

Banyan Place Estate Stage 5

GITA Inspection Verification Report

Prepared For: Lojac Civil Pty Ltd

Report Number P231404A V1

Version Release Date 31 Aug 2023

Report Released By C Caulfield

Title Project Manager

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 5. This work was conducted over the period of 05/04/2023 to 26/06/2023.

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 501 to 540, bounded by streets Tussock Way, Forage Street, Waterribbon Road and Twiggy Street. The site will be a Residential development.

The area on which fill was placed is shown on site plan (Appendix 1: *Test Location Plan*) based on drawings prepared by Charlton Degg (Drawing Reference: 1470_5/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 1500m²), the minimum testing frequency is 1 test per layer per material type per 2500m² or 1 test per 500m³ distributed reasonable evenly throughout full depth and area or 3 tests per lot. AS3798 defines a lot as “an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work”. All three of these test frequencies must be achieved and this is typically confirmed to have been achieved when 3 tests per visit (day) have been completed.

2.3 Limitations

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

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

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

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

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

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3 Construction Method

3.1 Subgrade Preparation

At the time of subgrade inspection the following was observed:

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

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

3.2 Fill Placement

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

All fill was placed in layers of thicknesses not exceeding 300mm. At the completion of a placed layer, compaction testing was performed to confirm appropriate compaction had been achieved and supported the observations made. It should be noted that the compaction tests are representative samples of the fill placed and support the visual assessment of the works completed. Each house lot does not necessarily require a compaction test to have been conducted within the house allotment but may have been verified by testing conducted within up to a 2500m² area of the house lot.

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

The final 300mm of material placed across the site was placed as a topsoil layer or growing medium and should be considered as non-structural, as it was placed in an uncontrolled manner, as allowed by specifications and placement of the final 300mm of material was not observed by the GITA.

4 Construction Verification

Compaction Verification testing is summarized in a detailed test register with test certificates attached provided in Appendix 2: *Compaction Test Register and Test Certificates*. A test location

plan (P231404D1, 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 44 density tests (Hilf method in accordance with 1289 5.7.1) were undertaken with 1 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 5 at Banyan Place Estate. For completed fill areas of greater than 300mm, and for works completed between 05/04/2023 and 26/06/2023, 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 5 of Banyan Place Estate was observed to be constructed in compliance with the requirements of the Technical Specification.



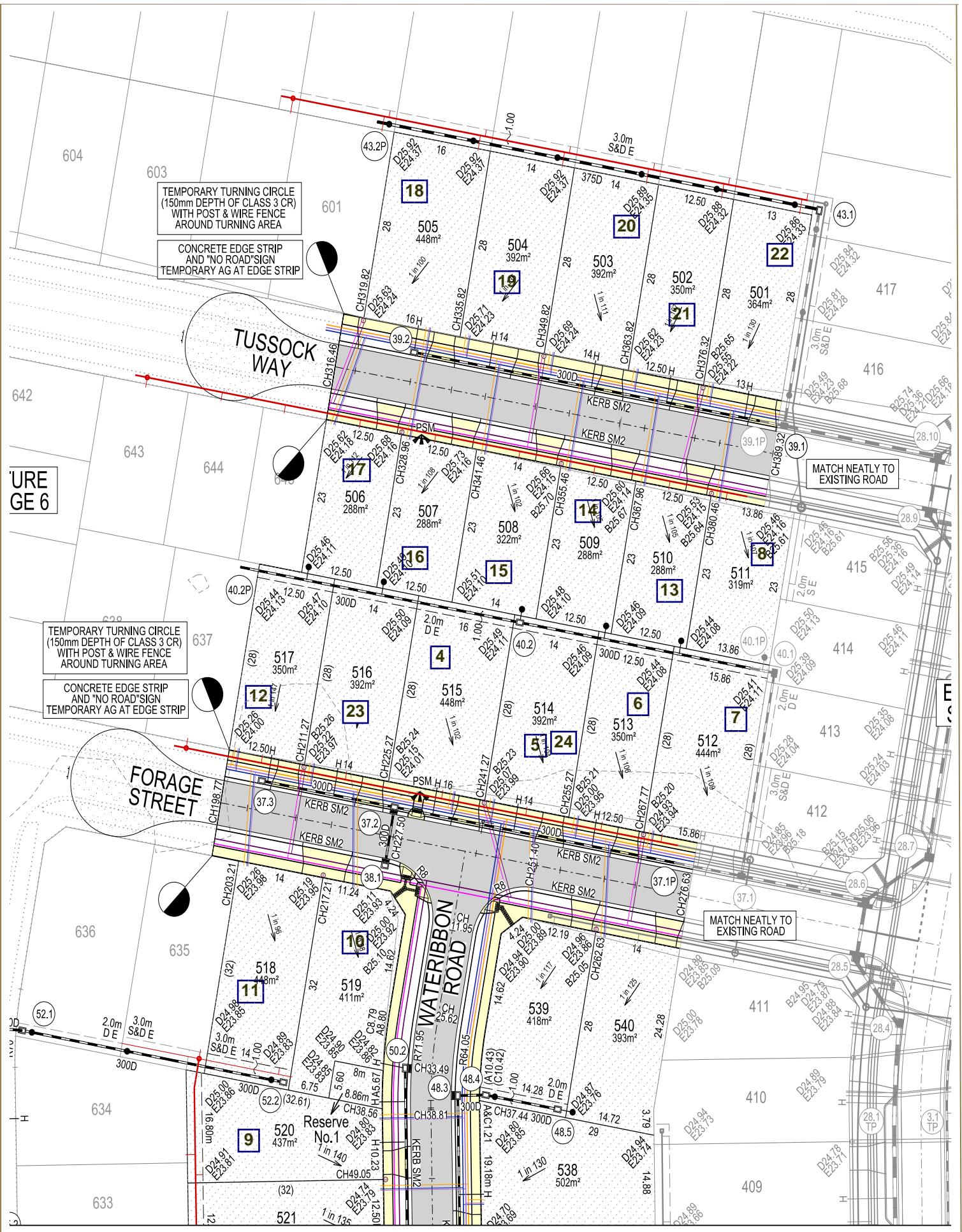
Your Worksite is Our Laboratory.

