



REPORT

Level One Inspection and Testing Services

Meridian Central Estate Stage 33, Clyde
Lot's 3301 to 3305 & Lot's 3331 to 3334

Prepared for:

Grosvenor Lodge Pty Ltd

27 May 2022

Our Ref: 3807351.033.v1

25 Metcalf Street, Dandenong South, Vic 3175, Australia
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Document Control

| Title: Level One Inspection and Testing Services | | | | | |
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| Date | Version | Description | Prepared by: | Reviewed by: | Authorised by: |
| 27 May 2022 | 1 | 3807351.033.V1 | PRS | RHB | TJC |
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1 Introduction

As part of the construction of the Meridian Central Estate development in Clyde North, 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 33 of the Estate.

This report presents the earthworks supervision methods and density testing results for the residential lot's 3301 to 3305 and 3331 to 3334 within the Stage 33 site. The earthworks were completed between 1 September 2021 and 15 December 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 Meridian Central Estate is in Clyde North, the Stage 33 site is located North of Stage 32 and West of Stage 34 within the Meridian Central site. 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 / Superintendent | Beveridge Williams 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 33 filling operations commenced on 1 September 2021 and was completed on 15 December 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 Compaction



Photograph 2.7.2: Material conditioning

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.

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 handheld GPS units.

A total of 18 tests were performed across the Stage 33 area during the filling process.

The results show that all tests achieved the specification requirements for the project.

A site plan showing the field density test locations is provided in Appendix A, 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


27-May-22

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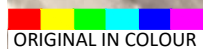
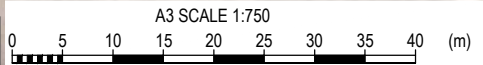
Appendix A: Site plan



LEGEND

 11360
HILF DENSITY TEST LOCATION

NOTES:
1. AERIAL IMAGE SOURCED FROM NEARMAP. COPYRIGHT NEARMAP PTY LTD. IMAGERY DATE: 25/04/2022.



| | | | | | |
|---------------------|------|--------|---|--|--|
| PROJECT No. 3807351 | | | CLIENT GROSVENOR LODGE PTY LTD | | |
| DESIGNED | MSI | May.22 | PROJECT MERIDIAN ESTATE - STAGE 33 | | |
| DRAWN | KMJA | May.22 | TITLE LEVEL ONE HILF DENSITY TESTING | | |
| CHECKED | | | HILF DENSITY TEST LOCATION PLAN | | |
| APPROVED | | | SCALE (A3) 1:1000 | | |
| DATE | | | FIG No. 3807351-F01 | | |
| | | | REV 1 | | |

