % (AS1289.5.4.1)	75.5	92.5	88.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	3.0	1.5	2.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	<b>96.0</b>	<b>99.5</b>	<b>98.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**

## Moisture Variation Note:

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

# Material Test Report

**Report Number:** P231328-7  
**Issue Number:** 1  
**Date Issued:** 23/03/2023  
**Client:** Lojac Civil Pty Ltd  
 35/148 Chesterville Road, Moorabbin Vic 3189  
**Project Number:** P231328  
**Project Name:** Banyan Place Estate Stage 4 - Level One  
**Project Location:** 70-100 Lecky Road, Officer  
**Work Request:** 11940  
**Date Sampled:** 20/03/2023  
**Dates Tested:** 20/03/2023 - 21/03/2023  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Specification:** 95%  
**Location:** Banyan Estate Stage 04 - Level One  
**Material:** Clay gravelly  
**Material Source:** Imported



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Approved Signatory: Janaka Somaratne  
 Lab Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11940A	P23-11940B	P23-11940C
Test Number	24	25	26
Date Tested	20/03/2023	20/03/2023	20/03/2023
Time Tested	**	**	**
Test Request #/Location	24 Lot 419	25 Lot 420	26 Lot 416
Easting	361822	361773	361773
Northing	5784020	5784032	5784032
Layer / Reduced Level	2nd	2nd	2nd
Thickness of Layer (mm)	300	300	300
Soil Description	Clayey GRAVEL	Clayey GRAVEL	Clayey GRAVEL
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 <sup>3</sup>	2.08	2.06	2.05
Field Moisture Content %	23.3	17.1	18.3
Field Dry Density (FDD) t/m <sup>3</sup>	1.69	1.76	1.73
Peak Converted Wet Density t/m <sup>3</sup>	2.04	2.10	2.09
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	20.4	16.6	18.4
Adj. Field Moisture Content % (AS1289.5.4.1)	23.3	17.1	18.3
Moisture Ratio % (AS1289.5.4.1)	114.0	102.5	99.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-3.0	-0.5	0.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	<b>102.0</b>	<b>98.0</b>	<b>98.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**

## Moisture Variation Note:

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

# Material Test Report

**Report Number:** P231328-8  
**Issue Number:** 1  
**Date Issued:** 23/03/2023  
**Client:** Lojac Civil Pty Ltd  
 35/148 Chesterville Road, Moorabbin Vic 3189  
**Project Number:** P231328  
**Project Name:** Banyan Place Estate Stage 4 - Level One  
**Project Location:** 70-100 Lecky Road, Officer  
**Work Request:** 11958  
**Date Sampled:** 21/03/2023  
**Dates Tested:** 21/03/2023 - 22/03/2023  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Specification:** 95%  
**Location:** Banyan Estate Stage 04 - Level One  
**Material:** Clayey GRAVEL  
**Material Source:** Imported



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Approved Signatory: Janaka Somaratne  
 Lab Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-11958A	P23-11958B	P23-11958C
Test Number	27	28	29
Date Tested	21/03/2023	21/03/2023	21/03/2023
Time Tested	**	**	**
Test Request #/Location	27 Lot 433	28 Lot 420	29 Lot 419
Easting	361721	361841	3618851
Northing	5783759	5784001	5784101
Layer / Reduced Level	3rd	5th	5th
Thickness of Layer (mm)	300	300	300
Soil Description	Clayey GRAVEL	Clayey GRAVEL	Clayey GRAVEL
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	2	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.02	2.04	2.05
Field Moisture Content %	16.4	23.0	20.4
Field Dry Density (FDD) t/m <sup>3</sup>	1.74	1.66	1.70
Peak Converted Wet Density t/m <sup>3</sup>	**	2.03	2.05
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.03	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	16.7	21.4	20.3
Adj. Field Moisture Content % (AS1289.5.4.1)	16.1	23.0	20.4
Moisture Ratio % (AS1289.5.4.1)	**	107.5	100.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	96.0	**	**
Moisture Variation (Wv) %	**	-1.5	0.0
Adjusted Moisture Variation %	0.5	**	**
Hilf Density Ratio (%)	<b>100.0</b>	<b>100.5</b>	<b>100.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**