Appendix 1: Test Location Plan

Our Head Office
47 National Ave
Pakenham, VIC 3810

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

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Page 1 of 2



TEMPORARY TURNING CIRCLE
(150mm DEPTH OF CLASS 3 CR)
WITH POST & WIRE FENCE
AROUND TURNING AREA

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

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

URE
GE 6

FORAGE STREET

WATERBIBBON ROAD

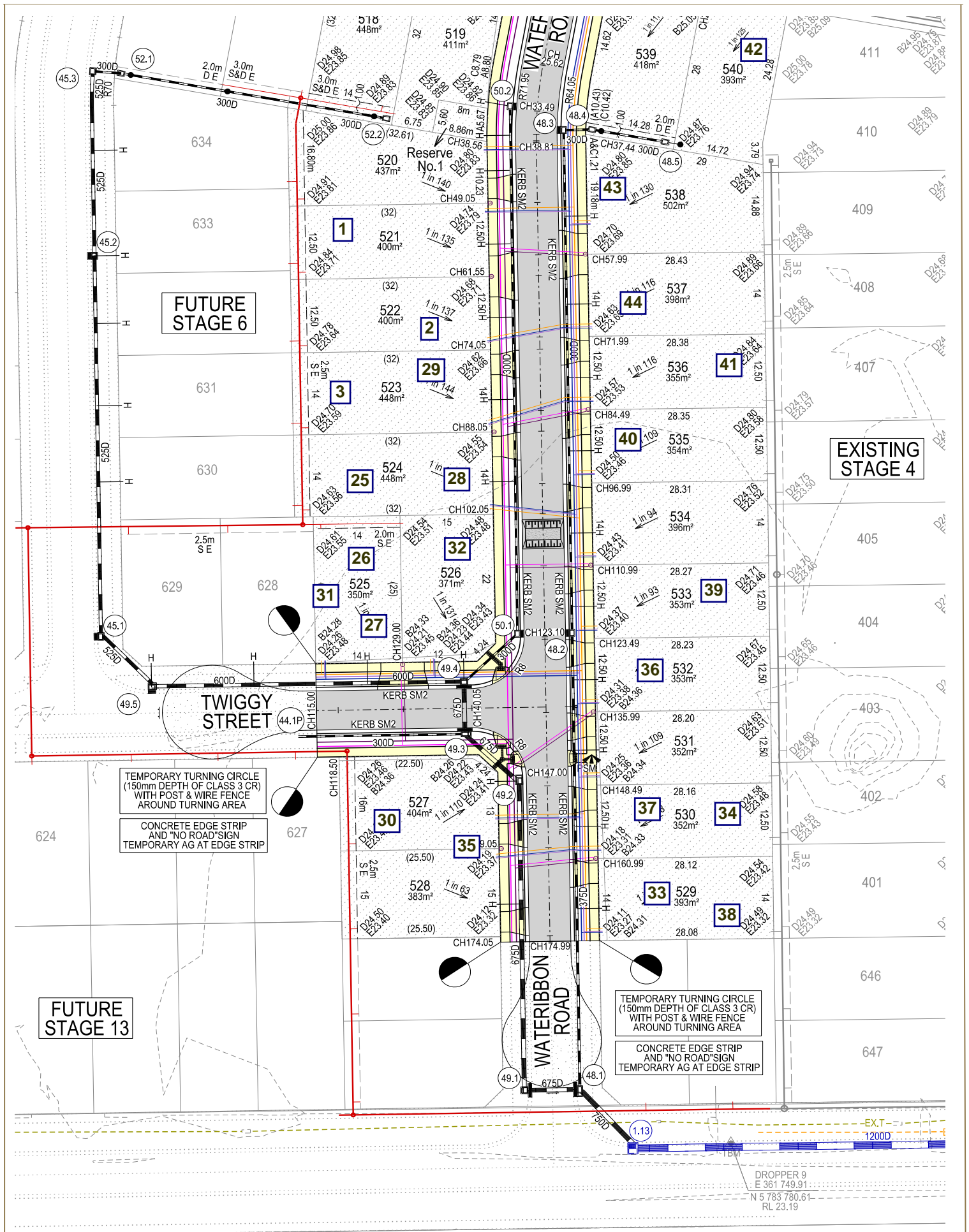
Reserve No. 1

Test Location Plan
not to scale

Client: Lojac Civil Pty Ltd
Project: Banyan Place Estate, Stage 5
Reference: P231404 D1



