



REPORT

Level 1 Geotechnical Inspection and Testing Authority Services

**Riverfield Square Estate Stage 21
Lots 2101 to 2164**

Prepared for:

Greenridge Properties Pty Ltd

27 November 2024

Our Ref: 1091938.021.v1

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Document Control

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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 21 of the Riverfield Square Estate in Clyde North between 28 May 2024 and 18 September 2024. The project is referred to as 'Stage 21' herein.

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."

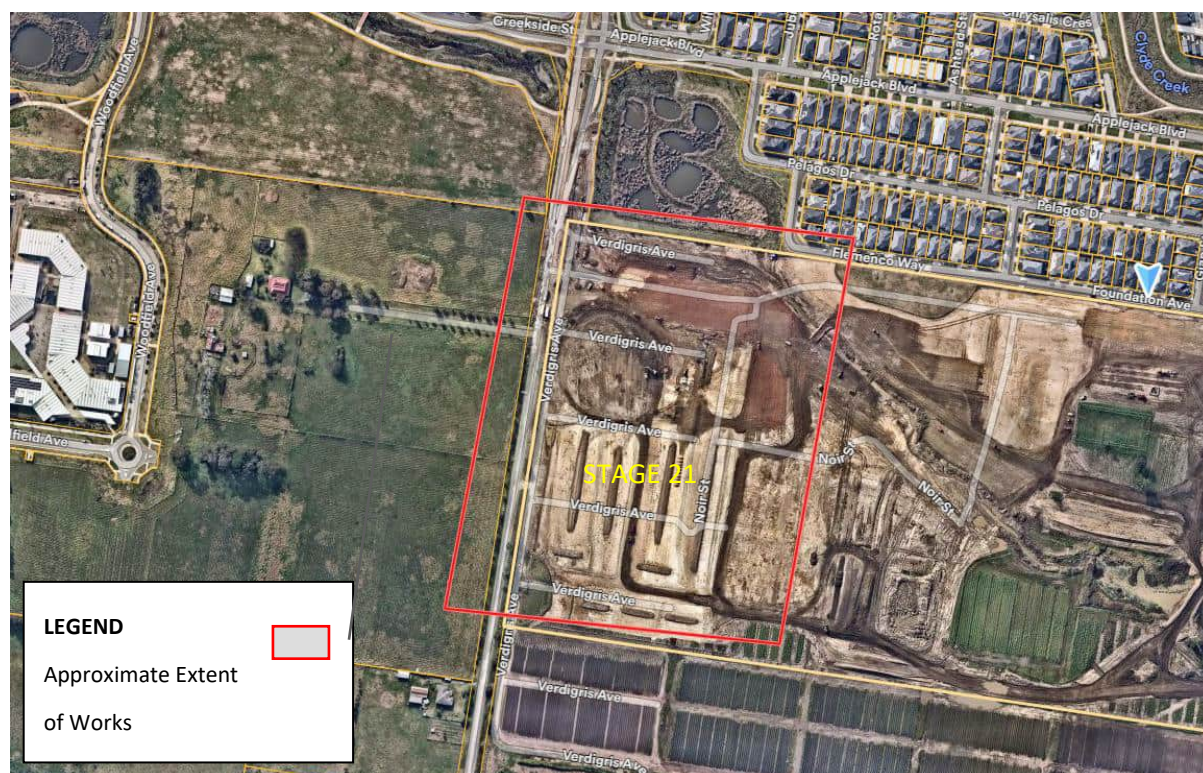
2 Project details

2.1 Location

The Stage 21 site is located to the East of Tuckers Road and North of Ballarto Rd. Stages 22 and 23 are within the same development area.

The included works are shown on the Site Plan in **Appendices A**. **Figure 2.1** below is an extract from Nearmap taken at the time of writing this report.

Figure 2.1: Extract from Nearmap



2.2 Roles

The organisations and their roles are presented in Table 2.1 below,

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 was conducted 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
May 2024	28,29, 30, 31
June 2024	1, 3, 4, 5, 6, 7, 8, 13, 17, 18, 19, 20, 21, 24,25, 26, 28
July 2024	3, 6, 8, 24, 31,
Aug 2024	2, 3, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16
Sep 2024	12, 17, 18

2.4 Included Areas

This report is applicable to material placed by the contractor on the residential lots within the Riverfield Square Estate Stage 21, as shown on **Figure 2.1**, with reference to Section 2.5 (Excluded Areas) of this report.

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

Project specifications were prepared by Beveridge Williams Pty Ltd for the project and presented on the drawing titled Stage 21 DWG 10-13 Rev P6, under reference 2101578, August 2022.

The works were to be conducted in general accordance with the 'Guidelines on earthworks for commercial and residential developments' of AS 3798-2007.

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 AS 3798-2007 "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).
- Frequency of testing to be in accordance with Table 8.1 of AS3798-2007.
- Finished fill surface to be surveyed prior to placement of topsoil.

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.
- Scarifying, moisture conditioning and compacting the Subgrade.
- 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 gravelly and silty clays won from the road boxing and trench excavations 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** The laboratory test certificates are attached in **Appendix D**.

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			
S24DS-03394	100	97	91	86	78	37	27	14	13
S24DS-03561	100	100	97	93	84	39	34	12	22
S24DS-04021	100	100	100	97	89	52	39	13	26
S24DS-04203	100	100	100	99	93	47	45	14	31

The laboratory test results indicated material is clay of medium 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 [BPG] 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 the 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: Silty 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 the topsoil and the wet soils that were present on site.

The subgrade inspections were performed in accordance with the Level 1 guidelines presented in AS 3798–2007 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.

As per the Specifications requirements, the subgrade was scarified in the uppermost 150mm, moisturised and compacted. Density and moisture testing of the subgrade was conducted, and the results met the specified requirements (further discussed in Section 4.5).

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

Photograph 4.2: Subgrade assessment photographs



Photograph 3: Subgrade assessed with watercart



Photograph 4: Subgrade assessment using loaded dump truck

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 Pad Foot Roller
Water cart	Volvo 25 T
Dump Trucks	Volvo
Excavator	CAT 25 T

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: Excavator used during fill construction



Photograph 7: Compactor used during fill construction



Photograph 8: Moxxy trucks used during fill construction

4.5 Density and Moisture testing

Field density and moisture content testing was undertaken progressively during the subgrade assessment and 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 AS 1289.5.7.1. 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 or 3 tests per lot – whichever requires the most tests in accordance with Type 1 Earthworks (large scale operations) as defined in Table 8.1 of the AS 3798-2007;

One hundred and forty seven (147) tests were performed during the subgrade assessment and the filling process. Ten (10) of the tests did not achieve the required density and or 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 AS 3798-2007- 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, 16 August 2024. 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 28th May 2024 and 18 September 2024. 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:



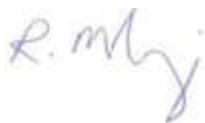
.....
Robert Barden
Project Manager

Authorised for Chadwick Geotechnics Pty Ltd by:



.....
Timothy Chadwick
Project Director

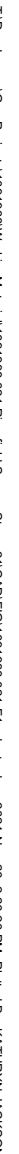
Report reviewed by:



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Robert McKenzie
Principal Geotechnical Engineer
PE0005222

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Appendix A Test Location Plan



Appendix B Hilf Density Test Summary

HILF Density Testing - Field Summary

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:W24DS00836	S24DS-03392	29/05/2024	1	1	354902	5778495	1/24.77	95.5	2 dry	Pass	
HDR:W24DS00836	S24DS-03393	29/05/2024	2	1	354900	5778442	1/ 24.77	98	2 dry	Pass	
HDR:W24DS00841	S24DS-03405	30/05/2024	1	- / 2	354904	5778430	- / 2	98.5	1.5 dry	Pass	
HDR:W24DS00841	S24DS-03406	30/05/2024	2	- / 2	354906	5778477	- / 2	99.5	2 dry	Pass	
HDR:W24DS00841	S24DS-03407	30/05/2024	3	2110 / 1	354934	5778387	2110 / 1	93	3 dry	Fail	See Retest S24DS-03458
HDR:W24DS00841	S24DS-03408	30/05/2024	4	2119 / 1	354923	5778439	2119 / 1	93.5	2 dry	Fail	See Retest S24DS-03459
HDR:W24DS00841	S24DS-03409	30/05/2024	5	2101	354945	5778450	2101	97	2 dry	Pass	
HDR:W24DS00853	S24DS-03458	31/05/2024	1	2119 / 1	354934	5778387	2119 / 1	96	2.5 dry	Pass	Retest of S24DS-03407
HDR:W24DS00853	S24DS-03459	31/05/2024	4,	2110 / 1	354923	5778439	2110 / 1	96.5	1.5 dry	Pass	Retest of S24DS-03408
HDR:W24DS00854	S24DS-03460	1/06/2024	1		354946	5778363	24.853	96.5	1.5 dry	Pass	
HDR:W24DS00854	S24DS-03461	1/06/2024	2		354956	5778399	23.985	99.5	0 wet	Pass	
HDR:W24DS00854	S24DS-03462	1/06/2024	3		354969	5778447	23.116	95	2 dry	Pass	
HDR:W24DS00854	S24DS-03463	1/06/2024	4		354940	5778367	24.713	100	1 dry	Pass	
HDR:W24DS00854	S24DS-03464	1/06/2024	5		354948	5778433	23.605	105.5	3.5 dry	Fail	See Retest S24DS-3479
HDR:W24DS00854	S24DS-03465	1/06/2024	6		354913	5778452	23.998	99.5	0.5 dry	Pass	
HDR:W24DS00854	S24DS-03466	1/06/2024	7		354906	5778397	25.27	103.5	1.5 dry	Pass	
HDR:W24DS00857	S24DS-03479	3/06/2024	1	-	354948	5778431	-	95	2 dry	Pass	Retest of S24DS-03464
HDR:W24DS00857	S24DS-03480	3/06/2024	2	2114 / 2	354923	5778383	25.62	96.5	0.5 dry	Pass	
HDR:W24DS00857	S24DS-03481	3/06/2024	3	2117 / 2	354922	5778414	25.041	98	0 dry	Pass	
HDR:W24DS00857	S24DS-03482	3/06/2024	4	2121 / 2	354941	5778470	23.724	102.5	2 wet	Pass	
HDR:W24DS00857	S24DS-03483	3/06/2024	5	2156 / 2	355046	5778555	20.104	98	0 dry	Pass	
HDR:W24DS00857	S24DS-03484	3/06/2024	6	2108 / 2	354964	5778423	23.771	93.5	3 wet	Fail	See Retest S24DS- 03558
HDR:W24DS00857	S24DS-03485	3/06/2024	7	2111 / 2	354959	5778380	24.477	94.5	3 wet	Fail	See Retest S24DS-3518
HDR:W24DS00857	S24DS-03486	3/06/2024	8	2129 / 2	354948	5778338	25.196	96.5	2 dry	Pass	
HDR:W24DS00865	S24DS-03514	4/06/2024	1	2122 / 5	354925	5778481	23.73	96.5	0 dry	Pass	