**Moisture Variation Note:**

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

# Material Test Report

**Report Number:** P231328-9  
**Issue Number:** 1  
**Date Issued:** 12/04/2023  
**Client:** Lojac Civil Pty Ltd  
 35/148 Chesterville Road, Moorabbin Vic 3189  
**Project Number:** P231328  
**Project Name:** Banyan Place Estate Stage 4 - Level One  
**Project Location:** 70-100 Lecky Road, Officer  
**Work Request:** 12011  
**Date Sampled:** 24/03/2023  
**Dates Tested:** 24/03/2023 - 27/03/2023  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Specification:** 95%  
**Location:** Banyan Place Estate Stage 4 - Level One  
**Material:** CLAY  
**Material Source:** Imported



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Approved Signatory: Janaka Somaratne  
 Lab Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-12011A	P23-12011B	P23-12011C
Test Number	30	31	32
Date Tested	24/03/2023	24/03/2023	24/03/2023
Time Tested	**	**	**
Test Request #/Location	30 Lot 420	31 Lot 418	32 Lot 415
Easting	361827	361842	361782
Northing	5784043	5784059	5784027
Layer / Reduced Level	FSL	FSL	FSL
Thickness of Layer (mm)	300	300	300
Soil Description	CLAY	CLAY	CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.14	2.03	2.00
Field Moisture Content %	17.3	24.4	11.1
Field Dry Density (FDD) t/m <sup>3</sup>	1.83	1.63	1.80
Peak Converted Wet Density t/m <sup>3</sup>	2.10	2.05	2.12
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	19.1	22.0	13.0
Adj. Field Moisture Content % (AS1289.5.4.1)	17.3	24.4	11.1
Moisture Ratio % (AS1289.5.4.1)	90.5	111.0	85.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	2.0	-2.5	2.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	<b>102.0</b>	<b>99.0</b>	<b>94.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**

**Moisture Variation Note:**

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

# Material Test Report

**Report Number:** P231328-10  
**Issue Number:** 1  
**Date Issued:** 05/05/2023  
**Client:** Lojac Civil Pty Ltd  
 35/148 Chesterville Road, Moorabbin Vic 3189  
**Project Number:** P231328  
**Project Name:** Banyan Place Estate Stage 4 - Level One  
**Project Location:** 70-100 Lecky Road, Officer  
**Work Request:** 12092  
**Date Sampled:** 03/04/2023  
**Dates Tested:** 03/04/2023 - 04/04/2023  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Specification:** 95%  
**Location:** Banyan Place Estate Stage 4 - Level One  
**Material:** CLAY  
**Material Source:** Imported



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Approved Signatory: Janaka Somaratne  
 Lab Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-12092A	P23-12092B	P23-12092C
Test Number	38	39	40
Date Tested	03/04/2023	03/04/2023	03/04/2023
Time Tested	**	**	**
Test Request #/Location	38 433	39 405	40 407
Easting	361824	361763	361773
Northing	5783818	5783811	5783849
Layer / Reduced Level	FSL	FSL	FSL
Thickness of Layer (mm)	300	300	300
Soil Description	CLAY	CLAY	CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.10	2.08	2.12
Field Moisture Content %	16.6	15.1	12.9
Field Dry Density (FDD) t/m <sup>3</sup>	1.80	1.81	1.88
Peak Converted Wet Density t/m <sup>3</sup>	2.09	2.07	2.14
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	16.5	15.6	13.2
Adj. Field Moisture Content % (AS1289.5.4.1)	16.6	15.1	12.9
Moisture Ratio % (AS1289.5.4.1)	101.0	96.5	98.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.0	0.5	0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	100.5	100.5	99.0
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

**Moisture Variation Note:**

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

# Material Test Report

**Report Number:** P231328-11  
**Issue Number:** 1  
**Date Issued:** 05/05/2023  
**Client:** Lojac Civil Pty Ltd  
 35/148 Chesterville Road, Moorabbin Vic 3189  
**Project Number:** P231328  
**Project Name:** Banyan Place Estate Stage 4 - Level One  
**Project Location:** 70-100 Lecky Road, Officer  
**Work Request:** 12063  
**Date Sampled:** 29/03/2023  
**Dates Tested:** 29/03/2023 - 30/03/2023  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Specification:** 95%  
**Location:** Banyan Place Estate Stage 4 - Level One  
**Material:** CLAY  
**Material Source:** Imported



