CHADWICK GEOTECHNICS

REPORT

Level 1 Geotechnical Inspection and Testing Authority Services

Riverfield Square Estate Stage 32
Lots 3203 to 3234

Prepared for:

Greenridge Properties Pty Ltd

28.11.2025

Our Ref: 1091938.032.v1

25 Metcalf Street, Dandenong South, Vic 3175, Melbourne, Australia
www.chadwickgeotechnics.com.au

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Document Control

Title:	Level One Inspection and Testing Services.				
Date	**Version**	**Description**	**Prepared by:**	**Reviewed by:**	**Authorised by**
28 November 2025	1	Final	R. Barden	R. McKenzie	M. Di Meglio

Distribution:

Greenridge Properties Pty Ltd	1 PDF copy
Chadwick Geotechnics Pty Ltd (File)	1 electronic copy

1 Introduction

Chadwick Geotechnics Pty Ltd (Chadwick Geotechnics), was engaged by Greenridge Properties Pty Ltd, to provide Level 1 Geotechnical Inspection and Testing Authority (GITA) services for the earthworks conducted within Stage 32 of the Riverfield Square Estate in Clyde North between 6 June 2025 and 07 August 2025.

Level 1 GITA services as defined in AS3798-2007 “Guidelines on Earthworks for Commercial and Residential Development,” requires full time inspection and field and laboratory testing of earthworks in accordance with AS1289 “Methods of Testing Soils for Engineering Purposes.”

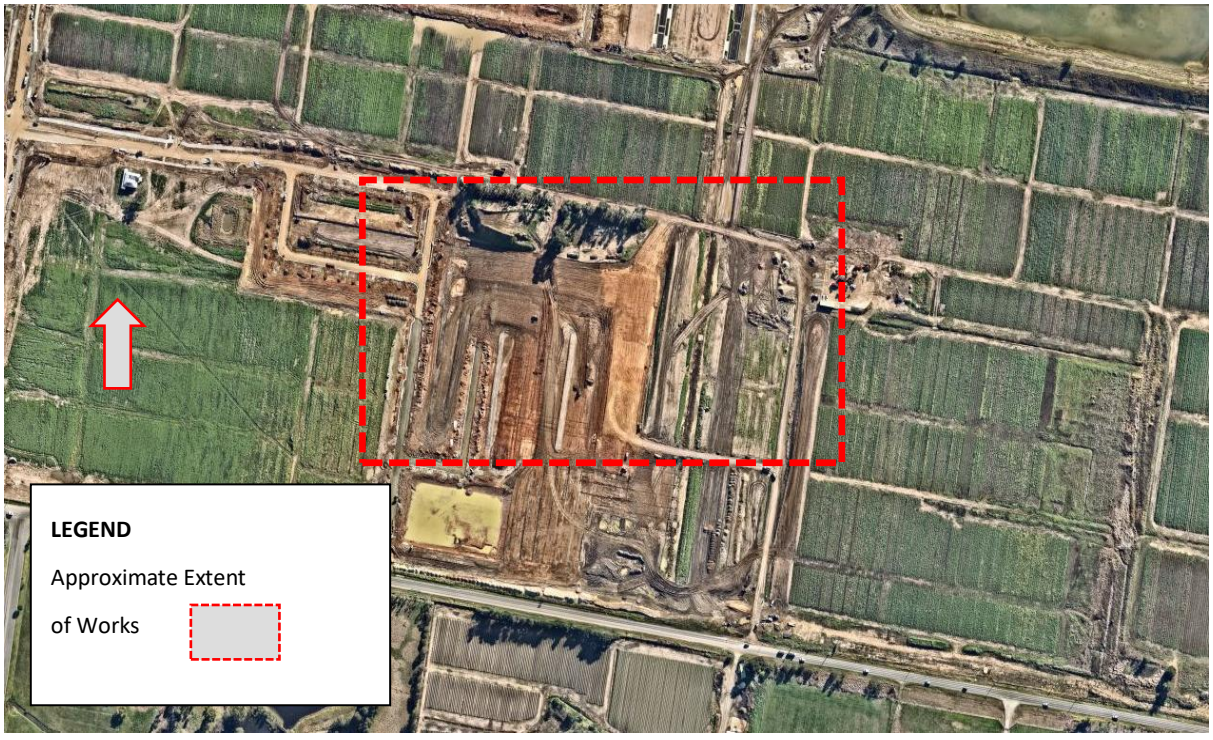
2 Project details

2.1 Location

Stage 32 is located to the North of Ballarto Road and on Grevillea Grove in Clyde North.

The included works area is shown on the Site Plan in Appendix A and within Figure 2.1 below is an extract from Nearmap.

Figure 2.1: Extract from Nearmap (4 Aug 2025)



2.2 Roles

The organisations and their roles are presented in Table 2.1

Table 2.1: Roles on the Project

Role	Organisation
Developer	Greenridge Properties Pty Ltd
Geotechnical Inspection and Testing Authority (GITA)	Chadwick Geotechnics Pty Ltd
Designer / Superintendent	Beveridge Williams Pty Ltd
Earthworks Contractor	Brown Property Group Pty Ltd

Chadwick Geotechnics undertook the field density testing, and the compaction control laboratory testing in our NATA accredited laboratories.

2.3 Dates on Site

Geotechnical technical and engineering staff from Chadwick Geotechnics were onsite for the duration of the earthworks program on the days shown in Table 2.2 below.

Table 2.2: Level 1 GITA – Onsite Presence

Month	Dates on site
June 2025	6, 12, 13, 18, 23, 24
July 2025	24, 25, 31
August 2025	2, 4, 5, 7

2.4 Included Areas

This report is applicable to material placed by the contractor on the residential lots within the Riverfield Square Estate, Stage 32, as shown on **Figure 2.1** and on the Site Plan in **Appendix A,** with reference to Section 2.5 (Excluded Areas) of this report.

The following Lots were filled (or partially filled) during the Level 1 GITA supervision:

- Lot's 3203 to 3234

2.5 Excluded Areas

This report does not include fill outside the general boundary of the filled areas as shown in **Figure 2.1**. No fill was placed on the lots not mentioned in Section 2.4 of this report.

Backfill of trenches for the underground services, fill on footpaths, driveways and roads, or placement of topsoil, were not part of the scope for the works supervised by Chadwick Geotechnics.

3 Specifications

The works were to be conducted in general accordance with the 'Guidelines on earthworks for commercial and residential developments' of AS3798-2007.

The following items were adopted as part of the project earthworks specifications:

- All Filling, in excess, of 200mm depth within the residential lots shall be undertaken to specifications satisfying the requirements of AS3798-2007 "Guidelines on Earthworks for Commercial and Residential Development".
- The fill soils to comply with the 'Suitable Material' in accordance with Section 4.4 of the AS3798-2007, and the following:
    - Maximum particle size of 150mm.
    - Particles over 37.5mm diameter not to exceed 20% of the material.
- Organic soils, topsoil, silts, or soils containing organic matter, wood, plastics, metal, or other deleterious materials are not acceptable.
- Subgrade to be proof rolled prior to placement of an engineered fill.
- Fill to be compacted in near horizontal layers not exceeding 250mm loose thickness.
- Compaction to achieve a ratio of at least 95% Standard Maximum Dry Density (SMDD).
- Moisture content of the fill material is to be within ±3% of the soils Standard Optimum Moisture Content (SOMC).
- Frequency of testing to be in accordance with Table 8.1 of AS3798-2007.

