



# **REPORT**

## **Level 1 Geotechnical Testing and Inspection Authority Services**

**Meridian Central Estate Stage 45  
Lots 4501 to 4505 and 4519 to 4548**

**Prepared for:**

**Greenridge Properties Pty Ltd**

**11 October 2023**

**Our Ref: 3807351.045.v1**

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**Document Control**

| <b>Title: Level One Inspection and testing Services.</b> |                |                                                           |                     |                     |                      |
|----------------------------------------------------------|----------------|-----------------------------------------------------------|---------------------|---------------------|----------------------|
| <b>Date</b>                                              | <b>Version</b> | <b>Description</b>                                        | <b>Prepared by:</b> | <b>Reviewed by:</b> | <b>Authorised by</b> |
| 11 October 2023                                          | V1             | 3807351.045.V1 Meridian Estate Stage 45. Level One Report | STPA and RHB        | RWMC                | TJJC                 |
|                                                          |                |                                                           |                     |                     |                      |

## 1 Introduction

Chadwick Geotechnics Pty Ltd (Chadwick Geotechnics), was engaged by Greenridge Properties Pty Ltd (Greenridge), to provide Level 1 Geotechnical Inspection and Testing Authority (GITA) services for the earthworks conducted within Stage 45 of the Meridian Central Estate in Clyde North between 12 October 2021 and 11 August 2023.

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

## 2 Project details

### 2.1 Location

The Stage 45 site is located to the North of Hardys Road and to the West of Pound Road. Stage 43 is located to the West of Stage 45.

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

**Figure 2.1:** Extract from Nearmap



## 2.2 Roles

The organisations and their roles are presented in Table 2.1

**Table 2.1: Roles on the Project**

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

Note:

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

## 2.3 Dates on Site

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

**Table 2.2: Level 1 GITA – Onsite Presence**

| Month                | Dates on site                                       |
|----------------------|-----------------------------------------------------|
| <b>October 2021</b>  | 12, 13, 22, 27, 28                                  |
| <b>November 2021</b> | 5, 6, 8, 9, 18, 20, 22, 23, 24, 25, 26, 27, 29, 30, |
| <b>December 2021</b> | 1, 2, 3, 4, 6, 7, 8, 9, 10, 13,                     |
| <b>June 2022</b>     | 20, 22, 23, 28,                                     |
| <b>December 2022</b> | 19, 20, 21                                          |
| <b>February 2023</b> | 10, 14, 22, 24, 27, 28,                             |
| <b>March 2023</b>    | 3, 4, 7, 8, 9, 10, 17, 18, 20, 21, 22, 29,          |
| <b>April 2023</b>    | 4, 5, 6, 15, 21, 24, 26, 27, 28,                    |
| <b>May 2023</b>      | 5, 12, 16, 17, 23, 25                               |
| <b>June 2023</b>     | 27, 29                                              |
| <b>July 2023</b>     | 13, 14, 17, 18, 19, 20, 21, 24, 25, 26, 27, 31      |
| <b>August 2023</b>   | 1, 2, 3, 4, 7, 8, 9, 11                             |

## 2.4 Included Areas

This report is applicable to material placed by the contractor on the residential lots within the Meridian Central Estate Stage 45, as shown on the Site Plan in **Appendix A**, and with reference to Section 2.5 (Excluded Areas) of this report.

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

- Lot's 4501 to 4505 and 4519 to 4548
- Earthworks were undertaken within the temporary drainage facility area which forms part of Stage 45A. This area was constructed as designed and tested in accordance with the specification. After earthwork construction the design was changed, the earthworks contractor was required to remove areas of recently replaced fill material to construct and shape the current temporary drainage facility.
- Future retaining wall near Alambadi Circuit.

## 2.5 Excluded Areas

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

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

## 3 Specifications

Project specifications were prepared by Beveridge Williams Pty Ltd for the project. The works were to be conducted in general accordance with the 'Guidelines on earthworks for commercial and residential developments' of AS 3798-2007.

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

- All Filling, in excess, of 200mm depth within the residential lots shall be undertaken to specifications satisfying the requirements of AS 3798-2007 "Guidelines on Earthworks for Commercial and Residential Development".
- The fill soils to comply with the 'Suitable Material' in accordance with Section 4.4 of the AS3798-2007, and the following:
  - Maximum particle size of 150mm.
  - Particles over 37.5mm diameter not to exceed 20% of the material.
- Organic soils, topsoil, silts, or soils containing organic matter, wood, plastics, metal, or other deleterious materials are not acceptable.
- Subgrade to be proof rolled prior to placement of an engineered fill.
- Fill to be compacted in near horizontal layers not exceeding 250mm loose thickness.
- Compaction to achieve a ratio of at least 95% Standard Maximum Dry Density (SMDD).
- Frequency of testing to be in accordance with Table 8.1 of AS3798-2007.
- Finished fill surface to be surveyed prior to placement of topsoil.

## 4 Inspection and Testing

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

### 4.1 Earthworks

The earthworks for the project comprised of the following phases:

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

### 4.2 Fill material

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

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

**Table 4.1: Compliance test Result Summary**

| Sample #    | Particle Size Distribution (PSD) |         |         |         |        |         | Liquid Limit % | Plastic Limit % | Plasticity Index % |
|-------------|----------------------------------|---------|---------|---------|--------|---------|----------------|-----------------|--------------------|
|             | 37.5 mm                          | 13.2 mm | 4.75 mm | 1.18 mm | 425 µm | 0.75 µm |                |                 |                    |
| S22DS-05754 | 100                              | 99      | 97      | 92      | 82     | 48      | 42             | 17              | 25                 |
| S23DS-01826 | 100                              | 100     | 95      | 89      | 79     | 44      | 26             | 14              | 12                 |
| S23DS-02258 | 100                              | 100     | 97      | 92      | 80     | 41      | 30             | 11              | 19                 |
| S23DS-03013 | 100                              | 97      | 91      | 86      | 77     | 43      | 37             | 14              | 23                 |
| S23DS-04011 | 100                              | 100     | 97      | 92      | 82     | 45      | 44             | 15              | 29                 |
| S23DS-05185 | 100                              | 99      | 96      | 91      | 83     | 57      | 52             | 18              | 34                 |
| S23DS-05710 | 100                              | 100     | 98      | 93      | 82     | 51      | 46             | 17              | 29                 |
| S23DS-05985 | 100                              | 100     | 98      | 91      | 73     | 41      | 49             | 18              | 31                 |

The laboratory test results indicated material is clay of medium to high plasticity and satisfied the requirements of the Specification.

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

The fill material was not tested for classification of 'Fill Material' as defined in EPA Publication IWRG621. Environmental testing is not within the Chadwick Geotechnics scope.

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

Below photographs of typical materials used during construction.

**Photograph 4.1: Photographs of the material used on site**



**Photo 1: Material Used (Silty Clay)**

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**Photo 2: Material Used (Sandy Clay)**

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### **4.3 Subgrade Assessment / Proof Roll**

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

Subgrade assessments were conducted following the removal of the topsoil and the wet soils that were present on site.

The subgrade inspections were performed in accordance with the Level 1 guidelines presented in AS 3798–2007 Section 5.5. No soft spots or deflections were encountered during the inspections and the area was found to be firm and free of vegetation and other deleterious material.



Below photographs of the subgrade assessment phase at the project.

**Photograph 4.2: Subgrade assessment photographs**



**Photo 3: Proof Roll with Dump truck**



**Photo 4: Typical surface**

#### 4.4 Engineered Fill Construction

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

All fill material was placed in lift sequences comprising horizontal layers. Chadwick Geotechnics verified that the surface of the stripped area, and that of additional lifts, was thoroughly scarified and moisture conditioned prior to placement of additional layers to prevent delamination at the layer interface. Once the placed fill was approved, the layer was compacted accordingly.

Chadwick Geotechnics personnel were on site on a fulltime basis during the placement, moisture conditioning, compaction, and testing of the fill on the dates noted in Table 2.2 of this report.

The following machinery was on site during earthworks.

**Table 4.2: Earthworks plant on site**

| Equipment type  | Model                               |
|-----------------|-------------------------------------|
| Dozer           | Caterpillar D6 Bulldozer            |
| Pad foot roller | 17 T Caterpillar Pad foot Roller    |
| Dump Truck      | Volvo 25T                           |
| Water cart      | Off-Road Water Cart with spray bars |
| Excavator       | Caterpillar 20 T                    |

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

**Photograph 4.3:** General Earthwork machinery and fill construction photographs



**Photo 5:** 20 Tonne CAT Excavator

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**Photo 6:** 17 Tonne CAT Pad foot

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**Photo 7:** Volvo 25T Water cart

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**Photo 8:** Volvo 25T Water cart

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## 4.5 Density testing

Field density and moisture content testing was undertaken progressively during construction on the compacted fill using a calibrated portable density and moisture gauge in accordance with AS 1289.5.8.1. The HILF rapid compaction test was used for peak converted wet density determinations in accordance with AS 1289.5.7.1. Test locations were recorded using a handheld GPS unit. A site plan showing the field density test locations is provided in **Appendix A**.

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

- 1 test per material type per layer per 2500m<sup>2</sup> or 1 test per 500m<sup>3</sup> distributed reasonably evenly or 3 tests per lot – whichever requires the most tests in accordance with Type 1 Earthworks (large scale operations) as defined in Table 8.1 of the AS 3798-2007;

Two Hundred and Seventy Six (276) tests were performed during the filling process. Seventeen (17) of the tests did not achieve the required density and or moisture ratio initially. The failed areas were reworked and retested accordingly. The retests returned passing density and moisture test results.

A summary table of HILF density tests is provided in **Appendix B** and the laboratory test reports are provided in **Appendix C**.

Below, photographs of field density testing conducted on site.

### Photograph 4.4: Density Testing photographs



Photo 9: Nuclear Density Test



Photo 10: Density Test with sand

## 5 Conclusion

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

- The materials, used by the earth-works contractor met the geotechnical property requirements of the specification.
- The sourced fill was, considered to be natural, clean, and suitable for use at the site.
- The fill material placed was tested at a suitable frequency in accordance with AS 3798-2007- Table 8.1 and the results indicate the compacted clay achieved the density requirement of the specification.
- Given the consistent construction practices followed by the earthworks contractor and as witnessed by the Chadwick Geotechnics, combined with the satisfactory verification of test results achieved, it is inferred that areas of the site between test locations were performed to the same standard as those areas that have been tested.
- Based on observations made by Chadwick Geotechnics Level 1 personal and the results of field and laboratory tests, we consider that the engineered fill within the site (noted in Section 2.5), as far as we have been able to reasonably determine, have been placed in general accordance with the intent of the specification.
- It is our opinion that the earthworks undertaken have been performed in accordance with the requirements of Section 8.2 – Level 1 Inspection and Testing - AS3798-2007 Guidelines on Earthworks for Commercial and Residential Developments.
- After our last day on site the Contractor is responsible to maintain the engineered fill in satisfactory condition. Should the fill be not maintained or protected with a sacrificial layer of topsoil or other fill, the uppermost layers of the engineered fill may deteriorate from the weather causing shrink/swell cracking and may need to be remediated prior to further construction on the site. Chadwick Geotechnics have not provided supervision since this date and are not responsible for any deterioration that may have occurred.

## 6 Applicability

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

This report is based on the nature of the project and the prevailing conditions between 12 October 2021 to 11 August 2023. No responsibility or liability will be accepted, and Chadwick Geotechnics is indemnified to the full extent permitted by law in respect of the use of this report where there has been a change in the nature of the project or the conditions on site that may alter or affect the conclusions of this report.

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

Chadwick Geotechnics Pty Ltd

Report prepared by:



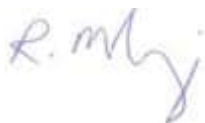
.....  
Robert Barden  
Project Manager

Authorised for Chadwick Geotechnics Pty Ltd by:



.....  
Timothy Chadwick  
Project Director

Report reviewed by:



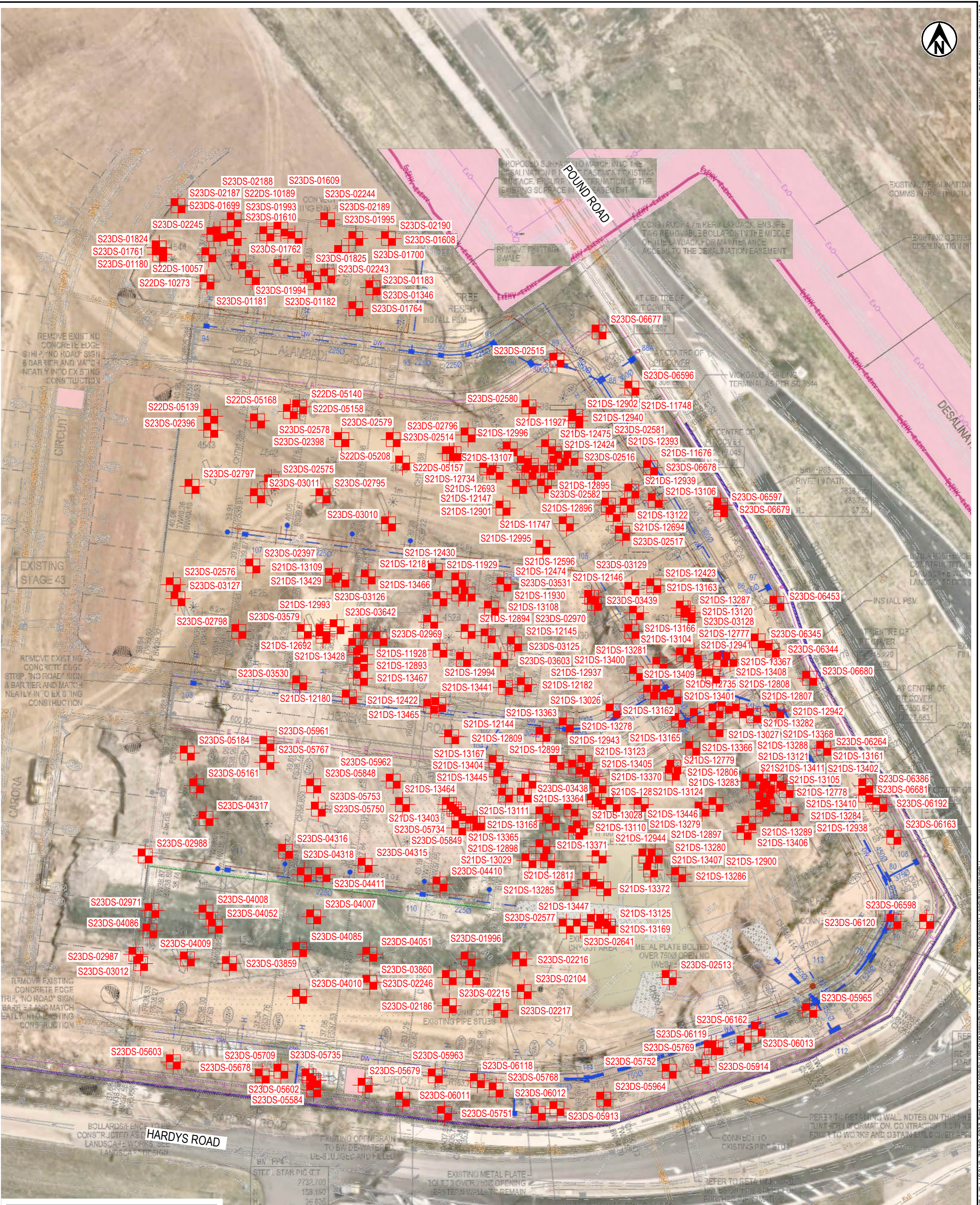
.....  
Robert McKenzie  
Principal Geotechnical Engineer  
PE0005222

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## **Appendix A    Test Location Plan**

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**LEGEND**

 S23DS-05679  
HILF DENSITY TEST LOCATION

**NOTES:**

1. AERIAL IMAGE SOURCED FROM NEARMAP. COPYRIGHT NEARMAP PTY LTD. IMAGERY DATE: 15/02/2023.
2. BASE PLAN PROVIDED BY BEVERIDGE WILLIAMS. PROJECT REF: 1801767, STAGE NO. 45, DRAWING NO. 010, REV B. DATE RECEIVED: 02/10/2023.

A3 SCALE 1:750

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

ORIGINAL IN COLOUR

|                     |      |        |
|---------------------|------|--------|
| PROJECT No. 3807351 |      |        |
| DESIGNED            | STPA | May.23 |
| DRAWN               | KMJA | May.23 |
| CHECKED             |      |        |
| APPROVED            |      |        |
| DATE                |      |        |

|            |                                                                   |                     |
|------------|-------------------------------------------------------------------|---------------------|
| CLIENT     | GROSVENOR LODGE PTY LTD                                           |                     |
| PROJECT    | MERIDIAN ESTATE - STAGE 45                                        |                     |
| TITLE      | LEVEL ONE HILF DENSITY TESTING<br>HILF DENSITY TEST LOCATION PLAN |                     |
| SCALE (A3) | 1:750                                                             | FIG No. 3807351-F01 |
|            |                                                                   | REV 1               |

## **Appendix B      Hilf Density Test Summary**

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## Meridian Estate, Stage 45 3807351.045

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



### HILF Density Testing - Field Summary

[www.chadwickgeotechnics.com.au](http://www.chadwickgeotechnics.com.au)

| Report No      | Sample No   | Date       | Test Number | Easting | Northing | Layer/RL | Density Ratio | Moisture Variation | Pass / Fail | Comments (Retest No)<br>Compliance test taken ect |
|----------------|-------------|------------|-------------|---------|----------|----------|---------------|--------------------|-------------|---------------------------------------------------|
| HDR:W21DS03161 | S21DS-11676 | 12/10/2021 | 1           | 356621  | 5781129  | 35.978   | 97.5          | 0.5 wet            | PASS        |                                                   |
| HDR:W21DS03185 | S21DS-11747 | 13/10/2021 | 1           | 356625  | 5781118  | 36.146   | 100.5         | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03185 | S21DS-11748 | 13/10/2021 | 2           | 356624  | 5781132  | 36.308   | 98            | 0.5 dry            | PASS        |                                                   |
| HDR:W21DS03242 | S21DS-11927 | 22/10/2021 | 1           | 356623  | 5781131  | 36.53    | 101.5         | 1 dry              | PASS        |                                                   |
| HDR:W21DS03242 | S21DS-11928 | 22/10/2021 | 2           | 356581  | 5781090  | 36.142   | 100.5         | 0.5 dry            | PASS        |                                                   |
| HDR:W21DS03242 | S21DS-11929 | 22/10/2021 | 3           | 356602  | 5781106  | 36.444   | 100           | 0.5 dry            | PASS        |                                                   |
| HDR:W21DS03242 | S21DS-11930 | 22/10/2021 | 4           | 356598  | 5781102  | 36.493   | 101.5         | 0.5 dry            | PASS        |                                                   |
| HDR:W21DS03300 | S21DS-12144 | 27/10/2021 | 1           | 356600  | 5781072  |          | 104.5         | 2 dry              | PASS        |                                                   |
| HDR:W21DS03300 | S21DS-12145 | 27/10/2021 | 2           | 356614  | 5781092  |          | 100           | 0 dry              | PASS        |                                                   |
| HDR:W21DS03300 | S21DS-12146 | 27/10/2021 | 3           | 356630  | 5781102  |          | 105           | 2 dry              | PASS        |                                                   |
| HDR:W21DS03300 | S21DS-12147 | 27/10/2021 | 4           | 356611  | 5781121  |          | 100.5         | 2 dry              | PASS        |                                                   |
| HDR:W21DS03315 | S21DS-12180 | 28/10/2021 | 1           | 356579  | 5781081  |          | 100           | 1 dry              | PASS        |                                                   |
| HDR:W21DS03315 | S21DS-12181 | 28/10/2021 | 2           | 356583  | 5781107  |          | 108           | 2 dry              | PASS        |                                                   |
| HDR:W21DS03315 | S21DS-12182 | 28/10/2021 | 3           | 356616  | 5781084  |          | 103.5         | 0.5 dry            | PASS        |                                                   |
| HDR:W21DS03368 | S21DS-12393 | 5/11/2021  | 1           | 356618  | 5781130  | 37.034   | 101.5         | 0 wet              | PASS        |                                                   |
| HDR:W21DS03375 | S21DS-12422 | 6/11/2021  | 1           | 356598  | 5781079  | 36.661   | 99            | 0 wet              | PASS        |                                                   |
| HDR:W21DS03375 | S21DS-12423 | 6/11/2021  | 2           | 356644  | 5781105  | 36.043   | 100.5         | 0 dry              | PASS        |                                                   |
| HDR:W21DS03375 | S21DS-12424 | 6/11/2021  | 3           | 356620  | 5781126  | 37.055   | 99            | 0 dry              | PASS        |                                                   |
| HDR:W21DS03381 | S21DS-12430 | 8/11/2021  | 1           | 356597  | 5781108  | 36.659   | 103.5         | 2 dry              | PASS        |                                                   |
| HDR:W21DS03391 | S21DS-12474 | 9/11/2021  | 1           | 356612  | 5781105  | 37.277   | 100.5         | 0 dry              | PASS        |                                                   |



## Meridian Estate, Stage 45 3807351.045

### HILF Density Testing - Field Summary

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| Report No      | Sample No   | Date       | Test Number | Easting | Northing | Layer/RL | Density Ratio | Moisture Variation | Pass / Fail | Comments (Retest No)<br>Compliance test taken ect |
|----------------|-------------|------------|-------------|---------|----------|----------|---------------|--------------------|-------------|---------------------------------------------------|
| HDR:W21DS03391 | S21DS-12475 | 9/11/2021  | 2           | 356621  | 5781134  | 37.265   | 98.5          | 0 dry              | PASS        |                                                   |
| HDR:W21DS03431 | S21DS-12596 | 18/11/2021 | 1           | 356602  | 5781103  | 37.42    | 97.5          | 0 dry              | PASS        |                                                   |
| HDR:W21DS03446 | S21DS-12692 | 20/11/2021 | 1           | 356573  | 5781094  | 37.583   | 97.5          | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03446 | S21DS-12693 | 20/11/2021 | 2           | 356610  | 5781129  | 37.607   | 94            | 1.5 dry            | FAIL        | See Retest 12734                                  |
| HDR:W21DS03446 | S21DS-12694 | 20/11/2021 | 3           | 356637  | 5781116  | 36.784   | 95            | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03459 | S21DS-12734 | 22/11/2021 | 1           | 356608  | 5781130  | 37.592   | 99            | 2.5 dry            | PASS        | Retest of 12693                                   |
| HDR:W21DS03459 | S21DS-12735 | 22/11/2021 | 2           | 356648  | 5781081  | 33.734   | 98.5          | 0.5 dry            | PASS        |                                                   |
| HDR:W21DS03468 | S21DS-12777 | 23/11/2021 | 1           | 356652  | 5781090  | 34.824   | 99.5          | 0.5 dry            | PASS        |                                                   |
| HDR:W21DS03468 | S21DS-12778 | 23/11/2021 | 2           | 356668  | 5781061  | 33.803   | 96            | 0.5 dry            | PASS        |                                                   |
| HDR:W21DS03468 | S21DS-12779 | 23/11/2021 | 3           | 356648  | 5781065  | 33.874   | 98            | 0.5 dry            | PASS        |                                                   |
| HDR:W21DS03478 | S21DS-12806 | 24/11/2021 | 1           | 356654  | 5781057  | 33.69    | 102.5         | 2 dry              | PASS        |                                                   |
| HDR:W21DS03478 | S21DS-12807 | 24/11/2021 | 2           | 356657  | 5781078  | 34.255   | 98            | 2 dry              | PASS        |                                                   |
| HDR:W21DS03478 | S21DS-12808 | 24/11/2021 | 3           | 356643  | 5781082  | 34.723   | 96.5          | 2 dry              | PASS        |                                                   |
| HDR:W21DS03478 | S21DS-12809 | 24/11/2021 | 4           | 356617  | 5781063  | 34.54    | 99.5          | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03478 | S21DS-12810 | 24/11/2021 | 5           | 356632  | 5781058  | 34.021   | 107           | 4.5 dry            | FAIL        | See Retest 12900                                  |
| HDR:W21DS03478 | S21DS-12811 | 24/11/2021 | 6           | 356630  | 5781042  | 33.489   | 100           | 2 dry              | PASS        |                                                   |
| HDR:W21DS03496 | S21DS-12893 | 25/11/2021 | 1           | 356581  | 5781088  | 37.369   | 101.5         | 0.5 dry            | PASS        |                                                   |
| HDR:W21DS03496 | S21DS-12894 | 25/11/2021 | 2           | 356604  | 5781095  | 37.433   | 102.5         | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03496 | S21DS-12895 | 25/11/2021 | 3           | 356617  | 5781129  | 37.581   | 100.5         | 0.5 dry            | PASS        |                                                   |



