



REPORT

Level One Inspection and Testing Services

Riverfield Estate Stage 4, Clyde
Lot's 401 to Lot 443

Prepared for:

Grosvenor Lodge Pty Ltd

14 April 2022

Our Ref: 1016363.004.v1

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

Document Control

Title: Level One Inspection and Testing Services					
Date	Version	Description	Prepared by:	Reviewed by:	Authorised by:
14 April 2022	1	1016363.004.v1	RHB	RHB	TJC

Distribution:

Grosvenor Lodge Pty Ltd

1 electronic copy

Chadwick Geotechnics Pty Ltd (FILE)

1 electronic copy

Table of contents

1	Introduction	2
2	Project details	2
	2.1 Location	2
	2.2 Fill specification	2
	2.3 Roles	3
	2.4 Source of material	3
	2.5 General	3
	2.6 Subgrade inspection	3
	2.7 Earthwork supervision	3
	2.8 Earthwork equipment	4
	2.9 Geotechnical sampling and testing	4
3	Conclusion	5
4	Applicability	5
Appendix A :	Site plan	
Appendix B :	Hilf density test summary	
Appendix C :	Hilf density testing reports	
Appendix D :	Controlled Fill certificate	

1 Introduction

As part of the construction of the Riverfield Estate development in Clyde, Chadwick Geotechnics Pty Ltd (Chadwick Geotechnics), has been engaged by Grosvenor Lodge Pty Ltd to provide Geotechnical Inspection and Testing Authority (GITA), services for the earthworks within Stage 4 of the Estate during construction.

This report presents the earthworks supervision methods and density testing results for the residential lot numbers 401 to Lot 443 within the Stage 4 site.

The earthworks were completed between 19 January 2021 and 30 November 2021.

The specification required the earthworks to be completed under Level 1 Supervision, that is, full-time Inspection and Testing of the earthworks. Chadwick Geotechnics were onsite for the duration of the earthworks program.

2 Project details

2.1 Location

The Riverfield Estate is located in Clyde, the Stage 4 site is generally located on the Eastern side of the Estate and is North of Stage 2. The stage is being developed as a residential development.

A site plan of the site is included in Appendix A.

2.2 Fill specification

A summary of the specification is shown below:

- All filling in excess of 300mm depth shall be constructed to specifications satisfying the requirements of AS 3798-2007 "Guidelines on Earthworks for Commercial and Residential Developments".
- All filling works shall be undertaken with supervision to the standard detailed as "Level 1 Inspection and Testing" in AS 3798-2007, such that the supervisor will issue a notice detailing that the works comply with the specifications and drawings.
- 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 in presence of the Level 1 Inspector prior to the placement of engineered fill.
- Fill to be compacted in near horizontal layers.
- Compaction to achieve a ratio of at least 95% Standard MDD (maximum dry density).
- Frequency of testing to be in accordance with Table 8.1 of AS3798-2007.

2.3 Roles

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

Table 2.1 Project roles

Role	Organisation
Developer	Grosvenor Lodge Pty Ltd
Geotechnical Inspection and Testing Authority (GITA)	Chadwick Geotechnics Pty Ltd
Civil Designer	Charlton Degg Consultants Pty Ltd
Earthworks Contractor	Brown Property Group Pty Ltd

2.4 Source of material

The material used on site was imported from locally sources.

2.5 General

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 a Type 1 project (large scale operation). Compaction control laboratory testing was undertaken within Chadwick Geotechnics NATA accredited laboratories in accordance with AS1289 'Methods of Testing Soils for Engineering Purposes'.

2.6 Subgrade inspection

Prior to fill being placed the subgrade was inspected. The inspections were performed in accordance with the Level 1 guidelines presented in AS 3798–2007 Section 5.5. The stripped surface was stripped to natural clay, and the area was found to be firm and free of vegetation and other deleterious material. All pre-existing uncontrolled fill was removed prior to the placement of engineered fill to achieve the design levels.

2.7 Earthwork supervision

Full time Level 1 inspection and testing of the Stage 4 filling operations commenced on 19 January 2021 and was completed on 30 November 2021. During this period Chadwick Geotechnics was on site all the time (except when there were no earthworks) and observed the earthworks, the placing of fill including the supply of material, conditioning of material (moisture conditioning and oversize removal), placement and compaction of the fill material.

All fill material was placed in lift sequences and Chadwick Geotechnics verified that the surface of the stripped subgrade and additional lifts were thoroughly scarified, and moisture conditioned prior to placement of additional layers to prevent delamination at the layer interface.

Below are two photographs of typical earthwork operations completed during earthworks, See Photographs 2.7.1 and 2.7.2 below.



Photograph 2.7.1:
Material Placement



Photograph 2.7.2:
Material Compaction

2.8 Earthwork equipment

The fill was placed and compacted using vibrating Pad foot rollers. Water trucks with water cannons attached were used to moisture condition the soil materials. The layer thicknesses were controlled using earthwork machinery with built-in GPS systems.

2.9 Geotechnical sampling and testing

Field density and moisture content testing was carried out 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 hand held GPS units. A site plan showing the field density test locations is provided in Appendix A. A summary of Hilf density testing is presented in Appendix B and the Hilf density test reports are presented in Appendix C.

A total of 45 test were performed across the Stage 4 area during the filling process.

The results show that 3 tests failed to meet the specification requirements for the project. The earthworks contractor was advised of the tests that failed and the fill relevant to the areas were reworked, reconditioned, re-compacted and subsequently retested. The result showed that the tests achieved the specification requirements for the project.

A summary of the Hilf density test reports is provided within Appendix B and all the test reports are provided within Appendix C, a controlled fill certificate is provided within Appendix D.

3 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 able to be determined, that:

- The materials used by the earthworks contractor met the geotechnical property requirements of the specification.
- 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 material achieved the minimum density requirement of the specification.
- Given the consistent construction practices followed by the earthworks contractor, and as witnessed by 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.

It is our opinion that the earthworks undertaken have been performed in accordance with the requirements of Section 8.2 of AS3798-2007 - Level 1 Inspection and Testing.

4 Applicability

This report has been prepared for the exclusive use of our client Grosvenor Lodge Pty Ltd , with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

Recommendations and opinions in this report are based on data from discrete investigation locations. The nature and continuity of subsoil away from these locations are inferred but it must be appreciated that actual conditions could vary from the assumed model.

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:

Authorised for Chadwick Geotechnics Pty Ltd by:



.....
Robert Barden
Project Manager

.....
Tim Chadwick
Project Director

14-Apr-22
\\ttgroup.local\corporate\dandenong\geo projects\1016363\4 stage 4\workingmaterial\april stage 4 riverfield\1016363.004.r1 level one report riverfield stage 4.docx

Appendix A: Site plan

Appendix B: Hilf density test summary

Report No	Sample No	Date	Location [E]	Location [N]	RL	Density Ratio HILF test ($\geq 95\%$)	Moisture Variation	Pass / Fail	Remarks
HDR:W20DS06588	S20DS-23903	17/12/2020	356716.9	5777734	8.93	99.5	omc	Pass	
HDR:W20DS06588	S20DS-23904	17/12/2020	356749.9	5777708.9	9.06	99	2.0 dry	Pass	
HDR:W20DS06588	S20DS-23905	17/12/2020	356799.3	5777719.7	8.79	93	omc	Fail	See Retest 24018
HDR:W20DS06588	S20DS-23906	17/12/2020	356772.6	5777769	9.17	100	0.5 dry	Pass	
HDR:W20DS06588	S20DS-23907	17/12/2020	356736	5777719.4	9.17	96.5	0.5 wet	Pass	
HDR:W20DS06588	S20DS-23908	17/12/2020	356864.6	5777758.7	7.32	92.5	omc	Fail	See Retest 24019
HDR:W20DS06620	S20DS-24018	21/12/2020	356800.6	5777732.5	8.817	102	omc	Pass	Retest of 23905
HDR:W20DS06620	S20DS-24019	21/12/2020	356866	5777758	7.3	103.5	omc	Pass	Retest of 23908
HDR:W20DS06620	S20DS-24020	21/12/2020	356859.7	5777607.1	8.19	103	omc	Pass	
HDR:W20DS06620	S20DS-24021	21/12/2020	356867.6	5777649.1	8.47	100	1.0 wet	Pass	
HDR:W20DS06620	S20DS-24022	21/12/2020	356744	5777566.1	8.24	96.5	0.5 wet	Pass	Retest of 23986
HDR:W21DS00044	S21DS-00143	9/01/2020	356800.8	5777743.4	210	97	omc	Pass	
HDR:W21DS00044	S21DS-00144	9/01/2020	356794.6	5777762.6	226	100	omc	Pass	
HDR:W21DS00044	S21DS-00145	9/01/2020	356792.9	5777786.3	227	98	omc	Pass	
HDR:W21DS00044	S21DS-00146	9/01/2020	356794.9	5777808.7	229	100.5	omc	Pass	
HDR:W21DS00065	S21DS-00292	11/01/2021	356809.6	5777774.1	9.41	99	2.0 wet	Pass	
HDR:W21DS00065	S21DS-00293	11/01/2021	356785.8	5777804.3	9.63	99.5	0.5 wet	Pass	
HDR:W21DS00065	S21DS-00294	11/01/2021	356816.4	5777825.4	9.14	98.5	3.0 wet	Pass	
HDR:W21DS00072	S21DS-00320	12/01/2021	356741.5	5777809.5	9.32	93	3.0 wet	Fail	See Retest 00368
HDR:W21DS00072	S21DS-00321	12/01/2021	356769.3	5777786.7	9.5	98.5	1.5 wet	Pass	

Report No	Sample No	Date	Location [E]	Location [N]	RL	Density Ratio HILF test (≥95%)	Moisture Variation	Pass / Fail	Remarks
HDR:W21DS00086	S21DS-00363	13/01/2021	356758.9	5777832.2	9.68	97	0.5 wet	Pass	
HDR:W21DS00086	S21DS-00364	13/01/2021	356758.4	5777778.7	9.67	93.5	2.0 wet	Fail	See Retest 00935
HDR:W21DS00086	S21DS-00365	13/01/2021	356725.9	5777781.7	9.63	98.5	0.5 wet	Pass	
HDR:W21DS00086	S21DS-00366	13/01/2021	356696.6	5777746.1	9.63	98.5	omc	Pass	
HDR:W21DS00086	S21DS-00367	13/01/2021	356711.4	5777812.8	9.86	96	2.5 wet	Pass	
HDR:W21DS00086	S21DS-00368	13/01/2021	356739.5	5777810.2	9.3	97	1.5 wet	Pass	Retest of 00320
HDR:W21DS00086	S21DS-00369	13/01/2021	356867.9	5777658.8	8.69	97	2.5 wet	Pass	
HDR:W21DS00086	S21DS-00370	13/01/2021	356864.2	5777680.7	9.15	91	2.5 wet	Fail	See Retest 01105
HDR:W21DS00199	S21DS-00857	19/01/2021	356909.3	5777573.4	8.25	98	0.5 wet	Pass	
HDR:W21DS00199	S21DS-00858	19/01/2021	356949.3	5777574.3	8.42	99.5	omc	Pass	
HDR:W21DS00199	S21DS-00859	19/01/2021	356778.3	5777854.1	9.41	97.5	0.5 dry	Pass	
HDR:W21DS00199	S21DS-00860	19/01/2021	356766.6	5777881.4	9.25	103	0.5 dry	Pass	
HDR:W21DS00199	S21DS-00861	19/01/2021	356785.3	5777897.1	9.14	98	0.5 wet	Pass	
HDR:W21DS00199	S21DS-00862	19/01/2021	356783.3	5777934.9	9.29	100.5	0.5 dry	Pass	
HDR:W21DS00219	S21DS-00924	20/01/2021	356718.1	5777868.4	8.34	100	0.5 wet	Pass	
HDR:W21DS00219	S21DS-00925	20/01/2021	356721	5777883.2	8.67	96	2.5 wet	Pass	
HDR:W21DS00219	S21DS-00926	20/01/2021	356736.1	5777852.4	8.97	96	omc	Pass	
HDR:W21DS00219	S21DS-00927	20/01/2021	356744.3	5777922.9	8.92	98.5	omc	Pass	
HDR:W21DS00219	S21DS-00928	20/01/2021	356721.9	5777885.4	8.94	97	2.5 dry	Pass	
HDR:W21DS00219	S21DS-00929	20/01/2021	356718.3	5777867.2	8.75	97.5	0.5 wet	Pass	
HDR:W21DS00219	S21DS-00930	20/01/2021	356798.3	5777787.9	9.69	95	2.0 wet	Pass	

Report No	Sample No	Date	Location [E]	Location [N]	RL	Density Ratio HILF test ($\geq 95\%$)	Moisture Variation	Pass / Fail	Remarks
HDR:W21DS00219	S21DS-00931	20/01/2021	356804.6	5777846.4	9.8	100.5	1.0 wet	Pass	
HDR:W21DS00219	S21DS-00932	20/01/2021	356770.5	5777846.1	9.24	98	4.0 wet	Fail	See Retest 01103
HDR:W21DS00219	S21DS-00933	20/01/2021	356772.1	5777930.6	9.31	97.5	2.5 wet	Pass	
HDR:W21DS00219	S21DS-00934	20/01/2021	356768.9	5777865.5	9.66	96	2.5 wet	Pass	
HDR:W21DS00219	S21DS-00935	20/01/2021	356760.8	5777804.3	9.95	100	2.0 wet	Pass	Retest of 00364
HDR:W21DS00219	S21DS-00936	20/01/2021	356693.9	5777874.5	8.61	97.5	2.0 dry	Pass	
HDR:W21DS00219	S21DS-00937	20/01/2021	356742.3	5777927.5	9.36	96.5	2.0 wet	Pass	
HDR:W21DS00219	S21DS-00938	20/01/2021	356721.3	5777906.1	9.28	98	2.0 wet	Pass	
HDR:W21DS00262	S21DS-01100	22/01/2021	356730.3	5777922.4	9.54	101	0.5 dry	Pass	
HDR:W21DS00262	S21DS-01101	22/01/2021	356737.4	5777957.6	9.59	97	0.5 wet	Pass	
HDR:W21DS00262	S21DS-01102	22/01/2021	356757.4	5777983.1	9.72	99.5	0.5 wet	Pass	
HDR:W21DS00262	S21DS-01103	22/01/2021	356769.4	5777894.7	9.13	100	0.5 dry	Pass	Retest of 00932
HDR:W21DS00262	S21DS-01104	22/01/2021	356680.2	5777880.1	8.29	96	omc	Pass	
HDR:W21DS00262	S21DS-01105	22/01/2021	356866.6	5777682.5	9.24	100	0.5 wet	Pass	Retest of 00370
HDR:W21DS00262	S21DS-01106	22/01/2021	356974.3	5777607.6	8.22	98	omc	Pass	
HDR:W21DS00262	S21DS-01107	22/01/2021	356984.2	5777595.6	8.09	99.5	0.5 wet	Pass	
HDR:W21DS00262	S21DS-01108	22/01/2021	356966	5777556.9	8.09	98.5	0.5 wet	Pass	
HDR:W21DS00304	S21DS-01328	27/01/2021	356734.2	5777962.3	9.85	100	1.0 wet	Pass	
HDR:W21DS00304	S21DS-01329	27/01/2021	356716.1	5777936.6	9.85	101	0.5 wet	Pass	
HDR:W21DS00304	S21DS-01330	27/01/2021	356699.1	5777870.9	9.72	98	0.5 wet	Pass	

Report No	Sample No	Date	Location [E]	Location [N]	RL	Density Ratio HILF test ($\geq 95\%$)	Moisture Variation	Pass / Fail	Remarks
HDR:W21DS00304	S21DS-01331	27/01/2021	356713.8	5777850.4	9.95	97	omc	Pass	
HDR:W21DS00318	S21DS-01375	28/01/2021	356834	5777967	9.37	96	1.0 wet	Pass	
HDR:W21DS00318	S21DS-01376	28/01/2021	356796	5777978	9.59	96.5	0.5 wet	Pass	
HDR:W21DS00318	S21DS-01377	28/01/2021	356861	5777553	6.14	95.5	3.1 wet	Pass	
HDR:W21DS00318	S21DS-01378	28/01/2021	356934	5777542	7.56	96.5	2.2 wet	Pass	
HDR:W21DS00410	S21DS-01723	4/02/2021	356700.7	5777965.8	9.88	95	omc	Pass	
HDR:W21DS00410	S21DS-01724	4/02/2021	356739.2	5777991.1	9.86	97.5	omc	Pass	
HDR:W21DS00410	S21DS-01725	4/02/2021	356971.1	5777575.1	8.43	101	0.5 wet	Pass	
HDR:W21DS00410	S21DS-01726	4/02/2021	356917.7	5777566.2	8.91	103	omc	Pass	
HDR:W21DS00410	S21DS-01727	4/02/2021	357023	5777629.4	7.87	99	0.5 dry	Pass	
HDR:W21DS00439	S21DS-01831	5/02/2021	356677	5777940	R.L 9.82m	95.5	3.3 wet	Fail	See Retest 03081
HDR:W21DS00439	S21DS-01832	5/02/2021	356680	5777976	R.L 9.92m	97	1.5 wet	Pass	
HDR:W21DS00439	S21DS-01833	5/02/2021	357039	5777636	R.L 7.57m	101	0.9 wet	Pass	
HDR:W21DS00439	S21DS-01834	5/02/2021	357051	5777621	R.L 7.54m	97.5	2.3 wet	Pass	
HDR:W21DS00439	S21DS-01835	5/02/2021	356998	5777567	R.L 7.55m	99	omc	Pass	
HDR:W21DS00439	S21DS-01836	5/02/2021	357038	5777557	R.L 7.53m	98	omc	Pass	
HDR:W21DS00504	S21DS-02096	10/02/2021	356681.2	5778040.2	10.27	100	0.5 wet	Pass	
HDR:W21DS00536	S21DS-02202	11/02/2021	357001.6	5777531.9	7.63	101	5.0 wet	Fail	See Retest 03077
HDR:W21DS00536	S21DS-02203	11/02/2021	357020.2	5777537.2	7.86	112	6.2 wet	Fail	See Retest 03078
HDR:W21DS00536	S21DS-02204	11/02/2021	357005.6	5777550.4	8.19	97.5	omc	Pass	

Report No	Sample No	Date	Location [E]	Location [N]	RL	Density Ratio HILF test ($\geq 95\%$)	Moisture Variation	Pass / Fail	Remarks
HDR:W21DS00536	S21DS-02205	11/02/2021	356853.4	5777885.5	9.02	98	2.2 wet	Pass	
HDR:W21DS00536	S21DS-02206	11/02/2021	356868	5777915.8	8.94	99.5	0.5 wet	Pass	
HDR:W21DS00644	S21DS-02585	18/02/2021	356864.6	5777939	9.45	92	5.8 wet	Fail	See Retest 03083
HDR:W21DS00644	S21DS-02586	18/02/2021	356866.9	5777919.2	9.46	92.5	3.6 wet	Fail	See Retest 03082
HDR:W21DS00644	S21DS-02587	18/02/2021	356853.1	5777895.3	9.24	98	0.5 wet	Pass	
HDR:W21DS00772	S21DS-03077	1/03/2021	357002	5777531	7.74	97.5	2.3 wet	Pass	Retest of 02202
HDR:W21DS00772	S21DS-03078	1/03/2021	357022	5777539	7.84	100	0.5 wet	Pass	Retest of 02203
HDR:W21DS00772	S21DS-03079	1/03/2021	357028	5777594	8.28	104.5	0.5 wet	Pass	Retest of 02024
HDR:W21DS00772	S21DS-03080	1/03/2021	357027	5777621	8.06	97	2.6 wet	Pass	Retest of 02769
HDR:W21DS00772	S21DS-03081	1/03/2021	356674	5777939	9.83	97.5	2.4 wet	Pass	Retest of 01831
HDR:W21DS00772	S21DS-03082	1/03/2021	356866	5777919	9.43	104	0.5 dry	Pass	Retest of 02586
HDR:W21DS00772	S21DS-03083	1/03/2021	356864	5777937	9.43	100.5	omc	Pass	Retest of 02585
HDR:W21DS00772	S21DS-03084	1/03/2021	356873	5777573	8.86	99	omc	Pass	Retest of 02894
HDR:W21DS00867	S21DS-03485	5/03/2021	356860.8	5777513.6	9.499	98.5	0.5 wet	Pass	
HDR:W21DS00867	S21DS-03486	5/03/2021	356874.4	5777770.1	9.6	94	0.5 wet	Fail	See Retest 03553
HDR:W21DS00867	S21DS-03487	5/03/2021	356877.5	5777822.9	9.41	96.5	0.5 wet	Pass	
HDR:W21DS00881	S21DS-03549	9/03/2021	357192.5	5777602.8	7.22	101.5	0.9 wet	Pass	
HDR:W21DS00881	S21DS-03550	9/03/2021	357188.8	5777583.4	7.42	99	0.5 wet	Pass	

Report No	Sample No	Date	Location [E]	Location [N]	RL	Density Ratio HILF test (≥95%)	Moisture Variation	Pass / Fail	Remarks
HDR:W21DS00881	S21DS-03551	9/03/2021	357162	5777571.7	7.09	99.5	0.5 wet	Pass	
HDR:W21DS00881	S21DS-03552	9/03/2021	357165.4	5777605.4	7.31	96.5	2.0 wet	Pass	
HDR:W21DS00881	S21DS-03553	9/03/2021	356875.4	5777769	9.32	102.5	2.4 dry	Pass	Retest of 03486
HDR:W21DS00983	S21DS-03871	17/03/2021	356632.9	5777907.1	9.42	100	omc	Pass	
HDR:W21DS00983	S21DS-03872	17/03/2021	356667.9	5777899.7	9.47	98.5	omc	Pass	
HDR:W21DS01005	S21DS-03951	18/03/2021	356849.9	5777930.2	9.47	105.5	1.0 dry	Pass	
HDR:W21DS01005	S21DS-03952	18/03/2021	356847.3	5777951.1	9.55	96	omc	Pass	
HDR:W21DS01005	S21DS-03953	18/03/2021	356629.7	5777965.7	9.68	89.5	2.4 dry	Fail	Earthworks contractor removed material, no retest
HDR:W21DS01005	S21DS-03954	18/03/2021	356624.1	5777928.4	9.89	96.5	1.5 dry	Pass	
HDR:W21DS01005	S21DS-03955	18/03/2021	356639.9	5777919.5	9.87	103	omc	Pass	
HDR:W21DS01005	S21DS-03956	18/03/2021	356652.2	5777901.2	9.41	93.5	omc	Fail	Earthworks contractor removed material, no retest
HDR:W21DS01022	S21DS-04027	19/03/2021	356764.7	5778053.2	10.19	93.5	0.5 wet	Fail	Earthworks contractor removed material, no retest
HDR:W21DS01022	S21DS-04028	19/03/2021	356740.4	5778051.4	10.411	94	0.5 wet	Fail	Earthworks contractor removed material, no retest
HDR:W21DS01022	S21DS-04029	19/03/2021	356712.7	5778051.2	10.37	93	2.0 wet	Fail	Earthworks contractor removed material, no retest
HDR:W21DS01343	S21DS-05201	19/04/2021	356748.04	5778075.76	10.28	98.5	0.8 wet	Pass	
HDR:W21DS01343	S21DS-05202	19/04/2021	356762.55	5778077.06	10.12	96.5	2.2 dry	Pass	
HDR:W21DS01343	S21DS-05203	19/04/2021	356730.52	5778074.73	10.49	100	2.4 wet	Pass	
HDR:W21DS01364	S21DS-05286	20/04/2021	356744.46	5778078.01	10.27	99.5	1.5 wet	Pass	
HDR:W21DS01364	S21DS-05287	20/04/2021	356715.53	5778080.08	10.3	97.5	1.5 wet	Pass	

Report No	Sample No	Date	Location [E]	Location [N]	RL	Density Ratio HILF test (≥95%)	Moisture Variation	Pass / Fail	Remarks
HDR:W21DS01405	S21DS-05405	22/04/2021	356683.4	5778089.6	10.33	99.5	0.5 wet	Pass	
HDR:W21DS01405	S21DS-05406	22/04/2021	356675.28	5778078.62	10.41	98.5	0.5 wet	Pass	
HDR:W21DS01443	S21DS-05532	26/04/2021	356637	5778101	10.07	100	0.5 wet	Pass	
HDR:W21DS01443	S21DS-05533	26/04/2021	356664	5778093	10.47	101	omc	Pass	
HDR:W21DS01443	S21DS-05534	26/04/2021	356694	5778078	10.35	99.5	omc	Pass	
HDR:W21DS01443	S21DS-05535	26/04/2021	356670	5778054	10.28	101	omc	Pass	
HDR:W21DS01443	S21DS-05536	26/04/2021	356649	5778052	10.22	100.5	0.5 dry	Pass	
HDR:W21DS01619	S21DS-06116	8/05/2021	356834	5777996		97	1.8 wet	Pass	
HDR:W21DS01619	S21DS-06117	8/05/2021	356827	5778009		98.5	1.8 wet	Pass	
HDR:W21DS01619	S21DS-06118	8/05/2021	356845	5778007		98	1.5 wet	Pass	
HDR:W21DS01702	S21DS-06378	10/05/2021	356832	5778008		97	omc	Pass	
HDR:W21DS01702	S21DS-06379	10/05/2021	356823	5778022		99	omc	Pass	
HDR:W21DS01730	S21DS-06448	12/05/2021	356871	5778020		96.5	0.5 dry	Pass	
HDR:W21DS01730	S21DS-06449	12/05/2021	356863	5777992		98	1.8 wet	Pass	
HDR:W21DS01730	S21DS-06450	12/05/2021	356859	5777968		95.5	2.2 wet	Pass	
HDR:W21DS01760	S21DS-06547	13/05/2021	356890	5778000		96	1.9 wet	Pass	
HDR:W21DS01760	S21DS-06548	13/05/2021	356882	5777975		89	2.1 dry	Fail	See Retest 6924
HDR:W21DS01764	S21DS-06555	14/05/2021	356886	5777796		102	2.5 wet	Pass	
HDR:W21DS01764	S21DS-06556	14/05/2021	356884	5777948		93.5	2.6 wet	Fail	See Retest 6925
HDR:W21DS01835	S21DS-06823	20/05/2021	356902	5778078		97.5	0.5 wet	Pass	

Report No	Sample No	Date	Location [E]	Location [N]	RL	Density Ratio HILF test (≥95%)	Moisture Variation	Pass / Fail	Remarks
HDR:W21DS01835	S21DS-06824	20/05/2021	356900	5778074		98	2.2 dry	Pass	
HDR:W21DS01864	S21DS-06923	24/05/2021	356901	5778057	9.86	98.5	0.5 wet	Pass	
HDR:W21DS01864	S21DS-06924	24/05/2021	356884	5777974	9.51	99	omc	Pass	Retest of 06548
HDR:W21DS01864	S21DS-06925	24/05/2021	356889	5777948		99	0.5 wet	Pass	Retest of 6556
HDR:W21DS01864	S21DS-06926	24/05/2021	356915	5778028	9.91	96	0.5 wet	Pass	
HDR:W21DS01879	S21DS-06965	22/05/2021	356900	5777975	9.55	99.5	0.5 wet	Pass	
HDR:W21DS01879	S21DS-06966	22/05/2021	356896	5777952	9.58	99.5	omc	Pass	
HDR:W21DS01879	S21DS-06967	22/05/2021	356894	5777929	9.4	101.5	omc	Pass	
HDR:W21DS01904	S21DS-07044	25/05/2021	356893	5777881	9.29	95	omc	Pass	
HDR:W21DS01904	S21DS-07045	25/05/2021	356901	5777923	9.31	99.5	0.5 wet	Pass	
HDR:W21DS01904	S21DS-07046	25/05/2021	356906	5777945	9.33	99	1.5 wet	Pass	
HDR:W21DS01904	S21DS-07047	25/05/2021	356909	5777973	9.74	97	0.5 wet	Pass	
HDR:W21DS02035	S21DS-07475	2/06/2021	356812	5777850	8.79	95	omc	Pass	
HDR:W21DS02035	S21DS-07476	2/06/2021	356903	5777809	8.94	96.5	0.5 dry	Pass	

Report No	Sample No	Date	Location [E]	Location [N]	RL	Density Ratio HILF test ($\geq 95\%$)	Moisture Variation	Pass / Fail	Remarks
HDR:W21DS02759	S21DS-10298	18/08/2021	356556.31	5777972.31	7.98	98.5	1.9 wet	Pass	
HDR:W21DS02759	S21DS-10299	18/08/2021	356623.47	5778005.66	9.79	102.5	0.5 dry	Pass	
HDR:W21DS02759	S21DS-10300	18/08/2021	356614.38	5777948.02	9.49	102.5	0.5 dry	Pass	
HDR:W21DS02759	S21DS-10301	18/08/2021	356559.07	5778034.86	7.47	98	2.0 wet	Pass	
HDR:W21DS02799	S21DS-10490	20/08/2021	356688	5777561	7.25	102	2.4 wet	Pass	
HDR:W21DS02799	S21DS-10491	20/08/2021	356622.96	5778022.14	9.83	102	0.5 dry	Pass	
HDR:W21DS02799	S21DS-10492	20/08/2021	356610.62	5777944.68	9.83	101	1.9 wet	Pass	
HDR:W21DS02799	S21DS-10493	20/08/2021	356684.79	5777560.51	7.52	104.5	omc	Pass	
HDR:W21DS02799	S21DS-10494	20/08/2021	356454.96	5778042.96	7.6	96	omc	Pass	
HDR:W21DS02799	S21DS-10495	20/08/2021	356551.69	5778068.49	7.85	98.5	0.5 wet	Pass	
HDR:W21DS02799	S21DS-10496	20/08/2021	356685.11	5777560.91	7.77	98.5	omc	Pass	
HDR:W21DS02799	S21DS-10497	20/08/2021	356606.85	5778009.64	9.76	102.5	omc	Pass	
HDR:W21DS02799	S21DS-10498	20/08/2021	356703.41	5777555.74	7.65	100.5	0.5 dry	Pass	
HDR:W21DS02838	S21DS-10615	26/08/2021	356606.01	5777896.63	9.45 / -	101	omc	Pass	
HDR:W21DS02838	S21DS-10616	26/08/2021	356621.88	5777884.87	9.21 / -	98.5	2.9 wet	Pass	
HDR:W21DS02838	S21DS-10617	26/08/2021	356539.42	5778032.99	8.26 / -	98.5	2.8 wet	Pass	
HDR:W21DS02838	S21DS-10618	26/08/2021	356558.42	5778045.61	8.41 / -	98	2.7 wet	Pass	
HDR:W21DS02838	S21DS-10619	26/08/2021	356555.4	5778091.87	8.75 / -	98	2.2 wet	Pass	
HDR:W21DS02838	S21DS-10620	26/08/2021	356688.51	5777560.41	8.13 / -	104	omc	Pass	
HDR:W21DS02838	S21DS-10621	26/08/2021	356550.72	5778069.53	8.28 / -	100	omc	Pass	

Report No	Sample No	Date	Location [E]	Location [N]	RL	Density Ratio HILF test ($\geq 95\%$)	Moisture Variation	Pass / Fail	Remarks
HDR:W21DS02849	S21DS-10687	27/08/2021	356603.56	5777908.33	9.75 / -	98.5	2.6 wet	Pass	
HDR:W21DS02849	S21DS-10688	27/08/2021	356604.31	5777901.26	9.72 / -	98.5	0.5 wet	Pass	
HDR:W21DS02849	S21DS-10689	27/08/2021	356555.72	5778054.45	8.59 / -	99.5	2.0 wet	Pass	
HDR:W21DS02849	S21DS-10690	27/08/2021	356550.13	5778089.37	9.12 / -	97.5	1.9 wet	Pass	
HDR:W21DS02869	S21DS-10744	30/08/2021	356553.67	5778071.84	9.15 / -	97.5	3.3 wet	Fail	See Retest 10790
HDR:W21DS02869	S21DS-10745	30/08/2021	356607.5	5778015.22	10.17 / -	97.5	2.9 wet	Pass	
HDR:W21DS02869	S21DS-10746	30/08/2021	356623.1	5777998.04	10.04 / -	101	0.9 wet	Pass	
HDR:W21DS02879	S21DS-10790	31/08/2021	356568	5778099	9.374 / -	98.5	1.5 wet	Pass	Retest of 10744
HDR:W21DS02879	S21DS-10791	31/08/2021	356556	5778018	9.073	97.5	2.1 wet	Pass	
HDR:W21DS02879	S21DS-10792	31/08/2021	356546.98	5778095.25	9.46	96.5	2.0 wet	Pass	
HDR:W21DS03211	S21DS-11847	19/10/2021	356565	5777989	9.121	99.5	2.6 wet	Pass	
HDR:W21DS03211	S21DS-11848	19/10/2021	356567	5777971	9.216	99.5	omc	Pass	
HDR:W21DS03236	S21DS-11908	21/10/2021	356555	5777964	8.546	101.5	2.7 wet	Pass	
HDR:W21DS03236	S21DS-11909	21/10/2021	356552	5777803	10.076	103	0.5 wet	Pass	
HDR:W21DS03236	S21DS-11910	21/10/2021	356561	5777939	8.837	98	1.5 wet	Pass	
HDR:W21DS03290	S21DS-12078	26/10/2021	356567	5777935	9.228	96.5	3.0 wet	Pass	
HDR:W21DS03290	S21DS-12079	26/10/2021	356552	5777988	8.393	96.5	2.3 wet	Pass	
HDR:W21DS03290	S21DS-12080	26/10/2021	356576	5778115	9.662	98	2.5 wet	Pass	
HDR:W21DS03290	S21DS-12081	26/10/2021	356556	5777949	9.546	97.5	2.3 wet	Pass	
HDR:W21DS03298	S21DS-12138	27/10/2021	356547	5778121	9.87	101.5	2.4 wet	Pass	

Report No	Sample No	Date	Location [E]	Location [N]	RL	Density Ratio HILF test (≥95%)	Moisture Variation	Pass / Fail	Remarks
HDR:W21DS03298	S21DS-12139	27/10/2021	356545	5777986	8.959	97.5	2.4 wet	Pass	
HDR:W21DS03298	S21DS-12140	27/10/2021	356564	5777943	9.762	99	2.8 wet	Pass	
HDR:W21DS03316	S21DS-12183	28/10/2021	356561	5778118	9.965	99	2.9 wet	Pass	
HDR:W21DS03316	S21DS-12184	28/10/2021	356566	5777917	9.895	97.5	3.0 wet	Pass	
HDR:W21DS03467	S21DS-12767	23/11/2021	356895	5777846	9.2	104	2.1 dry	Pass	
HDR:W21DS03475	S21DS-12797	24/11/2021	356950	5777846	8.675	100.5	omc	Pass	
HDR:W21DS03475	S21DS-12798	24/11/2021	356921	5777844	8.704	105.5	omc	Pass	
HDR:W21DS03493	S21DS-12885	25/11/2021	356867	5777843	9.285	96.5	2.5 wet	Pass	
HDR:W21DS03493	S21DS-12886	25/11/2021	356880	5777842	9.26	104	0.5 dry	Pass	
HDR:W21DS03493	S21DS-12887	25/11/2021	356903	5777834	9.02	98	omc	Pass	
HDR:W21DS03493	S21DS-12888	25/11/2021	356935	5777833	8.636	99.5	1.5 dry	Pass	
HDR:W21DS03502	S21DS-12918	26/11/2021	356960	5777826	8.415	99	0.5 wet	Pass	
HDR:W21DS03502	S21DS-12919	26/11/2021	356974	5777823	8.329	104	omc	Pass	
HDR:W21DS03502	S21DS-12920	26/11/2021	356990	5777831	8.365	100	2.4 dry	Pass	
HDR:W21DS03502	S21DS-12921	26/11/2021	356901	5777827	8.19	102	2.7 dry	Pass	
HDR:W21DS03502	S21DS-12922	26/11/2021	357018	5777812	8.173	97.5	2.3 dry	Pass	
HDR:W21DS03502	S21DS-12923	26/11/2021	357004	5777818	8.26	99	0.5 dry	Pass	
HDR:W21DS03503	S21DS-12924	27/11/2021	356924	5777847	9.02	96.5	0.5 dry	Pass	
HDR:W21DS03503	S21DS-12930	27/11/2021	356914	5777837	9.21	103.5	2.1 dry	Pass	

Report No	Sample No	Date	Location [E]	Location [N]	RL	Density Ratio HILF test (≥95%)	Moisture Variation	Pass / Fail	Remarks
HDR:W21DS03529	S21DS-12997	29/11/2021	356611	5777914	10.176	94	2.3 dry	Fail	See Retest 13011
HDR:W21DS03529	S21DS-12998	29/11/2021	356639	5777912	10.211	98	0.5 dry	Pass	
HDR:W21DS03530	S21DS-12999	29/11/2021	356652	5777980	10.215	97	0.5 wet	Pass	
HDR:W21DS03530	S21DS-13000	29/11/2021	356663	5777952	10.379	102	0.5 wet	Pass	
HDR:W21DS03530	S21DS-13001	29/11/2021	356620	5777948	10.181	101.5	omc	Pass	
HDR:W21DS03537	S21DS-13010	30/11/2021	356621	5777987	10.112	96	1.0 dry	Pass	
HDR:W21DS03538	S21DS-13011	30/11/2021	356610	5777915	10.231	95	omc	Pass	Retest of 12997
HDR:W21DS03538	S21DS-13012	30/11/2021	356642	5777918	10.181	95.5	omc	Pass	
HDR:W21DS03538	S21DS-13013	30/11/2021	356681	5777949	10.261	100	omc	Pass	
HDR:W21DS03558	S21DS-13113	1/12/2021	357024	5777791	8.176	98.5	0.5 wet	Pass	
HDR:W21DS03558	S21DS-13114	1/12/2021	357015	5777763	8.25	97.5	0.5 wet	Pass	
HDR:W21DS03558	S21DS-13115	1/12/2021	356973	5777799	8.75	98	1.5 dry	Pass	
HDR:W21DS03558	S21DS-13116	1/12/2021	356860	5777787	8.55	98	0.5 wet	Pass	
HDR:W21DS03563	S21DS-13129	2/12/2021	356946.889	5777889.98	9.086	100.5	0.5 wet	Pass	
HDR:W21DS03611	S21DS-13294	7/12/2021	356991.906	5777931.323	8.723	95	4.2 wet	Fail	See Retest 123628
HDR:W21DS03611	S21DS-13297	7/12/2021	357002	5778017	9.479	96	0.5 wet	Pass	
HDR:W21DS03611	S21DS-13298	7/12/2021	356797	5778022	9.589	98.5	0.5 wet	Pass	

1016363.4000 - Riverfield Estate Stage 4 - HILF Summary

Tel : (03) 8796 7900
Fax: (03) 8796 7944

Report No	Sample No	Date	Location [E]	Location [N]	RL	Density Ratio HILF test (≥95%)	Moisture Variation	Pass / Fail	Remarks
HDR:W21DS03707	S21DS-13627	16/12/2021	356576	5777883	8.987	92.5	omc	Fail	See Retest 13670
HDR:W21DS03708	S21DS-13628	16/12/2021	356990	5777931	8.548	98	omc	Pass	Retest of 13294
HDR:W21DS03708	S21DS-13629	16/12/2021	356982	5777967	9.149	104	omc	Pass	Retest of 13274
HDR:W21DS03708	S21DS-13630	16/12/2021	356972	5778017	9.525	101.5	omc	Pass	Retest of 13273
HDR:W21DS03709	S21DS-13631	16/12/2021	357060	5778051	FSL	100	omc	Pass	
HDR:W21DS03726	S21DS-13670	18/12/2021	356580	5777878	8.953	99.5	0.5 dry	Pass	Retest of 13627
HDR:W21DS03726	S21DS-13671	18/12/2021	356972	5777881	9.076	99	0.5 wet	Pass	
HDR:W21DS03726	S21DS-13672	18/12/2021	356990	5777922	9.175	99.5	1.5 wet	Pass	
HDR:W22DS00456	S22DS-01483	25/02/2022	356893	5778035	10.195	102.5	2.2 dry	Pass	
									No Further tests

Appendix C: Hilf density testing 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:W20DS06588

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 1
Project No.: 1016363.1000
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 23/12/2020

12712
 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	S20DS-23903	S20DS-23904	S20DS-23905	S20DS-23906	S20DS-23907	S20DS-23908
Field Sample ID	1	2	3	4	5	6
Date Tested	17/12/2020	17/12/2020	17/12/2020	17/12/2020	17/12/2020	17/12/2020
E:	356716.9	356749.9	356799.3	356772.6	356736	356864.6
N:	5777734	5777708.9	5777719.7	577769	5777719.4	5777758.7
RL:	8.93	9.06	8.79	9.17	9.17	7.32
Lot:	204	136	210	134	204	127

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)	1.97	1.93	2.08	2.05	1.95	1.94
Peak Converted Wet Density (t/m ³)	1.98	1.95	2.24	2.05	2.02	2.11
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Variation (%)	0.0	2.0 dry	0.0	0.5 dry	0.5 wet	0.0
Hilf Density Ratio (%)	99.5	99.0	93.0	100.0	96.5	92.5

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:W20DS06620

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 1
Project No.: 1016363.1000
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 – Testing



The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 18/01/2021

12712
 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	S20DS-24018	S20DS-24019	S20DS-24020	S20DS-24021	S20DS-24022
Field Sample ID	1	2	3	4	5
Date Tested	21/12/2020	21/12/2020	21/12/2020	21/12/2020	21/12/2020
E:	356800.6	356866	35859.7	356867.6	356744
N:	5777732.5	5777758	5777607.1	5777649.1	5777566.1
RL:	8.817	7.30	8.19	8.47	8.24
Lot:	211		3.16	321	103

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 Wet Density (t/m³)	2.13	2.12	2.08	2.04	1.97
Peak Converted Wet Density (t/m³)	2.08	2.04	2.01	2.04	2.05
Compactive Effort	Standard	Standard	Standard	Standard	Standard
Moisture Variation (%)	0.0	0.0	0.0	1.0 wet	0.5 wet
Hilf Density Ratio (%)	102.0	103.5	103.0	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:W21DS00044

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 2
Project No.: 1016363.2000
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing

Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 18/01/2021
 12712
 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-00143	S21DS-00144	S21DS-00145	S21DS-00146
Field Sample ID	1	2	3	4
Date Tested	9/01/2020	9/01/2020	9/01/2020	9/01/2020
E:	356800.8	356794.6	356792.9	356794.9
N:	5777743.4	5777762.6	5777786.3	5777808.7
RL:	210	226	227	229

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 Wet Density (t/m³)	2.09	2.06	2.02	2.06
Peak Converted Wet Density (t/m³)	2.15	2.05	2.07	2.05
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Variation (%)	0.0	0.0	0.0	0.0
Hilf Density Ratio (%)	97.0	100.0	98.0	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:W21DS00065

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 2
Project No.: 1016363.2000
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing




Accreditation No. 12719

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/National standards.

Approved Signatory: M. Longfield
 (Senior Technician)
 12712 Date of Issue: 18/01/2021
 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-00292	S21DS-00293	S21DS-00294		
Field Sample ID	1	2	3		
Date Tested	11/01/2021	11/01/2021	11/01/2021		
E:	356809.6	356785.8	356816.4		
N:	5777774.1	5777804.3	5777825.4		
RL:	9.41	9.63	9.140		
Lot:	224	229	220		

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)	2.06	1.99	2.02		
Peak Converted Wet Density (t/m³)	2.07	2.00	2.05		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	2.0 wet	0.5 wet	3.0 wet		
Hilf Density Ratio (%)	99.0	99.5	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:W21DS00072

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 2
Project No.: 1016363.2000
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing




The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/National standards.

Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 19/01/2021

12712

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-00320	S21DS-00321			
Field Sample ID	1	2			
Date Tested	12/01/2021	12/01/2021			
E:	356741.5	356769.3			
N:	5777809.5	5777786.7			
RL:	9.32	9.50			
Lot:	240	236			

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)	1.96	2.12			
Peak Converted Wet Density (t/m³)	2.11	2.15			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	3.0 wet	1.5 wet			
Hilf Density Ratio (%)	93.0	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:W21DS00086
Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 2
Project No.: 1016363.2000
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 19/01/2021

12712
 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-00363	S21DS-00364	S21DS-00365	S21DS-00366	S21DS-00367	S21DS-00368
Field Sample ID	1	2	3	4	5	6
Date Tested	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
E:	356758.9	356758.4	356725.9	356696.6	356711.4	356739.5
N:	5777832.2	5777778.7	5777781.7	5777746.1	5777812.8	5777810.2
RL:	9.68	9.67	9.63	9.63	9.86	9.30
Lot:	233	237	238	203	240	240

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)	1.99	1.97	2.00	1.98	1.96	1.99
Peak Converted Wet Density (t/m ³)	2.04	2.10	2.03	2.02	2.05	2.05
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Variation (%)	0.5 wet	2.0 wet	0.5 wet	0.0	2.5 wet	1.5 wet
Hilf Density Ratio (%)	97.0	93.5	98.5	98.5	96.0	97.0

Comments



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

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

Report No: HDR:W21DS00086

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 2
Project No.: 1016363.2000
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing




The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/National standards.

Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 19/01/2021

12712

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-00369	S21DS-00370			
Field Sample ID	7	8			
Date Tested	13/01/2021	13/01/2021			
E:	356867.9	356864.2			
N:	5777658.8	5777680.7			
RL:	8.69	9.15			
Lot:	321	1002			

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)	2.00	1.93			
Peak Converted Wet Density (t/m³)	2.07	2.13			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	2.5 wet	2.5 wet			
Hilf Density Ratio (%)	97.0	91.0			

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:W21DS00199

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 3
Project No.: 1016363.3000
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing

Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 25/01/2021
 12712
 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-00857	S21DS-00858	S21DS-00859	S21DS-00860	S21DS-00861	S21DS-00862
Field Sample ID	1	2	3	4	5	6
Date Tested	19/01/2021	19/01/2021	19/01/2021	19/01/2021	19/01/2021	19/01/2021
E:	356909.3	356949.3	3567678.3	356766.6	356785.3	356783.3
N:	5777573.4	5777574.3	5777854.1	5777881.4	5777897.1	5777934.9
RL:	8.25	8.42	9.41	9.25	9.14	9.29
Lot:	307	310	406	405	418	419

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)	1.95	2.04	1.98	1.94	1.95	1.97
Peak Converted Wet Density (t/m ³)	1.99	2.05	2.04	1.88	1.99	1.96
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Variation (%)	0.5 wet	0.0	0.5 dry	0.5 dry	0.5 wet	0.5 dry
Hilf Density Ratio (%)	98.0	99.5	97.5	103.0	98.0	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:W21DS00219

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 3
Project No.: 1016363.3000
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/National standards.

Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 25/01/2021

12712
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
Client Request ID:
Specification Requirements:
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-00924	S21DS-00925	S21DS-00926	S21DS-00927	S21DS-00928	S21DS-00929
Field Sample ID	1	2	3	4	5	6
Date Tested	20/01/2021	20/01/2021	20/01/2021	20/01/2021	20/01/2021	20/01/2021
E:	356718.1	356721.0	356736.1	356744.3	356721.9	356718.3
N:	5777868.4	5777883.2	5777852.4	5777922.9	5777885.4	5777867.2
EL:	8.34	8.67	8.97	8.92	8.94	8.75
Lot:	401	402	404	425	402	401

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)	2.00	1.98	1.97	2.05	1.99	1.98
Peak Converted Wet Density (t/m ³)	2.00	2.06	2.05	2.08	2.06	2.04
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Variation (%)	0.5 wet	2.5 wet	0.0	0.0	2.5 dry	0.5 wet
Hilf Density Ratio (%)	100.0	96.0	96.0	98.5	97.0	97.5

Comments



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

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

Report No: HDR:W21DS00219

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 3
Project No.: 1016363.3000
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing

Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 25/01/2021

12712
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
Client Request ID:
Specification Requirements:
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-00930	S21DS-00931	S21DS-00932	S21DS-00933	S21DS-00934	S21DS-00935
Field Sample ID	7	8	9	10	11	12
Date Tested	20/01/2021	20/01/2021	20/01/2021	20/01/2021	20/01/2021	20/01/2021
E:	356798.3	356804.6	356770.5	356772.1	356768.9	356760.8
N:	5777787.9	5777846.4	577786.1	5777930.6	57757865.5	5777804.3
EL:	9.69	9.80	9.24	9.31	9.66	9.95
Lot:	227	407	418	423	406	235

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)	1.94	2.00	1.97	1.99	1.99	2.05
Peak Converted Wet Density (t/m ³)	2.04	1.99	2.02	2.05	2.07	2.05
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Variation (%)	2.0 wet	1.0 wet	4.0 wet	2.5 wet	2.5 wet	2.0 wet
Hilf Density Ratio (%)	95.0	100.5	98.0	97.5	96.0	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:W21DS00219

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 3
Project No.: 1016363.3000
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing

Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 25/01/2021
 12712
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
Client Request ID:
Specification Requirements:
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-00936	S21DS-00937	S21DS-00938		
Field Sample ID	13	14	15		
Date Tested	20/01/2021	20/01/2021	20/01/2021		
E:	356693.9	356742.3	356721.3		
N:	5777874.5	5777927.5	5777906.1		
EL:	8.61	9.36	9.28		
Lot:	402	425	426		

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)	2.06	2.00	2.04		
Peak Converted Wet Density (t/m ³)	2.10	2.07	2.09		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	2.0 dry	2.0 wet	2.0 wet		
Hilf Density Ratio (%)	97.5	96.5	98.0		

Comments



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

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

Report No: HDR:W21DS00262

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 1
Project No.: 1016363.1000
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing

Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 29/01/2021

12712
 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-01100	S21DS-01101	S21DS-01102	S21DS-01103	S21DS-01104	S21DS-01105
Field Sample ID	1	2	3	4	5	6
Date Tested	22/01/2021	22/01/2021	22/01/2021	22/01/2021	22/01/2021	22/01/2021
E:	356730.3	356737.4	356757.4	356769.4	356680.2	356866.6
N:	5777922.4	5777957.6	5777983.1	5777894.7	5777880.1	5777682.5
RL:	9.54	9.59	9.72	9.13	8.29	9.24
Lot:	426	428	513	418	402	1002

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	2.04	2.00	2.02	2.02
Peak Converted Wet Density (t/m ³)	2.01	2.04	2.05	2.00	2.10	2.02
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Variation (%)	0.5 dry	0.5 wet	0.5 wet	0.5 dry	0.0	0.5 wet
Hilf Density Ratio (%)	101.0	97.0	99.5	100.0	96.0	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:W21DS00262

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 1
Project No.: 1016363.1000
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/National standards.

Approved Signatory: M. Longfield
 (Senior Technician)
 12712 Date of Issue: 29/01/2021
 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-01106	S21DS-01107	S21DS-01108		
Field Sample ID	7	8	9		
Date Tested	22/01/2021	22/01/2021	22/01/2021		
E:	356974.3	356984.2	356966		
N:	5777607.6	5777595.6	5777556.9		
RL:	8.22	8.09	8.09		
Lot:	329	330	333		

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)	2.03	2.00	2.03		
Peak Converted Wet Density (t/m ³)	2.07	2.01	2.06		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	0.0	0.5 wet	0.5 wet		
Hilf Density Ratio (%)	98.0	99.5	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:W21DS00304

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 4
Project No.: 1016363.4000
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Approved Signatory: M. Robinson
 (Team Leader)
 Date of Issue: 28/01/2021
 12712
 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-01328	S21DS-01329	S21DS-01330	S21DS-01331		
Field Sample ID	1	2	3	4		
Date Tested	27/01/2021	27/01/2021	27/01/2021	27/01/2021		
E:	356734.2	356716.1	356699.1	356713.8		
N:	5777962.3	5777936.6	5777870.9	5777850.4		
Elv:	9.85	9.85	9.72	9.95		

Field and Laboratory Data

Depth of Test (mm)	175	175	175	175		
Depth of Layer (mm)	200	200	200	200		
Field Wet Density (t/m³)	2.05	1.97	2.05	2.06		
Peak Converted Wet Density (t/m³)	2.05	1.96	2.09	2.12		
Compactive Effort	Standard	Standard	Standard	Standard		
Moisture Variation (%)	1.0 wet	0.5 wet	0.5 wet	0.0		
Hilf Density Ratio (%)	100.0	101.0	98.0	97.0		

Comments



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

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

Report No: HDR:W21DS00318

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 1
Project No.: 1016363.1000
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Approved Signatory: M. Robinson
 (Team Leader)
 Date of Issue: 29/01/2021
 12712
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location: Riverfield Stage 6
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: Site Won
Material: Clay Fill

Sample Data

Sample ID	S21DS-01375	S21DS-01376	S21DS-01377	S21DS-01378
Field Sample ID	1	2	3	4
Date Tested	28/01/2021	28/01/2021	28/01/2021	28/01/2021
E	356834	356796	356861	356934
N	5777967	5777978	5777553	5777542
RL	9.37	9.59	6.14	7.56

Field and Laboratory Data

Depth of Test (mm)	175	175	175	175
Depth of Layer (mm)	200	200	200	200
Field Wet Density (t/m ³)	1.96	1.99	1.98	2.00
Peak Converted Wet Density (t/m ³)	2.04	2.06	2.07	2.07
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Variation (%)	1.0 wet	0.5 wet	3.0 wet	2.0 wet
Hilf Density Ratio (%)	96.0	96.5	95.5	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:W21DS00410

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 4
Project No.: 1016363.4000
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number 12719
 12712
 Approved Signatory: M. Robinson
 (Team Leader)
 Date of Issue: 8/02/2021

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%
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-01723	S21DS-01724	S21DS-01725	S21DS-01726	S21DS-01727
Field Sample ID	1	2	3	4	5
Date Tested	4/02/2021	4/02/2021	4/02/2021	4/02/2021	4/02/2021
E:	356700.7	356739.2	356971.1	356917.7	357023.0
N:	5777965.8	5777991.1	5777575.1	5777566.2	5777629.4
Elv:	9.88	9.86	8.43	8.91	7.87

Field and Laboratory Data

Depth of Test (mm)	175	175	175	175	175
Depth of Layer (mm)	200	200	200	200	200
Field Wet Density (t/m ³)	1.96	2.00	2.12	2.12	2.07
Peak Converted Wet Density (t/m ³)	2.07	2.05	2.09	2.06	2.09
Compactive Effort	Standard	Standard	Standard	Standard	Standard
Moisture Variation (%)	0.0	0.0	0.5 wet	0.0	0.5 dry
Hilf Density Ratio (%)	95.0	97.5	101.0	103.0	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:W21DS00439

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 4
Project No.: 1016363.4000
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number 12719
 12712
 Approved Signatory: J. A. Smith
 (Senior Technician)
 Date of Issue: 3/03/2021
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
Client Request ID:
Specification Requirements:
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: Site Won
Material: CLAY Fill

Sample Data

Sample ID	S21DS-01831	S21DS-01832	S21DS-01833	S21DS-01834	S21DS-01835	S21DS-01836
Field Sample ID	1	2	3	4	5	6
Date Tested	5/02/2021	5/02/2021	5/02/2021	5/02/2021	5/02/2021	5/02/2021
Location	E 356677	E 356680	E 357039	E 357051	E 356998	E 357038
	N 5777940	N 5777976	N 5777636	N 5777621	N 5777567	N 5777557
	R.L 9.82m	R.L 9.92m	R.L 7.57m	R.L 7.54m	R.L 7.55m	R.L 7.53m

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)	1.96	1.97	2.07	2.02	2.04	1.96
Peak Converted Wet Density (t/m ³)	2.06	2.02	2.05	2.07	2.06	2.01
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Variation (%)	3.5 wet	1.5 wet	1.0 wet	2.5 wet	0.0	0.0
Hilf Density Ratio (%)	95.5	97.0	101.0	97.5	99.0	98.0

Comments



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

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

Report No: HDR:W21DS00504

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 3
Project No.: 1016363.3000
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number 12719
 12712
 Approved Signatory: J. A. Smith
 (Senior Technician)
 Date of Issue: 3/03/2021

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%
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-02096				
Field Sample ID	1				
Date Tested	10/02/2021				
E:	356681.2				
N:	5778040.2				
Elv:	10.27				

Field and Laboratory Data

Depth of Test (mm)	175				
Depth of Layer (mm)	200				
AS Sieve Size (mm)	19.0				
Oversize Wet (%)	0				
Field Wet Density (t/m³)	1.94				
Peak Converted Wet Density (t/m³)	1.94				
Compactive Effort	Standard				
Moisture Variation (%)	0.5 wet				
Hilf Density Ratio (%)	100.0				

Comments



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

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

Report No: HDR:W21DS00536

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 3
Project No.: 1016363.3000
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number 12719 Approved Signatory: J. A. Smith
 12712 (Senior Technician)
 Date of Issue: 3/03/2021
 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%
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-02202	S21DS-02203	S21DS-02204	S21DS-02205	S21DS-02206
Field Sample ID	1	2	3	4	5
Date Tested	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
E:	357001.6	357020.2	357005.6	356853.4	356868.0
N:	5777531.9	5777537.2	5777550.4	5777885.5	5777915.8
Elv:	7.63	7.86	8.19	9.02	8.94

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 Wet Density (t/m³)	2.04	2.19	2.11	1.97	2.10
Peak Converted Wet Density (t/m³)	2.02	1.96	2.16	2.02	2.11
Compactive Effort	Standard	Standard	Standard	Standard	Standard
Moisture Variation (%)	5.0 wet	6.0 wet	0.0	2.0 wet	0.5 wet
Hilf Density Ratio (%)	101.0	112.0	97.5	98.0	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:W21DS00644

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate Clyde - Stage 4
Project No.: 1016363.004
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number 12719
 12712
 Approved Signatory: J. A. Smith
 (Senior Technician)
 Date of Issue: 3/03/2021

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-02585	S21DS-02586	S21DS-02587		
Field Sample ID	1	2	3		
Date Tested	18/02/2021	18/02/2021	18/02/2021		
E:	356864.6	356866.9	356853.1		
N:	5777939	5777919.2	5777895.3		
EL:	9.45	9.46	9.24		
Lot:	473	412	411		

Field and Laboratory Data

Depth of Test (mm)	175	175	175		
Depth of Layer (mm)	200	200	200		
Field Wet Density (t/m³)	1.99	1.96	2.02		
Peak Converted Wet Density (t/m³)	2.16	2.11	2.06		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	6.0 wet	3.5 wet	0.5 wet		
Hilf Density Ratio (%)	92.0	92.5	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:W21DS00772

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 3
Project No.: 1016363.3000
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number 12719
 12712
 Approved Signatory: J. A. Smith
 (Senior Technician)
 Date of Issue: 3/03/2021
 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%
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-03077	S21DS-03078	S21DS-03079	S21DS-03080	S21DS-03081	S21DS-03082
Field Sample ID	1	2	3	4	5	6
Date Tested	1/03/2021	1/03/2021	1/03/2021	1/03/2021	1/03/2021	1/03/2021
E:	357002	357022	357028	357027	356674	3556866
N:	5777531	5777539	5777594	5777621	5777939	5777919
Elv:	7.74	7.84	8.28	8.06	9.83	9.43

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)	1.96	1.96	2.07	1.96	1.97	2.06
Peak Converted Wet Density (t/m ³)	2.01	1.96	1.98	2.01	2.02	1.99
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Variation (%)	2.5 wet	0.5 wet	0.5 wet	2.5 wet	2.5 wet	0.5 dry
Hilf Density Ratio (%)	97.5	100.0	104.5	97.0	97.5	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:W21DS00772

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 3
Project No.: 1016363.3000
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number 12719
 12712
 Approved Signatory: J. A. Smith
 (Senior Technician)
 Date of Issue: 3/03/2021
 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%
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-03083	S21DS-03084			
Field Sample ID	7	8			
Date Tested	1/03/2021	1/03/2021			
E:	356864	356873			
N:	5777937	5777573			
Elv:	9.43	8.86			

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/m ³)	1.98	2.00			
Peak Converted Wet Density (t/m ³)	1.98	2.01			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	0.0	0.0			
Hilf Density Ratio (%)	100.5	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:W21DS00867

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 3
Project No.: 1016363.3000
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number 12719
 12712
 Approved Signatory: J. A. Smith
 (Senior Technician)
 Date of Issue: 9/03/2021

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location: Stage 3
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: Site Won
Material: Clay

Sample Data

Sample ID	S21DS-03485	S21DS-03486	S21DS-03487			
Field Sample ID	1	2	3			
Date Tested	5/03/2021	5/03/2021	5/03/2021			
E	356860.8	356874.4	356877.5			
N	5777513.6	5777770.1	5777822.9			
EL	9.499	9.6	9.41			

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			
Field Wet Density (t/m³)	2.01	1.97	2.02			
Peak Converted Wet Density (t/m³)	2.04	2.09	2.09			
Compactive Effort	Standard	Standard	Standard			
Moisture Variation (%)	0.5 wet	0.5 wet	0.5 wet			
Hilf Density Ratio (%)	98.5	94.0	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:W21DS00881

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 1
Project No.: 1016363.1000
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: 19/03/2021
 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%
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-03549	S21DS-03550	S21DS-03551	S21DS-03552	S21DS-03553
Field Sample ID	1	2	3	4	5
Date Tested	9/03/2021	9/03/2021	9/03/2021	9/03/2021	9/03/2021
E:	357192.5	357188.8	357162.0	357165.4	356875.4
N:	5777602.8	5777583.4	5777571.7	5777605.4	5777769.0
Elv:	7.22	7.42	7.09	7.31	9.32

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 Wet Density (t/m³)	2.05	2.04	2.02	1.97	2.07
Peak Converted Wet Density (t/m³)	2.02	2.06	2.03	2.04	2.02
Compactive Effort	Standard	Standard	Standard	Standard	Standard
Moisture Variation (%)	1.0 wet	0.5 wet	0.5 wet	2.0 wet	2.5 dry
Hilf Density Ratio (%)	101.5	99.0	99.5	96.5	102.5

Comments



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

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

Report No: HDR:W21DS00983

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate Clyde - Stage 4
Project No.: 1016363.004
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: 19/03/2021
 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%
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.5.7.1, RC 316.00
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: CLAY

Sample Data

Sample ID	S21DS-03871	S21DS-03872			
Field Sample ID	1	2			
Date Tested	17/03/2021	17/03/2021			
E:	356632.9	356667.9			
N:	5777907.1	5777899.7			
Elv:	9.42	9.47			

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)	1.98	1.88			
Peak Converted Wet Density (t/m³)	1.98	1.91			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	0.0	0.0			
Hilf Density Ratio (%)	100.0	98.5			

Statistical Data

Mean Density Ratio (Rd) %:

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:W21DS01005

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 4
Project No.: 1016363.4000
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: 25/03/2021
 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-03951	S21DS-03952	S21DS-03953	S21DS-03954	S21DS-03955	S21DS-03956
Field Sample ID	1	2	3	4	5	6
Date Tested	18/03/2021	18/03/2021	18/03/2021	18/03/2021	18/03/2021	18/03/2021
E:	356849.9	356847.3	356629.7	356624.1	356639.9	356652.2
N:	5777930.2	5777951.1	57776965.7	5777928.4	5777119.5	5777901.2
EL:	9.47	9.55	9.68	9.89	9.87	9.41
Lot:	413	624	505	502	436	436

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)	1.94	1.71	1.74	1.82	1.94	1.86
Peak Converted Wet Density (t/m ³)	1.84	1.78	1.95	1.89	1.88	1.99
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Variation (%)	1.0 dry	0.0	2.5 dry	1.5 dry	0.0	0.0
Hilf Density Ratio (%)	105.5	96.0	89.5	96.5	103.0	93.5

Comments



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

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

Report No: HDR:W21DS01022

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 1
Project No.: 1016363.1000
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: 25/03/2021
 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-04027	S21DS-04028	S21DS-04029		
Field Sample ID	1	2	3		
Date Tested	19/03/2021	19/03/2021	19/03/2021		
E:	356764.7	356740.4	356712.7		
N:	5778053.2	5778051.4	5778051.2		
EL:Lot:	10.19	10.411	10.37		
	613	612	525		

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)	1.85	1.82	1.88		
Peak Converted Wet Density (t/m³)	1.97	1.93	2.02		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	0.5 wet	0.5 wet	2.0 wet		
Hilf Density Ratio (%)	93.5	94.0	93.0		

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:W21DS01343

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield - Stage 6
Project No.: 1016363.006
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: 23/04/2021

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%
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-05201	S21DS-05202	S21DS-05203		
Field Sample ID	1	2	3		
Date Tested	19/04/2021	19/04/2021	19/04/2021		
Lot:	612	613	611		
E:	356748.04	356762.55	356730.52		
N:	5778075.76	5778077.06	5778074.73		
Elv:	10.28	10.12	10.49		

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	1.84	1.97		
Peak Converted Wet Density (t/m ³)	2.03	1.90	1.97		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	1.0 wet	2.0 dry	2.5 wet		
Hilf Density Ratio (%)	98.5	96.5	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:W21DS01364

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield - Stage 6
Project No.: 1016363.006
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: 23/04/2021
 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-05286	S21DS-05287				
Field Sample ID	1	2				
Date Tested	20/04/2021	20/04/2021				
E:	356744.46	3576715.53				
N:	5778078.01	5778080.08				
EL:	10.27	10.30				
Lot:	612	610				

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)	2.00	1.93				
Peak Converted Wet Density (t/m³)	2.01	1.98				
Compactive Effort	Standard	Standard				
Moisture Variation (%)	1.5 wet	1.5 wet				
Hilf Density Ratio (%)	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:W21DS01405

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield - Stage 6
Project No.: 1016363.006
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: 16/06/2021

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-05405	S21DS-05406			
Field Sample ID	1	2			
Date Tested	22/04/2021	22/04/2021			
E:	356683.40	356675.28			
N:	5778089.60	5778078.62			
EL:	10.33	10.41			
Lot:	608	607			

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/m ³)	1.94	1.93			
Peak Converted Wet Density (t/m ³)	1.95	1.96			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	0.5 wet	0.5 wet			
Hilf Density Ratio (%)	99.5	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:W21DS01443

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield - Stage 6
Project No.: 1016363.006
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: 16/06/2021
 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%
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-05532	S21DS-05533	S21DS-05534	S21DS-05535	S21DS-05536
Field Sample ID	1	2	3	4	5
Date Tested	26/04/2021	26/04/2021	26/04/2021	26/04/2021	26/04/2021
E:	356637	356664	356694	356670	356649
N:	5778101	5778093	5778078	5778054	5778052
Elv:	10.07	10.47	10.35	10.28	10.22

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 Wet Density (t/m ³)	1.95	1.95	1.93	2.01	2.05
Peak Converted Wet Density (t/m ³)	1.94	1.94	1.95	1.98	2.03
Compactive Effort	Standard	Standard	Standard	Standard	Standard
Moisture Variation (%)	0.5 wet	0.0	0.0	0.0	0.5 dry
Hilf Density Ratio (%)	100.0	101.0	99.5	101.0	100.5

Comments



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

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

Report No: HDR:W21DS01619

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield - Stage 6
Project No.: 1016363.006
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: 16/06/2021

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-06116	S21DS-06117	S21DS-06118		
Field Sample ID	1	2	3		
Date Tested	8/05/2021	8/05/2021	8/05/2021		
E:	356834	356827	356845		
N:	5777996	5778009	5778007		

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	2.03	2.01		
Peak Converted Wet Density (t/m³)	2.07	2.06	2.05		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	2.0 wet	2.0 wet	1.5 wet		
Hilf Density Ratio (%)	97.0	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:W21DS01702

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield - Stage 6
Project No.: 1016363.006
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-06378	S21DS-06379			
Field Sample ID	1	2			
Date Tested	10/05/2021	10/05/2021			
E:	356832	356823			
N:	5778008	5778022			

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)	1.99	2.09			
Peak Converted Wet Density (t/m³)	2.05	2.11			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	0.0	0.0			
Hilf Density Ratio (%)	97.0	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:W21DS01730

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield - Stage 6
Project No.: 1016363.006
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: 16/06/2021

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-06448	S21DS-06449	S21DS-06450		
Field Sample ID	1	2	3		
Date Tested	12/05/2021	12/05/2021	12/05/2021		
E:	356871	356863	356859		
N:	5778020	5777992	5777968		

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)	2.04	2.08	2.03		
Peak Converted Wet Density (t/m ³)	2.11	2.12	2.13		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	0.5 dry	2.0 wet	2.0 wet		
Hilf Density Ratio (%)	96.5	98.0	95.5		

Comments



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

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

Report No: HDR:W21DS01760

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 1
Project No.: 1016363.1000
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: 14/05/2021
 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	S21DS-06547	S21DS-06548			
Field Sample ID	1	2			
Date Tested	13/05/2021	13/05/2021			
Location	E 356890	E 356882			
	N 5778000	N 5777975			

Field and Laboratory Data

Depth of Test (mm)	175	175			
Depth of Layer (mm)	200	200			
Field Wet Density (t/m ³)	1.86	1.85			
Peak Converted Wet Density (t/m ³)	1.94	2.08			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	2.0 wet	2.0 dry			
Hilf Density Ratio (%)	96.0	89.0			

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:W21DS01764

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield - Stage 6
Project No.: 1016363.006
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Approved Signatory: M. Robinson
 (Team Leader)
 Date of Issue: 17/05/2021

Accreditation Number: 12719
 Site Number: 12712

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

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

Sample Data

Sample ID	S21DS-06555	S21DS-06556			
Field Sample ID	1	2			
Date Tested	14/05/2021	14/05/2021			
E:	356886	356884			
N:	5777796	5777948			

Field and Laboratory Data

Depth of Test (mm)	175	175			
Depth of Layer (mm)	200	200			
Field Wet Density (t/m ³)	2.05	1.85			
Peak Converted Wet Density (t/m ³)	2.02	1.97			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	2.5 wet	2.5 wet			
Hilf Density Ratio (%)	102.0	93.5			

Comments



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

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

Report No: HDR:W21DS01835

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 1
Project No.: 1016363.1000
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-06823	S21DS-06824			
Field Sample ID	1	2			
Date Tested	20/05/2021	20/05/2021			
E:	356902	356900			
N:	5778078	5778074			

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)	2.08	2.06			
Peak Converted Wet Density (t/m³)	2.13	2.10			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	0.5 wet	2.0 dry			
Hilf Density Ratio (%)	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:W21DS01864

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield - Stage 6
Project No.: 1016363.006
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: 16/06/2021
 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-06923	S21DS-06924	S21DS-06925	S21DS-06926
Field Sample ID	1	2	3	4
Date Tested	24/05/2021	24/05/2021	24/05/2021	24/05/2021
E:	245801	356884	356889	356915
N:	5778057	5777974	5777948	5778028
EL:	9.86	9.51	Retest	9.91

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 Wet Density (t/m³)	2.11	2.13	2.13	2.07
Peak Converted Wet Density (t/m³)	2.14	2.16	2.15	2.16
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Variation (%)	0.5 wet	0.0	0.5 wet	0.5 wet
Hilf Density Ratio (%)	98.5	99.0	99.0	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: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:W21DS01904

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 11
Project No.: 1016363.011
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-07044	S21DS-07045	S21DS-07046	S21DS-07047
Field Sample ID	1	2	3	4
Date Tested	25/05/2021	25/05/2021	25/05/2021	25/05/2021
E:	356893	356901	356906	356909
N:	5777881	5777923	5777945	5777973
EL:	9.29	9.31	9.33	9.74

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 Wet Density (t/m³)	1.95	2.09	2.10	2.05
Peak Converted Wet Density (t/m³)	2.05	2.10	2.12	2.10
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Variation (%)	0.0	0.5 wet	1.5 wet	0.5 wet
Hilf Density Ratio (%)	95.0	99.5	99.0	97.0

Comments



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

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

Report No: HDR:W21DS02035

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 10
Project No.: 1016363.010
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: 11/04/2022
 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 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Clay

Sample Data

Sample ID	S21DS-07475	S21DS-07476	S21DS-07477	S21DS-07478
Field Sample ID	1	2	3	4
Date Tested	2/06/2021	2/06/2021	2/06/2021	2/06/2021
Sample	1	2	3	4
E:	356812	356903	356893	356884
N:	5777850	5777809	5777770	5777734
EL:	8.79	8.94	9.17	9.44

Field and Laboratory Data

Depth of Test (mm)	175	175	175	175
Depth of Layer (mm)	200	200	200	200
Field Wet Density (t/m ³)	2.07	2.09	2.07	2.05
Peak Converted Wet Density (t/m ³)	2.18	2.16	2.17	2.16
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Variation (%)	0.0	0.5 dry	3.0 wet	3.0 wet
Hilf Density Ratio (%)	95.0	96.5	95.5	95.0

Comments



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

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

Report No: HDR:W21DS02759

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 5
Project No.: 1016363.005
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: 6/09/2021
 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-10298	S21DS-10299	S21DS-10300	S21DS-10301
Field Sample ID	1	2	3	4
Date Tested	18/08/2021	18/08/2021	18/08/2021	18/08/2021
E:	356556.31	356623.47	356614.38	356559.07
N:	5777972.31	5778005.66	5777948.02	5778034.86
EL:	7.98	9.79	9.49	7.47
Lot:		539	502	543

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 Wet Density (t/m³)	2.02	2.10	2.12	2.02
Peak Converted Wet Density (t/m³)	2.04	2.04	2.07	2.05
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Variation (%)	2.0 wet	0.5 dry	0.5 dry	2.0 wet
Hilf Density Ratio (%)	98.5	102.5	102.5	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:W21DS02799

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 5
Project No.: 1016363.005
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. Robinson
 (Team Leader)
 Date of Issue: 6/09/2021

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-10490	S21DS-10491	S21DS-10492	S21DS-10493	S21DS-10494	S21DS-10495
Field Sample ID	1	2	3	4	5	6
Date Tested	20/08/2021	20/08/2021	20/08/2021	20/08/2021	20/08/2021	20/08/2021
E:	356688	356622.96	356610.62	356684.79	356454.96	356551.69
N:	5777561	5778022.14	577744.68	5777560.51	5778042.96	5778068.49
EL:	7.25	9.83	9.83	7.52	7.60	7.85
Lot:	Inter Section	539	502	-	544	545
	Stage 1	Stage 5	Stage 5	Stage 1	Dam 5	Dam 6

Field and Laboratory Data

Depth of Test (mm)	300	175	175	300	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)	2.02	2.04	2.04	2.14	1.98	2.00
Peak Converted Wet Density (t/m ³)	1.98	2.01	2.02	2.06	2.06	2.02
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Variation (%)	2.5 wet	0.5 dry	2.0 wet	0.0	0.0	0.5 wet
Hilf Density Ratio (%)	102.0	102.0	101.0	104.5	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:W21DS02799

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 5
Project No.: 1016363.005
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. Robinson
 (Team Leader)
 Date of Issue: 6/09/2021
 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-10496	S21DS-10497	S21DS-10498			
Field Sample ID	7	8	9			
Date Tested	20/08/2021	20/08/2021	20/08/2021			
E:	356685.11	356606.85	356703.41			
N:	5777560.91	5778009.64	5777555.74			
EL:	7.77	9.76	7.65			
Lot:	-	538	300			
	Stage 1					

Field and Laboratory Data

Depth of Test (mm)	300	175	300			
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)	2.02	2.01	2.03			
Peak Converted Wet Density (t/m³)	2.05	1.96	2.02			
Compactive Effort	Standard	Standard	Standard			
Moisture Variation (%)	0.0	0.0	0.5 dry			
Hilf Density Ratio (%)	98.5	102.5	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:W21DS02838

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 5
Project No.: 1016363.005
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. Robinson
 (Team Leader)
 Date of Issue: 6/09/2021
 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-10615	S21DS-10616	S21DS-10617	S21DS-10618	S21DS-10619	S21DS-10620
Field Sample ID	1	2	3	4	5	6
Date Tested	26/08/2021	26/08/2021	26/08/2021	26/08/2021	26/08/2021	26/08/2021
E:	356606.01	356621.88	356539.42	356558.42	356555.40	356688.51
N:	5777896.63	5777884.87	5778032.99	5778045.61	5778091.87	5777560.41
RL / Layer:	9.45 / -	9.21 / -	8.26 / -	8.41 / -	8.75 / -	8.13 / -
Lot:	438	438	544	543	547	-
Other:	Sample: 39	Sample: 40	Sample: 42	Sample: 43	Sample: 44	Sample: 45

Field and Laboratory Data

Depth of Test (mm)	175	175	175	175	175	300
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/m³)	2.06	1.97	1.96	1.97	1.98	2.13
Peak Converted Wet Density (t/m³)	2.03	2.00	2.00	2.01	2.03	2.04
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Variation (%)	0.0	3.0 wet	3.0 wet	2.5 wet	2.0 wet	0.0
Hilf Density Ratio (%)	101.0	98.5	98.5	98.0	98.0	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:W21DS02838

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 5
Project No.: 1016363.005
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: 6/09/2021
 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-10621				
Field Sample ID	7				
Date Tested	26/08/2021				
E:	356550.72				
N:	5778069.53				
RL / Layer:	8.28 / -				
Lot:	-				
Other:	Sample: 46				

Field and Laboratory Data

Depth of Test (mm)	175				
Depth of Layer (mm)	200				
AS Sieve Size (mm)	19.0				
Oversize Wet (%)	0				
Field Wet Density (t/m³)	2.02				
Peak Converted Wet Density (t/m³)	2.02				
Compactive Effort	Standard				
Moisture Variation (%)	0.0				
Hilf Density Ratio (%)	100.0				

Comments



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

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

Report No: HDR:W21DS02849

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 5
Project No.: 1016363.005
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: 30/08/2021
 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-10687	S21DS-10688	S21DS-10689	S21DS-10690
Field Sample ID	1	2	3	4
Date Tested	27/08/2021	27/08/2021	27/08/2021	27/08/2021
E:	356603.56	356604.31	356555.72	356550.13
N:	5777908.33	5777901.26	5778054.45	5778089.37
RL / Layer:	9.75 / -	9.72 / -	8.59 / -	9.12 / -
Lot:	437	438	543	547
Other:	Sample: 47	Sample: 48	Sample: 49	Sample: 50

Field and Laboratory Data

	S21DS-10687	S21DS-10688	S21DS-10689	S21DS-10690
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 Wet Density (t/m ³)	1.98	1.99	2.04	1.99
Peak Converted Wet Density (t/m ³)	2.02	2.03	2.05	2.03
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Variation (%)	2.5 wet	0.5 wet	2.0 wet	2.0 wet
Hilf Density Ratio (%)	98.5	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:W21DS02869

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 5
Project No.: 1016363.005
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: 6/09/2021
 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-10744	S21DS-10745	S21DS-10746		
Field Sample ID	1	2	3		
Date Tested	30/08/2021	30/08/2021	30/08/2021		
E:	356553.67	356607.50	356623.10		
N:	5778071.84	5778015.22	5777998.04		
RL / Layer:	9.15 / -	10.17 / -	10.04 / -		
Lot:	545	538	539		

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)	1.99	2.00	2.05		
Peak Converted Wet Density (t/m³)	2.04	2.05	2.03		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	3.5 wet	3.0 wet	1.0 wet		
Hilf Density Ratio (%)	97.5	97.5	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:W21DS02879

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 5
Project No.: 1016363.005
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: 6/09/2021
 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-10790	S21DS-10791	S21DS-10792		
Field Sample ID	1	2	3		
Date Tested	31/08/2021	31/08/2021	31/08/2021		
E:	356568	356556	356546.98		
N:	5778099	5778018	5778095.25		
RL / Layer:	9.374 / -	9.073 / -	9.46 / -		
Lot:	547	-	547		

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	2.00	1.97		
Peak Converted Wet Density (t/m³)	2.03	2.05	2.04		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	1.5 wet	2.0 wet	2.0 wet		
Hilf Density Ratio (%)	98.5	97.5	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:W21DS03211

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 5
Project No.: 1016363.005
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: 4/11/2021
 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%
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: Silty Clay

Sample Data

Sample ID	S21DS-11847	S21DS-11848			
Field Sample ID	1	2			
Date Tested	19/10/2021	19/10/2021			
E:	356565	356567			
N:	5777989	5777971			
RL / Layer:	9.121 / 1	9.216 / 2			

Field and Laboratory Data

Depth of Test (mm)	175	175			
Depth of Layer (mm)	200	200			
AS Sieve Size (mm)	19.0	19.0			
Oversize Wet (%)	0	0			
Field Wet Density (t/m³)	1.99	2.00			
Peak Converted Wet Density (t/m³)	2.00	2.02			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	2.5 wet	0.0			
Hilf Density Ratio (%)	99.5	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:W21DS03236

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 5
Project No.: 1016363.005
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: 4/11/2021
 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: Silty Clay

Sample Data

Sample ID	S21DS-11908	S21DS-11909	S21DS-11910		
Field Sample ID	1	2	3		
Date Tested	21/10/2021	21/10/2021	21/10/2021		
E:	356555	356552	356561		
N:	5777964	577803	5777939		
RL / Layer:	8.546	10.076	8.837		
Lot:	Reserve	543	Reserve		

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)	2.06	2.11	2.02		
Peak Converted Wet Density (t/m³)	2.02	2.05	2.05		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	2.5 wet	0.5 wet	1.5 wet		
Hilf Density Ratio (%)	101.5	103.0	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:W21DS03290

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - All Stages
Project No.: 1016363
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. Robinson
 (Team Leader)
 Date of Issue: 4/11/2021

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location: Wetland and Road Reserves
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: Site Won
Material: Clay

Sample Data

Sample ID	S21DS-12078	S21DS-12079	S21DS-12080	S21DS-12081		
Field Sample ID	1	2	3	4		
Date Tested	26/10/2021	26/10/2021	26/10/2021	26/10/2021		
E:	356567	356552	356576	356556		
N:	5777935	5777988	5778115	5777949		
RL:	9.228	8.393	9.662	9.546		
	Wetland Reserve	Wetland Reserve	Road Reserve	Wetland Reserve		

Field and Laboratory Data

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/m ³)	1.99	2.12	2.00	2.04		
Peak Converted Wet Density (t/m ³)	2.06	2.19	2.03	2.09		
Compactive Effort	Standard	Standard	Standard	Standard		
Moisture Variation (%)	3.0 wet	2.5 wet	2.5 wet	2.5 wet		
Hilf Density Ratio (%)	96.5	96.5	98.0	97.5		

Comments



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

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

Report No: HDR:W21DS03298

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - All Stages
Project No.: 1016363
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: 4/11/2021
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location: Wetland and Road Reverses
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: Site Won
Material: Clay

Sample Data

Sample ID	S21DS-12138	S21DS-12139	S21DS-12140		
Field Sample ID	1	2	3		
Date Tested	27/10/2021	27/10/2021	27/10/2021		
E:	356547	356545	356564		
N:	5778121	5777986	5777943		
RL:	9.870	8.959	9.762		
	Road Reserve	Wetland Reserve	Wetland Reserve		

Field and Laboratory Data

Depth of Test (mm)	225	225	225		
Depth of Layer (mm)	250	250	250		
Field Wet Density (t/m ³)	2.05	2.00	2.01		
Peak Converted Wet Density (t/m ³)	2.02	2.06	2.03		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	2.5 wet	2.5 wet	3.0 wet		
Hilf Density Ratio (%)	101.5	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:W21DS03316

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - All Stages
Project No.: 1016363
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: 4/11/2021
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location: Wetland and Road Reserve
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: Site Won
Material: Clay

Sample Data

Sample ID	S21DS-12183	S21DS-12184			
Field Sample ID	1	2			
Date Tested	28/10/2021	28/10/2021			
E:	356561	356566			
N:	5778118	5777917			
RL:	9.965	9.895			
	Road Reserve	Conservation Reserve			

Field and Laboratory Data

Depth of Test (mm)	225	225			
Depth of Layer (mm)	250	250			
AS Sieve Size (mm)	19.0	19.0			
Oversize Wet (%)	0	0			
Field Wet Density (t/m³)	2.02	2.01			
Peak Converted Wet Density (t/m³)	2.04	2.07			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	3.0 wet	3.0 wet			
Hilf Density Ratio (%)	99.0	97.5			

Comments



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

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

Report No: HDR:W21DS03467

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 11
Project No.: 1016363.011
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Approved Signatory: M. Robinson
 (Team Leader)
 Date of Issue: 1/12/2021

Accreditation Number: 12719
 Site Number: 12712

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: Silty Clay

Sample Data

Sample ID	S21DS-12767				
Field Sample ID	1				
Date Tested	23/11/2021				
E:	356895				
N:	5777846				
RL / Layer:	09.20 / 1				
Lot:	1103				

Field and Laboratory Data

Depth of Test (mm)	125				
Depth of Layer (mm)	150				
AS Sieve Size (mm)	19.0				
Oversize Wet (%)	0				
Field Wet Density (t/m³)	2.22				
Peak Converted Wet Density (t/m³)	2.13				
Compactive Effort	Standard				
Moisture Variation (%)	2.0 dry				
Hilf Density Ratio (%)	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:W21DS03475

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 11
Project No.: 1016363.011
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: 1/12/2021
 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%
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 Sandy Clay

Sample Data

Sample ID	S21DS-12797	S21DS-12798			
Field Sample ID	1	2			
Date Tested	24/11/2021	24/11/2021			
E:	356950	356921			
N:	5777846	5777844			
RL:	8.675	8.704			
Lot:	1107	1105			

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 Wet Density (t/m³)	2.17	2.23			
Peak Converted Wet Density (t/m³)	2.15	2.12			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	0.0	0.0			
Hilf Density Ratio (%)	100.5	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:W21DS03493

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 11
Project No.: 1016363.011
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. Robinson
 (Team Leader)
 Date of Issue: 1/12/2021

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%
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: Silty Clay

Sample Data

Sample ID	S21DS-12885	S21DS-12886	S21DS-12887	S21DS-12888
Field Sample ID	1	2	3	4
Date Tested	25/11/2021	25/11/2021	25/11/2021	25/11/2021
E:	356867	356880	356903	356935
N:	5777843	5777842	5777834	5777833
RL / Layer:	9.285 / 1	9.260 / 4	9.020 / 1	8.636 / 1 (FSL-0.45m)
Lot:	1101	1102	1104	1106

Field and Laboratory Data

Depth of Test (mm)	125	150	150	175
Depth of Layer (mm)	150	175	175	200
AS Sieve Size (mm)	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0
Field Wet Density (t/m ³)	2.07	2.18	2.06	2.12
Peak Converted Wet Density (t/m ³)	2.15	2.10	2.10	2.12
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Variation (%)	2.5 wet	0.5 dry	0.0	1.5 dry
Hilf Density Ratio (%)	96.5	104.0	98.0	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:W21DS03502

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 11
Project No.: 1016363.011
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. Robinson
 (Team Leader)
 Date of Issue: 1/12/2021

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: Onsite
Material: Silty Clay

Sample Data

Sample ID	S21DS-12918	S21DS-12919	S21DS-12920	S21DS-12921	S21DS-12922	S21DS-12923
Field Sample ID	1	2	3	4	5	6
Date Tested	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
E:	356960	356974	356990	356001	357018	57004
N:	5777826	5777823	5777831	5777827	5777812	5777818
RL / Layer:	8.415 / FSL-0.8m	8.329 / FSL-0.9m	8.365 / FSL-0.7m	8.190 / FSL-0.9m	8.173 / 2	8.260 / 2
Lot:	1108	1109	1111	1113	1113	1112

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)	2.06	2.06	2.06	2.08	2.06	2.12
Peak Converted Wet Density (t/m ³)	2.08	1.98	2.06	2.04	2.11	2.14
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Variation (%)	0.5 wet	0.0	2.5 dry	2.5 dry	2.5 dry	0.5 dry
Hilf Density Ratio (%)	99.0	104.0	100.0	102.0	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:W21DS03503

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 11
Project No.: 1016363.011
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: 1/12/2021
 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: Onsite
Material: Silty Clay

Sample Data

Sample ID	S21DS-12924	S21DS-12930			
Field Sample ID	1	7			
Date Tested	27/11/2021	27/11/2021			
E:	356924	356914			
N:	577847	577837			
RL / Layer:	9.02 / 1	9.21 / 1			
Lot:	1105	1104			

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 Wet Density (t/m³)	2.03	2.04			
Peak Converted Wet Density (t/m³)	2.10	1.97			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	0.5 dry	2.0 dry			
Hilf Density Ratio (%)	96.5	103.5			

Comments



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

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

Report No: HDR:W21DS03529

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate Clyde - Stage 4
Project No.: 1016363.004
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: 1/12/2021
 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: Onsite
Material: Silty Clay

Sample Data

Sample ID	S21DS-12997	S21DS-12998			
Field Sample ID	1	2			
Date Tested	29/11/2021	29/11/2021			
E:	356611	356639			
N:	5777914	5777912			
RL:	10.176	10.211			
Lot:	443	441			

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)	1.94	2.04			
Peak Converted Wet Density (t/m³)	2.06	2.07			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	2.5 dry	0.5 dry			
Hilf Density Ratio (%)	94.0	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:W21DS03530

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 5
Project No.: 1016363.005
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: 1/12/2021
 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: Onsite
Material: Silty Clay

Sample Data

Sample ID	S21DS-12999	S21DS-13000	S21DS-13001		
Field Sample ID	1	2	3		
Date Tested	29/11/2021	29/11/2021	29/11/2021		
E:	356652	356663	356620		
N:	5777980	5777952	5777948		
RL:	10.215	10.379	10.181		
Lot:	506	505	503		

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)	2.02	2.06	2.04		
Peak Converted Wet Density (t/m³)	2.08	2.02	2.01		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	0.5 wet	0.5 wet	0.0		
Hilf Density Ratio (%)	97.0	102.0	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:W21DS03537

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 5
Project No.: 1016363.005
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: 3/12/2021
 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: Onsite
Material: Silty Clay

Sample Data

Sample ID	S21DS-13010				
Field Sample ID	1				
Date Tested	30/11/2021				
E:	356621				
N:	5777987				
RL:	10.112				
Lot:	542				

Field and Laboratory Data

Depth of Test (mm)	175				
Depth of Layer (mm)	200				
AS Sieve Size (mm)	19.0				
Oversize Wet (%)	0				
Field Wet Density (t/m³)	2.03				
Peak Converted Wet Density (t/m³)	2.12				
Compactive Effort	Standard				
Moisture Variation (%)	1.0 dry				
Hilf Density Ratio (%)	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:W21DS03538

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate Clyde - Stage 4
Project No.: 1016363.004
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: 14/04/2022

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: Silty Clay

Sample Data

Sample ID	S21DS-13011	S21DS-13012	S21DS-13013		
Field Sample ID	1	2	3		
Date Tested	30/11/2021	30/11/2021	30/11/2021		
E:	356610	356642	356681		
N:	5777915	5777918	5777949		
RL:	10.231	10.181	10.261		
Lot:	443	439	436		
Other:	Retest				

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)	1.86	1.94	2.13		
Peak Converted Wet Density (t/m ³)	1.96	2.03	2.13		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	0.0	0.0	0.0		
Hilf Density Ratio (%)	95.0	95.5	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:W21DS03558

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 10
Project No.: 1016363.010
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. Robinson
 (Team Leader)
 Date of Issue: 3/12/2021
 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: Onsite
Material: Sandy Clay

Sample Data

Sample ID	S21DS-13113	S21DS-13114	S21DS-13115	S21DS-13116
Field Sample ID	1	2	3	4
Date Tested	1/12/2021	1/12/2021	1/12/2021	1/12/2021
E:	357024	357015	356973	35686
N:	5777791	5777763	5777799	5777787
RL / Layer:	8.176 / FSL-0.93m	8.250 / FSL-0.665m	8.750 / FSL-0.5m	8.550 / FSL-0.6m
Lot:	1034	1029	1041	1039

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 Wet Density (t/m ³)	2.14	2.12	2.10	2.13
Peak Converted Wet Density (t/m ³)	2.18	2.17	2.15	2.16
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Variation (%)	0.5 wet	0.5 wet	1.5 dry	0.5 wet
Hilf Density Ratio (%)	98.5	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:W21DS03563

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 11
Project No.: 1016363.011
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: 3/12/2021
 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%
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-13129				
Field Sample ID	1				
Date Tested	2/12/2021				
E:	356946.889				
N:	5777889.980				
RL:	9.086				
Lot:	1122				

Field and Laboratory Data

Depth of Test (mm)	175				
Depth of Layer (mm)	200				
AS Sieve Size (mm)	19.0				
Oversize Wet (%)	0				
Field Wet Density (t/m³)	2.10				
Peak Converted Wet Density (t/m³)	2.08				
Compactive Effort	Standard				
Moisture Variation (%)	0.5 wet				
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: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/m³)	2.00	2.02	2.08		
Peak Converted Wet Density (t/m³)	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:W21DS03707

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 11
Project No.: 1016363.011
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: 20/12/2021
 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-13627				
Field Sample ID	1				
Date Tested	16/12/2021				
E:	356576				
N:	5777883				
RL:	8.987				
Lot:	1121				

Field and Laboratory Data

Depth of Test (mm)	175				
Depth of Layer (mm)	200				
AS Sieve Size (mm)	19.0				
Oversize Wet (%)	0				
Field Wet Density (t/m³)	1.93				
Peak Converted Wet Density (t/m³)	2.09				
Compactive Effort	Standard				
Moisture Variation (%)	0.0				
Hilf Density Ratio (%)	92.5				

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:W21DS03708

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: 17/12/2021
 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-13628	S21DS-13629	S21DS-13630		
Field Sample ID	1	2	3		
Date Tested	16/12/2021	16/12/2021	16/12/2021		
E:	356990	356982	356972		
N:	5777431	5777967	5778017		
RL:	8.548	9.149	9.525		
Lot:	1217	1214	1235		
Other:	Retest of S21DS-13294	Retest of S21DS-13274	Retest of S21DS-13273		

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)	2.08	2.11	2.08		
Peak Converted Wet Density (t/m ³)	2.12	2.02	2.05		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	0.0	0.0	0.0		
Hilf Density Ratio (%)	98.0	104.0	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:W21DS03709

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Sports Ground
Project No.: 1016363.SG
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: 17/12/2021
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location: Stormwater Pit
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: Silty Clay

Sample Data

Sample ID	S21DS-13631				
Field Sample ID	1				
Date Tested	16/12/2021				
E:	357060				
N:	5778051				
Layer:	FSL				
Other:	Sample 4				

Field and Laboratory Data

Depth of Test (mm)	175				
Depth of Layer (mm)	200				
AS Sieve Size (mm)	19.0				
Oversize Wet (%)	0				
Field Wet Density (t/m³)	2.06				
Peak Converted Wet Density (t/m³)	2.06				
Compactive Effort	Standard				
Moisture Variation (%)	0.0				
Hilf Density Ratio (%)	100.0				

Comments



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

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

Report No: HDR:W21DS03726

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield Estate - Stage 11
Project No.: 1016363.011
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. Robinson
 (Team Leader)
 Date of Issue: 20/12/2021

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: Onsite
Material: Sandy Clay

Sample Data

Sample ID	S21DS-13670	S21DS-13671	S21DS-13672		
Field Sample ID	1	2	3		
Date Tested	18/12/2021	18/12/2021	18/12/2021		
E:	356580	356972	356990		
N:	5777878	5777881	5777922		
RL / Layer:	8.953	9.076	9.175		
Lot:	1120	1121	1118		
Other:	Retest of S21DS-13627	Sample 3	Sample 4		

Field and Laboratory Data

Depth of Test (mm)	175	175	175		
Depth of Layer (mm)	200	200	200		
AS Sieve Size (mm)	19.0	19.0	19.0		
Oversize Wet (%)	7	0	0		
Field Wet Density (t/m³)	2.14	2.10	2.06		
Peak Converted Wet Density (t/m³)	2.15	2.12	2.08		
Compactive Effort	Standard	Standard	Standard		
Moisture Variation (%)	0.5 dry	0.5 wet	1.5 wet		
Hilf Density Ratio (%)	99.5	99.0	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:W22DS00456

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Riverfield - Stage 6
Project No.: 1016363.006
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Approved Signatory: M. Robinson
 (Team Leader)
 Date of Issue: 28/02/2022

Accreditation Number: 12719
 Site Number: 12712

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	S22DS-01483				
Field Sample ID	1				
Date Tested	25/02/2022				
Lot No:	632				
E:	356893				
N:	5778035				
Elv:	10.195				

Field and Laboratory Data

Depth of Test (mm)	175				
Depth of Layer (mm)	200				
AS Sieve Size (mm)	19.0				
Oversize Wet (%)	0				
Field Wet Density (t/m³)	2.07				
Peak Converted Wet Density (t/m³)	2.02				
Compactive Effort	Standard				
Moisture Variation (%)	2.0 dry				
Hilf Density Ratio (%)	102.5				

Comments

Appendix D: Controlled Fill certificate



CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot No's: 401 to 443
Riverfield Estate, Stage 4
Chadwick Geotechnics REF: 1016363.004.v1

CLIENT : Grosvenor Lodge Pty Ltd
PO Box 4136
DANDENONG SOUTH VIC 3164
DATE : 14 April 2022

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 it is able to 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 top soil).

This report is based on the conditions present and factors affecting the soil at the time of inspection (19 January 2021 to the 31 November 2021). 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

© Chadwick Geotechnics Pty Ltd.

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise other than in accordance with the limitations and for the purpose provided for above.

www.chadwickgeotechnics.com.au