4 Inspection and Testing

The inspection and testing of earthworks have been carried out in accordance with AS3798-2007, 'Guidelines on earthworks for commercial and residential developments', with a frequency of field density tests as per Table 8.1 (explained in Section 4.5 of this report). Compaction control laboratory testing was performed in a Chadwick Geotechnics NATA accredited laboratory in accordance with AS1289 'Methods of Testing Soils for Engineering Purposes'.

4.1 Earthworks

The earthworks for the project comprised of the following phases:

- Stripping of topsoil from the proposed fill areas.
- Assessment, remediation, and proof rolling of subgrade.
- Geotechnical compliance testing of the soils used for fill.
- Placement and compaction of engineered fill.

4.2 Fill material

Material used for the construction of the fill comprised of local materials won from the road boxing and trench excavations and general excess site materials on this and the surrounding sites.

Samples taken from the site stockpiles comprising local material used for fill were taken for geotechnical compliance testing during the works. The material compliance test results are summarised in **Table 4.1 below.** The laboratory test certificates are attached in **Appendix C.**

Table 4.1: Compliance test Result Summary

Sample #	Particle Size Distribution (PSD)						Liquid Limit %	Plastic Limit %	Plasticity Index %
	37.5 mm	13.2 mm	4.75 mm	1.18 mm	425 µm	0.75 µm			
S25DS-04914/1	100	100	99	97	96	91	62	20	42
S25DS-06245/1	100	100	98	85	49	24	31	15	16
S25DS-07632/1	100	100	96	92	88	61	55	22	33

The laboratory test results indicate the fill materials are a CLAYS/Sandy CLAY of high plasticity and clayey SAND of low plasticity and satisfied the requirements of the specification.

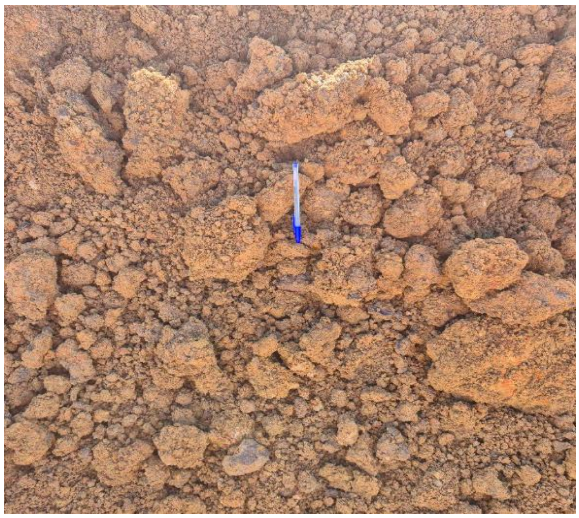
The material was deemed as being derived from natural soils. The soil is considered as 'Suitable Material' in accordance with Section 4.4 of the AS3798-2007.

The material imported and placed at the site by Brown Property Group was assessed by the superintendent as being derived from natural soils and meeting the classification of 'Fill Material' as defined in EPA publication 1828.2-2021 "Waste disposal categories – characteristics and thresholds". Environmental testing of the material was not within Chadwick Geotechnics' scope.

Any observed organic or deleterious matter including any oversize cobbles or boulders were removed from the tested areas during the fill placement.

Photographs of typical materials used during construction are shown below.

Photograph 4.1: Photographs of the material used on site



Photograph 1: Typical clay material used on site

Photograph 2: Sandy Clay used

4.3 Subgrade Assessment / Proof Roll

The Subgrade of the site was progressively assessed during the period Chadwick Geotechnics personnel were on site.

Subgrade assessments were conducted following the removal of natural grasses and topsoil that was present on site.

The subgrade inspection was performed in accordance with the Level 1 guidelines presented in AS3798–2007 Section 5.5. No soft spots or deflections were encountered during the inspections, and the area was found to be firm and free of vegetation and other deleterious material.

Two photographs of the subgrade assessment phase at the project are shown below.

Photograph 4.2: Subgrade assessment photographs

Photograph 3: Subgrade assessed with dump truck

Photograph 4: Subgrade assessment using pad foot roller

4.4 Engineered Fill Construction

All fill material was brought by dump trucks from the local stockpiles, spread with a bulldozer and compacted with a pad foot roller. A water cart was present onsite during the works for moisture conditioning of the materials.

All fill material was placed in lift sequences comprising horizontal layers. Chadwick Geotechnics verified that the surface of the stripped area, and that of additional lifts, was thoroughly scarified and moisture conditioned prior to placement of additional layers to prevent delamination at the layer interface. Once the placed fill was approved, the layer was compacted accordingly. Chadwick Geotechnics personnel were on site on a fulltime basis during the placement, moisture conditioning, compaction, and testing of the fill on the dates noted in Table 2.2 of this report.

The following machinery was on site during earthworks.

Table 4.2: Earthworks plant on site

Equipment type	Model
Dozer	CAT D6
Pad foot roller	BPG 15 T, Vibrating Pad Foot Roller
Water cart	Volvo 25 T and road going truck
Dump Trucks	Volvo A256
Excavator	CAT 25 T
Truck and Dog	Importing materials

Photographs of typical machinery on site used during construction are shown below.

Photograph 4.3: General Earthwork machinery and fill construction photographs

Photograph 5: Dozer used during fill construction

Photograph 6: Pad foot roller used during fill construction

Photograph 7: Excavator during fill construction

Photograph 8: Truck and trailer used during fill construction

4.5 Density and Moisture testing

Field density and moisture content testing was undertaken progressively during the construction on the compacted fill using a calibrated portable density and moisture gauge in accordance with AS 1289.5.8.1. The HILF rapid compaction test was used for peak converted wet density determinations in accordance with AS1289.5.7.1. Test locations were recorded using a handheld GPS unit. A site plan showing the field density test locations is provided in **Appendix A**.

Testing was undertaken under the frequencies listed below, subject to the area and volume worked on the day of testing:

- 1 test per material type per layer per 2500m² or 1 test per 500m³ distributed reasonably evenly – whichever requires the most tests in accordance with Type 1 Earthworks (large scale operations) as defined in Table 8.1 of the AS3798-2007;

Thirty-five (35) tests were performed during the filling process. Two (2) of the tests did not achieve the required moisture ratio initially. The failed areas were reworked and retested accordingly. The retests returned passing density and moisture test results.

A summary table of HILF density tests is provided in **Appendix B** and the laboratory test reports are provided in **Appendix C**. Two photographs of field density testing conducted on site are shown below.

Photograph 4.4: Field Density/Moisture Testing photographs

Photo 9: Field density/moisture test

Photo 10: Field density/moisture test

5 Conclusion

On the basis, of our inspections and after considering all test results relating to the project, it is our opinion, so far as it is to be determined, that:

- The materials, used by the earth-works contractor met the geotechnical property requirements of the specification.
- The sourced fill was, considered to be natural, clean, and suitable for use at the site.
- The fill material placed was tested at a suitable frequency in accordance with AS3798-2007- Table 8.1 and the results indicate the compacted clay achieved the density requirement of the specification.
- Given the consistent construction practices followed by the earthworks contractor and as witnessed by the Chadwick Geotechnics, combined with the satisfactory verification of test results achieved, it is inferred that areas of the site between test locations were performed to the same standard as those areas that have been tested.
- Based on observations made by Chadwick Geotechnics Level 1 personal and the results of field and laboratory tests, we consider that the engineered fill within the site (noted in Section 2.5), as far as we have been able to reasonably determine, have been placed in general accordance with the intent of the specification.
- It is our opinion that the earthworks undertaken have been performed in accordance with the requirements of Section 8.2 – Level 1 Inspection and Testing - AS3798-2007 Guidelines on Earthworks for Commercial and Residential Developments.
- Chadwick Geotechnics completed its Inspection and testing services on, 7th August 2025. After this date, the maintenance of the fill is the sole responsibility of the Contractor. If the fill is not well maintained or protected with a sacrificial layer of topsoil or other fill, the uppermost layers and the exposed faces of the engineered fill may deteriorate, as, a result of exposure to varying weather conditions which can cause cracking or heaving of the fill.
- Any deterioration will need to be remediated prior to further construction on the site. Chadwick Geotechnics has not provided supervision since the above date and is not responsible for any subsequent deterioration that may have occurred or may occur since that date.