HILF Density Testing - Field Summary

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:W24DS00865	S24DS-03515	4/06/2024	2	2118 / 3	354913	5778424	24.84	96	3 wet	Pass	
HDR:W24DS00865	S24DS-03516	4/06/2024	3	2105 / 3	354951	5778460	23.303	98	0.5 wet	Pass	
HDR:W24DS00865	S24DS-03517	4/06/2024	4	2113 / 2	354933	5778371	25.142	97.5	1.5 wet	Pass	
HDR:W24DS00865	S24DS-03518	4/06/2024	5	2111 / 2	354959	5778380	24.441	100	1 wet	Pass	Retest of S24DS-03485
HDR:W24DS00865	S24DS-03519	4/06/2024	6	2111 / 3	354954	5778376	24.611	97	0.5 wet	Pass	
HDR:W24DS00865	S24DS-03520	4/06/2024	7	2108 / 3	354963	5778419	23.772	99.5	1.5 wet	Pass	
HDR:W24DS00865	S24DS-03521	4/06/2024	8	2105 / 3	354968	5778466	23.073	95.5	1 wet	Pass	
HDR:W24DS00865	S24DS-03522	4/06/2024	9	2118 / 4	354930	5778428	24.798	97	2 wet	Pass	
HDR:W24DS00872	S24DS-03554	5/06/2024	1	2115 / 4	354908	5778386	25.917	95	2.5 wet	Pass	
HDR:W24DS00872	S24DS-03555	5/06/2024	2	2123 / 4	354925	5778497	23.898	96	1 wet	Pass	
HDR:W24DS00872	S24DS-03557	5/06/2024	4	2110 / 4	354943	5778395	24.7	95.5	3.5 wet	Fail	See Retest S24DS-03623
HDR:W24DS00872	S24DS-03558	5/06/2024	5	2108 / 2	354961	5778420	23.71	102.5	1.5 wet	Pass	Retest of S24DS-3484
HDR:W24DS00872	S24DS-03559	5/06/2024	6	2106 / 4	354953	5778450	23.7	95	2 wet	Pass	
HDR:W24DS00872	S24DS-03560	5/06/2024	7	2151 / 1	355013	5778597	20.961	100	1.5 wet	Pass	
HDR:W24DS00879	S24DS-03572	6/06/2024	1	2143 / 1	354996	5778458	22.73	96	1 wet	Pass	
HDR:W24DS00879	S24DS-03573	6/06/2024	2	2140 / 1	354987	5778411	23.05	96	0 dry	Pass	
HDR:W24DS00879	S24DS-03574	6/06/2024	3	2135 / 1	355013	5778366	22.8	104	1 dry	Pass	
HDR:W24DS00879	S24DS-03575	6/06/2024	4	2140 / 1	355013	5778414	22.44	97	0.5 wet	Pass	
HDR:W24DS00879	S24DS-03577	6/06/2024	6	2117 / 5	354923	5778408	25.4	97.5	0.5 wet	Pass	
HDR:W24DS00879	S24DS-03578	6/06/2024	7	2119 / 5	354920	5778441	24.94	96.5	2 dry	Pass	
HDR:W24DS00879	S24DS-03579	6/06/2024	8	2110 / 3	354954	5778392	24.61	98	0 wet	Pass	
HDR:W24DS00879	S24DS-03580	6/06/2024	9	2107 / 3	354956	5778435	24.23	98	0.5 wet	Pass	
HDR:W24DS00889	S24DS-03623	7/06/2024	1	2110 / 4	354945	5778396	24.68	97	0.5 wet	Pass	Retest of S24DS-03557
HDR:W24DS00889	S24DS-03624	7/06/2024	2	2152 / 2	355032	5778582	20.689	99	1 wet	Pass	
HDR:W24DS00889	S24DS-03625	7/06/2024	3	2148 / 1	355021	5778535	21.048	98	0 wet	Pass	

HILF Density Testing - Field Summary

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
DDR:W24DS00906	S24DS-03742/ 3626	8/06/2024	1	2129 / 1	354943	5778327	25.108	101.5	3.0 Wet	Pass	See Retest S24DS-04002
HDR:W24DS00890	S24DS-03627	8/06/2024	2	2137 / 2	354984	5778368	23.615	97.5	0.5 wet	Pass	
HDR:W24DS00890	S24DS-03628	8/06/2024	3	2139 / 2	354940	5778401	23.238	96.5	1 wet	Pass	
HDR:W24DS00890	S24DS-03629	8/06/2024	4	2141 / 2	354990	5778429	23.09	97.5	1 wet	Pass	
HDR:W24DS00890	S24DS-03630	8/06/2024	5	2136 / 2	355003	5778364	23.13	96	0 wet	Pass	
HDR:W24DS00890	S24DS-03631	8/06/2024	6	2142 / 2	355015	5778445	23.727	98	0.5 wet	Pass	
HDR:W24DS00915	S24DS-03808	13/06/2024	1	2120 / 6	354935	5778453	24.191	100	0.5 Wet	Pass	
HDR:W24DS00915	S24DS-03809	13/06/2024	2	2122 / 6	354934	5778479	24.786	100	0.5 wet	Pass	
HDR:W24DS00938	S24DS-03922	17/06/2024	1	2143 / 3	355010	5778450	22.88	94.5	2.5 wet	Fail	See Retest S24DS-4006
HDR:W24DS00938	S24DS-03923	17/06/2024	2	2141 / 3	355005	5778424	23.27	98	1 wet	Pass	
HDR:W24DS00938	S24DS-03924	17/06/2024	3	2138 / 3	354990	5778379	23.47	97	3 wet	Pass	
HDR:W24DS00938	S24DS-03925	17/06/2024	4	2132 / 1	354979	5774321	23.6	96.5	2.5 wet	Pass	
HDR:W24DS00938	S24DS-03926	17/06/2024	5	2105 / 6	354964	5778458	23.86	96.5	3 wet	Pass	
HDR:W24DS00938	S24DS-03927	17/06/2024	6	2108 / 6	354958	5778420	24.26	98	0.5 wet	Pass	
HDR:W24DS00938	S24DS-03929	17/06/2024	8	2151 / -	355018	5778589	21.45	97	0 wet	Pass	
HDR:W24DS00938	S24DS-03930	17/06/2024	9	2120 / 6	354922	5778457	24.84	97.5	1 wet	Pass	
HDR:W24DS00938	S24DS-03931	17/06/2024	10	2118 / 6	354934	5778430	25.02	3928,	2.5 wet	Pass	
HDR:W24DS00953	S24DS-04001	18/06/2024	1		355021	5778320	22.669	97	1 wet	Pass	
HDR:W24DS00954	S24DS-04002	18/06/2024	1	2129 / 1	354947	5778328	25.214	95.5	2.5 wet	Pass	Retest of S24DS-3626
HDR:W24DS00954	S24DS-04003	18/06/2024	2	2139 / 4	354998	5778399	23.52	98	3.5 wet	Fail	See Retest S24DS-4037
HDR:W24DS00954	S24DS-04004	18/06/2024	3	2140 / 4	355000	5778414	23.46	97	0	Pass	
HDR:W24DS00954	S24DS-04005	18/06/2024	4	2142 / 4	354996	5778444	23.32	95.5	2 wet	Pass	
HDR:W24DS00954	S24DS-04006	18/06/2024	5	2143 / 3	355010	5778453	-	99.5	0 wet	Pass	Retest of S24DS-03922
HDR:W24DS00954	S24DS-04007	18/06/2024	6	2121 / 7	354942	5778471	24.8	95.5	0.5 wet	Pass	
HDR:W24DS00954	S24DS-04008	18/06/2024	7	2131 / 2	354964	5778323	24.498	98	0 dry	Pass	

HILF Density Testing - Field Summary

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:W24DS00954	S24DS-04009	18/06/2024	8	2133 / 2	354995	5778324	23.39	98.5	0.5 dry	Pass	
HDR:W24DS00963	S24DS-04035	19/06/2024	1	2104 / 8	354965	5778477	23.79	98	1 wet	Pass	
HDR:W24DS00963	S24DS-04036	19/06/2024	2	2121 / 8	354931	5778474	24.916	100	1.5 wet	Pass	
HDR:W24DS00963	S24DS-04037	19/06/2024	3	2139 / 4	354989	5778403	-	97	2 wet	Pass	Retest of S24DS-04003
HDR:W24DS00963	S24DS-04041	19/06/2024	4	2144 / 5	355013	5778475	23.09	98	1.5 wet	Pass	
HDR:W24DS00963	S24DS-04042	19/06/2024	5	2141 / 8	355004	5778430	23.46	95.5	2 wet	Pass	
HDR:W24DS00974	S24DS-04064	20/06/2024	1	2132 / 3	354983	5778323	23.9	102	1 wet	Pass	
HDR:W24DS00974	S24DS-04065	20/06/2024	2	2150 / -	355016	5778570	21.598	100.5	1 dry	Pass	
HDR:W24DS00983	S24DS-04096	21/06/2024	1	2144 / 5	355019	5778469	23.393	97	0.5 wet	Pass	
HDR:W24DS00983	S24DS-04097	21/06/2024	2	2157 / 1	355054	5778537	20.665	101.5	0.5 wet	Pass	
HDR:W24DS00983	S24DS-04098	21/06/2024	3	2154 / 1	355065	5778582	19.86	98.5	0.5 wet	Pass	
HDR:W24DS00983	S24DS-04099	21/06/2024	4	2132 / 4	354979	5778329	24.107	100.5	1.5 wet	Pass	
HDR:W24DS00983	S24DS-04100	21/06/2024	5	2133 / 4	354997	5778328	23.819	98.5	1 wet	Pass	
HDR:W24DS00983	S24DS-04101	21/06/2024	6	2147 / 2	355027	5778524	21.421	96.5	0 wet	Pass	
HDR:W24DS00992	S24DS-04175	24/06/2024	1	2133 / FL	354994	5778334	23.967	101	0 wet	Pass	
HDR:W24DS00992	S24DS-04176	24/06/2024	2	2126 / FL	354914	5778328	26.75	100.5	0.5 dry	Pass	
HDR:W24DS00999	S24DS-04209	25/06/2024	1	2159 / 2	355067	5778582	19.89	98	0 dry	Pass	
HDR:W24DS01001	S24DS-04211	25/06/2024	1	2438 / 3	355030	5778324	22.604	100	0.5 wet	Pass	
HDR:W24DS01011	S24DS-04255	26/06/2024	1	2155/3	355067	5778559		95	0 dry	Pass	
HDR:W24DS01011	S24DS-04256	26/06/2024	2	2155/4	355057	5778565		99	0 dry	Pass	
HDR:W24DS01029	S24DS-04306	28/06/2024	1	2146 / 3	355020	5778507	21.714	97.5	0.5 dry	Pass	
HDR:W24DS01029	S24DS-04307	28/06/2024	2	2158 / 3	355048	5778526	21.359	98.5	0 dry	Pass	
HDR:W24DS01029	S24DS-04308	28/06/2024	3	2155 / 3	355054	5778569	21.359	96	0.5 dry	Pass	
HDR:W24DS01059	S24DS-04450	3/07/2024	1	2153 / -	355052	5778590	21.225	98	0 wet	Pass	

HILF Density Testing - Field Summary

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:W24DS01078	S24DS-04506	6/07/2024	1	2149 / 4	355023	5778546	22.036	99	0.5 dry	Pass	
HDR:W24DS01078	S24DS-04507	6/07/2024	2	2158 / 4	355056	5778519	-	99	0 dry	Pass	
HDR:W24DS01085	S24DS-04524	8/07/2024	1	2153 / 1	355085	5778516	21.225	102	0.5 dry	Pass	
HDR:W24DS01085	S24DS-04525	8/07/2024	2	2161 / 1	355106	5778567	19.613	97	0.5 dry	Pass	
HDR:W24DS01085	S24DS-04526	8/07/2024	3	2157 / 9	355055	5778539	21.499	98	0 dry	Pass	
HDR:W24DS01162	S24DS-04828	24/07/2024	1	2152	355040	5778572	22.547	96.5	2.5 Wet	Pass	
HDR:W24DS01202	S24DS-05005	31/07/2024	1	2146/6	355027	5778501	22.137	98	2 wet	Pass	
HDR:W24DS01219	S24DS-05074	2/08/2024	1	2153/5	355047	5778588	21.663	98.5	1.5 wet	Pass	
HDR:W24DS01219	S24DS-05075	2/08/2024	2	2154/5	355069	5778596	21.46	97	2 wet	Pass	
HDR:W24DS01219	S24DS-05076	2/08/2024	3	2145/FL	355027	5778492	23.193	100.5	2 wet	Pass	
HDR:W24DS01222	S24DS-05081	3/08/2024	1	2163/2	355103	5778577	19.827	100	0.5 wet	Pass	
HDR:W24DS01242	S24DS-05142	5/08/2024	1	2102 / 1	354953	5778508	22.823	99	2 wet	Pass	
HDR:W24DS01250	S24DS-05193	6/08/2024	1	2124 / 2	354933	5778510	23.862	98	0.5 wet	Pass	
HDR:W24DS01250	S24DS-05194	6/08/2024	2	2101 / 3	354979	5778527	22.016	103.5	0.5 wet	Pass	
HDR:W24DS01250	S24DS-05195	6/08/2024	3	2123 / 3	354936	5778500	23.731	99.5	2 wet	Pass	
HDR:W24DS01260	S24DS-05216	7/08/2024	2	2101 / 4	354979	5778523	22.383	101	2.5 wet	Pass	
HDR:W24DS01260	S24DS-05217	7/08/2024	3	2162 / 3	355099	5778569	19.09	101.5	0 dry	Pass	
HDR:W24DS01260	S24DS-05220	7/08/2024	6	2125 / 5	354934	5778527	24.428	97	0.5 dry	Pass	
DDR:W24DS01286	S24DS-05321 / 5263	8/08/2024	1	2147 / -	355010	5778519	22.245	97	5.5 Wet	Fail	See Retest S24DS-05419
DDR:W24DS01286	S24DS-05322 / 5268	8/08/2024	6	2101 / -	354969	5778519	22.979	96.5	3.5 Wet	Fail	See Retest S24DS-05420
HDR:W24DS01271	S24DS-05264	8/08/2024	2	2124 / -	354939	5778514	24.347	99	2 wet	Pass	
HDR:W24DS01271	S24DS-05266	8/08/2024	4	2123 / -	354919	5778499	24.301	100	1 wet	Pass	
HDR:W24DS01271	S24DS-05267	8/08/2024	5	2149 / -	355020	5778548	22.401	99	2 wet	Pass	
HDR:W24DS01271	S24DS-05269	8/08/2024	7	2164 / -	355103	5778595	20.364	100	0 dry	Pass	
HDR:W24DS01280	S24DS-05298	10/08/2024	1	2102 / -	354976	5778501	23.673	99	3 wet	Pass	

