

3 June 2026

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Stratum Civil

C/- Construction Sciences
Toowoomba

Attention: Mark Hickson

Dear Sir

**RE: WORKS INSPECTION & TESTING – BULK EARTHWORKS
(LEVEL 1 REPORT)
PARKLAKE ADARE, STAGES 6 & 7**

As requested by Construction Sciences, CMW has reviewed all the field testing results and the attached Level 1 report provided by Construction Sciences.

Based on our review of the attached Level 1 report and the field work results, it is considered that the attached Level 1 report for the above site is certified by an RPEQ from CMW.

For and on behalf of CMW Geosciences

Prepared by:



David Stirling
Principal Geotechnical Engineer RPEQ 8820

Distribution: 1 electronic copy to Construction Sciences via email
Original held at CMW Geosciences

Attachments: Construction Sciences' Level 1 report



Level One Report

PARKLAKE ADARE STAGES 6 AND 7

Prepared for Stratum Civil
25/05/2026





Document Information	
Prepared for	Stratum Civil
Report Name	Parklake Adare, Stages 6 and 7
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Mark Hickson
Laboratory Manager
Effective date: 15/05/2026

David Stirling
Principal Geotechnical Engineer RPEQ 8820
Date approved: 3/06/2026

DOCUMENT HISTORY

Version	Effective Date	Revision	Author	Reviewer	Recipient
00	03/06/2026	01	Mark Hickson	David Stirling	Brendan Nucifora

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1. Introduction

Construction Sciences Pty Ltd was commissioned by Stratum Civil as the Geotechnical Inspection and Testing Authority (GITA) to provide Level 1 inspection and testing services for the placement of fill for the following project:

PROJECT: Parklake Adare, Stages 6 and 7

ADDRESS: Adare Road

The earthworks were carried out from 15/08/2025 to 8/04/2026.

The proposed development comprises of 46 residential lots, sewer and stormwater lines.

PROPOSED SUBDIVISION PARKLAKE, ADARE - STAGES 6 AND 7 174 ADARE ROAD, ADARE, QLD 4343

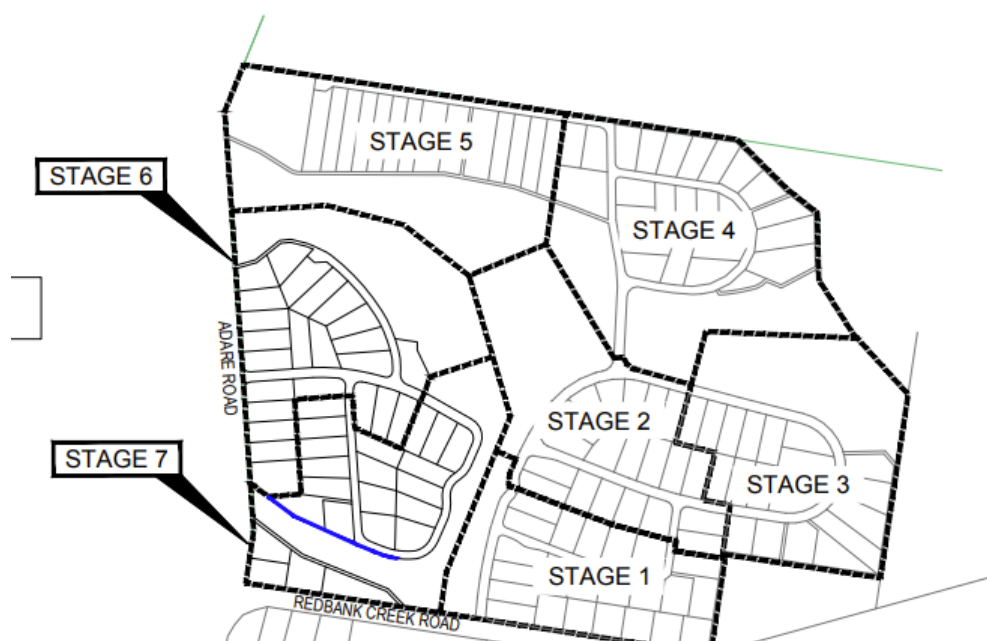


Figure 1: Plan overview

2. Specification Requirements

Filling was carried out in accordance with AS3798-2007 'Guidelines on earthworks for commercial and residential developments' and with the project specification prepared for the project.

The specification requirements were that all fill was to be placed and compacted in layers to a density ratio of not less than 95% of the Rapid Reference density as determined by AS1289.5.7.1 (standard compaction).