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### HILF Density Testing - Field Summary

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| Report No      | Sample No   | Date       | Test Number | Easting | Northing | Layer/RL | Density Ratio | Moisture Variation | Pass / Fail | Comments (Retest No)<br>Compliance test taken ect |
|----------------|-------------|------------|-------------|---------|----------|----------|---------------|--------------------|-------------|---------------------------------------------------|
| HDR:W21DS03496 | S21DS-12896 | 25/11/2021 | 4           | 356635  | 5781120  | 37.159   | 97.5          | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03496 | S21DS-12897 | 25/11/2021 | 5           | 356642  | 5781047  | 33.576   | 99.5          | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03496 | S21DS-12898 | 25/11/2021 | 6           | 356621  | 5781046  | 33.809   | 97            | 2 dry              | PASS        |                                                   |
| HDR:W21DS03496 | S21DS-12899 | 25/11/2021 | 7           | 356623  | 5781067  | 34.896   | 107           | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03496 | S21DS-12900 | 25/11/2021 | 8           | 356631  | 5781059  | 34.03    | 108           | 3 dry              | PASS        | Retest of 12810                                   |
| HDR:W21DS03496 | S21DS-12901 | 25/11/2021 | 9           | 356615  | 5781126  | 37.831   | 100.5         | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03496 | S21DS-12902 | 25/11/2021 | 10          | 356627  | 5781141  | 37.591   | 100           | 3 dry              | PASS        |                                                   |
| HDR:W21DS03508 | S21DS-12937 | 26/11/2021 | 1           | 356645  | 5781082  | 34.881   | 108           | 2 dry              | PASS        |                                                   |
| HDR:W21DS03508 | S21DS-12938 | 26/11/2021 | 2           | 356657  | 5781058  | 33.866   | 103           | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03508 | S21DS-12939 | 26/11/2021 | 3           | 356639  | 5781125  | 37.64    | 104           | 0.5 dry            | PASS        |                                                   |
| HDR:W21DS03508 | S21DS-12940 | 26/11/2021 | 4           | 356627  | 5781140  | 38.141   | 104.5         | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03509 | S21DS-12941 | 27/11/2021 | 1           | 356658  | 5781089  | 35.199   | 109           | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03509 | S21DS-12942 | 27/11/2021 | 2           | 356665  | 5781077  | 34.568   | 103.5         | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03509 | S21DS-12943 | 27/11/2021 | 3           | 356629  | 5781067  | 34.844   | 107.5         | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03509 | S21DS-12944 | 27/11/2021 | 4           | 356632  | 5781047  | 33.959   | 97            | 2 dry              | PASS        |                                                   |
| HDR:W21DS03528 | S21DS-12993 | 29/11/2021 | 1           | 356573  | 5781095  | 37.808   | 105           | 1 dry              | PASS        |                                                   |
| HDR:W21DS03528 | S21DS-12994 | 29/11/2021 | 2           | 356603  | 5781089  | 37.453   | 105.5         | 1.5 dry            | PASS        |                                                   |
| HDR:W21DS03528 | S21DS-12995 | 29/11/2021 | 3           | 356620  | 5781113  | 37.771   | 101           | 0.5 dry            | PASS        |                                                   |
| HDR:W21DS03528 | S21DS-12996 | 29/11/2021 | 4           | 356613  | 5781134  | 38.168   | 103           | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03544 | S21DS-13026 | 30/11/2021 | 1           | 356635  | 5781078  | 35.313   | 102           | 3 dry              | PASS        |                                                   |



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|----------------|-------------|------------|-------------|---------|----------|----------|---------------|--------------------|-------------|---------------------------------------------------|
| HDR:W21DS03544 | S21DS-13027 | 30/11/2021 | 2           | 356657  | 5781074  | 34.834   | 99.5          | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03544 | S21DS-13028 | 30/11/2021 | 3           | 356628  | 5781053  | 34.514   | 105.5         | 4 dry              | FAIL        | See Retest 13110                                  |
| HDR:W21DS03544 | S21DS-13029 | 30/11/2021 | 4           | 356617  | 5781046  | 34.484   | 104           | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03557 | S21DS-13104 | 1/12/2021  | 1           | 356650  | 5781090  | 35.86    | 101           | 3 dry              | PASS        |                                                   |
| HDR:W21DS03557 | S21DS-13105 | 1/12/2021  | 2           | 356668  | 5781062  | 34.6     | 100.5         | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03557 | S21DS-13106 | 1/12/2021  | 3           | 356644  | 5781123  | 38.09    | 93            | 2.5 dry            | FAIL        | See Retest 13122                                  |
| HDR:W21DS03557 | S21DS-13107 | 1/12/2021  | 4           | 356616  | 5781131  | 38.3     | 104           | 3 dry              | PASS        |                                                   |
| HDR:W21DS03557 | S21DS-13108 | 1/12/2021  | 5           | 356609  | 5781100  | 37.835   | 105.5         | 3 dry              | PASS        |                                                   |
| HDR:W21DS03557 | S21DS-13109 | 1/12/2021  | 6           | 356575  | 5781107  | 38.31    | 101.5         | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03557 | S21DS-13110 | 1/12/2021  | 7           | 356627  | 5781052  | 35.52    | 96.5          | 2 dry              | PASS        | Retest of 13028                                   |
| HDR:W21DS03557 | S21DS-13111 | 1/12/2021  | 8           | 356616  | 5781060  | 35.519   | 99            | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03557 | S21DS-13112 | 1/12/2021  | 9           | 356634  | 5781032  | 34.381   | 92.5          | 2.5 dry            | FAIL        | See Retest 13125                                  |
| HDR:W21DS03560 | S21DS-13120 | 2/12/2021  | 1           | 356651  | 5781098  | 36.583   | 102           | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03560 | S21DS-13121 | 2/12/2021  | 2           | 356670  | 5781063  | 35.012   | 101           | 3 dry              | PASS        |                                                   |
| HDR:W21DS03560 | S21DS-13122 | 2/12/2021  | 3           | 356638  | 5781122  | 38.1     | 104           | 3 dry              | PASS        | Retest of 13106                                   |
| HDR:W21DS03560 | S21DS-13123 | 2/12/2021  | 4           | 356627  | 5781066  | 35.679   | 95.5          | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03560 | S21DS-13124 | 2/12/2021  | 5           | 356641  | 5781058  | 35.073   | 99.5          | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03560 | S21DS-13125 | 2/12/2021  | 6           | 356634  | 5781032  | 34.4     | 99            | 2 dry              | PASS        | Retest of 13112                                   |
| HDR:W21DS03580 | S21DS-13165 | 3/12/2021  | 1           | 356652  | 5781070  | 35.613   | 98            | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03580 | S21DS-13166 | 3/12/2021  | 2           | 356639  | 5781095  | 37.065   | 107           | 3 dry              | PASS        |                                                   |



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|----------------|-------------|-----------|-------------|---------|----------|----------|---------------|--------------------|-------------|---------------------------------------------------|
| HDR:W21DS03580 | S21DS-13167 | 3/12/2021 | 3           | 356610  | 5781067  | 36.366   | 100.5         | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03580 | S21DS-13168 | 3/12/2021 | 4           | 356606  | 5781054  | 35.562   | 97.5          | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03580 | S21DS-13169 | 3/12/2021 | 5           | 356628  | 5781032  | 34.185   | 99            | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03578 | S21DS-13161 | 4/12/2021 | 1           | 356667  | 5781059  | 35.472   | 100.5         | 1.5 dry            | PASS        |                                                   |
| HDR:W21DS03578 | S21DS-13162 | 4/12/2021 | 2           | 356649  | 5781076  | 36.205   | 98.5          | 2 dry              | PASS        |                                                   |
| HDR:W21DS03578 | S21DS-13163 | 4/12/2021 | 3           | 356650  | 5781100  | 37.266   | 100.5         | 2 dry              | PASS        |                                                   |
| HDR:W21DS03605 | S21DS-13278 | 6/12/2021 | 1           | 356625  | 5781075  | 36.565   | 97.5          | 2 dry              | PASS        |                                                   |
| HDR:W21DS03605 | S21DS-13279 | 6/12/2021 | 2           | 356622  | 5781054  | 35.694   | 102.5         | 3 dry              | PASS        |                                                   |
| HDR:W21DS03605 | S21DS-13280 | 6/12/2021 | 3           | 356644  | 5781047  | 35.06    | 100           | 3 dry              | PASS        |                                                   |
| HDR:W21DS03606 | S21DS-13281 | 7/12/2021 | 1           | 356645  | 5781088  | 37.123   | 105           | 5 dry              | FAIL        | See Retest 13366                                  |
| HDR:W21DS03606 | S21DS-13282 | 7/12/2021 | 2           | 356662  | 5781078  | 36.41    | 103.5         | 4.5 dry            | FAIL        | See Retest 13368                                  |
| HDR:W21DS03606 | S21DS-13283 | 7/12/2021 | 3           | 356668  | 5781058  | 35.677   | 100           | 2 dry              | PASS        |                                                   |
| HDR:W21DS03607 | S21DS-13284 | 7/12/2021 | 1           | 356673  | 5781056  | 35.205   | 96.5          | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03607 | S21DS-13285 | 7/12/2021 | 2           | 356626  | 5781040  | 35.816   | 97.5          | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03607 | S21DS-13286 | 7/12/2021 | 3           | 356649  | 5781043  | 35.306   | 103           | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03607 | S21DS-13287 | 7/12/2021 | 4           | 356651  | 5781099  | 37.306   | 105.5         | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03607 | S21DS-13288 | 7/12/2021 | 5           | 356659  | 5781079  | 36.531   | 101           | 0 dry              | PASS        |                                                   |
| HDR:W21DS03607 | S21DS-13289 | 7/12/2021 | 6           | 356664  | 5781054  | 35.908   | 105           | 2 dry              | PASS        |                                                   |
| HDR:W21DS03630 | S21DS-13363 | 8/12/2021 | 1           | 356620  | 5781073  | 37.01    | 100.5         | 3 dry              | PASS        |                                                   |
| HDR:W21DS03630 | S21DS-13364 | 8/12/2021 | 2           | 356626  | 5781057  | 36.19    | 97            | 3.5 dry            | FAIL        | See Retest 13403                                  |



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|----------------|-------------|-----------|-------------|---------|----------|----------|---------------|--------------------|-------------|---------------------------------------------------|
| HDR:W21DS03630 | S21DS-13365 | 8/12/2021 | 3           | 356605  | 5781054  | 36.19    | 99.5          | 4 dry              | FAIL        | See Retest 13403                                  |
| HDR:W21DS03630 | S21DS-13366 | 8/12/2021 | 4           | 356648  | 5781066  | 37.15    | 102           | 0.5 dry            | PASS        | Retest of S21DS-13281                             |
| HDR:W21DS03630 | S21DS-13367 | 8/12/2021 | 5           | 356660  | 5781089  | 37.14    | 98            | 1.5 dry            | PASS        |                                                   |
| HDR:W21DS03630 | S21DS-13368 | 8/12/2021 | 6           | 356670  | 5781078  | 36.4     | 98            | 0 dry              | PASS        | Retest of S21DS-13282                             |
| HDR:W21DS03630 | S21DS-13369 | 8/12/2021 | 7           | 356664  | 5781063  | 36.22    | 93.5          | 2 dry              | FAIL        | See Retest 13411                                  |
| HDR:W21DS03630 | S21DS-13370 | 8/12/2021 | 8           | 356632  | 5781062  | 36.57    | 89.5          | 2 dry              | FAIL        | See Retest 13405                                  |
| HDR:W21DS03630 | S21DS-13371 | 8/12/2021 | 9           | 356620  | 5781049  | 36.25    | 99.5          | 3 dry              | PASS        |                                                   |
| HDR:W21DS03630 | S21DS-13372 | 8/12/2021 | 10          | 356633  | 5781040  | 35.73    | 98.5          | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03638 | S21DS-13400 | 9/12/2021 | 1           | 356640  | 5781086  | 37.54    | 105.5         | 0.5 dry            | PASS        |                                                   |
| HDR:W21DS03638 | S21DS-13401 | 9/12/2021 | 2           | 356653  | 5781077  | 36.99    | 96.5          | 2 dry              | PASS        |                                                   |
| HDR:W21DS03638 | S21DS-13402 | 9/12/2021 | 3           | 356672  | 5781061  | 36.28    | 101.5         | 2 dry              | PASS        |                                                   |
| HDR:W21DS03638 | S21DS-13403 | 9/12/2021 | 4           | 356601  | 5781057  | 36.04    | 107           | 0.5 dry            | PASS        | Retest of S21DS-13364 & S21DS-13365               |
| HDR:W21DS03638 | S21DS-13404 | 9/12/2021 | 5           | 356611  | 5781064  | 37.27    | 99.5          | 2 dry              | PASS        |                                                   |
| HDR:W21DS03638 | S21DS-13405 | 9/12/2021 | 6           | 356630  | 5781064  | 36.62    | 100           | 2.5 dry            | PASS        | Retest of S21DS-13370                             |
| HDR:W21DS03638 | S21DS-13406 | 9/12/2021 | 7           | 356663  | 5781052  | 36.51    | 102.5         | 1.5 dry            | PASS        |                                                   |
| HDR:W21DS03638 | S21DS-13407 | 9/12/2021 | 8           | 356643  | 5781044  | 36.07    | 105           | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03638 | S21DS-13408 | 9/12/2021 | 9           | 356656  | 5781085  | 37.43    | 95            | 0.5 dry            | PASS        |                                                   |
| HDR:W21DS03638 | S21DS-13409 | 9/12/2021 | 10          | 356654  | 5781087  | 37.07    | 103           | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03638 | S21DS-13410 | 9/12/2021 | 11          | 356667  | 5781057  | 36.64    | 100.5         | 2 dry              | PASS        |                                                   |
| HDR:W21DS03638 | S21DS-13411 | 9/12/2021 | 12          | 356667  | 5781063  | 36.3     | 104.5         | 2.5 dry            | PASS        | Retest of S21DS-13369                             |



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|----------------|-------------|------------|-------------|---------|----------|----------|---------------|--------------------|-------------|---------------------------------------------------|
| HDR:W21DS03645 | S21DS-13428 | 10/12/2021 | 1           | 356580  | 5781092  | 38.195   | 101           | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03645 | S21DS-13429 | 10/12/2021 | 2           | 356577  | 5781106  | 38.545   | 98.5          | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03650 | S21DS-13441 | 10/12/2021 | 1           | 356612  | 5781083  | 37.552   | 100.5         | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03650 | S21DS-13445 | 10/12/2021 | 2           | 356612  | 5781060  | 37.231   | 102.5         | 2.5 dry            | PASS        |                                                   |
| HDR:W21DS03650 | S21DS-13446 | 10/12/2021 | 3           | 356635  | 5781058  | 36.896   | 97            | 0 dry              | PASS        |                                                   |
| HDR:W21DS03650 | S21DS-13447 | 10/12/2021 | 4           | 356633  | 5781033  | 35.952   | 100.5         | 2 dry              | PASS        |                                                   |
| HDR:W21DS03661 | S21DS-13464 | 13/12/2021 | 1           | 356600  | 5781058  | 37.529   | 103.5         | 4 dry              | Pass        |                                                   |
| HDR:W21DS03661 | S21DS-13465 | 13/12/2021 | 2           | 356596  | 5781079  | 37.916   | 103.5         | 2 dry              | PASS        |                                                   |
| HDR:W21DS03661 | S21DS-13466 | 13/12/2021 | 3           | 356596  | 5781097  | 38.625   | 100.5         | 2 dry              | PASS        |                                                   |
| HDR:W21DS03661 | S21DS-13467 | 13/12/2021 | 4           | 356581  | 5781085  | 38.302   | 98.5          | 2 dry              | PASS        |                                                   |
| HDR:W22DS01370 | S22DS-05139 | 20/06/2022 | 1           | 356549  | 5781141  | 39.49    | 95            | 0.5 wet            | PASS        |                                                   |
| HDR:W22DS01370 | S22DS-05140 | 20/06/2022 | 2           | 356568  | 5781143  | 39.183   | 99.5          | 1.5 wet            | PASS        |                                                   |
| HDR:W22DS01378 | S22DS-05157 | 22/06/2022 | 1           | 356601  | 5781133  | 38.74    | 95            | 2 wet              | PASS        |                                                   |
| HDR:W22DS01378 | S22DS-05158 | 22/06/2022 | 2           | 356566  | 5781142  | 39.365   | 96.5          | 2.5 wet            | PASS        |                                                   |
| HDR:W22DS01383 | S22DS-05168 | 23/06/2022 | 1           | 356559  | 5781140  | 39.606   | 96.5          | 2 wet              | PASS        |                                                   |
| HDR:W22DS01399 | S22DS-05208 | 28/06/2022 | 1           | 356590  | 5781131  | 39.115   | 98            | 0.5 wet            | PASS        |                                                   |
| HDR:W22DS02515 | S22DS-10057 | 19/12/2022 | 1           | 356549  | 5781176  | 40.27    | 106.0         | 2.8 dry            | PASS        |                                                   |
| HDR:W22DS02542 | S22DS-10189 | 20/12/2022 | 1           | 356550  | 5781180  | 40.56    | 100.0         | 0.4 wet            | PASS        |                                                   |
| HDR:W22DS02558 | S22DS-10273 | 21/12/2022 | 1           | 356548  | 5781170  | 40.57    | 103.5         | 2.9 dry            | PASS        |                                                   |
| HDR:W23DS00346 | S23DS-01180 | 10/02/2023 | 1           | 356538  | 5781176  | 40.535   | 102.5         | 2.5 dry            | PASS        |                                                   |



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|----------------|-------------|------------|-------------|---------|----------|----------|---------------|--------------------|-------------|---------------------------------------------------|
| HDR:W23DS00346 | S23DS-01181 | 10/02/2023 | 2           | 356558  | 5781171  | 39.813   | 101.0         | 2.5 dry            | PASS        |                                                   |
| HDR:W23DS00346 | S23DS-01182 | 10/02/2023 | 3           | 356571  | 5781170  | 39.508   | 102.5         | 0.7 dry            | PASS        |                                                   |
| HDR:W23DS00346 | S23DS-01183 | 10/02/2023 | 4           | 356584  | 5781168  | 39.264   | 100.5         | 4.5 dry            | FAIL        | See Retest S23Ds-01346                            |
| HDR:W23DS00391 | S23DS-01346 | 14/02/2023 | 1           | 356584  | 5781168  | 39.264   | 98.5          | 2 dry              | PASS        | Retest of S23DS-01183                             |
| HDR:W23DS00483 | S23DS-01608 | 22/02/2023 | 1           | 356577  | 5781176  | 39.744   | 109.0         | 2.5 dry            | PASS        | See Retest S23DS-01700                            |
| HDR:W23DS00483 | S23DS-01609 | 22/02/2023 | 2           | 356567  | 5781179  | 39.907   | 100.0         | 3.0 dry            | PASS        |                                                   |
| HDR:W23DS00483 | S23DS-01610 | 22/02/2023 | 3           | 356554  | 5781179  | 40.394   | 107.0         | 4.5 dry            | FAIL        | See Retest S23DS-01699                            |
| HDR:W23DS00517 | S23DS-01699 | 24/02/2023 | 1           | 356554  | 5781179  | 40.394   | 98.5          | 0.0                | PASS        | Retest of S23DS-01610                             |
| HDR:W23DS00517 | S23DS-01700 | 24/02/2023 | 2           | 356577  | 5781176  | 39.744   | 98.0          | 0.3 wet            | PASS        | Retest of S23DS-01608                             |
| HDR:W23DS00539 | S23DS-01761 | 27/02/2023 | 1           | 356538  | 5781177  | 40.925   | 100.0         | 4.4 dry            | FAIL        | See Retest S23DS-01824                            |
| HDR:W23DS00539 | S23DS-01762 | 27/02/2023 | 2           | 356555  | 5781174  | 40.339   | 96.5          | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS00539 | S23DS-01763 | 27/02/2023 | 3           | 356569  | 5781172  | 40.027   | 93.5          | 0.5 dry            | FAIL        | See Retest S23DS-01825                            |
| HDR:W23DS00539 | S23DS-01764 | 27/02/2023 | 4           | 356580  | 5781164  | 39.552   | 100.5         | 0 dry              | PASS        |                                                   |
| HDR:W23DS00565 | S23DS-01824 | 28/02/2023 | 1           | 356538  | 5781177  | 40.925   | 98.0          | 2.5 dry            | PASS        | Retest of S23DS-01761                             |
| HDR:W23DS00565 | S23DS-01825 | 28/02/2023 | 2           | 356569  | 5781172  | 40.027   | 101.0         | 2.5 dry            | PASS        | Retest of S23DS-01763                             |
| HDR:W23DS00621 | S23DS-01993 | 3/03/2023  | 1           | 356554  | 5781183  | 40.158   | 100.0         | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS00621 | S23DS-01994 | 3/03/2023  | 2           | 356564  | 5781173  | 40.278   | 96.5          | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS00621 | S23DS-01995 | 3/03/2023  | 3           | 356580  | 5781179  | 40.703   | 96.5          | 0 dry              | PASS        |                                                   |
| HDR:W23DS00622 | S23DS-01996 | 4/03/2023  | 1           | 356604  | 5781025  | 36.015   | 105.0         | 2.5 dry            | PASS        |                                                   |
| HDR:W23DS00652 | S23DS-02104 | 7/03/2023  | 1           | 356616  | 5781018  | 35.626   | 102.0         | 0 dry              | PASS        |                                                   |





## Meridian Estate, Stage 45 3807351.045

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### HILF Density Testing - Field Summary

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| Report No      | Sample No   | Date       | Test Number | Easting | Northing | Layer/RL | Density Ratio | Moisture Variation | Pass / Fail | Comments (Retest No)<br>Compliance test taken ect |
|----------------|-------------|------------|-------------|---------|----------|----------|---------------|--------------------|-------------|---------------------------------------------------|
| HDR:W23DS00679 | S23DS-02186 | 8/03/2023  | 1           | 356600  | 5781015  | 36.39    | 104.0         | 1.0 dry            | PASS        |                                                   |
| HDR:W23DS00679 | S23DS-02187 | 8/03/2023  | 2           | 356542  | 5781186  | 41.099   | 103.5         | 2.0 dry            | PASS        |                                                   |
| HDR:W23DS00679 | S23DS-02188 | 8/03/2023  | 3           | 356561  | 5781180  | 40.671   | 97.5          | 0 dry              | PASS        |                                                   |
| HDR:W23DS00679 | S23DS-02189 | 8/03/2023  | 4           | 356574  | 5781183  | 40.514   | 99.0          | 0.5 wet            | PASS        |                                                   |
| HDR:W23DS00679 | S23DS-02190 | 8/03/2023  | 5           | 356587  | 5781179  | 40.272   | 95.5          | 0.1 dry            | PASS        |                                                   |
| HDR:W23DS00688 | S23DS-02215 | 9/03/2023  | 1           | 356605  | 5781021  | 36.417   | 101.0         | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS00688 | S23DS-02216 | 9/03/2023  | 2           | 356615  | 5781025  | 36.36    | 99.0          | 1.0 wet            | PASS        |                                                   |
| HDR:W23DS00688 | S23DS-02217 | 9/03/2023  | 3           | 356611  | 5781014  | 36.595   | 96.0          | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS00697 | S23DS-02243 | 10/03/2023 | 1           | 356574  | 5781171  | 40.441   | 100.5         | 0 dry              | PASS        |                                                   |
| HDR:W23DS00697 | S23DS-02244 | 10/03/2023 | 2           | 356564  | 5781181  | 40.7     | 98.5          | 0.0                | PASS        |                                                   |
| HDR:W23DS00697 | S23DS-02245 | 10/03/2023 | 3           | 356551  | 5781180  | 41.7     | 97.5          | 1.5 dry            | PASS        |                                                   |
| HDR:W23DS00697 | S23DS-02246 | 10/03/2023 | 4           | 356600  | 5781021  | 37.187   | 99.5          | 0 wet              | PASS        |                                                   |
| HDR:W23DS00756 | S23DS-02396 | 17/03/2023 | 1           | 356549  | 5781138  | 39.68    | 104.0         | 2.5 dry            | PASS        |                                                   |
| HDR:W23DS00756 | S23DS-02397 | 17/03/2023 | 2           | 356558  | 5781109  | 39.068   | 99.5          | 2.5 dry            | PASS        |                                                   |
| HDR:W23DS00757 | S23DS-02398 | 18/03/2023 | 1           | 356577  | 5781136  | 39.091   | 93.0          | 0.5 dry            | FAIL        | See Retest S23DS-02578                            |
| HDR:W23DS00786 | S23DS-02513 | 20/03/2023 | 1           | 356647  | 5781021  | 34.59    | 102.5         | 2 dry              | PASS        |                                                   |
| HDR:W23DS00786 | S23DS-02514 | 20/03/2023 | 2           | 356600  | 5781133  | 38.787   | 102.5         | 2 dry              | PASS        |                                                   |
| HDR:W23DS00786 | S23DS-02515 | 20/03/2023 | 3           | 356623  | 5781153  | 38.851   | 102.5         | 2 dry              | PASS        |                                                   |
| HDR:W23DS00786 | S23DS-02516 | 20/03/2023 | 4           | 356631  | 5781129  | 38.476   | 101.0         | 0 wet              | PASS        |                                                   |
| HDR:W23DS00786 | S23DS-02517 | 20/03/2023 | 5           | 356637  | 5781116  | 38.026   | 99.5          | 2.5 dry            | PASS        |                                                   |