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Pakenham, VIC 3860
Our Laboratories
Pakenham 03 9769 5799
Deer Park 03 8348 5596
Bibra Lake 08 9395 7220



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Pakenham, VIC 3860

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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 5

Reference: P231404 D2



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Appendix 2: Compaction Test Register and Test Certificates



Compaction Test Register

Client: Lojac Civil Pty Ltd **Project No:** P231404
Project: Banyan Place Estate Stage 5 **Specification:** 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
5/04/2023	1	Layer 1		103.0%	Pass	Lot 521	P231404-1
5/04/2023	2	Layer 1		99.5%	Pass	Lot 522	P231404-1
5/04/2023	3	Layer 1		98.5%	Pass	Lot 523	P231404-1
27/04/2023	4	Layer 2		97.5%	Pass	Lot 515	P231404-2
27/04/2023	5	Layer 3		94.5%	Fail	Lot 514	P231404-2
27/04/2023	6	Layer 2		96.5%	Pass	Lot 513	P231404-2
27/04/2023	7	Layer 3		98.5%	Pass	Lot 512	P231404-2
27/04/2023	8	Layer 3		100.5%	Pass	Lot 511	P231404-2
27/04/2023	9	Layer 3		95.0%	Pass	Lot 520	P231404-2
27/04/2023	10	Layer 3		98.5%	Pass	Lot 519	P231404-2
27/04/2023	11	Layer 3		99.5%	Pass	Lot 518	P231404-2
27/04/2023	12	Layer 4		96.5%	Pass	Lot 517	P231404-2
1/05/2023	13	Layer 1		102.0%	Pass	Lot 510	P231404-3
1/05/2023	14	Layer 2		102.0%	Pass	Lot 509	P231404-3
1/05/2023	15	Layer 3		96.0%	Pass	Lot 508	P231404-3
1/05/2023	16	Layer 2		97.0%	Pass	Lot 507	P231404-3
1/05/2023	17	Layer 3		96.5%	Pass	Lot 506	P231404-3
1/05/2023	18	Layer 4		99.0%	Pass	Lot 505	P231404-3
1/05/2023	19	Layer 1		99.0%	Pass	Lot 504	P231404-3
1/05/2023	20	Layer 2		95.0%	Pass	Lot 503	P231404-3
1/05/2023	21	Layer 3		97.5%	Pass	Lot 502	P231404-3
1/05/2023	22	Layer 4		100.0%	Pass	Lot 501	P231404-3
1/05/2023	23	Layer 3		95.0%	Pass	Lot 516	P231404-3
2/05/2023	24	Layer 3	Test #5	97.5%	Pass	Lot 514	P231404-4
2/05/2023	25	Layer 3		98.5%	Pass	Lot 524	P231404-4
2/05/2023	26	Layer 3		99.0%	Pass	Lot 525	P231404-4
15/05/2023	27	Layer 3		101.0%	Pass	Lot 525	P231404-5
15/05/2023	28	Layer 3		99.0%	Pass	Lot 524	P231404-5
15/05/2023	29	Layer 3		100.5%	Pass	Lot 523	P231404-5
18/05/2023	30	Layer 1		102.5%	Pass	Lot 527	P231401-6
18/05/2023	31	Layer 3		104.0%	Pass	Lot 525	P231401-6
18/05/2023	32	Layer 3		100.5%	Pass	Lot 526	P231401-6
22/05/2023	33	Layer 1		101.0%	Pass	Lot 529	P231404-7
22/05/2023	34	Layer 2		98.5%	Pass	Lot 530	P231404-7
22/05/2023	35	Layer 3		101.5%	Pass	Lot 527	P231404-7
23/05/2023	36	Layer 3		95.5%	Pass	Lot 532	P231404-8
23/05/2023	37	Layer 5		98.5%	Pass	Lot 530	P231404-8
23/05/2023	38	Layer 5		97.0%	Pass	Lot 529	P231404-8
1/06/2023	39	Layer 2		104.0%	Pass	Lot 533	P231404-9
1/06/2023	40	Layer 3		98.0%	Pass	Lot 535	P231404-9
1/06/2023	41	Layer 4		100.5%	Pass	Lot 536	P231404-9



Compaction Test Register

Client: Lojac Civil Pty Ltd **Project No:** P231404
Project: Banyan Place Estate Stage 5 **Specification:** 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
26/06/2023	42	Layer 1		95.0%	Pass	Lot 540	P231404-10
26/06/2023	43	Layer 2		96.0%	Pass	Lot 538	P231404-10
26/06/2023	44	Layer 3		99.0%	Pass	Lot 537	P231404-10