[illegible]

Appendix C NATA endorsed compaction laboratory reports



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:W24DS00836

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Approved Signatory: J. Lamont
(Discipline Manager - CMT)

Site Number: 12712
Date of Issue: 7/06/2024
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

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	S24DS-03392	S24DS-03393				
Field Sample ID	1	2				
Date Tested	29/05/2024	29/05/2024				
Time Tested	13:00	15:45				
E:	354902	354900				
N:	5778495	5778442				
EL:	24.770	24.770				
Layer:	1	1				

Field and Laboratory Data

Depth of Test (mm)	125	125				
Depth of Layer (mm)	150	150				
AS Sieve Size (mm)	19.0	19.0				
Oversize Wet (%)	0	0				
Field Moisture Content (%)	24.9	12.4				
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1				
Field Wet Density (t/m ³)	1.93	2.05				
Field Dry Density (t/m ³)	1.54	1.82				
Peak Converted Wet Density (t/m ³)	2.02	2.09				
Optimum Moisture Content (%)	27.0	14.5				
Compactive Effort	Standard	Standard				
Moisture Ratio (%)	92.0	84.5				
Moisture Variation (%)	2.0 dry	2.0 dry				
Hilf Density Ratio (%)	95.5	98.0				

Comments



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:W24DS00841

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Approved Signatory: J. Lamont
(Discipline Manager - CMT)

Site Number: 12712
Date of Issue: 7/06/2024

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

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	S24DS-03405	S24DS-03406	S24DS-03407	S24DS-03408	S24DS-03409	
Field Sample ID	1	2	3	4	5	
Date Tested	30/05/2024	30/05/2024	30/05/2024	30/05/2024	30/05/2024	
Time Tested	10:00	12:00	16:00	16:10	16:20	
E:	354904	354906	354936	354945	354926	
N:	5778430	5778477	5778388	5278450	5778439	
EL:	24.9	24.43	25.023	24.376	23.278	
Lot / Lift:	- / 2	- / 2	2110 / 1	2119 / 1	2101	
	Road Reserve	Road Reserve				

Field and Laboratory Data

Depth of Test (mm)	125	125	125	125	125	
Depth of Layer (mm)	150	150	150	150	150	
AS Sieve Size (mm)	19.0	19.0	19.0	19.0	19.0	
Oversize Wet (%)	0	0	0	0	0	
Field Moisture Content (%)	13.3	16.4	7.7	14.9	11.6	
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/m ³)	2.05	1.98	1.89	1.99	2.01	
Field Dry Density (t/m ³)	1.81	1.70	1.75	1.73	1.80	
Peak Converted Wet Density (t/m ³)	2.08	1.99	2.03	2.12	2.07	
Optimum Moisture Content (%)	15.0	18.5	10.5	17.0	13.5	
Compactive Effort	Standard	Standard	Standard	Standard	Standard	
Moisture Ratio (%)	88.0	89.0	73.0	87.5	84.5	
Moisture Variation (%)	1.5 dry	2.0 dry	3.0 dry	2.0 dry	2.0 dry	
Hilf Density Ratio (%)	98.5	99.5	93.0	93.5	97.0	

Comments



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:W24DS00853

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Approved Signatory: J. Lamont
(Discipline Manager - CMT)

Site Number: 12712
Date of Issue: 7/06/2024

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

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	S24DS-03458	S24DS-03459				
Field Sample ID	1	2				
Date Tested	31/05/2024	31/05/2024				
Time Tested	12:10	12:20				
E:	354934	354923				
N:	5778387	5778439				
EL:	24.996	24.235				
Lot / Lift:	2119 / 1	2110 / 1				
	Retest of S24DS-03407	Retest of S24DS-03408				

Field and Laboratory Data

Depth of Test (mm)	125	125				
Depth of Layer (mm)	150	150				
AS Sieve Size (mm)	19.0	19.0				
Oversize Wet (%)	0	0				
Field Moisture Content (%)	11.7	13.9				
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1				
Field Wet Density (t/m ³)	1.96	2.03				
Field Dry Density (t/m ³)	1.75	1.78				
Peak Converted Wet Density (t/m ³)	2.04	2.10				
Optimum Moisture Content (%)	14.0	15.5				
Compactive Effort	Standard	Standard				
Moisture Ratio (%)	82.5	90.0				
Moisture Variation (%)	2.5 dry	1.5 dry				
Hilf Density Ratio (%)	96.0	96.5				

Comments



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:W24DS00854

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Approved Signatory: J. Lamont
(Discipline Manager - CMT)

Site Number: 12712
Date of Issue: 7/06/2024

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

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: Sandy Clay

Sample Data

Sample ID	S24DS-03460	S24DS-03461	S24DS-03462	S24DS-03463	S24DS-03464	S24DS-03465
Field Sample ID	1	2	3	4	5	6
Date Tested	1/06/2024	1/06/2024	1/06/2024	1/06/2024	1/06/2024	1/06/2024
Time Tested	09:43	09:56	01:00	12:12	12:30	12:52
E:	354945.9	354956.4	354969.3	354939.9	354947.8	354913.4
N:	5778362.9	5778399.3	5778446.8	5778367.1	5778433.2	5778452.1
EL:	24.853	23.985	23.116	24.713	23.605	23.998

Field and Laboratory Data

Depth of Test (mm)	125	125	125	125	125	125
Depth of Layer (mm)	150	150	150	150	150	150
AS Sieve Size (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0	0	0
Field Moisture Content (%)	14.9	14.4	16.0	23.1	28.8	18.4
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	AS 1289.2.1.1
Field Wet Density (t/m ³)	1.98	2.01	1.93	1.93	1.81	2.01
Field Dry Density (t/m ³)	1.72	1.76	1.66	1.57	1.41	1.70
Peak Converted Wet Density (t/m ³)	2.06	2.03	2.03	1.92	1.72	2.03
Optimum Moisture Content (%)	16.5	14.5	18.0	24.0	32.5	19.0
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	90.5	100.0	89.0	96.0	89.0	98.0
Moisture Variation (%)	1.5 dry	0.0	2.0 dry	1.0 dry	3.5 dry	0.5 dry
Hilf Density Ratio (%)	96.5	99.5	95.0	100.0	105.5	99.5

Comments



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:W24DS00854

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Approved Signatory: J. Lamont
(Discipline Manager - CMT)

Site Number: 12712
Date of Issue: 7/06/2024
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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: Sandy Clay

Sample Data

Sample ID	S24DS-03466				
Field Sample ID	7				
Date Tested	1/06/2024				
Time Tested	13:20				
E:	354905.98				
N:	5778396.88				
EL:	25.270				

Field and Laboratory Data

Depth of Test (mm)	125				
Depth of Layer (mm)	150				
AS Sieve Size (mm)	19.0				
Oversize Wet (%)	0				
Field Moisture Content (%)	25.1				
Field Moisture Content Method	AS 1289.2.1.1				
Field Wet Density (t/m ³)	1.88				
Field Dry Density (t/m ³)	1.50				
Peak Converted Wet Density (t/m ³)	1.81				
Optimum Moisture Content (%)	27.0				
Compactive Effort	Standard				
Moisture Ratio (%)	93.5				
Moisture Variation (%)	1.5 dry				
Hilf Density Ratio (%)	103.5				

Comments



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:W24DS00857

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021
Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: J. Lamont
(Discipline Manager - CMT)
Date of Issue: 7/06/2024
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

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: Silty Clay

Sample Data

Sample ID	S24DS-03479	S24DS-03480	S24DS-03481	S24DS-03482	S24DS-03483	S24DS-03484
Field Sample ID	1	2	3	4	5	6
Date Tested	3/06/2024	3/06/2024	3/06/2024	3/06/2024	3/06/2024	3/06/2024
Time Tested	11:15	12:00	12:45	13:00	15:25	15:45
E:	354948	354923	354922	354941	355046	354964
N:	5778431	5778383	5778414	5778470	5778555	5778423
EL:	-	25.620	25.041	23.724	20.104	23.771
Lot / Layer:	-	2114 / 2	2117 / 2	2121 / 2	2156 / 2	2108 / 2
	Retest of S24DS-03464					

Field and Laboratory Data

Depth of Test (mm)	125	125	125	125	125	125
Depth of Layer (mm)	150	150	150	150	150	150
AS Sieve Size (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0	0	0
Field Moisture Content (%)	23.7	14.2	14.2	16.7	11.2	20.7
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	AS 1289.2.1.1
Field Wet Density (t/m ³)	1.86	2.04	2.03	2.09	2.09	1.90
Field Dry Density (t/m ³)	1.50	1.79	1.78	1.79	1.88	1.58
Peak Converted Wet Density (t/m ³)	1.95	2.11	2.08	2.04	2.14	2.03
Optimum Moisture Content (%)	26.0	15.0	14.5	14.5	11.5	18.0
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	91.5	96.5	98.5	114.5	99.0	116.5
Moisture Variation (%)	2.0 dry	0.5 dry	0.0	2.0 wet	0.0	3.0 wet
Hilf Density Ratio (%)	95.0	96.5	98.0	102.5	98.0	93.5

Comments



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:W24DS00857

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Approved Signatory: J. Lamont
(Discipline Manager - CMT)

Site Number: 12712
Date of Issue: 7/06/2024
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

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: Silty Clay

Sample Data

Sample ID	S24DS-03485	S24DS-03486				
Field Sample ID	7	8				
Date Tested	3/06/2024	3/06/2024				
Time Tested	15:50	16:00				
E:	354959	354948				
N:	5778380	57783387				
EL:	24.477	25.196				
Lot / Layer:	2111 / 2	2129 / 2				

Field and Laboratory Data

Depth of Test (mm)	125	125				
Depth of Layer (mm)	150	150				
AS Sieve Size (mm)	19.0	19.0				
Oversize Wet (%)	0	0				
Field Moisture Content (%)	22.5	8.9				
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1				
Field Wet Density (t/m ³)	1.95	2.06				
Field Dry Density (t/m ³)	1.59	1.90				
Peak Converted Wet Density (t/m ³)	2.06	2.14				
Optimum Moisture Content (%)	19.0	11.0				
Compactive Effort	Standard	Standard				
Moisture Ratio (%)	117.0	80.0				
Moisture Variation (%)	3.0 wet	2.0 dry				
Hilf Density Ratio (%)	94.5	96.5				

Comments



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:W24DS00865

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021
Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 25/11/2024
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

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	S24DS-03514	S24DS-03515	S24DS-03516	S24DS-03517	S24DS-03518	S24DS-03519
Field Sample ID	1	2	3	4	5	6
Date Tested	4/06/2024	4/06/2024	4/06/2024	4/06/2024	4/06/2024	4/06/2024
Time Tested	08:30	08:45	09:15	09:30	11:11	14:30
E:	354925	354913	354951	354933	354959	354954
N:	5778481	5778424	5778460	5778371	5778380	5778376
EL:	23.73	24.84	23.303	25.142	24.441	24.6110
Lot / Lift:	2122 / 5	2118 / 3	2105 / 3	2113 / 2	2111 / 2	2111 / 3
					Retest of S24DS-03485	

Field and Laboratory Data

Depth of Test (mm)	125	125	125	125	125	125
Depth of Layer (mm)	150	150	150	150	150	150
AS Sieve Size (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0	0	0
Field Moisture Content (%)	12.8	21.4	20.5	20.5	18.9	21.0
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	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.04	1.99	2.04	1.97	2.03	2.01
Field Dry Density (t/m ³)	1.81	1.64	1.69	1.63	1.70	1.66
Peak Converted Wet Density (t/m ³)	2.11	2.06	2.08	2.02	2.03	2.07
Optimum Moisture Content (%)	13.0	18.5	20.0	19.0	18.0	20.0
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	99.0	117.0	103.5	107.5	105.0	103.5
Moisture Variation (%)	0.0	3.0 wet	0.5 wet	1.5 wet	1.0 wet	0.5 wet
Hilf Density Ratio (%)	96.5	96.0	98.0	97.5	100.0	97.0