## Meridian Estate, Stage 45 3807351.045

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### HILF Density Testing - Field Summary

[www.chadwickgeotechnics.com.au](http://www.chadwickgeotechnics.com.au)

| Report No      | Sample No   | Date       | Test Number | Easting | Northing | Layer/RL | Density Ratio | Moisture Variation | Pass / Fail | Comments (Retest No)<br>Compliance test taken ect |
|----------------|-------------|------------|-------------|---------|----------|----------|---------------|--------------------|-------------|---------------------------------------------------|
| HDR:W23DS00803 | S23DS-02575 | 21/03/2023 | 1           | 356562  | 5781127  | 39.708   | 99.0          | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS00803 | S23DS-02576 | 21/03/2023 | 2           | 356541  | 5781105  | 39.41    | 103.0         | 3.0 dry            | PASS        |                                                   |
| HDR:W23DS00803 | S23DS-02577 | 21/03/2023 | 3           | 356625  | 5781032  | 34.83    | 98.5          | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS00803 | S23DS-02578 | 21/03/2023 | 4           | 356577  | 5781136  | -        | 100.5         | 2 dry              | PASS        | Retest of S23DS-02398                             |
| HDR:W23DS00803 | S23DS-02579 | 21/03/2023 | 5           | 356588  | 5781136  | 39.138   | 103.0         | 1.5 dry            | PASS        |                                                   |
| HDR:W23DS00803 | S23DS-02580 | 21/03/2023 | 6           | 356617  | 5781143  | 39.128   | 97.5          | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS00803 | S23DS-02581 | 21/03/2023 | 7           | 356626  | 5781132  | 38.82    | 97.0          | 0.0                | PASS        |                                                   |
| HDR:W23DS00803 | S23DS-02582 | 21/03/2023 | 8           | 356634  | 5781122  | 38.516   | 96.5          | 0 dry              | PASS        |                                                   |
| HDR:W23DS00812 | S23DS-02641 | 22/03/2023 | 1           | 356631  | 5781033  | 34.74    | 103.5         | 1.5 dry            | PASS        |                                                   |
| HDR:W23DS00864 | S23DS-02795 | 29/03/2023 | 1           | 356573  | 5781124  | 39.481   | 100.5         | 0 dry              | PASS        |                                                   |
| HDR:W23DS00864 | S23DS-02796 | 29/03/2023 | 2           | 356604  | 5781137  | 39.186   | 97.0          | 0 dry              | PASS        |                                                   |
| HDR:W23DS00864 | S23DS-02797 | 29/03/2023 | 3           | 356545  | 5781126  | 40.098   | 97.0          | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS00864 | S23DS-02798 | 29/03/2023 | 4           | 356555  | 5781095  | 39.17    | 101.0         | 2.0 dry            | PASS        |                                                   |
| HDR:W23DS00909 | S23DS-02969 | 4/04/2023  | 1           | 356585  | 5781093  | 38.292   | 104.0         | 2.5 dry            | PASS        |                                                   |
| HDR:W23DS00909 | S23DS-02970 | 4/04/2023  | 2           | 356608  | 5781094  | 37.882   | 98.5          | 2.5 dry            | PASS        |                                                   |
| HDR:W23DS00909 | S23DS-02971 | 4/04/2023  | 3           | 356536  | 5781035  | 37.72    | 100.0         | 2.0 dry            | PASS        |                                                   |
| HDR:W23DS00917 | S23DS-02987 | 5/04/2023  | 4           | 356533  | 5781026  | 37.785   | 100.0         | 0.7 dry            | PASS        |                                                   |
| HDR:W23DS00917 | S23DS-02988 | 5/04/2023  | 5           | 356535  | 5781047  | 38.289   | 101.0         | 1.9 dry            | PASS        |                                                   |
| HDR:W23DS00924 | S23DS-03010 | 6/04/2023  | 1           | 356587  | 5781118  | 39.439   | 100.5         | 2.4 dry            | PASS        |                                                   |
| HDR:W23DS00924 | S23DS-03011 | 6/04/2023  | 2           | 356559  | 5781124  | 39.879   | 103.0         | 1.7 dry            | PASS        |                                                   |



## Meridian Estate, Stage 45 3807351.045

### HILF Density Testing - Field Summary

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| Report No      | Sample No   | Date       | Test Number | Easting | Northing | Layer/RL | Density Ratio | Moisture Variation | Pass / Fail | Comments (Retest No)<br>Compliance test taken ect |
|----------------|-------------|------------|-------------|---------|----------|----------|---------------|--------------------|-------------|---------------------------------------------------|
| HDR:W23DS00924 | S23DS-03012 | 6/04/2023  | 3           | 356534  | 5781024  | 38.193   | 102.5         | 0.2 wet            | PASS        |                                                   |
| HDR:W23DS00959 | S23DS-03125 | 15/04/2023 | 1           | 356598  | 5781091  | 38.409   | 100           | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS00959 | S23DS-03126 | 15/04/2023 | 2           | 356576  | 5781096  | 38.383   | 103           | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS00959 | S23DS-03127 | 15/04/2023 | 3           | 356542  | 5781102  | 39.625   | 106           | 0 dry              | PASS        |                                                   |
| HDR:W23DS00959 | S23DS-03128 | 15/04/2023 | 4           | 356640  | 5781099  | 37.994   | 103.5         | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS00959 | S23DS-03129 | 15/04/2023 | 5           | 356639  | 5781104  | 38.099   | 101.5         | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS01029 | S23DS-03438 | 21/04/2023 | 1           | 356620  | 5781056  | 37.638   | 102.5         | 0.0                | PASS        |                                                   |
| HDR:W23DS01029 | S23DS-03439 | 21/04/2023 | 2           | 356631  | 5781101  | 38.052   | 99.0          | 1.4 wet            | PASS        |                                                   |
| HDR:W23DS01054 | S23DS-03530 | 24/04/2023 | 1           | 356568  | 5781084  | 38.664   | 99.0          | 0.1 dry            | PASS        |                                                   |
| HDR:W23DS01054 | S23DS-03531 | 24/04/2023 | 2           | 356604  | 5781103  | 38.628   | 99.0          | 0.4 dry            | PASS        |                                                   |
| HDR:W23DS01066 | S23DS-03579 | 26/04/2023 | 1           | 356569  | 5781095  | 38.732   | 100           | 0.2 dry            | PASS        |                                                   |
| HDR:W23DS01076 | S23DS-03603 | 27/04/2023 | 1           | 356611  | 5781089  | 38.532   | 106           | 0.1 wet            | PASS        |                                                   |
| HDR:W23DS01085 | S23DS-03642 | 28/04/2023 | 1           | 356581  | 5781095  | 39.031   | 105.0         | 1 dry              | PASS        |                                                   |
| HDR:W23DS01140 | S23DS-03859 | 5/05/2023  | 1           | 356553  | 5781024  | 37.07    | 99.0          | 1 wet              | PASS        |                                                   |
| HDR:W23DS01140 | S23DS-03860 | 5/05/2023  | 2           | 356583  | 5781020  | 36.583   | 97.5          | 2.5 wet            | PASS        |                                                   |
| HDR:W23DS01191 | S23DS-04007 | 12/05/2023 | 1           | 356571  | 5781034  | 37.041   | 97.5          | 0.5 wet            | PASS        |                                                   |
| HDR:W23DS01191 | S23DS-04008 | 12/05/2023 | 2           | 356548  | 5781035  | 37.532   | 97.5          | 0 wet              | PASS        |                                                   |
| HDR:W23DS01191 | S23DS-04009 | 12/05/2023 | 3           | 356544  | 5781025  | 37.774   | 98            | 0 dry              | PASS        |                                                   |
| HDR:W23DS01191 | S23DS-04010 | 12/05/2023 | 4           | 356568  | 5781017  | 37.348   | 98.5          | 0 wet              | PASS        |                                                   |
| HDR:W23DS01209 | S23DS-04051 | 16/05/2023 | 1           | 356583  | 5781026  | 37.21    | 99            | 0.5 dry            | PASS        |                                                   |



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| Report No      | Sample No   | Date       | Test Number | Easting | Northing | Layer/RL | Density Ratio | Moisture Variation | Pass / Fail | Comments (Retest No)<br>Compliance test taken ect |
|----------------|-------------|------------|-------------|---------|----------|----------|---------------|--------------------|-------------|---------------------------------------------------|
| HDR:W23DS01209 | S23DS-04052 | 16/05/2023 | 2           | 356550  | 5781032  | 37.783   | 97.5          | 0 wet              | PASS        |                                                   |
| HDR:W23DS01220 | S23DS-04085 | 17/05/2023 | 1           | 356568  | 5781027  | 37.752   | 97.5          | 0 wet              | PASS        |                                                   |
| HDR:W23DS01220 | S23DS-04086 | 17/05/2023 | 2           | 356536  | 5781031  | 38.282   | 105.5         | 1 dry              | PASS        |                                                   |
| HDR:W23DS01268 | S23DS-04315 | 23/05/2023 | 1           | 356582  | 5781045  | 37.178   | 100.5         | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS01268 | S23DS-04316 | 23/05/2023 | 2           | 356565  | 5781048  | 37.641   | 99.5          | 1 dry              | PASS        |                                                   |
| HDR:W23DS01268 | S23DS-04317 | 23/05/2023 | 3           | 356548  | 5781055  | 38.137   | 101.5         | 2 dry              | PASS        |                                                   |
| HDR:W23DS01268 | S23DS-04318 | 23/05/2023 | 4           | 356569  | 5781043  | 37.637   | 95.5          | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS01300 | S23DS-04410 | 25/05/2023 | 1           | 356598  | 5781041  | 37.51    | 97            | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS01300 | S23DS-04411 | 25/05/2023 | 2           | 356573  | 5781043  | 37.902   | 96            | 0 wet              | PASS        |                                                   |
| HDR:W23DS01556 | S23DS-05161 | 27/06/2023 | 1           | 356546  | 5781062  | 38.126   | 102.5         | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS01566 | S23DS-05184 | 29/06/2023 | 2           | 356544  | 5781069  | 38.754   | 98.5          | 0.5 wet            | PASS        |                                                   |
| HDR:W23DS01660 | S23DS-05584 | 13/07/2023 | 1           | 356571  | 5780997  | 35.865   | 91.5          | 0.5 Wet            | FAIL        | See Retest S23DS-05602                            |
| HDR:W23DS01668 | S23DS-05602 | 14/07/2023 | 1           | 356571  | 5780999  | 35.865   | 103.5         | 2.5 dry            | PASS        | Retest of S23DS-05584                             |
| HDR:W23DS01668 | S23DS-05603 | 14/07/2023 | 2           | 356541  | 5781003  | 36.715   | 101.0         | 0 dry              | PASS        |                                                   |
| HDR:W23DS01680 | S23DS-05678 | 17/07/2023 | 1           | 356560  | 5781000  | 36.48    | 100.5         | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS01680 | S23DS-05679 | 17/07/2023 | 2           | 356582  | 5780998  | 36.238   | 97.5          | 0 wet              | PASS        |                                                   |
| HDR:W23DS01688 | S23DS-05709 | 18/07/2023 | 1           | 356564  | 5781001  | 37.02    | 103.5         | 0.5 wet            | PASS        |                                                   |
| HDR:W23DS01698 | S23DS-05734 | 19/07/2023 | 1           | 356602  | 5781056  | 37.35    | 100           | 0.5 wet            | PASS        |                                                   |
| HDR:W23DS01698 | S23DS-05735 | 19/07/2023 | 2           | 356570  | 5781000  | 36.92    | 100           | 0.5 wet            | PASS        |                                                   |
| HDR:W23DS01705 | S23DS-05750 | 20/07/2023 | 1           | 356590  | 5781058  | 37.658   | 100.5         | 0.5 wet            | PASS        |                                                   |



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### HILF Density Testing - Field Summary

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| Report No      | Sample No   | Date       | Test Number | Easting | Northing | Layer/RL | Density Ratio | Moisture Variation | Pass / Fail | Comments (Retest No)<br>Compliance test taken ect |
|----------------|-------------|------------|-------------|---------|----------|----------|---------------|--------------------|-------------|---------------------------------------------------|
| HDR:W23DS01705 | S23DS-05751 | 20/07/2023 | 2           | 356599  | 5780992  | 35.445   | 99.5          | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS01705 | S23DS-05752 | 20/07/2023 | 3           | 356647  | 5781001  | 34.63    | 99.5          | 0 dry              | PASS        |                                                   |
| HDR:W23DS01705 | S23DS-05753 | 20/07/2023 | 4           | 356572  | 5781057  | 37.625   | 98.0          | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS01710 | S23DS-05767 | 21/07/2023 | 1           | 356561  | 5781067  | 38.186   | 98.5          | 0 dry              | PASS        |                                                   |
| HDR:W23DS01710 | S23DS-05768 | 21/07/2023 | 2           | 356610  | 5780997  | 35.56    | 102.0         | 0 dry              | PASS        |                                                   |
| HDR:W23DS01710 | S23DS-05769 | 21/07/2023 | 3           | 356656  | 5781006  | 34.815   | 101.0         | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS01732 | S23DS-05848 | 24/07/2023 | 1           | 356571  | 5781062  | 38.2     | 99.0          | 0.5 wet            | PASS        |                                                   |
| HDR:W23DS01732 | S23DS-05849 | 24/07/2023 | 2           | 356602  | 5781053  | 37.87    | 98.0          | 0.5 wet            | PASS        |                                                   |
| HDR:W23DS01749 | S23DS-05913 | 25/07/2023 | 1           | 356623  | 5780993  | 35.42    | 97.5          | 0 dry              | PASS        |                                                   |
| HDR:W23DS01749 | S23DS-05914 | 25/07/2023 | 2           | 356654  | 5781002  | 35.03    | 97.0          | 0 dry              | PASS        |                                                   |
| HDR:W23DS01759 | S23DS-05961 | 26/07/2023 | 1           | 356561  | 5781071  | 38.675   | 100.0         | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS01759 | S23DS-05962 | 26/07/2023 | 2           | 356588  | 5781063  | 38.185   | 97.5          | 0 wet              | PASS        |                                                   |
| HDR:W23DS01759 | S23DS-05963 | 26/07/2023 | 3           | 356597  | 5781000  | 36.459   | 96.5          | 0 dry              | PASS        |                                                   |
| HDR:W23DS01759 | S23DS-05964 | 26/07/2023 | 4           | 356633  | 5780995  | 35.48    | 98.5          | 0 dry              | PASS        |                                                   |
| HDR:W23DS01759 | S23DS-05965 | 26/07/2023 | 5           | 356677  | 5781014  | 34.55    | 102.0         | 0 dry              | PASS        |                                                   |
| HDR:W23DS01771 | S23DS-06011 | 27/07/2023 | 1           | 356590  | 5780995  | 36.61    | 98.5          | 0.5 wet            | PASS        |                                                   |
| HDR:W23DS01771 | S23DS-06012 | 27/07/2023 | 2           | 356619  | 5780992  | 36.07    | 99.5          | 2.5 wet            | PASS        |                                                   |
| HDR:W23DS01771 | S23DS-06013 | 27/07/2023 | 3           | 356663  | 5781007  | 34.805   | 98.5          | 0.5 dry            | PASS        |                                                   |
| HDR:W23DS01798 | S23DS-06118 | 31/07/2023 | 1           | 356606  | 5780999  | 36.38    | 101.5         | 0 wet              | PASS        |                                                   |
| HDR:W23DS01798 | S23DS-06119 | 31/07/2023 | 2           | 356657  | 5781006  | 35.245   | 99.5          | 0 dry              | PASS        |                                                   |



**Appendix C      NATA endorsed laboratory reports**

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**Report No: HDR:W21DS03161**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 13/10/2021  
 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-11676       |  |  |  |  |
| Field Sample ID | 1                 |  |  |  |  |
| Date Tested     | 12/10/2021        |  |  |  |  |
| E:              | 2795.389 (356621) |  |  |  |  |
| N:              | 285.232 (5781129) |  |  |  |  |
| EL / Layer:     | 35.978 / 1        |  |  |  |  |
| Lot:            | 4521              |  |  |  |  |
| Other:          | Sample: 1         |  |  |  |  |

## 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) | 1.98        |  |  |  |  |
| Compactive Effort                 | Standard    |  |  |  |  |
| Moisture Variation (%)            | 0.5 wet     |  |  |  |  |
| Hilf Density Ratio (%)            | <b>97.5</b> |  |  |  |  |

## Comments





**Dandenong South**  
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Ph: + 61 3 8796 7900  
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**Report No: HDR:W21DS03185**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 18/10/2021  
 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-11747       | S21DS-11748       |  |  |  |
|-----------------|-------------------|-------------------|--|--|--|
| Field Sample ID | 1                 | 2                 |  |  |  |
| Date Tested     | 13/10/2021        | 13/10/2021        |  |  |  |
| E:              | 2801.127 (356625) | 2801.052 (356624) |  |  |  |
| N:              | 278.112 (5781118) | 291.740 (5781132) |  |  |  |
| EL / Layer:     | 36.146 / 2        | 36.308 / 3        |  |  |  |
| Lot:            | 4540              | 4520              |  |  |  |
| Other:          | Sample: 2         | Sample: 3         |  |  |  |

## Field and Laboratory Data

|                                   |              |             |  |  |  |
|-----------------------------------|--------------|-------------|--|--|--|
| Depth of Test (mm)                | 175          | 175         |  |  |  |
| Depth of Layer (mm)               | 200          | 200         |  |  |  |
| AS Sieve Size (mm)                | 19.0         | 19.0        |  |  |  |
| Oversize Wet (%)                  | 0            | 0           |  |  |  |
| Field Wet Density (t/m³)          | 2.06         | 1.99        |  |  |  |
| Peak Converted Wet Density (t/m³) | 2.05         | 2.03        |  |  |  |
| Compactive Effort                 | Standard     | Standard    |  |  |  |
| Moisture Variation (%)            | 2.5 dry      | 0.5 dry     |  |  |  |
| Hilf Density Ratio (%)            | <b>100.5</b> | <b>98.0</b> |  |  |  |

## Comments



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**Report No: HDR:W21DS03242**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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. A. Smith  
 (Senior Technician)  
 Date of Issue: 25/10/2021

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:** Onsite  
**Material:** Sandy Clay

## Sample Data

| Sample ID       | S21DS-11927           | S21DS-11928           | S21DS-11929                | S21DS-11930                |
|-----------------|-----------------------|-----------------------|----------------------------|----------------------------|
| Field Sample ID | 1                     | 2                     | 3                          | 4                          |
| Date Tested     | 22/10/2021            | 22/10/2021            | 22/10/2021                 | 22/10/2021                 |
| E:              | 2799.590 (356623)     | 2756.448 (356581)     | 2788.614 (356602)          | 2775.328 (356598)          |
| N:              | 287.803 (5781131)     | 249.499 (5781090)     | 261.349 (5781106)          | 259.170 (5781102)          |
| RL / Layer:     | 36.530 / 4            | 36.142 / 1            | 36.444 / 1                 | 36.493 / 2                 |
| Lot:            | 4520                  | 4514                  | 4522                       | 4522                       |
| Other:          | Sample: 4 / NE Corner | Sample: 5 / NW Corner | Sample: 6 / Middle Section | Sample: 7 / Middle Section |

## 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 <sup>3</sup> )          | 1.98         | 1.94         | 1.94         | 1.98         |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.94         | 1.93         | 1.94         | 1.96         |
| Compactive Effort                              | Standard     | Standard     | Standard     | Standard     |
| Moisture Variation (%)                         | 1.0 dry      | 0.5 dry      | 0.5 dry      | 0.5 dry      |
| Hilf Density Ratio (%)                         | <b>101.5</b> | <b>100.5</b> | <b>100.0</b> | <b>101.5</b> |

## Comments



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**Report No: HDR:W21DS03300**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 28/10/2021

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-12144 | S21DS-12145 | S21DS-12146 | S21DS-12147 |
|-----------------|-------------|-------------|-------------|-------------|
| Field Sample ID | 1           | 2           | 3           | 4           |
| Date Tested     | 27/10/2021  | 27/10/2021  | 27/10/2021  | 27/10/2021  |
| Lot No:         | 4524        | 4522        | 4539        | 4521        |
| E:              | 2777.236    | 2790.673    | 2807.137    | 2788.193    |
| N:              | 233.466     | 253.319     | 263.263     | 282.345     |
| Elv:            | 35.961      | 36.559      | 36.001      | 36.844      |
|                 | Layer 3     | Layer 1     | Layer 1     | Layer 5     |

## Field and Laboratory Data

|                                   | S21DS-12144  | S21DS-12145  | S21DS-12146  | S21DS-12147  |
|-----------------------------------|--------------|--------------|--------------|--------------|
| 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)          | 1.91         | 1.91         | 1.88         | 1.86         |
| Peak Converted Wet Density (t/m³) | 1.83         | 1.91         | 1.79         | 1.86         |
| Compactive Effort                 | Standard     | Standard     | Standard     | Standard     |
| Moisture Variation (%)            | 2.0 dry      | 0.0          | 2.0 dry      | 2.0 dry      |
| Hilf Density Ratio (%)            | <b>104.5</b> | <b>100.0</b> | <b>105.0</b> | <b>100.5</b> |

## Comments



**Dandenong South**  
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**Report No: HDR:W21DS03315**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 29/10/2021  
 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:** CLAY

## Sample Data

| Sample ID       | S21DS-12180 | S21DS-12181 | S21DS-12182 |  |  |  |
|-----------------|-------------|-------------|-------------|--|--|--|
| Field Sample ID | 1           | 2           | 3           |  |  |  |
| Date Tested     | 28/10/2021  | 28/10/2021  | 28/10/2021  |  |  |  |
| Lot No:         | 4513        | 4515        | 4523        |  |  |  |
| E:              | 2755.367    | 2759.410    | 2792.789    |  |  |  |
| N:              | 241.969     | 267.641     | 244.594     |  |  |  |
| Elv:            | 36.904      | 37.202      | 36.309      |  |  |  |
|                 | Layer 4     | Layer 4     | Layer 2     |  |  |  |

## Field and Laboratory Data

|                                   |              |              |              |  |  |  |
|-----------------------------------|--------------|--------------|--------------|--|--|--|
| Depth of Test (mm)                | 175          | 175          | 175          |  |  |  |
| Depth of Layer (mm)               | 200          | 200          | 200          |  |  |  |
| Field Wet Density (t/m³)          | 1.85         | 1.97         | 1.89         |  |  |  |
| Peak Converted Wet Density (t/m³) | 1.86         | 1.82         | 1.82         |  |  |  |
| Compactive Effort                 | Standard     | Standard     | Standard     |  |  |  |
| Moisture Variation (%)            | 1.0 dry      | 2.0 dry      | 0.5 dry      |  |  |  |
| Hilf Density Ratio (%)            | <b>100.0</b> | <b>108.0</b> | <b>103.5</b> |  |  |  |

## Comments



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**Report No: HDR:W21DS03368**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 9/11/2021  
 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:** Silty Clay

## Sample Data

|                 |             |  |  |  |  |
|-----------------|-------------|--|--|--|--|
| Sample ID       | S21DS-12393 |  |  |  |  |
| Field Sample ID | 1           |  |  |  |  |
| Date Tested     | 5/11/2021   |  |  |  |  |
| E:              | 2794.247    |  |  |  |  |
| N:              | 291.457     |  |  |  |  |
| RL / Layer:     | 37.034 / 6  |  |  |  |  |
| Lot:            | 4521        |  |  |  |  |
| Other:          | Sample: 15  |  |  |  |  |

## Field and Laboratory Data

|                                   |              |  |  |  |  |
|-----------------------------------|--------------|--|--|--|--|
| Depth of Test (mm)                | 175          |  |  |  |  |
| Depth of Layer (mm)               | 200          |  |  |  |  |
| Field Wet Density (t/m³)          | 1.88         |  |  |  |  |
| Peak Converted Wet Density (t/m³) | 1.85         |  |  |  |  |
| Compactive Effort                 | Standard     |  |  |  |  |
| Moisture Variation (%)            | 0.0          |  |  |  |  |
| Hilf Density Ratio (%)            | <b>101.5</b> |  |  |  |  |