3. Inspection and Testing

3.1 Surface and Ground Preparation

Construction Sciences were present for the site stripping which included removal of topsoil, vegetation, and any other deleterious materials. After stripping, lots 75, 76, 77, 80 and 81 were proof rolled prior to fill placement using a fully loaded water cart. Any areas with movement were excavated and re-worked prior to fill being placed.

No significant (<5mm) deflection was observed, and the foundation was considered appropriately prepared to receive fill placement.

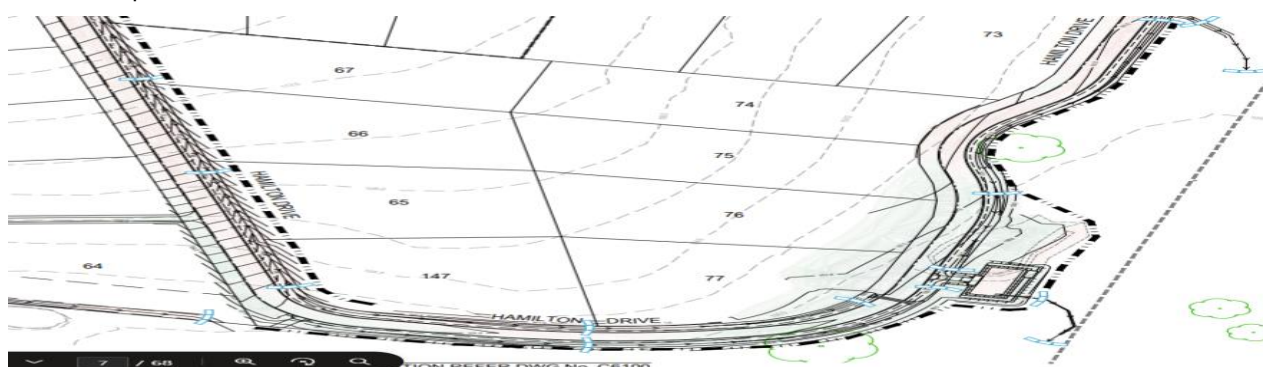


Figure 3: Lot 75, 76 and 77 fill areas

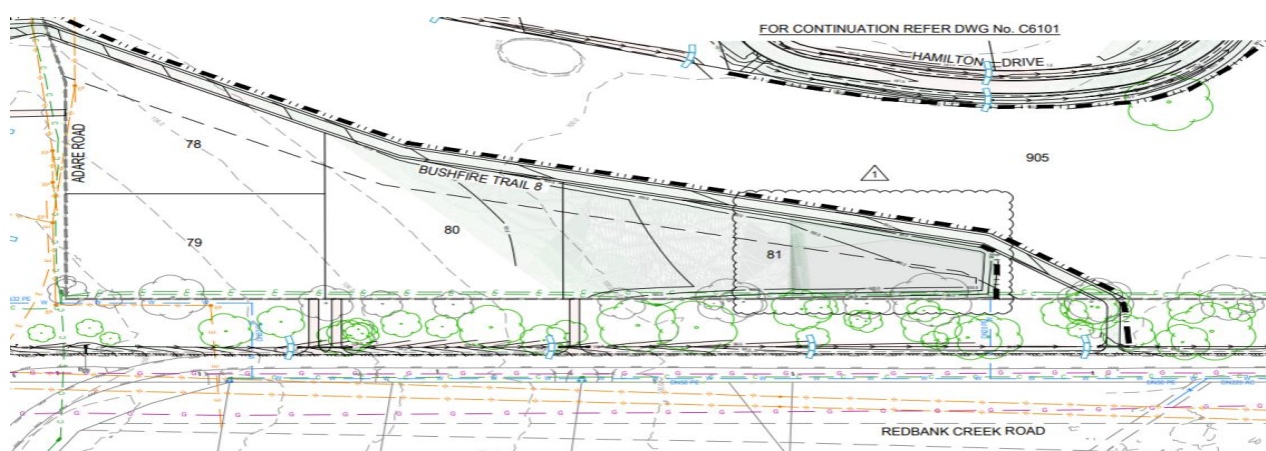


Figure 4: Lot 80 and 81 fill areas



3.2 Earthworks Materials

The fill materials used on this project were nominated by the on-site contractor. All fill was sourced from onsite cut.

Construction Sciences performed an assessment of the fill source to identify the following material characteristics:

- Material suitability as an engineering property.
- Free of building debris, deleterious material and vegetative matter.
- Free of oversize rock particles.

Visual assessments on the above-mentioned properties were conducted on-site and the fill materials used were considered acceptable for use on this project.

The nominated fill products were visually assessed to comprise of Silty Sand.

