Banyan Place Estate Stage 1

GITA Inspection Verification Report

Prepared For:	Lojac Civil Pty Ltd
Report Number	P221112A V1
Version Release Date	11 Aug 2023
Report Released By	C Caulfield
Title	Project Manager
Signature	

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Appendices

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 1. This work was conducted over the period of 20/07/2022 to 05/12/2022.

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

2 Scope of Work

2.1 Area of Work

The areas of work included lots 101 to 149, bounded by streets Blossom Street, Daisy Road, Droplet Way, Halycon Way, Ficus Way and Everlasting Road. The site will be a Residential development.

The area on which fill was placed is shown on site plan (Appendix 1: *Test Location Plan*) based on drawings prepared by Charlton Degg (Drawing Reference: 1470_1_R04) 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^2), the minimum testing frequency is 1 test per layer per material type per 2500m^2 or 1 test per 500m^3 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.

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 to have been conducted within the house allotment but may have been verified by testing conducted within up to a 2500m^2 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 fill placed across the site was placed as a topsoil layer or growing medium and should be considered as non-structural, as it was placed in an uncontrolled manner, as allowed by specifications and placement of the final 300mm of fill was not observed by the GITA.

4 Construction Verification

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

plan (P221112D1, 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 79 density tests (Hilf method in accordance with 1289 5.7.1) were undertaken with 5 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.

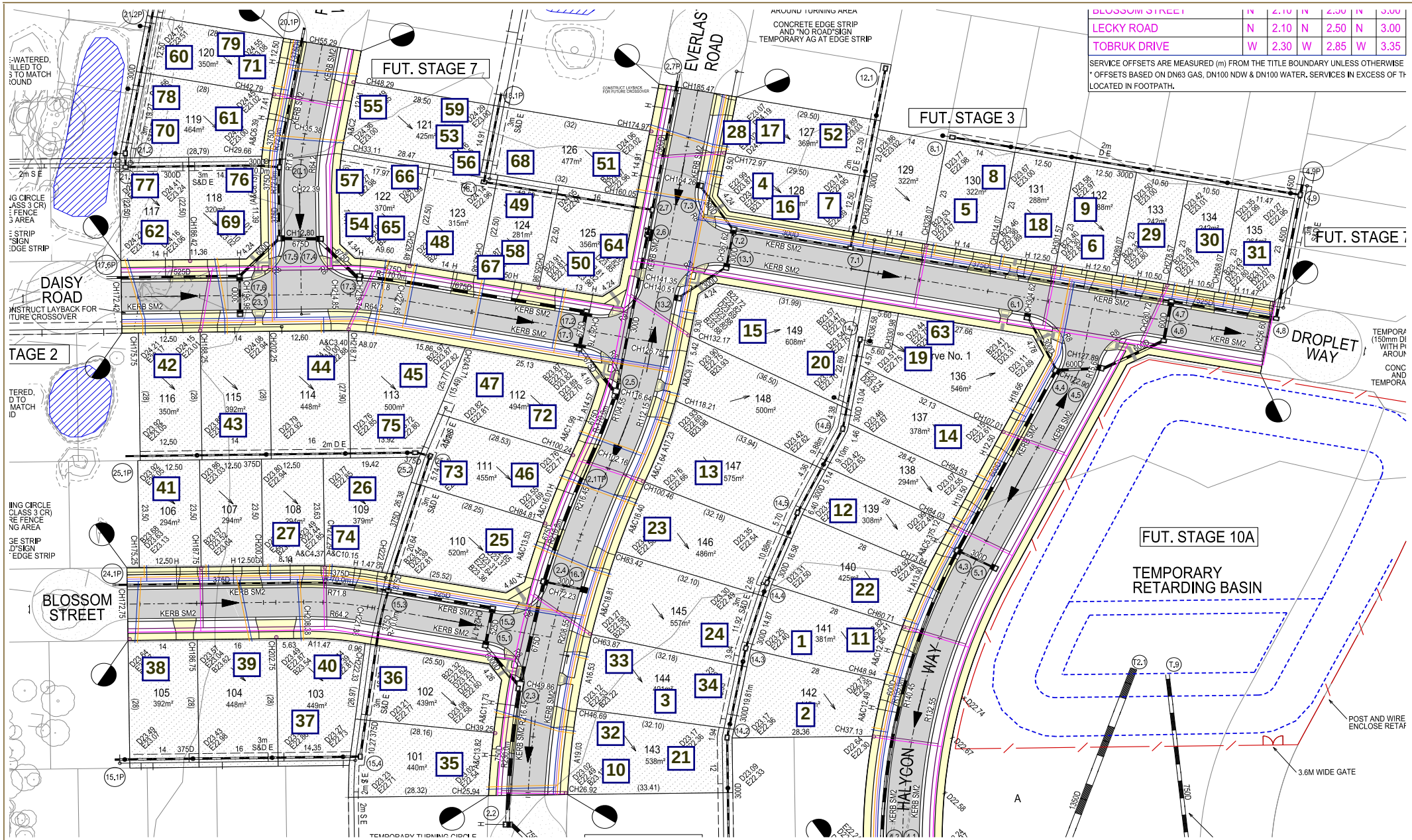
5 Statement of Compliance

The intention of this report is to provide a description of the earthworks construction for Stage 1 at Banyan Place Estate. For completed fill areas of greater than 300mm, and for works completed between 20/07/2022 and 05/12/2022, earthworks construction activities were conducted under the full time supervision of the Geotechnical Inspection and Testing Authority. Inspections and testing of the fill areas at this site indicate that both sub grade preparation and fill placement have been conducted in accordance with the specification. The earthworks construction for Stage 1 of Banyan Place Estate was observed to be constructed in compliance with the requirements of the Technical Specification.

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



BLOSSOM STREET	N	2.10	N	2.50	N	3.00
LECKY ROAD	N	2.10	N	2.50	N	3.00
TOBRUK DRIVE	W	2.30	W	2.85	W	3.35

SERVICE OFFSETS ARE MEASURED (m) FROM THE TITLE BOUNDARY UNLESS OTHERWISE
* OFFSETS BASED ON DN63 GAS, DN100 NDW & DN100 WATER. SERVICES IN EXCESS OF TH
LOCATED IN FOOTPATH.