Comments



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:W24DS00865

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
Date of Issue: 25/11/2024
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Approved Signatory: Krushik Patel
(Senior Geotechnician)

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	S24DS-03520	S24DS-03521	S24DS-03522			
Field Sample ID	7	8	9			
Date Tested	4/06/2024	4/06/2024	4/06/2024			
Time Tested	14:40	14:50	15:00			
E:	354963	354968	354930			
N:	5778411	5778466	5778428			
EL:	23.772	23.073	24.798			
Lot / Lift:	2108 / 3	2105 / 3	2118 / 4			

Field and Laboratory Data

Depth of Test (mm)	125	125	125			
Depth of Layer (mm)	150	150	150			
AS Sieve Size (mm)	19.0	19.0	19.0			
Oversize Wet (%)	0	0	0			
Field Moisture Content (%)	20.4	24.0	19.6			
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1			
Field Wet Density (t/m ³)	2.03	1.94	2.02			
Field Dry Density (t/m ³)	1.69	1.57	1.69			
Peak Converted Wet Density (t/m ³)	2.04	2.03	2.09			
Optimum Moisture Content (%)	19.0	23.0	17.5			
Compactive Effort	Standard	Standard	Standard			
Moisture Ratio (%)	107.5	104.0	111.0			
Moisture Variation (%)	1.5 wet	1.0 wet	2.0 wet			
Hilf Density Ratio (%)	99.5	95.5	97.0			

Comments



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:W24DS00872

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021
Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: J. Lamont
(Discipline Manager - CMT)
Date of Issue: 8/06/2024
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

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 - Meridian Green
Material: Clay

Sample Data

Sample ID	S24DS-03554	S24DS-03555	S24DS-03556	S24DS-03557	S24DS-03558	S24DS-03559
Field Sample ID	1	2	3	4	5	6
Date Tested	5/06/2024	5/06/2024	5/06/2024	5/06/2024	5/06/2024	5/06/2024
Time Tested	10:00	10:10	11:20	14:30	14:45	15:00
E:	354908	354925	354976	354943	354961	354953
N:	5778386	5778497	5778610	5778395	5778420	5778450
EL:	25.917	23.898	21.797	24.70	23.71	23.70
Lot / Lift:	2115 / 4	2123 / 4	Super / 1	2110 / 4	2108 / 2	2106 / 4
					Retest of S24DS-03484	

Field and Laboratory Data

Depth of Test (mm)	125	125	125	125	125	125
Depth of Layer (mm)	150	150	150	150	150	150
AS Sieve Size (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0	0	0
Field Moisture Content (%)	20.1	19.0	16.3	22.4	22.6	20.4
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	AS 1289.2.1.1
Field Wet Density (t/m ³)	1.98	2.01	2.12	1.98	2.04	2.00
Field Dry Density (t/m ³)	1.65	1.69	1.82	1.62	1.66	1.66
Peak Converted Wet Density (t/m ³)	2.09	2.09	2.14	2.08	1.99	2.10
Optimum Moisture Content (%)	17.5	18.0	15.5	19.0	21.0	18.0
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	114.0	104.5	106.5	117.5	108.5	113.0
Moisture Variation (%)	2.5 wet	1.0 wet	1.0 wet	3.5 wet	1.5 wet	2.0 wet
Hilf Density Ratio (%)	95.0	96.0	99.0	95.5	102.5	95.0

Comments



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:W24DS00872

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Approved Signatory: J. Lamont
(Discipline Manager - CMT)

Site Number: 12712
Date of Issue: 8/06/2024
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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 - Meridian Green
Material: Clay

Sample Data

Sample ID	S24DS-03560				
Field Sample ID	7				
Date Tested	5/06/2024				
Time Tested	15:15				
E:	355013				
N:	5778597				
EL:	20.961				
Lot / Lift:	2151 / 1				

Field and Laboratory Data

Depth of Test (mm)	125				
Depth of Layer (mm)	150				
AS Sieve Size (mm)	19.0				
Oversize Wet (%)	0				
Field Moisture Content (%)	15.9				
Field Moisture Content Method	AS 1289.2.1.1				
Field Wet Density (t/m ³)	2.08				
Field Dry Density (t/m ³)	1.80				
Peak Converted Wet Density (t/m ³)	2.09				
Optimum Moisture Content (%)	14.5				
Compactive Effort	Standard				
Moisture Ratio (%)	111.5				
Moisture Variation (%)	1.5 wet				
Hilf Density Ratio (%)	100.0				

Comments



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:W24DS00879

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021
Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: J. Lamont
(Discipline Manager - CMT)
Date of Issue: 11/06/2024
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

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 - Meridian Green
Material: Clay

Sample Data

Sample ID	S24DS-03572	S24DS-03573	S24DS-03574	S24DS-03575	S24DS-03576	S24DS-03577
Field Sample ID	1	2	3	4	5	6
Date Tested	6/06/2024	6/06/2024	6/06/2024	6/06/2024	6/06/2024	6/06/2024
Time Tested	10:00	10:10	12:20	12:30	13:00	15:10
E:	354996	354987	355013	355013	354956	354923
N:	5778485	5778412	5778366	5778414	5778609	5778408
EL:	22.73	23.05	22.80	22.44	23.019	25.40
Lot / Layer:	2143 / 1	2140 / 1	2135 / 1	2140 / 1	Super Lot / 2	2117 / 5

Field and Laboratory Data

Depth of Test (mm)	125	125	125	125	125	125
Depth of Layer (mm)	150	150	150	150	150	150
AS Sieve Size (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0	0	0
Field Moisture Content (%)	20.2	18.8	18.6	19.7	14.9	21.2
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	AS 1289.2.1.1
Field Wet Density (t/m ³)	1.98	1.98	2.09	2.02	2.02	2.01
Field Dry Density (t/m ³)	1.65	1.67	1.76	1.69	1.76	1.66
Peak Converted Wet Density (t/m ³)	2.06	2.06	2.01	2.09	2.12	2.06
Optimum Moisture Content (%)	19.5	19.0	19.5	19.0	16.5	21.0
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	104.5	99.5	95.5	103.0	90.0	101.5
Moisture Variation (%)	1.0 wet	0.0	1.0 dry	0.5 wet	1.5 dry	0.5 wet
Hilf Density Ratio (%)	96.0	96.0	104.0	97.0	95.0	97.5

Comments



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:W24DS00879

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712
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Approved Signatory: J. Lamont
(Discipline Manager - CMT)
Date of Issue: 11/06/2024

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 - Meridian Green
Material: Clay

Sample Data

Sample ID	S24DS-03578	S24DS-03579	S24DS-03580			
Field Sample ID	7	8	9			
Date Tested	6/06/2024	6/06/2024	6/06/2024			
Time Tested	15:15	15:35	15:45			
E:	354920	354954	354956			
N:	5778441	5778392	5778435			
EL:	24.94	24.61	24.23			
Lot / Layer:	2119 / 5	2110 / 3	2107 / 3			

Field and Laboratory Data

Depth of Test (mm)	125	125	125			
Depth of Layer (mm)	150	150	150			
AS Sieve Size (mm)	19.0	19.0	19.0			
Oversize Wet (%)	0	0	0			
Field Moisture Content (%)	14.2	19.9	16.4			
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1			
Field Wet Density (t/m ³)	2.00	2.02	2.07			
Field Dry Density (t/m ³)	1.75	1.68	1.78			
Peak Converted Wet Density (t/m ³)	2.07	2.07	2.11			
Optimum Moisture Content (%)	16.0	19.5	16.0			
Compactive Effort	Standard	Standard	Standard			
Moisture Ratio (%)	87.0	101.0	103.0			
Moisture Variation (%)	2.0 dry	0.0	0.5 wet			
Hilf Density Ratio (%)	96.5	98.0	98.0			

Comments



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:W24DS00889

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 25/11/2024
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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 - Meridian Green
Material: Clay

Sample Data

Sample ID	S24DS-03623	S24DS-03624	S24DS-03625
Field Sample ID	1	2	3
Date Tested	7/06/2024	7/06/2024	7/06/2024
Time Tested	10:30	12:30	15:00
E:	354945	355032	355021
N:	5778396	5778582	5778535
EL:	24.68	20.689	21.048
Lot / Layer:	2110 / 4	2152 / 2	2148 / 1
	Retest of S24DS-03557		

Field and Laboratory Data

Depth of Test (mm)	125	125	125
Depth of Layer (mm)	150	150	150
AS Sieve Size (mm)	19.0	19.0	19.0
Oversize Wet (%)	0	0	0
Field Moisture Content (%)	17.9	14.9	16.5
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.03	2.07	2.02
Field Dry Density (t/m ³)	1.72	1.80	1.73
Peak Converted Wet Density (t/m ³)	2.09	2.09	2.06
Optimum Moisture Content (%)	17.5	14.0	16.5
Compactive Effort	Standard	Standard	Standard
Moisture Ratio (%)	102.5	106.0	101.0
Moisture Variation (%)	0.5 wet	1.0 wet	0.0
Hilf Density Ratio (%)	97.0	99.0	98.0

Comments



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: DDR:W24DS00906

Issue No: 1

Dry Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Approved Signatory: J. Lamont
(Discipline Manager - CMT)

Site Number: 12712
Date of Issue: 13/06/2024
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Dry Density Ratio of 95% Standard Compaction
Field Test Procedures: AS 1289.5.8.1
Laboratory Test Procedures: AS 1289.2.1.1, AS 1289.5.4.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Clay

Sample Data

Sample ID	S24DS-03742				
Field Sample ID	1				
Date Tested	8/06/2024				
Time Tested	09:50				
E:	354943				
N:	5778327				
EL:	25.108				
Lot / Layer:	2129 / 1				

Field and Laboratory Data

Sample ID	S24DS-03742				
Depth of Test (mm)	125				
Depth of Layer (mm)	150				
AS Sieve Size (mm)	19.0				
Oversize Wet (%)	0				
Oversize Dry (%)	0				
Field Moisture Content (%)	28.9				
Field Wet Density (t/m ³)	2.02				
Field Dry Density (t/m ³)	1.57				
Lab Result from Test No.	S24DS-03742				
Maximum Dry Density (t/m ³)	1.54				
Optimum Moisture Content (%)	26.0				
Compactive Effort	Standard				
Moisture Ratio (%)	111.5				
Moisture Variation	3.0 wet				
Density Ratio (%)	101.5				
Compactive Effort	Standard				

Comments



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:W24DS00890

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712
Date of Issue: 13/06/2024
Approved Signatory: J. Lamont
(Discipline Manager - CMT)
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

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	S24DS-03627	S24DS-03628	S24DS-03629	S24DS-03630	S24DS-03631
Field Sample ID	2	3	4	5	6
Date Tested	8/06/2024	8/06/2024	8/06/2024	8/06/2024	8/06/2024
Time Tested	10:10	10:20	10:30	12:25	12:40
E:	354984	354940	354990	355003	355015
N:	5778368	5778401	5778429	5778364	5778445
EL:	23.615	23.238	23.09	23.130	23.727
Lot / Layer:	2137 / 2	2139 / 2	2141 / 2	2136 / 2	2142 / 2

Field and Laboratory Data

Depth of Test (mm)	125	125	125	125	125
Depth of Layer (mm)	150	150	150	150	150
AS Sieve Size (mm)	19.0	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0	0
Field Moisture Content (%)	19.4	18.0	21.8	19.7	19.3
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/m ³)	2.02	2.04	1.98	1.99	2.04
Field Dry Density (t/m ³)	1.69	1.73	1.63	1.66	1.71
Peak Converted Wet Density (t/m ³)	2.06	2.11	2.04	2.07	2.08
Optimum Moisture Content (%)	19.0	17.0	21.0	19.5	19.0
Compactive Effort	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	103.0	105.0	104.0	101.5	102.5
Moisture Variation (%)	0.5 wet	1.0 wet	1.0 wet	0.0	0.5 wet
Hilf Density Ratio (%)	97.5	96.5	97.5	96.0	98.0