3.2.1 Material Placement

Fill material was placed in approximately 300mm loose layers and compacted using a Pad Foot Compactor. Materials were placed within +/-2% of Optimum Moisture Content (OMC).

Any material that was found to be out of the moisture specification prior to placement was conditioned to within +/- 2% of Optimum Moisture Content (OMC).

The test results are included in Appendix A. A summary of the moisture content results is included in Table 1. Non-conforming results identified in Table 1 were raised with the client.

Table 1

Date	Test No.	Test Location	Moisture Variation (%)
01/09/2025	25-6590	E: 429534.66 N: 6954158.70	-0.5
01/09/2025	25-6591	E: 429547.92 N: 6954152.01	3.0
01/09/2025	25-6592	E: 429546.77 N: 6954161.21	-0.5
04/09/2025	25-6740	E: 430215 N: 6953783	0.0
04/09/2025	25-6741	E: 430117 N: 6954197	0.0
04/09/2025	25-6742	E: 429960 N: 6954258	-1.0
04/09/2025	25-6743	E: 430064 N: 6954197	-0.5
19/09/2025	25-7119	Lot 76 33m North, 18m from Road	1.0
19/09/2025	25-7120	Lot 76 64m North, 22m from Road	1.5
19/09/2025	25-7121	Lot 76 81m North, 18m from Road	2.0



19/09/2025	25-7122	Lot 76 99m North, 17m from Road	4.5
30/09/2025	25-7304	E: 429544 N: 6954130	5.0
30/09/2025	25-7305	E: 429553 N: 6954137	4.5
30/09/2025	25-7306	E: 429778 N: 6954231	5.0
30/09/2025	25-7307	E: 429792 N: 6954258	4.5
22/10/2025	25-8251	E: 429679 N: 6954094	0.0
22/10/2025	25-8252	E: 429664 N: 6954105	0.0
05/03/2026	26-1936	E: 429597.3 N: 6954113.9	2.0
05/03/2026	26-1937	E: 429620.2 N: 6954107.9	2.0
07/04/2026	26-3005	E: 429611.3 N: 6954108.13	2.0
07/04/2026	26-3006	E: 429582.3 N: 6954123.63	2.0
07/04/2026	26-3007	E: 429618.2 N: 6954110.21	2.0
07/04/2026	26-3008	E: 429626.3 N: 6954118.2	2.5





3.3 Field and Laboratory Testing

Compaction control tests were carried out at regular intervals throughout the placement of fill in accordance with the minimum test frequency recommendations included in AS3798-2007 '*Guidelines on earthworks for commercial and residential developments*', table 8.1.

The type of earthworks is Type 1 - Large scale operation, therefore, the frequency of testing was 1 test per 500m³ distributed evenly throughout full depth and area as per AS 3798 – Table 8.1.

Based on the layout plans provided by the client, a fill volume of approximately 12,667 m³ was used on this project.

A total of 23 field density tests were carried out throughout the earthworks. The average density ratio was 99.3% with a standard deviation of 1.9%.

The test results are included in Appendix A. A summary of the test results is included in Table 2 and approximate test locations are indicated approximately on a Site Plan in Appendix B.

Table 2 Summary of Results

Date	Test No.	Test Location	Density Ratio (%)	Retest details, if applicable.
01/09/2025	25-6590	E: 429534.66 N: 6954158.70	95.5	
01/09/2025	25-6591	E: 429547.92 N: 6954152.01	97.0	
01/09/2025	25-6592	E: 429546.77 N: 6954161.21	95.0	



04/09/2025	25-6740	E: 430215 N: 6953783	101.5	
04/09/2025	25-6741	E: 430117 N: 6954197	100.5	
04/09/2025	25-6742	E: 429960 N: 6954258	97.5	
04/09/2025	25-6743	E: 430064 N: 6954197	98.5	
19/09/2025	25-7119	Lot 76 33m North, 18m from Road	98.5	
19/09/2025	25-7120	Lot 76 64m North, 22m from Road	98.5	
19/09/2025	25-7121	Lot 76 81m North, 18m from Road	101.0	
19/09/2025	25-7122	Lot 76 99m North, 17m from Road	103.0	
30/09/2025	25-7304	E: 429544 N: 6954130	98.5	
30/09/2025	25-7305	E: 429553 N: 6954137	100.0	
30/09/2025	25-7306	E: 429778 N: 6954231	98.5	
30/09/2025	25-7307	E: 429792 N: 6954258	99.5	
22/10/2025	25-8251	E: 429679 N: 6954094	99.0	
22/10/2025	25-8252	E: 429664 N: 6954105	99.5	
05/03/2026	26-1936	E: 429597.3 N: 6954113.9	102.0	
05/03/2026	26-1937	E: 429620.2 N: 6954107.9	100.5	
07/04/2026	26-3005	E: 429611.3 N: 6954108.13	99.0	
07/04/2026	26-3006	E: 429582.3 N: 6954123.63	101.5	
07/04/2026	26-3007	E: 429618.2 N: 6954110.21	100.5	
07/04/2026	26-3008	E: 429626.3 N: 6954118.2	99.5	





