

Banyan Place Stage 8

GITA Inspection Verification Report

Prepared For:	Lojac Civil Pty Ltd
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Report Number	P241725A V1
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Version Release Date	20 Jun 2024
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Report Released By	C Caulfield
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Title	Laboratory Manager
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Signature



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1 Introduction

Terra Firma Laboratories was engaged by Lojac Civil Pty Ltd as the Geotechnical Inspection and Testing Authority (GITA) to provide Level 1 supervision and testing works on the earthworks component for Banyan Place Stage 8. This work was conducted over the period of 23/01/2024 to 06/05/2024.

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 801 to 841, bounded by streets Horvath Boulevard, Tulk Street, Flume Way and Leaf Way. The site will be a Commercial 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: 1470-8/R04 and R05) and provided by Lojac Civil Pty Ltd.

The supervision work by the GITA involved both inspection of sub grade preparation work and full time inspection and testing of fill placement.

2.2 Specification

The technical specification (Reference from Drawings) for compaction control requirements was provided by Lojac Civil Pty Ltd and established that:

Test Rolling is required for all layers of structural fill and materials within 150mm of permanent subgrade level so as to withstand test rolling without visible deformation or springing. Corrective action is required where unstable areas exceed 20% of the area being considered by test rolling.

Section 5.2 of AS3798-2007 (Section 5.2) establishes a specification requirement for a minimum density ratio of not less than 95% noting that soils containing more than 20% of particles coarser than 37.5mm cannot be tested for relative compaction using the procedures of AS1289 5.1.1 and AS1289 5.2.1.

In accordance with Table 8.1 (AS3798), for large scale operations, (greater than 1500m²), the minimum testing frequency is 1 test per layer per material type per 2500m² or 1 test per 500m³ distributed reasonable evenly throughout full depth and area or 3 tests per lot. AS3798 defines a lot as “an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work”. All three of these test frequencies must be achieved and this is typically confirmed to have been achieved when 3 tests per visit (day) have been completed.

2.3 Limitations

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

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

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

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

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

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3 Construction Method

3.1 Subgrade Preparation

At the time of subgrade inspection the following was observed:

- Subgrade preparation involved stripping the site of topsoil, vegetation and organic matter to a depth of approximately 200mm below existing levels.
- The site was cleared of all trees and stumps to the extent necessary for the fill placement to proceed
- The roots of all trees and any debris was removed from site prior to any fill placement
- A Dam to the north of Horvath Boulevard was cleaned out and backfilled under Level 1 supervision (reference report P241784A)

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

3.2 Fill Placement

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

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

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

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

4 Construction Verification

Compaction Verification testing is summarized in a detailed test register with test certificates attached provided in Appendix 2: *Compaction Test Register and Test Certificates*. A test location plan (P241725D1, 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 78 density tests (Hilf method in accordance with 1289 5.7.1) were undertaken with 1 failed results. The contractor was notified of any failed tests and the failed areas were ripped, watered, compacted and then re-tested to confirm compliance with the specification. The results summarised in the compaction test register (Appendix 2) confirm that for every layer of fill placed in a specific work area, satisfactory testing was completed.

5 Statement of Compliance

The intention of this report is to provide a description of the earthworks construction for Stage 8 at Banyan Place. For completed fill areas of greater than 300mm, and for works completed between 23/01/2024 and 06/05/2024, 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 8 of Banyan Place was observed to be constructed in compliance with the requirements of the Technical Specification.