Appendix B: Hilf density test summary

| Report No | Sample No | Date | Test Number | Lot Number | Location [E] | Location [N] | RL | Layer | Density Ratio HILF test (≥95%) | Moisture Variation | Pass / Fail | Remarks |
|----------------|-----------|------------|-------------|------------------|--------------|--------------|--------|-------|--------------------------------------|-----------------------|-------------|------------------------------|
| HDR:W21DS02822 | 10555 | 24/08/2021 | 1 | Burina Boulevard | 355995 | 5781417 | 42.32 | FSL | 102 | omc | Pass | Stage 32 |
| HDR:W21DS02822 | 10556 | 24/08/2021 | 2 | Nature Strip | 355983 | 5781450 | 43.16 | FSL | 102.5 | 0.5 dry | Pass | Stage 32 |
| HDR:W21DS02822 | 10557 | 24/08/2021 | 3 | Burina Boulevard | 355948 | 5781482 | 42.74 | FSL | 103.5 | 2.5 dry | Pass | Stage 32 |
| HDR:W21DS02822 | 10558 | 24/08/2021 | 4 | Nature Strip | 355947 | 5781532 | 42.66 | FSL | 103 | 2.0 dry | Pass | Stage 32 |
| HDR:W21DS02822 | 10559 | 24/08/2021 | 5 | Burina Boulevard | 355931 | 5781568 | 43.22 | FSL | 101 | 0.5 dry | Pass | Stage 32 |
| HDR:W21DS02853 | 10696 | 28/08/2021 | 1 | 3210 | 355987 | 5781480 | 41.94 | 4 | 99 | 3.0 wet | Pass | Stage 32 |
| HDR:W21DS02853 | 10697 | 28/08/2021 | 2 | 3210 | 355991 | 5781485 | 42.35 | 6 | 97 | 0.5 wet | Pass | Stage 33 |
| HDR:W21DS02853 | 10698 | 28/08/2021 | 3 | 3210 | 355989 | 5781488 | 42.58 | FSL | 97 | 0.5 wet | Pass | Stage 32 |
| HDR:W21DS02902 | 10859 | 1/09/2021 | 1 | Sofra Road | 356012 | 5781676 | 42.220 | 2 | 101 | 3.0 dry | Pass | Testing for roadways |
| HDR:W21DS02902 | 10863 | 1/09/2021 | 2 | Sofra Road | 356012 | 5781676 | 42.700 | FSL | 103 | 2.5 dry | Pass | Testing for roadways |
| HDR:W21DS02900 | 10853 | 1/09/2021 | 1 | 3209 | 356002 | 5781471 | 43.074 | 1.000 | 96.5 | omc | Pass | Stage 32 |
| HDR:W21DS02900 | 10854 | 1/09/2021 | 2 | 3225 | 356017 | 5781486 | 43.329 | 1.000 | 98 | 0.5 wet | Pass | Stage 32 |
| HDR:W21DS02901 | 10855 | 1/09/2021 | 1 | 3301 | 355977 | 5781499 | 42.424 | 1 | 95.5 | 2.5 dry | Pass | |
| HDR:W21DS02901 | 10856 | 1/09/2021 | 2 | 3331 | 355997 | 5781514 | 43.300 | 1 | 95.5 | 2.5 dry | Pass | |
| HDR:W21DS02901 | 10857 | 1/09/2021 | 3 | 3334 | 355984 | 5781548 | 43.348 | 1 | 102.5 | 2.5 dry | Pass | |
| HDR:W21DS02901 | 10858 | 1/09/2021 | 4 | 3303 | 355964 | 5781529 | 42.532 | 1 | 99 | 2.5 dry | Pass | |
| HDR:W21DS02926 | 10941 | 3/09/2021 | 1 | 3226 | 356004 | 5781496 | 43.273 | 2 | 94 | omc | Fail | See Re-Test 11048 (Stage 32) |
| HDR:W21DS02926 | 10942 | 3/09/2021 | 2 | 3210 | 355986 | 5781484 | 43.053 | 2 | 97.5 | 0.5 wet | Pass | Stage 32 |
| HDR:W21DS02959 | 11048 | 9/09/2021 | 1 | 3226 | 356001 | 5781497 | 43.156 | 2 | 97.5 | omc | Pass | Re-Test of 10941 (Stage 32) |
| HDR:W21DS02951 | 11026 | 8/09/2021 | 1 | 3225 | 356018 | 5781486 | 43.600 | 3 | 101 | 2.0 dry | Pass | Stage 32 |
| HDR:W21DS02960 | 11049 | 9/09/2021 | 1 | 3302 | 355961 | 5781513 | 42.499 | 2 | 97.5 | omc | Pass | |
| HDR:W21DS02960 | 11050 | 9/09/2021 | 2 | 3304 | 355953 | 5781542 | 42.487 | 2 | 99.5 | 0.5 wet | Pass | |
| HDR:W21DS02960 | 11051 | 9/09/2021 | 3 | 3333 | 355984 | 5781538 | 43.498 | 2 | 98.5 | 0.5 wet | Pass | |
| HDR:W21DS02960 | 11052 | 9/09/2021 | 4 | 3332 | 355995 | 5781524 | 43.562 | 2 | 98.5 | omc | Pass | |
| HDR:W21DS02968 | 11067 | 11/09/2021 | 1 | 3303 | 355970 | 5781525 | 42.880 | 3 | 99 | 1.0 dry | Pass | |
| HDR:W21DS02968 | 11068 | 11/09/2021 | 2 | 3305 | 355960 | 5781555 | 42.850 | 3 | 99.5 | 2.0 dry | Pass | |
| HDR:W21DS03018 | 11243 | 17/09/2021 | 1 | 3210 | 355995 | 5781485 | 43.238 | | 107 | 3.0 dry | Pass | Stage 32 |
| HDR:W21DS03030 | 11269 | 17/09/2021 | 1 | 3302 | 355973 | 5781506 | 43.089 | 4 | 104 | 2.5 dry | Pass | |
| HDR:W21DS03030 | 11270 | 17/09/2021 | 2 | 3304 | 355970 | 5781538 | 43.122 | 4 | 103.5 | 2.5 dry | Pass | |
| HDR:W21DS03019 | 11244 | 17/09/2021 | 1 | 3331 | 355991 | 5781502 | 43.581 | | 101.5 | 1.5 dry | Pass | |
| HDR:W21DS03062 | 11360 | 20/09/2021 | 1 | 3301 | 355975 | 5781497 | 43.181 | 5 | 102 | 1.5 dry | Pass | |
| HDR:W21DS03062 | 11361 | 20/09/2021 | 2 | 3303 | 355961 | 5781517 | 43.022 | 5 | 101 | 0.5 dry | Pass | |
| HDR:W21DS03062 | 11362 | 20/09/2021 | 3 | 3305 | 355954 | 5781552 | 42.842 | 5 | 103 | omc | Pass | |
| HDR:W21DS03235 | 11907 | 21/10/2021 | 1 | 3227 | 356043 | 5781517 | 44.667 | 2 | 102.5 | 1.0 dry | Pass | Stage 32 |
| HDR:W21DS03692 | 13573 | 15/12/2021 | 1 | 3209 | 355980 | 5781469 | 43.444 | 5 | 99 | 2.0 dry | Pass | Stage 32 |
| HDR:W21DS03692 | 13574 | 15/12/2021 | 2 | 3210 | 355993 | 5781473 | 43.671 | 5 | 103 | 2.5 dry | Pass | Stage 32 |
| HDR:W21DS03693 | 13575 | 15/12/2021 | 1 | 3304 | 355963 | 5781536 | 43.318 | 6 | 107.5 | 3.0 dry | Pass | |
| HDR:W21DS03693 | 13579 | 15/12/2021 | 2 | 3301 | 355970 | 5781509 | 43.595 | 6 | 100 | 3.0 dry | Pass | |