4. Conclusion

It is considered that the placement of fill at Parklake Adare stages 6 and 7 between 15/08/2025 to 08/04/2026 under the Level 1 supervision of Construction Sciences was carried out in a controlled manner and has met the project compaction and placement moisture content requirements.

It is concluded that the fill may be deemed to be 'controlled fill' in accordance with AS2870 – 2011 'Residential Slabs & Footings' and the Level 1 requirements of AS3798-2007.

For and on behalf of Construction Sciences. Yours faithfully

Mark Hickson
Laboratory Manager
For Construction Sciences



5. Important Information About This Level One Report

Scope of Works

This report has been prepared in accordance with the requirements of AS 3798 and is limited to the scope of investigation, inspection and testing services commissioned by the client.

Site Conditions

Subsurface conditions may vary significantly between test locations. Boreholes, test pits, density tests and observations represent only the specific locations tested and the conditions encountered at those locations. No warranty is given that the conditions observed are representative of conditions across the entire site.

Reliance of Provided Information

Information provided by the client, designers, contractors, surveyors or other third parties has been assumed to be correct unless stated otherwise. Construction Sciences accepts no responsibility for errors or omissions in data supplied by others.

Construction Variations

Earthworks and construction activities undertaken after inspections may alter conditions on site. Construction Sciences responsibility is limited to the periods during which inspections or tests were conducted. Unobserved works or changes to earthworks procedures beyond the frequency of inspection required by AS 3798 may affect compliance.

Use of Report

This report is intended for the exclusive use of the client for the specific project and purpose stated herein. It should not be relied upon by other parties or for other projects without written approval from Construction Sciences. Misinterpretation of this report or use beyond its stated scope is the responsibility of the user.

Regulatory and design Requirements

Construction Sciences role under AS 3798 is limited to inspection and testing for compliance with the specified earthworks standards. Construction Sciences is not responsible for structural design, drainage design, environmental assessments, or regulatory approvals unless explicitly included in the scope.

Unforeseen Conditions

Natural ground conditions, groundwater levels, or buried obstructions may differ from those encountered during the investigations. Should previously unknown conditions be identified during construction, additional geotechnical assessment may be required.

Changes After Issue

This report is based on site conditions, earthworks specifications and project documentation available at the time of preparation. Any changes to design, site use, or earthworks methodology may render elements of this report invalid.

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Appendix A

Test Results

WET DENSITY RATIO REPORT

Client:	Stratum Civil	Report Number:	22454/R/25-3040-3
Client Address:	14/2 Link Drive, Yatala	Project Number:	22454/P/25-19
Project:	Parklake Adare, Stages 6 and 7	Lot Number:	
Location:	Toowoomba	Internal Test Request:	22454/T/25-1273
Supplied To:	Tim Cowling	Client Reference/s:	Level One Fill
Area Description:		Report Date / Page:	9/03/2026 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.1.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	22454/S/25-6590	22454/S/25-6591	22454/S/25-6592	
ID / Client ID	-	-	-	
Lot Number	-	-	-	
Date / Time Tested	1/09/2025 09:45	1/09/2025 09:52	1/09/2025 09:57	
Material Source	On Site	On Site	On Site	
Material Type	Fill	Fill	Fill	
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	
Depths: Test / Nom / Actual (mm)	225 / - / -	225 / - / -	225 / - / -	
Standard or Modified	Standard	Standard	Standard	
Easting	429534.66	429547.92	429546.77	
Northing	6954158.70	6954152.01	6954161.21	
Elevation				
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	
Sample Oversize (%)	0	0	0	
Compaction Sample Number	22454/S/25-6590	22454/S/25-6591	22454/S/25-6592	
Sample Description	Sand	Sand	Sand	
Moisture Test Results:				
Field Moisture Content (%)	9.2	9.8	8.9	
Adjusted / Moist. Variation (%)	-0.5	3.0	-0.5	
Optimum Moisture Content (%)	8.5	12.5	8.5	
Moisture Variation from OMC	(Wetter than OMC)	(Drier than OMC)	(Wetter than OMC)	
Moisture Ratio (%)	108.5	79.0	105.5	
Density Test Results:				
Field Wet Density (t/m³)	1.97	2.03	1.94	
Field Dry Density (t/m³)	1.80	1.85	1.78	
Adj/Peak Conv Wet Density (t/m³)	2.06	2.09	2.04	
Density Ratio Required (%)	97	97	97	
Half Density Ratio (%)	95.5	97.0	95.0	