Appendix 1: Test Location Plan

TEMPORARY TURNING CIRCLE
1m DEPTH OF CLASS 3 CR
1.5m POST & WIRE FENCE
ROUND TURNING AREA

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

FUTURE
DEVELOPMENT

HORVATH
BOULEVARD

RE
12

EXISTING
STAGE 6

EXISTING
STAGE 5

EXISTING
STAGE 6

EXISTING
STAGE 5

EXISTING DAM TO BE DE-WATERED.
SILT REMOVED AND FILLED TO
LEVEL 1 REQUIREMENTS TO MATCH
SURROUNDING GROUND

CONCRETE BARRIERS TO BE PLACED.
CONCRETE EDGE STRIP
AND 'NO ROAD' SIGN
TEMPORARY AG AT EDGE STRIP

TULK
STREET

EXISTING
STAGE 4



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

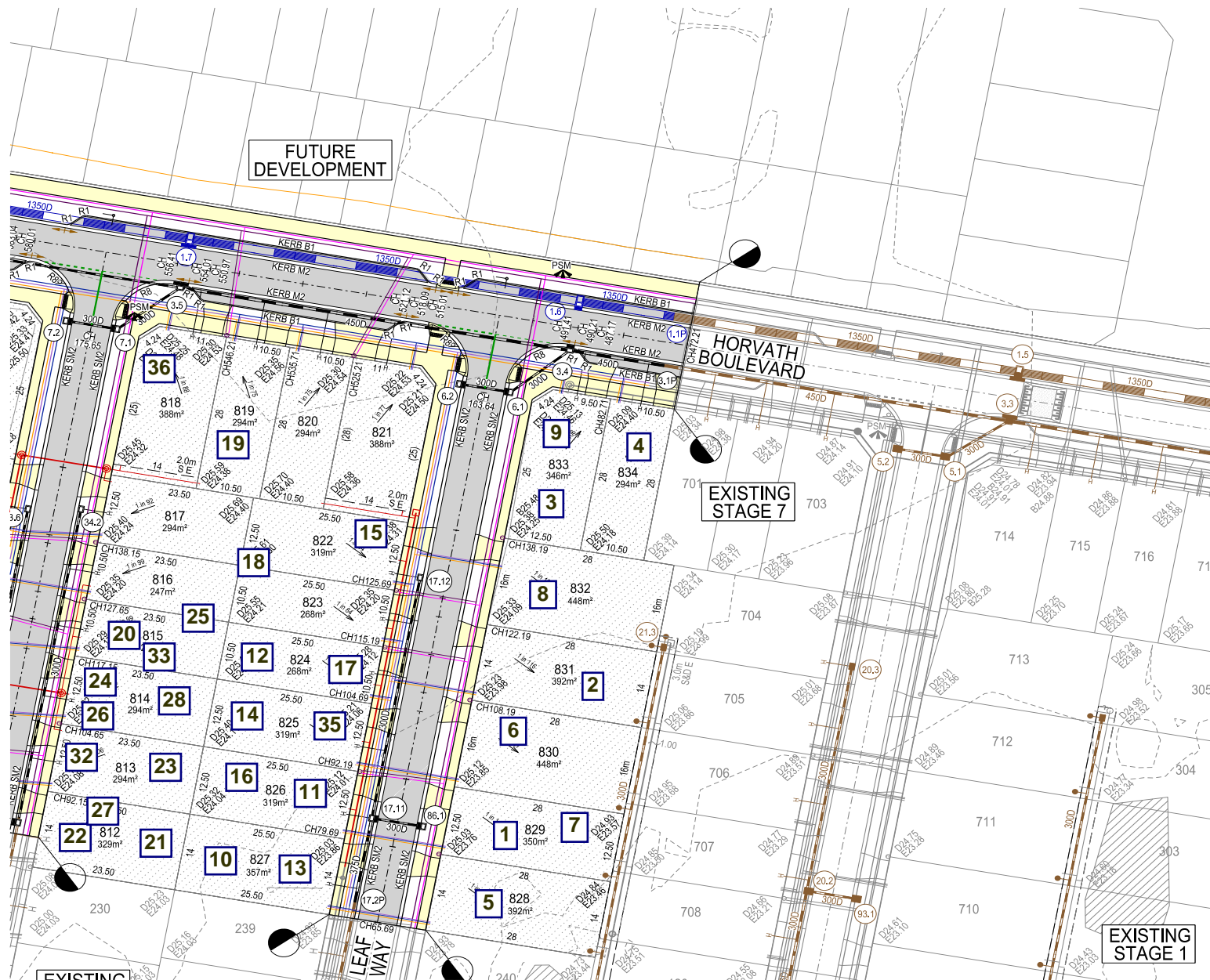
not to scale

Client: Lojac Civil Pty Ltd

Project: Banyan Place Stage 8

Reference: P241725 D1

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P241725 D1



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 Stage 8

Reference: P241725 D1

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Test Location Plan 001

Appendix 2: Compaction Test Register and Test Certificates



Compaction Test Register

Client: Lojac Civil Pty Ltd
Project: Banyan Place Stage 8

Project No: P241725
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
23/01/2024	1	Layer 1		98.5%	Pass	Lot 829	P241725-1
23/01/2024	2	Layer 2		97.5%	Pass	Lot 831	P241725-1
23/01/2024	3	Layer 2		95.0%	Pass	Lot 833	P241725-1
23/01/2024	4	Layer 3		96.5%	Pass	Lot 834	P241725-1
23/01/2024	5	Layer 3		97.5%	Pass	Lot 828	P241725-1
23/01/2024	6	Layer 4		98.0%	Pass	Lot 830	P241725-1
1/02/2024	7	Layer 4		97.0%	Pass	Lot 829	P241725-2
1/02/2024	8	FSL		99.0%	Pass	Lot 832	P241725-2
1/02/2024	9	FSL		96.5%	Pass	Lot 833	P241725-2
1/02/2024	10	Layer 1		97.0%	Pass	Lot 827	P241725-2
1/02/2024	11	Layer 2		98.5%	Pass	Lot 826	P241725-2
1/02/2024	12	Layer 2		95.0%	Pass	Lot 824	P241725-2
2/02/2024	13	Layer 2		98.5%	Pass	Lot 827	P241725-3
2/02/2024	14	Layer 2		98.5%	Pass	Lot 825	P241725-3
2/02/2024	15	Layer 2		99.0%	Pass	Lot 822	P241725-3
7/02/2024	16	Layer 3		99.5%	Pass	Lot 826	P241725-4
7/02/2024	17	Layer 3		99.5%	Pass	Lot 824	P241725-4
7/02/2024	18	Layer 3		97.5%	Pass	Lot 822	P241725-4
19/02/2024	19	Layer 2		108.0%	Pass	Lot 819	P241725-5
19/02/2024	20	Layer 2		100.5%	Pass	Lot 815	P241725-5
19/02/2024	21	Layer 1		102.5%	Pass	Lot 812	P241725-5
20/02/2024	22	Layer 3		97.0%	Pass	Lot 812	P241725-6
20/02/2024	23	Layer 3		96.5%	Pass	Lot 813	P241725-6
20/02/2024	24	Layer 3		93.0%	Fail	Lot 814	P241725-6
23/02/2024	25	Layer 2		95.5%	Pass	Lot 815	P241725-7
26/02/2024	26	Layer 2	Test #24	97.0%	Pass	Lot 814	P241725-8
27/02/2024	27	Layer 3		100.0%	Pass	Lot 812	P241725-9
27/02/2024	28	Layer 3		103.0%	Pass	Lot 814	P241725-9
28/02/2024	29	Layer 1		97.0%	Pass	Lot 811	P241725-10
28/02/2024	30	Layer 2		101.0%	Pass	Lot 809	P241725-10
28/02/2024	31	Layer 2		102.5%	Pass	Lot 807	P241725-10
1/03/2024	32	Layer 4		105.5%	Pass	Lot 813	P241725-11
1/03/2024	33	Layer 4		105.0%	Pass	Lot 815	P241725-11
1/03/2024	34	Layer 3		101.5%	Pass	Lot 808	P241725-11
2/03/2024	35	FSL		103.5%	Pass	Lot 825	P241725-12
2/03/2024	36	FSL		104.0%	Pass	Lot 818	P241725-12
2/03/2024	37	Layer 4		103.5%	Pass	Lot 805	P241725-12
4/03/2024	38	Layer 4		105.5%	Pass	Lot 808	P241725-13
4/03/2024	39	Layer 4		104.5%	Pass	Lot 810	P241725-13
4/03/2024	40	Layer 3		99.0%	Pass	Lot 820	P241725-13
7/03/2024	41	Layer 4		96.5%	Pass	Lot 805	P241725-14



Compaction Test Register

Client: Lojac Civil Pty Ltd
Project: Banyan Place Stage 8

Project No: P241725
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
7/03/2024	42	Layer 1		101.0%	Pass	Lot 801	P241725-14
7/03/2024	43	Layer 1		97.5%	Pass	Lot 838	P241725-14
8/03/2024	44	Layer 1		104.5%	Pass	Lot 803	P241725-15
8/03/2024	45	Layer 4		99.0%	Pass	Lot 806	P241725-15
8/03/2024	46	Layer 4		98.5%	Pass	Lot 808	P241725-15
8/03/2024	47	Layer 1		103.0%	Pass	Lot 837	P241725-15
8/03/2024	48	Layer 1		103.0%	Pass	Lot 836	P241725-15
8/03/2024	49	Layer 1		95.5%	Pass	Lot 835	P241725-15
14/03/2024	50	Layer 2		103.5%	Pass	Lot 837	P241725-16
14/03/2024	51	Layer 2		106.0%	Pass	Lot 836	P241725-16
14/03/2024	52	Layer 2		108.5%	Pass	Lot 835	P241725-16
14/03/2024	53	Layer 2		97.5%	Pass	Lot 840	P241725-16
14/03/2024	54	Layer 2		101.5%	Pass	Lot 839	P241725-16
14/03/2024	55	Layer 2		100.5%	Pass	Lot 838	P241725-16
15/03/2024	56	Layer 2		101.5%	Pass	Lot 802	P241725-17
15/03/2024	57	Layer 2		102.5%	Pass	Lot 841	P241725-17
15/03/2024	58	Layer 3		99.5%	Pass	Lot 835	P241725-17
18/03/2024	59	Layer 3		99.0%	Pass	Lot 836	P241725-18
18/03/2024	60	Layer 3		99.0%	Pass	Lot 837	P241725-18
18/03/2024	61	Layer 3		100.0%	Pass	Lot 838	P241725-18
19/03/2024	62	Layer 3		102.0%	Pass	Lot 801	P241725-19
19/03/2024	63	Layer 3		102.0%	Pass	Lot 841	P241725-19
19/03/2024	64	Layer 3		103.0%	Pass	Lot 839	P241725-19
22/03/2024	65	Layer 3		102.0%	Pass	Lot 803	P241725-20
22/03/2024	66	Layer 3		97.0%	Pass	Lot 802	P241725-20
22/03/2024	67	Layer 3		99.5%	Pass	Lot 802	P241725-20
25/03/2024	68	Layer 4		102.0%	Pass	Lot 836	P241725-21
25/03/2024	69	Layer 4		95.5%	Pass	Lot 838	P241725-21
25/03/2024	70	Layer 4		98.0%	Pass	Lot 840	P241725-21
26/03/2024	71	Layer 5		98.0%	Pass	Lot 835	P241725-22
26/03/2024	72	Layer 5		102.5%	Pass	Lot 839	P241725-22
26/03/2024	73	Layer 5		96.0%	Pass	Lot 841	P241725-22
27/03/2024	74	Layer 5		99.0%	Pass	Lot 801	P241725-23
27/03/2024	75	Layer 5		95.5%	Pass	Lot 801	P241725-23
27/03/2024	76	Layer 5		95.5%	Pass	Lot 803	P241725-23
6/05/2024	77	FSL		103.0%	Pass	Lot 836	P241725-24
6/05/2024	78	FSL		101.0%	Pass	Lot 835	P241725-24

Material Test Report

Report Number: P241725-1
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 20/06/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14274
Date Sampled: 22/01/2024 8:30
Dates Tested: 22/01/2024 - 25/01/2024
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 8 Level One
Material: Sandy silty CLAY
Material Source: Onsite - Stockpile