6 Applicability

This report has been prepared for the exclusive use of our client Greenridge Properties Pty Ltd in good faith and in accordance with the Chadwick Geotechnics quality system for the earthworks filling at the site.

This report is based on the nature of the project and the prevailing conditions between 6 June 2025 and 7 August 2025. No responsibility or liability will be accepted, and Chadwick Geotechnics is indemnified to the full extent permitted by law in respect of the use of this report where there has been a change in the nature of the project or the conditions on site that may alter or affect the conclusions of this report.

Should you require any further information regarding this report, please do not hesitate to contact the undersigned on (03) 8796 7900.

Chadwick Geotechnics Pty Ltd

Report prepared by:

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Robert Barden

Project Manager

Authorised for Chadwick Geotechnics Pty Ltd by:

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Michael DiMeglio

Project Director

Report reviewed by:

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Robert McKenzie

Principal Geotechnical Engineer

PE0005222

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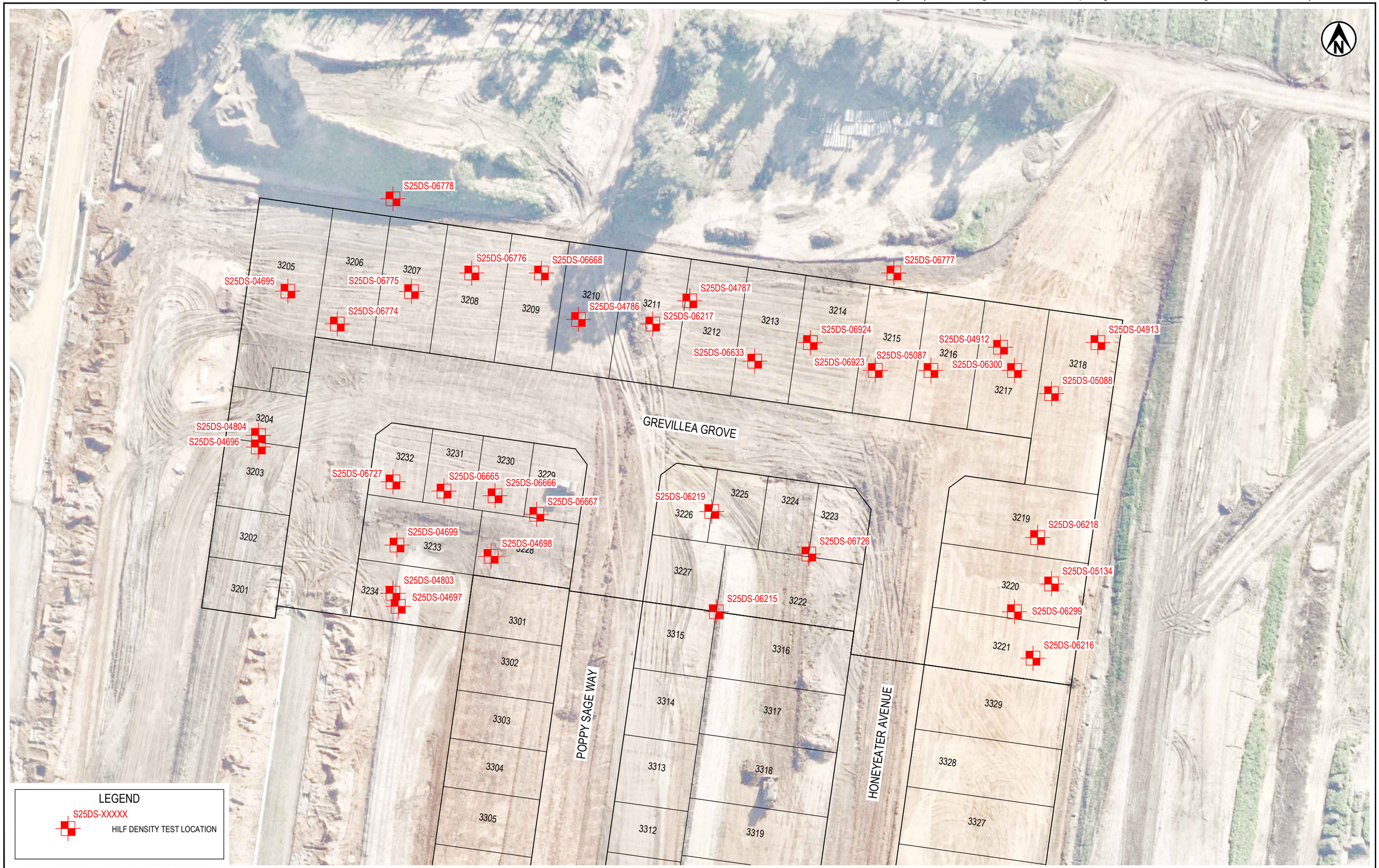
Appendix A Test location plan

T:\Dandenong\Geo Projects\1091938\WorkingMaterial\1091938.032 Riverfield Square Stage 32\CAD\FIG\1091938.032-F01.dwg 2025-Nov-25 1:40:08 PM Plotted By: KATHRYN JACKSON



LEGEND

S25DS-XXXXX — HILF DENSITY TEST LOCATION

NOTES:
1. AERIAL IMAGE SOURCED FROM NEARMAP. COPYRIGHT NEARMAP PTY LTD IMAGERY DATE: 04/03/2025.
2. BASE PLAN PROVIDED BY BEVERIDGE WILLIAMS. DRAWING REFERENCE: 2101578-32-BASE_dated20250317. DATE RECEIVED: 20/11/2025.

A3 SCALE 1:750

0 5 10 15 20 25 30 35 40 (m)

ORIGINAL IN COLOUR

CHADWICK GEOTECHNICS
www.chadwickgeotechnics.com.au

PROJECT No.	1091938.032	
DESIGNED	RHB	Nov.25
DRAWN	KMJA	Nov.25
CHECKED	RHB	Nov.25
APPROVED	R. BARDEN	DATE 24.11.2025

CLIENT **GREENRIDGE PROPERTIES PTY LTD**

PROJECT **RIVERFIELD SQUARE ESTATE - STAGE 32**

TITLE LEVEL ONE HILF DENSITY TESTING
HILF DENSITY TEST LOCATION PLAN

SCALE (A3) 1:750 FIG No. 1091938.032-F01 REV 1

Appendix B Density and moisture test summary

CHADWICK GEOTECHNICS

Riverfield Square Estate, 1091938.032 Stage 32

HILF Density Testing - Field Summary

Chadwick Geotechnics
25 Metcalf Street
Dandenong South VIC 3175
Tel : (03) 8796 7900
Fax: (03) 9706 9431