(Moisture Ratio = (100 x Field Moisture Content) / Optimum Moisture Content. Moisture Ratio calculation not covered by NATA endorsement)

Remarks	Re-Issued Report Replaces Report No 22454/R/25-3040-2 (reason: Included Area Description. Client informed of required Compaction change).
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	Corporate Site Number:	22454	
	Approved Signatory: Mark Hickson		
	Form ID: W5ASMRRep Rev 2		

WET DENSITY RATIO REPORT

Client:	Stratum Civil	Report Number:	22454/R/25-3415-2
Client Address:	14/2 Link Drive, Yatala	Project Number:	22454/P/25-19
Project:	Parklake Adare, Stages 6 and 7	Lot Number:	
Location:	Toowoomba	Internal Test Request:	22454/T/25-1421
Supplied To:	Tim Cowling	Client Reference/s:	Level One Fill 30/09/25 WR: 02555
Area Description:		Report Date / Page:	9/03/2026 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.1.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	22454/S/25-7306	22454/S/25-7307		
ID / Client ID	-	-		
Lot Number	-	-		
Date / Time Tested	30/09/2025 09:00	30/09/2025 09:05		
Material Source	On Site	On Site		
Material Type	Fill	Fill		
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b		
Depths: Test / Nom / Actual (mm)	200 / / 200	200 / / 200		
Standard or Modified	Standard	Standard		
Easting	E: 429778	E: 429792		
Northing	N: 6954231	N: 6954258		
Elevation				
Test Fraction (mm)	< 19.0 mm	< 19.0 mm		
Sample Oversize (%)	0	0		
Compaction Sample Number	22454/S/25-7306	22454/S/25-7307		
Sample Description	Sandy Clay Brown	Sandy Clay Brown		
Moisture Test Results:				
Field Moisture Content (%)	9.4	9.1		
Adjusted / Moist. Variation (%)	5.0	4.5		
Optimum Moisture Content (%)	14.0	13.5		
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)		
Moisture Ratio (%)	66.5	66.0		
Density Test Results:				
Field Wet Density (t/m³)	1.93	1.92		
Field Dry Density (t/m³)	1.76	1.76		
Adj/Peak Conv Wet Density (t/m³)	1.96	1.93		
Density Ratio Required (%)	97	97		
Hilf Density Ratio (%)	98.5	99.5		

(Moisture Ratio = (100 x Field Moisture Content) / Optimum Moisture Content. Moisture Ratio calculation not covered by NATA endorsement)

Remarks	Re-Issued Report Replaces Report No 22454/R/25-3415-1 (reason: Client informed of required Compaction change).
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WET DENSITY RATIO REPORT

Client:	Stratum Civil	Report Number:	22454/R/25-3416-2
Client Address:	14/2 Link Drive, Yatala	Project Number:	22454/P/25-19
Project:	Parklake Adare, Stages 6 and 7	Lot Number:	
Location:	Toowoomba	Internal Test Request:	22454/T/25-1420
Supplied To:	Tim Cowling	Client Reference/s:	Level One 30/09/2025 WR: 02555
Area Description:		Report Date / Page:	9/03/2026 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.1.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	22454/S/25-7304	22454/S/25-7305		
ID / Client ID	-	-		
Lot Number	-	-		
Date / Time Tested	30/09/2025 09:15	30/09/2025 09:20		
Material Source	On Site	On Site		
Material Type	Fill	Fill		
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b		
Depths: Test / Nom / Actual (mm)	200 / / 200	200 / / 200		
Standard or Modified	Standard	Standard		
Easting	E: 429544	E: 429553		
Northing	N: 6954130	N: 6954137		
Elevation				
Test Fraction (mm)	< 19.0 mm	< 19.0 mm		
Sample Oversize (%)	0	0		
Compaction Sample Number	22454/S/25-7304	22454/S/25-7305		
Sample Description	Sandy Clay Brown	Sandy Clay Brown		
Moisture Test Results:				
Field Moisture Content (%)	5.3	8.5		
Adjusted / Moist. Variation (%)	4.5	5.0		
Optimum Moisture Content (%)	9.5	13.5		
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)		
Moisture Ratio (%)	56.0	64.0		
Density Test Results:				
Field Wet Density (t/m³)	1.94	1.98		
Field Dry Density (t/m³)	1.84	1.82		
Adj/Peak Conv Wet Density (t/m³)	1.97	1.98		
Density Ratio Required (%)	97	97		
Hilf Density Ratio (%)	98.5	100.0		