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:W21DS02822

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 32
Project No.: 3807351.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. 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: Sandy Clay

Sample Data

| Sample ID | S21DS-10555 | S21DS-10556 | S21DS-10557 | S21DS-10558 | S21DS-10559 |
|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Field Sample ID | 1 | 2 | 3 | 4 | 5 |
| Date Tested | 24/08/2021 | 24/08/2021 | 24/08/2021 | 24/08/2021 | 24/08/2021 |
| E: | 2109.604 (355995) | 2169.688 (355983) | 2124.290 (355948) | 2120.673 (355947) | 2157.309 (355931) |
| N: | 725.817 (5781417) | 573.788 (781450) | 640.793 (5781482) | 689.520 (5781532) | 607.025 (5781568) |
| EL / Layer: | 42.320 / FSL | 43.158 / FSL | 42.735 / FSL | 42.662 / FSL | 43.220 / FSL |
| Other: | Burina Boulevard | Nature Strip | Burina Boulevard | Nature Strip | Burina Boulevard |
| Sample No: | #2 | #3 | #4 | #5 | #6 |

Field and Laboratory Data

| | #2 | #3 | #4 | #5 | #6 |
|-----------------------------------|--------------|--------------|--------------|--------------|--------------|
| 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) | 2.10 | 2.09 | 2.12 | 2.14 | 2.09 |
| Peak Converted Wet Density (t/m³) | 2.06 | 2.03 | 2.04 | 2.08 | 2.07 |
| Compactive Effort | Standard | Standard | Standard | Standard | Standard |
| Moisture Variation (%) | 0.0 | 0.5 dry | 2.5 dry | 2.0 dry | 0.5 dry |
| Hilf Density Ratio (%) | 102.0 | 102.5 | 103.5 | 103.0 | 101.0 |