Pakenham Laboratory
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Accredited for compliance with ISO/IEC 17025 - Testing

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

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P24-14274A	P24-14274B	
Test Number	1	2	
Date Tested	23/01/2024	23/01/2024	
Time Tested	**	**	
Test Request #/Location	Lot 829	Lot 831	
Layer / Reduced Level	Layer 1	Layer 2	
Thickness of Layer (mm)	300	300	
Soil Description	Sandy silty CLAY	Sandy silty CLAY	
Test Depth (mm)	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	**	
Field Wet Density (FWD) t/m ³	2.04	2.05	
Field Moisture Content %	18.8	21.9	
Field Dry Density (FDD) t/m ³	1.72	1.68	
Peak Converted Wet Density t/m ³	2.07	2.10	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	18.6	**	
Adj. Field Moisture Content % (AS1289.5.4.1)	18.8	21.9	
Moisture Ratio % (AS1289.5.4.1)	101.0	118.5	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	0.0	-3.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	98.5	97.5	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P241725-1
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 20/06/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14274
Date Sampled: 22/01/2024 8:30
Dates Tested: 22/01/2024 - 24/01/2024
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 8 Level One
Material: Sandy silty CLAY
Material Source: Onsite - Stockpile



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

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1

Sample Number	P24-14274C		
Test Number	3		
Date Tested	23/01/2024		
Time Tested	**		
Test Request #/Location	Lot833		
Layer / Reduced Level	Layer 2		
Thickness of Layer (mm)	300		
Soil Description	Sandy silty CLAY		
Test Depth (mm)	275		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	**		
Method used to Determine Plasticity	Visual Assessment		
Field Wet Density t/m ³	2.02		
Field Moisture Content %	18.7		
Field Dry Density t/m ³	1.70		
Maximum Dry Density t/m ³	1.79		
Adjusted Maximum Dry Density t/m ³	**		
Optimum Moisture Content (OMC) %	15.5		
Adjusted Optimum Moisture Content (OMC) %	**		
Moisture Variation %	-3.0		
Moisture Ratio %	119.0		
Density Ratio %	95.0		
Compaction Method	Standard		

Moisture Variation Note:

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

Material Test Report

Report Number: P241725-2
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 20/06/2024
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14282
Date Sampled: 23/01/2024 8:00
Dates Tested: 23/01/2024 - 29/01/2024
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Estate Stage 8 Level One
Material: Sandy silty CLAY
Material Source: Onsite - Stockpile



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Accredited for compliance with ISO/IEC 17025 - Testing

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

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P24-14282A	P24-14282C	
Test Number	4	6	
Date Tested	23/01/2024	23/01/2024	
Time Tested	**	**	
Test Request #/Location	Lor 834	Lot 830	
Layer / Reduced Level	Layer 3	Layer 4	
Thickness of Layer (mm)	300	300	
Soil Description	Sandy silty CLAY	Sandy silty CLAY	
Test Depth (mm)	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	0	
Field Wet Density (FWD) t/m ³	2.05	2.05	
Field Moisture Content %	35.0	22.1	
Field Dry Density (FDD) t/m ³	1.52	1.68	
Peak Converted Wet Density t/m ³	2.12	2.09	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	18.6	
Adj. Field Moisture Content % (AS1289.5.4.1)	35.0	22.1	
Moisture Ratio % (AS1289.5.4.1)	110.5	119.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	-3.0	-3.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	96.5	98.0	
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: P241725-2
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 20/06/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14282
Date Sampled: 23/01/2024 8:00
Dates Tested: 23/01/2024 - 25/01/2024
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Estate Stage 8 Level One
Material: Sandy silty CLAY
Material Source: Onsite - Stockpile



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

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1

Sample Number	P24-14282B		
Test Number	5		
Date Tested	23/01/2024		
Time Tested	**		
Test Request #/Location	Lot 832		
Layer / Reduced Level	Layer 3		
Thickness of Layer (mm)	300		
Soil Description	Sandy silty CLAY		
Test Depth (mm)	275		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	**		
Method used to Determine Plasticity	Visual Assessment		
Field Wet Density t/m ³	2.02		
Field Moisture Content %	17.6		
Field Dry Density t/m ³	1.71		
Maximum Dry Density t/m ³	1.75		
Adjusted Maximum Dry Density t/m ³	**		
Optimum Moisture Content (OMC) %	17.5		
Adjusted Optimum Moisture Content (OMC) %	**		
Moisture Variation %	-0.5		
Moisture Ratio %	101.5		
Density Ratio %	97.5		
Compaction Method	Standard		

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P241725-3
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 20/06/2024
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rick
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14330
Date Sampled: 31/01/2024
Dates Tested: 31/01/2024 - 01/02/2024
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Estate Stage 8 Level One
Material: CLAY
Material Source: Onsite



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 Laboratory Manager
 NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P24-14330A	P24-14330B	P24-14330C
Test Number	7	8	9
Date Tested	01/02/2024	01/02/2024	01/02/2024
Time Tested	**	**	**
Test Request #/Location	Lot 829	Lot 832	Lot 833
Layer / Reduced Level	Layer 4	FSL	FSL
Thickness of Layer (mm)	300	300	300
Soil Description	CLAY	CLAY	CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	**
Field Wet Density (FWD) t/m ³	2.02	2.05	2.01
Field Moisture Content %	20.0	21.0	18.0
Field Dry Density (FDD) t/m ³	1.68	1.70	1.70
Peak Converted Wet Density t/m ³	2.08	2.07	2.08
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	18.3	18.4	**
Adj. Field Moisture Content % (AS1289.5.4.1)	20.0	21.0	18.0
Moisture Ratio % (AS1289.5.4.1)	109.0	113.5	105.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-1.5	-2.5	-1.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	97.0	99.0	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

Material Test Report

Report Number: P241725-4
Issue Number: 1
Date Issued: 05/02/2024
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14347
Date Sampled: 01/02/2024
Dates Tested: 01/02/2024 - 02/02/2024
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Estate Stage 8 Level One
Material: CLAY
Material Source: Onsite



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NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P24-14347A	P24-14347B	
Test Number	10	11	
Date Tested	01/02/2024	01/02/2024	
Time Tested	**	**	
Test Request #/Location	Lot 827	Lot 826	
Layer / Reduced Level	Layer 1	Layer 2	
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	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	
Field Wet Density (FWD) t/m ³	2.01	2.04	
Field Moisture Content %	21.1	22.5	
Field Dry Density (FDD) t/m ³	1.66	1.66	
Peak Converted Wet Density t/m ³	2.07	2.07	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	
Adj. Field Moisture Content % (AS1289.5.4.1)	21.1	22.5	
Moisture Ratio % (AS1289.5.4.1)	120.5	117.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	-3.5	-3.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	97.0	98.5	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P241725-4
Issue Number: 1
Date Issued: 05/02/2024
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14347
Date Sampled: 01/02/2024
Dates Tested: 01/02/2024 - 02/02/2024
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Estate Stage 8 Level One
Material: CLAY
Material Source: Onsite



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Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1

Sample Number	P24-14347C		
Test Number	12		
Date Tested	01/02/2024		
Time Tested	**		
Test Request #/Location	Lot 824		
Layer / Reduced Level	Layer 2		
Thickness of Layer (mm)	300		
Soil Description	CLAY		
Test Depth (mm)	275		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	**		
Method used to Determine Plasticity	Visual Assessment		
Field Wet Density t/m ³	2.01		
Field Moisture Content %	20.7		
Field Dry Density t/m ³	1.67		
Maximum Dry Density t/m ³	1.75		
Adjusted Maximum Dry Density t/m ³	**		
Optimum Moisture Content (OMC) %	16.5		
Adjusted Optimum Moisture Content (OMC) %	**		
Moisture Variation %	-4.0		
Moisture Ratio %	125.5		
Density Ratio %	95.0		
Compaction Method	Standard		