(Moisture Ratio = (100 x Field Moisture Content) / Optimum Moisture Content. Moisture Ratio calculation not covered by NATA endorsement)

Remarks	Re-Issued Report Replaces Report No 22454/R/25-3416-1 (reason: Client informed of required Compaction change).
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	Approved Signatory: Mark Hickson		
	Form ID: W5ASMRRep Rev 2		

WET DENSITY RATIO REPORT

Client:	Stratum Civil	Report Number:	22454/R/25-3539-2
Client Address:	14/2 Link Drive, Yatala	Project Number:	22454/P/25-19
Project:	Parklake Adare, Stages 6 and 7	Lot Number:	
Location:	Toowoomba	Internal Test Request:	22454/T/25-1306
Supplied To:	Tim Cowling	Client Reference/s:	Level One fill 04/09/2025 WR: 02551
Area Description:		Report Date / Page:	9/03/2026 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.1.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	22454/S/25-6740	22454/S/25-6741	22454/S/25-6742	22454/S/25-6743
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	4/09/2025 12:05	4/09/2025 12:10	4/09/2025 12:15	4/09/2025 12:20
Material Source	On Site	On Site	On Site	On Site
Material Type	Fill	Fill	Fill	Fill
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)	225 / / 225	225 / / 225	225 / / 225	225 / / 225
Standard or Modified	Standard	Standard	Standard	Standard
Easting	430215	430117	429960	430064
Northing	6953783	6954197	6954258	6954197
Elevation	Layer 4	Layer 1	Layer 2	Layer 3
	Lot 80	Lot 81	Lot 81	Lot 81
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	1	0	0	0
Compaction Sample Number	22454/S/25-6740	22454/S/25-6741	22454/S/25-6742	22454/S/25-6743
Sample Description	Silty Clay Brown	Silty Clay Brown	Brown CLayey Sand	Brown Clayey Sand
Moisture Test Results:				
Field Moisture Content (%)	12.5	5.8	12.7	10.6
Adjusted / Moist. Variation (%)	0.0	0.0	-1.0	-0.5
Optimum Moisture Content (%)	12.5	6.0	12.0	10.0
Moisture Variation from OMC	(at OMC)	(Drier than OMC)	(Wetter than OMC)	(Wetter than OMC)
Moisture Ratio (%)	100.5	98.0	107.0	105.5
Density Test Results:				
Field Wet Density (t/m³)	2.17	2.17	2.17	2.18
Field Dry Density (t/m³)	1.93	2.05	1.92	1.98
Adj/Peak Conv Wet Density (t/m³)	2.14	2.16	2.23	2.21
Density Ratio Required (%)	97	97	97	97
Hilf Density Ratio (%)	101.5	100.5	97.5	98.5

(Moisture Ratio = (100 x Field Moisture Content) / Optimum Moisture Content. Moisture Ratio calculation not covered by NATA endorsement)

Remarks	Re-Issued Report Replaces Report No 22454/R/25-3539-1 (reason: Client informed of required Compaction change).
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	Corporate Site Number:	22454	
	Approved Signatory: Mark Hickson		
	Form ID: W5ASMRRep Rev 2		

WET DENSITY RATIO REPORT

Client:	Stratum Civil	Report Number:	22454/R/25-3628-2
Client Address:	14/2 Link Drive, Yatala	Project Number:	22454/P/25-19
Project:	Parklake Adare, Stages 6 and 7	Lot Number:	
Location:	Toowoomba	Internal Test Request:	22454/T/25-1381
Supplied To:	Tim Cowling	Client Reference/s:	
Area Description:		Report Date / Page:	9/03/2026 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.1.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	22454/S/25-7119	22454/S/25-7120	22454/S/25-7121	22454/S/25-7122
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	19/09/2025 13:15	19/09/2025 13:25	19/09/2025 13:45	19/09/2025 13:55
Material Source	On Site	On Site	On Site	On Site
Material Type	Fill	Fill	Fill	Fill
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)	150 / / -	300 / / -	150 / / -	300 / / -
Standard or Modified	Standard	Standard	Standard	Standard
Location	Lot 76	Lot 76	Lot 76	Lot 76
	33m north	64m north	81m north	99m north
	18m from road	22m from road	18m from road	17m from road
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	22454/S/25-7119	22454/S/25-7120	22454/S/25-7121	22454/S/25-7122
Sample Description	Clay SAND Orange	Sand with Clay, Orange	Sand with Clay, Orange	Gravel SAND Brown
Moisture Test Results:				
Field Moisture Content (%)	9.7	8.8	9.6	6.3
Adjusted / Moist. Variation (%)	1.0	1.5	2.0	4.5
Optimum Moisture Content (%)	10.5	10.0	12.0	11.0
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	91.5	87.0	81.5	58.0
Density Test Results:				
Field Wet Density (t/m³)	2.10	2.10	2.06	2.13
Field Dry Density (t/m³)	1.91	1.93	1.88	2.00
Adj/Peak Conv Wet Density (t/m³)	2.13	2.14	2.04	2.06
Density Ratio Required (%)	97	97	97	97
Half Density Ratio (%)	98.5	98.5	101.0	103.0