terra firma laboratories

Our Head Office
47 National Ave
Pakenham, VIC 3810

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

Test Location Plan

not to scale

Client: Lojac Civil Pty Ltd

Project: Banyan Place Estate, Stage 1

Reference: P221112 D1

Appendix 2: Compaction Test Register and Test Certificates

Compaction Test Register

Client: Lojac Civil Pty Ltd
Project No: P221112
Project: Banyan Place Estate Stage 1
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
20/07/2022	1	Layer 1		101.0%	Pass	Lot 141	P221112-1
20/07/2022	2	Layer 1		99.5%	Pass	Lot 142	P221112-1
20/07/2022	3	Layer 1		101.5%	Pass	Lot 144	P221112-1
21/07/2022	4	Layer 1		101.5%	Pass	Lot 128	P221112-2
21/07/2022	5	Layer 1		97.0%	Pass	Lot 130	P221112-2
21/07/2022	6	Layer 1		97.0%	Pass	Lot 132	P221112-2
22/07/2022	7	Layer 1		100.0%	Pass	Lot 128	P221112-3
22/07/2022	8	Layer 1		101.0%	Pass	Lot 130	P221112-3
22/07/2022	9	Layer 1		99.5%	Pass	Lot 132	P221112-3
1/08/2022	10	Layer 2		95.0%	Pass	Lot 143	P221112-4
1/08/2022	11	Layer 2		98.5%	Pass	Lot 141	P221112-4
1/08/2022	12	Layer 2		96.0%	Pass	Lot 139	P221112-4
1/08/2022	13	Layer 2		100.5%	Pass	Lot 147	P221112-4
1/08/2022	14	Layer 2		98.5%	Pass	Lot 137	P221112-4
1/08/2022	15	Layer 2		101.0%	Pass	Lot 149	P221112-4
2/08/2022	16	Layer 2		100.5%	Pass	Lot 128	P221112-5
2/08/2022	17	Layer 2		94.0%	Fail	Lot 127	P221112-5
2/08/2022	18	Layer 2		95.0%	Pass	Lot 131	P221112-5
4/08/2022	19	layer 2		94.0%	Fail	Lot 136	P221112-6
4/08/2022	20	layer 2		98.0%	Pass	Lot 149	P221112-6
4/08/2022	21	layer 2		100.0%	Pass	Lot 143	P221112-6
5/08/2022	22	layer 2		95.5%	Pass	Lot 140	P221112-7
5/08/2022	23	layer 2		96.5%	Pass	Lot 146	P221112-7
5/08/2022	24	layer 2		97.0%	Pass	Lot 145	P221112-7
8/08/2022	25	layer 2		96.5%	Pass	Lot 110	P221112-8
8/08/2022	26	layer 1		101.0%	Pass	Lot 109	P221112-8
8/08/2022	27	layer 1		101.0%	Pass	Lot 108	P221112-8
7/09/2022	28	Layer 1	Test #17	95.5%	Pass	Lot 127	P221112-9
7/09/2022	29	Layer 1		97.5%	Pass	Lot 133	P221112-9
7/09/2022	30	Layer 1		99.0%	Pass	Lot 134	P221112-9
7/09/2022	31	Layer 1		98.0%	Pass	Lot 135	P221112-9
12/09/2022	32	Layer 1		101.0%	Pass	Lot 143	P221112-10
12/09/2022	33	Layer 1		106.0%	Pass	Lot 144	P221112-10
12/09/2022	34	Layer 1		100.0%	Pass	Lot 144	P221112-10
14/09/2022	35	Layer 1		96.0%	Pass	Lot 101	P221112-12
14/09/2022	36	Layer 1		98.0%	Pass	Lot 102	P221112-12
14/09/2022	37	Layer 1		96.5%	Pass	Lot 103	P221112-12
30/09/2022	38	Layer 3		100.0%	Pass	Lot 105	P221112-13
30/09/2022	39	Layer 3		104.0%	Pass	Lot 104	P221112-13
30/09/2022	40	Layer 3		98.0%	Pass	Lot 103	P221112-13
20/10/2022	41	Layer 1		99.0%	Pass	Lot 106	P221112-14

Compaction Test Register

Client: Lojac Civil Pty Ltd
Project No: P221112
Project: Banyan Place Estate Stage 1
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
20/10/2022	42	Layer 1		100.5%	Pass	Lot 116	P221112-14
20/10/2022	43	Layer 1		100.0%	Pass	Lot 115	P221112-14
18/11/2022	44	Layer 2		100.5%	Pass	Lot 114	P221112-15
18/11/2022	45	Layer 2		96.0%	Pass	Lot 113	P221112-15
18/11/2022	46	Layer 2		102.0%	Pass	Lot 111	P221112-15
18/11/2022	47	Layer 2		104.0%	Pass	Lot 112	P221112-15
18/11/2022	48	Layer 2		98.0%	Pass	Lot 123	P221112-15
18/11/2022	49	Layer 2		100.0%	Pass	Lot 124	P221112-15
18/11/2022	50	Layer 2		94.0%	Fail	Lot 125	P221112-15
18/11/2022	51	Layer 2		100.0%	Pass	Lot 126	P221112-15
18/11/2022	52	Layer 2		100.0%	Pass	Lot 127	P221112-15
25/11/2022	53	Layer 1		90.5%	Fail	Lot 121	P221112-16
25/11/2022	54	Layer 1		94.5%	Fail	Lot 122	P221112-16
25/11/2022	55	Layer 1		96.5%	Pass	Lot 121	P221112-16
27/11/2022	56	Layer 2		97.0%	Pass	Lot 121	P221112-17
27/11/2022	57	Layer 2		97.5%	Pass	Lot 122	P221112-17
27/11/2022	58	Layer 2		99.5%	Pass	Lot 124	P221112-17
27/11/2022	59	Layer 1	Test #53	99.0%	Pass	Lot 121	P221112-17
29/11/2022	60	Layer 1		100.5%	Pass	Lot 120	P221112-18
29/11/2022	61	Layer 1		99.0%	Pass	Lot 119	P221112-18
29/11/2022	62	Layer 1		98.0%	Pass	Lot 117	P221112-18
30/11/2022	63	Layer 2	Test #19	99.0%	Pass	Lot 136	P221118-19
30/11/2022	64	Layer 2	Test #50	100.5%	Pass	Lot 125	P221118-19
30/11/2022	65	Layer 1	Test #54	99.0%	Pass	Lot 122	P221118-19
30/11/2022	66	Layer 3		98.0%	Pass	Lot 122	P221118-19
30/11/2022	67	Layer 3		100.5%	Pass	Lot 124	P221118-19
30/11/2022	68	Layer 3		99.5%	Pass	Lot 126	P221118-19
1/12/2022	69	Layer 1		98.5%	Pass	Lot 118	P221112-20
1/12/2022	70	Layer 2		100.5%	Pass	Lot 119	P221112-20
1/12/2022	71	Layer 3		99.5%	Pass	Lot 120	P221112-20
1/12/2022	72	FSL		96.5%	Pass	Lot 112	P221112-20
1/12/2022	73	FSL		100.0%	Pass	Lot 111	P221112-20
2/12/2022	74	Layer 3		109.5%	Pass	Lot 109	P221112-21
2/12/2022	75	Layer 3		98.5%	Pass	Lot 113	P221112-21
2/12/2022	76	Layer 3		103.0%	Pass	Lot 118	P221112-21
5/12/2022	77	Layer 3		100.0%	Pass	Lot 117	P221112-22
5/12/2022	78	Layer 4		96.5%	Pass	Lot 119	P221112-22
5/12/2022	79	Layer 5		98.5%	Pass	Lot 120	P221112-22

Material Test Report

Report Number: P221112-1
Issue Number: 1
Date Issued: 28/07/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 9891
Date Sampled: 20/07/2022 16:00
Dates Tested: 21/07/2022 - 26/07/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Estate Stage 1 - Level One
Material: Mudstone
Material Source: Imported