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P241725-5
Issue Number: 1
Date Issued: 13/02/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Contact: Rick
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14356
Date Sampled: 02/02/2024
Dates Tested: 02/02/2024 - 05/02/2024
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 Officer
Material: CLAY
Material Source: Onsite



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P24-14356A	P24-14356B	P24-14356C
Test Number	13	14	15
Date Tested	02/02/2024	02/02/2024	02/02/2024
Time Tested	**	**	**
Test Request #/Location	Lot 827	Lot 825	Lot 822
Layer / Reduced Level	2	2	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)	0	0	0
Field Wet Density (FWD) t/m ³	2.02	2.07	2.05
Field Moisture Content %	21.6	16.7	21.3
Field Dry Density (FDD) t/m ³	1.66	1.78	1.69
Peak Converted Wet Density t/m ³	2.05	2.11	2.08
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	18.1	15.4	18.2
Adj. Field Moisture Content % (AS1289.5.4.1)	21.6	16.7	21.3
Moisture Ratio % (AS1289.5.4.1)	119.5	108.5	117.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-3.5	-1.5	-3.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	98.5	98.5	99.0
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P241725-6
Issue Number: 1
Date Issued: 13/02/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14403
Date Sampled: 07/02/2024
Dates Tested: 07/02/2024 - 09/02/2024
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Estate Stage 8 Level One
Material: CLAY
Material Source: Onsite



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Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P24-14403A	P24-14403B	P24-14403C
Test Number	16	17	18
Date Tested	07/02/2024	07/02/2024	07/02/2024
Time Tested	**	**	**
Test Request #/Location	Lot 826	Lot 824	Lot 822
Layer / Reduced Level	Layer 3	Layer 3	Layer 3
Thickness of Layer (mm)	300	300	300
Soil Description	CLAY	CLAY	CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	2.07	2.07	2.04
Field Moisture Content %	16.6	18.0	17.0
Field Dry Density (FDD) t/m ³	1.78	1.76	1.74
Peak Converted Wet Density t/m ³	2.09	2.08	2.09
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	16.6	18.0	17.0
Moisture Ratio % (AS1289.5.4.1)	101.0	105.5	103.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.0	-1.0	-0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	99.5	99.5	97.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P241725-7
Issue Number: 1
Date Issued: 27/02/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14542
Date Sampled: 19/02/2024
Dates Tested: 19/02/2024 - 20/02/2024
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Estate Stage 8 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	P24-14542A	P24-14542B	P24-14542C
Test Number	19	20	21
Date Tested	19/02/2024	19/02/2024	19/02/2024
Time Tested	**	**	**
Test Request #/Location	Lot 819	Lot 815	Lot 812
Layer / Reduced Level	Layer 2	Layer 2	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	2.12	2.04	2.09
Field Moisture Content %	14.1	14.3	15.5
Field Dry Density (FDD) t/m ³	1.86	1.79	1.81
Peak Converted Wet Density t/m ³	1.97	2.03	2.04
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	17.3	14.4	15.6
Adj. Field Moisture Content % (AS1289.5.4.1)	14.1	14.3	15.5
Moisture Ratio % (AS1289.5.4.1)	81.5	99.5	99.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	3.0	0.0	0.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	108.0	100.5	102.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P241725-8
Issue Number: 1
Date Issued: 27/02/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14546
Date Sampled: 20/02/2024
Dates Tested: 20/02/2024 - 21/02/2024
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 Officer
Material: CLAY
Material Source: Imported



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P24-14546A	P24-14546B	P24-14546C
Test Number	22	23	24
Date Tested	20/02/2024	20/02/2024	20/02/2024
Time Tested	**	**	**
Test Request #/Location	Lot 812	Lot 813	Lot 814
Layer / Reduced Level	Layer 3	Layer 3	Layer 3
Thickness of Layer (mm)	300	300	300
Soil Description	CLAY	CLAY	CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	2.02	1.98	1.91
Field Moisture Content %	18.1	18.1	19.1
Field Dry Density (FDD) t/m ³	1.71	1.68	1.60
Peak Converted Wet Density t/m ³	2.08	2.05	2.05
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	18.1	18.1	19.1
Moisture Ratio % (AS1289.5.4.1)	108.0	106.0	104.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-1.5	-1.0	-0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	97.0	96.5	93.0
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: P241725-9
Issue Number: 1
Date Issued: 27/02/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14585
Date Sampled: 23/02/2024
Dates Tested: 23/02/2024 - 26/02/2024
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 8- 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	P24-14585A		
Test Number	25		
Date Tested	23/02/2024		
Time Tested	**		
Test Request #/Location	Lot 815		
Layer / Reduced Level	Layer 2		
Thickness of Layer (mm)	300		
Soil Description	CLAY		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0		
Field Wet Density (FWD) t/m ³	1.94		
Field Moisture Content %	15.7		
Field Dry Density (FDD) t/m ³	1.67		
Peak Converted Wet Density t/m ³	2.03		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	17.4		
Adj. Field Moisture Content % (AS1289.5.4.1)	15.7		
Moisture Ratio % (AS1289.5.4.1)	90.5		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	1.5		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	95.5		
Compaction Method	Standard		
Report Remarks	**		

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P241725-10
Issue Number: 1
Date Issued: 11/03/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14599
Date Sampled: 26/02/2024
Dates Tested: 26/02/2024 - 28/02/2024
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Estate Stage 8 - Level One Fill
Material: CLAY
Material Source: Onsite



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P24-14599A		
Test Number	26		
Date Tested	26/02/2024		
Time Tested	**		
Test Request #/Location	Lot 814 (Retest)		
Layer / Reduced Level	Layer 2		
Thickness of Layer (mm)	300		
Soil Description	Clay		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0		
Field Wet Density (FWD) t/m ³	2.00		
Field Moisture Content %	18.4		
Field Dry Density (FDD) t/m ³	1.69		
Peak Converted Wet Density t/m ³	2.07		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	17.2		
Adj. Field Moisture Content % (AS1289.5.4.1)	18.4		
Moisture Ratio % (AS1289.5.4.1)	107.0		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	-1.0		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	97.0		
Compaction Method	Standard		
Report Remarks	**		