## Comments



**Dandenong South**  
**ACN 143 009 330**  
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**Report No: HDR:W21DS03375**


**Issue No: 2**

*This report replaces all previous issues of report no 'HDR:W21DS03375'.*

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 5/10/2023  
 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 Clay  
**Material:**

## Sample Data

| Sample ID       | S21DS-12422 | S21DS-12423 | S21DS-12424 |  |  |  |
|-----------------|-------------|-------------|-------------|--|--|--|
| Field Sample ID | 1           | 2           | 3           |  |  |  |
| Date Tested     | 6/11/2021   | 6/11/2021   | 6/11/2021   |  |  |  |
| E:              | 2774.476    | 2820.426    | 2797.076    |  |  |  |
| N:              | 240.333     | 265.747     | 287.110     |  |  |  |
| RL:             | 36.661      | 36.043      | 37.055      |  |  |  |
| Lot:            | 4523        | 4539        | 4521        |  |  |  |
|                 | Sample: 16  | Sample: 17  | Sample: 18  |  |  |  |

## Field and Laboratory Data

|                                   |             |              |             |  |  |  |
|-----------------------------------|-------------|--------------|-------------|--|--|--|
| Depth of Test (mm)                | 175         | 175          | 175         |  |  |  |
| Depth of Layer (mm)               | 200         | 200          | 200         |  |  |  |
| Field Wet Density (t/m³)          | 1.84        | 1.92         | 1.87        |  |  |  |
| Peak Converted Wet Density (t/m³) | 1.86        | 1.91         | 1.90        |  |  |  |
| Compactive Effort                 | Standard    | Standard     | Standard    |  |  |  |
| Moisture Variation (%)            | 0.0         | 0.0          | 0.0         |  |  |  |
| Hilf Density Ratio (%)            | <b>99.0</b> | <b>100.5</b> | <b>99.0</b> |  |  |  |

## Comments



**Dandenong South**  
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**Report No: HDR:W21DS03381**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 11/11/2021  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:** Zone A  
**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:** Red Clay

## Sample Data

|                 |                   |  |  |  |  |
|-----------------|-------------------|--|--|--|--|
| Sample ID       | S21DS-12430       |  |  |  |  |
| Field Sample ID | 1                 |  |  |  |  |
| Date Tested     | 8/11/2021         |  |  |  |  |
| E:              | 2774.366 (356597) |  |  |  |  |
| N:              | 236.343 (5781081) |  |  |  |  |
| RL / Layer:     | 36.659 / 6        |  |  |  |  |
| Lot:            | 4524              |  |  |  |  |
| Other:          | Sample: 19        |  |  |  |  |

## 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)          | 1.87         |  |  |  |  |
| Peak Converted Wet Density (t/m³) | 1.81         |  |  |  |  |
| Compactive Effort                 | Standard     |  |  |  |  |
| Moisture Variation (%)            | 2.0 dry      |  |  |  |  |
| Hilf Density Ratio (%)            | <b>103.5</b> |  |  |  |  |

## Comments



**Dandenong South**  
**ACN 143 009 330**  
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**Report No: HDR:W21DS03391**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 10/11/2021

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 Clay  
**Material:**

## Sample Data

| Sample ID       | S21DS-12474 | S21DS-12475 |  |  |  |  |
|-----------------|-------------|-------------|--|--|--|--|
| Field Sample ID | 1           | 2           |  |  |  |  |
| Date Tested     | 9/11/2021   | 9/11/2021   |  |  |  |  |
| E:              | 2788.414    | 2797.948    |  |  |  |  |
| N:              | 266.063     | 295.455     |  |  |  |  |
| RL:             | 37.277      | 37.265      |  |  |  |  |
| Lot:            | 4522        | 4520        |  |  |  |  |
|                 | Sample:20   | Sample:21   |  |  |  |  |

## Field and Laboratory Data

|                                                |              |             |  |  |  |  |
|------------------------------------------------|--------------|-------------|--|--|--|--|
| Depth of Test (mm)                             | 175          | 175         |  |  |  |  |
| Depth of Layer (mm)                            | 200          | 200         |  |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 1.96         | 1.92        |  |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.95         | 1.95        |  |  |  |  |
| Compactive Effort                              | Standard     | Standard    |  |  |  |  |
| Moisture Variation (%)                         | 0.0          | 0.0         |  |  |  |  |
| Hilf Density Ratio (%)                         | <b>100.5</b> | <b>98.5</b> |  |  |  |  |

## Comments





**Dandenong South**  
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**Report No: HDR:W21DS03431**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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  
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## Sample Details

**Location:** Zone D  
**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-12596       |  |  |  |  |
| Field Sample ID | 1                 |  |  |  |  |
| Date Tested     | 18/11/2021        |  |  |  |  |
| E:              | 2778.330 (356602) |  |  |  |  |
| N:              | 259.265 (5781103) |  |  |  |  |
| RL / Layer:     | 37.420 / 5        |  |  |  |  |
| Lot:            | 4522              |  |  |  |  |
| Other:          | Sample: 22        |  |  |  |  |

## 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)          | 1.92        |  |  |  |  |
| Peak Converted Wet Density (t/m³) | 1.97        |  |  |  |  |
| Compactive Effort                 | Standard    |  |  |  |  |
| Moisture Variation (%)            | 0.0         |  |  |  |  |
| <b>Hilf Density Ratio (%)</b>     | <b>97.5</b> |  |  |  |  |

## Comments



**Dandenong South**  
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**Report No: HDR:W21DS03446**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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

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## Sample Details

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

## Sample Data

| Sample ID       | S21DS-12692         | S21DS-12693         | S21DS-12694         |  |  |
|-----------------|---------------------|---------------------|---------------------|--|--|
| Field Sample ID | 1                   | 2                   | 3                   |  |  |
| Date Tested     | 20/11/2021          | 20/11/2021          | 20/11/2021          |  |  |
| E:              | 2749.259 (356573)   | 2786.359 (356610)   | 2813.088 (356637)   |  |  |
| N:              | 252.389 (5781094)   | 288.840 (5781129)   | 274.568 (5781116)   |  |  |
| RL / Layer:     | 37.583 / 7          | 37.607 / 9          | 36.784 / 5          |  |  |
| Lot:            | 4514                | 4521                | 4540                |  |  |
| Other:          | Zone A / Sample: 23 | Zone D / Sample: 24 | Zone C / Sample: 25 |  |  |

## 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 <sup>3</sup> )          | 1.93        | 1.89        | 1.90        |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.98        | 2.01        | 2.00        |  |  |
| Compactive Effort                              | Standard    | Standard    | Standard    |  |  |
| Moisture Variation (%)                         | 2.5 dry     | 1.5 dry     | 2.5 dry     |  |  |
| Hilf Density Ratio (%)                         | <b>97.5</b> | <b>94.0</b> | <b>95.0</b> |  |  |

## Comments



**Dandenong South**  
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**Report No: HDR:W21DS03459**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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  
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## Sample Details

**Location:** Cranbourne  
**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-12734                                       | S21DS-12735       |  |  |  |
|-----------------|---------------------------------------------------|-------------------|--|--|--|
| Field Sample ID | 1                                                 | 2                 |  |  |  |
| Date Tested     | 22/11/2021                                        | 22/11/2021        |  |  |  |
| E:              | 2784.738 (356608)                                 | 2825.292 (356648) |  |  |  |
| N:              | 287.657 (5781130)                                 | 236.845 (5781081) |  |  |  |
| RL / Layer:     | 37.592 / 9                                        | 33.734 / 1        |  |  |  |
| Lot:            | 4521                                              | -                 |  |  |  |
| Other:          | Retest of<br>S21DS-12693 /<br>Sample: 26 / Zone C | Sample: 27        |  |  |  |

## 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 <sup>3</sup> )          | 1.99        | 2.05        |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.01        | 2.08        |  |  |  |
| Compactive Effort                              | Standard    | Standard    |  |  |  |
| Moisture Variation (%)                         | 2.5 dry     | 0.5 dry     |  |  |  |
| Hilf Density Ratio (%)                         | <b>99.0</b> | <b>98.5</b> |  |  |  |

## Comments



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**Report No: HDR:W21DS03468**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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  
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## Sample Details

**Location:** Zone E  
**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-12777 | S21DS-12778 | S21DS-12779 |  |  |
|-----------------|-------------|-------------|-------------|--|--|
| Field Sample ID | 1           | 2           | 3           |  |  |
| Date Tested     | 23/11/2021  | 23/11/2021  | 23/11/2021  |  |  |
| E:              | 2829.041    | 2844.507    | 2824.398    |  |  |
| N:              | 250.906     | 221.720     | 225.703     |  |  |
| RL / Layer:     | 34.824 / 2  | 33.803 / 2  | 33.874 / 2  |  |  |
| Lot:            | 4537        | 4535        | 4536        |  |  |
| Other:          | Sample: 28  | Sample: 29  | Sample: 30  |  |  |

## 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        | 1.96        | 2.01        |  |  |
| Peak Converted Wet Density (t/m³) | 2.02        | 2.04        | 2.05        |  |  |
| Compactive Effort                 | Standard    | Standard    | Standard    |  |  |
| Moisture Variation (%)            | 0.5 dry     | 0.5 dry     | 0.5 dry     |  |  |
| Hilf Density Ratio (%)            | <b>99.5</b> | <b>96.0</b> | <b>98.0</b> |  |  |

## Comments



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**Report No: HDR:W21DS03478**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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  
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## Sample Details

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

## Sample Data

| Sample ID       | S21DS-12806         | S21DS-12807         | S21DS-12808         | S21DS-12809         | S21DS-12810         | S21DS-12811         |
|-----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Field Sample ID | 1                   | 2                   | 3                   | 4                   | 5                   | 6                   |
| Date Tested     | 24/11/2021          | 24/11/2021          | 24/11/2021          | 24/11/2021          | 24/11/2021          | 24/11/2021          |
| E:              | 2830.634 (356654)   | 2835.494 (356657)   | 2820.584 (356643)   | 2795.009 (356617)   | 2806.884 (356632)   | 2808.227 (356630)   |
| N:              | 215.890 (5781057)   | 233.618 (5781078)   | 239.648 (5781082)   | 221.404 (5781063)   | 213.729 (5781058)   | 199.431 (5781042)   |
| RL / Layer:     | 33.690 / 3          | 34.255 / 3          | 34.723 / 3          | 34.540 / 1          | 34.021 / 1          | 33.489 / 1          |
| Lot:            | 4535                | 4536                | 4537                | 4524                | 4525                | 4526                |
| Other:          | Zone E / Sample: 31 | Zone E / Sample: 32 | Zone E / Sample: 33 | Zone F / Sample: 34 | Zone F / Sample: 35 | Zone F / Sample: 36 |

## 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 <sup>3</sup> )          | 2.05         | 2.00        | 1.98        | 1.95        | 2.01         | 1.98         |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.00         | 2.03        | 2.05        | 1.96        | 1.88         | 1.98         |
| Compactive Effort                              | Standard     | Standard    | Standard    | Standard    | Standard     | Standard     |
| Moisture Variation (%)                         | 2.0 dry      | 2.0 dry     | 2.0 dry     | 2.5 dry     | 4.5 dry      | 2.0 dry      |
| Hilf Density Ratio (%)                         | <b>102.5</b> | <b>98.0</b> | <b>96.5</b> | <b>99.5</b> | <b>107.0</b> | <b>100.0</b> |

## Comments



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**Report No: HDR:W21DS03496**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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

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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:** Clay

## Sample Data

| Sample ID       | S21DS-12893         | S21DS-12894         | S21DS-12895         | S21DS-12896         | S21DS-12897         | S21DS-12898         |
|-----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Field Sample ID | 1                   | 2                   | 3                   | 4                   | 5                   | 6                   |
| Date Tested     | 25/11/2021          | 25/11/2021          | 25/11/2021          | 25/11/2021          | 25/11/2021          | 25/11/2021          |
| E:              | 2755.827 (356581)   | 2780.670 (356604)   | 2793.888 (356617)   | 2811.104 (356635)   | 2817.987 (356642)   | 2796.271 (356621)   |
| N:              | 245.962 (5781088)   | 254.500 (781095)    | 386.810 (5781129)   | 278.749 (5781120)   | 203.885 (5781047)   | 204.195 (5781046)   |
| RL / Layer:     | 37.369 / 8          | 37.433 / 6          | 37.581 / 10         | 37.159 / 6          | 33.576 / 2          | 33.809 / 2          |
| Lot:            | 4513                | 4522                | 4521                | 4540                | 4535                | 4526                |
| Other:          | Zone A / Sample: 37 | Zone D / Sample: 38 | Zone C / Sample: 39 | Zone D / Sample: 40 | Zone F / Sample: 41 | Zone F / Sample: 42 |

## 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 <sup>3</sup> )          | 1.99         | 1.96         | 2.04         | 2.00        | 1.98        | 1.94        |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.96         | 1.91         | 2.03         | 2.05        | 1.99        | 2.00        |
| Compactive Effort                              | Standard     | Standard     | Standard     | Standard    | Standard    | Standard    |
| Moisture Variation (%)                         | 0.5 dry      | 2.5 dry      | 0.5 dry      | 2.5 dry     | 2.5 dry     | 2.0 dry     |
| Hilf Density Ratio (%)                         | <b>101.5</b> | <b>102.5</b> | <b>100.5</b> | <b>97.5</b> | <b>99.5</b> | <b>97.0</b> |

## Comments



**Dandenong South**  
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**Report No: HDR:W21DS03496**



**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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  
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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:** Clay

## Sample Data

| Sample ID       | S21DS-12899         | S21DS-12900                          | S21DS-12901         | S21DS-12902         |
|-----------------|---------------------|--------------------------------------|---------------------|---------------------|
| Field Sample ID | 7                   | 8                                    | 9                   | 10                  |
| Date Tested     | 25/11/2021          | 25/11/2021                           | 25/11/2021          | 25/11/2021          |
| E:              | 2799.055 (356623)   | 2808.227 (356631)                    | 2792.084 (356615)   | 2809.287            |
| N:              | 225.789 (5781067)   | 215.470 (5781059)                    | 281.162 (5781126)   | 290.300             |
| RL / Layer:     | 34.896 / 2          | 34.030 / 1                           | 37.831 / 11         | 37.591 / 7          |
| Lot:            | 4524                | 4525                                 | 4521                | 4520                |
| Other:          | Zone F / Sample: 43 | Zone F / Retest S#12810 / Sample: 44 | Zone C / Sample: 45 | Zone D / Sample: 46 |

## Field and Laboratory Data

|                                                | S21DS-12899  | S21DS-12900  | S21DS-12901  | S21DS-12902  |
|------------------------------------------------|--------------|--------------|--------------|--------------|
| 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 <sup>3</sup> )          | 2.06         | 2.08         | 1.93         | 1.92         |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.93         | 1.92         | 1.92         | 1.92         |
| Compactive Effort                              | Standard     | Standard     | Standard     | Standard     |
| Moisture Variation (%)                         | 2.5 dry      | 3.0 dry      | 2.5 dry      | 3.0 dry      |
| Hilf Density Ratio (%)                         | <b>107.0</b> | <b>108.0</b> | <b>100.5</b> | <b>100.0</b> |

## Comments



**Dandenong South**  
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**Report No: HDR:W21DS03508**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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:** Clay

## Sample Data

| Sample ID       | S21DS-12937         | S21DS-12938         | S21DS-12939         | S21DS-12940         |
|-----------------|---------------------|---------------------|---------------------|---------------------|
| Field Sample ID | 1                   | 2                   | 3                   | 4                   |
| Date Tested     | 26/11/2021          | 26/11/2021          | 26/11/2021          | 26/11/2021          |
| E:              | 2821.676 (356645)   | 2833.483 (356657)   | 2817.360 (356639)   | 2802.413 (356627)   |
| N:              | 239.078 (5781082)   | 214.738 (5781058)   | 282.475 (5781125)   | 296.204 (5781140)   |
| RL / Layer:     | 34.881 / 4          | 33.866 / 4          | 37.640 / 8          | 38.141 / 12         |
| Lot:            | 4537                | 4535                | 4540                | 4520                |
| Other:          | Zone E / Sample: 47 | Zone E / Sample: 48 | Zone D / Sample: 49 | Zone C / Sample: 50 |

## 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 <sup>3</sup> )          | 1.98         | 1.92         | 2.01         | 1.98         |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.84         | 1.86         | 1.93         | 1.89         |
| Compactive Effort                              | Standard     | Standard     | Standard     | Standard     |
| Moisture Variation (%)                         | 2.0 dry      | 2.5 dry      | 0.5 dry      | 2.5 dry      |
| Hilf Density Ratio (%)                         | <b>108.0</b> | <b>103.0</b> | <b>104.0</b> | <b>104.5</b> |

## Comments





**Dandenong South**  
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**Report No: HDR:W21DS03509**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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:** Clay

## Sample Data

| Sample ID       | S21DS-12941         | S21DS-12942         | S21DS-12943         | S21DS-12944         |
|-----------------|---------------------|---------------------|---------------------|---------------------|
| Field Sample ID | 1                   | 2                   | 3                   | 4                   |
| Date Tested     | 27/11/2021          | 27/11/2021          | 27/11/2021          | 27/11/2021          |
| E:              | 2833.108 (356658)   | 2838.661 (356665)   | 2803.887 (356629)   | 2808.626 (356632)   |
| N:              | 245.019 (5781089)   | 232.335 (5781077)   | 222.360 (5781067)   | 203.074 (5781047)   |
| RL / Layer:     | 35.199 / 5          | 34.568 / 5          | 34.844 / 3          | 33.959 / 3          |
| Lot:            | 4537                | 4536                | 4524                | 4526                |
| Other:          | Zone E / Sample: 51 | Zone E / Sample: 52 | Zone F / Sample: 53 | Zone F / Sample: 54 |

## 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 <sup>3</sup> )          | 1.99         | 1.93         | 1.96         | 2.00        |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.83         | 1.86         | 1.83         | 2.06        |
| Compactive Effort                              | Standard     | Standard     | Standard     | Standard    |
| Moisture Variation (%)                         | 2.5 dry      | 2.5 dry      | 2.5 dry      | 2.0 dry     |
| Hilf Density Ratio (%)                         | <b>109.0</b> | <b>103.5</b> | <b>107.5</b> | <b>97.0</b> |

## Comments



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**Report No: HDR:W21DS03528**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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:** Clay

## Sample Data

| Sample ID       | S21DS-12993                         | S21DS-12994                         | S21DS-12995                         | S21DS-12996                         |
|-----------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Field Sample ID | 1                                   | 2                                   | 3                                   | 4                                   |
| Date Tested     | 29/11/2021                          | 29/11/2021                          | 29/11/2021                          | 29/11/2021                          |
| E:              | 2749.646 (356573)                   | 2778.995 (356603)                   | 2795.437 (56620)                    | 2789.437 (356613)                   |
| N:              | 252.726 (5281095)                   | 245.684 (5781089)                   | 270.571 (5781113)                   | 291.901 (5781134)                   |
| RL / Layer:     | 37.808 / 13                         | 37.453 / 13                         | 7.771 / 13                          | 38.168 / 13                         |
| Lot:            | 4514                                | 4523                                | 4522                                | 4521                                |
| Other:          | North west side of Dam / Sample: 55 | North west side of Dam / Sample: 56 | East side north of dam / Sample: 57 | East side north of dam / Sample: 58 |

## Field and Laboratory Data

|                                                | S21DS-12993  | S21DS-12994  | S21DS-12995  | S21DS-12996  |
|------------------------------------------------|--------------|--------------|--------------|--------------|
| 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 <sup>3</sup> )          | 2.02         | 2.02         | 2.06         | 2.04         |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.92         | 1.92         | 2.03         | 1.98         |
| Compactive Effort                              | Standard     | Standard     | Standard     | Standard     |
| Moisture Variation (%)                         | 1.0 dry      | 1.5 dry      | 0.5 dry      | 2.5 dry      |
| Hilf Density Ratio (%)                         | <b>105.0</b> | <b>105.5</b> | <b>101.0</b> | <b>103.0</b> |

## Comments



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**Report No: HDR:W21DS03544**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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  
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## Sample Details

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

## Sample Data

| Sample ID       | S21DS-13026         | S21DS-13027         | S21DS-13028         | S21DS-13029         |
|-----------------|---------------------|---------------------|---------------------|---------------------|
| Field Sample ID | 1                   | 2                   | 3                   | 4                   |
| Date Tested     | 30/11/2021          | 30/11/2021          | 30/11/2021          | 30/11/2021          |
| E:              | 2813.024 (356635)   | 2835.462 (356657)   | 2804.977 (356628)   | 2791.618 (36617)    |
| N:              | 234.701 (5781078)   | 231.978 (5781074)   | 209.909 (5781053)   | 203.949 (5781046)   |
| RL / Layer:     | 35.313 / 6          | 34.834 / 6          | 34.514 / 47         | 34.484 / 4          |
| Lot:            | 4527                | 4536                | 4525                | 4526                |
| Other:          | Zone E / Sample: 59 | Zone E / Sample: 60 | Zone F / Sample: 61 | Zone F / Sample: 62 |

## 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)          | 1.93         | 1.88        | 2.00         | 1.96         |
| Peak Converted Wet Density (t/m³) | 1.90         | 1.89        | 1.89         | 1.89         |
| Compactive Effort                 | Standard     | Standard    | Standard     | Standard     |
| Moisture Variation (%)            | 3.0 dry      | 2.5 dry     | 4.0 dry      | 2.5 dry      |
| Hilf Density Ratio (%)            | <b>102.0</b> | <b>99.5</b> | <b>105.5</b> | <b>104.0</b> |

## Comments



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**Report No: HDR:W21DS03557**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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  
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## Sample Details

**Location:** North half of dam - Zone E  
**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-13104       | S21DS-13105       | S21DS-13106       | S21DS-13107       | S21DS-13108       | S21DS-13109       |
|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Field Sample ID | 1                 | 2                 | 3                 | 4                 | 5                 | 6                 |
| Date Tested     | 1/12/2021         | 1/12/2021         | 1/12/2021         | 1/12/2021         | 1/12/2021         | 1/12/2021         |
| E:              | 2828.170 (56650)  | 2846.520 (356668) | 2816.650 (356644) | 2793.500 (356616) | 2785.550 (356609) | 2751.510 (356575) |
| N:              | 248.130 (5781090) | 220.295 (5781062) | 281.500 (5781123) | 289.120 (5781131) | 257.270 (5781100) | 266.100 (5781107) |
| RL / Layer:     | 35.860 / 7        | 34.600 / 7        | 38.090 / 14       | 38.300 / 14       | 37.835 / 14       | 38.310 / 14       |
| Other:          | Sample: 63        | Sample: 64        | Sample: 65        | Sample: 66        | Sample: 67        | Sample: 68        |

## 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 <sup>3</sup> )          | 1.96         | 1.96         | 1.87        | 1.99         | 2.03         | 1.96         |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.94         | 1.95         | 2.02        | 1.92         | 1.92         | 1.94         |
| Compactive Effort                              | Standard     | Standard     | Standard    | Standard     | Standard     | Standard     |
| Moisture Variation (%)                         | 3.0 dry      | 2.5 dry      | 2.5 dry     | 3.0 dry      | 3.0 dry      | 2.5 dry      |
| Hilf Density Ratio (%)                         | <b>101.0</b> | <b>100.5</b> | <b>93.0</b> | <b>104.0</b> | <b>105.5</b> | <b>101.5</b> |

## Comments



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**Report No: HDR:W21DS03557**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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

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## Sample Details

**Location:** North half of dam - Zone E  
**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-13110                              | S21DS-13111       | S21DS-13112       |  |  |
|-----------------|------------------------------------------|-------------------|-------------------|--|--|
| Field Sample ID | 7                                        | 8                 | 9                 |  |  |
| Date Tested     | 1/12/2021                                | 1/12/2021         | 1/12/2021         |  |  |
| E:              | 2804.634 (356627)                        | 2792.934 (356616) | 2810.616 (356634) |  |  |
| N:              | 209.868 (5781052)                        | 226.451 (5781060) | 189.861 (5781032) |  |  |
| RL / Layer:     | 35.520 / 4                               | 35.519 / 5        | 34.381 / 5        |  |  |
| Other:          | Retest of<br>S21DS-13028 /<br>Sample: 69 | Sample: 70        | Sample: 71        |  |  |

## 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 <sup>3</sup> )          | 1.97        | 1.99        | 1.86        |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.05        | 2.02        | 2.01        |  |  |
| Compactive Effort                              | Standard    | Standard    | Standard    |  |  |
| Moisture Variation (%)                         | 2.0 dry     | 2.5 dry     | 2.5 dry     |  |  |
| Hilf Density Ratio (%)                         | <b>96.5</b> | <b>99.0</b> | <b>92.5</b> |  |  |