Material Test Report

Report Number: P231404-1
Issue Number: 1
Date Issued: 13/04/2023
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P231404
Project Name: Banyan Place Stage 5 - Level One
Project Location: Officer
Work Request: 12116
Date Sampled: 05/04/2023
Dates Tested: 05/04/2023 - 06/04/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Stage 5 - Level One
Material: Silty Clay
Material Source: Imported



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

Accredited for compliance with ISO/IEC 17025 - Testing



Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-12116A	P23-12116C	
Test Number	1	3	
Date Tested	05/04/2023	05/04/2023	
Time Tested	11:25	11:41	
Test Request #/Location	Lot 501	Lot 503	
Layer / Reduced Level	Layer 1	Layer 3	
Thickness of Layer (mm)	300	300	
Soil Description	**	**	
Test Depth (mm)	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	
Field Wet Density (FWD) t/m ³	2.10	2.08	
Field Moisture Content %	13.8	9.7	
Field Dry Density (FDD) t/m ³	1.84	1.90	
Peak Converted Wet Density t/m ³	2.03	2.11	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	16.4	11.5	
Adj. Field Moisture Content % (AS1289.5.4.1)	13.8	9.7	
Moisture Ratio % (AS1289.5.4.1)	84.0	84.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	2.5	2.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	103.0	98.5	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

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

Material Test Report

Report Number: P231404-1
Issue Number: 1
Date Issued: 13/04/2023
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P231404
Project Name: Banyan Place Stage 5 - Level One
Project Location: Officer
Work Request: 12116
Date Sampled: 05/04/2023
Dates Tested: 05/04/2023 - 06/04/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Stage 5 - 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 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1

Sample Number	P23-12116B		
Test Number	2		
Date Tested	05/04/2023		
Time Tested	11:32		
Test Request #/Location	Lot 502		
Layer / Reduced Level	Layer 2		
Thickness of Layer (mm)	300		
Soil Description	**		
Test Depth (mm)	275		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	**		
Method used to Determine Plasticity	Visual Assessment		
Field Wet Density t/m ³	1.97		
Field Moisture Content %	40.5		
Field Dry Density t/m ³	1.40		
Maximum Dry Density t/m ³	1.41		
Adjusted Maximum Dry Density t/m ³	**		
Optimum Moisture Content (OMC) %	29.5		
Adjusted Optimum Moisture Content (OMC) %	**		
Moisture Variation %	-11.0		
Moisture Ratio %	136.5		
Density Ratio %	99.5		
Compaction Method	Standard		

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P231404-2
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 31/08/2023
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P231404
Project Name: Banyan Place Stage 5 - Level One
Project Location: Officer
Work Request: 12281
Date Sampled: 27/04/2023
Dates Tested: 27/04/2023 - 28/04/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Estate Stage 5
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	P23-12281A	P23-12281B	P23-12281C	P23-12281D	P23-12281E
Test Number	4	5	6	7	8
Date Tested	27/04/2023	27/04/2023	27/04/2023	27/04/2023	27/04/2023
Time Tested	12:38	13:08	13:08	13:08	13:08
Test Request #/Location	Lot 515	Lot 514	Lot 513	Lot 512	Lot 511
Layer / Reduced Level	Layer 2	Layer 3	Layer 2	Layer 3	Layer 3
Thickness of Layer (mm)	300	300	300	300	300
Soil Description	CLAY	CLAY	CLAY	CLAY	CLAY
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 ³	2.05	1.99	2.03	2.02	2.07
Field Moisture Content %	14.0	10.0	9.2	8.3	11.5
Field Dry Density (FDD) t/m ³	1.80	1.81	1.86	1.87	1.85
Peak Converted Wet Density t/m ³	2.11	2.10	2.11	2.06	2.05
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	15.4	11.9	11.2	11.3	13.9
Adj. Field Moisture Content % (AS1289.5.4.1)	14.0	10.0	9.2	8.3	11.5
Moisture Ratio % (AS1289.5.4.1)	90.5	84.5	82.0	73.0	83.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**
Moisture Variation (Wv) %	1.5	2.0	2.0	3.0	2.5
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	97.5	94.5	96.5	98.5	100.5
Compaction Method	Standard	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**	**

Moisture Variation Note:

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

Material Test Report

Report Number: P231404-2
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 31/08/2023
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P231404
Project Name: Banyan Place Stage 5 - Level One
Project Location: Officer
Work Request: 12281
Date Sampled: 27/04/2023
Dates Tested: 27/04/2023 - 28/04/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Estate Stage 5
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	P23-12281F	P23-12281G	P23-12281H	P23-12281I	
Test Number	9	10	11	12	
Date Tested	27/04/2023	27/04/2023	27/04/2023	27/04/2023	
Time Tested	13:08	13:08	13:08	13:08	
Test Request #/Location	Lot 520	Lot 519	Lot 518	Lot 517	
Layer / Reduced Level	Layer 3	Layer 3	Layer 3	Layer 4	
Thickness of Layer (mm)	300	300	300	300	
Soil Description	CLAY	CLAY	CLAY	CLAY	
Test Depth (mm)	275	275	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	0	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0	0	
Field Wet Density (FWD) t/m ³	1.93	2.08	2.07	2.06	
Field Moisture Content %	8.2	9.7	8.9	10.0	
Field Dry Density (FDD) t/m ³	1.79	1.89	1.90	1.87	
Peak Converted Wet Density t/m ³	2.04	2.10	2.08	2.13	
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	11.3	11.9	11.5	10.9	
Adj. Field Moisture Content % (AS1289.5.4.1)	8.2	9.7	8.9	10.0	
Moisture Ratio % (AS1289.5.4.1)	72.5	81.0	77.5	91.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	
Moisture Variation (Wv) %	3.0	2.5	2.5	1.0	
Adjusted Moisture Variation %	**	**	**	**	
Hilf Density Ratio (%)	95.0	98.5	99.5	96.5	
Compaction Method	Standard	Standard	Standard	Standard	
Report Remarks	**	**	**	**	

Moisture Variation Note:

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

Material Test Report

Report Number: P231404-3
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 31/08/2023
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P231404
Project Name: Banyan Place Stage 5 - Level One
Project Location: Officer
Work Request: 12320
Date Sampled: 01/05/2023
Dates Tested: 01/05/2023 - 08/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Stage 5 - Level One
Material: CLAY
Material Source: Imported



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Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P23-12320A	P23-12320B	P23-12320C	P23-12320D	P23-12320E	P23-12320F
Test Number	13	14	15	16	17	18
Date Tested	01/05/2023	01/05/2023	01/05/2023	01/05/2023	01/05/2023	01/05/2023
Time Tested	09:26	09:31	09:35	09:39	09:45	15:21
Test Request #/Location	Lot 510	Lot 509	Lot 508	Lot 507	Lot 506	Lot 505
Layer / Reduced Level	Layer 1	Layer 2	Layer 3	Layer 2	Layer 3	Layer 4
Thickness of Layer (mm)	300	300	300	300	300	300
Soil Description	CLAY	CLAY	CLAY	CLAY	CLAY	CLAY
Test Depth (mm)	275	275	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**	**	**	**
Field Wet Density (FWD) t/m ³	2.09	2.04	2.06	2.02	2.08	2.13
Field Moisture Content %	14.1	16.5	13.7	17.2	12.9	14.0
Field Dry Density (FDD) t/m ³	1.83	1.75	1.81	1.72	1.84	1.87
Peak Converted Wet Density t/m ³	2.05	2.00	2.15	2.08	2.15	2.16
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	15.0	17.2	13.5	17.0	12.9	12.3
Adj. Field Moisture Content % (AS1289.5.4.1)	14.1	16.5	13.7	17.2	12.9	14.0
Moisture Ratio % (AS1289.5.4.1)	94.0	96.0	101.5	101.0	99.5	113.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**	**
Moisture Variation (Wv) %	1.0	0.5	0.0	0.0	0.0	-1.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	102.0	102.0	96.0	97.0	96.5	99.0
Compaction Method	Standard	Standard	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**	**	**

Moisture Variation Note:

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

Material Test Report

Report Number: P231404-3
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 31/08/2023
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P231404
Project Name: Banyan Place Stage 5 - Level One
Project Location: Officer
Work Request: 12320
Date Sampled: 01/05/2023
Dates Tested: 01/05/2023 - 08/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Stage 5 - Level One
Material: 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	P23-12320G	P23-12320H	P23-12320I	P23-12320J	P23-12320K	
Test Number	19	20	21	22	23	
Date Tested	01/05/2023	01/05/2023	01/05/2023	01/05/2023	01/05/2023	
Time Tested	15:26	15:29	15:32	15:35	15:43	
Test Request #/Location	Lot 504	Lot 503	Lot 502	Lot 501	Lot 516	
Layer / Reduced Level	Layer 1	Layer 2	Layer 3	Layer 4	Layer 3	
Thickness of Layer (mm)	300	300	300	300	300	
Soil Description	CLAY	CLAY	CLAY	CLAY	CLAY	
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	2	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**	**	**	
Field Wet Density (FWD) t/m ³	2.06	1.92	1.99	2.08	1.93	
Field Moisture Content %	18.5	11.2	16.6	11.1	8.5	
Field Dry Density (FDD) t/m ³	1.74	1.72	1.71	1.87	1.78	
Peak Converted Wet Density t/m ³	2.08	2.02	2.04	**	2.03	
Adjusted Peak Converted Wet Density t/m ³	**	**	**	2.07	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	16.9	11.7	**	11.7	**	
Adj. Field Moisture Content % (AS1289.5.4.1)	18.5	11.2	16.6	10.8	8.5	
Moisture Ratio % (AS1289.5.4.1)	109.5	96.5	109.5	**	74.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	92.5	**	
Moisture Variation (Wv) %	-1.5	0.5	-1.5	**	3.0	
Adjusted Moisture Variation %	**	**	**	1.0	**	
Hilf Density Ratio (%)	99.0	95.0	97.5	100.0	95.0	
Compaction Method	Standard	Standard	Standard	Standard	Standard	
Report Remarks	**	**	**	**	**	