Think Act Be Safe

Report No	Sample No	Date	Test Number	Lot No	Easting	Northing	Layer/RL	Density Ratio (≥95 %)	Moisture Variation	Pass / Fail	Comments (Retest No) Compliance test taken ect
HDR:W25DS01205	S25DS-04695	6/06/2025	1	3205 / 1	355303.33	5778039.1	20.41	103.5	0.5 dry	Pass	
HDR:W25DS01205	S25DS-04696	6/06/2025	5	3204/3203	355296.96	5778005.52	19.88	102	3.5 dry	Fail	See Retest S25DS-04804
HDR:W25DS01205	S25DS-04697	6/06/2025	2	3234 / 1	355327.13	5777971.16	19.32	110.5	4.5 dry	Fail	See Retest S25DS-04803
HDR:W25DS01205	S25DS-04698	6/06/2025	3	3228 / 1	355347.16	5777981.96	19.68	107	3 dry	Pass	
HDR:W25DS01205	S25DS-04699	6/06/2025	4	3233 / 1	355326.86	5777984.36	-	103.5	0.5 dry	Pass	
HDR:W25DS01228	S25DS-04786	12/06/2025	1	3210 / 1	355366	5778033	20.485	103	0 dry	Pass	
HDR:W25DS01228	S25DS-04787	12/06/2025	2	3212/3211	355390	5778037	20.074	100	1.5 dry	Pass	
HDR:W25DS01234	S25DS-04803	13/06/2025	1	3234 / 1	355326	5777974	19.25	102.5	0.5 dry	Pass	Retest of S25DS-04697
HDR:W25DS01234	S25DS-04804	13/06/2025	2	3204/3203	355297	5778008	20.187	96.5	0 wet	Pass	Retest of S25DS-04696
HDR:W25DS01260	S25DS-04912	18/06/2025	1	3217 / 1	355457	5778027	18.454	98	0 wet	Pass	
HDR:W25DS01260	S25DS-04913	18/06/2025	2	3218 / 2	355478	5778028	18.778	99.5	2 wet	Pass	
HDR:W25DS01315	S25DS-05087	23/06/2025	1	3216 / 3	355442	5778022	19.013	98	0 wet	Pass	
HDR:W25DS01315	S25DS-05088	23/06/2025	2	3218 / 3	355468	5778017	18.895	97	2.5 wet	Pass	
HDR:W25DS01322	S25DS-05134	24/06/2025	1	3220 / 3	355468	5777976	18.503	96.5	2 wet	Pass	
HDR:W25DS01575	S25DS-06215	24/07/2025	1	3222 / 3227 / 3	355395	5777970	19.324	100	0 dry	Pass	
HDR:W25DS01575	S25DS-06216	24/07/2025	2	3221 / 4	355464	5777960	19.02	95	2 dry	Pass	
HDR:W25DS01575	S25DS-06217	24/07/2025	3	3211 / 3	355382	5778032	20.416	97	1.5 dry	Pass	
HDR:W25DS01575	S25DS-06218	24/07/2025	4	3219 / 3	355465	5777986	19.052	96.5	2.5 dry	Pass	
HDR:W25DS01575	S25DS-06219	24/07/2025	5	3225 / 3226 / 4	355394	5777991	19.879	100	0 wet	Pass	
HDR:W25DS01592	S25DS-06299	25/07/2025	1	3220/3221	355460	5777970	19.087	97	2.5 dry	Pass	
HDR:W25DS01592	S25DS-06300	25/07/2025	2	3217	355460	5778022	19.575	98	3 dry	Pass	
HDR:W25DS01671	S25DS-06633	31/07/2025	1	3213 / 3	355404	5778024	20.119	99.5	0.5 wet	Pass	

CHADWICK GEOTECHNICS

Riverfield Square Estate, 1091938.032 Stage 32

HILF Density Testing - Field Summary

Chadwick Geotechnics
25 Metcalf Street
Dandenong South VIC 3175
Tel : (03) 8796 7900
Fax: (03) 9706 9431

Think Act Be Safe

Report No	Sample No	Date	Test Number	Lot No	Easting	Northing	Layer/RL	Density Ratio (≥95 %)	Moisture Variation	Pass / Fail	Comments (Retest No) Compliance test taken ect
HDR:W25DS01680	S25DS-06665	2/08/2025	1	3231 / 1	355337	5777996	20.499	99	0 wet	Pass	
HDR:W25DS01680	S25DS-06666	2/08/2025	2	3239 / 2	355348	5777995	20.416	97.5	2 wet	Pass	
HDR:W25DS01680	S25DS-06667	2/08/2025	3	3229/ 3228	355357	5777991	20.50	102	0 dry	Pass	
HDR:W25DS01680	S25DS-06668	2/08/2025	4	3209 / 3	355358	5778043	21.391	97	2.5 wet	Pass	
HDR:W25DS01695	S25DS-06726	4/08/2025	1	3223 / 3222 / 3	355415	5777982	19.491	99.5	1.5 dry	Pass	
HDR:W25DS01695	S25DS-06727	4/08/2025	2	3232 / 3	355326	5777998	20.581	101	2.5 wet	Pass	
HDR:W25DS01713	S25DS-06774	5/08/2025	1	3206 / 4	355314	5778032	20.696	96	2.5 wet	Pass	
HDR:W25DS01713	S25DS-06775	5/08/2025	2	3207 / 4	355330	5778039	21.16	99	0 wet	Pass	
HDR:W25DS01713	S25DS-06776	5/08/2025	3	3208 / 4	355343	5778043	21.321	100	0.5 wet	Pass	
HDR:W25DS01714	S25DS-06777	5/08/2025	4	- / 2	355434	5778043	19.144	101.5	0.5 dry	Pass	
HDR:W25DS01714	S25DS-06778	5/08/2025	5	- / 2	355326	5778059	21.125	100	2 dry	Pass	
HDR:W25DS01753	S25DS-06923	7/08/2025	1	3215 / -	355430	5778022	19.908	101.5	2.5 wet	Pass	
HDR:W25DS01753	S25DS-06924	7/08/2025	2	3214 / -	355416	5778028	20.099	103.5	0 wet	Pass	

Appendix C NATA compaction laboratory reports

CHADWICK GEOTECHNICS

Dandenong South
ACN 143 009 330
25 Metcalf Street
DANDENONG SOUTH, VIC 3175

Ph: + 61 3 8796 7900
Fax: +61 3 9706 9431

Report No: HDR:W25DS01205
Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Estate, Stage 32
Project No.: 1091938.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025 – Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel (Senior Geotechnician)
Date of Issue: 17/06/2025

Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95%
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.2.1.1, AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Clay

Sample Data

Sample ID	S25DS-04695	S25DS-04696	S25DS-04697	S25DS-04698	S25DS-04699
Field Sample ID	1	2	3	4	5
Date Tested	6/06/2025	6/06/2025	6/06/2025	6/06/2025	6/06/2025
Time Tested	11:10	11:20	14:30	14:40	14:50
E:	355303.33	355296.96	355327.13	355347.16	355326.86
N:	5778039.10	5778005.52	5777971.16	5777981.96	5777984.36
EL:	20.41	19.88	19.32	19.68	-
Lot / Layer:	3205 / 1	3204 / 1	3234 / 1	3228 / 1	3233 / 1

Field and Laboratory Data

Depth of Test (mm)	175	175	175	175	175
Depth of Layer (mm)	200	200	200	200	200
AS Sieve Size (mm)	19.0	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0	0
Field Moisture Content (%)	26.2	21.3	27.9	25.5	25.2
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1
Field Wet Density (t/m³)	1.97	2.00	1.97	1.97	1.97
Field Dry Density (t/m³)	1.56	1.65	1.54	1.57	1.57
Peak Converted Wet Density (t/m³)	1.90	1.96	1.78	1.84	1.90
Optimum Moisture Content (%)	26.5	25.0	32.5	28.5	26.0
Compactive Effort	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	98.0	85.5	85.0	89.5	97.0
Moisture Variation (%)	0.5 dry	3.5 dry	4.5 dry	3.0 dry	0.5 dry
Hilf Density Ratio (%)	**103.5**	**102.0**	**110.5**	**107.0**	**103.5**

Comments

Results relate only to the items tested/sampled.