## Comments



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**Report No: HDR:W21DS03560**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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:** Clay

## Sample Data

| Sample ID              | S21DS-13120         | S21DS-13121         | S21DS-13122                                        | S21DS-13123         | S21DS-13124         | S21DS-13125                            |
|------------------------|---------------------|---------------------|----------------------------------------------------|---------------------|---------------------|----------------------------------------|
| <b>Field Sample ID</b> | 1                   | 2                   | 3                                                  | 4                   | 5                   | 6                                      |
| <b>Date Tested</b>     | 2/12/2021           | 2/12/2021           | 2/12/2021                                          | 2/12/2021           | 2/12/2021           | 2/12/2021                              |
| <b>E:</b>              | 2826.269 (356651)   | 2848.752 (256670)   | 2815.559 (356638)                                  | 2804.843 (356627)   | 2817.364 (356641)   | 2811.204 (356634)                      |
| <b>N:</b>              | 36.583 (5781098)    | 220.594 (5781063)   | 279.178 (5781122)                                  | 225.554 (5781066)   | 216.650 (5781058)   | 190.093 (5781032)                      |
| <b>RL / Layer:</b>     | 36.583 / 8          | 35.012 / 8          | 38.100 / 14                                        | 35.679 / 6          | 35.073 / 6          | 34.400 / 5                             |
| <b>Lot:</b>            | 4538                | 4535                | 4540                                               | 4524                | 4535                | 4531                                   |
| <b>Other:</b>          | Zone E / Sample: 72 | Zone E / Sample: 73 | North half of dam / retest of S-13106 / Sample: 74 | Zone F / Sample: 75 | Zone F / Sample: 76 | Zone F / Retest of S13112 / Sample: 77 |

## Field and Laboratory Data

|                                                     |              |              |              |             |             |             |
|-----------------------------------------------------|--------------|--------------|--------------|-------------|-------------|-------------|
| <b>Depth of Test (mm)</b>                           | 175          | 175          | 175          | 175         | 175         | 175         |
| <b>Depth of Layer (mm)</b>                          | 200          | 200          | 200          | 200         | 200         | 200         |
| <b>AS Sieve Size (mm)</b>                           | 19.0         | 19.0         | 19.0         | 19.0        | 19.0        | 19.0        |
| <b>Oversize Wet (%)</b>                             | 0            | 0            | 0            | 0           | 0           | 0           |
| <b>Field Wet Density (t/m<sup>3</sup>)</b>          | 1.97         | 2.02         | 1.98         | 1.92        | 1.99        | 1.98        |
| <b>Peak Converted Wet Density (t/m<sup>3</sup>)</b> | 1.94         | 2.00         | 1.90         | 2.01        | 2.00        | 2.00        |
| <b>Compactive Effort</b>                            | Standard     | Standard     | Standard     | Standard    | Standard    | Standard    |
| <b>Moisture Variation (%)</b>                       | 2.5 dry      | 3.0 dry      | 3.0 dry      | 2.5 dry     | 2.5 dry     | 2.0 dry     |
| <b>Hilf Density Ratio (%)</b>                       | <b>102.0</b> | <b>101.0</b> | <b>104.0</b> | <b>95.5</b> | <b>99.5</b> | <b>99.0</b> |

## Comments



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**Report No: HDR:W21DS03578**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 6/12/2021

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## Sample Details

**Location:** Zone E  
**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-13161       | S21DS-13162       | S21DS-13163       |  |  |
|-----------------|-------------------|-------------------|-------------------|--|--|
| Field Sample ID | 1                 | 2                 | 3                 |  |  |
| Date Tested     | 4/12/2021         | 4/12/2021         | 4/12/2021         |  |  |
| E:              | 2842.596 (356667) | 2827.307 (356649) | 2825.686 (356650) |  |  |
| N:              | 218.472 (5781059) | 232.656 (5781076) | 258.100 (5781100) |  |  |
| RL / Layer:     | 35.472 / 10       | 36.205 / 10       | 37.266 / 10       |  |  |
|                 | Sample: 83        | Sample: 84        | Sample: 85        |  |  |

## 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 <sup>3</sup> )          | 1.98         | 1.98        | 2.00         |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.97         | 2.01        | 1.99         |  |  |
| Compactive Effort                              | Standard     | Standard    | Standard     |  |  |
| Moisture Variation (%)                         | 1.5 dry      | 2.0 dry     | 2.0 dry      |  |  |
| Hilf Density Ratio (%)                         | <b>100.5</b> | <b>98.5</b> | <b>100.5</b> |  |  |

## Comments



**Dandenong South**  
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**Report No: HDR:W21DS03580**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 6/12/2021  
 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:** Clay

## Sample Data

| Sample ID       | S21DS-13165         | S21DS-13166         | S21DS-13167         | S21DS-13168         | S21DS-13169         |
|-----------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Field Sample ID | 1                   | 2                   | 3                   | 4                   | 5                   |
| Date Tested     | 3/12/2021           | 3/12/2021           | 3/12/2021           | 3/12/2021           | 3/12/2021           |
| E:              | 2828.792 (356652)   | 2816.125 (356639)   | 2784.174 (356610)   | 2781.833 (356606)   | 2803.661 (356628)   |
| N:              | 2227.367 (5781070)  | 251.419 (5781095)   | 225.1836 (5781067)  | 211.832 (5781054)   | 190.691 (5781032)   |
| RL / Layer:     | 35.613 / 9          | 37.065 / 9          | 36.366 / 7          | 35.562 / 7          | 34.185 / 7          |
| Lot:            | 4536                | 4538                | 4524                | 4525                | 4538                |
| Other:          | Zone E / Sample: 78 | Zone E / Sample: 79 | Zone F / Sample: 80 | Zone F / Sample: 81 | Zone F / Sample: 82 |

## 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 <sup>3</sup> )          | 1.90        | 2.05         | 1.91         | 1.95        | 1.96        |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.93        | 1.91         | 1.90         | 2.00        | 1.98        |
| Compactive Effort                              | Standard    | Standard     | Standard     | Standard    | Standard    |
| Moisture Variation (%)                         | 2.5 dry     | 3.0 dry      | 2.5 dry      | 2.5 dry     | 2.5 dry     |
| Hilf Density Ratio (%)                         | <b>98.0</b> | <b>107.0</b> | <b>100.5</b> | <b>97.5</b> | <b>99.0</b> |

## Comments





**Dandenong South**  
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**Report No: HDR:W21DS03605**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 9/12/2021

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## Sample Details

**Location:** Zone F  
**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-13278       | S21DS-13279       | S21DS-13280       |  |  |
|-----------------|-------------------|-------------------|-------------------|--|--|
| Field Sample ID | 1                 | 2                 | 3                 |  |  |
| Date Tested     | 6/12/2021         | 6/12/2021         | 6/12/2021         |  |  |
| E:              | 2801.560 (356625) | 2799.286 (56622)  | 2821.195 (356644) |  |  |
| N:              | 232.502 (5781075) | 212.623 (5781054) | 203.793 (5781047) |  |  |
| RL / Layer:     | 36.565 / 8        | 35.694 / 8        | 35.060 / 8        |  |  |
| Lot:            | Sample: 86        | Sample: 87        | Sample: 88        |  |  |

## 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 <sup>3</sup> )          | 1.98        | 1.94         | 1.92         |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.03        | 1.89         | 1.92         |  |  |
| Compactive Effort                              | Standard    | Standard     | Standard     |  |  |
| Moisture Variation (%)                         | 2.0 dry     | 3.0 dry      | 3.0 dry      |  |  |
| Hilf Density Ratio (%)                         | <b>97.5</b> | <b>102.5</b> | <b>100.0</b> |  |  |

## Comments



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**Report No: HDR:W21DS03606**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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  
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## Sample Details

**Location:** Zone E  
**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-13281       | S21DS-13282       | S21DS-13283       |  |  |
|-----------------|-------------------|-------------------|-------------------|--|--|
| Field Sample ID | 1                 | 2                 | 3                 |  |  |
| Date Tested     | 7/12/2021         | 7/12/2021         | 7/12/2021         |  |  |
| E:              | 2820.339 (356645) | 2837.688 (356662) | 2843.297 (56668)  |  |  |
| N:              | 247.384 (5781088) | 238.362 (5781078) | 217.276 (5781058) |  |  |
| RL / Layer:     | 37.123 / 11       | 36.410 / 11       | 35.677 / 11       |  |  |
|                 | Sample: 89        | Sample: 90        | Sample: 91        |  |  |

## 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         | 1.98         | 1.95         |  |  |
| Peak Converted Wet Density (t/m³) | 1.90         | 1.91         | 1.95         |  |  |
| Compactive Effort                 | Standard     | Standard     | Standard     |  |  |
| Moisture Variation (%)            | 5.0 dry      | 4.5 dry      | 2.0 dry      |  |  |
| Hilf Density Ratio (%)            | <b>105.0</b> | <b>103.5</b> | <b>100.0</b> |  |  |

## Comments



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**Report No: HDR:W21DS03607**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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  
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## Sample Details

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

## Sample Data

| Sample ID       | S21DS-13284         | S21DS-13285         | S21DS-13286         | S21DS-13287         | S21DS-13288         | S21DS-13289         |
|-----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Field Sample ID | 1                   | 2                   | 3                   | 4                   | 5                   | 6                   |
| Date Tested     | 7/12/2021           | 7/12/2021           | 7/12/2021           | 7/12/2021           | 7/12/2021           | 7/12/2021           |
| E:              | 2801.501 (356673)   | 2811.854 (256626)   | 2826.319 (356649)   | 2829.887 (356651)   | 2835.236 (356659)   | 2839.636 (356664)   |
| N:              | 195.651 (5781056)   | 212.237 (5781040)   | 201.465 (5781043)   | 255.607 (5781099)   | 235.810 (5781079)   | 217.089 (5781054)   |
| RL / Layer:     | 35.205 / 9          | 35.816 / 9          | 35.306 / 9          | 37.306 / 12         | 36.531 / 12         | 35.908 / 12         |
| Lot:            | 4526                | 4536                | 4532                | 4538                | 4536                | 4537                |
| Other:          | Zone F / Sample: 92 | Zone F / Sample: 93 | Zone F / Sample: 94 | Zone E / Sample: 95 | Zone E / Sample: 96 | Zone E / Sample: 97 |

## 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 <sup>3</sup> )          | 1.91        | 1.90        | 1.98         | 2.03         | 1.94         | 2.10         |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.97        | 1.96        | 1.93         | 1.92         | 1.92         | 2.00         |
| Compactive Effort                              | Standard    | Standard    | Standard     | Standard     | Standard     | Standard     |
| Moisture Variation (%)                         | 2.5 dry     | 2.5 dry     | 2.5 dry      | 2.5 dry      | 0.0          | 2.0 dry      |
| Hilf Density Ratio (%)                         | <b>96.5</b> | <b>97.5</b> | <b>103.0</b> | <b>105.5</b> | <b>101.0</b> | <b>105.0</b> |

## Comments



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**Report No: HDR:W21DS03630**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 9/12/2021

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## Sample Details

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

## Sample Data

| Sample ID       | S21DS-13363        | S21DS-13364        | S21DS-13365         | S21DS-13366                                 | S21DS-13367         | S21DS-13368                                 |
|-----------------|--------------------|--------------------|---------------------|---------------------------------------------|---------------------|---------------------------------------------|
| Field Sample ID | 1                  | 2                  | 3                   | 4                                           | 5                   | 6                                           |
| Date Tested     | 8/12/2021          | 8/12/2021          | 8/12/2021           | 8/12/2021                                   | 8/12/2021           | 8/12/2021                                   |
| E:              | 2797.77 (356620)   | 2802.16 (356626)   | 2782.45 (356605)    | 2824.15 (356648)                            | 2837.30 (356660)    | 2847.18 (356670)                            |
| N:              | 230.55 (5781073)   | 214.51 (5781057)   | 215.55 (5781054)    | 242.36 (5781066)                            | 246.90 (5781089)    | 236.68 (5781078)                            |
| RL / Layer:     | 37.01 / 10         | 36.19 / 10         | 36.19 / 10          | 37.150 / 11                                 | 37.14 / 13          | 36.400 / 11                                 |
| Other:          | Zone F / Sample 98 | Zone F / Sample 99 | Zone F / Sample 100 | Zone E / Sample 101 / Retest of S21DS-13281 | Zone E / Sample 102 | Zone E / Sample 103 / Retest of S21DS-13282 |

## 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 <sup>3</sup> )          | 1.94         | 1.87        | 1.93        | 1.98         | 1.96        | 2.06        |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.93         | 1.93        | 1.94        | 1.95         | 2.00        | 2.11        |
| Compactive Effort                              | Standard     | Standard    | Standard    | Standard     | Standard    | Standard    |
| Moisture Variation (%)                         | 3.0 dry      | 3.5 dry     | 4.0 dry     | 0.5 dry      | 1.5 dry     | 0.0         |
| Hilf Density Ratio (%)                         | <b>100.5</b> | <b>97.0</b> | <b>99.5</b> | <b>102.0</b> | <b>98.0</b> | <b>98.0</b> |

## Comments



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**Report No: HDR:W21DS03630**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 9/12/2021

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## Sample Details

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

## Sample Data

| Sample ID       | S21DS-13369         | S21DS-13370         | S21DS-13371         | S21DS-13372         |
|-----------------|---------------------|---------------------|---------------------|---------------------|
| Field Sample ID | 7                   | 8                   | 9                   | 10                  |
| Date Tested     | 8/12/2021           | 8/12/2021           | 8/12/2021           | 8/12/2021           |
| E:              | 2842.28 (356664)    | 2811.86 (356632)    | 2798.05 (356620)    | 2812.12 (356633)    |
| N:              | 220.04 (5781063)    | 219.61 (5781062)    | 205.70 (5781049)    | 197.40 (5781040)    |
| RL / Layer:     | 36.22 / 13          | 36.57 / 11          | 36.25 / 11          | 35.73 / 11          |
| Other:          | Zone E / Sample 104 | Zone F / Sample 105 | Zone F / Sample 106 | Zone F / Sample 107 |

## 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 <sup>3</sup> )          | 1.94        | 1.88        | 1.93        | 2.00        |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.08        | 2.10        | 1.93        | 2.04        |
| Compactive Effort                              | Standard    | Standard    | Standard    | Standard    |
| Moisture Variation (%)                         | 2.0 dry     | 2.0 dry     | 3.0 dry     | 2.5 dry     |
| Hilf Density Ratio (%)                         | <b>93.5</b> | <b>89.5</b> | <b>99.5</b> | <b>98.5</b> |

## Comments



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**Report No: HDR:W21DS03638**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 14/12/2021

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## Sample Details

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

## Sample Data

| Sample ID       | S21DS-13400         | S21DS-13401         | S21DS-13402         | S21DS-13403                                 | S21DS-13404         | S21DS-13405                                 |
|-----------------|---------------------|---------------------|---------------------|---------------------------------------------|---------------------|---------------------------------------------|
| Field Sample ID | 1                   | 2                   | 3                   | 4                                           | 5                   | 6                                           |
| Date Tested     | 9/12/2021           | 9/12/2021           | 9/12/2021           | 9/12/2021                                   | 9/12/2021           | 9/12/2021                                   |
| E:              | 2819.61 (356640)    | 2833.50 (356653)    | 2849.77 (356672)    | 2779.07 (356601)                            | 2788.85 (356611)    | 2807.49 (356630)                            |
| N:              | 245.12 (5781086)    | 234.98 (5781077)    | 219.71 (5781061)    | 15.05 (5781057)                             | 222.53 (5781064)    | 220.95 (5781064)                            |
| RL / Layer:     | 37.54 / 14          | 36.99 / 14          | 36.28 / 14          | 36.04 / 10                                  | 37.27 / 12          | 36.62 / 11                                  |
| Other:          | Zone E / Sample 108 | Zone E / Sample 109 | Zone E / Sample 110 | Zone F / Sample 111 / Retest of S21DS-13365 | Zone F / Sample 112 | Zone F / Sample 113 / Retest of S21DS-13370 |

## 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 <sup>3</sup> )          | 2.10         | 1.92        | 1.99         | 2.00         | 1.90        | 2.04         |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.99         | 1.99        | 1.96         | 1.87         | 1.91        | 2.04         |
| Compactive Effort                              | Standard     | Standard    | Standard     | Standard     | Standard    | Standard     |
| Moisture Variation (%)                         | 0.5 dry      | 2.0 dry     | 2.0 dry      | 0.5 dry      | 2.0 dry     | 2.5 dry      |
| Hilf Density Ratio (%)                         | <b>105.5</b> | <b>96.5</b> | <b>101.5</b> | <b>107.0</b> | <b>99.5</b> | <b>100.0</b> |

## Comments



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**Report No: HDR:W21DS03638**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 14/12/2021  
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## Sample Details

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

## Sample Data

| Sample ID       | S21DS-13406         | S21DS-13407         | S21DS-13408         | S21DS-13409         | S21DS-13410         | S21DS-13411                                 |
|-----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------------------------------|
| Field Sample ID | 7                   | 8                   | 9                   | 10                  | 11                  | 12                                          |
| Date Tested     | 9/12/2021           | 9/12/2021           | 9/12/2021           | 9/12/2021           | 9/12/2021           | 9/12/2021                                   |
| E:              | 2809.30 (35663)     | 2822.15 (356643)    | 2833.03             | 2829.16 (356654)    | 2846.14 (356667)    | 2843.47 (356667)                            |
| N:              | 209.82 (5781052)    | 202.69 (5781044)    | 246.42              | 226.99 (5781087)    | 217.04 (5781057)    | 221.49 (57781063)                           |
| RL / Layer:     | 36.51 / 12          | 36.07 / 12          | 37.43 / 15          | 37.07 / 15          | 36.64 / 15          | 36.30 / 13                                  |
| Other:          | Zone F / Sample 114 | Zone F / Sample 115 | Zone F / Sample 116 | Zone E / Sample 117 | Zone E / Sample 118 | Zone E / Sample 119 / Retest of S21DS-13369 |

## 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 <sup>3</sup> )          | 1.95         | 1.97         | 1.99        | 2.03         | 2.00         | 1.98         |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.91         | 1.88         | 2.10        | 1.97         | 1.99         | 1.89         |
| Compactive Effort                              | Standard     | Standard     | Standard    | Standard     | Standard     | Standard     |
| Moisture Variation (%)                         | 1.5 dry      | 2.5 dry      | 0.5 dry     | 2.5 dry      | 2.0 dry      | 2.5 dry      |
| Hilf Density Ratio (%)                         | <b>102.5</b> | <b>105.0</b> | <b>95.0</b> | <b>103.0</b> | <b>100.5</b> | <b>104.5</b> |

## Comments



**Dandenong South**  
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**Report No: HDR:W21DS03645**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 14/12/2021  
 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:** Gravelly Clay

## Sample Data

| Sample ID       | S21DS-13428 | S21DS-13429 |  |  |  |
|-----------------|-------------|-------------|--|--|--|
| Field Sample ID | 1           | 2           |  |  |  |
| Date Tested     | 10/12/2021  | 10/12/2021  |  |  |  |
| E:              | 356580      | 356577      |  |  |  |
| N:              | 5781092     | 5781106     |  |  |  |
| RL / Layer:     | 38.195 / 15 | 38.545 / 15 |  |  |  |
| Other:          | Sample 124  | Sample 125  |  |  |  |

## 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/m <sup>3</sup> )          | 1.88         | 1.86        |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.86         | 1.89        |  |  |  |
| Compactive Effort                              | Standard     | Standard    |  |  |  |
| Moisture Variation (%)                         | 2.5 dry      | 2.5 dry     |  |  |  |
| Hilf Density Ratio (%)                         | <b>101.0</b> | <b>98.5</b> |  |  |  |

## Comments





**Dandenong South**  
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**Report No: HDR:W21DS03650**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 14/12/2021

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:** Clay

## Sample Data

| Sample ID       | S21DS-13441       | S21DS-13445       | S21DS-13446       | S21DS-13447       |
|-----------------|-------------------|-------------------|-------------------|-------------------|
| Field Sample ID | 1                 | 5                 | 6                 | 7                 |
| Date Tested     | 10/12/2021        | 10/12/2021        | 10/12/2021        | 10/12/2021        |
| E:              | 2793.704 (356612) | 2786.984 (356612) | 2810.702 (356635) | 2808.802 (356633) |
| N:              | 240.422 (5781083) | 218.531 (5781060) | 216.047 (5781058) | 191.835 (5781033) |
| RL / Layer:     | 37.552 / 13       | 37.231 / 13       | 36.896 / 13       | 35.952 / 13       |
| Lot:            | 4523              | 4525              | 4536              | 4531              |
| Other:          | Sample 120        | Sample 121        | Sample 122        | Sample 123        |

## 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 <sup>3</sup> )          | 2.04         | 2.00         | 1.94        | 2.04         |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.02         | 1.95         | 2.00        | 2.04         |
| Compactive Effort                              | Standard     | Standard     | Standard    | Standard     |
| Moisture Variation (%)                         | 2.5 dry      | 2.5 dry      | 0.0         | 2.0 dry      |
| Hilf Density Ratio (%)                         | <b>100.5</b> | <b>102.5</b> | <b>97.0</b> | <b>100.5</b> |

## Comments



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**Report No: HDR:W21DS03661**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 15/12/2021  
 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:** Clay

## Sample Data

| Sample ID       | S21DS-13464         | S21DS-13465                    | S21DS-13466                    | S21DS-13467                    |
|-----------------|---------------------|--------------------------------|--------------------------------|--------------------------------|
| Field Sample ID | 1                   | 2                              | 3                              | 4                              |
| Date Tested     | 13/12/2021          | 13/12/2021                     | 13/12/2021                     | 13/12/2021                     |
| E:              | 2777.675 (356600)   | 2775.549 (356596)              | 2751.764 (356596)              | 2735.673 (356581)              |
| N:              | 219.318 (5781058)   | 236.935 (5781079)              | 236.935 (5781097)              | 243.70 (5781085)               |
| RL / Layer:     | 37.529 / 14         | 37.916 / 16                    | 38.625 / 16                    | 38.302 / 16                    |
| Lot:            | 4525                | 4525                           | 4514                           | 4513                           |
| Other:          | Zone F / Sample 126 | North West Corner / Sample 127 | North West Corner / Sample 128 | North West Corner / Sample 129 |

## 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 <sup>3</sup> )          | 2.07         | 2.08         | 1.97         | 1.99        |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.00         | 2.00         | 1.96         | 2.02        |
| Compactive Effort                              | Standard     | Standard     | Standard     | Standard    |
| Moisture Variation (%)                         | 4.0 dry      | 2.0 dry      | 2.0 dry      | 2.0 dry     |
| Hilf Density Ratio (%)                         | <b>103.5</b> | <b>103.5</b> | <b>100.5</b> | <b>98.5</b> |

## Comments



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**Report No: HDR:W22DS01370**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 28/06/2022  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy Clay

## Sample Data

| Sample ID       | S22DS-05139       | S22DS-05140       |  |  |  |
|-----------------|-------------------|-------------------|--|--|--|
| Field Sample ID | 1                 | 2                 |  |  |  |
| Date Tested     | 20/06/2022        | 20/06/2022        |  |  |  |
| Time Tested     | 11:10             | 11:28             |  |  |  |
| E:              | 2727.80 (356549)  | 2743.260 (356568) |  |  |  |
| N:              | 300.280 (5781141) | 298.060 (5781143) |  |  |  |
| EL:             | 39.490            | 39.183            |  |  |  |
| Lot / Layer:    | 4543 / 1          | 4542 / 1          |  |  |  |
| Other:          | Sample 131        | Sample 132        |  |  |  |

## Field and Laboratory Data

|                                                |               |               |  |  |  |
|------------------------------------------------|---------------|---------------|--|--|--|
| Depth of Test (mm)                             | 175           | 175           |  |  |  |
| Depth of Layer (mm)                            | 200           | 200           |  |  |  |
| AS Sieve Size (mm)                             | 19.0          | 19.0          |  |  |  |
| Oversize Wet (%)                               | 0             | 0             |  |  |  |
| Field Moisture Content (%)                     | 19.8          | 20.0          |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 1.95          | 2.05          |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.63          | 1.71          |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.06          | 2.06          |  |  |  |
| Optimum Moisture Content (%)                   | 19.5          | 18.0          |  |  |  |
| Compactive Effort                              | Standard      | Standard      |  |  |  |
| Moisture Ratio (%)                             | 102.0         | 109.5         |  |  |  |
| Moisture Variation (%)                         | 0.5 wet       | 1.5 wet       |  |  |  |
| Hilf Density Ratio (%)                         | <b>95.0</b>   | <b>99.5</b>   |  |  |  |

## Comments



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**Report No: HDR:W22DS01378**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 28/06/2022  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy / Silty Clay