Moisture Variation Note:

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

Material Test Report


Report Number: P231404-4
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 31/08/2023
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P231404
Project Name: Banyan Place Stage 5 - Level One
Project Location: Officer
Work Request: 12334
Date Sampled: 02/05/2023
Dates Tested: 02/05/2023 - 05/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Stage 5 - Level One
Material: 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	P23-12334A		
Test Number	24		
Date Tested	02/05/2023		
Time Tested	14:26		
Test Request #/Location	Lot 514 Retest #5		
Layer / Reduced Level	Layer 3		
Thickness of Layer (mm)	300		
Soil Description	Silty Clay		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**		
Field Wet Density (FWD) t/m ³	2.10		
Field Moisture Content %	16.0		
Field Dry Density (FDD) t/m ³	1.81		
Peak Converted Wet Density t/m ³	2.16		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**		
Adj. Field Moisture Content % (AS1289.5.4.1)	16.0		
Moisture Ratio % (AS1289.5.4.1)	118.5		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	-2.5		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	97.5		
Compaction Method	Standard		
Report Remarks	**		

Moisture Variation Note:

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

Material Test Report

Report Number: P231404-4
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 31/08/2023
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P231404
Project Name: Banyan Place Stage 5 - Level One
Project Location: Officer
Work Request: 12334
Date Sampled: 02/05/2023
Dates Tested: 02/05/2023 - 08/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Stage 5 - Level One
Material: CLAY
Material Source: Imported



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NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1

	P23-12334B	P23-12334C	
Sample Number	P23-12334B	P23-12334C	
Test Number	25	26	
Date Tested	02/05/2023	02/05/2023	
Time Tested	14:30	14:34	
Test Request #/Location	Lot 524	Lot 525	
Layer / Reduced Level	Layer 3	Layer 3	
Thickness of Layer (mm)	300	300	
Soil Description	Silty Clay	Silty Clay	
Test Depth (mm)	275	275	
Fraction Tested (mm)	19.0	19.0	
Oversize (wet basis) %	0	0	
Oversize (dry basis) %	0	0	
Curing Hours	**	**	
Method used to Determine Plasticity	Visual Assessment	Visual Assessment	
Field Wet Density t/m ³	2.10	2.14	
Field Moisture Content %	18.5	20.0	
Field Dry Density t/m ³	1.77	1.79	
Maximum Dry Density t/m ³	1.80	1.80	
Adjusted Maximum Dry Density t/m ³	**	**	
Optimum Moisture Content (OMC) %	14.0	14.0	
Adjusted Optimum Moisture Content (OMC) %	**	**	
Moisture Variation %	-4.5	-6.0	
Moisture Ratio %	132.5	143.5	
Density Ratio %	98.5	99.0	
Compaction Method	Standard	Standard	

Moisture Variation Note:

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

Material Test Report

Report Number: P231404-5
Issue Number: 1
Date Issued: 17/05/2023
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P231404
Project Name: Banyan Place Stage 5 - Level One
Project Location: Officer
Work Request: 12410
Date Sampled: 15/05/2023
Dates Tested: 15/05/2023 - 16/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Stage 5 - Level One
Material: CLAY
Material Source: Imported



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NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	P23-12410A	P23-12410B	P23-12410C
Sample Number	P23-12410A	P23-12410B	P23-12410C
Test Number	27	28	29
Date Tested	15/05/2023	15/05/2023	15/05/2023
Time Tested	**	**	**
Test Request #/Location	Lot 525	Lot 524	Lot 523
Layer / Reduced Level	3rd layer	3rd layer	3rd layer
Thickness of Layer (mm)	300mm	300mm	300mm
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 ³	2.02	1.98	2.02
Field Moisture Content %	21.2	22.3	22.7
Field Dry Density (FDD) t/m ³	1.67	1.62	1.65
Peak Converted Wet Density t/m ³	2.00	2.01	2.01
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	21.1	21.9	**
Adj. Field Moisture Content % (AS1289.5.4.1)	21.2	22.3	22.7
Moisture Ratio % (AS1289.5.4.1)	100.5	102.0	97.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.0	-0.5	0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	101.0	99.0	100.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

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

Material Test Report

Report Number: P231404-6
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 31/08/2023
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P231404
Project Name: Banyan Place Stage 5 - Level One
Project Location: Officer
Work Request: 12443
Date Sampled: 18/05/2023
Dates Tested: 18/05/2023 - 19/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Stage 5 - Level One
Material: CLAY
Material Source: Imported