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

NATA WORLD RECOGNISED ACCREDITATION
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	P22-9891A	P22-9891B	P22-9891C
Test Number	1	2	3
Date Tested	20/07/2022	20/07/2022	20/07/2022
Time Tested	04:00	04:00	04:00
Test Request #/Location	Lot 141	Lot 142	Lot 144
Layer / Reduced Level	Layer 1	Layer 1	Layer 1
Thickness of Layer (mm)	300	300	300
Soil Description	Mudstone	Mudstone	Mudstone
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	18	4
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m^3	2.02	2.25	2.19
Field Moisture Content %	26.8	16.4	17.9
Field Dry Density (FDD) t/m^3	1.59	1.99	1.87
Peak Converted Wet Density t/m^3	2.00	**	**
Adjusted Peak Converted Wet Density t/m^3	**	2.27	2.16
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	12.2	14.9
Adj. Field Moisture Content % (AS1289.5.4.1)	26.8	13.5	17.1
Moisture Ratio % (AS1289.5.4.1)	110.5	**	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	111.0	115.0
Moisture Variation (Wv) %	-2.5	**	**
Adjusted Moisture Variation %	**	-1.5	-2.0
Hilf Density Ratio (%)	**101.0**	**99.5**	**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: P221112-2
Issue Number: 1
Date Issued: 04/08/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 9912
Date Sampled: 21/07/2022 9:00
Dates Tested: 22/07/2022 - 27/07/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Estate Stage 1 - Level One
Material: CLAY
Material Source: Imported

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NATA WORLD RECOGNISED ACCREDITATION

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	P22-9912A	P22-9912B	P22-9912C
Test Number	4	5	6
Date Tested	21/07/2022	21/07/2022	21/07/2022
Time Tested	15:30	15:40	15:50
Test Request #/Location	Lot 128	Lot 130	Lot 132
Layer / Reduced Level	Layer 1	Layer 1	Layer 1
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^3	2.03	2.03	1.98
Field Moisture Content %	27.1	20.8	22.4
Field Dry Density (FDD) t/m^3	1.60	1.68	1.62
Peak Converted Wet Density t/m^3	2.01	2.10	2.04
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	27.1	20.8	22.4
Moisture Ratio % (AS1289.5.4.1)	111.5	109.0	108.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-2.5	-1.5	-1.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**101.5**	**97.0**	**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: P221112-3
Issue Number: 1
Date Issued: 28/07/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 9923
Date Sampled: 22/07/2022
Dates Tested: 25/07/2022 - 26/07/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Stage 1
Material: silty CLay
Material Source: Imported

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Email: ccaulfield@terrafirmalabs.com.au

NATA WORLD RECOGNISED ACCREDITATION

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	P22-9923A	P22-9923B	P22-9923C
Test Number	7	8	9
Date Tested	22/07/2022	22/07/2022	22/07/2022
Time Tested	15:00	15:15	15:30
Test Request #/Location	Lot 128	Lot 130	Lot 132
Layer / Reduced Level	1	1	1
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^3	1.94	1.97	1.95
Field Moisture Content %	28.1	27.9	27.3
Field Dry Density (FDD) t/m^3	1.51	1.54	1.53
Peak Converted Wet Density t/m^3	1.94	1.95	1.96
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	28.1	27.9	27.3
Moisture Ratio % (AS1289.5.4.1)	109.0	113.0	113.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-2.5	-3.0	-3.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**100.0**	**101.0**	**99.5**
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: **P221112-4**
Issue Number: 1
Date Issued: 03/08/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 9965
Date Sampled: 01/08/2022
Dates Tested: 01/08/2022 - 02/08/2022
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 1 Level One
Material: Silty Clay
Material Source: Imported

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Accredited for compliance with ISO/IEC 17025 - Testing

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

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P22-9965B	P22-9965E	P22-9965F
Test Number	11	14	15
Date Tested	01/08/2022	01/08/2022	01/08/2022
Time Tested	14:50	15:20	15:30
Test Request #/Location	Lot 141	Lot 137	Lot 149
Layer / Reduced Level	Layer 2	Layer 2	Layer 2
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	0
Field Wet Density (FWD) t/m^3	1.92	1.92	1.96
Field Moisture Content %	29.3	28.6	27.4
Field Dry Density (FDD) t/m^3	1.49	1.49	1.54
Peak Converted Wet Density t/m^3	1.95	1.95	1.94
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	25.6	25.5	24.3
Adj. Field Moisture Content % (AS1289.5.4.1)	29.3	28.6	27.4
Moisture Ratio % (AS1289.5.4.1)	114.5	112.0	113.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-3.5	-3.0	-3.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**98.5**	**98.5**	**101.0**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

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

Material Test Report

Report Number: P221112-4
Issue Number: 1
Date Issued: 03/08/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 9965
Date Sampled: 01/08/2022
Dates Tested: 01/08/2022 - 02/08/2022
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 1 Level One
Material: Silty Clay
Material Source: Imported

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

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	P22-9965A	P22-9965C	P22-9965D
Test Number	10	12	13
Date Tested	01/08/2022	01/08/2022	01/08/2022
Time Tested	14:40	15:00	15:10
Test Request #/Location	Lot 143	Lot 139	Lot 147
Layer / Reduced Level	Layer 2	Layer 2	Layer 2
Thickness of Layer (mm)	300	300	300
Soil Description	Silty Clay	Silty Clay	Silty Clay
Test Depth (mm)	275	275	275
Fraction Tested (mm)	19.0	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	Visual Assessment
Field Wet Density t/m^3	1.88	1.91	1.93
Field Moisture Content %	28.1	28.7	24.9
Field Dry Density t/m^3	1.47	1.48	1.54
Maximum Dry Density t/m^3	1.55	1.55	1.53
Adjusted Maximum Dry Density t/m^3	**	**	**
Optimum Moisture Content (OMC) %	25.0	24.0	24.0
Adjusted Optimum Moisture Content (OMC) %	**	**	**
Moisture Variation %	-3.0	-4.5	-0.5
Moisture Ratio %	113.0	119.0	103.0
Density Ratio %	**95.0**	**96.0**	**100.5**
Compaction Method	**Standard**	**Standard**	**Standard**

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

Material Test Report

Report Number: **P221112-5**
Issue Number: 1
Date Issued: 04/08/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 9976
Date Sampled: 02/08/2022 7:50
Dates Tested: 02/08/2022 - 03/08/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Level 1
Material: CLAY
Material Source: Imported