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Approved Signatory: Janaka Somaratne  
 Lab Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	P23-12063A	P23-12063B	P23-12063C	P23-12063D	P23-12063E
Test Number	33	34	35	36	37
Date Tested	29/03/2023	29/03/2023	29/03/2023	29/03/2023	29/03/2023
Time Tested	**	**	**	**	**
Test Request #/Location	33R Lot415 retest	34 440	35 441	36 401	37 402
Easting	361782	**	**	361765	361764
Northing	5784027	**	**	5783807	5783819
Layer / Reduced Level	FSL	3rd layer	3rd layer	3rd layer	4th layer
Thickness of Layer (mm)	300	250	300	250	250
Soil Description	CLAY	CLAY	CLAY	CLAY	CLAY
Test Depth (mm)	275	225	275	225	225
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)	0	0	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.12	2.02	2.13	2.02	2.03
Field Moisture Content %	10.1	14.3	14.2	14.3	17.5
Field Dry Density (FDD) t/m <sup>3</sup>	1.93	1.76	1.86	1.77	1.73
Peak Converted Wet Density t/m <sup>3</sup>	2.15	2.11	2.18	2.13	2.08
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	10.4	11.4	11.2	12.0	15.0
Adj. Field Moisture Content % (AS1289.5.4.1)	10.1	14.3	14.2	14.3	17.5
Moisture Ratio % (AS1289.5.4.1)	97.0	125.0	126.5	119.0	116.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**
Moisture Variation (Wv) %	0.5	-3.0	-3.0	-2.5	-2.5
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	99.0	95.5	97.5	95.0	98.0
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



28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 401

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 401 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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: P231328A) has been published on 28 Aug 2023 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 402

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 402 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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: P231328A) has been published on 28 Aug 2023 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 403

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 403 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 404

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 404 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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: P231328A) has been published on 28 Aug 2023 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 405

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 405 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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: P231328A) has been published on 28 Aug 2023 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 406

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 406 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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: P231328A) has been published on 28 Aug 2023 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 407

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 407 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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: P231328A) has been published on 28 Aug 2023 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**



C Caulfield  
Project Manager



28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 408

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 408 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 409

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 409 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 410

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 410 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 411

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 411 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 412

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 412 as defined in drawing Ref 1470\_4/R04 and R05 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 material is considered top soil and organic matter and not controlled fill.
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For and on behalf of

**Terra Firma Laboratories**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 413

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 413 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 414

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 414 as defined in drawing Ref 1470\_4/R04 and R05 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 material is considered top soil and organic matter and not controlled fill.
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For and on behalf of  
**Terra Firma Laboratories**



C Caulfield  
Project Manager



28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 415

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 415 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 416

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 416 as defined in drawing Ref 1470\_4/R04 and R05 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 417

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 417 as defined in drawing Ref 1470\_4/R04 and R05 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 418

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Lot 418 as defined in drawing Ref 1470\_4/R04 and R05 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 419

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 419 as defined in drawing Ref 1470\_4/R04 and R05 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 420

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 420 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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: P231328A) has been published on 28 Aug 2023 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 421

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 421 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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**



C Caulfield  
Project Manager



28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 422

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 422 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 423

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 423 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 424

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 424 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 425

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 425 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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: P231328A) has been published on 28 Aug 2023 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 426

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 426 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 427

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 427 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 428

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 428 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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**



C Caulfield  
Project Manager



28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 429

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 429 as defined in drawing Ref 1470\_4/R04 and R05 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 material is considered top soil and organic matter and not controlled fill.
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For and on behalf of

**Terra Firma Laboratories**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 430

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 430 as defined in drawing Ref 1470\_4/R04 and R05 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 material is considered top soil and organic matter and not controlled fill.
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For and on behalf of  
**Terra Firma Laboratories**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 431

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 431 as defined in drawing Ref 1470\_4/R04 and R05 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 material is considered top soil and organic matter and not controlled fill.
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For and on behalf of

**Terra Firma Laboratories**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 432

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Lot 432 as defined in drawing Ref 1470\_4/R04 and R05 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 433

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Lot 433 as defined in drawing Ref 1470\_4/R04 and R05 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 434

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 434 as defined in drawing Ref 1470\_4/R04 and R05 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 435

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 435 as defined in drawing Ref 1470\_4/R04 and R05 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**



C Caulfield  
Project Manager



28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 436

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 436 as defined in drawing Ref 1470\_4/R04 and R05 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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- 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 437

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 437 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 438

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 438 as defined in drawing Ref 1470\_4/R04 and R05 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 material 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: P231328A) has been published on 28 Aug 2023 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**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 439

*Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Banyan Place Estate, Stage 4, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.*

Lot 439 as defined in drawing Ref 1470\_4/R04 and R05 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 material is considered top soil and organic matter and not controlled fill.
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For and on behalf of  
**Terra Firma Laboratories**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 440

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**Terra Firma Laboratories**



C Caulfield  
Project Manager

28 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 4  
Officer  
Lot 441

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