Comments



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

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

Report No: HDR:W21DS02853


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 32
Project No.: 3807351.032
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-10696 | S21DS-10697 | S21DS-10698 | | |
|-----------------|------------------|------------------|-------------------|--|--|
| Field Sample ID | 1 | 2 | 3 | | |
| Date Tested | 28/08/2021 | 28/08/2021 | 28/08/2021 | | |
| E: | 2163.43 (355987) | 2164.13 (355991) | 2165.537 (355989) | | |
| N: | 637.05 (5781480) | 641.21 (5781485) | 643.794 (5781488) | | |
| EL / Layer: | 41.942 / 4 | 42.354 / 6 | 42.584 / FSL | | |
| Lot: | 3210 | 3210 | 3210 | | |
| Other: | Sample: 11 | Sample: 12 | Sample: 13 | | |

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) | 1.97 | 2.02 | 1.99 | | |
| Peak Converted Wet Density (t/m ³) | 1.98 | 2.09 | 2.05 | | |
| Compactive Effort | Standard | Standard | Standard | | |
| Moisture Variation (%) | 3.0 wet | 0.5 wet | 0.5 wet | | |
| Hilf Density Ratio (%) | 99.0 | 97.0 | 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:W21DS02901


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 33
Project No.: 3807351.033
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
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Sample Details

Location: Clyde North
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% (+- 3% of OMC)
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Silty Clay

Sample Data

| Sample ID | S21DS-10855 | S21DS-10856 | S21DS-10857 | S21DS-10858 |
|-----------------|-------------------|-------------------|-------------------|-------------------|
| Field Sample ID | 1 | 2 | 3 | 4 |
| Date Tested | 1/09/2021 | 1/09/2021 | 1/09/2021 | 1/09/2021 |
| E: | 2146.457 (355967) | 2173.274 (355997) | 2159.022 (355984) | 2140.891 (355964) |
| N: | 657.802 (5781499) | 674.041 (5781514) | 706.959 (5781548) | 688.395 (5781529) |
| EL / Layer: | 42.424 / 1 | 43.300 / 1 | 43.348 / 1 | 42.532 / 1 |
| Lot: | 3301 | 3331 | 3334 | 3303 |
| Other: | Sample: 1 | Sample: 2 | Sample: 3 | Sample: 4 |

Field and Laboratory Data

| | | | | |
|-----------------------------------|-------------|-------------|--------------|-------------|
| Depth of Test (mm) | 175 | 175 | 175 | 175 |
| Depth of Layer (mm) | 200 | 200 | 200 | 200 |
| AS Sieve Size (mm) | 19.0 | 19.0 | 19.0 | 19.0 |
| Oversize Wet (%) | 0 | 0 | 0 | 0 |
| Field Wet Density (t/m³) | 1.99 | 2.04 | 1.98 | 1.95 |
| Peak Converted Wet Density (t/m³) | 2.08 | 2.14 | 1.93 | 1.97 |
| Compactive Effort | Standard | Standard | Standard | Standard |
| Moisture Variation (%) | 2.5 dry | 2.5 dry | 2.5 dry | 2.5 dry |
| Hilf Density Ratio (%) | 95.5 | 95.5 | 102.5 | 99.0 |

Comments



Dandenong South
ACN 143 009 330
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 DANDENONG SOUTH, VIC 3175

Ph: + 61 3 8796 7900
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Report No: HDR:W21DS02900

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 32
Project No.: 3807351.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Robinson
 (Team Leader)
 Date of Issue: 6/09/2021
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Sample Details

Location: Clyde North
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% (+- 3% of OMC)
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Silty Clay