## Sample Data

| Sample ID       | S22DS-05157       | S22DS-05158       |  |  |  |  |
|-----------------|-------------------|-------------------|--|--|--|--|
| Field Sample ID | 1                 | 2                 |  |  |  |  |
| Date Tested     | 22/06/2022        | 22/06/2022        |  |  |  |  |
| Time Tested     | 12:26             | 12:35             |  |  |  |  |
| E:              | 2776.900 (356601) | 2745.030 (356566) |  |  |  |  |
| N:              | 292.140 (5781133) | 298.510 (5781142) |  |  |  |  |
| EL:             | 38.740            | 39.365            |  |  |  |  |
| Lot / Layer:    | 4539 / 1          | 4541 / 1          |  |  |  |  |
| Other:          | Sample 133        | Sample 134        |  |  |  |  |

## Field and Laboratory Data

| Depth of Test (mm)                             | 175           | 175           |  |  |  |  |
|------------------------------------------------|---------------|---------------|--|--|--|--|
| Depth of Layer (mm)                            | 200           | 200           |  |  |  |  |
| AS Sieve Size (mm)                             | 19.0          | 19.0          |  |  |  |  |
| Oversize Wet (%)                               | 0             | 0             |  |  |  |  |
| Field Moisture Content (%)                     | 20.3          | 22.0          |  |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 1.97          | 1.98          |  |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.64          | 1.63          |  |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.07          | 2.05          |  |  |  |  |
| Optimum Moisture Content (%)                   | 18.0          | 19.5          |  |  |  |  |
| Compactive Effort                              | Standard      | Standard      |  |  |  |  |
| Moisture Ratio (%)                             | 112.5         | 112.0         |  |  |  |  |
| Moisture Variation (%)                         | 2.0 wet       | 2.5 wet       |  |  |  |  |
| Hilf Density Ratio (%)                         | <b>95.0</b>   | <b>96.5</b>   |  |  |  |  |

## Comments



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**Report No: HDR:W22DS01383**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 28/06/2022  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Site Won  
**Material:** Silty CLAY

## Sample Data

|                 |                   |  |  |  |  |
|-----------------|-------------------|--|--|--|--|
| Sample ID       | S22DS-05168       |  |  |  |  |
| Field Sample ID | 135               |  |  |  |  |
| Date Tested     | 23/06/2022        |  |  |  |  |
| Time Tested     | 10:30             |  |  |  |  |
| E               | 2735.560 (356559) |  |  |  |  |
| N               | 296.310 (5781140) |  |  |  |  |
| EL:             | 39.606            |  |  |  |  |
| Lot / Layer:    | 4542 / 2          |  |  |  |  |
| Other:          | Sample 135        |  |  |  |  |

## Field and Laboratory Data

|                                                |               |  |  |  |  |
|------------------------------------------------|---------------|--|--|--|--|
| Depth of Test (mm)                             | 175           |  |  |  |  |
| Depth of Layer (mm)                            | 200           |  |  |  |  |
| AS Sieve Size (mm)                             | 19.0          |  |  |  |  |
| Oversize Wet (%)                               | 0             |  |  |  |  |
| Field Moisture Content (%)                     | 19.4          |  |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 1.99          |  |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.66          |  |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.06          |  |  |  |  |
| Optimum Moisture Content (%)                   | 17.5          |  |  |  |  |
| Compactive Effort                              | Standard      |  |  |  |  |
| Moisture Ratio (%)                             | 112.5         |  |  |  |  |
| Moisture Variation (%)                         | 2.0 wet       |  |  |  |  |
| Hilf Density Ratio (%)                         | <b>96.5</b>   |  |  |  |  |

## Comments



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**Report No: HDR:W22DS01399**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 30/06/2022  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:** Clyde Noth  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy Clay

## Sample Data

|                  |                   |  |  |  |  |
|------------------|-------------------|--|--|--|--|
| Sample ID        | S22DS-05208       |  |  |  |  |
| Field Sample ID  | 1                 |  |  |  |  |
| Client Sample ID | 136               |  |  |  |  |
| Date Tested      | 28/06/2022        |  |  |  |  |
| Time Tested      | 14:00             |  |  |  |  |
| E:               | 2765.975 (356590) |  |  |  |  |
| N:               | 290.160 (5781131) |  |  |  |  |
| EL:              | 39.115            |  |  |  |  |
| Lot              | 4540              |  |  |  |  |
|                  | Layer 2           |  |  |  |  |

## Field and Laboratory Data

|                                   |               |  |  |  |  |
|-----------------------------------|---------------|--|--|--|--|
| Depth of Test (mm)                | 175           |  |  |  |  |
| Depth of Layer (mm)               | 200           |  |  |  |  |
| AS Sieve Size (mm)                | 19.0          |  |  |  |  |
| Oversize Wet (%)                  | 0             |  |  |  |  |
| Field Moisture Content (%)        | 17.7          |  |  |  |  |
| Field Moisture Content Method     | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m³)          | 2.04          |  |  |  |  |
| Field Dry Density (t/m³)          | 1.73          |  |  |  |  |
| Peak Converted Wet Density (t/m³) | 2.08          |  |  |  |  |
| Optimum Moisture Content (%)      | 17.5          |  |  |  |  |
| Compactive Effort                 | Standard      |  |  |  |  |
| Moisture Ratio (%)                | 102.0         |  |  |  |  |
| Moisture Variation (%)            | 0.5 wet       |  |  |  |  |
| Hilf Density Ratio (%)            | <b>98.0</b>   |  |  |  |  |

## Comments



**Dandenong South**  
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**Report No: HDR:W22DS02515**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 22/12/2022

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy Clay

## Sample Data

|                  |                  |  |  |  |  |
|------------------|------------------|--|--|--|--|
| Sample ID        | S22DS-10057      |  |  |  |  |
| Field Sample ID  | 1                |  |  |  |  |
| Client Sample ID | 137              |  |  |  |  |
| Date Tested      | 19/12/2022       |  |  |  |  |
| Time Tested      | 07:43            |  |  |  |  |
| E:               | 2725.35 (356546) |  |  |  |  |
| N:               | 336.48 (5781179) |  |  |  |  |
| EL:              | 40.27            |  |  |  |  |
| Lot / Layer:     | - / 1            |  |  |  |  |

## Field and Laboratory Data

|                                                |               |  |  |  |  |
|------------------------------------------------|---------------|--|--|--|--|
| Depth of Test (mm)                             | 175           |  |  |  |  |
| Depth of Layer (mm)                            | 200           |  |  |  |  |
| AS Sieve Size (mm)                             | 19.0          |  |  |  |  |
| Oversize Wet (%)                               | 0             |  |  |  |  |
| Field Moisture Content (%)                     | 17.3          |  |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.11          |  |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.80          |  |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.98          |  |  |  |  |
| Optimum Moisture Content (%)                   | 20.0          |  |  |  |  |
| Compactive Effort                              | Standard      |  |  |  |  |
| Moisture Ratio (%)                             | 85.5          |  |  |  |  |
| Moisture Variation (%)                         | 3.0 dry       |  |  |  |  |
| Hilf Density Ratio (%)                         | <b>106.0</b>  |  |  |  |  |

## Comments



**Dandenong South**  
**ACN 143 009 330**  
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Ph: + 61 3 8796 7900  
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**Report No: HDR:W22DS02542**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 22/12/2022  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy Clay

## Sample Data

|                  |                  |  |  |  |  |
|------------------|------------------|--|--|--|--|
| Sample ID        | S22DS-10189      |  |  |  |  |
| Field Sample ID  | 1                |  |  |  |  |
| Client Sample ID | 138              |  |  |  |  |
| Date Tested      | 20/12/2022       |  |  |  |  |
| E:               | 2726.43 (356549) |  |  |  |  |
| N:               | 340.83 (5781183) |  |  |  |  |
| EL:              | 40.56            |  |  |  |  |
| Lot / Layer:     | 4545 / 2         |  |  |  |  |

## Field and Laboratory Data

|                                                |               |  |  |  |  |
|------------------------------------------------|---------------|--|--|--|--|
| Depth of Test (mm)                             | 175           |  |  |  |  |
| Depth of Layer (mm)                            | 200           |  |  |  |  |
| AS Sieve Size (mm)                             | 19.0          |  |  |  |  |
| Oversize Wet (%)                               | 0             |  |  |  |  |
| Field Moisture Content (%)                     | 15.3          |  |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.08          |  |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.80          |  |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.08          |  |  |  |  |
| Optimum Moisture Content (%)                   | 15.0          |  |  |  |  |
| Compactive Effort                              | Standard      |  |  |  |  |
| Moisture Ratio (%)                             | 102.5         |  |  |  |  |
| Moisture Variation (%)                         | 0.5 wet       |  |  |  |  |
| Hilf Density Ratio (%)                         | <b>100.0</b>  |  |  |  |  |

## Comments





**Dandenong South**  
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**Report No: HDR:W22DS02558**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**Order No.:**  
**TRN:**

**CG Request No.:**  
**Lot No.:**

Accredited for compliance with ISO/IEC 17025  
 - Testing



Accreditation Number: 12719  
 Site Number: 12712

Approved Signatory: M. Longfield  
 (Senior Technician)  
 Date of Issue: 23/12/2022

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy Clay

## Sample Data

|                  |                  |  |  |  |  |
|------------------|------------------|--|--|--|--|
| Sample ID        | S22DS-10273      |  |  |  |  |
| Field Sample ID  | 1                |  |  |  |  |
| Client Sample ID | 3                |  |  |  |  |
| Date Tested      | 21/12/2022       |  |  |  |  |
| Time Tested      | 07:45            |  |  |  |  |
| E:               | 2724.93 (356548) |  |  |  |  |
| N:               | 330.66 (5781174) |  |  |  |  |
| EL:              | 40.57            |  |  |  |  |
| Lot / Layer:     | 4545 / 3         |  |  |  |  |

## Field and Laboratory Data

|                                                |               |  |  |  |  |
|------------------------------------------------|---------------|--|--|--|--|
| Depth of Test (mm)                             | 175           |  |  |  |  |
| Depth of Layer (mm)                            | 200           |  |  |  |  |
| AS Sieve Size (mm)                             | 19.0          |  |  |  |  |
| Oversize Wet (%)                               | 0             |  |  |  |  |
| Field Moisture Content (%)                     | 16.0          |  |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.02          |  |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.74          |  |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.95          |  |  |  |  |
| Optimum Moisture Content (%)                   | 19.0          |  |  |  |  |
| Compactive Effort                              | Standard      |  |  |  |  |
| Moisture Ratio (%)                             | 84.5          |  |  |  |  |
| Moisture Variation (%)                         | 3.0 dry       |  |  |  |  |
| Hilf Density Ratio (%)                         | <b>103.5</b>  |  |  |  |  |

## Comments



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**Report No: HDR:W23DS00346**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 3/03/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy Clay

## Sample Data

| Sample ID       | S23DS-01180       | S23DS-01181       | S23DS-01182       | S23DS-01183       |
|-----------------|-------------------|-------------------|-------------------|-------------------|
| Field Sample ID | 1                 | 2                 | 3                 | 4                 |
| Date Tested     | 10/02/2023        | 10/02/2023        | 10/02/2023        | 10/02/2023        |
| Time Tested     | 14:18             | 14:22             | 14:28             | 14:34             |
| E:              | 2714.855 (356535) | 2734.628 (356557) | 2747.794 (356573) | 2760.401 (356584) |
| N:              | 336.589 (5781180) | 331.616 (5781175) | 330.559 (5781177) | 329.459 (5781175) |
| EL:             | 40.535            | 39.813            | 39.508            | 39.264            |
| Lot / Layer:    | 4544 / 1          | 4546 / 1          | 4548 / 1          | 4550 / 1          |

## Field and Laboratory Data

|                                                |               |               |               |               |
|------------------------------------------------|---------------|---------------|---------------|---------------|
| Depth of Test (mm)                             | 175           | 175           | 175           | 175           |
| Depth of Layer (mm)                            | 200           | 200           | 200           | 200           |
| AS Sieve Size (mm)                             | 19.0          | 19.0          | 19.0          | 19.0          |
| Oversize Wet (%)                               | 0             | 0             | 0             | 0             |
| Field Moisture Content (%)                     | 16.5          | 14.4          | 16.9          | 15.0          |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |
| Field Wet Density (t/m <sup>3</sup> )          | 2.05          | 2.05          | 2.04          | 1.94          |
| Field Dry Density (t/m <sup>3</sup> )          | 1.76          | 1.80          | 1.75          | 1.68          |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.00          | 2.04          | 1.99          | 1.93          |
| Optimum Moisture Content (%)                   | 19.0          | 17.0          | 17.5          | 19.5          |
| Compactive Effort                              | Standard      | Standard      | Standard      | Standard      |
| Moisture Ratio (%)                             | 86.5          | 85.0          | 96.0          | 76.5          |
| Moisture Variation (%)                         | 2.5 dry       | 2.5 dry       | 0.5 dry       | 4.5 dry       |
| Hilf Density Ratio (%)                         | <b>102.5</b>  | <b>101.0</b>  | <b>102.5</b>  | <b>100.5</b>  |

## Comments



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**Report No: HDR:W23DS00391**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 5/10/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy Clay

## Sample Data

|                 |                          |  |  |  |  |
|-----------------|--------------------------|--|--|--|--|
| Sample ID       | S23DS-01346              |  |  |  |  |
| Field Sample ID | 1                        |  |  |  |  |
| Date Tested     | 14/02/2023               |  |  |  |  |
| Lot / Layer:    | 4550 / 1                 |  |  |  |  |
|                 | Retest of<br>S23DS-01183 |  |  |  |  |

## Field and Laboratory Data

|                                                |               |  |  |  |  |
|------------------------------------------------|---------------|--|--|--|--|
| Depth of Test (mm)                             | 175           |  |  |  |  |
| Depth of Layer (mm)                            | 200           |  |  |  |  |
| AS Sieve Size (mm)                             | 19.0          |  |  |  |  |
| Oversize Wet (%)                               | 0             |  |  |  |  |
| Field Moisture Content (%)                     | 18.3          |  |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 1.98          |  |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.67          |  |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.01          |  |  |  |  |
| Optimum Moisture Content (%)                   | 20.5          |  |  |  |  |
| Compactive Effort                              | Standard      |  |  |  |  |
| Moisture Ratio (%)                             | 88.5          |  |  |  |  |
| Moisture Variation (%)                         | 2.0 dry       |  |  |  |  |
| Hilf Density Ratio (%)                         | <b>98.5</b>   |  |  |  |  |

## Comments



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**Report No: HDR:W23DS00483**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 3/03/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy Clay, traces of Gravel

## Sample Data

| Sample ID        | S23DS-01608       | S23DS-01609       | S23DS-01610       |  |  |
|------------------|-------------------|-------------------|-------------------|--|--|
| Field Sample ID  | 1                 | 2                 | 3                 |  |  |
| Client Sample ID | 6                 | 7                 | 8                 |  |  |
| Date Tested      | 22/02/2023        | 22/02/2023        | 22/02/2023        |  |  |
| Time Tested      | 09:43             | 09:51             | 10:02             |  |  |
| E:               | 2752.264 (356577) | 2740.806 (356567) | 2727.114 (356554) |  |  |
| N:               | 332.412 (5781176) | 335.107 (5781179) | 335.943 (5781179) |  |  |
| EL:              | 39.744            | 39.907            | 40.394            |  |  |
| Lot / Layer:     | 4549 / 2          | 4547 / 2          | 4545 / 2          |  |  |

## 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         | 2.08         | 2.14         |  |  |
| Peak Converted Wet Density (t/m³) | 1.97         | 2.08         | 2.00         |  |  |
| Compactive Effort                 | Standard     | Standard     | Standard     |  |  |
| Moisture Variation (%)            | 2.5 dry      | 3.0 dry      | 4.5 dry      |  |  |
| <b>Hilf Density Ratio (%)</b>     | <b>109.0</b> | <b>100.0</b> | <b>107.0</b> |  |  |

## Comments



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**Report No: HDR:W23DS00517**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 3/03/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy clay, traces of Gravel

## Sample Data

|                  |                       |                       |  |  |  |
|------------------|-----------------------|-----------------------|--|--|--|
| Sample ID        | S23DS-01699           | S23DS-01700           |  |  |  |
| Field Sample ID  | 1                     | 2                     |  |  |  |
| Client Sample ID | 9                     | 10                    |  |  |  |
| Date Tested      | 24/02/2023            | 24/02/2023            |  |  |  |
| Time Tested      | 08:06                 | 08:24                 |  |  |  |
| Lot / Layer:     | 4545 / 2              | 4549 / 2              |  |  |  |
|                  | Retest of S23DS-01610 | Retest of S23DS-01608 |  |  |  |

## Field and Laboratory Data

|                                   |               |               |  |  |  |
|-----------------------------------|---------------|---------------|--|--|--|
| Depth of Test (mm)                | 175           | 175           |  |  |  |
| Depth of Layer (mm)               | 200           | 200           |  |  |  |
| AS Sieve Size (mm)                | 19.0          | 19.0          |  |  |  |
| Oversize Wet (%)                  | 0             | 0             |  |  |  |
| Field Moisture Content (%)        | 16.2          | 16.0          |  |  |  |
| Field Moisture Content Method     | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |  |
| Field Wet Density (t/m³)          | 2.11          | 2.06          |  |  |  |
| Field Dry Density (t/m³)          | 1.81          | 1.78          |  |  |  |
| Peak Converted Wet Density (t/m³) | 2.14          | 2.10          |  |  |  |
| Optimum Moisture Content (%)      | 16.0          | 15.5          |  |  |  |
| Compactive Effort                 | Standard      | Standard      |  |  |  |
| Moisture Ratio (%)                | 99.5          | 102.0         |  |  |  |
| Moisture Variation (%)            | 0.0           | 0.5 wet       |  |  |  |
| Hilf Density Ratio (%)            | <b>98.5</b>   | <b>98.0</b>   |  |  |  |

**Comments**



**Dandenong South**  
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**Report No: HDR:W23DS00539**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 3/03/2023

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Silty Clay

## Sample Data

| Sample ID        | S23DS-01761       | S23DS-01762       | S23DS-01763       | S23DS-01764       |
|------------------|-------------------|-------------------|-------------------|-------------------|
| Field Sample ID  | 1                 | 2                 | 3                 | 4                 |
| Client Sample ID | 11                | 12                | 13                | 14                |
| Date Tested      | 27/02/2023        | 27/02/2023        | 27/02/2023        | 27/02/2023        |
| Time Tested      | 15:41             | 15:50             | 15:55             | 16:01             |
| E:               | 2713.972 (356538) | 2732.120 (356555) | 2747.893 (356569) | 2757.991 (356580) |
| N:               | 332.464 (5781177) | 329.123 (5781174) | 329.241 (5781172) | 320.606 (5781164) |
| EL:              | 40.925            | 40.339            | 40.027            | 39.552            |
| Lot / Layer:     | 4544 / 3          | 4546 / 3          | 4548 / 3          | 4550 / 3          |

## Field and Laboratory Data

|                                                |               |               |               |               |
|------------------------------------------------|---------------|---------------|---------------|---------------|
| Depth of Test (mm)                             | 175           | 175           | 175           | 175           |
| Depth of Layer (mm)                            | 200           | 200           | 200           | 200           |
| AS Sieve Size (mm)                             | 19.0          | 19.0          | 19.0          | 19.0          |
| Oversize Wet (%)                               | 0             | 0             | 0             | 0             |
| Field Moisture Content (%)                     | 11.1          | 12.3          | 14.3          | 12.2          |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |
| Field Wet Density (t/m <sup>3</sup> )          | 2.03          | 2.08          | 2.02          | 2.11          |
| Field Dry Density (t/m <sup>3</sup> )          | 1.83          | 1.85          | 1.77          | 1.88          |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.03          | 2.15          | 2.16          | 2.09          |
| Optimum Moisture Content (%)                   | 15.5          | 13.0          | 14.5          | 12.5          |
| Compactive Effort                              | Standard      | Standard      | Standard      | Standard      |
| Moisture Ratio (%)                             | 71.0          | 96.0          | 97.5          | 98.5          |
| Moisture Variation (%)                         | 4.5 dry       | 0.5 dry       | 0.5 dry       | 0.0           |
| Hilf Density Ratio (%)                         | <b>100.0</b>  | <b>96.5</b>   | <b>93.5</b>   | <b>100.5</b>  |

## Comments



**Dandenong South**  
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**Report No: HDR:W23DS00565**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 3/03/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy Clay, traces of Gravel & Silt

## Sample Data

|                  |                       |                       |  |  |  |
|------------------|-----------------------|-----------------------|--|--|--|
| Sample ID        | S23DS-01824           | S23DS-01825           |  |  |  |
| Field Sample ID  | 1                     | 2                     |  |  |  |
| Client Sample ID | 15                    | 16                    |  |  |  |
| Date Tested      | 28/02/2023            | 28/02/2023            |  |  |  |
| Time Tested      | 15:34                 | 15:39                 |  |  |  |
| Lot / Layer:     | 4544 / 3              | 4548 / 3              |  |  |  |
|                  | Retest of S23DS-01761 | Retest of S23DS-01763 |  |  |  |

## Field and Laboratory Data

|                                   |               |               |  |  |  |
|-----------------------------------|---------------|---------------|--|--|--|
| Depth of Test (mm)                | 175           | 175           |  |  |  |
| Depth of Layer (mm)               | 200           | 200           |  |  |  |
| AS Sieve Size (mm)                | 19.0          | 19.0          |  |  |  |
| Oversize Wet (%)                  | 0             | 0             |  |  |  |
| Field Moisture Content (%)        | 13.0          | 13.5          |  |  |  |
| Field Moisture Content Method     | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |  |
| Field Wet Density (t/m³)          | 2.02          | 2.10          |  |  |  |
| Field Dry Density (t/m³)          | 1.79          | 1.85          |  |  |  |
| Peak Converted Wet Density (t/m³) | 2.07          | 2.08          |  |  |  |
| Optimum Moisture Content (%)      | 15.5          | 16.0          |  |  |  |
| Compactive Effort                 | Standard      | Standard      |  |  |  |
| Moisture Ratio (%)                | 84.0          | 84.5          |  |  |  |
| Moisture Variation (%)            | 2.5 dry       | 2.5 dry       |  |  |  |
| Hilf Density Ratio (%)            | <b>98.0</b>   | <b>101.0</b>  |  |  |  |

**Comments**



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**Report No: HDR:W23DS00621**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 20/03/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Silty Clay

## Sample Data

| Sample ID        | S23DS-01993       | S23DS-01994       | S23DS-01995       |  |  |
|------------------|-------------------|-------------------|-------------------|--|--|
| Field Sample ID  | 1                 | 2                 | 3                 |  |  |
| Client Sample ID | 17                | 18                | 19                |  |  |
| Date Tested      | 3/03/2023         | 3/03/2023         | 3/03/2023         |  |  |
| Time Tested      | 10:49             | 10:56             | 11:03             |  |  |
| E:               | 2754.760 (356554) | 2740.398 (356564) | 2730.188 (356580) |  |  |
| N:               | 335.957 (5781183) | 328.581 (5781173) | 339.532 (5781179) |  |  |
| EL:              | 40.158            | 40.278            | 40.703            |  |  |
| Lot / Layer:     | 4549 / 4          | 4547 / 4          | 4545 / 4          |  |  |

## Field and Laboratory Data

|                                                |               |               |               |  |  |
|------------------------------------------------|---------------|---------------|---------------|--|--|
| Depth of Test (mm)                             | 175           | 175           | 175           |  |  |
| Depth of Layer (mm)                            | 200           | 200           | 200           |  |  |
| AS Sieve Size (mm)                             | 19.0          | 19.0          | 19.0          |  |  |
| Oversize Wet (%)                               | 0             | 0             | 0             |  |  |
| Field Moisture Content (%)                     | 13.9          | 13.9          | 15.5          |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.13          | 2.09          | 2.07          |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.87          | 1.84          | 1.79          |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.13          | 2.17          | 2.14          |  |  |
| Optimum Moisture Content (%)                   | 14.5          | 14.0          | 15.5          |  |  |
| Compactive Effort                              | Standard      | Standard      | Standard      |  |  |
| Moisture Ratio (%)                             | 97.0          | 98.0          | 99.5          |  |  |
| Moisture Variation (%)                         | 0.5 dry       | 0.5 dry       | 0.0           |  |  |
| Hilf Density Ratio (%)                         | <b>100.0</b>  | <b>96.5</b>   | <b>96.5</b>   |  |  |

## Comments





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**Report No: HDR:W23DS00622**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**Order No.:**  
**TRN:**

**CG Request No.:**  
**Lot No.:**

Accredited for compliance with ISO/IEC 17025  
 - Testing

Accreditation Number: 12719  
 Site Number: 12712  
 Approved Signatory: M. Longfield  
 (Senior Technician)  
 Date of Issue: 20/03/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Silty Clay