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NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	P23-12443A	P23-12443B	P23-12443C
Sample Number			
Test Number	30	31	32
Date Tested	18/05/2023	18/05/2023	18/05/2023
Time Tested	**	**	**
Test Request #/Location	Lot 527	Lot 525	Lot 526
Easting	361655	361662	361671
Northing	5783841	5783849	578356
Layer / Reduced Level	Layer 1	Layer 3	Layer 3
Thickness of Layer (mm)	300mm	300mm	300mm
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	**
Field Wet Density (FWD) t/m ³	2.11	2.11	2.14
Field Moisture Content %	19.6	21.7	18.3
Field Dry Density (FDD) t/m ³	1.77	1.73	1.81
Peak Converted Wet Density t/m ³	2.06	2.02	2.13
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	19.9	20.8	17.5
Adj. Field Moisture Content % (AS1289.5.4.1)	19.6	21.7	18.3
Moisture Ratio % (AS1289.5.4.1)	98.5	104.5	105.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.5	-1.0	-1.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	102.5	104.0	100.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

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

Material Test Report

Report Number: P231404-7
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 31/08/2023
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P231404
Project Name: Banyan Place Stage 5 - Level One
Project Location: Officer
Work Request: 12462
Date Sampled: 22/05/2023
Dates Tested: 22/05/2023 - 29/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Stage 5 - Level One
Material: CLAY
Material Source: Imported



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NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P23-12462A	P23-12462B	P23-12462C
Test Number	33	34	35
Date Tested	22/05/2023	22/05/2023	22/05/2023
Time Tested	**	**	**
Test Request #/Location	Lot 529	Lot 530	Lot 527
Layer / Reduced Level	Layer 1	Layer 2	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 ³	2.04	2.06	2.12
Field Moisture Content %	19.8	16.7	19.6
Field Dry Density (FDD) t/m ³	1.70	1.77	1.77
Peak Converted Wet Density t/m ³	2.01	2.09	2.08
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	20.4	15.5	18.4
Adj. Field Moisture Content % (AS1289.5.4.1)	19.8	16.7	19.6
Moisture Ratio % (AS1289.5.4.1)	97.0	107.5	107.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.5	-1.0	-1.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	101.0	98.5	101.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

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

Material Test Report

Report Number: P231404-8
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 31/08/2023
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P231404
Project Name: Banyan Place Stage 5 - Level One
Project Location: Officer
Work Request: 12472
Date Sampled: 23/05/2023
Dates Tested: 23/05/2023 - 24/05/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Stage 5 - Level One
Material: Sandy 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

	P23-12472A	P23-12472B	P23-12472C
Sample Number	P23-12472A	P23-12472B	P23-12472C
Test Number	36	37	38
Date Tested	23/05/2023	23/05/2023	23/05/2023
Time Tested	**	**	**
Test Request #/Location	Lot 532	Lot 530	Lot 529
Layer / Reduced Level	Layer 3	Layer 5	Layer 5
Thickness of Layer (mm)	300	300	300
Soil Description	Sandy CLAY	Sandy CLAY	Sandy CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	2.08	2.10	2.09
Field Moisture Content %	9.5	13.8	10.0
Field Dry Density (FDD) t/m ³	1.90	1.84	1.90
Peak Converted Wet Density t/m ³	2.18	2.13	2.15
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	9.5	13.8	10.0
Moisture Ratio % (AS1289.5.4.1)	97.5	94.5	97.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.0	1.0	0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	95.5	98.5	97.0
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

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

Material Test Report


Report Number: P231404-9
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 31/08/2023
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P231404
Project Name: Banyan Place Stage 5 - Level One
Project Location: Officer
Work Request: 12570
Date Sampled: 01/06/2023
Dates Tested: 06/06/2023 - 07/06/2023
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 Stage 5
Material: Silty Clay
Material Source: Imported



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 NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	P23-12570A	P23-12570B	P23-12570C
Sample Number	P23-12570A	P23-12570B	P23-12570C
Test Number	39	40	41
Date Tested	01/06/2023	01/06/2023	01/06/2023
Time Tested	**	**	**
Test Request #/Location	Lot 533	Lot 535	Lot 536
Layer / Reduced Level	Layer 2	Layer 3	Layer 4
Thickness of Layer (mm)	300	300	300
Soil Description	Silty Clay	Silty Clay	Silty Clay
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	0	0
Field Wet Density (FWD) t/m ³	2.10	2.09	2.10
Field Moisture Content %	21.2	13.5	17.5
Field Dry Density (FDD) t/m ³	1.73	1.84	1.79
Peak Converted Wet Density t/m ³	2.02	2.13	2.09
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	21.1	13.5	16.4
Adj. Field Moisture Content % (AS1289.5.4.1)	21.2	13.5	17.5
Moisture Ratio % (AS1289.5.4.1)	100.5	100.5	106.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.0	0.0	-1.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	104.0	98.0	100.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

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

Material Test Report

Report Number: P231404-10
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 31/08/2023
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P231404
Project Name: Banyan Place Stage 5 - Level One
Project Location: Officer
Work Request: 12686
Date Sampled: 26/06/2023 15:32
Dates Tested: 26/06/2023 - 27/06/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Remarks: Test number 42 outside the limits of the HILF test. Will be retested
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Estate Stage 5 - Level One
Material: CLAY
Material Source: Imported