Comments



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:W24DS00915

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712
Date of Issue: 12/07/2024
Approved Signatory: B. Taseski
(Ravenhall Laboratory Manager)
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location: Clyde
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	S24DS-03808	S24DS-03809				
Field Sample ID	1	2				
Date Tested	13/06/2024	13/06/2024				
Time Tested	09:10	09:30				
E:	354935	354934				
N:	5778453	5778479				
EL:	24.191	24.786				
Lot / Layer:	2120 / 6	2122 / 6				

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 (%)	20.3	22.0				
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1				
Field Wet Density (t/m ³)	2.08	2.01				
Field Dry Density (t/m ³)	1.73	1.65				
Peak Converted Wet Density (t/m ³)	2.10	2.01				
Optimum Moisture Content (%)	19.5	21.5				
Compactive Effort	Standard	Standard				
Moisture Ratio (%)	104.0	102.5				
Moisture Variation (%)	1.0 wet	0.5 wet				
Hilf Density Ratio (%)	98.5	100.0				

Comments



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:W24DS00938

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712
Date of Issue: 12/07/2024
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Approved Signatory: B. Taseski
(Ravenhall Laboratory Manager)

Sample Details

Location: Clyde
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	S24DS-03922	S24DS-03923	S24DS-03924	S24DS-03925	S24DS-03926	S24DS-03927
Field Sample ID	1	2	3	4	5	6
Date Tested	17/06/2024	17/06/2024	17/06/2024	17/06/2024	17/06/2024	17/06/2024
Time Tested	08:30	08:40	08:50	09:00	12:30	12:50
E:	355010	355005	354990	354979	354964	354958
N:	5778450	5778424	5778379	5778421	5778458	5778420
EL:	22.88	23.27	23.47	23.60	23.86	24.26
Lot / Lift:	2143 / 3	2141 / 3	2138 / 3	2132 / 1	2105 / 6	2108 / 6

Field and Laboratory Data

Depth of Test (mm)	175	175	175	175	175	175
Depth of Layer (mm)	200	200	200	200	200	200
AS Sieve Size (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0	0	0
Field Moisture Content (%)	18.1	17.9	18.8	22.7	22.0	19.2
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	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.03	2.06	2.04	1.99	2.03	2.05
Field Dry Density (t/m ³)	1.71	1.74	1.72	1.62	1.66	1.72
Peak Converted Wet Density (t/m ³)	2.14	2.09	2.10	2.06	2.11	2.10
Optimum Moisture Content (%)	15.5	17.0	16.0	20.0	19.0	18.5
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	117.5	104.5	119.0	114.0	117.0	103.5
Moisture Variation (%)	2.5 wet	1.0 wet	3.0 wet	2.5 wet	3.0 wet	0.5 wet
Hilf Density Ratio (%)	94.5	98.0	97.0	96.5	96.5	98.0

Comments



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:W24DS00938

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021
Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712
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Approved Signatory: B. Taseski
(Ravenhall Laboratory Manager)
Date of Issue: 12/07/2024

Sample Details

Location: Clyde
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	S24DS-03928	S24DS-03929	S24DS-03930	S24DS-03931		
Field Sample ID	7	8	9	10		
Date Tested	17/06/2024	17/06/2024	17/06/2024	17/06/2024		
Time Tested	13:20	13:20	16:00	16:15		
E:	354970	355018	354922	354934		
N:	5778599	5778589	5778457	5778430		
EL:	22.721	21.450	24.84	25.02		
Lot / Lift:	Super Lot / 3	2151 / -	2120 / 6	2118 / 6		
	Retest of S24DS-03890					

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 (%)	15.3	17.6	20.2	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/m ³)	2.06	2.04	2.03	2.07		
Field Dry Density (t/m ³)	1.78	1.74	1.69	1.71		
Peak Converted Wet Density (t/m ³)	2.15	2.10	2.09	2.12		
Optimum Moisture Content (%)	15.5	17.5	19.5	18.5		
Compactive Effort	Standard	Standard	Standard	Standard		
Moisture Ratio (%)	100.5	100.0	104.5	113.0		
Moisture Variation (%)	0.0	0.0	1.0 wet	2.5 wet		
Hilf Density Ratio (%)	96.0	97.0	97.5	97.5		

Comments



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:W24DS00953

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square Estate, Stage 24
Project No.: 1091938.024

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712
Date of Issue: 12/07/2024
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Approved Signatory: B. Taseski
(Ravenhall Laboratory Manager)

Sample Details

Location: Clyde
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	S24DS-04001				
Field Sample ID	1				
Date Tested	18/06/2024				
Time Tested	16:35				
E:	355021				
N:	5778320				
EL:	22.669				
Lot / Lift:	2438 / 2				

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 (%)	21.0				
Field Moisture Content Method	AS 1289.2.1.1				
Field Wet Density (t/m ³)	2.02				
Field Dry Density (t/m ³)	1.67				
Peak Converted Wet Density (t/m ³)	2.08				
Optimum Moisture Content (%)	20.0				
Compactive Effort	Standard				
Moisture Ratio (%)	105.0				
Moisture Variation (%)	1.0 wet				
Hilf Density Ratio (%)	97.0				

Comments



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:W24DS00954

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021
Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Approved Signatory: B. Taseski
(Ravenhall Laboratory Manager)
Date of Issue: 12/07/2024

Sample Details

Location: Clyde
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	S24DS-04002	S24DS-04003	S24DS-04004	S24DS-04005	S24DS-04006	S24DS-04007
Field Sample ID	1	2	3	4	5	6
Date Tested	18/06/2024	18/06/2024	18/06/2024	18/06/2024	18/06/2024	18/06/2024
Time Tested	11:52	12:15	12:25	12:35	12:45	13:50
E:	354947	354998	35000	354996	355010	354942
N:	5778328	5778399	5778414	5778444	5778453	5778471
EL:	25.214	23.52	23.46	23.32	-	24.80
Lot / Lift:	2129 / 1	2139 / 4	2140 / 4	2142 / 4	2143 / 3	2021 / 7
	Retest of S24DS-03626				Retest of S24DS-03922	

Field and Laboratory Data

Depth of Test (mm)	175	175	175	175	175	175
Depth of Layer (mm)	200	200	200	200	200	200
AS Sieve Size (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0	0	0
Field Moisture Content (%)	21.8	19.0	18.4	18.7	17.6	17.4
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	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.00	2.02	2.04	2.01	2.08	2.02
Field Dry Density (t/m ³)	1.64	1.70	1.72	1.69	1.77	1.72
Peak Converted Wet Density (t/m ³)	2.09	2.06	2.10	2.11	2.09	2.11
Optimum Moisture Content (%)	19.0	15.5	18.5	17.0	17.5	16.5
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	115.0	121.0	99.5	111.0	100.5	103.5
Moisture Variation (%)	2.5 wet	3.5 wet	0.0	2.0 wet	0.0	0.5 wet
Hilf Density Ratio (%)	95.5	98.0	97.0	95.5	99.5	95.5

Comments



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:W24DS00954

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712
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Approved Signatory: B. Taseski
(Ravenhall Laboratory Manager)
Date of Issue: 12/07/2024

Sample Details

Location: Clyde
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	S24DS-04008	S24DS-04009			
Field Sample ID	7	8			
Date Tested	18/06/2024	18/06/2024			
Time Tested	16:15	16:25			
E:	354964	354995			
N:	5778323	57783247			
EL:	24.498	23.390			
Lot / Lift:	2131 / 2	2133 / 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 (%)	18.3	13.9			
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1			
Field Wet Density (t/m ³)	2.03	2.07			
Field Dry Density (t/m ³)	1.71	1.82			
Peak Converted Wet Density (t/m ³)	2.07	2.11			
Optimum Moisture Content (%)	18.5	14.5			
Compactive Effort	Standard	Standard			
Moisture Ratio (%)	99.5	97.5			
Moisture Variation (%)	0.0	0.5 dry			
Hilf Density Ratio (%)	98.0	98.5			

Comments



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:W24DS00963

Issue No: 1

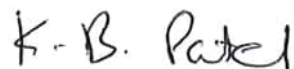
HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
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: 25/11/2024

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Sample Details

Location: Clyde
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	S24DS-04035	S24DS-04036	S24DS-04037	S24DS-04041	S24DS-04042
Field Sample ID	1	2	3	7	8
Date Tested	19/06/2024	19/06/2024	19/06/2024	19/06/2024	19/06/2024
Time Tested	10:00	12:10	14:35	15:25	15:35
E:	354965	354931	354989	355013	355004
N:	5778472	5778474	5778406	5778475	5778430
EL:	23.79	24.916	-	23.09	23.46
Lot / Lift:	2104 / 8	2121 / 8	2139 / -	2144 / 5	2141 / 8
			Retest of S24DS-04003		

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 (%)	17.4	17.6	20.7	18.1	19.6
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/m ³)	2.04	2.06	2.03	2.05	2.00
Field Dry Density (t/m ³)	1.74	1.75	1.68	1.73	1.67
Peak Converted Wet Density (t/m ³)	2.08	2.06	2.10	2.09	2.10
Optimum Moisture Content (%)	16.5	16.0	18.5	16.5	17.5
Compactive Effort	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	104.5	110.0	110.5	110.0	110.5
Moisture Variation (%)	1.0 wet	1.5 wet	2.0 wet	1.5 wet	2.0 wet
Hilf Density Ratio (%)	98.0	100.0	97.0	98.0	95.5

Comments



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:W24DS00974

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Approved Signatory: B. Taseski
(Ravenhall Laboratory Manager)
Date of Issue: 12/07/2024

Sample Details

Location: Clyde
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	S24DS-04064	S24DS-04065				
Field Sample ID	1	2				
Date Tested	20/06/2024	20/06/2024				
Time Tested	10:00	15:20				
E:	354983	355016				
N:	5778323	5778570				
EL:	23.90	21.598				
Lot / Lift:	2132 / 3	2150 / -				

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 (%)	19.1	17.8				
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1				
Field Wet Density (t/m ³)	2.18	2.04				
Field Dry Density (t/m ³)	1.83	1.73				
Peak Converted Wet Density (t/m ³)	2.13	2.04				
Optimum Moisture Content (%)	18.0	18.5				
Compactive Effort	Standard	Standard				
Moisture Ratio (%)	105.0	95.5				
Moisture Variation (%)	1.0 wet	1.0 dry				
Hilf Density Ratio (%)	102.0	100.5				

Comments



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:W24DS00983

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Approved Signatory: B. Taseski
(Ravenhall Laboratory Manager)
Date of Issue: 12/07/2024

Sample Details

Location: Clyde
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	S24DS-04096	S24DS-04097	S24DS-04098	S24DS-04099	S24DS-04100	S24DS-04101
Field Sample ID	1	2	3	4	5	6
Date Tested	21/06/2024	21/06/2024	21/06/2024	21/06/2024	21/06/2024	21/06/2024
Time Tested	08:20	10:00	11:30	11:40	12:00	14:00
E:	355019	355054	355065	354979	354997	355027
N:	5778459	5778537	5778582	5778329	5778328	5778524
EL:	23.393	20.665	19.860	24.107	23.819	21.421
Lot / Lift:	2144 / 5	2157 / 1	2154 / 1	2132 / 4	2133 / 4	2147 / 2

Field and Laboratory Data

Depth of Test (mm)	175	175	175	175	175	175
Depth of Layer (mm)	200	200	200	200	200	200
AS Sieve Size (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0	0	0
Field Moisture Content (%)	15.8	17.8	14.3	17.0	16.3	17.4
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	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.08	2.06	2.13	2.08	2.05	2.00
Field Dry Density (t/m ³)	1.80	1.75	1.86	1.78	1.76	1.70
Peak Converted Wet Density (t/m ³)	2.14	2.03	2.16	2.08	2.08	2.07
Optimum Moisture Content (%)	15.0	17.5	14.0	15.5	15.5	17.0
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	104.5	102.5	102.0	110.5	105.5	101.0
Moisture Variation (%)	0.5 wet	0.5 wet	0.5 wet	1.5 wet	1.0 wet	0.0
Hilf Density Ratio (%)	97.0	101.5	98.5	100.5	98.5	96.5

Comments



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:W24DS00992

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



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– Testing

Accreditation Number: 12719
Site Number: 12712
Date of Issue: 12/07/2024
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Approved Signatory: B. Taseski
(Ravenhall Laboratory Manager)

Sample Details

Location: Clyde
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: Sandy Clay