CHADWICK GEOTECHNICS

Dandenong South
ACN 143 009 330
25 Metcalf Street
DANDENONG SOUTH, VIC 3175

Ph: + 61 3 8796 7900
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Report No: HDR:W25DS01228
Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Estate, Stage 32
Project No.: 1091938.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025 – Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel (Senior Geotechnician)
Date of Issue: 17/06/2025

Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95%
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.2.1.1, AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Clay

Sample Data

Sample ID	S25DS-04786	S25DS-04787	
Field Sample ID	1	2	
Date Tested	12/06/2025	12/06/2025	
Time Tested	10:00	12:00	
E:	355366 (5365.200)	355390 (5392.304)	
N:	578033 (78029.713)	5778037 (78034.708)	
EL:	20.485	20.074	
Lot / Layer:	3210 / 1	3212 / 1	

Field and Laboratory Data

Depth of Test (mm)	175	175	
Depth of Layer (mm)	200	200	
AS Sieve Size (mm)	19.0	19.0	
Oversize Wet (%)	0	0	
Field Moisture Content (%)	21.9	15.3	
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	
Field Wet Density (t/m³)	2.04	2.05	
Field Dry Density (t/m³)	1.67	1.78	
Peak Converted Wet Density (t/m³)	1.98	2.05	
Optimum Moisture Content (%)	22.0	17.0	
Compactive Effort	Standard	Standard	
Moisture Ratio (%)	99.0	90.0	
Moisture Variation (%)	0.0	1.5 dry	
Hilf Density Ratio (%)	**103.0**	**100.0**	

Comments

Results relate only to the items tested/sampled.

CHADWICK GEOTECHNICS

Dandenong South
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25 Metcalf Street
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Report No: HDR:W25DS01234
Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Estate, Stage 32
Project No.: 1091938.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025 – Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel (Senior Geotechnician)
Date of Issue: 17/06/2025

Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95%
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.2.1.1, AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Clay

Sample Data

Sample ID	S25DS-04803	S25DS-04804	
Field Sample ID	1	2	
Date Tested	13/06/2025	13/06/2025	
Time Tested	08:45	09:10	
E:	355326 (5327.375)	355297 (5297.908)	
N:	5777974 (77971.091)	5778008 (78006.464)	
EL:	19.250	20.187	
Lot / Layer:	3234 / 1	3204 / 1	
	Retest of S25DS-04697	Retest of S25DS-04696	
Field and Laboratory Data			
Depth of Test (mm)	175	175	
Depth of Layer (mm)	200	200	
AS Sieve Size (mm)	19.0	19.0	
Oversize Wet (%)	0	0	
Field Moisture Content (%)	25.4	21.6	
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	
Field Wet Density (t/m³)	1.97	1.97	
Field Dry Density (t/m³)	1.57	1.62	
Peak Converted Wet Density (t/m³)	1.92	2.04	
Optimum Moisture Content (%)	26.0	21.5	
Compactive Effort	Standard	Standard	
Moisture Ratio (%)	98.0	100.5	
Moisture Variation (%)	0.5 dry	0.0	
Hilf Density Ratio (%)	**102.5**	**96.5**	

Comments

Results relate only to the items tested/sampled.

CHADWICK GEOTECHNICS

Dandenong South
ACN 143 009 330
25 Metcalf Street
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Report No: HDR:W25DS01260
Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Estate, Stage 32
Project No.: 1091938.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025 – Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: J. Lamont
(Base Laboratory Manager -
Date of Issue: 18/08/2025

Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95%
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.2.1.1, AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Imported - Boronia
Material: Clay

Sample Data

Sample ID	S25DS-04912	S25DS-04913				
Field Sample ID	1	2				
Date Tested	18/06/2025	18/06/2025				
Time Tested	11:45	15:30				
E:	355457 (5458.788)	355478 (5476.046)				
N:	5778027 (78023.045)	5778028 (78022.664)				
EL:	18.454	18.778				
Lot / Layer:	3217 / 1	3218 / 2				

Field and Laboratory Data

Depth of Test (mm)	175	175				
Depth of Layer (mm)	200	200				
AS Sieve Size (mm)	19.0	19.0				
Oversize Wet (%)	0	0				
Field Moisture Content (%)	24.7	97.0				
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1				
Field Wet Density (t/m³)	1.92	1.95				
Field Dry Density (t/m³)	1.54	0.99				
Peak Converted Wet Density (t/m³)	1.96	1.96				
Optimum Moisture Content (%)	24.5	93.5				
Compactive Effort	Standard	Standard				
Moisture Ratio (%)	100.0	103.5				
Moisture Variation (%)	0.0	2.0 wet				
Hilf Density Ratio (%)	**98.0**	**99.5**				

Comments

Results relate only to the items tested/sampled.

CHADWICK GEOTECHNICS

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Report No: HDR:W25DS01315
Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Estate, Stage 32
Project No.: 1091938.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025 – Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: M. Di Meglio
(Practice Lead - Technical Services)
Date of Issue: 30/07/2025

Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95%
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.2.1.1, AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Imported
Material: Clay

Sample Data

Sample ID	S25DS-05087	S25DS-05088				
Field Sample ID	1	2				
Date Tested	23/06/2025	23/06/2025				
Time Tested	15:00	15:15				
E:	355442 (5443.280)	355468 (5470.554)				
N:	5778022 (78018.644)	5778017 (78011.251)				
EL:	19.013	18.895				
Lot / Layer:	3216 / 3	3218 / 3				

Field and Laboratory Data

Depth of Test (mm)	175	175				
Depth of Layer (mm)	200	200				
AS Sieve Size (mm)	19.0	19.0				
Oversize Wet (%)	0	0				
Field Moisture Content (%)	22.9	23.5				
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1				
Field Wet Density (t/m³)	1.94	1.95				
Field Dry Density (t/m³)	1.58	1.58				
Peak Converted Wet Density (t/m³)	1.98	2.01				
Optimum Moisture Content (%)	22.5	21.0				
Compactive Effort	Standard	Standard				
Moisture Ratio (%)	101.0	112.5				
Moisture Variation (%)	0.0	2.5 wet				
Hilf Density Ratio (%)	**98.0**	**97.0**				

Comments

Results relate only to the items tested/sampled.

CHADWICK GEOTECHNICS

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Report No: HDR:W25DS01322
Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Estate, Stage 32
Project No.: 1091938.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025 – Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: M. Di Meglio
(Practice Lead - Technical Services)
Date of Issue: 30/07/2025

Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95%
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.2.1.1, AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Imported
Material: Clay

Sample Data

Sample ID	S25DS-05134					
Field Sample ID	1					
Date Tested	24/06/2025					
Time Tested	14:13					
E:	355468 (5466.635)					
N:	5777976 (77970.239)					
EL:	18.503					
Lot / Layer:	3220 / 3					

Field and Laboratory Data

Depth of Test (mm)	175					
Depth of Layer (mm)	200					
AS Sieve Size (mm)	19.0					
Oversize Wet (%)	0					
Field Moisture Content (%)	25.0					
Field Moisture Content Method	AS 1289.2.1.1					
Field Wet Density (t/m³)	1.92					
Field Dry Density (t/m³)	1.53					
Peak Converted Wet Density (t/m³)	1.98					
Optimum Moisture Content (%)	23.0					
Compactive Effort	Standard					
Moisture Ratio (%)	108.0					
Moisture Variation (%)	2.0 wet					
Hilf Density Ratio (%)	**96.5**					

Comments

Results relate only to the items tested/sampled.