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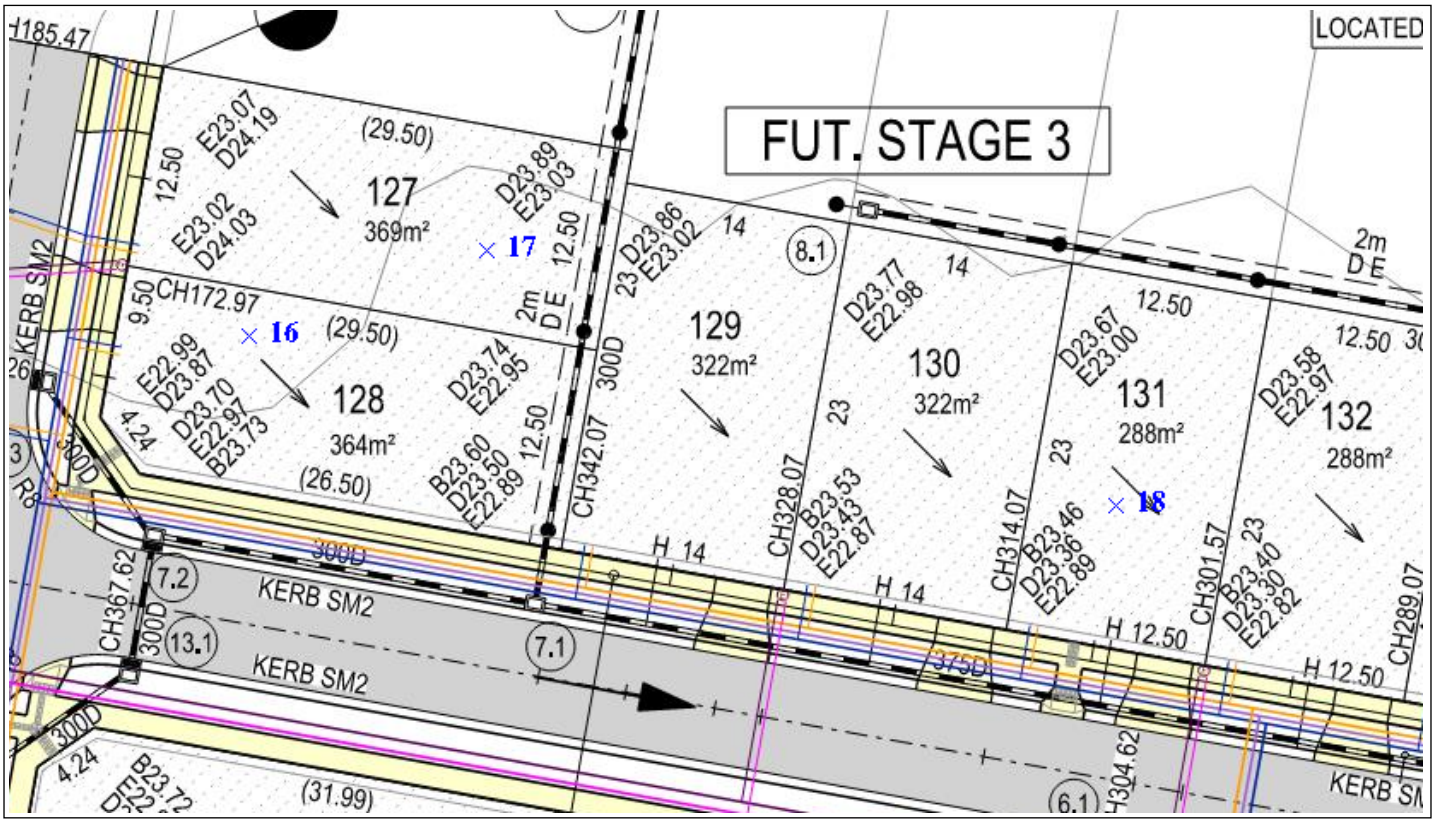
NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P22-9976A	P22-9976B	P22-9976C
Test Number	16	17	18
Date Tested	02/08/2022	02/08/2022	02/08/2022
Time Tested	15:36	15:46	15:57
Test Request #/Location	16 Lot 128	17 Lot 127	18 Lot131
Layer / Reduced Level	2	2	2
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
Field Wet Density (FWD) t/m^3	2.01	1.91	1.91
Field Moisture Content %	24.2	26.4	24.9
Field Dry Density (FDD) t/m^3	1.62	1.51	1.53
Peak Converted Wet Density t/m^3	2.00	2.03	2.01
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	-1.0	-3.5	-3.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**100.5**	**94.0**	**95.0**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

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

Sample Locations Plan



Material Test Report

Report Number: P221112-6
Issue Number: 1
Date Issued: 25/08/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 10003
Date Sampled: 04/08/2022
Dates Tested: 04/08/2022 - 12/08/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Estate Stage 1 - Level One
Material: CLAY
Material Source: Imported

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P22-10003A	P22-10003B	P22-10003C
Test Number	19	20	21
Date Tested	04/08/2022	04/08/2022	04/08/2022
Time Tested	15:00	15:00	15:00
Test Request #/Location	19 lot no 136	20 lot no 149	21 lot no 143
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^3	1.89	1.96	2.00
Field Moisture Content %	24.2	24.0	22.9
Field Dry Density (FDD) t/m^3	1.52	1.58	1.63
Peak Converted Wet Density t/m^3	2.01	1.99	2.00
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	24.2	24.0	22.9
Moisture Ratio % (AS1289.5.4.1)	107.5	101.5	102.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-1.5	-0.5	-0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**94.0**	**98.0**	**100.0**
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: **P221112-7**
Issue Number: 1
Date Issued: 25/08/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 10021
Date Sampled: 05/08/2022
Dates Tested: 05/08/2022 - 17/08/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Estate Stage 1 - Level One
Material: CLAY
Material Source: Pakenham

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P22-10021A	P22-10021B	P22-10021C
Test Number	22	23	24
Date Tested	05/08/2022	05/08/2022	05/08/2022
Time Tested	15:30	15:30	15:30
Test Request #/Location	lot 140	lot 146	lot 145
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^3	1.89	1.92	1.90
Field Moisture Content %	25.1	23.4	22.9
Field Dry Density (FDD) t/m^3	1.51	1.55	1.55
Peak Converted Wet Density t/m^3	1.98	1.98	1.97
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	23.6	22.0	**
Adj. Field Moisture Content % (AS1289.5.4.1)	25.1	23.4	22.9
Moisture Ratio % (AS1289.5.4.1)	106.5	106.5	99.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-1.5	-1.5	0.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**95.5**	**96.5**	**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: P221112-8
Issue Number: 1
Date Issued: 25/08/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 10034
Date Sampled: 08/08/2022 8:00
Dates Tested: 08/08/2022 - 16/08/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Estate Stage 1 - 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	P22-10034A	P22-10034B	P22-10034C
Test Number	25	26	27
Date Tested	08/08/2022	08/08/2022	08/08/2022
Time Tested	02:45	02:45	02:45
Test Request #/Location	Lot 110	Lot 109	Lot 108
Layer / Reduced Level	layer 2	layer 1	layer 1
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^3	1.95	2.00	2.04
Field Moisture Content %	22.9	24.9	22.1
Field Dry Density (FDD) t/m^3	1.59	1.60	1.67
Peak Converted Wet Density t/m^3	2.02	1.98	2.01
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	22.9	24.9	22.1
Moisture Ratio % (AS1289.5.4.1)	106.5	114.0	101.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-1.5	-3.0	0.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**96.5**	**101.0**	**101.0**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

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

Material Test Report

Report Number: P221112-9
Issue Number: 1
Date Issued: 11/09/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 10298
Date Sampled: 07/09/2022 12:00
Dates Tested: 07/09/2022 - 08/09/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Estate Stage 1 - Level One
Material: CLAY
Material Source: Imported

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Approved Signatory: Janaka Somaratne
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NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P22-10298A	P22-10298C	
Test Number	28	30	
Date Tested	07/09/2022	07/09/2022	
Time Tested	12:00	12:20	
Test Request #/Location	Retest of test 17 Lot 127	Lot 134	
Layer / Reduced Level	Layer 1	Layer 1	
Thickness of Layer (mm)	300	300	
Soil Description	CLAY	CLAY	
Test Depth (mm)	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	**	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	0	
Field Wet Density (FWD) t/m^3	1.92	2.04	
Field Moisture Content %	22.7	20.6	
Field Dry Density (FDD) t/m^3	1.56	1.69	
Peak Converted Wet Density t/m^3	2.00	2.06	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	17.5	
Adj. Field Moisture Content % (AS1289.5.4.1)	**	20.6	
Moisture Ratio % (AS1289.5.4.1)	102.0	117.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	-0.5	-3.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**95.5**	**99.0**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

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

Material Test Report

Report Number: P221112-9
Issue Number: 1
Date Issued: 11/09/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 10298
Date Sampled: 07/09/2022 12:00
Dates Tested: 07/09/2022 - 08/09/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Estate Stage 1 - Level One
Material: CLAY
Material Source: Imported

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Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	P22-10298B	P22-10298D	
Test Number	29	31	
Date Tested	07/09/2022	07/09/2022	
Time Tested	12:10	12:30	
Test Request #/Location	Lot 133	Lot 135	
Layer / Reduced Level	Layer 1	Layer 1	
Thickness of Layer (mm)	300	300	
Soil Description	CLAY	CLAY	
Test Depth (mm)	275	275	
Fraction Tested (mm)	19.0	19.0	
Oversize (wet basis) %	**	**	
Oversize (dry basis) %	**	**	
Curing Hours	**	**	
Method used to Determine Plasticity	**	Visual Assessment	
Field Wet Density t/m^3	2.01	2.06	
Field Moisture Content %	23.0	21.3	
Field Dry Density t/m^3	1.63	1.70	
Maximum Dry Density t/m^3	1.68	1.73	
Adjusted Maximum Dry Density t/m^3	**	**	
Optimum Moisture Content (OMC) %	19.0	16.5	
Adjusted Optimum Moisture Content (OMC) %	**	**	
Moisture Variation %	-4.0	-4.5	
Moisture Ratio %	121.5	127.5	
Density Ratio %	**97.5**	**98.0**	
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: P221112-10
Issue Number: 1
Date Issued: 13/09/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 10342
Date Sampled: 12/09/2022
Dates Tested: 12/09/2022 - 12/09/2022
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 1
Material: CLAY
Material Source: Outside Bund

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P22-10342A	P22-10342B	P22-10342C
Test Number	32	33	34
Date Tested	12/09/2022	12/09/2022	12/09/2022
Time Tested	**	**	**
Test Request #/Location	32 Lot 143	33 Lot 144	34 Lot 144
Layer / Reduced Level	Layer 1	Layer 1	Layer 1
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	2.05	2.08	1.97
Field Moisture Content %	25.9	26.2	24.3
Field Dry Density (FDD) t/m^3	1.63	1.65	1.59
Peak Converted Wet Density t/m^3	2.03	1.96	1.97
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	23.4	24.8	22.6
Adj. Field Moisture Content % (AS1289.5.4.1)	25.9	26.2	24.3
Moisture Ratio % (AS1289.5.4.1)	111.0	105.5	107.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-2.5	-1.5	-1.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**101.0**	**106.0**	**100.0**
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: P221112-12
Issue Number: 1
Date Issued: 30/09/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 10365
Date Sampled: 14/09/2022 8:45
Dates Tested: 14/09/2022 - 15/09/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Estate Stage 1 - Level One
Material: CLAY
Material Source: Imported

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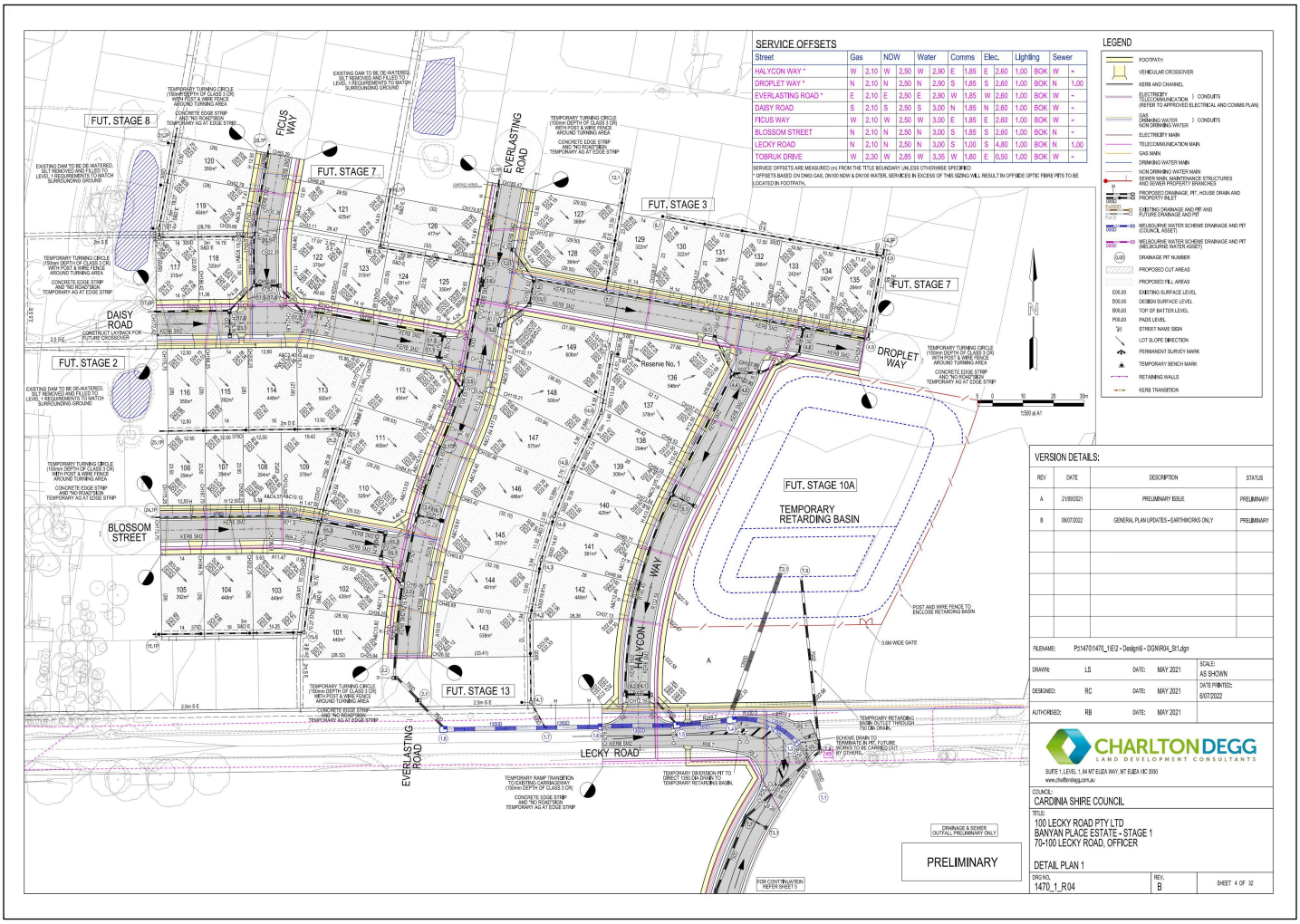
Approved Signatory: Chris Caulfield
Project Manager
NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P22-10365A	P22-10365B	P22-10365C
Test Number	35	36	37
Date Tested	14/09/2022	14/09/2022	14/09/2022
Time Tested	03:30	03:30	03:30
Test Request #/Location	Lot No.101	Lot No.102	Lot No.103
Layer / Reduced Level	Layer 1	Layer 1	Layer 1
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^3	1.99	2.01	1.94
Field Moisture Content %	20.5	21.3	23.8
Field Dry Density (FDD) t/m^3	1.65	1.66	1.57
Peak Converted Wet Density t/m^3	2.07	2.05	2.01
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	20.5	21.3	23.8
Moisture Ratio % (AS1289.5.4.1)	107.5	103.5	107.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-1.5	-0.5	-1.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**96.0**	**98.0**	**96.5**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