Sample Data

Sample ID	S24DS-04175	S24DS-04176				
Field Sample ID	1	2				
Date Tested	24/06/2024	24/06/2024				
Time Tested	09:00	09:12				
E:	354994	354914				
N:	5778334	5778328				
RL:	23.967	26.750				
Lot / Layer:	2133 / FL	2126 / FL				

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 (%)	15.6	18.5				
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1				
Field Wet Density (t/m ³)	2.13	2.03				
Field Dry Density (t/m ³)	1.84	1.71				
Peak Converted Wet Density (t/m ³)	2.11	2.02				
Optimum Moisture Content (%)	15.5	19.0				
Compactive Effort	Standard	Standard				
Moisture Ratio (%)	101.0	96.5				
Moisture Variation (%)	0.0	0.5 dry				
Hilf Density Ratio (%)	101.0	100.5				

Comments



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:W24DS00999

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.: **CG Request No.:**
TRN: **Lot No.:**



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712
Date of Issue: 12/07/2024
Approved Signatory: B. Taseski
(Ravenhall Laboratory Manager)
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Sample Details

Location: Clyde
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 - Meridian
Material: Clay

Sample Data

Sample ID	S24DS-04209				
Field Sample ID	1				
Date Tested	25/06/2024				
Time Tested	13:30				
E:	355067				
N:	5778582				
EL:	19.890				
Lot / Layer:	2159 / 2				

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 (%)	14.0				
Field Moisture Content Method	AS 1289.2.1.1				
Field Wet Density (t/m ³)	2.12				
Field Dry Density (t/m ³)	1.86				
Peak Converted Wet Density (t/m ³)	2.16				
Optimum Moisture Content (%)	14.0				
Compactive Effort	Standard				
Moisture Ratio (%)	100.0				
Moisture Variation (%)	0.0				
Hilf Density Ratio (%)	98.0				

Comments



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:W24DS01001

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square Estate, Stage 24
Project No.: 1091938.024

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Approved Signatory: J. Lamont
(Discipline Manager - CMT)

Site Number: 12712
Date of Issue: 26/11/2024
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Sample Details

Location: Clyde
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	S24DS-04211	S24DS-04212	S24DS-04213			
Field Sample ID	1	2	3			
Date Tested	25/06/2024	25/06/2024	25/06/2024			
Time Tested	12:08	12:15	12:26			
E:	355030	355034	355038			
N:	5778324	5778418	5778457			
EL:	22.604	22.793	22.384			
Lot / Layer:	2438 / 3	2443 / 3	2446 / 3			

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 (%)	15.2	130	15.7			
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1			
Field Wet Density (t/m ³)	2.09	1.98	2.07			
Field Dry Density (t/m ³)	1.81	0.86	1.79			
Peak Converted Wet Density (t/m ³)	2.09	2.03	2.11			
Optimum Moisture Content (%)	14.5	129.5	15.0			
Compactive Effort	Standard	Standard	Standard			
Moisture Ratio (%)	104.0	100.5	104.0			
Moisture Variation (%)	0.5 wet	0.5 wet	0.5 wet			
Hilf Density Ratio (%)	100.0	97.5	98.0			

Comments



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:W24DS01011

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712
Date of Issue: 12/07/2024
Approved Signatory: B. Taseski
(Ravenhall Laboratory Manager)
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Sample Details

Location: Clyde
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 - Meridian
Material: Clay

Sample Data

Sample ID	S24DS-04255	S24DS-04256				
Field Sample ID	1	2				
Date Tested	26/06/2024	26/06/2024				
E:	355067	355057				
N:	5778559	5778565				
EL:	19.904	20.422				
Lot / Layer:	2155 / 3	2155 / 4				

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 (%)	16.7	14.0				
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1				
Field Wet Density (t/m ³)	2.01	2.13				
Field Dry Density (t/m ³)	1.72	1.87				
Peak Converted Wet Density (t/m ³)	2.12	2.15				
Optimum Moisture Content (%)	17.0	14.0				
Compactive Effort	Standard	Standard				
Moisture Ratio (%)	99.5	98.5				
Moisture Variation (%)	0.0	0.0				
Hilf Density Ratio (%)	95.0	99.0				

Comments



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:W24DS01029

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



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– Testing

Accreditation Number: 12719
Site Number: 12712
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Approved Signatory: B. Taseski
(Ravenhall Laboratory Manager)
Date of Issue: 12/07/2024

Sample Details

Location: Clyde
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	S24DS-04306	S24DS-04307	S24DS-04308			
Field Sample ID	1	2	3			
Date Tested	28/06/2024	28/06/2024	28/06/2024			
Time Tested	12:00	12:10	14:00			
E:	355020	355048	355054			
N:	5778507	5778526	5778569			
EL:	21.714	21.359	21.359			
Lot / Lift:	2146 / 3	2158 / 3	2155 / 3			

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 (%)	16.6	12.5	14.0			
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1			
Field Wet Density (t/m ³)	2.04	2.05	2.00			
Field Dry Density (t/m ³)	1.75	1.82	1.75			
Peak Converted Wet Density (t/m ³)	2.08	2.08	2.09			
Optimum Moisture Content (%)	17.0	12.5	14.5			
Compactive Effort	Standard	Standard	Standard			
Moisture Ratio (%)	98.0	98.0	97.5			
Moisture Variation (%)	0.5 dry	0.0	0.5 dry			
Hilf Density Ratio (%)	97.5	98.5	96.0			

Comments



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:W24DS01059

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



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– Testing

Accreditation Number: 12719
Site Number: 12712
Date of Issue: 12/07/2024
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Approved Signatory: B. Taseski
(Ravenhall Laboratory Manager)

Sample Details

Location: Clyde
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 - Meridian
Material: Clay

Sample Data

Sample ID	S24DS-04450				
Field Sample ID	1				
Date Tested	3/07/2024				
Time Tested	10:35				
E:	355052				
N:	5778590				
EL:	21.225				
Lot / Lift:	2153 / -				

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 (%)	16.8				
Field Moisture Content Method	AS 1289.2.1.1				
Field Wet Density (t/m ³)	2.05				
Field Dry Density (t/m ³)	1.75				
Peak Converted Wet Density (t/m ³)	2.09				
Optimum Moisture Content (%)	16.5				
Compactive Effort	Standard				
Moisture Ratio (%)	101.5				
Moisture Variation (%)	0.0				
Hilf Density Ratio (%)	98.0				

Comments



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:W24DS01078

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



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– Testing

Accreditation Number: 12719
Site Number: 12712
Date of Issue: 12/07/2024
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Approved Signatory: B. Taseski
(Ravenhall Laboratory Manager)

Sample Details

Location: Clyde
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 - Meridian
Material: Clay

Sample Data

Sample ID	S24DS-04506	S24DS-04507				
Field Sample ID	1	2				
Date Tested	6/07/2024	6/07/2024				
Time Tested	08:15	08:30				
E	355023	355056				
N	5778546	5778519				
EL:	22.036	-				
Lot / Lift:	2149 / 4	2158 / 4				

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 (%)	17.5	17.3				
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1				
Field Wet Density (t/m ³)	1.98	2.07				
Field Dry Density (t/m ³)	1.69	1.76				
Peak Converted Wet Density (t/m ³)	2.00	2.08				
Optimum Moisture Content (%)	18.0	17.5				
Compactive Effort	Standard	Standard				
Moisture Ratio (%)	98.0	99.5				
Moisture Variation (%)	0.5 dry	0.0				
Hilf Density Ratio (%)	99.0	99.0				

Comments



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

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

Report No: HDR:W24DS01085

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712
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Approved Signatory: B. Taseski
(Ravenhall Laboratory Manager)
Date of Issue: 12/07/2024

Sample Details

Location: Clyde
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 - Meridian
Material: Clay

Sample Data

Sample ID	S24DS-04524	S24DS-04525	S24DS-04526			
Field Sample ID	1	2	3			
Date Tested	8/07/2024	8/07/2024	8/07/2024			
Time Tested	09:15	09:45	15:15			
E:	355085	355106	355055			
N:	5778516	5778567	5778534			
EL:	21.225	19.613	21.499			
Lot / Lift:	2153 / 1	2161 / 1	2157 / 9			

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 (%)	19.0	16.4	16.3			
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1			
Field Wet Density (t/m ³)	2.03	2.00	2.04			
Field Dry Density (t/m ³)	1.71	1.71	1.75			
Peak Converted Wet Density (t/m ³)	2.00	2.06	2.08			
Optimum Moisture Content (%)	19.5	17.0	16.5			
Compactive Effort	Standard	Standard	Standard			
Moisture Ratio (%)	97.0	97.5	99.5			
Moisture Variation (%)	0.5 dry	0.5 dry	0.0			
Hilf Density Ratio (%)	102.0	97.0	98.0			

Comments



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:W24DS01162

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021
Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 1/08/2024
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Sample Details

Location: Riverfield Square, Stage 21
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% (+- 3% of OMC)
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	S24DS-04828
Field Sample ID	1
Date Tested	24/07/2024
E	355040
N	5778572
Elevation	22.547
Lot	2152
Soil Description	Clay

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 (%)	20.2
Field Moisture Content Method	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.02
Field Dry Density (t/m ³)	1.68
Peak Converted Wet Density (t/m ³)	2.09
Optimum Moisture Content (%)	17.5
Compactive Effort	Standard
Moisture Ratio (%)	115.0
Moisture Variation (%)	2.5 wet
Hilf Density Ratio (%)	96.5

Comments



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:W24DS01202

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021
Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 5/08/2024
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Sample Details

Location: Riverfield Square, Stage 21
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	S24DS-05005
Field Sample ID	1
Date Tested	31/07/2024
Time Tested	13:10
E:	355027
N:	5778501
EL:	22.137
Layer:	6
Lot	2146
Soil Description	Clay

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 (%)	17.5
Field Moisture Content Method	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.10
Field Dry Density (t/m ³)	1.79
Peak Converted Wet Density (t/m ³)	2.15
Optimum Moisture Content (%)	15.5
Compactive Effort	Standard
Moisture Ratio (%)	112.0
Moisture Variation (%)	2.0 wet
Hilf Density Ratio (%)	98.0

Comments



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:W24DS01219

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021
Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 7/08/2024
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

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 - Meridian
Material: Clay

Sample Data

Sample ID	S24DS-05074	S24DS-05075	S24DS-05076
Field Sample ID	1	2	3
Date Tested	2/08/2024	2/08/2024	2/08/2024
Time Tested	09:30	09:45	10:00
E:	355047	355069	355027
N:	5778588	5778596	5778492
EL:	21.663	21.460	23.193
Lot / Layer:	2153 / 5	2154 / 5	2145 / FSL
Soil Description	Clay	Clay	Clay

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 (%)	20.1	18.9	21.6
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1
Field Wet Density (t/m ³)	1.98	2.02	2.05
Field Dry Density (t/m ³)	1.64	1.70	1.69
Peak Converted Wet Density (t/m ³)	2.00	2.09	2.04
Optimum Moisture Content (%)	18.5	17.0	19.5
Compactive Effort	Standard	Standard	Standard
Moisture Ratio (%)	108.5	111.0	110.0
Moisture Variation (%)	1.5 wet	2.0 wet	2.0 wet
Hilf Density Ratio (%)	98.5	97.0	100.5

Comments



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:W24DS01222

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 7/08/2024
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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 - Meridian
Material: Clay

Sample Data

Sample ID	S24DS-05081
Field Sample ID	1
Date Tested	3/08/2024
Time Tested	08:30
E:	355103
N:	5778577
EL:	19.827
Lot / Layer:	2163 / 2
Soil Description	Clay

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 (%)	18.0
Field Moisture Content Method	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.04
Field Dry Density (t/m ³)	1.73
Peak Converted Wet Density (t/m ³)	2.04
Optimum Moisture Content (%)	17.5
Compactive Effort	Standard
Moisture Ratio (%)	101.5
Moisture Variation (%)	0.5 wet
Hilf Density Ratio (%)	100.0

Comments



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:W24DS01242

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 7/08/2024
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Sample Details

Location: Riverfield Square, Stage 21, Clyde North
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 - Reserve
Material: Clay

Sample Data

Sample ID	S24DS-05142
Field Sample ID	1
Date Tested	5/08/2024
Time Tested	13:00
E:	354953
N:	5778508
EL:	22.823
Lot / Layer:	2102 / 1
Soil Description	Clay

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 (%)	18.8
Field Moisture Content Method	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.04
Field Dry Density (t/m ³)	1.72
Peak Converted Wet Density (t/m ³)	2.06
Optimum Moisture Content (%)	17.0
Compactive Effort	Standard
Moisture Ratio (%)	110.5
Moisture Variation (%)	2.0 wet
Hilf Density Ratio (%)	99.0

Comments



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:W24DS01250

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021
Order No.:
TRN:

CG Request No.:
Lot No.:



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K. B. Patel

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 12/08/2024
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Sample Details

Location: Riverfield Square, Stage 21,
Clyde North
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	S24DS-05193	S24DS-05194	S24DS-05195
Field Sample ID	1	2	3
Date Tested	6/08/2024	6/08/2024	6/08/2024
Time Tested	11:40	13:30	15:30
E:	354933	354979	354936
N:	5778510	5778527	5778500
EL:	23.862	22.016	23.731
Lot / Layer:	2124 / 2	2101 / 3	2123 / 3
Soil Description	Clay	Clay	Clay

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 (%)	18.6	17.4	18.6
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.01	2.08	2.10
Field Dry Density (t/m ³)	1.69	1.77	1.77
Peak Converted Wet Density (t/m ³)	2.04	2.01	2.10
Optimum Moisture Content (%)	18.0	17.0	16.5
Compactive Effort	Standard	Standard	Standard
Moisture Ratio (%)	102.5	102.5	113.0
Moisture Variation (%)	0.5 wet	0.5 wet	2.0 wet
Hilf Density Ratio (%)	98.0	103.5	99.5

Comments



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:W24DS01260

Issue No: 2

This report replaces all previous issues of report no 'HDR:W24DS01260'.