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



Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-12686A	P23-12686B	P23-12686C
Test Number	42	43	44
Date Tested	26/06/2023	26/06/2023	26/06/2023
Time Tested	15:32	15:46	15:59
Test Request #/Location	Lot 540	Lot 538	Lot 537
Layer / Reduced Level	Layer 1	Layer 2	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
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	2.08	2.00	2.07
Field Moisture Content %	21.1	17.4	19.6
Field Dry Density (FDD) t/m ³	1.71	1.70	1.73
Peak Converted Wet Density t/m ³	2.19	2.08	2.09
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	21.1	**	19.6
Moisture Ratio % (AS1289.5.4.1)	122.0	101.5	112.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-3.5	-0.5	-2.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	95.0	96.0	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: P231404-11
Issue Number: 1
Date Issued: 10/07/2023
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P231404
Project Name: Banyan Place Stage 5 - Level One
Project Location: Officer
Work Request: 12787
Date Sampled: 03/07/2023
Dates Tested: 04/07/2023 - 04/07/2023
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 Stage 5
Material: Silty Clay
Material Source: Imported



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

Accredited for compliance with ISO/IEC 17025 - Testing



Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P23-12787A		
Test Number	45		
Date Tested	03/07/2023		
Time Tested	**		
Test Request #/Location	Lot 540 Retest #42		
Layer / Reduced Level	Layer 1		
Thickness of Layer (mm)	300		
Soil Description	Silty Clay		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	**		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**		
Field Wet Density (FWD) t/m ³	2.12		
Field Moisture Content %	17.5		
Field Dry Density (FDD) t/m ³	1.81		
Peak Converted Wet Density t/m ³	2.10		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**		
Adj. Field Moisture Content % (AS1289.5.4.1)	**		
Moisture Ratio % (AS1289.5.4.1)	102.0		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	-0.5		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	101.0		
Compaction Method	Standard		
Report Remarks	**		

Moisture Variation Note:

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

31 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 5
Officer
Lot 501

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 5, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 501 as defined in drawing Ref 1470_5/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 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P231404A) has been published on 31 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

31 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 5
Officer
Lot 502

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 5, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 502 as defined in drawing Ref 1470_5/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 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

31 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 5
Officer
Lot 503

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 5, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 503 as defined in drawing Ref 1470_5/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 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P231404A) has been published on 31 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

31 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 5
Officer
Lot 504

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 5, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 504 as defined in drawing Ref 1470_5/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 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P231404A) has been published on 31 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

31 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 5
Officer
Lot 505

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 5, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 505 as defined in drawing Ref 1470_5/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 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P231404A) has been published on 31 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

31 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 5
Officer
Lot 506

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 5, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 506 as defined in drawing Ref 1470_5/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 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P231404A) has been published on 31 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

31 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 5
Officer
Lot 507

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 5, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 507 as defined in drawing Ref 1470_5/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 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P231404A) has been published on 31 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

31 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 5
Officer
Lot 508

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 5, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 508 as defined in drawing Ref 1470_5/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 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

31 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 5
Officer
Lot 509

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 5, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 509 as defined in drawing Ref 1470_5/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.
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For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

31 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 5
Officer
Lot 510

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 5, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 510 as defined in drawing Ref 1470_5/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 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P231404A) has been published on 31 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

31 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 5
Officer
Lot 511

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 5, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 511 as defined in drawing Ref 1470_5/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 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P231404A) has been published on 31 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

31 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 5
Officer
Lot 512

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 5, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 512 as defined in drawing Ref 1470_5/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 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P231404A) has been published on 31 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

31 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 5
Officer
Lot 513

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 5, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 513 as defined in drawing Ref 1470_5/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 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

31 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 5
Officer
Lot 514

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 5, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 514 as defined in drawing Ref 1470_5/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 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P231404A) has been published on 31 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

31 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 5
Officer
Lot 515

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 5, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 515 as defined in drawing Ref 1470_5/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

31 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 5
Officer
Lot 516

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 5, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 516 as defined in drawing Ref 1470_5/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 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P231404A) has been published on 31 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

31 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 5
Officer
Lot 517

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C Caulfield
Project Manager

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Re: Banyan Place Estate Stage 5
Officer
Lot 518

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Project Manager

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Officer
Lot 519

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C Caulfield
Project Manager

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Re: Banyan Place Estate Stage 5
Officer
Lot 520

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C Caulfield
Project Manager

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Re: Banyan Place Estate Stage 5
Officer
Lot 521

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Project Manager

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Officer
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Project Manager

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Officer
Lot 523

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Project Manager

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Officer
Lot 524

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Officer
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Officer
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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 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P231404A) has been published on 31 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

31 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 5
Officer
Lot 535

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 5, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 535 as defined in drawing Ref 1470_5/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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C Caulfield
Project Manager

31 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 5
Officer
Lot 536

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C Caulfield
Project Manager

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Officer
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Project Manager

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C Caulfield
Project Manager

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