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P241725-11
Issue Number: 1
Date Issued: 11/03/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14607
Date Sampled: 27/02/2024
Dates Tested: 27/02/2024 - 28/02/2024
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 8- 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	P24-14607A	P24-14607B	
Test Number	27	28	
Date Tested	27/02/2024	27/02/2024	
Time Tested	**	**	
Test Request #/Location	Lot 812	Lot 814	
Layer / Reduced Level	Layer 3	Layer 3	
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	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	
Field Wet Density (FWD) t/m ³	2.03	2.00	
Field Moisture Content %	17.1	24.2	
Field Dry Density (FDD) t/m ³	1.73	1.61	
Peak Converted Wet Density t/m ³	2.03	1.94	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	17.5	24.5	
Adj. Field Moisture Content % (AS1289.5.4.1)	17.1	24.2	
Moisture Ratio % (AS1289.5.4.1)	97.5	99.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	0.5	0.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	100.0	103.0	
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: P241725-12
Issue Number: 1
Date Issued: 11/03/2024
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14621
Date Sampled: 28/02/2024
Dates Tested: 28/02/2024 - 29/02/2024
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 8- 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	P24-14621A	P24-14621B	P24-14621C
Test Number	29	30	31
Date Tested	28/02/2024	28/02/2024	28/02/2024
Time Tested	**	**	**
Test Request #/Location	Lot 811	Lot 809	Lot 807
Layer / Reduced Level	Layer 1	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)	0	0	0
Field Wet Density (FWD) t/m ³	2.02	2.01	2.04
Field Moisture Content %	19.7	22.9	16.1
Field Dry Density (FDD) t/m ³	1.68	1.63	1.76
Peak Converted Wet Density t/m ³	2.08	1.99	1.99
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	17.5	22.7	16.3
Adj. Field Moisture Content % (AS1289.5.4.1)	19.7	22.9	16.1
Moisture Ratio % (AS1289.5.4.1)	112.5	101.0	99.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-2.0	0.0	0.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	97.0	101.0	102.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P241725-13
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 20/06/2024
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14653
Date Sampled: 01/03/2024
Dates Tested: 01/03/2024 - 04/03/2024
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 8- 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	P24-14653A	P24-14653B	P24-14653C	P24-14653D	P24-14653E	P24-14653F
Test Number	32	33	34	35	36	37
Date Tested	01/03/2024	01/03/2024	01/03/2024	02/03/2024	02/03/2024	02/03/2024
Time Tested	**	**	**	**	**	**
Test Request #/Location	Lot 813	33 Lot 815	34 Lot 808	Lot 825	Lot 818	Lot 805
Layer / Reduced Level	Layer 4	Layer 4	Layer 3	FSL	FSL	Layer 4
Thickness of Layer (mm)	300	300	300	300	300	300
Soil Description	CLAY	CLAY	CLAY	CLAY	CLAY	CLAY
Test Depth (mm)	275	275	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0	0	0	0
Field Wet Density (FWD) t/m ³	2.11	2.09	2.04	2.00	2.01	2.04
Field Moisture Content %	18.2	14.6	15.0	16.9	41.1	16.5
Field Dry Density (FDD) t/m ³	1.78	1.82	1.77	1.71	1.42	1.75
Peak Converted Wet Density t/m ³	2.00	1.98	2.00	1.93	1.94	1.97
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	21.4	19.3	16.9	19.8	47.4	18.8
Adj. Field Moisture Content % (AS1289.5.4.1)	18.2	14.6	15.0	16.9	41.1	16.5
Moisture Ratio % (AS1289.5.4.1)	85.0	75.5	88.5	85.5	86.5	88.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**	**
Moisture Variation (Wv) %	3.0	4.5	2.0	3.0	5.0	2.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	105.5	105.0	101.5	103.5	104.0	103.5
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: P241725-14
Issue Number: 1
Date Issued: 11/03/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14661
Date Sampled: 04/03/2024
Dates Tested: 04/03/2024 - 05/03/2024
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 8- 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	P24-14661A	P24-14661B	P24-14661C
Test Number	38	39	40
Date Tested	04/03/2024	04/03/2024	04/03/2024
Time Tested	**	**	**
Test Request #/Location	Lot 808	Lot 810	Lot 820
Layer / Reduced Level	Layer 4	Layer 4	Layer 3
Thickness of Layer (mm)	300	300	300
Soil Description	CLAY	CLAY	CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0
Field Wet Density (FWD) t/m ³	2.04	2.05	2.02
Field Moisture Content %	14.3	9.5	19.5
Field Dry Density (FDD) t/m ³	1.78	1.88	1.69
Peak Converted Wet Density t/m ³	1.93	1.96	2.04
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	17.4	14.3	20.0
Adj. Field Moisture Content % (AS1289.5.4.1)	14.3	9.5	19.5
Moisture Ratio % (AS1289.5.4.1)	82.0	66.5	97.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	3.0	5.0	0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	105.5	104.5	99.0
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P241725-15
Issue Number: 1
Date Issued: 17/03/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14709
Date Sampled: 07/03/2024
Dates Tested: 07/03/2024 - 08/03/2024
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 8- 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	P24-14709A	P24-14709B	P24-14709C
Test Number	41	42	43
Date Tested	07/03/2024	07/03/2024	07/03/2024
Time Tested	**	**	**
Test Request #/Location	Lot 805	Lot 801	Lot 838
Layer / Reduced Level	Layer 4	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	2.00	2.08	2.00
Field Moisture Content %	8.3	34.8	20.1
Field Dry Density (FDD) t/m ³	1.85	1.55	1.67
Peak Converted Wet Density t/m ³	2.07	2.07	2.05
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	12.6	34.2	19.3
Adj. Field Moisture Content % (AS1289.5.4.1)	8.3	34.8	20.1
Moisture Ratio % (AS1289.5.4.1)	66.0	101.5	104.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	4.5	-0.5	-1.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	96.5	101.0	97.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P241725-16
Issue Number: 1
Date Issued: 17/03/2024
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14719
Date Sampled: 08/03/2024
Dates Tested: 08/03/2024 - 13/03/2024
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 8- 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	P24-14719A	P24-14719B	P24-14719C	P24-14719D	P24-14719E	P24-14719F
Test Number	44	45	46	47	48	49
Date Tested	08/03/2024	08/03/2024	08/03/2024	08/03/2024	08/03/2024	08/03/2024
Time Tested	**	**	**	**	**	**
Test Request #/Location	Lot 803	Lot 806	Lot 808	Lot 837	Lot 836	Lot 835
Layer / Reduced Level	Layer 1	Layer 4	Layer 4	Layer 1	Layer 1	Layer 1
Thickness of Layer (mm)	300	300	300	300	300	300
Soil Description	CLAY	CLAY	CLAY	CLAY	CLAY	CLAY
Test Depth (mm)	275	275	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**	**	**	**
Field Wet Density (FWD) t/m ³	2.02	2.10	2.05	2.04	2.00	1.99
Field Moisture Content %	14.3	17.9	**	16.8	13.5	11.0
Field Dry Density (FDD) t/m ³	1.77	1.78	**	1.74	1.76	1.79
Peak Converted Wet Density t/m ³	1.93	2.11	2.08	1.98	1.94	2.08
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	14.3	17.9	**	16.8	13.5	11.0
Moisture Ratio % (AS1289.5.4.1)	84.5	115.0	**	95.5	80.5	88.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**	**
Moisture Variation (Wv) %	2.5	-2.5	-1.5	1.0	3.5	1.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	104.5	99.0	98.5	103.0	103.0	95.5
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: P241725-17
Issue Number: 1
Date Issued: 27/03/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14754
Date Sampled: 14/03/2024
Dates Tested: 14/03/2024 - 20/03/2024
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 8- 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	P24-14754A	P24-14754B	P24-14754C	P24-14754D	P24-14754E	P24-14754F
Test Number	50	51	52	53	54	55
Date Tested	14/03/2024	14/03/2024	14/03/2024	14/03/2024	14/03/2024	14/03/2024
Time Tested	**	**	**	**	**	**
Test Request #/Location	Lot 837	Lot 836	Lot 835	Lot 840	Lot 839	Lot 838
Layer / Reduced Level	Layer 2	Layer 2	Layer 2	Layer 2	Layer 2	Layer 2
Thickness of Layer (mm)	300	300	300	300	300	300
Soil Description	CLAY	CLAY	CLAY	CLAY	CLAY	CLAY
Test Depth (mm)	275	275	275	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0	0	**	0
Field Wet Density (FWD) t/m ³	2.05	2.00	1.93	2.01	2.03	2.05
Field Moisture Content %	15.3	14.0	28.5	20.4	23.1	20.0
Field Dry Density (FDD) t/m ³	1.78	1.76	1.50	1.67	1.65	1.71
Peak Converted Wet Density t/m ³	1.98	1.89	1.77	2.07	2.00	2.04
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	17.0	19.1	29.3	18.4	**	19.1
Adj. Field Moisture Content % (AS1289.5.4.1)	15.3	14.0	28.5	20.4	23.1	20.0
Moisture Ratio % (AS1289.5.4.1)	89.5	73.5	97.5	111.0	108.0	105.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**	**	**	**
Moisture Variation (Wv) %	1.5	5.0	1.0	-2.0	-1.5	-1.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	103.5	106.0	108.5	97.5	101.5	100.5
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: P241725-18
Issue Number: 1
Date Issued: 27/03/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14761
Date Sampled: 15/03/2024
Dates Tested: 15/03/2024 - 20/03/2024
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 8- 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	P24-14761A	P24-14761B	P24-14761C
Test Number	56	57	58
Date Tested	15/03/2024	15/03/2024	15/03/2024
Time Tested	**	**	**
Test Request #/Location	Lot 802	Lot 841	Lot 835
Layer / Reduced Level	Layer 2	Layer 2	Layer 3
Thickness of Layer (mm)	300	300	200
Soil Description	CLAY	CLAY	CLAY
Test Depth (mm)	275	275	175
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	2.10	2.02	2.02
Field Moisture Content %	18.1	23.4	11.1
Field Dry Density (FDD) t/m ³	1.78	1.64	1.82
Peak Converted Wet Density t/m ³	2.07	1.97	2.03
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	18.1	23.4	11.1
Moisture Ratio % (AS1289.5.4.1)	104.5	101.5	80.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	-0.5	-0.5	2.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	101.5	102.5	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: P241725-19
Issue Number: 1
Date Issued: 27/03/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14780
Date Sampled: 18/03/2024
Dates Tested: 18/03/2024 - 21/03/2024
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Location: Banyan Place Stage 8- 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	P24-14780A	P24-14780B	P24-14780C
Test Number	59	60	61
Date Tested	18/03/2024	18/03/2024	18/03/2024
Time Tested	**	**	**
Test Request #/Location	Lot 836	Lot 837	Lot 838
Layer / Reduced Level	Layer 3	Layer 3	Layer 3
Thickness of Layer (mm)	300	300	300
Soil Description	CLAY	CLAY	CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	**	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	2.00	1.97	2.05
Field Moisture Content %	14.5	12.9	17.5
Field Dry Density (FDD) t/m ³	1.74	1.75	1.74
Peak Converted Wet Density t/m ³	2.01	1.99	2.05
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	14.5	**	17.5
Moisture Ratio % (AS1289.5.4.1)	86.5	97.0	111.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	2.0	0.5	-2.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	99.0	99.0	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: P241725-20
Issue Number: 1
Date Issued: 27/03/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14791
Date Sampled: 19/03/2024
Dates Tested: 19/03/2024 - 22/03/2024
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 8- Level One
Material: CLAY
Material Source: Imported