Sample Data

| Sample ID | S21DS-10853 | S21DS-10854 | | | |
|-----------------|-------------------|-------------------|--|--|--|
| Field Sample ID | 1 | 2 | | | |
| Date Tested | 1/09/2021 | 1/09/2021 | | | |
| E: | 2179.097 (356002) | 2194.153 (356017) | | | |
| N: | 630.161 (5781471) | 647.476 (5781486) | | | |
| EL / Layer: | 43.074 / 1 | 43.329 / 1 | | | |
| Lot: | 3209 | 3225 | | | |
| Other: | Sample: 17 | Sample: 18 | | | |

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 | 2.03 | | | |
| Peak Converted Wet Density (t/m³) | 2.07 | 2.07 | | | |
| Compactive Effort | Standard | Standard | | | |
| Moisture Variation (%) | 0.0 | 0.5 wet | | | |
| Hilf Density Ratio (%) | 96.5 | 98.0 | | | |

Comments



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

Ph: + 61 3 8796 7900
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Report No: HDR:W21DS02926

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 32
Project No.: 3807351.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 6/09/2021
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Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% (+- 3% of OMC)
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Silty Clay

Sample Data

| Sample ID | S21DS-10941 | S21DS-10942 | | | |
|-----------------|-------------------|-------------------|--|--|--|
| Field Sample ID | 1 | 2 | | | |
| Date Tested | 3/09/2021 | 3/09/2021 | | | |
| E: | 2180.531 (356004) | 2162.225 (355986) | | | |
| N: | 653.478 (5781496) | 641.278 (5781484) | | | |
| RL / Layer: | 43.273 / 2 | 43.053 / 2 | | | |
| Lot: | 3226 | 3210 | | | |
| Other: | Sample: 21 | Sample: 22 | | | |

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 | 2.08 | | | |
| Peak Converted Wet Density (t/m³) | 2.13 | 2.14 | | | |
| Compactive Effort | Standard | Standard | | | |
| Moisture Variation (%) | 0.0 | 0.5 wet | | | |
| Hilf Density Ratio (%) | 94.0 | 97.5 | | | |

Comments



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Report No: HDR:W21DS02902

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 33
Project No.: 3807351.033
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: Sofra Road
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 98% (+- 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-10859 | S21DS-10863 | | | |
|-----------------|-------------------|-------------------|--|--|--|
| Field Sample ID | 1 | 5 | | | |
| Date Tested | 1/09/2021 | 1/09/2021 | | | |
| E: | 2187.900 (356012) | 2188.208 (356012) | | | |
| N: | 734.805 (5781676) | 838.233 (5781676) | | | |
| EL / Layer: | 42.220 / 2 | 42.700 / FSL | | | |
| Lot: | - | - | | | |
| Other: | Sample: 1 | Sample: 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/m ³) | 2.07 | 2.21 | | | |
| Peak Converted Wet Density (t/m ³) | 2.05 | 2.14 | | | |
| Compactive Effort | Standard | Standard | | | |
| Moisture Variation (%) | 3.0 dry | 2.5 dry | | | |
| Hilf Density Ratio (%) | 101.0 | 103.0 | | | |

Comments



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

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Report No: HDR:W21DS02959

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 32
Project No.: 3807351.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 13/09/2021
 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: Sandy Silty Clay

Sample Data

| | | | | | |
|-----------------|------------------------------------|--|--|--|--|
| Sample ID | S21DS-11048 | | | | |
| Field Sample ID | 1 | | | | |
| Date Tested | 9/09/2021 | | | | |
| E: | 2179.492 (356001) | | | | |
| N: | 655.686 (5781497) | | | | |
| EL / Layer: | 43.156 / 2 | | | | |
| Lot: | 3226 | | | | |
| Other: | Sample: 24 / Retest S21DS-10941 | | | | |

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) | 2.11 | | | | |
| Compactive Effort | Standard | | | | |
| Moisture Variation (%) | 0.0 | | | | |
| Hilf Density Ratio (%) | 97.5 | | | | |

Comments



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

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Report No: HDR:W21DS02951

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 32
Project No.: 3807351.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Longfield
 (Senior Technician)
 Date of Issue: 9/09/2021
 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: Sandy Clay