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 21/08/2024
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Sample Details

Location: Clyde North,
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	S24DS-05216	S24DS-05217	S24DS-05220
Field Sample ID	2	3	6
Date Tested	7/08/2024	7/08/2024	7/08/2024
Time Tested	11:20	11:45	14:20
E:	354979	355049	354934
N:	5778523	5778569	5778527
EL:	22.383	19.09	24.428
Lot / Layer:	2101 / 4	2162 / 3	2125 / 5
Soil Description	Clay	Clay	Clay

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 (%)	21.0	25.1	19.6
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.01	1.93	2.00
Field Dry Density (t/m ³)	1.66	1.54	1.67
Peak Converted Wet Density (t/m ³)	1.98	1.90	2.06
Optimum Moisture Content (%)	18.5	25.5	20.0
Compactive Effort	Standard	Standard	Standard
Moisture Ratio (%)	113.0	99.0	98.0
Moisture Variation (%)	2.5 wet	0.0	0.5 dry
Hilf Density Ratio (%)	101.0	101.5	97.0

Comments

Total number of Samples have been amended. KP



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: DDR:W24DS01286

Issue No: 1

Dry Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021
Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 13/08/2024
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location: Riverfield Square, Stage 21, Clyde North
Client Request ID:
Specification Requirements: Minimum Hilt Density Ratio of 95%
Field Test Procedures: AS 1289.5.8.1
Laboratory Test Procedures: AS 1289.2.1.1, AS 1289.5.4.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Imported
Material: Sandy Clay

Sample Data

Sample ID	S24DS-05321	S24DS-05322
Field Sample ID	1	2
Date Tested	8/08/2024	8/08/2024
Time Tested	08:45	13:20
E:	355010	354969
N:	5778519	5778519
EL:	22.245	22.979
Lot / Layer:	2147 / -	2101 / -
Soil Description	Sandy Clay	Sandy Clay

Field and Laboratory Data

Sample ID	S24DS-05321	S24DS-05322
Depth of Test (mm)	175	175
Depth of Layer (mm)	200	200
AS Sieve Size (mm)	19.0	19.0
Oversize Wet (%)	0	0
Oversize Dry (%)	0	0
Field Moisture Content (%)	30.5	23.5
Field Wet Density (t/m ³)	1.97	1.98
Field Dry Density (t/m ³)	1.51	1.60
Lab Result from Test No.	S24DS-05321	S24DS-05322
Maximum Dry Density (t/m ³)	1.56	1.66
Optimum Moisture Content (%)	25.0	20.0
Compactive Effort	Standard	Standard
Moisture Ratio (%)	121.5	117.5
Moisture Variation	5.5 wet	3.5 wet
Density Ratio (%)	97.0	96.5
Compactive Effort	Standard	Standard

Comments



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:W24DS01271

Issue No: 2

This report replaces all previous issues of report no 'HDR:W24DS01271'.

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 21/08/2024
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Sample Details

Location: Riverfield Square, Stage 21, Clyde North
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: Sandy Clay

Sample Data

Sample ID	S24DS-05264	S24DS-05266	S24DS-05267	S24DS-05269
Field Sample ID	2	4	5	7
Date Tested	8/08/2024	8/08/2024	8/08/2024	8/08/2024
Time Tested	09:10	12:55	13:05	14:24
E:	354939	354919	355020	355103
N:	5778514	5778499	5778548	5778595
EL:	24.347	24.301	22.401	20.364
Lot / Layer:	2124 / -	2123 / -	2149 / -	2164 / -
Soil Description	Sandy CLAY	Sandy CLAY	Sandy CLAY	Sandy CLAY

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 (%)	19.9	18.7	26.2	22.7
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/m ³)	2.05	2.05	1.97	1.94
Field Dry Density (t/m ³)	1.70	1.73	1.56	1.58
Peak Converted Wet Density (t/m ³)	2.06	2.05	1.98	1.94
Optimum Moisture Content (%)	18.0	18.0	24.0	23.0
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Ratio (%)	110.5	104.5	109.5	99.0
Moisture Variation (%)	2.0 wet	1.0 wet	2.0 wet	0.0
Hilf Density Ratio (%)	99.0	100.0	99.0	100.0

Comments

Total numbers of samples for this Job number have been amended. KP



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:W24DS01280

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
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Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 13/08/2024

Sample Details

Location: Riverfield Square, Stage 21, Clyde North
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: Sandy Clay

Sample Data

Sample ID	S24DS-05298	S24DS-05299	
Field Sample ID	1	2	
Date Tested	10/08/2024	10/08/2024	
Time Tested	09:21	09:51	
E:	354976	355011	
N:	5778501	5778533	
EL:	23.673	22.759	
Lot / Layer:	2102 / -	2148 / -	

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 (%)	18.7	22.3	
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	
Field Wet Density (t/m ³)	2.06	2.02	
Field Dry Density (t/m ³)	1.74	1.65	
Peak Converted Wet Density (t/m ³)	2.08	1.91	
Optimum Moisture Content (%)	15.5	23.0	
Compactive Effort	Standard	Standard	
Moisture Ratio (%)	119.0	96.0	
Moisture Variation (%)	3.0 wet	1.0 dry	
Hilf Density Ratio (%)	99.0	106.0	

Comments



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:W24DS01285

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021
Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 17/10/2024
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Sample Details

Location: Riverfield Square, Stage 21,
Clyde North
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	S24DS-05312	S24DS-05313	S24DS-05314	S24DS-05315	S24DS-05316
Field Sample ID	1	2	3	4	5
Date Tested	9/08/2024	9/08/2024	9/08/2024	9/08/2024	9/08/2024
Time Tested	08:30	10:40	12:30	12:45	15:00
E:	354965	354933	355016	354475	354927
N:	5778496	5778505	5778507	5778515	5778534
EL:	23.555	24.606	22.734	23.749	24.616
Lot / Layer:	2103 / 4	2123 / 6	2146 / 4	2102 / 5	2125 / 7
Soil Description	Clay	Clay	Clay	Clay	Clay

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 (%)	18.4	15.3	25.2	18.9	21.0
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/m ³)	2.05	2.10	1.97	2.09	2.02
Field Dry Density (t/m ³)	1.73	1.82	1.57	1.76	1.67
Peak Converted Wet Density (t/m ³)	2.12	2.13	1.99	2.11	2.05
Optimum Moisture Content (%)	16.0	14.5	24.5	17.0	20.5
Compactive Effort	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	115.0	106.0	102.5	112.5	101.5
Moisture Variation (%)	2.5 wet	1.0 wet	0.5 wet	2.0 wet	0.5 wet
Hilf Density Ratio (%)	96.5	98.5	99.0	99.0	98.5

Comments



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:W24DS01301

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



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– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 22/08/2024
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Sample Details

Location: Clyde North
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	S24DS-05418	S24DS-05419	S24DS-05420	S24DS-05421
Field Sample ID	1	2	3	4
Date Tested	12/08/2024	12/08/2024	12/08/2024	12/08/2024
Time Tested	08:45	13:50	14:00	14:15
E:	355098	355010	3548526	355103
N:	5778505	5778505	5778526	5778537
EL:	20.344	22.465	23.071	20.500
Lot / Layer:	2159 / 3	2147 / -	2101 / -	2161 / 3
		Retest of S24DS-05263	Retest of S24DS-05268	

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 (%)	30.3	22.1	27.9	22.4
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/m ³)	2.03	1.93	2.03	1.94
Field Dry Density (t/m ³)	1.56	1.58	1.59	1.59
Peak Converted Wet Density (t/m ³)	2.09	1.99	2.06	2.01
Optimum Moisture Content (%)	27.5	22.0	25.0	22.0
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Ratio (%)	110.0	99.5	111.5	101.5
Moisture Variation (%)	2.5 wet	0.0	2.5 wet	0.5 wet
Hilf Density Ratio (%)	97.0	97.0	98.5	96.5

Comments



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:W24DS01306

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021
Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 15/08/2024
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location: Riverfield Square, Stage 21, Clyde North
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 - Meridian Green
Material: Clay

Sample Data

Sample ID	S24DS-05439	S24DS-05440	S24DS-05441
Field Sample ID	1	2	3
Date Tested	13/08/2024	13/08/2024	13/08/2024
Time Tested	09:10	09:40	10:10
E:	355096	355118	355094
N:	5778521	5778582	5778520
EL:	20.847	20.012	21.017
Lot / Layer:	2160 / 5	2163 / -	2160 / 6
Soil Description	Clay	Clay	Clay

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 (%)	20.9	22.8	21.4
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1
Field Wet Density (t/m ³)	1.98	1.98	2.01
Field Dry Density (t/m ³)	1.63	1.61	1.66
Peak Converted Wet Density (t/m ³)	2.01	2.01	2.03
Optimum Moisture Content (%)	21.5	23.0	21.5
Compactive Effort	Standard	Standard	Standard
Moisture Ratio (%)	98.0	99.5	100.0
Moisture Variation (%)	0.5 dry	0.0	0.0
Hilf Density Ratio (%)	98.0	98.5	99.0

Comments



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:W24DS01326

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 16/08/2024
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location: Riverfield Square, Stage 21, Clyde North
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 - Meridian Green
Material: Clay

Sample Data

Sample ID	S24DS-05550
Field Sample ID	1
Date Tested	14/08/2024
Time Tested	11:45
E:	355095
N:	5778580
EL:	20.582
Lot / Layer:	2163 / 6
Soil Description	Clay

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 (%)	19.3
Field Moisture Content Method	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.04
Field Dry Density (t/m ³)	1.71
Peak Converted Wet Density (t/m ³)	1.99
Optimum Moisture Content (%)	20.0
Compactive Effort	Standard
Moisture Ratio (%)	97.0
Moisture Variation (%)	0.5 dry
Hilf Density Ratio (%)	102.5

Comments



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:W24DS01336

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 21/08/2024

Sample Details

Location: Clyde North
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 - Meridian Green
Material: Clay

Sample Data

Sample ID	S24DS-05580	S24DS-05581	
Field Sample ID	1	2	
Date Tested	15/08/2024	15/08/2024	
Time Tested	08:50	11:00	
E:	355116	355037	
N:	5778577	5778596	
EL:	20.747	22.210	
Lot / Layer:	2163 / 7	2152 / 6	
Soil Description	Clay	Clay	

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 (%)		19.3	
Field Moisture Content Method		AS 1289.2.1.1	
Field Wet Density (t/m ³)	2.01	2.03	
Field Dry Density (t/m ³)		1.70	
Peak Converted Wet Density (t/m ³)	2.05	1.98	
Optimum Moisture Content (%)		20.5	
Compactive Effort	Standard	Standard	
Moisture Ratio (%)		95.5	
Moisture Variation (%)	0.5 wet	1.0 dry	
Hilf Density Ratio (%)	98.5	102.5	

Comments



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:W24DS01351

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 21/08/2024
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location: Clyde North
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 - Meridian Green
Material: Clay

Sample Data

Sample ID	S24DS-05619
Field Sample ID	1
Date Tested	16/08/2024
Time Tested	10:30
E:	355112
N:	5778568
EL:	20.936
Lot / Layer:	2162 / Final
Soil Description	Clay