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



Accredited for compliance with ISO/IEC 17025 - Testing

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

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P24-14791A	P24-14791B	P24-14791C
Test Number	62	63	64
Date Tested	19/03/2024	19/03/2024	19/03/2024
Time Tested	**	**	**
Test Request #/Location	Lot 801	Lot 841	Lot 839
Layer / Reduced Level	Layer 3	Layer 3	Layer 3
Thickness of Layer (mm)	300	300	300
Soil Description	CLAY	CLAY	CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	0	0
Field Wet Density (FWD) t/m ³	1.97	1.99	1.97
Field Moisture Content %	**	20.8	20.5
Field Dry Density (FDD) t/m ³	**	1.65	1.63
Peak Converted Wet Density t/m ³	1.93	1.95	1.91
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	22.1	22.0
Adj. Field Moisture Content % (AS1289.5.4.1)	**	20.8	20.5
Moisture Ratio % (AS1289.5.4.1)	**	94.0	93.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	1.5	1.5	1.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	102.0	102.0	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: P241725-21
Issue Number: 1
Date Issued: 07/04/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14828
Date Sampled: 22/03/2024
Dates Tested: 22/03/2024 - 02/04/2024
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 8- Level One
Material: CLAY
Material Source: Imported



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Phone: (03) 9769 5799
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Accredited for compliance with ISO/IEC 17025 - Testing

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

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P24-14828A	P24-14828B	P24-14828C
Test Number	65	66	67
Date Tested	22/03/2024	22/03/2024	22/03/2024
Time Tested	**	**	**
Test Request #/Location	Lot 803	Lot 802	Lot 802
Layer / Reduced Level	Layer 3	Layer 3	Layer 3
Thickness of Layer (mm)	300	300	300
Soil Description	CLAY	CLAY	CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	**	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	**	**
Field Wet Density (FWD) t/m ³	1.97	1.98	2.01
Field Moisture Content %	15.9	9.0	11.4
Field Dry Density (FDD) t/m ³	1.70	1.82	1.81
Peak Converted Wet Density t/m ³	1.94	2.04	2.02
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	18.7	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	15.9	**	11.4
Moisture Ratio % (AS1289.5.4.1)	85.0	74.0	72.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	3.0	3.0	4.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	102.0	97.0	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: P241725-22
Issue Number: 1
Date Issued: 31/03/2024
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14847
Date Sampled: 25/03/2024
Dates Tested: 25/03/2024 - 28/03/2024
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 Stage 8 - Level One
Material: Clay



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

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P24-14847A	P24-14847B	P24-14847C
Test Number	68	69	70
Date Tested	25/03/2024	25/03/2024	25/03/2024
Time Tested	**	**	**
Test Request #/Location	Lot 436	Lot 438	Lot 440
Layer / Reduced Level	Layer 4	Layer 4	Layer 4
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	6
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	2.01	1.93	1.92
Field Moisture Content %	16.7	17.6	17.3
Field Dry Density (FDD) t/m ³	1.72	1.64	1.65
Peak Converted Wet Density t/m ³	1.97	2.03	**
Adjusted Peak Converted Wet Density t/m ³	**	**	1.96
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	19.1
Adj. Field Moisture Content % (AS1289.5.4.1)	16.7	17.6	16.3
Moisture Ratio % (AS1289.5.4.1)	89.5	101.0	**
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	85.5
Moisture Variation (Wv) %	2.0	0.0	**
Adjusted Moisture Variation %	**	**	2.5
Hilf Density Ratio (%)	102.0	95.5	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: P241725-23
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 20/06/2024
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14856
Date Sampled: 26/03/2024
Dates Tested: 26/03/2024 - 03/04/2024
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 8- Level One
Material: CLAY
Material Source: Imported



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

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P24-14856A	P24-14856B	P24-14856C
Test Number	71	72	73
Date Tested	26/03/2024	26/03/2024	26/03/2024
Time Tested	**	**	**
Test Request #/Location	Lot 838	Lot 839	Lot 841
Layer / Reduced Level	Layer 5	Layer 5	Layer 5
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	1.92	2.02	1.91
Field Moisture Content %	18.6	19.9	11.4
Field Dry Density (FDD) t/m ³	1.62	1.68	1.72
Peak Converted Wet Density t/m ³	1.95	1.97	1.99
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	18.6	19.9	11.4
Moisture Ratio % (AS1289.5.4.1)	94.5	95.0	71.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	1.0	1.0	4.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	98.0	102.5	96.0
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: P241725-24
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason:
Date Issued: 20/06/2024
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 14865
Date Sampled: 27/03/2024
Dates Tested: 27/03/2024 - 28/03/2024
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 8- Level One
Material: CLAY
Material Source: Imported



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 Laboratory Manager
 NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P24-14865A	P24-14865B	P24-14865C
Test Number	74	75	76
Date Tested	27/03/2024	27/03/2024	27/03/2024
Time Tested	**	**	**
Test Request #/Location	Lot 801	Lot 801	Lot 803
Layer / Reduced Level	Layer 5	Layer 5	Layer 5
Thickness of Layer (mm)	300	300	200
Soil Description	CLAY	CLAY	CLAY
Test Depth (mm)	275	275	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	7	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	**
Field Wet Density (FWD) t/m ³	2.09	1.86	1.94
Field Moisture Content %	16.2	15.3	14.8
Field Dry Density (FDD) t/m ³	1.82	1.61	1.69
Peak Converted Wet Density t/m ³	**	1.95	2.04
Adjusted Peak Converted Wet Density t/m ³	2.11	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	17.6	**	**
Adj. Field Moisture Content % (AS1289.5.4.1)	15.1	15.3	14.8
Moisture Ratio % (AS1289.5.4.1)	**	86.0	89.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	86.0	**	**
Moisture Variation (Wv) %	**	2.5	2.0
Adjusted Moisture Variation %	2.5	**	**
Hilf Density Ratio (%)	99.0	95.5	95.5
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: P241725-25
Issue Number: 1
Date Issued: 20/05/2024
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241725
Project Name: Banyan Estate Stage 8 Level One
Project Location: Officer
Work Request: 15094
Date Sampled: 06/05/2024
Dates Tested: 06/05/2024 - 10/05/2024
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 Stage 8 - Level one
Material: Clay