## Sample Data

|                  |                   |  |  |  |  |
|------------------|-------------------|--|--|--|--|
| Sample ID        | S23DS-01996       |  |  |  |  |
| Field Sample ID  | 1                 |  |  |  |  |
| Client Sample ID | 20                |  |  |  |  |
| Date Tested      | 4/03/2023         |  |  |  |  |
| Time Tested      | 11:37             |  |  |  |  |
| E:               | 2779.424 (356604) |  |  |  |  |
| N:               | 182.996 (5781025) |  |  |  |  |
| EL:              | 36.015            |  |  |  |  |
| Layer:           | 1                 |  |  |  |  |

## Field and Laboratory Data

|                                                |               |  |  |  |  |
|------------------------------------------------|---------------|--|--|--|--|
| Depth of Test (mm)                             | 275           |  |  |  |  |
| Depth of Layer (mm)                            | 300           |  |  |  |  |
| AS Sieve Size (mm)                             | 19.0          |  |  |  |  |
| Oversize Wet (%)                               | 0             |  |  |  |  |
| Field Moisture Content (%)                     | 19.2          |  |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.02          |  |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.70          |  |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.93          |  |  |  |  |
| Optimum Moisture Content (%)                   | 21.5          |  |  |  |  |
| Compactive Effort                              | Standard      |  |  |  |  |
| Moisture Ratio (%)                             | 88.5          |  |  |  |  |
| Moisture Variation (%)                         | 2.5 dry       |  |  |  |  |
| Hilf Density Ratio (%)                         | <b>105.0</b>  |  |  |  |  |

## Comments



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**Report No: HDR:W23DS00652**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 20/03/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Silty Clay

## Sample Data

|                 |                   |  |  |  |  |
|-----------------|-------------------|--|--|--|--|
| Sample ID       | S23DS-02104       |  |  |  |  |
| Field Sample ID | 1                 |  |  |  |  |
| Date Tested     | 7/03/2023         |  |  |  |  |
| Time Tested     | 14:18             |  |  |  |  |
| E:              | 2791.692 (356616) |  |  |  |  |
| N:              | 173.351 (5781018) |  |  |  |  |
| EL:             | 35.626            |  |  |  |  |
| Layer:          | 2                 |  |  |  |  |

## Field and Laboratory Data

|                                                |               |  |  |  |  |
|------------------------------------------------|---------------|--|--|--|--|
| Depth of Test (mm)                             | 275           |  |  |  |  |
| Depth of Layer (mm)                            | 300           |  |  |  |  |
| AS Sieve Size (mm)                             | 19.0          |  |  |  |  |
| Oversize Wet (%)                               | 0             |  |  |  |  |
| Field Moisture Content (%)                     | 19.0          |  |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.02          |  |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.70          |  |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.98          |  |  |  |  |
| Optimum Moisture Content (%)                   | 19.0          |  |  |  |  |
| Compactive Effort                              | Standard      |  |  |  |  |
| Moisture Ratio (%)                             | 99.5          |  |  |  |  |
| Moisture Variation (%)                         | 0.0           |  |  |  |  |
| Hilf Density Ratio (%)                         | <b>102.0</b>  |  |  |  |  |

## Comments



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**Report No: HDR:W23DS00679**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**Order No.:**  
**TRN:**

**CG Request No.:**  
**Lot No.:**

Accredited for compliance with ISO/IEC 17025  
 - Testing



Accreditation Number: 12719  
 Site Number: 12712  
 Approved Signatory: M. Longfield  
 (Senior Technician)  
 Date of Issue: 20/03/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Clay

## Sample Data

| Sample ID       | S23DS-02186       | S23DS-02187       | S23DS-02188       | S23DS-02189       | S23DS-02190       |
|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Field Sample ID | 1                 | 2                 | 3                 | 4                 | 5                 |
| Date Tested     | 8/03/2023         | 8/03/2023         | 8/03/2023         | 8/03/2023         | 8/03/2023         |
| Time Tested     | 09:47             |                   |                   |                   |                   |
| E:              | 2776.194 (356600) | 2720.019 (356542) | 2735.275 (356561) | 2748.101 (356574) | 2760.826 (356587) |
| N:              | 178.421 (5781015) | 341.579 (5781186) | 338.566 (5781180) | 338.593 (5781183) | 336.597 (5781179) |
| EL:             | 36.390            | 41.099            | 40.671            | 40.514            | 40.272            |
| Lot / Layer:    | - / 3             | 4544 / 5          | 4546 / 5          | 4548 / 5          | 4550 / 5          |

## Field and Laboratory Data

|                                                |               |               |               |               |               |
|------------------------------------------------|---------------|---------------|---------------|---------------|---------------|
| Depth of Test (mm)                             | 275           | 200           | 200           | 200           | 200           |
| Depth of Layer (mm)                            | 300           | 225           | 225           | 225           | 225           |
| AS Sieve Size (mm)                             | 19.0          | 19.0          | 19.0          | 19.0          | 19.0          |
| Oversize Wet (%)                               | 0             | 0             | 0             | 0             | 0             |
| Field Moisture Content (%)                     | 15.4          | 15.9          | 14.6          | 14.4          | 14.3          |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |
| Field Wet Density (t/m <sup>3</sup> )          | 2.12          | 2.11          | 2.10          | 2.11          | 2.06          |
| Field Dry Density (t/m <sup>3</sup> )          | 1.84          | 1.82          | 1.84          | 1.84          | 1.80          |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.04          | 2.04          | 2.15          | 2.13          | 2.15          |
| Optimum Moisture Content (%)                   | 16.5          | 18.0          | 14.5          | 14.0          | 14.5          |
| Compactive Effort                              | Standard      | Standard      | Standard      | Standard      | Standard      |
| Moisture Ratio (%)                             | 94.5          | 88.5          | 99.0          | 103.5         | 99.0          |
| Moisture Variation (%)                         | 1.0 dry       | 2.0 dry       | 0.0           | 0.5 wet       | 0.0           |
| Hilf Density Ratio (%)                         | <b>104.0</b>  | <b>103.5</b>  | <b>97.5</b>   | <b>99.0</b>   | <b>95.5</b>   |

## Comments



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**Report No: HDR:W23DS00688**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**Order No.:**  
**TRN:**

**CG Request No.:**  
**Lot No.:**

Accredited for compliance with ISO/IEC 17025  
 - Testing



Accreditation Number: 12719  
 Site Number: 12712  
 Approved Signatory: M. Longfield  
 (Senior Technician)  
 Date of Issue: 20/03/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Clay, traces of Gravel

## Sample Data

| Sample ID        | S23DS-02215       | S23DS-02216       | S23DS-02217       |  |  |
|------------------|-------------------|-------------------|-------------------|--|--|
| Field Sample ID  | 1                 | 2                 | 3                 |  |  |
| Client Sample ID | 27                | 28                | 29                |  |  |
| Date Tested      | 9/03/2023         | 9/03/2023         | 9/03/2023         |  |  |
| Time Tested      | 07:43             | 11:13             | 14:48             |  |  |
| E:               | 2784.070 (356605) | 2792.550 (356615) | 2786.055 (356611) |  |  |
| N:               | 179.115 (5781021) | 183.185 (5781025) | 168.700 (5781014) |  |  |
| EL:              | 36.417            | 36.360            | 36.595            |  |  |
| Layer:           | 4                 | 5                 | 6                 |  |  |

## Field and Laboratory Data

|                                                |               |               |               |  |  |
|------------------------------------------------|---------------|---------------|---------------|--|--|
| Depth of Test (mm)                             | 275           | 275           | 275           |  |  |
| Depth of Layer (mm)                            | 300           | 300           | 300           |  |  |
| AS Sieve Size (mm)                             | 19.0          | 19.0          | 19.0          |  |  |
| Oversize Wet (%)                               | 0             | 0             | 0             |  |  |
| Field Moisture Content (%)                     | 14.4          | 13.8          | 12.7          |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.11          | 2.12          | 2.08          |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.85          | 1.87          | 1.84          |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.10          | 2.14          | 2.17          |  |  |
| Optimum Moisture Content (%)                   | 15.0          | 13.0          | 13.0          |  |  |
| Compactive Effort                              | Standard      | Standard      | Standard      |  |  |
| Moisture Ratio (%)                             | 95.5          | 106.5         | 97.5          |  |  |
| Moisture Variation (%)                         | 0.5 dry       | 1.0 wet       | 0.5 dry       |  |  |
| Hilf Density Ratio (%)                         | <b>101.0</b>  | <b>99.0</b>   | <b>96.0</b>   |  |  |

## Comments



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**Report No: HDR:W23DS00697**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**Order No.:**  
**TRN:**

**CG Request No.:**  
**Lot No.:**

Accredited for compliance with ISO/IEC 17025  
 - Testing



Accreditation Number: 12719  
 Site Number: 12712  
 Approved Signatory: M. Longfield  
 (Senior Technician)  
 Date of Issue: 20/03/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Silty Clay, traces of Gravel

## Sample Data

| Sample ID        | S23DS-02243       | S23DS-02244       | S23DS-02245       | S23DS-02246       |
|------------------|-------------------|-------------------|-------------------|-------------------|
| Field Sample ID  | 1                 | 2                 | 3                 | 4                 |
| Client Sample ID | 30                | 31                | 32                | 33                |
| Date Tested      | 10/03/2023        | 10/03/2023        | 10/03/2023        | 10/03/2023        |
| Time Tested      | 07:58             | 08:05             | 08:11             | 10:57             |
| E:               | 2753.560 (356574) | 2741.900 (356564) | 2726.360 (356551) | 2774.688 (356600) |
| N:               | 329.009 (5781171) | 339.319 (5781181) | 338.570 (5781180) | 178.870 (5781021) |
| EL:              | 40.441            | 40.700            | 41.70             | 37.187            |
| Lot / Layer:     | 4549 / 6          | 4547 / 6          | 4545 / 6          | - / 7             |

## Field and Laboratory Data

|                                                |               |               |               |               |
|------------------------------------------------|---------------|---------------|---------------|---------------|
| Depth of Test (mm)                             | 175           | 175           | 175           | 275           |
| Depth of Layer (mm)                            | 200           | 200           | 200           | 300           |
| AS Sieve Size (mm)                             | 19.0          | 19.0          | 19.0          | 19.0          |
| Oversize Wet (%)                               | 0             | 0             | 0             | 0             |
| Field Moisture Content (%)                     | 13.2          | 13.5          | 12.7          | 14.0          |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |
| Field Wet Density (t/m <sup>3</sup> )          | 2.13          | 2.09          | 2.04          | 2.13          |
| Field Dry Density (t/m <sup>3</sup> )          | 1.88          | 1.84          | 1.80          | 1.87          |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.12          | 2.13          | 2.09          | 2.14          |
| Optimum Moisture Content (%)                   | 13.5          | 13.5          | 14.5          | 13.5          |
| Compactive Effort                              | Standard      | Standard      | Standard      | Standard      |
| Moisture Ratio (%)                             | 98.5          | 99.5          | 89.0          | 101.5         |
| Moisture Variation (%)                         | 0.0           | 0.0           | 1.5 dry       | 0.0           |
| Hilf Density Ratio (%)                         | <b>100.5</b>  | <b>98.5</b>   | <b>97.5</b>   | <b>99.5</b>   |

## Comments



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**Report No: HDR:W23DS00756**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 30/03/2023  
 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 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Silty Clay

## Sample Data

| Sample ID        | S23DS-02396       | S23DS-02397       |  |  |  |
|------------------|-------------------|-------------------|--|--|--|
| Field Sample ID  | 1                 | 2                 |  |  |  |
| Client Sample ID | 34                | 35                |  |  |  |
| Date Tested      | 17/03/2023        | 17/03/2023        |  |  |  |
| Time Tested      | 14:31             | 14:37             |  |  |  |
| E:               | 2722.810 (356549) | 2732.503 (356558) |  |  |  |
| N:               | 294.625 (5781138) | 265.952 (5781109) |  |  |  |
| EL:              | 39.680            | 39.068            |  |  |  |
| Lot / Layer:     | 4543 / 1          | 4525 / 1          |  |  |  |

## Field and Laboratory Data

|                                                |               |               |  |  |  |
|------------------------------------------------|---------------|---------------|--|--|--|
| Depth of Test (mm)                             | 175           | 175           |  |  |  |
| Depth of Layer (mm)                            | 200           | 200           |  |  |  |
| AS Sieve Size (mm)                             | 19.0          | 19.0          |  |  |  |
| Oversize Wet (%)                               | 0             | 0             |  |  |  |
| Field Moisture Content (%)                     | 11.3          | 12.4          |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.16          | 2.10          |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.94          | 1.87          |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.07          | 2.11          |  |  |  |
| Optimum Moisture Content (%)                   | 14.0          | 14.5          |  |  |  |
| Compactive Effort                              | Standard      | Standard      |  |  |  |
| Moisture Ratio (%)                             | 81.0          | 84.5          |  |  |  |
| Moisture Variation (%)                         | 2.5 dry       | 2.5 dry       |  |  |  |
| Hilf Density Ratio (%)                         | <b>104.0</b>  | <b>99.5</b>   |  |  |  |

## Comments



**Dandenong South**  
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**Report No: HDR:W23DS00757**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 30/03/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Silty Clay

## Sample Data

|                  |                   |  |  |  |  |
|------------------|-------------------|--|--|--|--|
| Sample ID        | S23DS-02398       |  |  |  |  |
| Field Sample ID  | 1                 |  |  |  |  |
| Client Sample ID | 36                |  |  |  |  |
| Date Tested      | 18/03/2023        |  |  |  |  |
| Time Tested      | 12:10             |  |  |  |  |
| E:               | 2750.922 (356577) |  |  |  |  |
| N:               | 291.956 (5781136) |  |  |  |  |
| EL:              | 39.091            |  |  |  |  |
| Lot / Layer:     | 4541 / 1          |  |  |  |  |

## Field and Laboratory Data

|                                                |               |  |  |  |  |
|------------------------------------------------|---------------|--|--|--|--|
| Depth of Test (mm)                             | 175           |  |  |  |  |
| Depth of Layer (mm)                            | 200           |  |  |  |  |
| AS Sieve Size (mm)                             | 19.0          |  |  |  |  |
| Oversize Wet (%)                               | 0             |  |  |  |  |
| Field Moisture Content (%)                     | 15.3          |  |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 1.95          |  |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.69          |  |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.10          |  |  |  |  |
| Optimum Moisture Content (%)                   | 16.0          |  |  |  |  |
| Compactive Effort                              | Standard      |  |  |  |  |
| Moisture Ratio (%)                             | 96.0          |  |  |  |  |
| Moisture Variation (%)                         | 0.5 dry       |  |  |  |  |
| Hilf Density Ratio (%)                         | <b>93.0</b>   |  |  |  |  |

## Comments



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**Report No: HDR:W23DS00786**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**Order No.:**  
**TRN:**

**CG Request No.:**  
**Lot No.:**

Accredited for compliance with ISO/IEC 17025  
 - Testing



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

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 2% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Clay

## Sample Data

| Sample ID        | S23DS-02513       | S23DS-02514       | S23DS-02515       | S23DS-02516       | S23DS-02517       |
|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Field Sample ID  | 1                 | 2                 | 3                 | 4                 | 5                 |
| Client Sample ID | 37                | 38                | 39                | 40                | 41                |
| Date Tested      | 20/03/2023        | 20/03/2023        | 20/03/2023        | 20/03/2023        | 20/03/2023        |
| Time Tested      | 11:00             | 12:12             | 12:32             | 12:38             | 12:45             |
| E:               | 2824.490 (356647) | 2775.770 (356600) | 2800.342 (356623) | 2807.510 (356631) | 2813.796 (356637) |
| N:               | 177.180 (5781021) | 287.728 (5781133) | 293.149 (356623)  | 281.179 (5781129) | 269.719 (5781116) |
| EL:              | 34.590            | 38.787            | 38.851            | 38.476            | 38.026            |
| Lot / Layer:     | - / 1             | 4539 / 1          | 4537 / 4          | 4535 / 4          | 4533 / 4          |

## Field and Laboratory Data

|                                                |               |               |               |               |               |
|------------------------------------------------|---------------|---------------|---------------|---------------|---------------|
| Depth of Test (mm)                             | 275           | 275           | 275           | 275           | 275           |
| Depth of Layer (mm)                            | 300           | 300           | 300           | 300           | 300           |
| AS Sieve Size (mm)                             | 19.0          | 19.0          | 19.0          | 19.0          | 19.0          |
| Oversize Wet (%)                               | 0             | 0             | 0             | 0             | 0             |
| Field Moisture Content (%)                     | 14.0          | 12.7          | 12.8          | 15.0          | 12.1          |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |
| Field Wet Density (t/m <sup>3</sup> )          | 2.09          | 2.11          | 2.11          | 2.07          | 2.08          |
| Field Dry Density (t/m <sup>3</sup> )          | 1.83          | 1.87          | 1.87          | 1.80          | 1.86          |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.04          | 2.06          | 2.06          | 2.05          | 2.09          |
| Optimum Moisture Content (%)                   | 16.0          | 15.0          | 15.0          | 15.0          | 14.5          |
| Compactive Effort                              | Standard      | Standard      | Standard      | Standard      | Standard      |
| Moisture Ratio (%)                             | 87.0          | 86.0          | 86.0          | 100.5         | 83.5          |
| Moisture Variation (%)                         | 2.0 dry       | 2.0 dry       | 2.0 dry       | 0.0           | 2.5 dry       |
| Hilf Density Ratio (%)                         | <b>102.5</b>  | <b>102.5</b>  | <b>102.5</b>  | <b>101.0</b>  | <b>99.5</b>   |

## Comments





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**Report No: HDR:W23DS00803**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 30/03/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy Clay, traces Gravel

## Sample Data

| Sample ID        | S23DS-02575       | S23DS-02576       | S23DS-02577       | S23DS-02578              | S23DS-02579       | S23DS-02580       |
|------------------|-------------------|-------------------|-------------------|--------------------------|-------------------|-------------------|
| Field Sample ID  | 1                 | 2                 | 3                 | 4                        | 5                 | 6                 |
| Client Sample ID | 42                | 43                | 44                | 45                       | 46                | 47                |
| Date Tested      | 21/03/2023        | 21/03/2023        | 21/03/2023        | 21/03/2023               | 21/03/2023        | 21/03/2023        |
| Time Tested      | 11:11             | 11:17             | 13:41             | 14:51                    | 14:54             | 15:19             |
| E:               | 2735.930 (356562) | 2718.205 (356541) | 2800.690 (356625) | -                        | 2763.728 (356588) | 2796.648 (356617) |
| N:               | 287.588 (5781127) | 264.095 (5781105) | 190.400 (5781032) | -                        | 290.120 (5781136) | 300.690 (5781143) |
| EL:              | 39.708            | 39.41             | 34.83             | -                        | 39.138            | 39.128            |
| Lot / Layer:     | 4542 / 2          | 4524 / 2          | - / 1             | 4541 / 1                 | 4540 / 2          | 4538 / 5          |
|                  |                   |                   |                   | Retest of<br>S23DS-02398 |                   |                   |

## Field and Laboratory Data

|                                                |               |               |               |               |               |               |
|------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Depth of Test (mm)                             | 175           | 175           | 175           | 175           | 175           | 175           |
| Depth of Layer (mm)                            | 200           | 200           | 200           | 200           | 200           | 200           |
| AS Sieve Size (mm)                             | 19.0          | 19.0          | 19.0          | 19.0          | 19.0          | 19.0          |
| Oversize Wet (%)                               | 0             | 0             | 0             | 0             | 0             | 0             |
| Field Moisture Content (%)                     | 16.2          | 12.8          | 15.4          | 13.2          | 20.5          | 12.2          |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |
| Field Wet Density (t/m <sup>3</sup> )          | 2.03          | 2.11          | 2.05          | 2.08          | 2.02          | 2.12          |
| Field Dry Density (t/m <sup>3</sup> )          | 1.74          | 1.87          | 1.77          | 1.83          | 1.67          | 1.89          |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.05          | 2.05          | 2.08          | 2.07          | 1.96          | 2.17          |
| Optimum Moisture Content (%)                   | 17.0          | 15.5          | 16.0          | 15.5          | 22.0          | 12.5          |
| Compactive Effort                              | Standard      | Standard      | Standard      | Standard      | Standard      | Standard      |
| Moisture Ratio (%)                             | 97.0          | 82.0          | 97.5          | 86.0          | 92.5          | 96.5          |
| Moisture Variation (%)                         | 0.5 dry       | 3.0 dry       | 0.5 dry       | 2.0 dry       | 1.5 dry       | 0.5 dry       |
| Hilf Density Ratio (%)                         | <b>99.0</b>   | <b>103.0</b>  | <b>98.5</b>   | <b>100.5</b>  | <b>103.0</b>  | <b>97.5</b>   |

## Comments



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**Report No: HDR:W23DS00803**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**Order No.:**  
**TRN:**

**CG Request No.:**  
**Lot No.:**

Accredited for compliance with ISO/IEC 17025  
 - Testing



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

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy Clay, traces Gravel

## Sample Data

| Sample ID        | S23DS-02581       | S23DS-02582       |  |  |  |
|------------------|-------------------|-------------------|--|--|--|
| Field Sample ID  | 7                 | 8                 |  |  |  |
| Client Sample ID | 48                | 49                |  |  |  |
| Date Tested      | 21/03/2023        | 21/03/2023        |  |  |  |
| Time Tested      | 15:27             | 15:33             |  |  |  |
| E:               | 2804.289 (356626) | 2811.392 (356634) |  |  |  |
| N:               | 287.686 (5781132) | 275.861 (5781122) |  |  |  |
| EL:              | 38.820            | 38.516            |  |  |  |
| Lot / Layer:     | 4536 / 5          | 4534 / 5          |  |  |  |

## Field and Laboratory Data

|                                                |               |               |  |  |  |
|------------------------------------------------|---------------|---------------|--|--|--|
| Depth of Test (mm)                             | 175           | 175           |  |  |  |
| Depth of Layer (mm)                            | 200           | 200           |  |  |  |
| AS Sieve Size (mm)                             | 19.0          | 19.0          |  |  |  |
| Oversize Wet (%)                               | 0             | 0             |  |  |  |
| Field Moisture Content (%)                     | 12.2          | 12.2          |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.14          | 2.10          |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.90          | 1.87          |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.20          | 2.18          |  |  |  |
| Optimum Moisture Content (%)                   | 12.0          | 12.5          |  |  |  |
| Compactive Effort                              | Standard      | Standard      |  |  |  |
| Moisture Ratio (%)                             | 100.0         | 98.5          |  |  |  |
| Moisture Variation (%)                         | 0.0           | 0.0           |  |  |  |
| Hilf Density Ratio (%)                         | <b>97.0</b>   | <b>96.5</b>   |  |  |  |

## Comments



**Dandenong South**  
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**Report No: HDR:W23DS00812**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**Order No.:**  
**TRN:**

**CG Request No.:**  
**Lot No.:**

Accredited for compliance with ISO/IEC 17025  
 - Testing



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

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Clay

## Sample Data

|                 |                       |  |  |  |  |
|-----------------|-----------------------|--|--|--|--|
| Sample ID       | S23DS-02641           |  |  |  |  |
| Field Sample ID | 1                     |  |  |  |  |
| Date Tested     | 22/03/2023            |  |  |  |  |
| Time Tested     | 13:55                 |  |  |  |  |
| E:              | 2805.950 (356631)     |  |  |  |  |
| N:              | 1091.540<br>(5781033) |  |  |  |  |
| EL:             | 34.740                |  |  |  |  |
| Layer:          | 2                     |  |  |  |  |

## Field and Laboratory Data

|                                   |               |  |  |  |  |
|-----------------------------------|---------------|--|--|--|--|
| Depth of Test (mm)                | 275           |  |  |  |  |
| Depth of Layer (mm)               | 300           |  |  |  |  |
| AS Sieve Size (mm)                | 19.0          |  |  |  |  |
| Oversize Wet (%)                  | 0             |  |  |  |  |
| Field Moisture Content (%)        | 15.3          |  |  |  |  |
| Field Moisture Content Method     | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m³)          | 2.14          |  |  |  |  |
| Field Dry Density (t/m³)          | 1.86          |  |  |  |  |
| Peak Converted Wet Density (t/m³) | 2.07          |  |  |  |  |
| Optimum Moisture Content (%)      | 16.5          |  |  |  |  |
| Compactive Effort                 | Standard      |  |  |  |  |
| Moisture Ratio (%)                | 92.0          |  |  |  |  |
| Moisture Variation (%)            | 1.5 dry       |  |  |  |  |
| Hilf Density Ratio (%)            | <b>103.5</b>  |  |  |  |  |

## Comments



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**Report No: HDR:W23DS00864**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 27/04/2023