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 (%)	16.3
Field Moisture Content Method	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.11
Field Dry Density (t/m ³)	1.81
Peak Converted Wet Density (t/m ³)	2.09
Optimum Moisture Content (%)	16.5
Compactive Effort	Standard
Moisture Ratio (%)	98.0
Moisture Variation (%)	0.5 dry
Hilf Density Ratio (%)	101.0

Comments



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:W24DS01565

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 17/09/2024
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

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	S24DS-06556
Field Sample ID	1
Date Tested	12/09/2024
Time Tested	09:30
E:	355119
N:	5778603
EL:	19.362
Lot / Layer:	2164 / -

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 (%)	20.2
Field Moisture Content Method	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.06
Field Dry Density (t/m ³)	1.72
Peak Converted Wet Density (t/m ³)	2.08
Optimum Moisture Content (%)	18.5
Compactive Effort	Standard
Moisture Ratio (%)	110.5
Moisture Variation (%)	2.0 wet
Hilf Density Ratio (%)	99.5

Comments



Dandenong South
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25 Metcalf Street
DANDENONG SOUTH, VIC 3175

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

Report No: HDR:W24DS01607

Issue No: 1

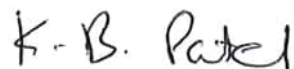
HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
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: 27/09/2024

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

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	S24DS-06734	S24DS-06735	S24DS-06736	S24DS-06737
Field Sample ID	1	2	3	4
Date Tested	17/09/2024	17/09/2024	17/09/2024	17/09/2024
Time Tested	10:30	10:45	14:30	15:15
E:	355117	354884	355111	354892
N:	5778611	5778409	5778591	5778445
EL:	20.913	26.187	25.489	25.489
Lot / Layer:	2164 / -	Tuckers Road	2164 / -	Tuckers Road

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 (%)	16.0	24.5	18.4	21.5
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/m ³)	2.06	1.97	2.09	2.05
Field Dry Density (t/m ³)	1.78	1.58	1.76	1.69
Peak Converted Wet Density (t/m ³)	2.14	1.94	2.11	1.99
Optimum Moisture Content (%)	14.0	25.0	16.5	21.5
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Ratio (%)	115.0	98.0	112.5	100.5
Moisture Variation (%)	2.0 wet	0.5 dry	2.0 wet	0.0
Hilf Density Ratio (%)	96.5	101.5	99.0	103.0

Comments



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:W24DS01621

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
– Testing

K. B. Patel

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel
(Senior Geotechnician)
Date of Issue: 27/09/2024
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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	S24DS-06797
Field Sample ID	1
Date Tested	18/09/2024
Time Tested	12:45
E:	354874
N:	5778337
EL:	27.952
Lot / Layer:	Tuckers Road

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 (%)	21.2
Field Moisture Content Method	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.00
Field Dry Density (t/m ³)	1.65
Peak Converted Wet Density (t/m ³)	1.93
Optimum Moisture Content (%)	23.5
Compactive Effort	Standard
Moisture Ratio (%)	89.0
Moisture Variation (%)	2.5 dry
Hilf Density Ratio (%)	103.5

Comments

Appendix D NATA endorsed compliance laboratory reports



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:S24DS-03394/1

Issue No: 1

Material Test Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712

Approved Signatory: B. Taseski
(Ravenhall Laboratory Manager)
Date of Issue: 12/07/2024

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Sample Details

Location Clyde
Sample Location E: 354900, N: 5778442, EL: 24.770, Layer: 1
Field Sample ID 1
Date Sampled 29/05/2024
Time Sampled 15:45
Source Imported
Material Sandy CLAY, trace gravel, brown, low plasticity
Specification AS Grading
Sampling Method AS1289.1.2.1 Clause 6.4 (b)
Sample ID S24DS-03394

Other Test Results

Description	Method	Result	Limits
Moisture Content (%)	AS 1289.2.1.1	9.2	
Date Tested		31/05/2024	
Sample History	AS 1289.1.1	Oven-dried	
Preparation	AS 1289.1.1	Dry Sieved	
Linear Shrinkage (%)	AS 1289.3.4.1	7.0	
Mould Length (mm)		250	
Crumbling		No	
Curling		No	
Cracking		Yes	
Liquid Limit (%)	AS 1289.3.1.2	27	
Plastic Limit (%)	AS 1289.3.2.1	14	
Plasticity Index (%)	AS 1289.3.3.1	13	
Date Tested		5/06/2024	

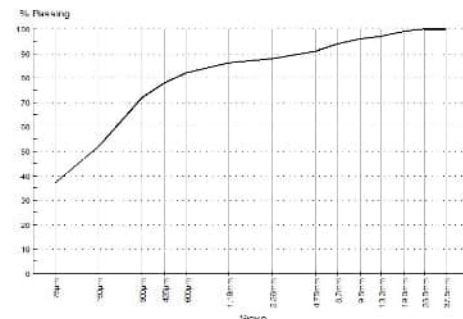
Particle Size Distribution

Method: AS 1289.3.6.1
Drying By: Oven
Date Tested: 4/06/2024

Note: Sample Washed

Sieve Size	% Passing	Limits
37.5mm	100	
26.5mm	100	
19.0mm	99	
13.2mm	97	
9.5mm	96	
6.7mm	94	
4.75mm	91	
2.36mm	88	
1.18mm	86	
600µm	82	
425µm	78	
300µm	72	
150µm	52	
75µm	37	

Chart



Comments

N/A



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:S24DS-03561/1

Issue No: 1

Material Test Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Approved Signatory: B. Taseski
(Ravenhall Laboratory Manager)
Date of Issue: 12/07/2024

Sample Details

Location Clyde
Sample Location E: 354976, N: 5778610, EL: 21.797, Lot: Super Lot, Lift: 1
Field Sample ID 1
Date Sampled 5/06/2024
Time Sampled 11:20
Source Imported - Meridian Green
Material , trace gravel, low plasticity
Specification AS Grading
Sampling Method AS1289.1.2.1 Clause 6.4 (b)
Sample ID S24DS-03561

Other Test Results

Description	Method	Result	Limits
Moisture Content (%)	AS 1289.2.1.1	14.9	
Date Tested		6/06/2024	
Sample History	AS 1289.1.1	Oven-dried	
Preparation	AS 1289.1.1	Dry Sieved	
Linear Shrinkage (%)	AS 1289.3.4.1	10.0	
Mould Length (mm)		250	
Crumbling		No	
Curling		No	
Cracking		No	
Liquid Limit (%)	AS 1289.3.1.2	34	
Plastic Limit (%)	AS 1289.3.2.1	12	
Plasticity Index (%)	AS 1289.3.3.1	22	
Date Tested		11/06/2024	

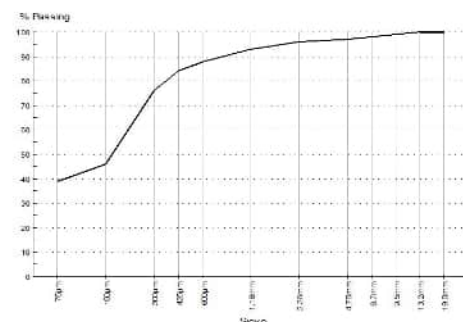
Particle Size Distribution

Method: AS 1289.3.6.1
Drying By: Oven
Date Tested: 12/06/2024

Note: Sample Washed

Sieve Size	% Passing	Limits
19.0mm	100	
13.2mm	100	
9.5mm	99	
6.7mm	98	
4.75mm	97	
2.36mm	96	
1.18mm	93	
600µm	88	
425µm	84	
300µm	76	
150µm	46	
75µm	39	

Chart



Comments

N/A



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:S24DS-04021/1

Issue No: 1

Material Test Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712

Approved Signatory: B. Taseski
(Ravenhall Laboratory Manager)
Date of Issue: 12/07/2024

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location Clyde
Sample Location
Field Sample ID 1
Date Sampled 18/06/2024
Time Sampled 12:35
Source Imported
Material Sandy CLAY, trace gravel, gray brown, medium plasticity
Specification AS Grading
Sampling Method AS1289.1.2.1 Clause 6.4 (b)
Sample ID S24DS-04021

Other Test Results

Description	Method	Result	Limits
Moisture Content (%)	AS 1289.2.1.1	20.0	
Date Tested		20/06/2024	
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	39	
Plastic Limit (%)	AS 1289.3.2.1	13	
Plasticity Index (%)	AS 1289.3.3.1	26	
Date Tested		25/06/2024	

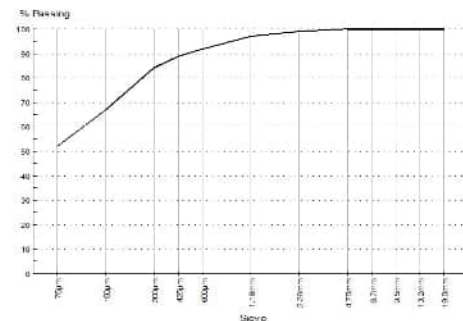
Particle Size Distribution

Method: AS 1289.3.6.1
Drying By: Oven
Date Tested: 24/06/2024

Note: Sample Washed

Sieve Size	% Passing	Limits
19.0mm	100	
13.2mm	100	
9.5mm	100	
6.7mm	100	
4.75mm	100	
2.36mm	99	
1.18mm	97	
600µm	92	
425µm	89	
300µm	84	
150µm	67	
75µm	52	

Chart



Comments

N/A



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:S24DS-04203/1

Issue No: 1

Material Test Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Riverfield Square, Stage 21
Project No.: 1091938.021

Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
– Testing

Accreditation Number: 12719
Site Number: 12712
Date of Issue: 12/07/2024
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Approved Signatory: B. Taseski
(Ravenhall Laboratory Manager)

Sample Details

Location Clyde
Sample Location E: 355028, N: 5778568
Field Sample ID 1
Date Sampled 20/06/2024
Time Sampled 10:33
Source Imported - Malvern
Material Sandy CLAY, brown, medium plasticity
Specification AS Grading
Sampling Method AS1289.1.2.1 Clause 6.4 (b)
Sample ID S24DS-04203

Other Test Results

Description	Method	Result	Limits
Moisture Content (%)	AS 1289.2.1.1	16.3	
Date Tested		25/06/2024	
Sample History	AS 1289.1.1	Oven-dried	
Preparation	AS 1289.1.1	Dry Sieved	
Linear Shrinkage (%)	AS 1289.3.4.1	14.0	
Mould Length (mm)		250	
Crumbling		No	
Curling		Yes	
Cracking		No	
Liquid Limit (%)	AS 1289.3.1.2	45	
Plastic Limit (%)	AS 1289.3.2.1	14	
Plasticity Index (%)	AS 1289.3.3.1	31	
Date Tested		28/06/2024	

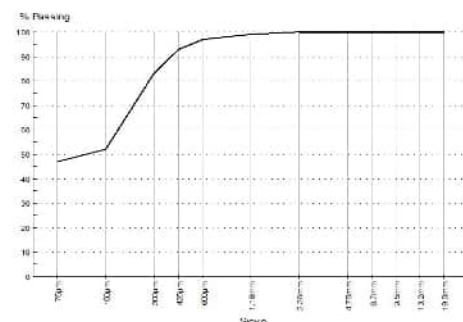
Particle Size Distribution

Method: AS 1289.3.6.1
Drying By: Oven
Date Tested: 27/06/2024

Note: Sample Washed

Sieve Size	% Passing	Limits
19.0mm	100	
13.2mm	100	
9.5mm	100	
6.7mm	100	
4.75mm	100	
2.36mm	100	
1.18mm	99	
600µm	97	
425µm	93	
300µm	83	
150µm	52	
75µm	47	

Chart



Comments

N/A

Appendix E Controlled Fill Certificate



CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Riverfield Square Estate Stage 21
Lots 2101 to 2164

Chadwick Geotechnics REF: 1091938.021v1

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

DATE: 27 November 2024

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. 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, specifically for Level 1 Inspection and Testing of the structural fill (excluding topsoil).

This report is based on the conditions present and factors affecting the soil at the time of inspection (28th May 2024 and was completed on 18th September 2024). No responsibility or liability will be accepted and Chadwick Geotechnics Pty Ltd is indemnified to the full extent permitted by law in respect of the use of this Certificate where there has been a change in the nature of the project, or in the site conditions since the site testing.

CHADWICK GEOTECHNICS PTY LTD

Robert Barden
Project Manager

Timothy Chadwick
Project Director

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