CHADWICK GEOTECHNICS

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Report No: HDR:W25DS01575
Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Estate, Stage 32
Project No.: 1091938.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025 – Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: J. Lamont
(Base Laboratory Manager -
Date of Issue: 26/11/2025

Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95%
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.2.1.1, AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Import
Material: Clay

Sample Data

Sample ID	S25DS-06215	S25DS-06216	S25DS-06217	S25DS-06218	S25DS-06219
Field Sample ID	1	2	3	4	5
Date Tested	24/07/2025	24/07/2025	24/07/2025	24/07/2025	24/07/2025
Time Tested	09:30	10:45	11:10	11:30	14:30
E:	355395	355464 (5462.420)	355382 (5381.663)	355465 (5465.463)	355394
N:	5777970	5777960 (77955.293)	5778032 (78026.140)	5777986 (77982.434)	5777991
EL:	19.324	19.020	20.416	19.052	19.879
Lot / Layer:	3227 / 3	3221 / 4	3211 / 3	3219 / 3	3226 / 4
Field and Laboratory Data					
Depth of Test (mm)	175	175	175	175	175
Depth of Layer (mm)	200	200	200	200	200
AS Sieve Size (mm)	19.0	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0	4
Field Moisture Content (%)	18.1	8.1	19.1	8.4	24.0
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1
Field Wet Density (t/m³)	2.07	2.06	1.91	2.06	2.03
Field Dry Density (t/m³)	1.75	1.91	1.61	1.90	1.64
Peak Converted Wet Density (t/m³)	2.07	2.17	1.97	2.13	2.03
Optimum Moisture Content (%)	18.0	10.5	20.5	11.0	24.0
Compactive Effort	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	99.5	79.0	92.0	77.5	101.0
Moisture Variation (%)	0.0	2.0 dry	1.5 dry	2.5 dry	0.0
Hilf Density Ratio (%)	**100.0**	**95.0**	**97.0**	**96.5**	**100.0**

Comments

Results relate only to the items tested/sampled.

CHADWICK GEOTECHNICS

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Report No: HDR:W25DS01592
Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Estate, Stage 32
Project No.: 1091938.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025 – Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: M. Di Meglio
(Practice Lead - Technical Services)
Date of Issue: 30/07/2025

Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95%
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.2.1.1, AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Clay

Sample Data

Sample ID	S25DS-06299	S25DS-06300				
Field Sample ID	1	2				
Date Tested	25/07/2025	25/07/2025				
Time Tested	12:00	12:50				
E:	355460 (5459.920)	355460 (5458.563)				
N:	5777970 (77969.478)	5778022 (78019.832)				
EL:	19.087	19.575				
Lot / Layer:	3220 / 5	3217 / 5				

Field and Laboratory Data

Depth of Test (mm)	175	175				
Depth of Layer (mm)	200	200				
AS Sieve Size (mm)	19.0	19.0				
Oversize Wet (%)	0	0				
Field Moisture Content (%)	9.3	8.4				
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1				
Field Wet Density (t/m³)	2.08	2.05				
Field Dry Density (t/m³)	1.90	1.89				
Peak Converted Wet Density (t/m³)	2.14	2.09				
Optimum Moisture Content (%)	12.0	11.0				
Compactive Effort	Standard	Standard				
Moisture Ratio (%)	79.5	75.5				
Moisture Variation (%)	2.5 dry	3.0 dry				
Hilf Density Ratio (%)	**97.0**	**98.0**				

Comments

Results relate only to the items tested/sampled.

CHADWICK GEOTECHNICS

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Report No: HDR:W25DS01671
Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Estate, Stage 32
Project No.: 1091938.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025 – Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: M. Di Meglio
(Practice Lead - Technical Services)
Date of Issue: 14/08/2025

Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95%
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.2.1.1, AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Imported
Material: Clay

Sample Data

Sample ID	S25DS-06633					
Field Sample ID	1					
Date Tested	31/07/2025					
Time Tested	14:30					
E:	355404 (5403.723)					
N:	5778024 (78020.712)					
EL:	20.119					
Lot / Layer:	3213 / 3					

Field and Laboratory Data

Depth of Test (mm)	175					
Depth of Layer (mm)	200					
AS Sieve Size (mm)	19.0					
Oversize Wet (%)	0					
Field Moisture Content (%)	20.6					
Field Moisture Content Method	AS 1289.2.1.1					
Field Wet Density (t/m³)	2.03					
Field Dry Density (t/m³)	1.68					
Peak Converted Wet Density (t/m³)	2.04					
Optimum Moisture Content (%)	20.0					
Compactive Effort	Standard					
Moisture Ratio (%)	103.5					
Moisture Variation (%)	0.5 wet					
Hilf Density Ratio (%)	**99.5**					

Comments

Results relate only to the items tested/sampled.

CHADWICK GEOTECHNICS

Think Act Safe Be

Dandenong South
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Report No: HDR:W25DS01680
Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Estate, Stage 32
Project No.: 1091938.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025 – Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: M. Di Meglio
(Practice Lead - Technical Services)
Date of Issue: 14/08/2025

Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95%
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.2.1.1, AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Clay

Sample Data

Sample ID	S25DS-06665	S25DS-06666	S25DS-06667	S25DS-06668		
Field Sample ID	1	2	3	4		
Date Tested	2/08/2025	2/08/2025	2/08/2025	2/08/2025		
Time Tested	08:40	08:50	09:05	09:20		
E:	355337 (5349.119)	355348 (5338.210)	355357 (5349.119)	355358 (5356.790)		
N:	5777996 (77992.152)	5777995 (77493.972)	5777991 (77992.152)	5778043 (78041.498)		
EL:	20.499	20.416	20.499	21.391		
Lot / Layer:	3231 / 1	3239 / 2	3229 / 1	3209 / 3		

Field and Laboratory Data

Depth of Test (mm)	175	175	175	175		
Depth of Layer (mm)	200	200	200	200		
AS Sieve Size (mm)	19.0	19.0	19.0	19.0		
Oversize Wet (%)	0	0	0	0		
Field Moisture Content (%)	25.2	23.1	20.7	20.8		
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1		
Field Wet Density (t/m³)	1.95	2.01	2.05	2.00		
Field Dry Density (t/m³)	1.56	1.64	1.70	1.66		
Peak Converted Wet Density (t/m³)	1.97	2.06	2.01	2.07		
Optimum Moisture Content (%)	25.0	21.0	21.0	18.0		
Compactive Effort	Standard	Standard	Standard	Standard		
Moisture Ratio (%)	100.0	110.5	99.5	115.0		
Moisture Variation (%)	0.0	2.0 wet	0.0	2.5 wet		
Hilf Density Ratio (%)	**99.0**	**97.5**	**102.0**	**97.0**		

Comments

Results relate only to the items tested/sampled.