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Accredited for compliance with ISO/IEC 17025 - Testing

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

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P24-15094A	P24-15094B	
Test Number	77	78	
Date Tested	06/05/2024	06/05/2024	
Time Tested	**	**	
Test Request #/Location	Lot 802	Lot 803	
Layer / Reduced Level	Final Layer	Final Layer	
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	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	
Field Wet Density (FWD) t/m ³	2.14	2.08	
Field Moisture Content %	11.8	15.3	
Field Dry Density (FDD) t/m ³	1.91	1.80	
Peak Converted Wet Density t/m ³	2.07	2.05	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	14.2	16.3	
Adj. Field Moisture Content % (AS1289.5.4.1)	11.8	15.3	
Moisture Ratio % (AS1289.5.4.1)	83.0	94.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	2.5	1.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	103.0	101.0	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

Moisture Variation Note:

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

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 801

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 801 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P241725A) has been published on 20 Jun 2024 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
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 802

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 802 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P241725A) has been published on 20 Jun 2024 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
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 803

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 803 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P241725A) has been published on 20 Jun 2024 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
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 804

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 804 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P241725A) has been published on 20 Jun 2024 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
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 805

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 805 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P241725A) has been published on 20 Jun 2024 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
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 806

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 806 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P241725A) has been published on 20 Jun 2024 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
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 807

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 807 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P241725A) has been published on 20 Jun 2024 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
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 808

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 808 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 809

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 809 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 810

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 810 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 811

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 811 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 812

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 812 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 813

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 813 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 814

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 814 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 815

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 815 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 816

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 816 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 817

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 817 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 818

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 818 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
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- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 819

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 819 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
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- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 820

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 820 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
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- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 821

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 821 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 822

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 822 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 823

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 823 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 824

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 824 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 825

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 825 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P241725A) has been published on 20 Jun 2024 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
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 826

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 826 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 827

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 827 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 828

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 828 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 829

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 829 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 830

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 830 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 831

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 831 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 832

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 832 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 833

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 833 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 834

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 834 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 835

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 835 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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A GITA Inspection Verification report (Reference: P241725A) has been published on 20 Jun 2024 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
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 836

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 836 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

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For and on behalf of

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 837

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 837 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 838

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 838 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

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

Terra Firma Laboratories



C Caulfield
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 839

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 839 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P241725A) has been published on 20 Jun 2024 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
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 840

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 840 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
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A GITA Inspection Verification report (Reference: P241725A) has been published on 20 Jun 2024 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
Laboratory Manager

20 Jun 2024

TO WHOM IT MAY CONCERN

Re: Banyan Place Stage 8
Officer
Lot 841

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, Stage 8, Officer in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 841 as defined in drawing Ref 1470-8/R04 and R05 from *Charlton Degg*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
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A GITA Inspection Verification report (Reference: P241725A) has been published on 20 Jun 2024 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
Laboratory Manager

Banyan Place Stage 8 Dam

GITA Inspection Verification Report

Prepared For:	Lojac Civil Pty Ltd
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Report Number	P241784A V1
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Version Release Date	17 Jun 2024
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Report Released By	C Caulfield
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Title	Laboratory Manager
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Signature



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Appendices

Appendix 1	Test Location Plan
Appendix 2	Compaction Test Register and Test Certificates

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 Stage 8 Dam. This work was conducted over the period of 23/02/2024 to 14/03/2024.

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 the Dam north of lots 801 and 802, bounded by Horvath Boulevard. The site will be a Residential development.

The area on which fill was placed is shown on site plan (Appendix 1: *Test Location Plan*) based on drawings prepared by Charlton Degg (Drawing Reference: 1470-8/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 1500m²), the minimum testing frequency is 1 test per layer per material type per 2500m² or 1 test per 500m³ distributed reasonable evenly throughout full depth and area or 3 tests per lot. AS3798 defines a lot as “an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work”. All three of these test frequencies must be achieved and this is typically confirmed to have been achieved when 3 tests per visit (day) have been completed.

2.3 Limitations

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

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

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

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

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

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3 Construction Method

3.1 Subgrade Preparation

At the time of subgrade inspection the following was observed:

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

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

3.2 Fill Placement

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

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

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

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

4 Construction Verification

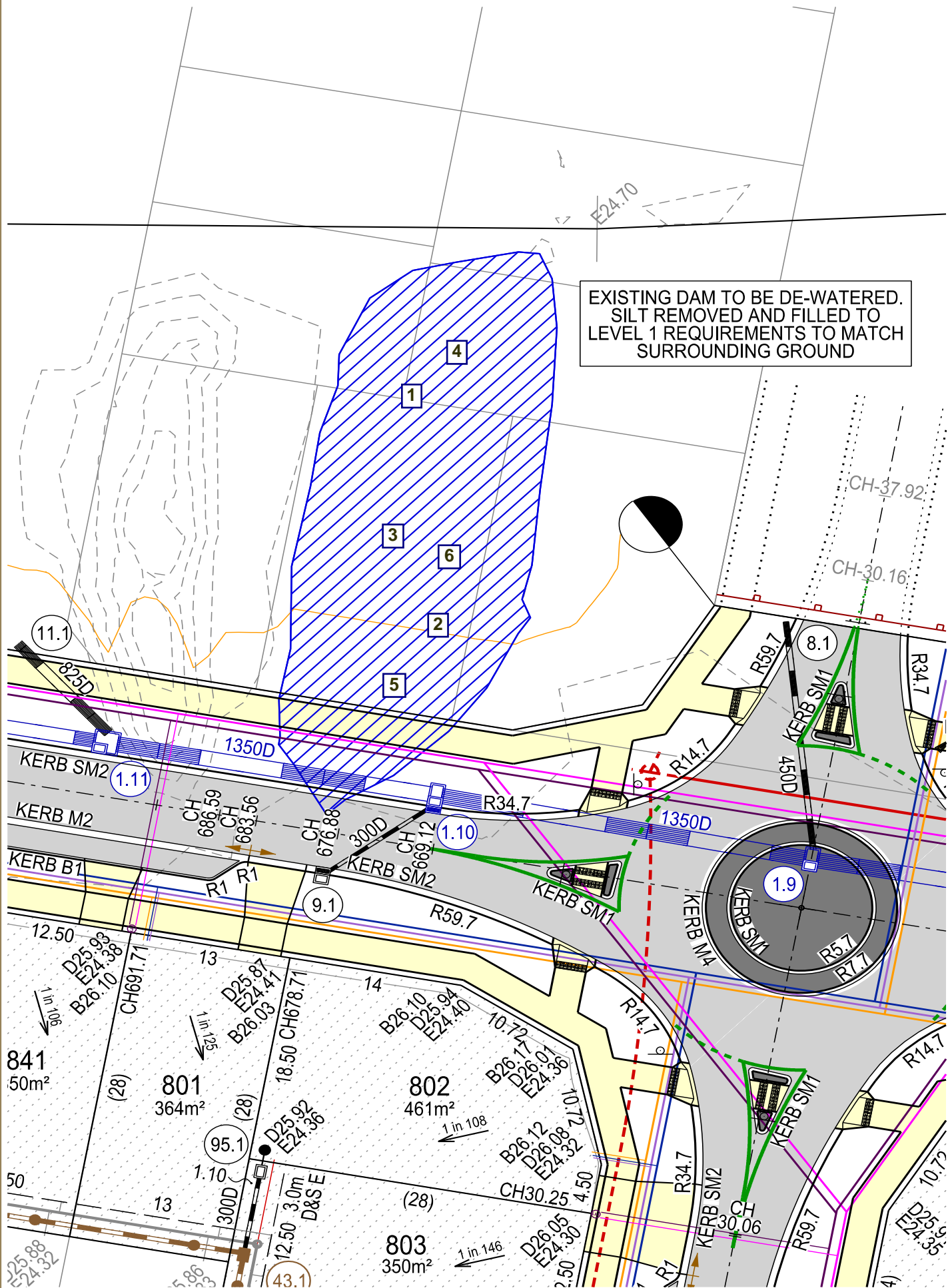
Compaction Verification testing is summarized in a detailed test register with test certificates attached provided in Appendix 2: *Compaction Test Register and Test Certificates*. A test location plan (P241784D1, Appendix 1) providing a schematic of test locations across the extent of scope of works for every placed layer of fill is also documented.