(Moisture Ratio = (100 x Field Moisture Content) / Optimum Moisture Content. Moisture Ratio calculation not covered by NATA endorsement)

Remarks	Re-Issued Report Replaces Report No 22454/R/25-3628-1 (reason: Client informed of required Compaction change).
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	Accreditation Number:	1986	
	Corporate Site Number:	22454	
	Approved Signatory: Mark Hickson		
	Form ID: W5ASMRRep Rev 2		

WET DENSITY RATIO REPORT

Client:	Stratum Civil	Report Number:	22454/R/25-3739-2
Client Address:	14/2 Link Drive, Yatala	Project Number:	22454/P/25-19
Project:	Parklake Adare, Stages 6 and 7	Lot Number:	
Location:	Toowoomba	Internal Test Request:	22454/T/25-1559
Supplied To:	Tim Cowling	Client Reference/s:	Level One Fill - 22/10/25 - WR: 0256
Area Description:		Report Date / Page:	9/03/2026 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.1.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	22454/S/25-8251	22454/S/25-8252		
ID / Client ID	WR: 02569	WR: 02569		
Lot Number	-	-		
Date / Time Tested	22/10/2025 14:00	22/10/2025 14:05		
Material Source	On Site	On Site		
Material Type	Fill	Fill		
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b		
Depths: Test / Nom / Actual (mm)	200 / - / 200	200 / - / 200		
Standard or Modified	Standard	Standard		
Easting	E: 429679	E: 429664		
Northing	N: 6954094	N: 6954105		
Elevation				
Test Fraction (mm)	< 19.0 mm	< 19.0 mm		
Sample Oversize (%)	0	0		
Compaction Sample Number	22454/S/25-8251	22454/S/25-8252		
Sample Description	Sandy Clay, Brown	Sandy Clay, Brown		
Moisture Test Results:				
Field Moisture Content (%)	16.0	17.1		
Adjusted / Moist. Variation (%)	0.0	0.0		
Optimum Moisture Content (%)	16.0	17.5		
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)		
Moisture Ratio (%)	99.0	98.5		
Density Test Results:				
Field Wet Density (t/m³)	2.03	2.06		
Field Dry Density (t/m³)	1.75	1.76		
Adj/Peak Conv Wet Density (t/m³)	2.06	2.07		
Density Ratio Required (%)	97	97		
Hilf Density Ratio (%)	99.0	99.5		

(Moisture Ratio = (100 x Field Moisture Content) / Optimum Moisture Content. Moisture Ratio calculation not covered by NATA endorsement)

Remarks	Re-Issued Report Replaces Report No 22454/R/25-3739-1 (reason: Client informed of required Compaction change).
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WET DENSITY RATIO REPORT

Client:	Stratum Civil	Report Number:	22454/R/26-867-1
Client Address:	14/2 Link Drive, Yatala	Project Number:	22454/P/25-19
Project:	Parklake Adare, Stages 6 and 7	Lot Number:	
Location:	Toowoomba	Internal Test Request:	22454/T/26-399
Supplied To:	Tim Cowling	Client Reference/s:	Level One Fill 5/3/26 - WR: 06496
Area Description:		Report Date / Page:	11/03/2026 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.1.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	22454/S/26-1936	22454/S/26-1937		
ID / Client ID	WR: 06496	WR: 06496		
Lot Number	-	-		
Date / Time Tested	5/03/2026 07:15	5/03/2026 07:20		
Material Source	On Site	On Site		
Material Type	Sandy Clay	Sandy Clay		
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b		
Depths: Test / Nom / Actual (mm)	200 / - / 200	200 / - / 200		
Standard or Modified	Standard	Standard		
Easting	429597.3	429620.2		
Northing	6954113.9	6954107.9		
Elevation	100.7	100.3		
Test Fraction (mm)	< 19.0 mm	< 19.0 mm		
Sample Oversize (%)	0	0		
Compaction Sample Number	22454/S/26-1936	22454/S/26-1937		
Sample Description	Sandy Clay, Brown	Sandy Clay, Brown		
Moisture Test Results:				
Field Moisture Content (%)	10.1	10.3		
Adjusted / Moist. Variation (%)	2.0	2.0		
Optimum Moisture Content (%)	12.0	12.5		
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)		
Moisture Ratio (%)	83.0	82.0		
Density Test Results:				
Field Wet Density (t/m³)	2.19	2.13		
Field Dry Density (t/m³)	1.99	1.93		
Adj/Peak Conv Wet Density (t/m³)	2.15	2.12		
Density Ratio Required (%)	97	97		
Hilf Density Ratio (%)	102.0	100.5		