CHADWICK GEOTECHNICS

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Report No: HDR:W25DS01695
Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Estate, Stage 32
Project No.: 1091938.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025 – Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: J. Lamont
(Base Laboratory Manager -
Date of Issue: 26/11/2025

Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95%
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.2.1.1, AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Imported
Material: Clay

Sample Data

Sample ID	S25DS-06726	S25DS-06727				
Field Sample ID	1	2				
Date Tested	4/08/2025	4/08/2025				
Time Tested	14:56	15:00				
E:	355415	355326 (5326.277)				
N:	5777982	5777998 (77995.747)				
EL:	19.491	20.581				
Lot / Layer:	3223 / 3	3232 / 3				

Field and Laboratory Data

Depth of Test (mm)	175	175				
Depth of Layer (mm)	200	200				
AS Sieve Size (mm)	19.0	19.0				
Oversize Wet (%)	0	0				
Field Moisture Content (%)	20.0	26.0				
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1				
Field Wet Density (t/m³)	1.99	1.96				
Field Dry Density (t/m³)	1.66	1.55				
Peak Converted Wet Density (t/m³)	2.00	1.94				
Optimum Moisture Content (%)	21.5	23.0				
Compactive Effort	Standard	Standard				
Moisture Ratio (%)	92.0	112.0				
Moisture Variation (%)	1.5 dry	2.5 wet				
Hilf Density Ratio (%)	**99.5**	**101.0**				

Comments

Results relate only to the items tested/sampled.

CHADWICK GEOTECHNICS

Dandenong South
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Report No: HDR:W25DS01713
Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Estate, Stage 32
Project No.: 1091938.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025 – Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: M. Di Meglio
(Practice Lead - Technical Services)
Date of Issue: 14/08/2025

Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95%
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.2.1.1, AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Clay

Sample Data

Sample ID	S25DS-06774	S25DS-06775	S25DS-06776			
Field Sample ID	1	2	3			
Date Tested	5/08/2025	5/08/2025	5/08/2025			
Time Tested	10:00	10:10	10:20			
E:	355314 (5313.653)	355330 (5329.594)	355343 (5341.244)			
N:	5778032 (78030.842)	5778039 (78036.528)	5778043 (78040.792)			
EL:	20.696	21.160	21.321			
Lot / Layer:	3206 / 4	3207 / 4	3208 / 4			
Field and Laboratory Data						
Depth of Test (mm)	175	175	175			
Depth of Layer (mm)	200	200	200			
AS Sieve Size (mm)	19.0	19.0	19.0			
Oversize Wet (%)	0	0	0			
Field Moisture Content (%)	25.5	24.8	21.3			
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1			
Field Wet Density (t/m³)	1.95	1.95	2.04			
Field Dry Density (t/m³)	1.56	1.57	1.68			
Peak Converted Wet Density (t/m³)	2.03	1.98	2.04			
Optimum Moisture Content (%)	23.0	24.5	20.5			
Compactive Effort	Standard	Standard	Standard			
Moisture Ratio (%)	111.5	101.0	103.0			
Moisture Variation (%)	2.5 wet	0.0	0.5 wet			
Hilf Density Ratio (%)	**96.0**	**99.0**	**100.0**			

Comments

Results relate only to the items tested/sampled.

CHADWICK GEOTECHNICS

Dandenong South
ACN 143 009 330
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Report No: HDR:W25DS01714
Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Estate, Stage 32
Project No.: 1091938.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025 – Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: J. Lamont
(Base Laboratory Manager -
Date of Issue: 9/09/2025

Sample Details

Location:	North Retaining Wall
Client Request ID:	
Specification Requirements:	Minimum Hilf Density Ratio of 95%
Field Test procedures:	AS 1289.5.8.1
Laboratory Test procedures:	AS 1289.2.1.1, AS 1289.5.7.1
Sampling Method:	AS1289.1.2.1 Clause 6.4 (b)
Source:	Onsite
Material:	Clay

Sample Data

Sample ID	S25DS-06777	S25DS-06778				
Field Sample ID	1	2				
Date Tested	5/08/2025	5/08/2025				
Time Tested	09:15	09:30				
E:	355434 (5434.336)	355326 (5324.200)				
N:	5778043 (78040.094)	5778059 (78053.192)				
EL:	19.144	21.125				
Lot / Layer:	- / 2	- / 2				

Field and Laboratory Data

Depth of Test (mm)	175	175				
Depth of Layer (mm)	200	200				
AS Sieve Size (mm)	19.0	19.0				
Oversize Wet (%)	0	0				
Field Moisture Content (%)	16.9	17.7				
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1				
Field Wet Density (t/m³)	2.08	1.99				
Field Dry Density (t/m³)	1.78	1.69				
Peak Converted Wet Density (t/m³)	2.04	2.00				
Optimum Moisture Content (%)	17.5	19.5				
Compactive Effort	Standard	Standard				
Moisture Ratio (%)	98.0	89.5				
Moisture Variation (%)	0.5 dry	2.0 dry				
Hilf Density Ratio (%)	**101.5**	**100.0**				

Comments

Results relate only to the items tested/sampled.

CHADWICK GEOTECHNICS

Think Act Safe Be

Dandenong South
ACN 143 009 330
25 Metcalf Street
DANDENONG SOUTH, VIC 3175

Ph: + 61 3 8796 7900
Fax: +61 3 9706 9431

Report No: HDR:W25DS01753
Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Estate, Stage 32
Project No.: 1091938.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025 – Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: M. Di Meglio
(Practice Lead - Technical Services)
Date of Issue: 14/08/2025

Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95%
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.2.1.1, AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Imported
Material: Clay

Sample Data

Sample ID	S25DS-06923	S25DS-06924				
Field Sample ID	1	2				
Date Tested	7/08/2025	7/08/2025				
Time Tested	14:00	14:15				
E:	355430 (3430.541)	355416 (5416.606)				
N:	5778022 (78020.923)	5778028 (78022.854)				
EL:	19.908	20.099				
Lot / Layer:	3215 / -	3214 / -				

Field and Laboratory Data

Depth of Test (mm)	175	175				
Depth of Layer (mm)	200	200				
AS Sieve Size (mm)	19.0	19.0				
Oversize Wet (%)	0	0				
Field Moisture Content (%)	21.1	18.0				
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1				
Field Wet Density (t/m³)	2.05	2.12				
Field Dry Density (t/m³)	1.69	1.80				
Peak Converted Wet Density (t/m³)	2.02	2.05				
Optimum Moisture Content (%)	18.5	18.0				
Compactive Effort	Standard	Standard				
Moisture Ratio (%)	113.0	100.5				
Moisture Variation (%)	2.5 wet	0.0				
Hilf Density Ratio (%)	**101.5**	**103.5**				

Comments

Results relate only to the items tested/sampled.