A total of 6 density tests (Hilf method in accordance with 1289 5.7.1) were undertaken with 1 failed results. The contractor was notified of any failed tests and the failed areas were ripped, watered, compacted and then re-tested to confirm compliance with the specification. The results summarised in the compaction test register (Appendix 2) confirm that for every layer of fill placed in a specific work area, satisfactory testing was completed.

5 Statement of Compliance

The intention of this report is to provide a description of the earthworks construction for Stage 8 Dam at Banyan Place. For completed fill areas of greater than 300mm, and for works completed between 23/02/2024 and 14/03/2024, 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 8 Dam of Banyan Place was observed to be constructed in compliance with the requirements of the Technical Specification.

Appendix 1: Test Location Plan



EXISTING DAM TO BE DE-WATERED.
SILT REMOVED AND FILLED TO
LEVEL 1 REQUIREMENTS TO MATCH
SURROUNDING GROUND

Appendix 2: Compaction Test Register and Test Certificates



Compaction Test Register

Client: Lojac Civil Pty Ltd **Project No:** P241784
Project: Banyan Place Stage 8 Dam **Specification:** 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
23/02/2024	1	Layer 1		95.5%	Pass	Dam	P241784-1
23/02/2024	2	Layer 2		104.0%	Pass	Dam	P241784-1
26/02/2024	3	Layer 3		89.0%	Fail	Dam	P241784-2
27/02/2024	4	Layer4		99.0%	Pass	Dam	P241784-3
27/02/2024	5	Layer 5		99.5%	Pass	Dam	P241784-3
14/03/2024	6	Layer 3	Test #3	103.5%	Pass	Dam	P241784-4

Material Test Report

Report Number: P241784-1
Issue Number: 1
Date Issued: 11/03/2024
Client: Lojac Civil Pty Ltd
 35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241784
Project Name: Banyan Place Stage 8 Dam Backfill
Project Location: Officer
Work Request: 14596
Date Sampled: 23/02/2024
Dates Tested: 26/02/2024 - 26/02/2024
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 8 Dam
Material: Silty Clay
Material Source: Onsite



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Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Chris Caulfield
 Laboratory Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P24-14596A	P24-14596B	
Test Number	1	2	
Date Tested	23/02/2024	23/02/2024	
Time Tested	**	**	
Test Request #/Location	Dam	Dam	
Easting	361802	361798	
Northing	5784144	5784153	
Layer / Reduced Level	Layer 1	Layer 2	
Thickness of Layer (mm)	300	300	
Soil Description	Silty Clay	Silty Clay	
Test Depth (mm)	275	275	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	2	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	**	
Field Wet Density (FWD) t/m ³	1.99	2.16	
Field Moisture Content %	18.6	17.8	
Field Dry Density (FDD) t/m ³	1.68	1.84	
Peak Converted Wet Density t/m ³	2.09	**	
Adjusted Peak Converted Wet Density t/m ³	**	2.08	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	16.9	18.1	
Adj. Field Moisture Content % (AS1289.5.4.1)	18.6	17.4	
Moisture Ratio % (AS1289.5.4.1)	110.0	**	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	96.5	
Moisture Variation (Wv) %	-1.5	**	
Adjusted Moisture Variation %	**	0.5	
Hilf Density Ratio (%)	95.5	104.0	
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: P241784-2
Issue Number: 1
Date Issued: 11/03/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241784
Project Name: Banyan Place Stage 8 Dam Backfill
Project Location: Officer
Work Request: 14598
Date Sampled: 26/02/2024
Dates Tested: 26/02/2024 - 29/02/2024
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Estate Stage 8 Dam Backfill - Level One
Material: Clay
Material Source: Onsite



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Laboratory Manager
NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P24-14598A		
Test Number	3		
Date Tested	26/02/2024		
Time Tested	**		
Test Request #/Location	Stage 8 Dam		
Easting	361797		
Northing	5784153		
Layer / Reduced Level	Layer 3		
Thickness of Layer (mm)	300		
Soil Description	Clay		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0		
Field Wet Density (FWD) t/m ³	1.84		
Field Moisture Content %	18.3		
Field Dry Density (FDD) t/m ³	1.56		
Peak Converted Wet Density t/m ³	2.07		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	17.6		
Adj. Field Moisture Content % (AS1289.5.4.1)	18.3		
Moisture Ratio % (AS1289.5.4.1)	103.5		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	-0.5		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	89.0		
Compaction Method	Standard		
Report Remarks	**		

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P241784-3
Issue Number: 1
Date Issued: 11/03/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241784
Project Name: Banyan Place Stage 8 Dam Backfill
Project Location: Officer
Work Request: 14610
Date Sampled: 27/02/2024
Dates Tested: 27/02/2024 - 28/02/2024
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 8- Level One
Material: CLAY
Material Source: Imported



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Laboratory Manager
NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P24-14610A	P24-14610B	
Test Number	4	5	
Date Tested	27/02/2024	27/02/2024	
Time Tested	14:54	15:05	
Test Request #/Location	Stage 8 dam	Stage 8 dam	
Easting	361801	361796	
Northing	5784156	5784137	
Layer / Reduced Level	Layer4	Layer 5	
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	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	
Field Wet Density (FWD) t/m ³	2.06	2.07	
Field Moisture Content %	20.3	14.2	
Field Dry Density (FDD) t/m ³	1.71	1.81	
Peak Converted Wet Density t/m ³	2.07	2.08	
Adjusted Peak Converted Wet Density t/m ³	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	
Adj. Field Moisture Content % (AS1289.5.4.1)	20.3	14.2	
Moisture Ratio % (AS1289.5.4.1)	97.5	97.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	0.5	0.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	99.0	99.5	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: P241784-4
Issue Number: 1
Date Issued: 17/03/2024
Client: Lojac Civil Pty Ltd
35/148 Chesterville Road, Moorabbin Vic 3189
Project Number: P241784
Project Name: Banyan Place Stage 8 Dam Backfill
Project Location: Officer
Work Request: 14752
Date Sampled: 14/03/2024
Dates Tested: 14/03/2024 - 15/03/2024
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Site Selection: Selected by Client
Location: Banyan Estate Stage 8 Dam Backfill
Material: CLAY
Material Source: Imported



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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P24-14752A		
Test Number	6		
Date Tested	14/03/2024		
Time Tested	**		
Test Request #/Location	Stage 8 dam - retest 3		
Easting	361799		
Northing	5784159		
Layer / Reduced Level	3rd layer		
Thickness of Layer (mm)	300		
Soil Description	CLAY		
Test Depth (mm)	275		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0		
Field Wet Density (FWD) t/m ³	2.08		
Field Moisture Content %	18.3		
Field Dry Density (FDD) t/m ³	1.76		
Peak Converted Wet Density t/m ³	2.01		
Adjusted Peak Converted Wet Density t/m ³	**		
Adj. Optimum Moisture Content % (AS1289.5.4.1)	19.2		
Adj. Field Moisture Content % (AS1289.5.4.1)	18.3		
Moisture Ratio % (AS1289.5.4.1)	95.0		
Adjusted Moisture Ratio % (AS1289.5.4.1)	**		
Moisture Variation (Wv) %	1.0		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	103.5		
Compaction Method	Standard		
Report Remarks	**		

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC