



REPORT

Level 1 Geotechnical Testing and Inspection Authority Services

**Riverfield Estate Stage 12
Lots 1201 to 1245**

Prepared for:

Greenridge Properties Pty Ltd

24 May 2023

Our Ref: 1016363.012.v1

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Document Control

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Date	Version	Description	Prepared by:	Reviewed by:	Authorised by
24-05-2023	1	1016363.012 Level One Report, Riverfield Estate Stage 12	STPA and RHB	RWMC	TJJC

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 12 of the Riverfield Estate in Clyde between 22 May 2021 and 21 March 2023.

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.”

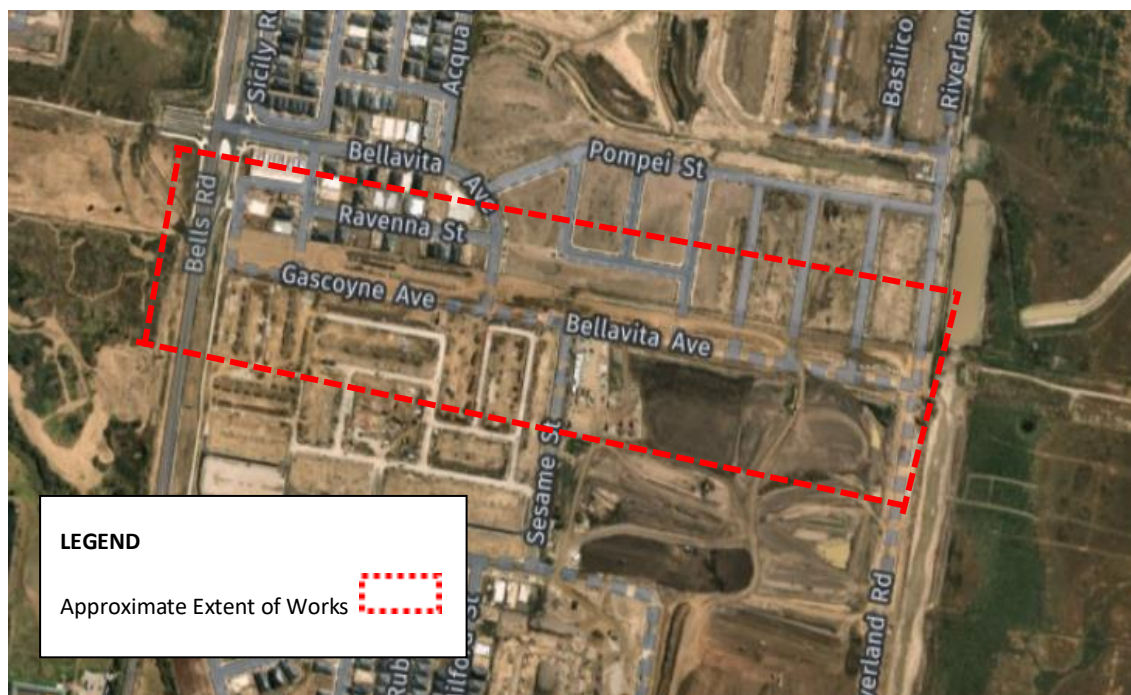
2 Project details

2.1 Location

The Riverfield Estate Stage 12 site is located in Clyde, to the North of Stage 6 and North of Gascoyne Avenue and Bellavita Avenue. The site is to the West of Riverland Road.

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

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	Charlton Degg Consultants Pty Ltd
Earthworks Contractor	Brown Property Group Pty Ltd

Note:

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 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 2021	22
September 2021	11,15,17
December 2021	7
January 2022	6
November 2022	8,9,10,12,28,29,30
December 2022	1,2,3,5,7,8,9,21
January 2023	5,6,9,10,11,12,13,17
March 2023	2,3,6,7,8,9,10,14,20,21

2.4 Included areas

This report is applicable to material placed by the contractor on the residential lots within the Riverfield Estate Stage 12 site, as shown on the Site Plan in **Appendix A**, and with reference to Section 2.5 (Excluded Areas) of this report.

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

- Lot 1201 to 1245.

2.5 Excluded areas

This report does not include fill outside the general boundary of the filled areas as shown in **Appendix A** of this report. 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 Charlton Degg Consultants for the project. 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.
- Assessment, remediation, and proof rolling of subgrade.
- Geotechnical compliance testing of the soils used for fill, and,
- Placement and compaction of engineered fill.

4.2 Fill material

Material used for the construction of the fill comprised of local gravelly clays, sandy clays and silty clays won from the road boxing and trench excavations on this and the surrounding sites.

Sample taken from the site stockpiles comprising local material used for fill was 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 C**.

Table 4.1: Compliance Test Results 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			
S22DS-08875	100	100	98	94	83	51	43	15	28
S22DS-09498	100	100	100	99	79	28	37	11	26
S22DS-09499	100	98	94	88	81	47	45	16	29
S22DS-09650	90	87	84	77	70	59	63	29	34
S22DS-09656	100	98	97	92	74	36	26	11	15
S22DS-09955	100	100	99	99	98	90	29	17	12
S22DS-09909	100	93	88	73	63	48	47	34	13
S23DS-00037	100	99	95	89	80	42	25	10	15
S23DS-00195	100	99	95	91	80	51	35	14	21

The laboratory test results indicated material is clay of medium to high 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 fill material was not tested for classification of 'Fill Material' as defined in EPA Publication IWRG621. Environmental testing is not within Chadwick Geotechnics scope.

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

Below photographs of typical materials used during construction.

Photograph 4.1: Photographs of the material used on site



4.3 Subgrade Assessment / Proof Roll

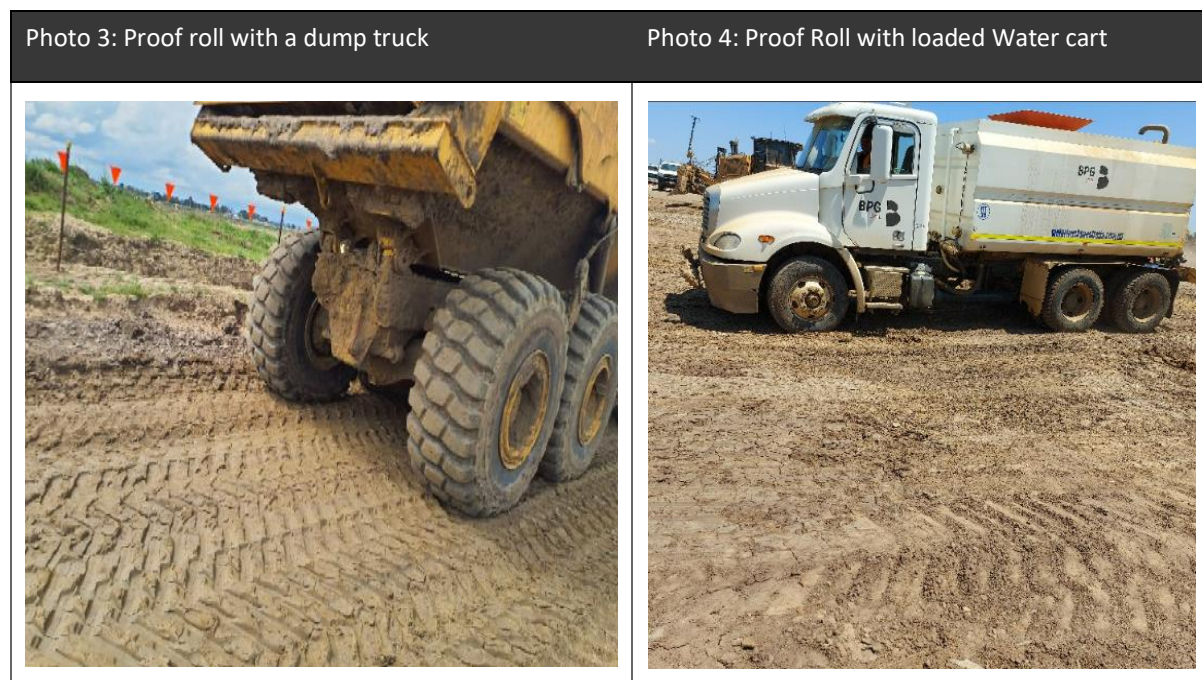
The Subgrade of the site was progressively assessed during the period Chadwick Geotechnics personnel were on site.

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.

Below photographs of the subgrade assessment phase at the project.

Photograph 4.2: Subgrade assessment photographs



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	Caterpillar Bulldozer & Caterpillar Grader
Pad foot roller	Caterpillar compactor & Pad-Foot Roller
Water cart	Off-Road Water Cart with spray bars
Dump Trucks	Articulated Dump Truck & Road Trucks

Below photographs of typical machinery on site and materials used during construction.

Photograph 4.3: General Earthwork machinery and fill construction photographs

Photo 5: Pad Foot Roller used on site



Photo 6: Excavator stripping to subgrade



Photo 7: Dozer spreading clay



Photo 8: Water cart moisture conditioning



4.5 Density testing

Field density and moisture content testing was undertaken progressively during 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-six (146) tests were performed during the filling process across the site. Four (04) 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**.

Below, photographs of field density testing conducted on site.

Photograph 4.4: Density Testing photographs

Photo 9: Nuclear Density Test



Photo 10: Pad Excavated for Nuclear Density 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.
- After our last day on site the Contractor is responsible to maintain the engineered fill in satisfactory condition. Should the fill be not maintained or protected with a sacrificial layer of topsoil or other fill, the uppermost layers of the engineered fill may deteriorate from the weather causing shrink/swell cracking and may need to be remediated prior to further construction on the site. Chadwick Geotechnics have not provided supervision since this date and are not responsible for any deterioration that may have occurred.

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 22 May 2021 and 21 March 2023. 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:



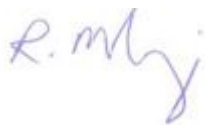
.....
Robert Barden
Project Manager

Authorised for Chadwick Geotechnics Pty Ltd by:



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Timothy Chadwick
Project Director

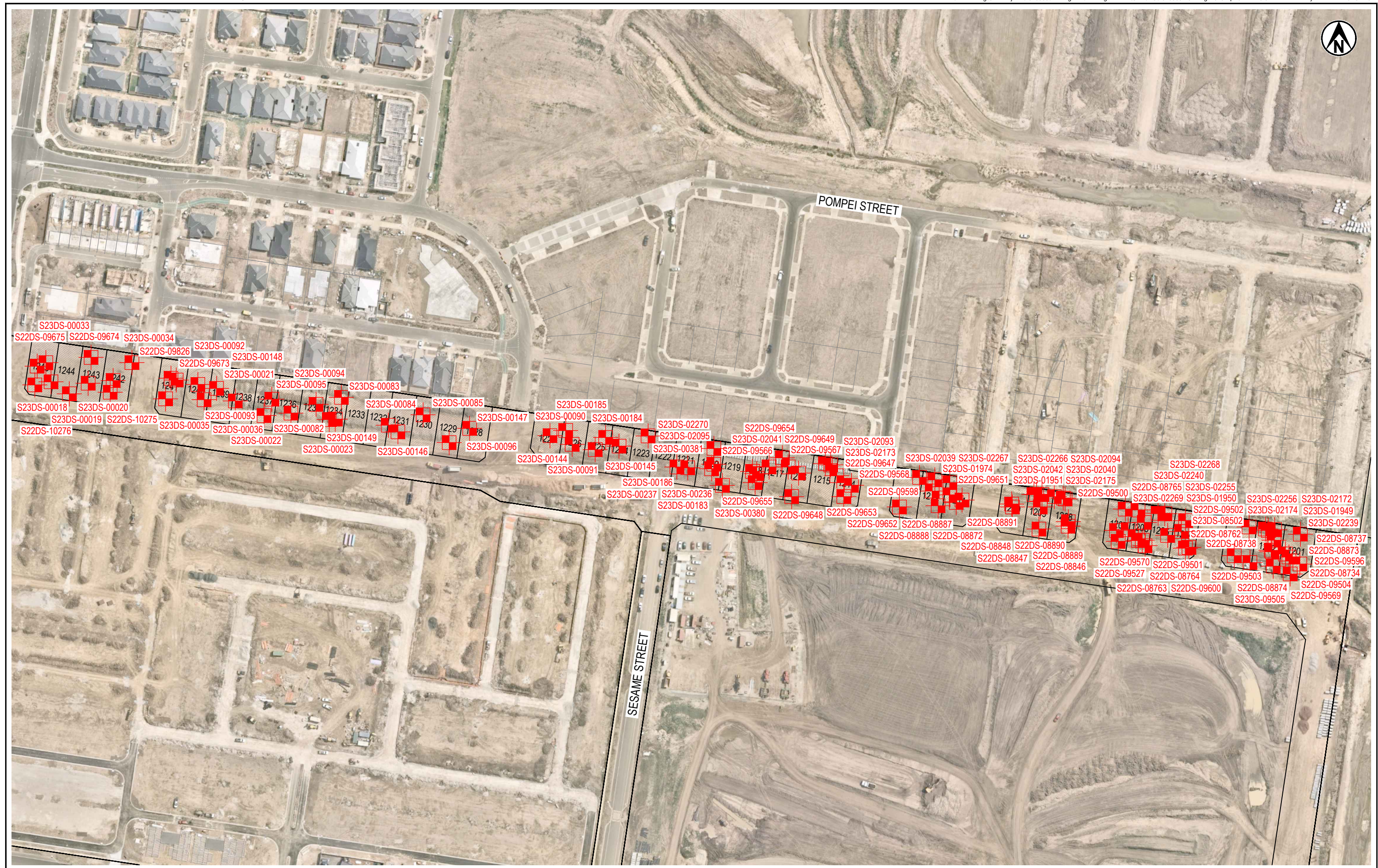
Report reviewed by:



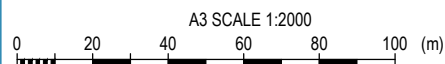
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Robert McKenzie
Senior Associate Geotechnical Engineer
PE0005222

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Appendix A Test Location Plan



NOTES:
1. AERIAL IMAGE SOURCED FROM NEARMAP. COPYRIGHT NEARMAP PTY LTD. IMAGERY DATE: 15/02/2023.



ORIGINAL IN COLOUR

PROJECT No.	1016363	
DESIGNED	STPA	Mar.23
DRAWN	KMJA	Mar.23
CHECKED		

CLIENT **GREENRIDGE PROPERTIES PTY LTD**
PROJECT **RIVERFIELD ESTATE STAGE 12**

TITLE **LEVEL ONE HILF DENSITY TESTING**
HILF DENSITY TEST LOCATION PLAN

APPROVED DATE

SCALE (A3) 1:2000 FIG No. 1016363-F01 REV 1

Appendix B Hilf Density Test Summary



Riverfield Estate Stage 12, 1016363.012

HILF Density Testing - Field Summary

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

www.chadwickgeotechnics.com.au



Report No	Sample No	Date	Test Number	Easting	Northing	Layer / RL	Density Ratio	Moisture Variation	Pass / Fail	Comments (Retest No) Compliance test taken ect
HDR:W21DS01879	S21DS-06965	22/05/2021	1	356900	5777975	9.55	99.5	0.5 wet	Pass	
HDR:W21DS01879	S21DS-06966	22/05/2021	2	356896	5777952	9.58	99.5	0 wet	Pass	
HDR:W21DS01879	S21DS-06967	22/05/2021	3	356894	5777929	9.4	101.5	0 wet	Pass	
HDR:W21DS02970	S21DS-11069	11/09/2021	1	357016	5778022	8.836	97.5	3.5 wet	Pass	
HDR:W21DS02970	S21DS-11070	11/09/2021	2	357013	5778002	8.777	98	3 wet	Pass	
HDR:W21DS02970	S21DS-11071	11/09/2021	3	357009	5777968	8.578	98	0 wet	Pass	
HDR:W21DS03000	S21DS-11186	15/09/2021	1	356952	5778046	9.109	101	0 wet	Pass	
HDR:W21DS03028	S21DS-11265	17/09/2021	2	356970	5778042	9.422	97.5	2.5 wet	Pass	
HDR:W21DS03611	S21DS-13297	7/12/2021	2	357002	5778017	9.479	96	0.5 wet	Pass	
HDR:W21DS03611	S21DS-13298	7/12/2021	3	356797	5778022	9.589	98.5	0.5 wet	Pass	
HDR:W22DS00006	S22DS-00021	6/01/2022	1	357010	5777949		100.5	0 wet	Pass	
HDR:W22DS00006	S22DS-00022	6/01/2022	2	357011	5777943		99.5	0.5 wet	Pass	
HDR:W22DS00008	S22DS-00024	7/01/2022	1	357031	5778016	8.69	100	0.5 wet	Pass	
HDR:W22DS00008	S22DS-00025	7/01/2022	2	357029	5778002	8.76	99	0.5 wet	Pass	
HDR:W22DS02184	S22DS-08734	8/11/2022	1	357321	5778286	8.037	98.5	0 wet	Pass	
HDR:W22DS02184	S22DS-08737	8/11/2022	2	357305	5778294	8.203	100	0 wet	Pass	
HDR:W22DS02184	S22DS-08738	8/11/2022	3	357293	5778287	8.3	102.5	0.5 wet	Pass	
HDR:W22DS02193	S22DS-08762	8/11/2022	1	357258	5778296	8.45	98.5	1 wet	Pass	
HDR:W22DS02193	S22DS-08763	8/11/2022	2	357245	5778303	8.571	98	2 wet	Pass	



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Report No	Sample No	Date	Test Number	Easting	Northing	Layer / RL	Density Ratio	Moisture Variation	Pass / Fail	Comments (Retest No) Compliance test taken ect
HDR:W22DS02193	S22DS-08764	8/11/2022	3	357232	5778297	8.571	100	0 wet	Pass	
HDR:W22DS02193	S22DS-08765	8/11/2022	4	357223	5778306	8.67	98	1.5 wet	Pass	
HDR:W22DS02210	S22DS-08846	9/11/2022	1	357188	5778308	8.73	95.5	2.5 wet	Pass	
HDR:W22DS02210	S22DS-08847	9/11/2022	2	357172	5778319	8.936	98	0 dry	Pass	
HDR:W22DS02210	S22DS-08848	9/11/2022	3	357156	5778319	8.921	99	0 wet	Pass	
HDR:W22DS02216	S22DS-08872	10/11/2022	1	357127	5778323	9.141	100	0 dry	Pass	
HDR:W22DS02216	S22DS-08873	10/11/2022	2	357313	5778292	8.338	100.5	0 wet	Pass	
HDR:W22DS02216	S22DS-08874	10/11/2022	3	357306	5778285	8.406	105	0.5 dry	Pass	
HDR:W22DS02224	S22DS-08887	12/11/2022	1	357113	5778320	9.156	100.5	0 dry	Pass	
HDR:W22DS02224	S22DS-08888	12/11/2022	2	357124	5778322	9.2	98.5	0.5 dry	Pass	
HDR:W22DS02224	S22DS-08889	12/11/2022	3	357188	5778311	9.15	98.5	2.5 wet	Pass	
HDR:W22DS02224	S22DS-08890	12/11/2022	4	357171	5778306	9.147	99	0.5 wet	Pass	
HDR:W22DS02224	S22DS-08891	12/11/2022	5	357156	5778321	9.21	104	0.5 dry	Pass	
HDR:W22DS02357	S22DS-09500	28/11/2022	1	357216	5778305	9.177	101	0 wet	Pass	
HDR:W22DS02357	S22DS-09501	28/11/2022	2	357231	5778300	8.905	98.5	0.5 wet	Pass	
HDR:W22DS02357	S22DS-09502	28/11/2022	3	357255	5778253	8.808	100	0 wet	Pass	
HDR:W22DS02357	S22DS-09503	28/11/2022	4	357284	5778291	8.789	98.5	0.5 dry	Pass	
HDR:W22DS02357	S22DS-09504	28/11/2022	5	357316	5778281	8.715	99	0 wet	Pass	
HDR:W22DS02357	S22DS-09505	28/11/2022	6	357304	5778308	8.622	100	0 dry	Pass	



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HDR:W22DS02362	S22DS-09527	29/11/2022	1	357217	5778299	9.125	97.5	0 dry	Pass	
HDR:W22DS02362	S22DS-09528	29/11/2022	2	357341	5778256	9.242	99	0.5 dry	Pass	
HDR:W22DS02369	S22DS-09566	30/11/2022	1	357007	5778339	9.04	101.5	0.5 wet	Pass	
HDR:W22DS02369	S22DS-09567	30/11/2022	2	357033	5778338	9.058	101	1 dry	Pass	
HDR:W22DS02369	S22DS-09568	30/11/2022	3	357063	5778331	8.966	100.5	0.5 dry	Pass	
HDR:W22DS02369	S22DS-09569	30/11/2022	4	357305	5778293	9.018	101	0 wet	Pass	
HDR:W22DS02369	S22DS-09570	30/11/2022	5	357228	5778300	9.155	96.5	0 wet	Pass	
HDR:W22DS02380	S22DS-09595	1/12/2022	1	357384	5778290	9.236	101.5	0 dry	Pass	
HDR:W22DS02380	S22DS-09596	1/12/2022	2	357315	5778290	9.209	103	2 dry	Pass	
HDR:W22DS02380	S22DS-09597	1/12/2022	3	357416	5778335	9.416	98.5	0 dry	Pass	
HDR:W22DS02380	S22DS-09598	1/12/2022	4	357111	5778366	9.555	104.5	1.5 dry	Pass	
HDR:W22DS02380	S22DS-09599	1/12/2022	5	357526	5778341	9.415	100	0 wet	Pass	
HDR:W22DS02380	S22DS-09600	1/12/2022	6	357255	5778295	9.305	104	0 dry	Pass	
HDR:W22DS02399	S22DS-09647	3/12/2022	1	357055	5778337	9.863	97	0.5 wet	Pass	
HDR:W22DS02399	S22DS-09648	3/12/2022	2	357029	5778325	9.76	100	0.5 dry	Pass	
HDR:W22DS02399	S22DS-09649	3/12/2022	3	357016	5778342	10.055	98	0 wet	Pass	
HDR:W22DS02401	S22DS-09651	2/12/2022	1	357120	5778326	9.469	99	0.5 wet	Pass	
HDR:W22DS02401	S22DS-09652	2/12/2022	2	357091	5778319	9.546	99.5	2.5 wet	Pass	
HDR:W22DS02401	S22DS-09653	2/12/2022	3	357059	5778325	9.491	100.5	1.5 dry	Pass	



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Fax: (03) 9706 9431

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HDR:W22DS02401	S22DS-09654	2/12/2022	4	357027	5778342	9.76	97.5	0.5 wet	Pass	
HDR:W22DS02401	S22DS-09655	2/12/2022	5	357008	5778333	9.706	98	0.5 wet	Pass	
HDR:W22DS02409	S22DS-09673	5/12/2022	1	356672	5778393	10.628	97	0.5 dry	Pass	
HDR:W22DS02409	S22DS-09674	5/12/2022	2	356626	5778405	10.719	94	0.5 dry	Fail	See Retest S22DS-09826
HDR:W22DS02409	S22DS-09675	5/12/2022	3	356595	5778400	11.028	99.5	0.5 dry	Pass	
HDR:W22DS02425	S22DS-09743	7/12/2022	1	357332	5778235	8.011	112.5	0 wet	Pass	
HDR:W22DS02425	S22DS-09744	7/12/2022	2	357323	5778162	7.919	108.5	0 dry	Pass	
HDR:W22DS02425	S22DS-09745	7/12/2022	3	357313	5778126	7.666	108.5	0.5 wet	Pass	
HDR:W22DS02425	S22DS-09746	7/12/2022	4	357322	5778182	8.182	113	0.5 wet	Pass	
HDR:W22DS02438	S22DS-09826	8/12/2022	1	356650	5778402	10.773	97.5	2 dry	Pass	Retest of S22DS-9674
HDR:W22DS02438	S22DS-09827	8/12/2022	2	357314	5778089	7.53	104.5	0.5 wet	Pass	
HDR:W22DS02438	S22DS-09828	8/12/2022	3	357302	5778042	7.14	106	0 wet	Pass	
HDR:W22DS02438	S22DS-09829	8/12/2022	4	357323	5778200	8.354	103	1 wet	Pass	
HDR:W22DS02438	S22DS-09830	8/12/2022	5	357328	5778164	8.431	99.5	0.5 dry	Pass	
HDR:W22DS02462	S22DS-09907	9/12/2022	1	357314	5778103	8.112	100	1 dry	Pass	
HDR:W22DS02462	S22DS-09908	9/12/2022	2	357305	5778060	7.23	105.5	0.5 wet	Pass	
HDR:W22DS02560	S22DS-10275	21/12/2022	1	356637	5778385	10.811	100.5	0.5 Dry	Pass	
HDR:W22DS02560	S22DS-10276	21/12/2022	2	356603	5778391	11.106	100.5	2.0 Dry	Pass	
HDR:W23DS00007	S23DS-00018	5/01/2023	1	356594	5778389	11.4	100.5	0.1 wet	Pass	



Riverfield Estate Stage 12, 1016363.012

HILF Density Testing - Field Summary

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

www.chadwickgeotechnics.com.au



Report No	Sample No	Date	Test Number	Easting	Northing	Layer / RL	Density Ratio	Moisture Variation	Pass / Fail	Comments (Retest No) Compliance test taken ect
HDR:W23DS00007	S23DS-00019	5/01/2023	2	356614	5778384	11.189	101.5	1.5 dry	Pass	
HDR:W23DS00007	S23DS-00020	5/01/2023	3	356624	5778390	11.102	101	0.5 wet	Pass	
HDR:W23DS00007	S23DS-00021	5/01/2023	4	356698	5778387	10.551	100	0.5 wet	Pass	
HDR:W23DS00007	S23DS-00022	5/01/2023	5	356725	5778372	10.524	103	0.5 dry	Pass	
HDR:W23DS00007	S23DS-00023	5/01/2023	6	356763	5778369	10.289	101	1.5 dry	Pass	
HDR:W23DS00012	S23DS-00033	6/01/2022	1	356600	5778402	11.817	100.5	2.5 dry	Pass	
HDR:W23DS00012	S23DS-00034	6/01/2022	2	356639	5778392	11.316	100.5	3.0 dry	Pass	
HDR:W23DS00012	S23DS-00035	6/01/2022	3	356669	5778381	10.828	92	0.5 dry	Fail	See Retest No. S23DS-00092
HDR:W23DS00012	S23DS-00036	6/01/2022	4	356691	5778381	10.843	100.5	3.0 dry	Pass	
HDR:W23DS00026	S23DS-00082	9/01/2023	1	356741	5778373	10.528	108	3.0 dry	Pass	
HDR:W23DS00026	S23DS-00083	9/01/2023	2	356770	5778382	10.444	102.5	2.5 dry	Pass	
HDR:W23DS00026	S23DS-00084	9/01/2023	3	356797	5778366	10.242	99.5	0.5 dry	Pass	
HDR:W23DS00026	S23DS-00085	9/01/2023	4	356817	5778372	10.135	97	0	Pass	
HDR:W23DS00028	S23DS-00090	10/01/2023	1	356890	5778360	9.906	101	2.5 dry	Pass	
HDR:W23DS00028	S23DS-00091	10/01/2023	2	356916	5778352	9.651	100	0.5 dry	Pass	
HDR:W23DS00028	S23DS-00092	10/01/2023	3	356675	5778392	10.852	104.5	2.0dry	Pass	Retest of S23DS-00035
HDR:W23DS00028	S23DS-00093	10/01/2023	4	356709	5778380	10.948	100	0.5 dry	Pass	
HDR:W23DS00028	S23DS-00094	10/01/2023	5	356755	5778378	10.614	98.5	0.5 dry	Pass	
HDR:W23DS00028	S23DS-00095	10/01/2023	6	356730	5778381	10.881	96.5	0	Pass	



Riverfield Estate Stage 12, 1016363.012

HILF Density Testing - Field Summary

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Report No	Sample No	Date	Test Number	Easting	Northing	Layer / RL	Density Ratio	Moisture Variation	Pass / Fail	Comments (Retest No) Compliance test taken ect
HDR:W23DS00028	S23DS-00096	10/01/2023	7	356832	5778356	10.23	100.5	0 dry	Pass	
HDR:W23DS00047	S23DS-00144	11/01/2023	1	356903	5778355	10.084	96	0 wet	Pass	
HDR:W23DS00047	S23DS-00145	11/01/2023	2	356930	5778354	9.879	96.5	0 wet	Pass	
HDR:W23DS00047	S23DS-00146	11/01/2023	3	356803	5778362	10.418	97	0.5 dry	Pass	
HDR:W23DS00047	S23DS-00147	11/01/2023	4	356844	5778364	10.29	98	0 dry	Pass	
HDR:W23DS00047	S23DS-00148	11/01/2023	5	356687	5778389	11.254	101	0 wet	Pass	
HDR:W23DS00047	S23DS-00149	11/01/2023	6	356767	5778370	10.855	98	0	Pass	
HDR:W23DS00059	S23DS-00183	12/01/2023	1	356983	5778341	9.205	102	2.5 dry	Pass	
HDR:W23DS00059	S23DS-00184	12/01/2023	2	356922	5778359	10.33	97.5	0.5 dry	Pass	
HDR:W23DS00059	S23DS-00185	12/01/2023	3	356899	5778363	10.422	97.5	0	Pass	
HDR:W23DS00059	S23DS-00186	12/01/2023	4	356963	5778342	9.595	97.5	2.0 dry	Pass	
HDR:W23DS00076	S23DS-00236	13/01/2023	1	356989	5778331	9.552	100.5	0.5 dry	Pass	
HDR:W23DS00076	S23DS-00237	13/01/2023	2	356966	5778384	9.826	97	0.5 dry	Pass	
HDR:W23DS00111	S23DS-00380	17/01/2023	1	357009	5778338	10.145	98.5	1.5 dry	Pass	
HDR:W23DS00111	S23DS-00381	17/01/2023	2	356984	5778344	10.143	100	2.5 dry	Pass	
HDR:W23DS00601	S23DS-01949	2/03/2023	1	357307	5778306	7.859	99	0 dry	Pass	
HDR:W23DS00601	S23DS-01950	2/03/2023	2	357240	5778315	7.977	102.5	0 dry	Pass	
HDR:W23DS00601	S23DS-01951	2/03/2023	3	357180	5778325	8.217	101	0.5 wet	Pass	
HDR:W23DS00613	S23DS-01973	3/03/2023	1	357317	5778304	8.077	102	2.0 dry	Pass	



Riverfield Estate Stage 12, 1016363.012

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Report No	Sample No	Date	Test Number	Easting	Northing	Layer / RL	Density Ratio	Moisture Variation	Pass / Fail	Comments (Retest No) Compliance test taken ect
HDR:W23DS00613	S23DS-01974	3/03/2023	2	357111	5778335	8.302	98.5	1.0 wet	Pass	
HDR:W23DS00633	S23DS-02039	6/03/2023	1	357103	5778336	8.536	100	0.5 dry	Pass	
HDR:W23DS00633	S23DS-02040	6/03/2023	2	357168	5778326	8.608	99.5	0	Pass	
HDR:W23DS00633	S23DS-02041	6/03/2023	3	357024	5778347	8.901	98.5	0.5 dry	Pass	
HDR:W23DS00633	S23DS-02042	6/03/2023	4	357170	5778326	8.771	98	1.5 wet	Pass	
HDR:W23DS00647	S23DS-02091	7/03/2023	1	357002	5778351	9.211	99.5	0.5 dry	Pass	
HDR:W23DS00647	S23DS-02092	7/03/2023	2	357287	5778309	8.439	98	0 dry	Pass	
HDR:W23DS00647	S23DS-02093	7/03/2023	3	357048	5778344	9.328	98	0.5 dry	Pass	
HDR:W23DS00647	S23DS-02094	7/03/2023	4	357186	5778324	9.071	99	2.0 dry	Pass	
HDR:W23DS00647	S23DS-02095	7/03/2023	5	356984	5778353	9.65	101.5	1.5 dry	Pass	
HDR:W23DS00675	S23DS-02172	8/03/2023	1	357302	5778306	8.565	99.5	1.5 dry	Pass	
HDR:W23DS00675	S23DS-02173	8/03/2023	2	357051	5778343	9.718	98.5	0 wet	Pass	
HDR:W23DS00675	S23DS-02174	8/03/2023	3	357303	5778306	8.754	99.5	0 dry	Pass	
HDR:W23DS00675	S23DS-02175	8/03/2023	4	357185	5778324	9.365	97.5	2.0 dry	Pass	
HDR:W23DS00693	S23DS-02239	9/03/2023	1	357322	5778303	8.958	98.5	1.5 dry	Pass	
HDR:W23DS00693	S23DS-02240	9/03/2023	2	357244	5778315	8.752	96	0 wet	Pass	
HDR:W23DS00702	S23DS-02255	10/03/2023	1	357228	5778317	8.958	99.5	2.0 dry	Pass	
HDR:W23DS00702	S23DS-02256	10/03/2023	2	357292	5778308	9.435	99	2.0 dry	Pass	
HDR:W23DS00709	S23DS-02266	14/03/2023	1	357173	5778326	9.706	97	4.5 dry	Fail	See Retest S23DS-02523



Riverfield Estate Stage 12, 1016363.012

HILF Density Testing - Field Summary

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Fax: (03) 9706 9431

www.chadwickgeotechnics.com.au



Report No	Sample No	Date	Test Number	Easting	Northing	Layer / RL	Density Ratio	Moisture Variation	Pass / Fail	Comments (Retest No) Compliance test taken ect
HDR:W23DS00709	S23DS-02267	14/03/2023	2	357120	5778333	9.725	104	3.0 dry	Pass	
HDR:W23DS00709	S23DS-02268	14/03/2023	3	357226	5778344	9.084	105.5	2.0 dry	Pass	
HDR:W23DS00709	S23DS-02269	14/03/2023	4	357222	5778318	9.4	103	4.5 dry	Fail	See Retest S23DS-02524
HDR:W23DS00709	S23DS-02270	14/03/2023	5	356946	5778360	9.399	101	0 dry	Pass	
HDR:W23DS00788	S23DS-02522	20/03/2023	1	356949	5778356	9.713	99.5	2.5 dry	Pass	
HDR:W23DS00788	S23DS-02523	20/03/2023	2	357173	5778326	9.7	98	2.5 dry	Pass	Retest of S23DS-02266
HDR:W23DS00788	S23DS-02524	20/03/2023	3	357221	5778317	9.38	98.5	1.5 dry	Pass	Retest of S23DS-02269
HDR:W23DS00788	S23DS-02525	20/03/2023	4	356945	5778352	9.815	100	0 wet	Pass	
HDR:W23DS00788	S23DS-02526	20/03/2023	5	356952	5778352	10.047	96.5	0	Pass	
HDR:W23DS00802	S23DS-02571	21/03/2023	1	356947	5778353	9.652	101.5	2.5 dry	Pass	
HDR:W23DS00802	S23DS-02572	21/03/2023	2	356940	5778358	10.193	99.5	0.5 wet	Pass	
HDR:W23DS00802	S23DS-02573	21/03/2023	3	356931	5778345	11.963	100	2.5 dry	Pass	
HDR:W23DS00802	S23DS-02574	21/03/2023	4	356951	5778357	10.291	98.5	1.0 dry	Pass	

Appendix C NATA endorsed 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:W21DS01879

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 16/06/2021
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
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 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Clay

Sample Data

Sample ID	S21DS-06965	S21DS-06966	S21DS-06967		
Field Sample ID	1	2	3		
Date Tested	22/05/2021	22/05/2021	22/05/2021		
E:	356900	56896	356894		
N:	5777975	5777952	5777929		
RL:	9.55	9.58	9.40		

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 Wet Density (t/m³)	2.15	2.14	2.06		
Peak Converted Wet Density (t/m³)	2.16	2.15	2.03		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	0.5 wet	0.0	0.0		
Hilf Density Ratio (%)	99.5	99.5	101.5		

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:W21DS02970


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
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
 (Dandenong Laboratory Manager)
 Date of Issue: 16/05/2022
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Sample Details

Location:
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 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Clay

Sample Data

Sample ID	S21DS-11069	S21DS-11070	S21DS-11071		
Field Sample ID	1	2	3		
Date Tested	11/09/2021	11/09/2021	11/09/2021		
E:	357016	357013	357009		
N:	5778022	5778002	5777968		
RL / Layer:	8.836 / -	8.777 / -	8.578 / -		
Lot:	1232 - 650mm	760	1227 - 950		
Other:	-				

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 Wet Density (t/m³)	1.98	2.00	1.98		
Peak Converted Wet Density (t/m³)	2.03	2.04	2.02		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	3.5 wet	3.0 wet	0.0		
Hilf Density Ratio (%)	97.5	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:W21DS03000

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Robinson
 (Team Leader)
 Date of Issue: 16/09/2021
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Sample Details

Location: Clyde North
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 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Clay

Sample Data

Sample ID	S21DS-11186	S21DS-11187	S21DS-11188	S21DS-11189	S21DS-11190	S21DS-11191
Field Sample ID	1	2	3	4	5	6
Date Tested	15/09/2021	15/09/2021	15/09/2021	15/09/2021	15/09/2021	15/09/2021
E:	356952	356526.760	356554.771	356551.708	356565	356588.902
N:	5778046	5778055.193	5778083.062	5778101.066	5778103	5778058.537
RL / Layer:	9.109	9.384	10.953	11.171	10.64	10.986
Lot:	502	-	548	-	-	537

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 Wet Density (t/m ³)	2.03	1.98	2.02	1.99	1.97	2.00
Peak Converted Wet Density (t/m ³)	2.01	2.04	2.02	2.05	2.04	1.96
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Variation (%)	0.0	2.0 wet	2.0 wet	1.5 wet	1.5 wet	1.0 wet
Hilf Density Ratio (%)	101.0	97.0	100.0	97.0	96.5	102.0

Comments



Dandenong South
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 DANDENONG SOUTH, VIC 3175

Ph: + 61 3 8796 7900
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Report No: HDR:W21DS03000

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Robinson
 (Team Leader)
 Date of Issue: 16/09/2021
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Sample Details

Location: Clyde North
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 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Clay

Sample Data

Sample ID	S21DS-11192	S21DS-11193			
Field Sample ID	7	8			
Date Tested	15/09/2021	15/09/2021			
E:	356548	356529.975			
N:	5778069	5778061.505			
RL / Layer:	10.61	9.723			
Lot:	547	-			

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 Wet Density (t/m³)	2.01	2.00			
Peak Converted Wet Density (t/m³)	2.02	2.01			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	1.0 wet	0.5 wet			
Hilf Density Ratio (%)	99.5	99.5			

Comments



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



Report No: HDR:W21DS03028

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Robinson
 (Team Leader)
 Date of Issue: 23/09/2021
 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% (+- 3% of OMC)
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: CLAY

Sample Data

Sample ID	S21DS-11264	S21DS-11265			
Field Sample ID	1	2			
Date Tested	17/09/2021	17/09/2021			
E:	356554.607	356969.745			
N:	5778120.446	5778041.562			
RL / Layer:	9.511	9.422			

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 Wet Density (t/m³)	2.01	1.98			
Peak Converted Wet Density (t/m³)	2.02	2.04			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	2.5 wet	2.5 wet			
Hilf Density Ratio (%)	99.5	97.5			

Comments



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Ph: + 61 3 8796 7900
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Report No: HDR:W21DS03611

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Robinson
 (Team Leader)
 Date of Issue: 9/12/2021
 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% (+- 3% of OMC)
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Imported
Material: Sandy Clay

Sample Data

Sample ID	S21DS-13294	S21DS-13297	S21DS-13298		
Field Sample ID	1	4	5		
Date Tested	7/12/2021	7/12/2021	7/12/2021		
E:	356991.906	3507002	356797		
N:	5777931.323	5778017	5778022		
RL / Layer:	8.723 / -	9.479 / FSL-0.485	9.589 / FSL-0.400m		
Lot:	1217	-	-		

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 Wet Density (t/m ³)	2.00	2.02	2.08		
Peak Converted Wet Density (t/m ³)	2.10	2.10	2.11		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	4.0 wet	0.5 wet	0.5 wet		
Hilf Density Ratio (%)	95.0	96.0	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:W22DS00006


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712

Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 11/01/2022

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Sample Details

Location:
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 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Imported
Material: Silty Clay

Sample Data

Sample ID	S22DS-00021	S22DS-00022			
Field Sample ID	1	2			
Date Tested	6/01/2022	6/01/2022			
E:	357010	357011			
N:	5777949	5777943			
RL / Layer:	- / 1	- / 2			
Lot:	-	-			
Other:	-	-			

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 Wet Density (t/m³)	2.11	2.09			
Peak Converted Wet Density (t/m³)	2.10	2.10			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	0.0	0.5 wet			
Hilf Density Ratio (%)	100.5	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:W22DS00008

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: J. A. Smith
 (Senior Technician)
 Date of Issue: 11/01/2022
 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 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: CLAY

Sample Data

Sample ID	S22DS-00024	S22DS-00025			
Field Sample ID	1	2			
Date Tested	7/01/2022	7/01/2022			
Location	E 357031	E 357029			
	N 5778016	N 5778002			
	E.L 8.69	E.L 8.76			
	Layer 1	Layer 2			

Field and Laboratory Data

Depth of Test (mm)	175	175			
Depth of Layer (mm)	200	200			
Field Wet Density (t/m ³)	2.08	2.06			
Peak Converted Wet Density (t/m ³)	2.08	2.09			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	0.5 wet	0.5 wet			
Hilf Density Ratio (%)	100.0	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:W22DS02184


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 16/11/2022
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Sample Details

Location:
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: Silty Clay

Sample Data

Sample ID	S22DS-08734	S22DS-08737	S22DS-08738		
Field Sample ID	1	4	5		
Date Tested	8/11/2022	8/11/2022	8/11/2022		
Time Tested	09:00	09:10	09:25		
E:	357321.312	357304.817	357292.637		
N:	5778286.229	5778294.099	5778287.061		
EL:	8.037	8.203	8.300		
Lot:	1201	1202	1203		

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 (%)	17.9	15.9	21.0		
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)	2.05	2.11	2.10		
Field Dry Density (t/m ³)	1.74	1.82	1.74		
Peak Converted Wet Density (t/m ³)	2.08	2.12	2.04		
Optimum Moisture Content (%)	17.5	16.0	20.5		
Compactive Effort	Standard	Standard	Standard		
Moisture Ratio (%)	101.0	100.5	102.0		
Moisture Variation (%)	0.0	0.0	0.5 wet		
Hilf Density Ratio (%)	98.5	100.0	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:W22DS02193

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 16/11/2022
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
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: Silty Clay

Sample Data

Sample ID	S22DS-08762	S22DS-08763	S22DS-08764	S22DS-08765
Field Sample ID	1	2	3	4
Date Tested	8/11/2022	8/11/2022	8/11/2022	8/11/2022
Time Tested	15:00	15:20	15:30	
E:	357257.518	357245.275	357232.237	357222.555
N:	5778295.808	5778302.662	5778296.731	5778305.969
EL:	8.450	8.571	8.571	8.670
Lot:	1204	1205	1206	1207

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 (%)	17.0	18.5	18.3	18.5
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)	2.09	2.07	2.07	2.06
Field Dry Density (t/m ³)	1.78	1.75	1.75	1.74
Peak Converted Wet Density (t/m ³)	2.11	2.11	2.07	2.10
Optimum Moisture Content (%)	16.0	16.5	18.0	17.0
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Ratio (%)	105.5	112.0	101.0	109.5
Moisture Variation (%)	1.0 wet	2.0 wet	0.0	1.5 wet
Hilf Density Ratio (%)	98.5	98.0	100.0	98.0

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:W22DS02210


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712

Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 16/11/2022

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Sample Details

Location:
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: Silty Clay

Sample Data

Sample ID	S22DS-08846	S22DS-08847	S22DS-08848		
Field Sample ID	1	2	3		
Date Tested	9/11/2022	9/11/2022	9/11/2022		
Time Tested	15:25	15:35	15:49		
E:	357188	357172	357156		
N:	5778308	5778319	5778319		
EL:	8.730m	8.936m	8.921m		

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 Wet Density (t/m³)	2.01	2.10	2.11		
Peak Converted Wet Density (t/m³)	2.10	2.14	2.13		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	2.5 wet	0.0	0.0		
Hilf Density Ratio (%)	95.5	98.0	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:W22DS02216


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 16/11/2022
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Sample Details

Location:
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: Silty Clay

Sample Data

Sample ID	S22DS-08872	S22DS-08873	S22DS-08874		
Field Sample ID	1	2	3		
Client Sample ID	4	5	6		
Date Tested	10/11/2022	10/11/2022	10/11/2022		
Time Tested	09:55	10:37	10:52		
E	357127	357313	357306		
N	5778323	5778292	5778285		
EL:	9.141	8.338	8.406		
Lot	1211	1201	1202		

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 (%)	16.0	19.9	19.9		
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)	2.13	2.08	2.08		
Field Dry Density (t/m ³)	1.83	1.73	1.74		
Peak Converted Wet Density (t/m ³)	2.13	2.06	1.98		
Optimum Moisture Content (%)	16.5	20.0	20.5		
Compactive Effort	Standard	Standard	Standard		
Moisture Ratio (%)	98.5	101.0	98.0		
Moisture Variation (%)	0.0	0.0	0.5 dry		
Hilf Density Ratio (%)	100.0	100.5	105.0		

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:W22DS02224


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 16/11/2022
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Sample Details

Location: Stage 12
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 Clay
Material:

Sample Data

Sample ID	S22DS-08887	S22DS-08888	S22DS-08889	S22DS-08890	S22DS-08891
Field Sample ID	1	2	3	4	5
Date Tested	12/11/2022	12/11/2022	12/11/2022	12/11/2022	12/11/2022
Time Tested	08:00	08:10	09:00	09:15	09:30
Lot:	1212	1211	1208	1209	1210
E:	357113.232	357123.655	357188.170	357171.210	357155.521
N:	5778319.720	5778321.583	5778310.547	5778306.310	5778320.706
Elevation:	9.156	9.200	9.150	9.147	9.210

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 (%)	15.0	14.5	20.9	20.8	17.2
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.13	2.06	2.01	2.03	2.12
Field Dry Density (t/m ³)	1.85	1.80	1.66	1.68	1.81
Peak Converted Wet Density (t/m ³)	2.12	2.09	2.04	2.05	2.04
Optimum Moisture Content (%)	15.0	15.0	18.5	20.0	17.5
Compactive Effort	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	99.0	95.0	114.5	103.5	97.0
Moisture Variation (%)	0.0	0.5 dry	2.5 wet	0.5 wet	0.5 dry
Hilf Density Ratio (%)	100.5	98.5	98.5	99.0	104.0

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:W22DS02357


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 24/05/2023
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Sample Details

Location:
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: Silty Clay

Sample Data

Sample ID	S22DS-09500	S22DS-09501	S22DS-09502	S22DS-09503	S22DS-09504	S22DS-09505
Field Sample ID	1	2	3	4	5	6
Date Tested	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022
Time Tested	09:42	10:00	10:12	13:10	13:20	14:30
E:	357215.816	357230.676	357255.064	357283.590	357315.768	357304.072
N:	5778305.458	5778299.917	5778253.442	5778290.980	5778280.524	5778308
EL:	9.177	8.905	8.808	8.789	8.715	8.622
Lot / Layer:	1207 / 2	1206 / 2	1204 / 2	1203 / 3	1201 / 3	1202 / 2

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 (%)	15.3	16.7	15.8	14.0	15.8	13.5
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.15	2.12	2.13	2.12	2.14	2.12
Field Dry Density (t/m ³)	1.86	1.81	1.84	1.86	1.85	1.87
Peak Converted Wet Density (t/m ³)	2.13	2.15	2.13	2.15	2.16	2.12
Optimum Moisture Content (%)	15.5	16.5	15.5	14.5	15.5	13.5
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	100.0	102.5	101.5	97.5	101.0	98.0
Moisture Variation (%)	0.0	0.5 wet	0.0	0.5 dry	0.0	0.0
Hilf Density Ratio (%)	101.0	98.5	100.0	98.5	99.0	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:W22DS02362

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

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 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 2/12/2022
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Sample Details

Location:
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	S22DS-09527	S22DS-09528			
Field Sample ID	1	2			
Date Tested	29/11/2022	29/11/2022			
Time Tested	11:50	12:00			
E:	357216.826	357341.253			
N:	5778299.256	5778256.034			
EL:	9.125	9.242			
Lot / Layer:	1207 / 3	1205 / 3			

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 (%)	14.0	13.9			
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1			
Field Wet Density (t/m ³)	2.11	2.11			
Field Dry Density (t/m ³)	1.85	1.85			
Peak Converted Wet Density (t/m ³)	2.17	2.13			
Optimum Moisture Content (%)	14.0	14.5			
Compactive Effort	Standard	Standard			
Moisture Ratio (%)	99.5	96.0			
Moisture Variation (%)	0.0	0.5 dry			
Hilf Density Ratio (%)	97.5	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:W22DS02369


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 2/12/2022
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
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	S22DS-09566	S22DS-09567	S22DS-09568	S22DS-09569	S22DS-09570
Field Sample ID	1	2	3	4	5
Date Tested	30/11/2022	30/11/2022	30/11/2022	30/11/2022	30/11/2022
Time Tested	10:00	10:10	10:20	10:50	12:40
E:	357006.515	357032.976	357063.408	357305.327	357228.454
N:	5778339.478	5778338.485	5778331.478	5778293.314	5778299.760
EL:	9.040	9.058	8.966	9.018	9.155
Lot / Layer:	1218 / 1	1216 / 1	1214 / 1	1202 / 4	1206 / 4

Field and Laboratory Data

Depth of Test (mm)	175	175	175	175	125
Depth of Layer (mm)	200	200	200	200	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 (%)	22.7	17.2	18.6	15.4	14.5
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.03	2.05	2.05	2.15	2.04
Field Dry Density (t/m ³)	1.65	1.75	1.73	1.87	1.78
Peak Converted Wet Density (t/m ³)	2.00	2.03	2.04	2.14	2.11
Optimum Moisture Content (%)	22.0	18.0	19.0	15.0	14.5
Compactive Effort	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	102.0	95.0	97.5	101.0	100.5
Moisture Variation (%)	0.5 wet	1.0 dry	0.5 dry	0.0	0.0
Hilf Density Ratio (%)	101.5	101.0	100.5	101.0	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:W22DS02380


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 21/12/2022
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Sample Details

Location:
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: Silty Clay

Sample Data

Sample ID	S22DS-09595	S22DS-09596	S22DS-09597	S22DS-09598	S22DS-09599	S22DS-09600
Field Sample ID	1	2	3	4	5	6
Date Tested	1/12/2022	1/12/2022	1/12/2022	1/12/2022	1/12/2022	1/12/2022
Time Tested	09:40	09:50	11:40	11:50	13:50	14:10
E:	357784.311	357315.031	3570415.577	357111.054	357525.683	357255.496
N:	57778204.171	5778290.248	5778335.014	5778366.495	5778341.050	5778295.356
EL:	9.236	9.209	9.416	9.555	9.415	9.305
Lot / Layer:	1203 / 5	1201 / 5	1215 / 2	1212 / 3	1217 / 3	1204 / 4

Field and Laboratory Data

Depth of Test (mm)	175	175	175	175	175	125
Depth of Layer (mm)	200	200	200	200	200	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 Wet Density (t/m ³)	2.13	2.07	2.03	2.16	2.06	2.17
Peak Converted Wet Density (t/m ³)	2.10	2.01	2.06	2.07	2.06	2.09
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Variation (%)	0.0	2.0 dry	0.0	1.5 dry	0.0	0.0
Hilf Density Ratio (%)	101.5	103.0	98.5	104.5	100.0	104.0

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:W22DS02399

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 8/06/2023
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Sample Details

Location: Stage 12
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: General Fill

Sample Data

Sample ID	S22DS-09647	S22DS-09648	S22DS-09649		
Field Sample ID	1	2	3		
Date Tested	3/12/2022	3/12/2022	3/12/2022		
Time Tested	12:55	13:04	13:14		
E:	357055	357029	357016		
N:	5778337	5778325	5778342		
RL:	9.863	9.760	10.055		
Lot/Layer:	1215 / 4	1216 / 4	1217 / 4		

Field and Laboratory Data

Depth of Test (mm)	175	175	175		
Depth of Layer (mm)	200	200	200		
Field Moisture Content (%)	18.8	19.4	19.1		
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1		
Field Wet Density (t/m³)	2.03	2.00	2.02		
Field Dry Density (t/m³)	1.71	1.68	1.70		
Peak Converted Wet Density (t/m³)	2.09	2.00	2.07		
Optimum Moisture Content (%)	18.5	20.0	19.0		
Compactive Effort	Standard	Standard	Standard		
Moisture Ratio (%)	101.5	97.0	100.0		
Moisture Variation (%)	0.5 wet	0.5 dry	0.0		
Hilf Density Ratio (%)	97.0	100.0	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:W22DS02401

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 21/12/2022
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Sample Details

Location: Stage 12
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 Clay
Material:

Sample Data

Sample ID	S22DS-09651	S22DS-09652	S22DS-09653	S22DS-09654	S22DS-09655
Field Sample ID	1	2	3	4	5
Date Tested	2/12/2022	2/12/2022	2/12/2022	2/12/2022	2/12/2022
Time Tested	11:36	11:50	12:03	14:58	15:10
E:	357120	357091	357059	357027	357008
N:	5778326	5778319	5778325	5778342	5778333
RL:	9.469	9.546	9.491	9.760	9.706
Lot/Layer	1211/4	1213/4	1214/3	1216/3	1218/3

Field and Laboratory Data

Depth of Test (mm)	175	175	175	175	175
Depth of Layer (mm)	200	200	200	200	200
Field Moisture Content (%)	18.3	18.7	15.5	12.2	17.7
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
Field Wet Density (t/m ³)	2.11	2.12	2.07	2.08	2.09
Field Dry Density (t/m ³)	1.79	1.78	1.79	1.85	1.77
Peak Converted Wet Density (t/m ³)	2.13	2.13	2.06	2.13	2.13
Optimum Moisture Content (%)	17.5	16.5	17.0	11.5	17.5
Compactive Effort	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	104.0	115.0	91.0	105.0	102.0
Moisture Variation (%)	0.5 wet	2.5 wet	1.5 dry	0.5 wet	0.5 wet
Hilf Density Ratio (%)	99.0	99.5	100.5	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:W22DS02409


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 21/12/2022
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Sample Details

Location: Stage 12
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 Clay
Material:

Sample Data

Sample ID	S22DS-09673	S22DS-09674	S22DS-09675			
Field Sample ID	1	2	3			
Date Tested	5/12/2022	5/12/2022	5/12/2022			
Time Tested	15:30	15:45	16:00			
E:	356672	356626	356595			
N:	5778393	5778405	5778400			
EL:	10.628	10.719	11.028			
Lot:	1241	1243	1245			

Field and Laboratory Data

Depth of Test (mm)	175	175	175			
Depth of Layer (mm)	200	200	200			
Field Moisture Content (%)	10.3	14.4	18.5			
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)	2.08	1.96	2.00			
Field Dry Density (t/m ³)	1.89	1.71	1.69			
Peak Converted Wet Density (t/m ³)	2.15	2.08	2.01			
Optimum Moisture Content (%)	10.5	15.0	18.5			
Compactive Effort	Standard	Standard	Standard			
Moisture Ratio (%)	97.0	96.0	98.5			
Moisture Variation (%)	0.5 dry	0.5 dry	0.5 dry			
Hilf Density Ratio (%)	97.0	94.0	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:W22DS02425


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 21/12/2022
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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
Material: Clay

Sample Data

Sample ID	S22DS-09743	S22DS-09744	S22DS-09745	S22DS-09746
Field Sample ID	1	2	3	4
Date Tested	7/12/2022	7/12/2022	7/12/2022	7/12/2022
Time Tested	09:45	11:30	11:44	
E:	357332.335	357323.091	357312.791	357321.517
N:	5778234.654	5778162.357	5778125.986	5778182.099
EL:	8.011	7.919	7.666	8.182
Layer:	-500 FSL	-650 FSL	-650 FSL	-250 FSL

Field and Laboratory Data

	S22DS-09743	S22DS-09744	S22DS-09745	S22DS-09746
Depth of Test (mm)	225	225	225	225
Depth of Layer (mm)	250	250	250	250
AS Sieve Size (mm)	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0
Field Wet Density (t/m³)	2.06	2.18	2.04	2.08
Peak Converted Wet Density (t/m³)	1.83	2.01	1.88	1.84
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Variation (%)	0.0	0.0	0.5 wet	0.5 wet
Hilf Density Ratio (%)	112.5	108.5	108.5	113.0

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:W22DS02438


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 24/05/2023
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Sample Details

Location:
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: Silty Clay

Sample Data

Sample ID	S22DS-09826	S22DS-09827	S22DS-09828	S22DS-09829	S22DS-09830
Field Sample ID	1	2	3	4	5
Date Tested	8/12/2022	8/12/2022	8/12/2022	8/12/2022	8/12/2022
Time Tested	09:00	12:00	12:10	15:20	15:30
E:	356649.507	357313.559	357301.548	357322.561	357327.506
N:	57784.004	5778088.611	5778042.103	5778199.704	5778164
EL:	10.773	7.530	7.140	8.354	8.431
Lot / Layer:	1243 / 1	- / 1 - FSL -990	- / 1 - FSL -290	- / 2	- / 2
	Retest from 05/12				

Field and Laboratory Data

Depth of Test (mm)	175	225	225	225	225
Depth of Layer (mm)	200	250	250	250	250
AS Sieve Size (mm)	19.0	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0	0
Field Moisture Content (%)	14.0	28.4	16.9	28.6	16.4
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
Field Wet Density (t/m ³)	2.01	2.02	2.17	1.95	2.02
Field Dry Density (t/m ³)	1.76	1.57	1.86	1.52	1.74
Peak Converted Wet Density (t/m ³)	2.06	1.93	2.05	1.90	2.03
Optimum Moisture Content (%)	16.0	27.5	17.0	28.0	17.0
Compactive Effort	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	86.5	103.0	100.5	103.0	98.0
Moisture Variation (%)	2.0 dry	0.5 wet	0.0	1.0 wet	0.5 dry
Hilf Density Ratio (%)	97.5	104.5	106.0	103.0	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:W22DS02462

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 21/12/2022
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
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: Silty Clay

Sample Data

Sample ID	S22DS-09907	S22DS-09908			
Field Sample ID	1	2			
Date Tested	9/12/2022	9/12/2022			
Time Tested	11:00	11:10			
E:	357313.988	357304.952			
N:	5778102.820	5778060.051			
EL:	8.112	7.230			
Layer:	2	2			

Field and Laboratory Data

Depth of Test (mm)	225	225			
Depth of Layer (mm)	250	250			
Field Moisture Content (%)	12.9	31.5			
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1			
Field Wet Density (t/m ³)	2.10	1.99			
Field Dry Density (t/m ³)	1.86	1.52			
Peak Converted Wet Density (t/m ³)	2.09	1.89			
Optimum Moisture Content (%)	13.5	31.0			
Compactive Effort	Standard	Standard			
Moisture Ratio (%)	94.0	102.0			
Moisture Variation (%)	1.0 dry	0.5 wet			
Hilf Density Ratio (%)	100.0	105.5			

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:W22DS02560


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 23/12/2022
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
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: Silty Clay

Sample Data

Sample ID	S22DS-10275	S22DS-10276			
Field Sample ID	1	2			
Date Tested	21/12/2022	21/12/2022			
E:	356637	356603			
N:	5778385	5778391			
RL:	10.811	11.106			
Lot / Layer:	1242 / 3	1244 / -			

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 (%)	14.3	15.0			
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1			
Field Wet Density (t/m ³)	2.01	2.03			
Field Dry Density (t/m ³)	1.76	1.76			
Peak Converted Wet Density (t/m ³)	2.00	2.02			
Optimum Moisture Content (%)	14.5	17.0			
Compactive Effort	Standard	Standard			
Moisture Ratio (%)	97.5	88.5			
Moisture Variation (%)	0.5 dry	2.0 dry			
Hilf Density Ratio (%)	100.5	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:W23DS00007


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 9/01/2023
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Sample Details

Location:
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: Silty Clay

Sample Data

Sample ID	S23DS-00018	S23DS-00019	S23DS-00020	S23DS-00021	S23DS-00022	S23DS-00023
Field Sample ID	1	2	3	4	5	6
Date Tested	5/01/2023	5/01/2023	5/01/2023	5/01/2023	5/01/2023	5/01/2023
Time Tested	09:10	09:40	10:00	10:15	10:30	11:40
E:	356593.645	356613.512	356624.357	356698.188	356725.474	356763.024
N:	5778389.201	5778384.077	5778390.152	5778387.175	5778371.568	5778369.294
EL:	11.40	11.189	11.102	10.551	10.524	10.289
Lot:	1245	1244	1243	1239	12367	1234

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 (%)	13.2	12.1	13.6	13.7	14.8	19.4
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)	2.11	2.13	2.15	2.14	2.12	1.97
Field Dry Density (t/m ³)	1.86	1.90	1.89	1.89	1.85	1.65
Peak Converted Wet Density (t/m ³)	2.10	2.10	2.13	2.15	2.06	1.95
Optimum Moisture Content (%)	13.0	13.5	13.0	13.5	15.5	21.0
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	101.0	88.5	104.0	102.5	95.5	91.5
Moisture Variation (%)	0.0	1.5 dry	0.5 wet	0.5 wet	0.5 dry	1.5 dry
Hilf Density Ratio (%)	100.5	101.5	101.0	100.0	103.0	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:W23DS00012

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 10/01/2023
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
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: Silty Clay

Sample Data

Sample ID	S23DS-00033	S23DS-00034	S23DS-00035	S23DS-00036
Field Sample ID	1	2	3	4
Date Tested	6/01/2023	6/01/2023	6/01/2023	6/01/2023
Time Tested	10:45	11:10	11:10	12:53
E:	356600.042 (356598)	356638.748 (356639)	356668.883 (356670)	3566689.042 (356691)
N:	5778401.961 (5778407)	5778391.699 (5778393)	5778381.209 (5778382)	5778380.707 (5778380)
RL:	11.817	11.316	10.828	10.843
Lot / Layer:	1245 / 3 (FSL)	1242 / - (FSL)	1241 / 2	1240 / 2

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 (%)	13.7	15.4	15.0	13.1
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)	2.08	2.07	1.98	2.02
Field Dry Density (t/m ³)	1.83	1.80	1.72	1.78
Peak Converted Wet Density (t/m ³)	2.07	2.06	2.15	2.00
Optimum Moisture Content (%)	16.5	18.5	15.5	16.0
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Ratio (%)	83.5	83.5	96.5	82.5
Moisture Variation (%)	2.5 dry	3.0 dry	0.5 dry	3.0 dry
Hilf Density Ratio (%)	100.5	100.5	92.0	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:W23DS00026


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 18/01/2023
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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: Silty Clay

Sample Data

Sample ID	S23DS-00082	S23DS-00083	S23DS-00084	S23DS-00085
Field Sample ID	1	2	3	4
Date Tested	9/01/2023	9/01/2023	9/01/2023	9/01/2023
Time Tested	09:05	09:30	13:30	14:00
E:	356738.708 (356741)	356766.675 (356770)	3567980.554 (356797)	356819.494 (356817)
N:	5778371.166 (5778373)	5778378.741 (5778382)	5778366.218 (5778366)	5778371.800 (5778372)
RL:	10.528	10.444	10.242	10.135
Lot / Layer:	1236 / 2	1233 / 1	1232 / 1	1230 / 1

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 (%)	11.5	12.0	14.0	14.2
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.11	2.13	2.11	2.10
Field Dry Density (t/m ³)	1.90	1.90	1.85	1.83
Peak Converted Wet Density (t/m ³)	1.96	2.08	2.12	2.16
Optimum Moisture Content (%)	14.5	14.5	14.5	14.0
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Ratio (%)	79.0	84.0	97.5	100.0
Moisture Variation (%)	3.0 dry	2.5 dry	0.5 dry	0.0
Hilf Density Ratio (%)	108.0	102.5	99.5	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:W23DS00028


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 18/01/2023
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Sample Details

Location:
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: Imported
Material: Clay with Sand

Sample Data

Sample ID	S23DS-00090	S23DS-00091	S23DS-00092	S23DS-00093	S23DS-00094	S23DS-00095
Field Sample ID	1	2	3	4	5	6
Date Tested	10/01/2023	10/01/2023	10/01/2023	10/01/2023	10/01/2023	10/01/2023
Time Tested	08:30	09:46	09:05	09:15	09:30	09:47
E:	356889.934 (356890)	356916.050 (356916)	356675.970 (356675)	356710.164 (356709)	356755.441	356727.160 (356730)
N:	5778358.907 (5778360)	5778348.852 (5778352)	5778388.295 (5778392)	5778376.653 (5778380)	5778378.005	5778379.627 (5778381)
RL:	9.906	9.651	10.852	10.948	10.614	10.881
Lot / Layer:	1227 / 1	1225 / 1	1241 / 3	1238 / 3	1235 / 2	1237 / 2
			Retest of S23DS-00035			

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 (%)	11.8	13.9	13.1	12.3	13.0	14.7
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)	2.08	2.08	2.14	2.11	2.11	2.06
Field Dry Density (t/m ³)	1.86	1.83	1.89	1.88	1.86	1.79
Peak Converted Wet Density (t/m ³)	2.06	2.08	2.05	2.11	2.14	2.13
Optimum Moisture Content (%)	14.0	14.5	15.0	12.5	13.5	14.5
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	84.0	97.5	86.5	97.0	95.5	100.0
Moisture Variation (%)	2.5 dry	0.5 dry	2.0 dry	0.5 dry	0.5 dry	0.0
Hilf Density Ratio (%)	101.0	100.0	104.5	100.0	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:W23DS00028

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 18/01/2023
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Sample Details

Location:
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: Imported
Material: Clay with Sand

Sample Data

Sample ID	S23DS-00096				
Field Sample ID	7				
Date Tested	10/01/2023				
Time Tested	14:35				
E:	356831.628 (356832)				
N:	5778356.891 (5778359)				
RL:	10.230				
Lot / Layer:	1229 / 3				

Field and Laboratory Data

Depth of Test (mm)	175				
Depth of Layer (mm)	200				
AS Sieve Size (mm)	19.0				
Oversize Wet (%)	0				
Field Moisture Content (%)	14.9				
Field Moisture Content Method	AS 1289.2.1.1				
Field Wet Density (t/m ³)	2.12				
Field Dry Density (t/m ³)	1.84				
Peak Converted Wet Density (t/m ³)	2.11				
Optimum Moisture Content (%)	15.0				
Compactive Effort	Standard				
Moisture Ratio (%)	99.0				
Moisture Variation (%)	0.0				
Hilf Density Ratio (%)	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:W23DS00047


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 18/01/2023
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Sample Details

Location:
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: Silty Sandy Clay

Sample Data

Sample ID	S23DS-00144	S23DS-00145	S23DS-00146	S23DS-00147	S23DS-00148	S23DS-00149
Field Sample ID	1	2	3	4	5	6
Date Tested	11/01/2023	11/01/2023	11/01/2023	11/01/2023	11/01/2023	11/01/2023
Time Tested	08:20	08:40	11:30	11:45	13:55	14:15
E:	356902.733	356929.724	356802.516	356843.779	356687.461	356766.502
N:	5778355	5778353.978	5778362.238	5778364.199	5778389.425	5778369.512
RL:	10.084	9.879	10.418	10.290	11.254	10.855
Layer:	2	2	3	3	4 (FSL)	4 (FSL)

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 (%)	14.7	14.3	13.0	14.0	18.2	13.6
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	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.07	2.07	2.10	2.12	2.09	2.11
Field Dry Density (t/m ³)	1.80	1.81	1.86	1.86	1.77	1.86
Peak Converted Wet Density (t/m ³)	2.15	2.14	2.16	2.17	2.07	2.16
Optimum Moisture Content (%)	14.5	14.0	13.5	14.0	18.0	13.5
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	100.5	101.5	97.0	99.0	101.0	99.5
Moisture Variation (%)	0.0	0.0	0.5 dry	0.0	0.0	0.0
Hilf Density Ratio (%)	96.0	96.5	97.0	98.0	101.0	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:W23DS00059

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 18/01/2023
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Sample Details

Location:
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	S23DS-00183	S23DS-00184	S23DS-00185	S23DS-00186
Field Sample ID	1	2	3	4
Date Tested	12/01/2023	12/01/2023	12/01/2023	12/01/2023
Time Tested	11:00	11:15	11:35	12:30
E:	356981.742 (356983)	356921.621 (356922)	356902.362 (356899)	356965.234 (356963)
N:	5778339.910 (5778341)	5778353.748 (5778359)	5778358.732 (5778363)	57783474.023 (5778342)
RL:	9.205	10.33	10.422	9.595
Layer:	1	3	4	2

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 (%)	13.8	13.2	14.4	11.9
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1
Field Wet Density (t/m³)	2.07	2.07	2.10	2.04
Field Dry Density (t/m³)	1.82	1.82	1.83	1.82
Peak Converted Wet Density (t/m³)	2.03	2.12	2.15	2.09
Optimum Moisture Content (%)	16.0	14.0	14.5	14.0
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Ratio (%)	85.0	95.0	100.0	84.0
Moisture Variation (%)	2.5 dry	0.5 dry	0.0	2.0 dry
Hilf Density Ratio (%)	102.0	97.5	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:W23DS00076


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 18/01/2023
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 98%
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	S23DS-00236	S23DS-00237			
Field Sample ID	1	2			
Date Tested	13/01/2023	13/01/2023			
Time Tested	09:50	13:40			
E:	356989.154	356966.033			
N:	5778331.423	5778384.119			
EL:	9.552	9.826			
Layer:	3	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 (%)	12.8	12.3			
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1			
Field Wet Density (t/m ³)	2.13	2.08			
Field Dry Density (t/m ³)	1.89	1.85			
Peak Converted Wet Density (t/m ³)	2.12	2.14			
Optimum Moisture Content (%)	13.5	13.0			
Compactive Effort	Standard	Standard			
Moisture Ratio (%)	94.5	96.0			
Moisture Variation (%)	0.5 dry	0.5 dry			
Hilf Density Ratio (%)	100.5	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:W23DS00111


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712

Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 20/01/2023

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
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	S23DS-00380	S23DS-00381				
Field Sample ID	1	2				
Date Tested	17/01/2023	17/01/2023				
E:	357008.968	356984.229				
N:	5778338.190	5778343.593				
EL:	10.145	10.143				
Layer:	1 (FSL)	4 (FSL)				

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 (%)	15.4	12.5				
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1				
Field Wet Density (t/m ³)	2.02	2.07				
Field Dry Density (t/m ³)	1.75	1.84				
Peak Converted Wet Density (t/m ³)	2.04	2.07				
Optimum Moisture Content (%)	17.0	15.0				
Compactive Effort	Standard	Standard				
Moisture Ratio (%)	89.5	84.0				
Moisture Variation (%)	1.5 dry	2.5 dry				
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:W23DS00601


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 16/03/2023
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
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: Silty Clay

Sample Data

Sample ID	S23DS-01949	S23DS-01950	S23DS-01951		
Field Sample ID	1	2	3		
Date Tested	2/03/2023	2/03/2023	2/03/2023		
Time Tested	12:30	12:45	13:00		
E:	357306.831	357239.831	357180.116		
N:	5778305.955	5778315.408	5778324.953		
EL:	7.859	7.977	8.217		
Layer:	1	1	1		

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 (%)	17.2	19.8	17.7		
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)	2.02	2.08	2.09		
Field Dry Density (t/m ³)	1.73	1.74	1.78		
Peak Converted Wet Density (t/m ³)	2.05	2.03	2.07		
Optimum Moisture Content (%)	17.5	20.0	17.0		
Compactive Effort	Standard	Standard	Standard		
Moisture Ratio (%)	99.0	98.5	104.0		
Moisture Variation (%)	0.0	0.0	0.5 wet		
Hilf Density Ratio (%)	99.0	102.5	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:W23DS00613

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

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 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 16/03/2023
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
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	S23DS-01973	S23DS-01974			
Field Sample ID	1	2			
Date Tested	3/03/2023	3/03/2023			
Time Tested	07:50	09:30			
E:	357316.561	357111.336			
N:	5728304.181	5778334.646			
EL:	8.077	8.302			
Layer:	2	1			

Field and Laboratory Data

Depth of Test (mm)	175	175			
Depth of Layer (mm)	200	200			
AS Sieve Size (mm)	19.0	19.0			
Oversize Wet (%)	0	0			
Field Moisture Content (%)	16.5	19.4			
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1			
Field Wet Density (t/m ³)	2.08	2.02			
Field Dry Density (t/m ³)	1.78	1.69			
Peak Converted Wet Density (t/m ³)	2.03	2.05			
Optimum Moisture Content (%)	18.5	18.5			
Compactive Effort	Standard	Standard			
Moisture Ratio (%)	90.0	105.0			
Moisture Variation (%)	2.0 dry	1.0 wet			
Hilf Density Ratio (%)	102.0	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:W23DS00633


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 16/03/2023
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
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	S23DS-02039	S23DS-02040	S23DS-02041	S23DS-02042
Field Sample ID	1	2	3	4
Date Tested	6/03/2023	6/03/2023	6/03/2023	6/03/2023
Time Tested	09:30	09:45	12:20	14:30
E:	357102.581	357168.350	357023.629	357169.904
N:	5778336220	5778326.154	5778347.304	5778326.325
EL:	8.536	8.608	8.901	8.771
Layer:	3	3	1	4

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 (%)	16.4	18.4	14.2	18.7
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)	2.08	2.04	2.08	2.02
Field Dry Density (t/m ³)	1.79	1.73	1.83	1.70
Peak Converted Wet Density (t/m ³)	2.09	2.05	2.12	2.06
Optimum Moisture Content (%)	16.5	18.5	15.0	17.0
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Ratio (%)	98.5	100.0	95.5	110.0
Moisture Variation (%)	0.5 dry	0.0	0.5 dry	1.5 wet
Hilf Density Ratio (%)	100.0	99.5	98.5	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:W23DS00647


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 24/05/2023
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Sample Details

Location:
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: Silty Clay

Sample Data

Sample ID	S23DS-02091	S23DS-02092	S23DS-02093	S23DS-02094	S23DS-02095
Field Sample ID	1	2	3	4	5
Date Tested	7/03/2023	7/03/2023	7/03/2023	7/03/2023	7/03/2023
Time Tested	07:50	10:15	11:30	13:50	15:00
E:	357001.734	357286.640	357048.393	357186.270	356984.300
N:	5778351	5778309	5778343.938	5778323.607	5778352.630
EL:	9.211	8.439	9.328	9.071	9.650
Lift:	2	3	3	5	4

Field and Laboratory Data

Depth of Test (mm)	175	175	175	175	175
Depth of Layer (mm)	200	200	200	200	200
AS Sieve Size (mm)	19.0	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0	0
Field Moisture Content (%)	15.3	16.1	17.0	13.2	13.4
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
Field Wet Density (t/m ³)	2.04	2.06	2.02	2.07	2.12
Field Dry Density (t/m ³)	1.77	1.77	1.72	1.83	1.87
Peak Converted Wet Density (t/m ³)	2.05	2.10	2.05	2.08	2.09
Optimum Moisture Content (%)	16.0	16.0	17.5	15.0	15.0
Compactive Effort	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	96.5	99.0	98.0	87.5	88.5
Moisture Variation (%)	0.5 dry	0.0	0.5 dry	2.0 dry	1.5 dry
Hilf Density Ratio (%)	99.5	98.0	98.0	99.0	101.5

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:W23DS00675


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 16/03/2023
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Sample Details

Location:
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: Silty Clay

Sample Data

Sample ID	S23DS-02172	S23DS-02173	S23DS-02174	S23DS-02175
Field Sample ID	1	2	3	4
Date Tested	8/03/2023	8/03/2023	8/03/2023	8/03/2023
Time Tested	09:30	11:15	12:30	14:00
E:	357301.574	357051.470	357303.152	357185.217
N:	5778306.357	5778343.210	5778305.537	5778324.126
EL:	8.565	9.718	8.754	9.365
Layer:	4	4	5	6

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 (%)	15.0	19.9	17.7	11.3
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1
Field Wet Density (t/m ³)	2.03	2.01	2.06	2.04
Field Dry Density (t/m ³)	1.77	1.67	1.75	1.83
Peak Converted Wet Density (t/m ³)	2.04	2.04	2.06	2.09
Optimum Moisture Content (%)	16.5	19.5	18.0	13.5
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Ratio (%)	91.0	101.0	99.0	85.0
Moisture Variation (%)	1.5 dry	0.0	0.0	2.0 dry
Hilf Density Ratio (%)	99.5	98.5	99.5	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:W23DS00693

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 16/03/2023
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
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: Silty Clay

Sample Data

Sample ID	S23DS-02239	S23DS-02240			
Field Sample ID	1	2			
Date Tested	9/03/2023	9/03/2023			
Time Tested	08:20	13:10			
E:	357321.637	357243.646			
N:	5778303.406	5778315.105			
EL:	8.958	8.752			
Layer:	6	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 (%)	13.5	20.7			
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1			
Field Wet Density (t/m³)	2.02	1.97			
Field Dry Density (t/m³)	1.78	1.63			
Peak Converted Wet Density (t/m³)	2.05	2.05			
Optimum Moisture Content (%)	15.0	20.5			
Compactive Effort	Standard	Standard			
Moisture Ratio (%)	89.0	101.0			
Moisture Variation (%)	1.5 dry	0.0			
Hilf Density Ratio (%)	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:W23DS00702

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 16/03/2023
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
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: Silty Clay

Sample Data

Sample ID	S23DS-02255	S23DS-02256			
Field Sample ID	1	2			
Date Tested	10/03/2023	10/03/2023			
Time Tested	09:50	10:10			
E:	357228.255	357292.087			
N:	5778317.313	5778307.515			
EL:	8.958	9.435			
Layer:	5	3			

Field and Laboratory Data

Depth of Test (mm)	175	175			
Depth of Layer (mm)	200	200			
AS Sieve Size (mm)	19.0	19.0			
Oversize Wet (%)	0	0			
Field Moisture Content (%)	13.2	16.4			
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1			
Field Wet Density (t/m ³)	2.03	2.01			
Field Dry Density (t/m ³)	1.79	1.73			
Peak Converted Wet Density (t/m ³)	2.04	2.03			
Optimum Moisture Content (%)	15.0	18.5			
Compactive Effort	Standard	Standard			
Moisture Ratio (%)	87.0	89.0			
Moisture Variation (%)	2.0 dry	2.0 dry			
Hilf Density Ratio (%)	99.5	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:W23DS00709


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 24/05/2023
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Sample Details

Location:
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: Silty Clay

Sample Data

Sample ID	S23DS-02266	S23DS-02267	S23DS-02268	S23DS-02269	S23DS-02270
Field Sample ID	1	2	3	4	5
Date Tested	14/03/2023	14/03/2023	14/03/2023	14/03/2023	14/03/2023
Time Tested	08:50	09:10	09:30	13:00	15:10
E:	357173.020	357119.994	357225.738	357222	356946.424
N:	5778326.134	5778333.000	57783143.840	5778317.818	5778359.868
EL:	9.706	9.725	9.084	9.400	9.399
Lot / Layer:	- / 7	- / 7	- / 8	- / 8	1222 / 1

Field and Laboratory Data

Depth of Test (mm)	175	175	175	175	175
Depth of Layer (mm)	200	200	200	200	200
AS Sieve Size (mm)	19.0	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0	0
Field Moisture Content (%)	11.4	13.5	14.7	13.2	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)	1.95	2.08	2.14	2.04	2.04
Field Dry Density (t/m ³)	1.75	1.83	1.87	1.80	1.71
Peak Converted Wet Density (t/m ³)	2.01	2.00	2.02	1.98	2.02
Optimum Moisture Content (%)	16.0	16.5	17.0	17.5	19.5
Compactive Effort	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	71.5	82.5	87.0	75.0	99.5
Moisture Variation (%)	4.5 dry	3.0 dry	2.0 dry	4.5 dry	0.0
Hilf Density Ratio (%)	97.0	104.0	105.5	103.0	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:W23DS00788


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 24/05/2023
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
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: Silty Clay

Sample Data

Sample ID	S23DS-02522	S23DS-02523	S23DS-02524	S23DS-02525	S23DS-02526
Field Sample ID	1	2	3	4	5
Date Tested	20/03/2023	20/03/2023	20/03/2023	20/03/2023	20/03/2023
Time Tested	10:30	13:00	13:40	14:00	15:50
E:	356949.337	357173	357221	356944.506	356952.211
N:	5778355.844	5778326	5778317	5778351.629	5778351.888
EL:	9.713	9.700	9.380	9.815	10.047
Lot / Layer:	1222 / 2	- / 7	- / 7	1223 / 3	1222 / 4
		Retest of S23DS-02266	Retest of S23DS-02269		

Field and Laboratory Data

	S23DS-02522	S23DS-02523	S23DS-02524	S23DS-02525	S23DS-02526
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 (%)	12.5	16.0	15.3	15.9	14.6
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	1.99	2.00	2.11	2.08
Field Dry Density (t/m ³)	1.82	1.71	1.73	1.82	1.81
Peak Converted Wet Density (t/m ³)	2.06	2.03	2.03	2.11	2.16
Optimum Moisture Content (%)	15.0	18.5	17.0	16.0	14.5
Compactive Effort	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	84.0	86.0	90.5	100.5	100.5
Moisture Variation (%)	2.5 dry	2.5 dry	1.5 dry	0.0	0.0
Hilf Density Ratio (%)	99.5	98.0	98.5	100.0	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:W23DS00802


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 30/03/2023
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
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: Silty Clay

Sample Data

Sample ID	S23DS-02570	S23DS-02571	S23DS-02572	S23DS-02573	S23DS-02574
Field Sample ID	1	2	3	4	5
Date Tested	21/03/2023	21/03/2023	21/03/2023	21/03/2023	21/03/2023
Time Tested	10:30	11:50	12:30	13:20	15:30
E:	356950.174	356947.484	356939.912	356931.003	356951.436
N:	5778342.281	5778352.735	5778358.195	5778344.885	5778356.537
EL:	9.447	9.652	10.193	11.963	10.291
Lot / Layer:	1222 / 1	1223 / 2	1223 / 5	1223 / 3	1222 / 6

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 (%)	10.2	12.9	21.9	11.1	19.4
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
Field Wet Density (t/m ³)	2.11	2.05	2.00	2.05	1.94
Field Dry Density (t/m ³)	1.91	1.81	1.64	1.84	1.63
Peak Converted Wet Density (t/m ³)	2.06	2.02	2.01	2.05	1.98
Optimum Moisture Content (%)	12.5	15.5	21.5	13.5	20.0
Compactive Effort	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	83.0	84.5	101.5	81.5	96.0
Moisture Variation (%)	2.0 dry	2.5 dry	0.5 wet	2.5 dry	1.0 dry
Hilf Density Ratio (%)	102.5	101.5	99.5	100.0	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: MAT:S22DS-08875/1

Issue No: 1

Material Test Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 – Testing

Accreditation Number: 12719 Approved Signatory: J. Lamont
 (Dandenong Laboratory Manager)
 Site Number: 12712 Date of Issue: 23/11/2022
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Sample Location Lot: 1206, Stockpile
Field Sample ID 1
Date Sampled 10/11/2022
Source Onsite
Material CI Sandy CLAY, Grey brown, medium plasticity.
Specification AS Grading
Sampling Method AS1289.1.2.1 Clause 6.4 (b)
Sample ID S22DS-08875

Particle Size Distribution

Method: AS 1289.3.6.1
Drying By: Oven
Date Tested: 16/11/2022

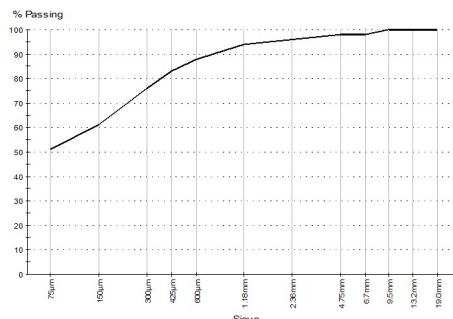
Note: Sample Washed

Sieve Size	% Passing	Limits
19.0mm	100	
13.2mm	100	
9.5mm	100	
6.7mm	98	
4.75mm	98	
2.36mm	96	
1.18mm	94	
600µm	88	
425µm	83	
300µm	76	
150µm	61	
75µm	51	

Other Test Results

Description	Method	Result	Limits
Moisture Content (%)	AS 1289.2.1.1	16.2	
Sample History	AS 1289.1.1	Oven-dried	
Preparation	AS 1289.1.1	Dry Sieved	
Linear Shrinkage (%)	AS 1289.3.4.1	13.0	
Mould Length (mm)		250	
Crumbling		No	
Curling		Yes	
Cracking		No	
Liquid Limit (%)	AS 1289.3.1.2	43	
Plastic Limit (%)	AS 1289.3.2.1	15	
Plasticity Index (%)	AS 1289.3.3.1	28	
Date Tested		18/11/2022	

Chart



Comments

N/A



Dandenong South
ACN 143 009 330
 25 Metcalf Street
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Ph: + 61 3 8796 7900
 Fax: +61 3 9706 9431



Report No: MAT:S22DS-09498/1

Issue No: 1

Material Test Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number: 12719 Approved Signatory: J. Lamont
 (Dandenong Laboratory Manager)
 Site Number: 12712 Date of Issue: 12/12/2022
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Sample Details

Sample Location Roadway, Infront of Lot 1217
Field Sample ID 1
Date Sampled 28/11/2022
Source Onsite
Material SC Clayey SAND, Orange, medium plasticity clay.
Specification AS Grading
Sampling Method AS1289.1.2.1 Clause 6.4 (b)
Sample ID S22DS-09498

Particle Size Distribution

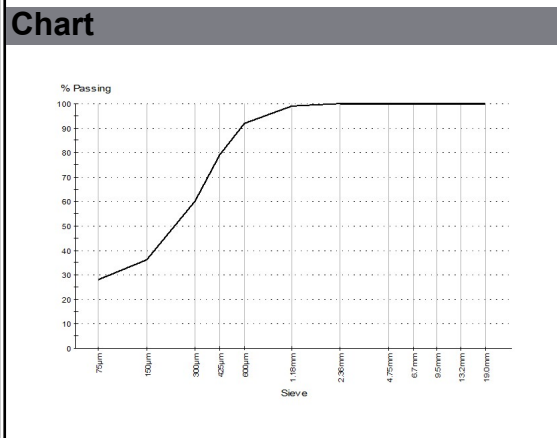
Method: AS 1289.3.6.1
Drying By: Oven
Date Tested: 2/12/2022

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	92	
425µm	79	
300µm	60	
150µm	36	
75µm	28	

Other Test Results

Description	Method	Result	Limits
Moisture Content (%)	AS 1289.2.1.1	12.9	
Sample History	AS 1289.1.1	Oven-dried	
Preparation	AS 1289.1.1	Dry Sieved	
Linear Shrinkage (%)	AS 1289.3.4.1	9.0	
Mould Length (mm)		250	
Crumbling		No	
Curling		Yes	
Cracking		No	
Liquid Limit (%)	AS 1289.3.1.2	37	
Plastic Limit (%)	AS 1289.3.2.1	11	
Plasticity Index (%)	AS 1289.3.3.1	26	
Date Tested		2/12/2022	



Comments
 N/A



Dandenong South
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 25 Metcalf Street
 DANDENONG SOUTH, VIC 3175

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 Fax: +61 3 9706 9431

Report No: MAT:S22DS-09499/1

Issue No: 1

Material Test Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: J. Lamont
 (Dandenong Laboratory Manager)
 Date of Issue: 12/12/2022
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Sample Details

Sample Location Roadway, Opposite Lot 1217
Field Sample ID 1
Date Sampled 28/11/2022
Source Onsite
Material Cl; Sandy CLAY trace gravel, mottled red/brown, medium plasticity.
Specification AS Grading
Sampling Method AS1289.1.2.1 Clause 6.4 (b)
Sample ID S22DS-09499

Particle Size Distribution

Method: AS 1289.3.6.1
Drying By: Oven
Date Tested: 2/12/2022

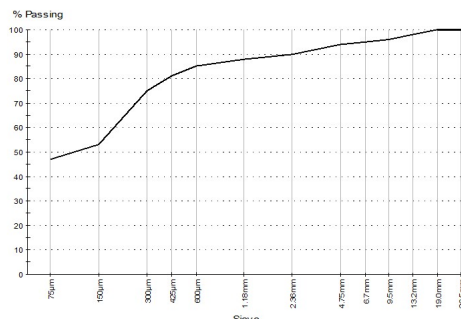
Note: Sample Washed

Sieve Size	% Passing	Limits
26.5mm	100	
19.0mm	100	
13.2mm	98	
9.5mm	96	
6.7mm	95	
4.75mm	94	
2.36mm	90	
1.18mm	88	
600µm	85	
425µm	81	
300µm	75	
150µm	53	
75µm	47	

Other Test Results

Description	Method	Result	Limits
Moisture Content (%)	AS 1289.2.1.1	19.2	
Sample History	AS 1289.1.1	Oven-dried	
Preparation	AS 1289.1.1	Dry Sieved	
Linear Shrinkage (%)	AS 1289.3.4.1	13.0	
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	16	
Plasticity Index (%)	AS 1289.3.3.1	29	
Date Tested		2/12/2022	

Chart



Comments

N/A



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Report No: MAT:S22DS-09650/1

Issue No: 1

Material Test Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: J. Lamont
 (Dandenong Laboratory Manager)
 Date of Issue: 12/12/2022
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Sample Details

Location: Stage 12
Sample Location: Lots 1231 to 1234
Field Sample ID: 1
Date Sampled: 3/12/2022
Time Sampled: 13:30
Source: Onsite
Material: CH; CLAY with gravel, with sand, dark brown, high plasticity.
Specification: AS Grading
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Sample ID: S22DS-09650

Particle Size Distribution

Method: AS 1289.3.6.1
Drying By: Oven
Date Tested: 6/12/2022

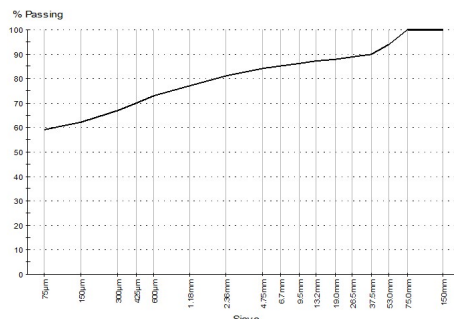
Note: Sample Washed

Sieve Size	% Passing	Limits
150mm	100	
75.0mm	100	
53.0mm	94	
37.5mm	90	
26.5mm	89	
19.0mm	88	
13.2mm	87	
9.5mm	86	
6.7mm	85	
4.75mm	84	
2.36mm	81	
1.18mm	77	
600µm	73	
425µm	70	
300µm	67	
150µm	62	
75µm	59	

Other Test Results

Description	Method	Result	Limits
Moisture Content (%)	AS 1289.2.1.1	31.6	
Sample History	AS 1289.1.1	Oven-dried	
Preparation	AS 1289.1.1	Dry Sieved	
Linear Shrinkage (%)	AS 1289.3.4.1	16.0	
Mould Length (mm)		250	
Crumbling		No	
Curling		Yes	
Cracking		No	
Liquid Limit (%)	AS 1289.3.1.2	63	
Plastic Limit (%)	AS 1289.3.2.1	29	
Plasticity Index (%)	AS 1289.3.3.1	34	
Date Tested		7/12/2022	

Chart



Comments

N/A



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Ph: + 61 3 8796 7900
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Report No: MAT:S22DS-09656/1

Issue No: 1

Material Test Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 – Testing

Accreditation Number: 12719 Approved Signatory: J. Lamont
 (Dandenong Laboratory Manager)
 Site Number: 12712 Date of Issue: 12/12/2022
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Sample Details

Location: Stage 12
Sample Location: E 357008, N 5778333, R.L 9.706, Lot 1218, Layer 3
Field Sample ID: 1
Date Sampled: 2/12/2022
Time Sampled: 15:10
Source: Onsite
Material: CL; Sandy CLAY trace gravel, mottled grey/brown, low plasticity.
Specification: AS Grading
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Sample ID: S22DS-09656

Particle Size Distribution

Method: AS 1289.3.6.1
Drying By: Oven
Date Tested: 6/12/2022

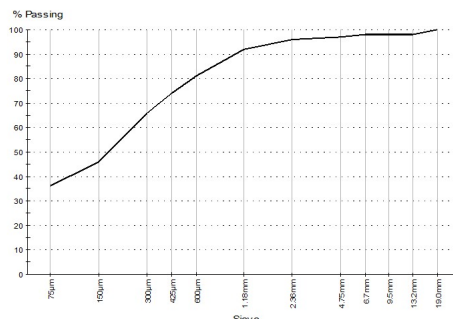
Note: Sample Washed

Sieve Size	% Passing	Limits
19.0mm	100	
13.2mm	98	
9.5mm	98	
6.7mm	98	
4.75mm	97	
2.36mm	96	
1.18mm	92	
600µm	81	
425µm	74	
300µm	66	
150µm	46	
75µm	36	

Other Test Results

Description	Method	Result	Limits
Moisture Content (%)	AS 1289.2.1.1	10.8	
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		Yes	
Cracking		No	
Liquid Limit (%)	AS 1289.3.1.2	26	
Plastic Limit (%)	AS 1289.3.2.1	11	
Plasticity Index (%)	AS 1289.3.3.1	15	
Date Tested		7/12/2022	

Chart



Comments

N/A



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Ph: + 61 3 8796 7900
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Report No: MAT:S22DS-09909/1

Issue No: 1

Material Test Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 – Testing

Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 21/12/2022
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Sample Details

Sample Location Sample 403
Field Sample ID 1
Date Sampled 9/12/2022
Source Onsite
Material Silty Clay
Specification AS Grading
Sampling Method AS1289.1.2.1 Clause 6.4 (b)
Sample ID S22DS-09909

Particle Size Distribution

Method: AS 1289.3.6.1
Drying By: Oven
Date Tested: 14/12/2022

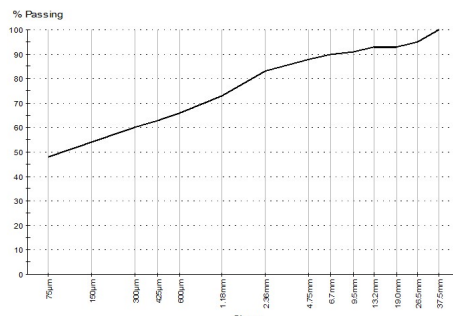
Note: Sample Washed

Sieve Size	% Passing	Limits
37.5mm	100	
26.5mm	95	
19.0mm	93	
13.2mm	93	
9.5mm	91	
6.7mm	90	
4.75mm	88	
2.36mm	83	
1.18mm	73	
600µm	66	
425µm	63	
300µm	60	
150µm	54	
75µm	48	

Other Test Results

Description	Method	Result	Limits
Moisture Content (%)	AS 1289.2.1.1	37.4	
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	47	
Plastic Limit (%)	AS 1289.3.2.1	34	
Plasticity Index (%)	AS 1289.3.3.1	13	
Date Tested		15/12/2022	

Chart



Comments

N/A



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 DANDENONG SOUTH, VIC 3175

Ph: + 61 3 8796 7900
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Report No: MAT:S22DS-09955/1

Issue No: 1

Material Test Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.: **CG Request No.:**
TRN: **Lot No.:**

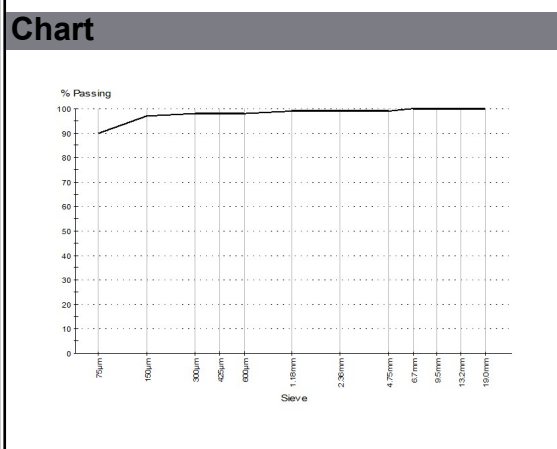
Accredited for compliance with ISO/IEC 17025
 – Testing

Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 21/12/2022
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Sample Details	
Sample Location	E: 357324, N: 5778121
Field Sample ID	1
Date Sampled	8/12/2022
Source	Onsite
Material	Clay
Specification	AS Grading
Sampling Method	AS1289.1.2.1 Clause 6.4 (b)
Sample ID	S22DS-09955

Particle Size Distribution		
Method:	AS 1289.3.6.1	
Drying By:	Oven	
Date Tested:	14/12/2022	
Note:	Sample Washed	
Sieve Size	% Passing	Limits
19.0mm	100	
13.2mm	100	
9.5mm	100	
6.7mm	100	
4.75mm	99	
2.36mm	99	
1.18mm	99	
600µm	98	
425µm	98	
300µm	98	
150µm	97	
75µm	90	

Other Test Results			
Description	Method	Result	Limits
Moisture Content (%)	AS 1289.2.1.1	15.8	
Sample History	AS 1289.1.1	Oven-dried	
Preparation	AS 1289.1.1	Dry Sieved	
Linear Shrinkage (%)	AS 1289.3.4.1	5.5	
Mould Length (mm)		250	
Crumbling		No	
Curling		No	
Cracking		Yes	
Liquid Limit (%)	AS 1289.3.1.2	29	
Plastic Limit (%)	AS 1289.3.2.1	17	
Plasticity Index (%)	AS 1289.3.3.1	12	
Date Tested		15/12/2022	



Comments
 N/A



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 Fax: +61 3 9706 9431

Report No: MAT:S23DS-00037/1

Issue No: 1

Material Test Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 31/01/2023
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Sample Details

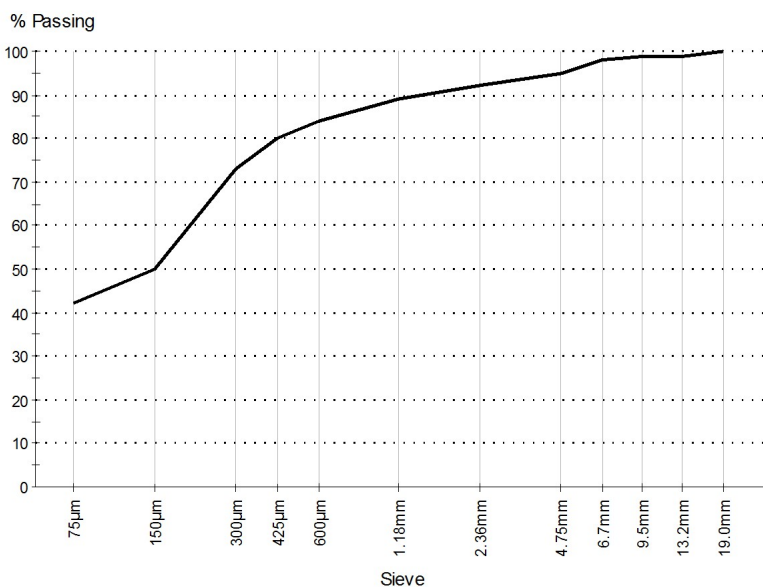
Sample Location 356808, 5778373, 1230 / 1
Field Sample ID 1
Date Sampled 6/01/2023
Time Sampled 13:30
Source Onsite
Material Silty Clay
Specification AS Grading
Sampling Method AS1289.1.2.1 Clause 6.4 (b)
Sample ID S23DS-00037

Other Test Results

Description	Method	Result	Limits
Moisture Content (%)	AS 1289.2.1.1	16.5	
Sample History	AS 1289.1.1	Oven-dried	
Preparation	AS 1289.1.1	Dry Sieved	
Linear Shrinkage (%)	AS 1289.3.4.1	6.5	
Mould Length (mm)		250	
Crumbling		No	

Particle Size Distribution

AS 1289.3.6.1



Drying By: Oven
Date Tested: 16/01/2023

Note: Sample Washed

Sieve Size	% Passing	Limits
19.0mm	100	
13.2mm	99	
9.5mm	99	
6.7mm	98	
4.75mm	95	
2.36mm	92	
1.18mm	89	
600µm	84	
425µm	80	
300µm	73	
150µm	50	
75µm	42	

Comments

N/A



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

Ph: + 61 3 8796 7900
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Report No: MAT:S23DS-00195/1

Issue No: 1

Material Test Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:



Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 31/01/2023
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Sample Details

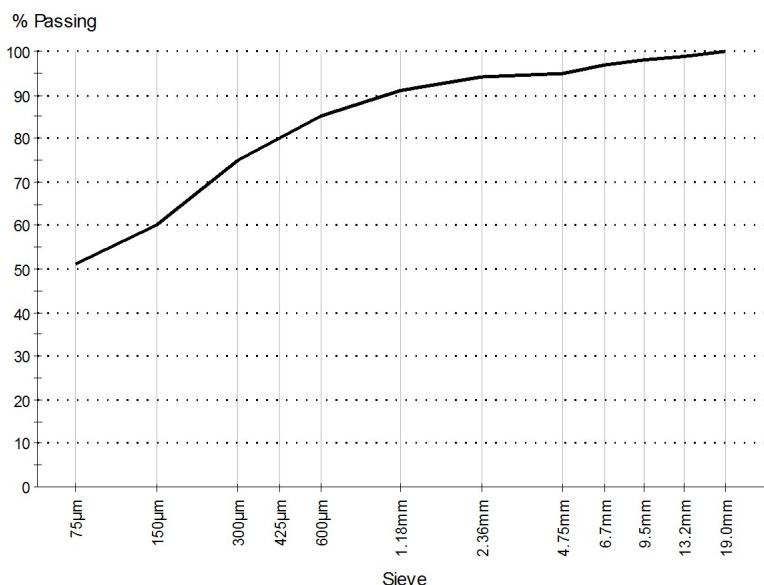
Sample Location 356902.362, 5778358.732
Field Sample ID 1
Date Sampled 12/01/2023
Time Sampled 12:30
Source Onsite
Material Clay
Specification AS Grading
Sampling Method AS1289.1.2.1 Clause 6.4 (b)
Sample ID S23DS-00195

Other Test Results

Description	Method	Result	Limits
Moisture Content (%)	AS 1289.2.1.1	13.0	
Sample History	AS 1289.1.1	Oven-dried	
Preparation	AS 1289.1.1	Dry Sieved	
Linear Shrinkage (%)	AS 1289.3.4.1	9.5	
Mould Length (mm)		250	
Crumbling		No	

Particle Size Distribution

AS 1289.3.6.1



Drying By: Oven
Date Tested: 16/01/2023

Note: Sample Washed

Sieve Size	% Passing	Limits
19.0mm	100	
13.2mm	99	
9.5mm	98	
6.7mm	97	
4.75mm	95	
2.36mm	94	
1.18mm	91	
600µm	85	
425µm	80	
300µm	75	
150µm	60	
75µm	51	

Comments

N/A



Dandenong South
ACN 143 009 330
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Report No: MAT:S23DS-00195/1



Issue No: 1

Material Test Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 31/01/2023
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Other Test Results

Description	Method	Result	Limits
Curling		No	
Cracking		Yes	
Liquid Limit (%)	AS 1289.3.1.2	35	
Plastic Limit (%)	AS 1289.3.2.1	14	
Plasticity Index (%)	AS 1289.3.3.1	21	
Date Tested		20/01/2023	

Comments

N/A



Dandenong South
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 25 Metcalf Street
 DANDENONG SOUTH, VIC 3175

Ph: + 61 3 8796 7900
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Report No: MAT:S23DS-00037/1


Issue No: 1

Material Test Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 12
Project No.: 1016363.012
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712

Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 31/01/2023

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Other Test Results

Description	Method	Result	Limits
Curling		No	
Cracking		Yes	
Liquid Limit (%)	AS 1289.3.1.2	25	
Plastic Limit (%)	AS 1289.3.2.1	10	
Plasticity Index (%)	AS 1289.3.3.1	15	
Date Tested		19/01/2023	

Comments

N/A

Appendix D Controlled Fill Certificate



CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Riverfield Estate Stage 12
Lots 1201 to 1245

Chadwick Geotechnics REF: 1016363.012.v1

CLIENT : Greenridge Properties Pty Ltd
PO Box 4136
DANDENONG SOUTH VIC 3164

DATE: 24 May 2023

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 (22 May 2021 and was completed on 21 March 2023). 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

A handwritten signature in black ink that reads 'Robert Barden'.

Robert Barden
Project Manager

A handwritten signature in blue ink that reads 'Timothy Chadwick'.

Timothy Chadwick
Project Director

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