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

Sample Locations Plan



Material Test Report

Report Number: P221112-13
Issue Number: 1
Date Issued: 13/10/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 10491
Date Sampled: 30/09/2022 8:00
Dates Tested: 30/09/2022 - 05/10/2022
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 1
Material: Clay
Material Source: Imported

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Lab Manager
NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P22-10491A	P22-10491B	P22-10491C
Test Number	38	39	40
Date Tested	30/09/2022	30/09/2022	30/09/2022
Time Tested	**	**	**
Test Request #/Location	38 Lot 105	39 Lot 104	40 Lot 103
Layer / Reduced Level	LAYER3	LAYER3	LAYER3
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	2.03	2.08	2.01
Field Moisture Content %	15.0	22.0	22.1
Field Dry Density (FDD) t/m^3	1.76	1.70	1.64
Peak Converted Wet Density t/m^3	2.03	2.00	2.05
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	15.9	21.6	22.0
Adj. Field Moisture Content % (AS1289.5.4.1)	15.0	22.0	22.1
Moisture Ratio % (AS1289.5.4.1)	94.0	101.5	100.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	1.0	-0.5	0.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**100.0**	**104.0**	**98.0**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

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

Material Test Report

Report Number: **P221112-14**
Issue Number: 1
Date Issued: 11/11/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 10634
Date Sampled: 20/10/2022
Dates Tested: 20/10/2022 - 21/10/2022
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 1
Material: CLAY
Material Source: Onsite

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P22-10634A	P22-10634B	P22-10634C
Test Number	41	42	43
Date Tested	20/10/2022	20/10/2022	20/10/2022
Time Tested	**	**	**
Test Request #/Location	41 Lot 106	42 Lot 116	43 Lot 115
Layer / Reduced Level	Layer 1	Layer 1	Layer 1
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^3	2.02	2.12	2.08
Field Moisture Content %	21.5	19.5	19.7
Field Dry Density (FDD) t/m^3	1.66	1.77	1.74
Peak Converted Wet Density t/m^3	2.04	2.11	2.08
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	-2.5	-2.5	-2.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**99.0**	**100.5**	**100.0**
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: P221112-15
Issue Number: 1
Date Issued: 23/11/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 10841
Date Sampled: 18/11/2022
Dates Tested: 18/11/2022 - 21/11/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Estate Stage 1 - Level One
Material: CLAY
Material Source: Imported

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	P22-10841A	P22-10841B	P22-10841C	P22-10841D	P22-10841E
Test Number	44	45	46	47	48
Date Tested	18/11/2022	18/11/2022	18/11/2022	18/11/2022	18/11/2022
Time Tested	**	**	**	**	**
Test Request #/Location	Lot 114	Lot 113	Lot 111	Lot 112	Lot 123
Layer / Reduced Level	Layer 2	Layer 2	Layer 2	Layer 2	Layer 2
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)	**	**	**	**	**
Field Wet Density (FWD) t/m^3	2.08	1.90	2.05	2.01	2.09
Field Moisture Content %	20.1	26.0	25.2	32.1	18.5
Field Dry Density (FDD) t/m^3	1.73	1.51	1.64	1.52	1.76
Peak Converted Wet Density t/m^3	2.08	1.98	2.01	1.93	2.13
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	20.1	26.0	25.2	32.1	18.5
Moisture Ratio % (AS1289.5.4.1)	102.5	109.0	112.0	107.0	117.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**
Moisture Variation (Wv) %	-0.5	-2.0	-2.5	-2.0	-3.0
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**100.5**	**96.0**	**102.0**	**104.0**	**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

Material Test Report

Report Number: P221112-15
Issue Number: 1
Date Issued: 23/11/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 10841
Date Sampled: 18/11/2022
Dates Tested: 18/11/2022 - 21/11/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Estate Stage 1 - Level One
Material: CLAY
Material Source: Imported

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	P22-10841F	P22-10841G	P22-10841H	P22-10841I	
Test Number	49	50	51	52	
Date Tested	18/11/2022	18/11/2022	18/11/2022	18/11/2022	
Time Tested	**	**	**	**	
Test Request #/Location	Lot 124	Lot 125	Lot 126	Lot 127	
Layer / Reduced Level	Layer 2	Layer 2	Layer 2	Layer 2	
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)	**	**	**	**	
Field Wet Density (FWD) t/m^3	2.09	1.99	2.10	2.01	
Field Moisture Content %	20.2	18.4	19.8	22.2	
Field Dry Density (FDD) t/m^3	1.74	1.68	1.76	1.65	
Peak Converted Wet Density t/m^3	2.10	2.12	2.10	2.01	
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**	**	
Adj. Field Moisture Content % (AS1289.5.4.1)	20.2	18.4	19.8	22.2	
Moisture Ratio % (AS1289.5.4.1)	114.5	118.5	114.5	102.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	
Moisture Variation (Wv) %	-2.5	-3.0	-2.5	-0.5	
Adjusted Moisture Variation %	**	**	**	**	
Hilf Density Ratio (%)	**100.0**	**94.0**	**100.0**	**100.0**	
Compaction Method	**Standard**	**Standard**	**Standard**	**Standard**	
Report Remarks	**	**	**	**	

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

Material Test Report

Report Number: **P221112-16**
Issue Number: 1
Date Issued: 09/08/2023
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 10923
Date Sampled: 25/11/2022 9:40
Dates Tested: 27/11/2022 - 29/11/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Estate Level One
Material: CLAY
Material Source: Stockpile

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P22-10923A	P22-10923B	P22-10923C
Test Number	53	54	55
Date Tested	25/11/2022	25/11/2022	25/11/2022
Time Tested	09:40	09:55	10:10
Test Request #/Location	Lot 121	Lot 122	Lot 121
Layer / Reduced Level	Layer 1	Layer 1	Layer 1
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 (%)	5	0	0
Field Wet Density (FWD) t/m^3	1.97	1.99	2.06
Field Moisture Content %	19.3	19.1	23.4
Field Dry Density (FDD) t/m^3	1.65	1.67	1.67
Peak Converted Wet Density t/m^3	**	2.11	2.13
Adjusted Peak Converted Wet Density t/m^3	2.17	**	**
Moisture Variation (Wv) %	**	-2.5	-3.0
Adjusted Moisture Variation %	-2.5	**	**
Hilf Density Ratio (%)	**90.5**	**94.5**	**96.5**
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: **P221112-17**
Issue Number: 1
Date Issued: 09/08/2023
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 10925
Date Sampled: 26/11/2022 8:00
Dates Tested: 27/11/2022 - 29/11/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Estate Stage 1 - Level One
Material: clay
Material Source: Imported

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	P22-10925A	P22-10925B	P22-10925C	P22-10925D
Test Number	56	57	58	59
Date Tested	27/11/2022	27/11/2022	27/11/2022	27/11/2022
Time Tested	08:00	08:00	08:00	08:00
Test Request #/Location	Lot 121	Lot 122	Lot 124	Re-test Lot 121 Retest #53
Layer / Reduced Level	Layer 02	Layer 02	Layer 02	Layer 01
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
Field Wet Density (FWD) t/m^3	2.02	2.04	2.03	2.06
Field Moisture Content %	22.0	21.1	21.2	20.2
Field Dry Density (FDD) t/m^3	1.65	1.69	1.68	1.72
Peak Converted Wet Density t/m^3	2.08	2.10	2.04	2.09
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	-3.0	-3.0	-2.0	-3.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**97.0**	**97.5**	**99.5**	**99.0**
Compaction Method	**Standard**	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**	**