(Moisture Ratio = (100 x Field Moisture Content) / Optimum Moisture Content. Moisture Ratio calculation not covered by NATA endorsement)

Remarks



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Corporate Site Number: 22454



Approved Signatory: Steven Martin-Blakey
Form ID: W5ASMRRep Rev 2

WET DENSITY RATIO REPORT

Client:	Stratum Civil	Report Number:	22454/R/26-1406-1
Client Address:	14/2 Link Drive, Yatala	Project Number:	22454/P/25-19
Project:	Parklake Adare, Stages 6 and 7	Lot Number:	LOT#81
Location:	Toowoomba	Internal Test Request:	22454/T/26-600
Supplied To:	Tim Cowling	Client Reference/s:	Lot 81 4x Compations 7/4/26 - WR: 0
Area Description:		Report Date / Page:	13/04/2026 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.1.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	22454/S/26-3005	22454/S/26-3006	22454/S/26-3007	22454/S/26-3008
ID / Client ID	-	-	-	-
Lot Number	LOT#81	LOT#81	LOT#81	LOT#81
Date / Time Tested	7/04/2026 14:00	7/04/2026 14:10	7/04/2026 14:15	7/04/2026 14:20
Material Source	On Site	On Site	On Site	On Site
Material Type	Sandy Clay	Sandy Clay	Sandy Clay	Sandy Clay
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)	275 / - / 300	275 / - / 300	275 / - / 300	275 / - / 300
Standard or Modified	Standard	Standard	Standard	Standard
Easting	429611.3	429582.3	429618.2	429626.3
Northing	6954108.13	6954123.63	6954110.21	6954118.2
Elevation	100.3	100.6	100.2	100.3
	Layer 1	Layer 1	Layer 2	Layer 2
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	22454/S/26-3005	22454/S/26-3006	22454/S/26-3007	22454/S/26-3008
Sample Description	Sandy Clay	Sandy Clay	Sandy Clay	Sandy Clay
Moisture Test Results:				
Field Moisture Content (%)	9.8	10.0	10.8	8.8
Adjusted / Moist. Variation (%)	2.0	2.0	2.0	2.5
Optimum Moisture Content (%)	12.0	12.0	13.0	11.0
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	81.5	82.0	83.0	78.5
Density Test Results:				
Field Wet Density (t/m³)	2.14	2.13	2.13	2.13
Field Dry Density (t/m³)	1.95	1.94	1.92	1.95
Adj/Peak Conv Wet Density (t/m³)	2.17	2.10	2.12	2.14
Density Ratio Required (%)	95	95	95	95
Hilf Density Ratio (%)	99.0	101.5	100.5	99.5

(Moisture Ratio = (100 x Field Moisture Content) / Optimum Moisture Content. Moisture Ratio calculation not covered by NATA endorsement)

Remarks

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Locations across Australia and New Zealand

QLD

Airlie
Beenleigh
Brisbane (Albion)
Brisbane (Brendale)
Brisbane (Kingston)
Cairns
Childers
Emerald
Gold Coast
Mackay
Moranbah
Petrie
Rockhampton
Sunshine Coast
Toowoomba
Townsville

NSW

Ballina
Coffs Harbour
Dubbo
Marulan (Lynwood)
Newcastle
Port Macquarie
Sydney (Glendenning)
Sydney (Kingsgrove)
Wollongong

VIC

Ararat
Bendigo
Echuca
Melbourne (Chadstone)
Melbourne (Oaklands Junction)
Melbourne (Sunshine West)
Traralgon

WA

Bunbury
Gosnells
Newman
Perth
Port Hedland

SA

Adelaide
Whyalla

NT

Darwin
Katherine

ACT

Canberra

TAS

Hobart

NZ

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