Sample Data

| | | | | | |
|-----------------|------------------|--|--|--|--|
| Sample ID | S21DS-11026 | | | | |
| Field Sample ID | 1 | | | | |
| Date Tested | 8/09/2021 | | | | |
| E: | 2192.92 (356018) | | | | |
| N: | 643.96 (5781486) | | | | |
| EL / Layer: | 43.60 / 3 | | | | |
| Lot: | 3225 | | | | |
| Other: | Sample: 23 | | | | |

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) | 1.95 | | | | |
| Peak Converted Wet Density (t/m³) | 1.93 | | | | |
| Compactive Effort | Standard | | | | |
| Moisture Variation (%) | 2.0 dry | | | | |
| Hilf Density Ratio (%) | 101.0 | | | | |

Comments



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

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Report No: HDR:W21DS02960


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 33
Project No.: 3807351.033
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: 13/09/2021
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Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% (+- 3% of OMC)
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Silty Sandy Clay

Sample Data

| Sample ID | S21DS-11049 | S21DS-11050 | S21DS-11051 | S21DS-11052 |
|-----------------|-------------------|-------------------|-------------------|-------------------|
| Field Sample ID | 1 | 2 | 3 | 4 |
| Date Tested | 9/09/2021 | 9/09/2021 | 9/09/2021 | 9/09/2021 |
| E: | 2139.722 (355961) | 2130.265 (355953) | 2162.994 (355984) | 2170.023 (355995) |
| N: | 669.722 (5781513) | 694.796 (5781542) | 694.677 (5781538) | 681.777 (5781524) |
| EL / Layer: | 42.499 / 2 | 42.487 / 2 | 43.498 / 2 | 43.562 / 2 |
| Lot: | 3302 | 3304 | 3333 | 3332 |
| Other: | Sample: 5 | Sample: 6 | Sample: 7 | Sample: 8 |

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) | 2.10 | 2.14 | 2.05 | 2.07 |
| Peak Converted Wet Density (t/m³) | 2.16 | 2.15 | 2.07 | 2.11 |
| Compactive Effort | Standard | Standard | Standard | Standard |
| Moisture Variation (%) | 0.0 | 0.5 wet | 0.5 wet | 0.0 |
| Hilf Density Ratio (%) | 97.5 | 99.5 | 98.5 | 98.5 |

Comments



Dandenong South
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Report No: HDR:W21DS02968

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 33
Project No.: 3807351.033
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: 13/09/2021
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Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% (+- 3% of OMC)
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Sandy Clay

Sample Data

| Sample ID | S21DS-11067 | S21DS-11068 | | | |
|-----------------|------------------|------------------|--|--|--|
| Field Sample ID | 1 | 2 | | | |
| Date Tested | 11/09/2021 | 11/09/2021 | | | |
| E: | 2140.28 (355970) | 2132.23 (355960) | | | |
| N: | 686.77 (5781525) | 714.69 (5781555) | | | |
| EL / Layer: | 42.88 / 3 | 42.85 / 3 | | | |
| Lot: | 3303 | 3305 | | | |
| Other: | Sample: 9 | Sample: 10 | | | |

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) | 1.97 | 1.96 | | | |
| Peak Converted Wet Density (t/m³) | 1.99 | 1.97 | | | |
| Compactive Effort | Standard | Standard | | | |
| Moisture Variation (%) | 1.0 dry | 2.0 dry | | | |
| Hilf Density Ratio (%) | 99.0 | 99.5 | | | |

Comments



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

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Report No: HDR:W21DS03018

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 32
Project No.: 3807351.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Robinson
 (Team Leader)
 Date of Issue: 17/09/2021
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Sample Details

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

Sample Data

| | | | | | |
|-----------------|-------------|--|--|--|--|
| Sample ID | S21DS-11243 | | | | |
| Field Sample ID | 25 | | | | |
| Date Tested | 17/09/2021 | | | | |
| E: | 2152.179 | | | | |
| N: | 634.302 | | | | |
| Lot: | 3210 | | | | |
| Elv: | 43.238 | | | | |

Field and Laboratory Data

| | | | | | |
|-----------------------------------|--------------|--|--|--|--|
| Depth of Test (mm) | 175 | | | | |
| Depth of Layer (mm) | 200 | | | | |
| Field Wet Density (t/m³) | 2.02 | | | | |
| Peak Converted Wet Density (t/m³) | 1.89 | | | | |
| Compactive Effort | Standard | | | | |
| Moisture Variation (%) | 3.0 dry | | | | |
| Hilf Density Ratio (%) | 107.0 | | | | |

Comments



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

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Report No: HDR:W21DS03030

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 33
Project No.: 3807351.033
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Robinson
 (Team Leader)
 Date of Issue: 23/09/2021
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location: Clyde North
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% (+- 3% of OMC)
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Sandy Clay

Sample Data

| Sample ID | S21DS-11269 | S21DS-11270 | | | |
|-----------------|-------------------|-------------------|--|--|--|
| Field Sample ID | 12 | 13 | | | |
| Date Tested | 17/09/2021 | 17/09/2021 | | | |
| E: | 2147.042 (355973) | 2143.318 (355970) | | | |
| N: | 663.577 (5781506) | 696.233 (5781538) | | | |
| EL / Layer: | 43.089 / 4 | 43.122 / 4 | | | |
| Lot: | 3302 | 3304 | | | |

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) | 1.99 | 2.02 | | | |
| Peak Converted Wet Density (t/m ³) | 1.91 | 1.95 | | | |
| Compactive Effort | Standard | Standard | | | |
| Moisture Variation (%) | 2.5 dry | 2.5 dry | | | |
| Hilf Density Ratio (%) | 104.0 | 103.5 | | | |

Comments



Dandenong South
ACN 143 009 330
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 DANDENONG SOUTH, VIC 3175

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Report No: HDR:W21DS03019

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 33
Project No.: 3807351.033
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: 17/09/2021
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Sample Details

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

Sample Data

| | | | | | |
|-----------------|-------------|--|--|--|--|
| Sample ID | S21DS-11244 | | | | |
| Field Sample ID | 1 | | | | |
| Date Tested | 17/09/2021 | | | | |
| E: | 2167.295 | | | | |
| N: | 662.608 | | | | |
| Lot: | 3331 | | | | |
| Elv: | 43.581 | | | | |

Field and Laboratory Data

| | | | | | |
|-----------------------------------|--------------|--|--|--|--|
| Depth of Test (mm) | 175 | | | | |
| Depth of Layer (mm) | 200 | | | | |
| Field Wet Density (t/m³) | 2.00 | | | | |
| Peak Converted Wet Density (t/m³) | 1.97 | | | | |
| Compactive Effort | Standard | | | | |
| Moisture Variation (%) | 1.5 dry | | | | |
| Hilf Density Ratio (%) | 101.5 | | | | |

Comments



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

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Report No: HDR:W21DS03062

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 33
Project No.: 3807351.033
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Robinson
 (Team Leader)
 Date of Issue: 23/09/2021
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location: Clyde North
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% (+- 3% of OMC)
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Sandy Clay

Sample Data

| Sample ID | S21DS-11360 | S21DS-11361 | S21DS-11362 | | |
|-----------------|-------------------|-------------------|-------------------|--|--|
| Field Sample ID | 1 | 2 | 3 | | |
| Date Tested | 20/09/2021 | 20/09/2021 | 20/09/2021 | | |
| E: | 2146.088 (355975) | 2132.930 (355961) | 2128.261 (355954) | | |
| N: | 653.279 (5781497) | 679.052 (5781517) | 711.252 (5781552) | | |
| EL / Layer: | 43.181 / 5 | 43.022 / 5 | 42.842 / 5 | | |
| Lot: | 3301 | 3303 | 3305 | | |
| Other: | Sample: 14 | Sample: 15 | Sample: 16 | | |

Field and Laboratory Data

| | | | | | |
|-----------------------------------|--------------|--------------|--------------|--|--|
| Depth of Test (mm) | 175 | 175 | 175 | | |
| Depth of Layer (mm) | 200 | 200 | 200 | | |
| AS Sieve Size (mm) | 19.0 | 19.0 | 19.0 | | |
| Oversize Wet (%) | 0 | 0 | 0 | | |
| Field Wet Density (t/m³) | 1.98 | 2.00 | 1.98 | | |
| Peak Converted Wet Density (t/m³) | 1.94 | 1.98 | 1.92 | | |
| Compactive Effort | Standard | Standard | Standard | | |
| Moisture Variation (%) | 1.5 dry | 0.5 dry | 0.0 | | |
| Hilf Density Ratio (%) | 102.0 | 101.0 | 103.0 | | |

Comments



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

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Report No: HDR:W21DS03235


Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 32
Project No.: 3807351.032
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: 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-11907 | | | | |
| Field Sample ID | 1 | | | | |
| Date Tested | 21/10/2021 | | | | |
| E: | 2220.773 (356043) | | | | |
| N: | 674.473 (5781517) | | | | |
| RL / Layer: | 44.667 / 2 | | | | |
| Lot: | 3227 | | | | |
| Other: | Sample: 26 | | | | |

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) | 2.04 | | | | |
| Peak Converted Wet Density (t/m³) | 2.00 | | | | |
| Compactive Effort | Standard | | | | |
| Moisture Variation (%) | 1.0 dry | | | | |
| Hilf Density Ratio (%) | 102.5 | | | | |

Comments



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

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Report No: HDR:W21DS03692

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 32
Project No.: 3807351.032
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing

Accreditation Number: 12719
 Site Number: 12712
 Approved Signatory: M. Robinson
 (Team Leader)
 Date of Issue: 16/12/2021
 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-13573 | S21DS-13574 | | | |
|-----------------|-------------------|-------------------|--|--|--|
| Field Sample ID | 1 | 2 | | | |
| Date Tested | 15/12/2021 | 15/12/2021 | | | |
| E: | 2156.882 (355980) | 2164.876 (355993) | | | |
| N: | 626.641 (5781469) | 647.560 (5781473) | | | |
| RL / Layer: | 43.444 / 5 | 43.671 / 5 | | | |
| Lot: | 3209 | 3210 | | | |
| Other: | Sample 27 | Sample 28 | | | |

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 | 2.08 | | | |
| Peak Converted Wet Density (t/m³) | 2.01 | 2.02 | | | |
| Compactive Effort | Standard | Standard | | | |
| Moisture Variation (%) | 2.0 dry | 2.5 dry | | | |
| Hilf Density Ratio (%) | 99.0 | 103.0 | | | |

Comments



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

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



Report No: HDR:W21DS03693

Issue No: 1

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 33
Project No.: 3807351.033
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: 29/03/2022
 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: Clay

Sample Data

| Sample ID | S21DS-13575 | S21DS-13579 | | | |
|-----------------|-------------------|-------------------|--|--|--|
| Field Sample ID | 1 | 5 | | | |
| Date Tested | 15/12/2021 | 15/12/2021 | | | |
| E: | 2142.921 (355963) | 2156.053 (355970) | | | |
| N: | 693.973 (5781536) | 664.367 (5781509) | | | |
| RL / Layer: | 43.318 / 6 | 43.595 / 6 | | | |
| Lot: | 3304 | 3301 | | | |
| Other: | Sample 19 | Sample 20 | | | |

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) | 2.15 | 1.98 | | | |
| Peak Converted Wet Density (t/m³) | 2.00 | 1.98 | | | |
| Compactive Effort | Standard | Standard | | | |
| Moisture Variation (%) | 3.0 dry | 3.0 dry | | | |
| Hilf Density Ratio (%) | 107.5 | 100.0 | | | |

Comments

Appendix D: Controlled Fill certificate



CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot No's: 3301 to 3305 and 3331 to 3334 Chadwick Geotechnics REF: 3807351.033.v1
Meridian Central Estate Stage 33

CLIENT : Grosvenor Lodge Pty Ltd DATE : 27 May 2022
PO Box 4136
DANDENONG SOUTH VIC 3164

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 topsoil).

This report is based on the conditions present and factors affecting the soil at the time of inspection (1 September 2021 and was completed on 15 December 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

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www.chadwickgeotechnics.com.au