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

Material Test Report

Report Number: P221112-18
Issue Number: 1
Date Issued: 09/08/2023
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 10936
Date Sampled: 28/11/2022
Dates Tested: 28/11/2022 - 02/12/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Estate Stage 1 - Level One
Material: Silty Clay
Material Source: Imported

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P22-10936A	P22-10936B	P22-10936C
Test Number	60	61	62
Date Tested	29/11/2022	29/11/2022	29/11/2022
Time Tested	11:45	11:45	11:45
Test Request #/Location	Lot 120	Lot 119	Lot 117
Layer / Reduced Level	Layer 1	Layer 1	Layer 1
Thickness of Layer (mm)	300	300	300
Soil Description	Sandy silty CLAY	Sandy silty CLAY	Sandy 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)	**	**	**
Field Wet Density (FWD) t/m^3	2.09	2.06	2.04
Field Moisture Content %	20.4	20.7	20.5
Field Dry Density (FDD) t/m^3	1.73	1.70	1.69
Peak Converted Wet Density t/m^3	2.07	2.08	2.08
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	18.0	18.1	**
Adj. Field Moisture Content % (AS1289.5.4.1)	20.4	20.7	20.5
Moisture Ratio % (AS1289.5.4.1)	113.5	115.0	113.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-2.5	-2.5	-2.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**100.5**	**99.0**	**98.0**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

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

Material Test Report

Report Number: P221112-19
Issue Number: 1
Date Issued: 09/08/2023
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 10966
Date Sampled: 30/11/2022
Dates Tested: 30/11/2022 - 01/12/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Estate Stage 1 - Level One - Officer
Material: Silty Clay
Material Source: Imported

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	P22-10966A	P22-10966B	P22-10966C	P22-10966D	P22-10966E	P22-10966F
Test Number	63	64	65	66	67	68
Date Tested	30/11/2022	30/11/2022	30/11/2022	30/11/2022	30/11/2022	30/11/2022
Time Tested	09:51	09:51	09:51	15:07	15:12	15:16
Test Request #/Location	Lot 136 Retest #19	Lot 125 Retest #50	Lot 122 Retest #54	Lot 122	Lot 124	Lot 126
Layer / Reduced Level	Layer 2	Layer 2	Layer 1	Layer 3	Layer 3	Layer 3
Thickness of Layer (mm)	300	300	300	300	300	300
Soil Description	Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty 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	2.05	2.10	2.06	2.02	1.91	1.95
Field Moisture Content %	21.3	20.7	21.7	23.5	32.0	28.9
Field Dry Density (FDD) t/m^3	1.69	1.74	1.69	1.64	1.45	1.51
Peak Converted Wet Density t/m^3	2.08	2.08	2.08	2.06	1.90	1.96
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	21.3	20.7	21.7	23.5	32.0	28.9
Moisture Ratio % (AS1289.5.4.1)	115.0	115.5	117.0	113.5	109.5	111.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**	**
Moisture Variation (Wv) %	-2.5	-2.5	-3.0	-2.5	-2.5	-2.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**99.0**	**100.5**	**99.0**	**98.0**	**100.5**	**99.5**
Compaction Method	**Standard**	**Standard**	**Standard**	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**	**	**	**

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

Material Test Report

Report Number: P221112-20
Issue Number: 1
Date Issued: 12/12/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 10984
Date Sampled: 01/12/2022
Dates Tested: 01/12/2022 - 02/12/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Estate - Stage 1 Level One -Officer
Material: CLAY
Material Source: Imported

terra firma laboratories

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

NATA WORLD RECOGNISED ACCREDITATION

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	P22-10984A	P22-10984B	P22-10984C	P22-10984D	P22-10984E
Test Number	69	70	71	72	73
Date Tested	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022
Time Tested	**	**	**	**	**
Test Request #/Location	Lot 118	Lot 119	Lot 120	Lot 112	Lot 111
Layer / Reduced Level	Layer 1	Layer 2	Layer 3	FSL	FSL
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)	**	**	**	**	**
Field Wet Density (FWD) t/m^3	2.07	2.11	2.08	2.02	2.04
Field Moisture Content %	19.3	19.1	19.9	40.5	30.3
Field Dry Density (FDD) t/m^3	1.73	1.77	1.74	1.44	1.57
Peak Converted Wet Density t/m^3	2.10	2.09	2.09	2.09	2.04
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	17.4	17.0	17.9	38.3	30.0
Adj. Field Moisture Content % (AS1289.5.4.1)	19.3	19.1	19.9	40.5	30.3
Moisture Ratio % (AS1289.5.4.1)	111.0	112.0	111.0	106.0	101.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**
Moisture Variation (Wv) %	-2.0	-2.0	-2.0	-2.0	-0.5
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**98.5**	**100.5**	**99.5**	**96.5**	**100.0**
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: P221112-21
Issue Number: 1
Date Issued: 16/12/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 10995
Date Sampled: 02/12/2022 8:00
Dates Tested: 02/12/2022 - 05/12/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Estate - Stage 1 Level One -Officer
Material: Gravelly 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	P22-10995A	P22-10995B	P22-10995C
Test Number	74	75	76
Date Tested	02/12/2022	02/12/2022	02/12/2022
Time Tested	08:00	08:00	08:00
Test Request #/Location	109	113	118
Layer / Reduced Level	Layer 3	Layer 3	Layer 3
Thickness of Layer (mm)	300	300	300
Soil Description	Gravelly CLAY	Gravelly CLAY	Gravelly CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m^3	2.05	1.99	2.16
Field Moisture Content %	31.4	23.0	24.7
Field Dry Density (FDD) t/m^3	1.56	1.62	1.73
Peak Converted Wet Density t/m^3	1.88	2.02	2.10
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	31.6	21.8	23.1
Adj. Field Moisture Content % (AS1289.5.4.1)	31.4	23.0	24.7
Moisture Ratio % (AS1289.5.4.1)	99.5	105.5	107.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.0	-1.0	-1.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**109.5**	**98.5**	**103.0**
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: P221112-21
Issue Number: 1
Date Issued: 16/12/2022
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 10995
Date Sampled: 02/12/2022 8:00
Dates Tested: 02/12/2022 - 05/12/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Estate - Stage 1 Level One -Officer
Material: Gravelly CLAY
Material Source: Imported

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47 National Avenue Pakenham VIC 3810
Phone: (03) 9769 5799
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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	P22-10995A	P22-10995B	P22-10995C
Test Number	74	75	76
Date Tested	02/12/2022	02/12/2022	02/12/2022
Time Tested	08:00	08:00	08:00
Test Request #/Location	109	113	118
Layer / Reduced Level	Layer 3	Layer 3	Layer 3
Thickness of Layer (mm)	300	300	300
Soil Description	Gravelly CLAY	Gravelly CLAY	Gravelly CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m^3	2.05	1.99	2.16
Field Moisture Content %	31.4	23.0	24.7
Field Dry Density (FDD) t/m^3	1.56	1.62	1.73
Peak Converted Wet Density t/m^3	1.88	2.02	2.10
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	31.6	21.8	23.1
Adj. Field Moisture Content % (AS1289.5.4.1)	31.4	23.0	24.7
Moisture Ratio % (AS1289.5.4.1)	99.5	105.5	107.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.0	-1.0	-1.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**109.5**	**98.5**	**103.0**
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: P221112-22
Issue Number: 1
Date Issued: 19/01/2023
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rob Nassar
Project Number: P221112
Project Name: Banyan Place Estate Stage 1 - Level One
Project Location: Officer
Work Request: 11012
Date Sampled: 05/12/2022
Dates Tested: 05/12/2022 - 06/12/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Place Estate Stage 1 - Level One - Officer
Material: Silty Clay
Material Source: Imported