Appendix D NATA compliance laboratory reports

CHADWICK GEOTECHNICS

Dandenong South
ACN 143 009 330
25 Metcalf Street
DANDENONG SOUTH, VIC 3175

Ph: + 61 3 8796 7900
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Report No: MAT:S25DS-04914/1
Issue No: 1

Material Test Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Estate, Stage 32
Project No.: 1091938.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025 – Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: J. Lamont
(Base Laboratory Manager -
Date of Issue: 17/07/2025

Sample Details

Sample Location	E: 355457 (5458.788), N: 5778027 (78023.045), EL: 18.454, Lot: 3217 / Layer: 1
Field Sample ID	1
Date Sampled	18/06/2025
Time Sampled	11:45
Source	Imported - Boronia
Material	CH: CLAY trace gravel & sand, brown, high plasticity.
Specification	AS Grading
Sampling Method	AS1289.1.2.1 Clause 6.4 (b)
Sample ID	S25DS-04914

Other Test Results

Description	Method	Result	Limits
Moisture Content (%)	AS 1289.2.1.1	26.9	
Date Tested		20/06/2025	
Sample History	AS 1289.1.1	Oven-Dried	
Preparation	AS 1289.1.1	Dry Sieved	
Linear Shrinkage (%)	AS 1289.3.4.1	9.5	
Mould Length (mm)		250	
Crumbling		No	
Curling		No	
Cracking		Yes	
Liquid Limit (%)	AS 1289.3.1.2	62	
Plastic Limit (%)	AS 1289.3.2.1	20	
Plasticity Index (%)	AS 1289.3.3.1	42	
Date Tested		26/05/2025	

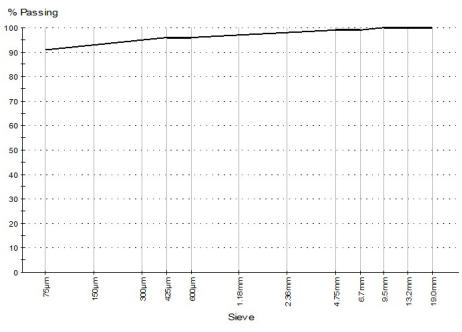
Particle Size Distribution

Method: AS 1289.3.6.1
Drying By: Oven
Date Tested: 24/06/2025

Note: Sample Washed

Sieve Size	% Passing	Limits
19.0mm	100	
13.2mm	100	
9.5mm	100	
6.7mm	99	
4.75mm	99	
2.36mm	98	
1.18mm	97	
600µm	96	
425µm	96	
300µm	95	
150µm	93	
75µm	91	

Chart



Comments

Results relate only to the items tested/sampled.

CHADWICK GEOTECHNICS

Dandenong South
ACN 143 009 330
25 Metcalf Street
DANDENONG SOUTH, VIC 3175

Ph: + 61 3 8796 7900
Fax: +61 3 9706 9431

Report No: MAT:S25DS-06245/1
Issue No: 1

Material Test Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Estate, Stage 32
Project No.: 1091938.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025 – Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: M. Di Meglio
(Practice Lead - Technical Services)
Date of Issue: 14/08/2025

Sample Details

Sample Location	E: 355464 (5381.663), N: 5777966 (77955.293), EL: 19.020, Lot: 3221, Layer:4
Field Sample ID	1
Date Sampled	24/07/2025
Time Sampled	10:45
Source	Import
Material	SC Clayey SAND, trace gravel, orange brown, fine to coarse grained, low plasticity clay
Specification	AS Grading
Sampling Method	
Sample ID	S25DS-06245

Other Test Results

Description	Method	Result	Limits
Moisture Content (%)	AS 1289.2.1.1	8.2	
Date Tested		8/08/2025	
Sample History	AS 1289.1.1	Oven-Dried	
Preparation	AS 1289.1.1	Dry Sieved	
Linear Shrinkage (%)	AS 1289.3.4.1	6.5	
Mould Length (mm)		250	
Crumbling		No	
Curling		No	
Cracking		No	
Liquid Limit (%)	AS 1289.3.1.2	31	
Plastic Limit (%)	AS 1289.3.2.1	15	
Plasticity Index (%)	AS 1289.3.3.1	16	
Date Tested		7/08/2025	

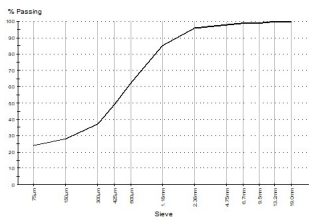
Particle Size Distribution

Method: AS 1289.3.6.1
Drying By: Oven
Date Tested: 8/08/2025

Note: Sample Washed

Sieve Size	% Passing	Limits
19.0mm	100	
13.2mm	100	
9.5mm	99	
6.7mm	99	
4.75mm	98	
2.36mm	96	
1.18mm	85	
600µm	62	
425µm	49	
300µm	37	
150µm	28	
75µm	24	

Chart



Comments

Results relate only to the items tested/sampled.

CHADWICK GEOTECHNICS

Dandenong South
ACN 143 009 330
25 Metcalf Street
DANDENONG SOUTH, VIC 3175

Ph: + 61 3 8796 7900
Fax: +61 3 9706 9431

Report No: MAT:S25DS-07632/1
Issue No: 1

Material Test Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Estate, Stage 32
Project No.: 1091938.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025 – Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: M. Di Meglio
(Practice Lead - Technical Services)
Date of Issue: 9/10/2025

Sample Details

Sample Location	
Field Sample ID	1
Date Sampled	4/08/2025
Source	Imported
Material	CH Sandy CLAY, trace gravel, high plasticity, fine to coarse grained sand
Specification	AS Grading
Sampling Method	AS1289.1.2.1 Clause 6.4 (b)
Sample ID	S25DS-07632

Other Test Results

Description	Method	Result	Limits
Moisture Content (%)	AS 1289.2.1.1	20.4	
Date Tested		21/08/2025	
Sample History	AS 1289.1.1	Oven-Dried	
Preparation	AS 1289.1.1	Dry Sieved	
Linear Shrinkage (%)	AS 1289.3.4.1	12.5	
Mould Length (mm)		250	
Crumbling		No	
Curling		Yes	
Cracking		No	
Liquid Limit (%)	AS 1289.3.1.2	55	
Plastic Limit (%)	AS 1289.3.2.1	22	
Plasticity Index (%)	AS 1289.3.3.1	33	
Date Tested		8/09/2025	

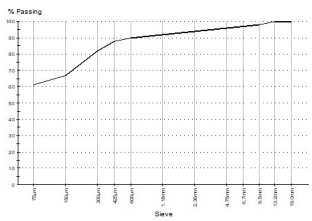
Particle Size Distribution

Method: AS 1289.3.6.1
Drying By: Oven
Date Tested: 25/08/2025

Note: Sample Washed

Sieve Size	% Passing	Limits
19.0mm	100	
13.2mm	100	
9.5mm	98	
6.7mm	97	
4.75mm	96	
2.36mm	94	
1.18mm	92	
600µm	90	
425µm	88	
300µm	82	
150µm	67	
75µm	61	

Chart



Comments

Results relate only to the items tested/sampled.

Appendix E Controlled fill certificate

CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Riverfield Square Estate Stage 32
Lots 3203 to 3234.

Chadwick Geotechnics REF: 1091938.032v1

CLIENT : Greenridge Properties Pty Ltd
P.O Box 4136
Dandenong South Vic 3164

DATE: 28 November 2025

SUMMARY

Chadwick Geotechnics Pty Ltd conducted, Level 1 inspection and testing, in accordance with Section 8.2 Level 1 inspection and Testing *AS3798-2007, Guidelines on earthworks for commercial and residential developments,* during the filling of the site.

So far as can be determined, the fill was placed in accordance with the Specification that required a minimum density ratio of 95% of HILF Density (AS1289.5.7.1) to be achieved.

LIMITATIONS

This Certificate has been commissioned for the filling of the area mentioned above and is based on the site conditions present at the time of the inspections (6 June 2025 to 7 August 2025). No responsibility or liability will be accepted for the use of this report for any purpose other than that for which Chadwick Geotechnics Pty Ltd was engaged, or where there has been a change in the nature of the project or the site conditions since the site testing.

Chadwick Geotechnics Pty Ltd

Robert Barden
Project Manager

Michael Di Meglio
Project Director

CHADWICK
GEOTECHNICS