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Pakenham Laboratory
47 National Avenue Pakenham VIC 3810
Phone: (03) 9769 5799
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NATA WORLD RECOGNISED ACCREDITATION

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	P22-11012A	P22-11012B	P22-11012C
Test Number	77	78	79
Date Tested	05/12/2022	05/12/2022	05/12/2022
Time Tested	15:28	15:29	15:30
Test Request #/Location	Lot 117	Lot 119	Lot 120
Layer / Reduced Level	Layer 3	Layer 4	Layer 5
Thickness of Layer (mm)	300	300	300
Soil Description	Sandy silty CLAY	Sandy silty CLAY	Sandy 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	0
Field Wet Density (FWD) t/m^3	2.12	2.06	2.08
Field Moisture Content %	18.6	18.9	18.8
Field Dry Density (FDD) t/m^3	1.79	1.74	1.75
Peak Converted Wet Density t/m^3	2.13	2.14	2.12
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	16.2	15.5	16.7
Adj. Field Moisture Content % (AS1289.5.4.1)	18.6	18.9	18.8
Moisture Ratio % (AS1289.5.4.1)	114.5	121.5	112.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-2.5	-3.5	-2.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**100.0**	**96.5**	**98.5**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

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

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 101

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

Lot 101 as defined in drawing Ref 1470_1_R04 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^2 in area and across several house lots.

A GITA Inspection Verification report (Reference: P221112A) has been published on 11 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

terra firma laboratories

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 102

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

Lot 102 as defined in drawing Ref 1470_1_R04 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^2 in area and across several house lots.

A GITA Inspection Verification report (Reference: P221112A) has been published on 11 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

terra firma laboratories

Your Worksite is Our Laboratory.

11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 103

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

Lot 103 as defined in drawing Ref 1470_1_R04 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^2 in area and across several house lots.

A GITA Inspection Verification report (Reference: P221112A) has been published on 11 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

terra firma laboratories

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 104

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

Lot 104 as defined in drawing Ref 1470_1_R04 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^2 in area and across several house lots.

A GITA Inspection Verification report (Reference: P221112A) has been published on 11 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

terra firma laboratories

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 105

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

Lot 105 as defined in drawing Ref 1470_1_R04 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^2 in area and across several house lots.

A GITA Inspection Verification report (Reference: P221112A) has been published on 11 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

terra firma laboratories

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 106

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

Lot 106 as defined in drawing Ref 1470_1_R04 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^2 in area and across several house lots.

A GITA Inspection Verification report (Reference: P221112A) has been published on 11 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

terra firma laboratories

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 107

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

Lot 107 as defined in drawing Ref 1470_1_R04 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^2 in area and across several house lots.

A GITA Inspection Verification report (Reference: P221112A) has been published on 11 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

terra firma laboratories

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 108

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

Lot 108 as defined in drawing Ref 1470_1_R04 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^2 in area and across several house lots.

A GITA Inspection Verification report (Reference: P221112A) has been published on 11 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

terra firma laboratories

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 109

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

Lot 109 as defined in drawing Ref 1470_1_R04 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^2 in area and across several house lots.

A GITA Inspection Verification report (Reference: P221112A) has been published on 11 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

terra firma laboratories

Your Worksite is Our Laboratory.

11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 110

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

Lot 110 as defined in drawing Ref 1470_1_R04 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^2 in area and across several house lots.

A GITA Inspection Verification report (Reference: P221112A) has been published on 11 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

terra firma laboratories

Your Worksite is Our Laboratory.

11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 111

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

Lot 111 as defined in drawing Ref 1470_1_R04 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^2 in area and across several house lots.

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For and on behalf of
Terra Firma Laboratories

C Caulfield
Project Manager

terra firma laboratories

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 112

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

Lot 112 as defined in drawing Ref 1470_1_R04 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

terra firma laboratories

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 113

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

Lot 113 as defined in drawing Ref 1470_1_R04 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

terra firma laboratories

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 114

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

Lot 114 as defined in drawing Ref 1470_1_R04 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

terra firma laboratories

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 115

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

Lot 115 as defined in drawing Ref 1470_1_R04 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

terra firma laboratories

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 116

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Lot 116 as defined in drawing Ref 1470_1_R04 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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Terra Firma Laboratories

C Caulfield
Project Manager

terra firma laboratories

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 117

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Lot 117 as defined in drawing Ref 1470_1_R04 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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Terra Firma Laboratories

C Caulfield
Project Manager

terra firma laboratories

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 118

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Lot 118 as defined in drawing Ref 1470_1_R04 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

terra firma laboratories

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 119

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Lot 119 as defined in drawing Ref 1470_1_R04 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

terra firma laboratories

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 120

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

Lot 120 as defined in drawing Ref 1470_1_R04 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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Terra Firma Laboratories

C Caulfield
Project Manager

terra firma laboratories

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 121

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Lot 121 as defined in drawing Ref 1470_1_R04 from *Charlton Degg,* provided by the contractor, was included in the scope of works.

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C Caulfield
Project Manager

terra firma laboratories

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 122

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Lot 122 as defined in drawing Ref 1470_1_R04 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

terra firma laboratories

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11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 123

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Lot 123 as defined in drawing Ref 1470_1_R04 from *Charlton Degg,* provided by the contractor, was included in the scope of works.

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Terra Firma Laboratories

C Caulfield
Project Manager

terra firma laboratories

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11 Aug 2023

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Re: Banyan Place Estate Stage 1
Officer
Lot 124

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Lot 124 as defined in drawing Ref 1470_1_R04 from *Charlton Degg,* provided by the contractor, was included in the scope of works.

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Terra Firma Laboratories

C Caulfield
Project Manager

terra firma laboratories

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11 Aug 2023

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Re: Banyan Place Estate Stage 1
Officer
Lot 125

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Lot 125 as defined in drawing Ref 1470_1_R04 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

terra firma laboratories

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11 Aug 2023

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Officer
Lot 126

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Lot 126 as defined in drawing Ref 1470_1_R04 from *Charlton Degg,* provided by the contractor, was included in the scope of works.

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C Caulfield
Project Manager

terra firma laboratories

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Officer
Lot 127

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Terra Firma Laboratories

C Caulfield
Project Manager

terra firma laboratories

Your Worksite is Our Laboratory.

11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 128

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

Lot 128 as defined in drawing Ref 1470_1_R04 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^2 in area and across several house lots.

A GITA Inspection Verification report (Reference: P221112A) has been published on 11 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

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11 Aug 2023

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Re: Banyan Place Estate Stage 1
Officer
Lot 129

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Re: Banyan Place Estate Stage 1
Officer
Lot 130

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Officer
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Officer
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Officer
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Officer
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Officer
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Officer
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For and on behalf of
Terra Firma Laboratories

C Caulfield
Project Manager

terra firma laboratories

Your Worksite is Our Laboratory.

11 Aug 2023

TO WHOM IT MAY CONCERN

Re: Banyan Place Estate Stage 1
Officer
Lot 146

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

Lot 146 as defined in drawing Ref 1470_1_R04 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^2 in area and across several house lots.

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