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## Sample Details

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

## Sample Data

| Sample ID        | S23DS-02795       | S23DS-02796       | S23DS-02797       | S23DS-02798       |
|------------------|-------------------|-------------------|-------------------|-------------------|
| Field Sample ID  | 1                 | 2                 | 3                 | 4                 |
| Client Sample ID | 51                | 52                | 53                | 54                |
| Date Tested      | 29/03/2023        | 29/03/2023        | 29/03/2023        | 29/03/2023        |
| Time Tested      | 07:51             | 07:58             | 08:04             | 08:09             |
| E:               | 2747.923 (356573) | 2779.548 (356604) | 2720.930 (356545) | 2731.877 (356555) |
| N:               | 281.437 (5781124) | 294.081 (5781137) | 285.673 (5781126) | 254.068 (5781095) |
| EL:              | 39.481            | 39.186            | 40.098            | 39.170            |
| Lot/Layer:       | 4541 / 3          | 4539 / 3          | 4542 / 3          | 4525 / 3          |

## Field and Laboratory Data

|                                                |              |             |             |              |
|------------------------------------------------|--------------|-------------|-------------|--------------|
| Depth of Test (mm)                             | 175          | 175         | 175         | 175          |
| Depth of Layer (mm)                            | 200          | 200         | 200         | 200          |
| AS Sieve Size (mm)                             | 19.0         | 19.0        | 19.0        | 19.0         |
| Oversize Wet (%)                               | 0            | 0           | 0           | 0            |
| Field Wet Density (t/m <sup>3</sup> )          | 2.15         | 2.07        | 2.10        | 2.14         |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.14         | 2.13        | 2.17        | 2.12         |
| Compactive Effort                              | Standard     | Standard    | Standard    | Standard     |
| Moisture Variation (%)                         | 0.0          | 0.0         | 0.5 dry     | 2.0 dry      |
| Hilf Density Ratio (%)                         | <b>100.5</b> | <b>97.0</b> | <b>97.0</b> | <b>101.0</b> |

## Comments



**Dandenong South**  
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**Report No: HDR:W23DS00909**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 27/04/2023

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**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 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Clay

## Sample Data

| Sample ID       | S23DS-02969 | S23DS-02970 | S23DS-02971 |  |  |
|-----------------|-------------|-------------|-------------|--|--|
| Field Sample ID | 1           | 2           | 3           |  |  |
| Date Tested     | 4/04/2023   | 4/04/2023   | 4/04/2023   |  |  |
| Time Tested     | 11:00       | 11:15       | 15:30       |  |  |
| E:              | 2761.919    | 2785.038    | 2713.163    |  |  |
| N:              | 254.451     | 255.046     | 196.325     |  |  |
| EL:             | 38.292      | 37.882      | 37.720      |  |  |
| Lot / Layer:    | 4524 / 1    | 4529 / 1    | 4501 / 1    |  |  |

## Field and Laboratory Data

|                                                |               |               |               |  |  |
|------------------------------------------------|---------------|---------------|---------------|--|--|
| Depth of Test (mm)                             | 125           | 125           | 125           |  |  |
| Depth of Layer (mm)                            | 150           | 150           | 150           |  |  |
| AS Sieve Size (mm)                             | 19.0          | 19.0          | 19.0          |  |  |
| Oversize Wet (%)                               | 0             | 0             | 0             |  |  |
| Field Moisture Content (%)                     | 13.2          | 16.7          | 15.0          |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.13          | 1.99          | 2.06          |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.88          | 1.71          | 1.79          |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.05          | 2.02          | 2.06          |  |  |
| Optimum Moisture Content (%)                   | 16.0          | 19.5          | 17.0          |  |  |
| Compactive Effort                              | Standard      | Standard      | Standard      |  |  |
| Moisture Ratio (%)                             | 82.5          | 86.0          | 88.0          |  |  |
| Moisture Variation (%)                         | 2.5 dry       | 2.5 dry       | 2.0 dry       |  |  |
| Hilf Density Ratio (%)                         | <b>104.0</b>  | <b>98.5</b>   | <b>100.0</b>  |  |  |

## Comments



**Dandenong South**  
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**Report No: HDR:W23DS00917**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 27/04/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Silty Clay

## Sample Data

| Sample ID        | S23DS-02987       | S23DS-02988       |  |  |  |
|------------------|-------------------|-------------------|--|--|--|
| Field Sample ID  | 1                 | 2                 |  |  |  |
| Client Sample ID | 56                | 57                |  |  |  |
| Date Tested      | 5/04/2023         | 5/04/2023         |  |  |  |
| Time Tested      | 09:24             | 14:11             |  |  |  |
| E:               | 2710.772 (356533) | 2712.986 (356535) |  |  |  |
| N:               | 186.328 (5781026) | 202.749 (5781047) |  |  |  |
| EL:              | 37.785            | 38.289            |  |  |  |
| Lot / Layer:     | 4501 / 3          | 4501 / 4          |  |  |  |

## Field and Laboratory Data

|                                                |               |               |  |  |  |
|------------------------------------------------|---------------|---------------|--|--|--|
| Depth of Test (mm)                             | 275           | 275           |  |  |  |
| Depth of Layer (mm)                            | 300           | 300           |  |  |  |
| AS Sieve Size (mm)                             | 19.0          | 19.0          |  |  |  |
| Oversize Wet (%)                               | 0             | 0             |  |  |  |
| Field Moisture Content (%)                     | 13.3          | 12.8          |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.10          | 2.12          |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.85          | 1.88          |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.10          | 2.10          |  |  |  |
| Optimum Moisture Content (%)                   | 14.0          | 14.5          |  |  |  |
| Compactive Effort                              | Standard      | Standard      |  |  |  |
| Moisture Ratio (%)                             | 95.0          | 87.0          |  |  |  |
| Moisture Variation (%)                         | 0.5 dry       | 2.0 dry       |  |  |  |
| Hilf Density Ratio (%)                         | <b>100.0</b>  | <b>101.0</b>  |  |  |  |

## Comments



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**Report No: HDR:W23DS00924**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 27/04/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Silty Clay

## Sample Data

| Sample ID        | S23DS-03010       | S23DS-03011       | S23DS-03012       |  |  |
|------------------|-------------------|-------------------|-------------------|--|--|
| Field Sample ID  | 1                 | 2                 | 3                 |  |  |
| Client Sample ID | 58                | 59                | 60                |  |  |
| Date Tested      | 6/04/2023         | 6/04/2023         | 6/04/2023         |  |  |
| Time Tested      | 08:30             | 08:42             | 10:00             |  |  |
| E:               | 2763.840 (356587) | 2736.867 (356559) | 2711.596 (356534) |  |  |
| N:               | 277.596 (5781118) | 280.249 (5781124) | 179.974 (5781024) |  |  |
| EL:              | 39.439            | 39.879            | 38.193            |  |  |
| Lot / Layer:     | 4540 / 4          | 4542 / 4          | 4501 / 5          |  |  |

## Field and Laboratory Data

|                                                |               |               |               |  |  |
|------------------------------------------------|---------------|---------------|---------------|--|--|
| Depth of Test (mm)                             | 225           | 225           | 275           |  |  |
| Depth of Layer (mm)                            | 250           | 250           | 300           |  |  |
| AS Sieve Size (mm)                             | 19.0          | 19.0          | 19.0          |  |  |
| Oversize Wet (%)                               | 0             | 0             | 0             |  |  |
| Field Moisture Content (%)                     | 15.1          | 12.4          | 18.7          |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.06          | 2.14          | 2.11          |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.78          | 1.91          | 1.78          |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.05          | 2.08          | 2.05          |  |  |
| Optimum Moisture Content (%)                   | 17.5          | 14.0          | 18.5          |  |  |
| Compactive Effort                              | Standard      | Standard      | Standard      |  |  |
| Moisture Ratio (%)                             | 86.0          | 87.5          | 101.5         |  |  |
| Moisture Variation (%)                         | 2.5 dry       | 1.5 dry       | 0.0           |  |  |
| Hilf Density Ratio (%)                         | <b>100.5</b>  | <b>103.0</b>  | <b>102.5</b>  |  |  |

## Comments



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**Report No: HDR:W23DS00959**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 27/04/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**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 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Silty Clay

## Sample Data

| Sample ID       | S23DS-03125               | S23DS-03126          | S23DS-03127            | S23DS-03128         | S23DS-03129          |
|-----------------|---------------------------|----------------------|------------------------|---------------------|----------------------|
| Field Sample ID | 1                         | 2                    | 3                      | 4                   | 5                    |
| Date Tested     | 15/04/2023                | 15/04/2023           | 15/04/2023             | 15/04/2023          | 15/04/2023           |
| Time Tested     | 11:00                     | 11:20                | 12:00                  | 12:40               | 12:55                |
| E:              | 2774.280 (356598)         | 2750.187 (356576)    | 2719.718 (356542)      | 2820.096 (356640)   | 2814.704 (356639)    |
| N:              | 251.687 (5781091)         | 255.347 (5781096)    | 253.977 (5781102)      | 256.507 (5781099)   | 262.885 (5781104)    |
| EL:             | 38.409                    | 38.383               | 39.625                 | 37.994              | 38.099               |
| Lot / Layer:    | New: 4528 (Old: 4523) / 2 | 4526 (Old: 4514) / 2 | 4524 (Old: 4339) / FSL | 4531 (4539) / Final | 4532 (Old: 4538) / - |

## Field and Laboratory Data

|                                                |               |               |               |               |               |
|------------------------------------------------|---------------|---------------|---------------|---------------|---------------|
| Depth of Test (mm)                             | 275           | 275           | 275           | 275           | 275           |
| Depth of Layer (mm)                            | 300           | 300           | 300           | 300           | 300           |
| AS Sieve Size (mm)                             | 19.0          | 19.0          | 19.0          | 19.0          | 19.0          |
| Oversize Wet (%)                               | 0             | 0             | 0             | 0             | 0             |
| Field Moisture Content (%)                     | 13.1          | 17.9          | 17.1          | 14.7          | 13.3          |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |
| Field Wet Density (t/m <sup>3</sup> )          | 2.17          | 2.13          | 2.17          | 2.14          | 2.15          |
| Field Dry Density (t/m <sup>3</sup> )          | 1.92          | 1.81          | 1.85          | 1.87          | 1.90          |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.16          | 2.06          | 2.04          | 2.07          | 2.11          |
| Optimum Moisture Content (%)                   | 13.5          | 18.0          | 17.5          | 15.5          | 13.5          |
| Compactive Effort                              | Standard      | Standard      | Standard      | Standard      | Standard      |
| Moisture Ratio (%)                             | 97.0          | 98.0          | 99.5          | 95.5          | 97.5          |
| Moisture Variation (%)                         | 0.5 dry       | 0.5 dry       | 0.0           | 0.5 dry       | 0.5 dry       |
| Hilf Density Ratio (%)                         | <b>100.0</b>  | <b>103.0</b>  | <b>106.0</b>  | <b>103.5</b>  | <b>101.5</b>  |

## Comments





**Dandenong South**  
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**Report No: HDR:W23DS01029**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 27/04/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**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 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Silty Clay

## Sample Data

| Sample ID       | S23DS-03438 | S23DS-03439 |  |  |  |
|-----------------|-------------|-------------|--|--|--|
| Field Sample ID | 1           | 2           |  |  |  |
| Date Tested     | 21/04/2023  | 21/04/2023  |  |  |  |
| Time Tested     | 09:15       | 12:55       |  |  |  |
| E:              | 356620      | 356631      |  |  |  |
| N:              | 5781056     | 571101      |  |  |  |
| EL:             | 37.638      | 38.052      |  |  |  |
| Lot / Layer:    | 4530 / 3    | 4530 / 4    |  |  |  |

## Field and Laboratory Data

|                                                |               |               |  |  |  |
|------------------------------------------------|---------------|---------------|--|--|--|
| Depth of Test (mm)                             | 275           | 275           |  |  |  |
| Depth of Layer (mm)                            | 300           | 300           |  |  |  |
| AS Sieve Size (mm)                             | 19.0          | 19.0          |  |  |  |
| Oversize Wet (%)                               | 0             | 0             |  |  |  |
| Field Moisture Content (%)                     | 11.7          | 17.5          |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.15          | 2.09          |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.92          | 1.78          |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.10          | 2.11          |  |  |  |
| Optimum Moisture Content (%)                   | 12.0          | 16.0          |  |  |  |
| Compactive Effort                              | Standard      | Standard      |  |  |  |
| Moisture Ratio (%)                             | 99.5          | 109.0         |  |  |  |
| Moisture Variation (%)                         | 0.0           | 1.5 wet       |  |  |  |
| Hilf Density Ratio (%)                         | <b>102.5</b>  | <b>99.0</b>   |  |  |  |

## Comments



**Dandenong South**  
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**Report No: HDR:W23DS01054**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 27/04/2023

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## Sample Details

**Location:**  
**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 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Silty Clay

## Sample Data

| Sample ID       | S23DS-03530       | S23DS-03531       |  |  |  |
|-----------------|-------------------|-------------------|--|--|--|
| Field Sample ID | 1                 | 2                 |  |  |  |
| Date Tested     | 24/04/2023        | 24/04/2023        |  |  |  |
| Time Tested     | 08:55             | 14:05             |  |  |  |
| E:              | 2748.034 (356568) | 2777.099 (356604) |  |  |  |
| N:              | 261.612 (5781084) | 261.749 (5781103) |  |  |  |
| EL:             | 38.664            | 38.628            |  |  |  |
| Lot / Layer:    | 4526 / 5          | 4528 / 5          |  |  |  |

## Field and Laboratory Data

|                                   |             |             |  |  |  |
|-----------------------------------|-------------|-------------|--|--|--|
| Depth of Test (mm)                | 275         | 275         |  |  |  |
| Depth of Layer (mm)               | 300         | 300         |  |  |  |
| AS Sieve Size (mm)                | 19.0        | 19.0        |  |  |  |
| Oversize Wet (%)                  | 0           | 0           |  |  |  |
| Field Wet Density (t/m³)          | 2.12        | 2.14        |  |  |  |
| Peak Converted Wet Density (t/m³) | 2.14        | 2.16        |  |  |  |
| Compactive Effort                 | Standard    | Standard    |  |  |  |
| Moisture Variation (%)            | 0.0         | 0.5 dry     |  |  |  |
| Hilf Density Ratio (%)            | <b>99.0</b> | <b>99.0</b> |  |  |  |

## Comments



**Dandenong South**  
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**Report No: HDR:W23DS01066**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 11/05/2023  
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## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy Clay, traces of Gravel

## Sample Data

|                 |                    |  |  |  |  |
|-----------------|--------------------|--|--|--|--|
| Sample ID       | S23DS-03579        |  |  |  |  |
| Field Sample ID | 1                  |  |  |  |  |
| Date Tested     | 26/04/2023         |  |  |  |  |
| Time Tested     | 08:45              |  |  |  |  |
| E:              | 2745.579 (0356569) |  |  |  |  |
| N:              | 252.387 (5781095)  |  |  |  |  |
| EL:             | 38.732             |  |  |  |  |
| Lot / Layer:    | 4526 / 6           |  |  |  |  |

## Field and Laboratory Data

|                                   |               |  |  |  |  |
|-----------------------------------|---------------|--|--|--|--|
| Depth of Test (mm)                | 225           |  |  |  |  |
| Depth of Layer (mm)               | 250           |  |  |  |  |
| AS Sieve Size (mm)                | 19.0          |  |  |  |  |
| Oversize Wet (%)                  | 0             |  |  |  |  |
| Field Moisture Content (%)        | 15.8          |  |  |  |  |
| Field Moisture Content Method     | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m³)          | 2.12          |  |  |  |  |
| Field Dry Density (t/m³)          | 1.83          |  |  |  |  |
| Peak Converted Wet Density (t/m³) | 2.12          |  |  |  |  |
| Optimum Moisture Content (%)      | 16.0          |  |  |  |  |
| Compactive Effort                 | Standard      |  |  |  |  |
| Moisture Ratio (%)                | 98.5          |  |  |  |  |
| Moisture Variation (%)            | 0.0           |  |  |  |  |
| Hilf Density Ratio (%)            | <b>100.0</b>  |  |  |  |  |

## Comments



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**Report No: HDR:W23DS01076**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**Order No.:** **CG Request No.:**  
**TRN:** **Lot No.:**

Accredited for compliance with ISO/IEC 17025  
 - Testing



Accreditation Number: 12719  
 Site Number: 12712  
 Approved Signatory: M. Longfield  
 (Senior Technician)  
 Date of Issue: 10/05/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy Clay, traces of Gravel

## Sample Data

|                 |                      |  |  |  |  |
|-----------------|----------------------|--|--|--|--|
| Sample ID       | S23DS-03603          |  |  |  |  |
| Field Sample ID | 1                    |  |  |  |  |
| Date Tested     | 27/04/2023           |  |  |  |  |
| Time Tested     | 08:33                |  |  |  |  |
| E:              | 2786.441 (0356611)   |  |  |  |  |
| N:              | 248.963 (5781089)    |  |  |  |  |
| RL:             | 38.532               |  |  |  |  |
| Lot / Layer:    | 4529 / 7 Final Layer |  |  |  |  |

## Field and Laboratory Data

|                                                |               |  |  |  |  |
|------------------------------------------------|---------------|--|--|--|--|
| Depth of Test (mm)                             | 225           |  |  |  |  |
| Depth of Layer (mm)                            | 250           |  |  |  |  |
| AS Sieve Size (mm)                             | 19.0          |  |  |  |  |
| Oversize Wet (%)                               | 0             |  |  |  |  |
| Field Moisture Content (%)                     | 23.4          |  |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.11          |  |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.71          |  |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.99          |  |  |  |  |
| Optimum Moisture Content (%)                   | 23.5          |  |  |  |  |
| Compactive Effort                              | Standard      |  |  |  |  |
| Moisture Ratio (%)                             | 100.5         |  |  |  |  |
| Moisture Variation (%)                         | 0.0           |  |  |  |  |
| Hilf Density Ratio (%)                         | <b>106.0</b>  |  |  |  |  |

## Comments



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**Report No: HDR:W23DS01085**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**Order No.:**  
**TRN:**

**CG Request No.:**  
**Lot No.:**

Accredited for compliance with ISO/IEC 17025  
 - Testing



Accreditation Number: 12719  
 Site Number: 12712  
 Approved Signatory: M. Longfield  
 (Senior Technician)  
 Date of Issue: 11/05/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy Clay, traces of Gravel

## Sample Data

|                 |                    |  |  |  |  |
|-----------------|--------------------|--|--|--|--|
| Sample ID       | S23DS-03642        |  |  |  |  |
| Field Sample ID | 1                  |  |  |  |  |
| Date Tested     | 28/04/2023         |  |  |  |  |
| Time Tested     | 08:55              |  |  |  |  |
| E:              | 2759.846 (0356581) |  |  |  |  |
| N:              | 254.813 (5781095)  |  |  |  |  |
| EL:             | 39.031             |  |  |  |  |
| Lot / Layer:    | 4527 / 7           |  |  |  |  |
|                 | Final Layer        |  |  |  |  |

## Field and Laboratory Data

|                                   |               |  |  |  |  |
|-----------------------------------|---------------|--|--|--|--|
| Depth of Test (mm)                | 225           |  |  |  |  |
| Depth of Layer (mm)               | 250           |  |  |  |  |
| AS Sieve Size (mm)                | 19.0          |  |  |  |  |
| Oversize Wet (%)                  | 0             |  |  |  |  |
| Field Moisture Content (%)        | 15.7          |  |  |  |  |
| Field Moisture Content Method     | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m³)          | 2.10          |  |  |  |  |
| Field Dry Density (t/m³)          | 1.81          |  |  |  |  |
| Peak Converted Wet Density (t/m³) | 2.00          |  |  |  |  |
| Optimum Moisture Content (%)      | 16.5          |  |  |  |  |
| Compactive Effort                 | Standard      |  |  |  |  |
| Moisture Ratio (%)                | 95.5          |  |  |  |  |
| Moisture Variation (%)            | 1.0 dry       |  |  |  |  |
| Hilf Density Ratio (%)            | <b>105.0</b>  |  |  |  |  |

**Comments**



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**Report No: HDR:W23DS01140**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**Order No.:**  
**TRN:**

**CG Request No.:**  
**Lot No.:**

Accredited for compliance with ISO/IEC 17025  
 - Testing



Accreditation Number: 12719  
 Site Number: 12712  
 Approved Signatory: M. Longfield  
 (Senior Technician)  
 Date of Issue: 11/05/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy Clay

## Sample Data

| Sample ID        | S23DS-03859       | S23DS-03860       |  |  |  |
|------------------|-------------------|-------------------|--|--|--|
| Field Sample ID  | 1                 | 2                 |  |  |  |
| Client Sample ID | 72                | 3                 |  |  |  |
| Date Tested      | 5/05/2023         | 5/05/2023         |  |  |  |
| Time Tested      | 14:31             | 14:39             |  |  |  |
| E:               | 2728.856 (356553) | 2757.711 (356583) |  |  |  |
| N:               | 181.007 (5781024) | 176.942 (5781020) |  |  |  |
| EL:              | 37.070            | 36.583            |  |  |  |
| Lot / Layer:     | 4502 / 1          | 4504 / 1          |  |  |  |

## Field and Laboratory Data

|                                                |               |               |  |  |  |
|------------------------------------------------|---------------|---------------|--|--|--|
| Depth of Test (mm)                             | 275           | 275           |  |  |  |
| Depth of Layer (mm)                            | 300           | 300           |  |  |  |
| AS Sieve Size (mm)                             | 19.0          | 19.0          |  |  |  |
| Oversize Wet (%)                               | 0             | 0             |  |  |  |
| Field Moisture Content (%)                     | 17.0          | 18.8          |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.09          | 2.10          |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.79          | 1.77          |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.11          | 2.16          |  |  |  |
| Optimum Moisture Content (%)                   | 16.0          | 16.5          |  |  |  |
| Compactive Effort                              | Standard      | Standard      |  |  |  |
| Moisture Ratio (%)                             | 105.5         | 115.0         |  |  |  |
| Moisture Variation (%)                         | 1.0 wet       | 2.5 wet       |  |  |  |
| Hilf Density Ratio (%)                         | <b>99.0</b>   | <b>97.5</b>   |  |  |  |

## Comments



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**Report No: HDR:W23DS01191**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 25/05/2023  
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## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Silty Sandy Clay

## Sample Data

| Sample ID        | S23DS-04007       | S23DS-04008       | S23DS-04009       | S23DS-04010       |
|------------------|-------------------|-------------------|-------------------|-------------------|
| Field Sample ID  | 1                 | 2                 | 3                 | 4                 |
| Client Sample ID | 74                | 75                | 76                | 77                |
| Date Tested      | 12/05/2023        | 12/05/2023        | 12/05/2023        | 12/05/2023        |
| Time Tested      | 09:43             | 09:53             | 14:38             | 14:44             |
| E:               | 2744.420 (356571) | 2722.177 (356548) | 2718.157 (356544) | 2743.114 (356568) |
| N:               | 189.100 (5781034) | 192.885 (5781035) | 180.775 (5781025) | 174.023 (5781017) |
| EL:              | 37.041            | 37.532            | 37.774            | 37.348            |
| Lot / Layer:     | 4503 / 2          | 4501 / 2          | 4501 / 3          | 4503 / 3          |

## 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 Moisture Content (%)                     | 18.8          | 20.7          | 17.6          | 17.6          |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |
| Field Wet Density (t/m <sup>3</sup> )          | 2.03          | 2.00          | 2.05          | 2.02          |
| Field Dry Density (t/m <sup>3</sup> )          | 1.71          | 1.66          | 1.74          | 1.72          |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.08          | 2.05          | 2.09          | 2.05          |
| Optimum Moisture Content (%)                   | 18.0          | 19.0          | 17.5          | 17.5          |
| Compactive Effort                              | Standard      | Standard      | Standard      | Standard      |
| Moisture Ratio (%)                             | 103.5         | 110.0         | 99.5          | 100.5         |
| Moisture Variation (%)                         | 0.5 wet       | 2.0 wet       | 0.0           | 0.0           |
| Hilf Density Ratio (%)                         | <b>97.5</b>   | <b>97.5</b>   | <b>98.0</b>   | <b>98.5</b>   |

## Comments



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**Report No: HDR:W23DS01209**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 25/05/2023  
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## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy Clay

## Sample Data

| Sample ID        | S23DS-04051       | S23DS-04052       |  |  |  |
|------------------|-------------------|-------------------|--|--|--|
| Field Sample ID  | 1                 | 2                 |  |  |  |
| Client Sample ID | 78                | 79                |  |  |  |
| Date Tested      | 16/05/2023        | 16/05/2023        |  |  |  |
| Time Tested      | 10:15             | 10:23             |  |  |  |
| E:               | 2760.390 (356583) | 2731.210 (356555) |  |  |  |
| N:               | 183.922 (5781026) | 189.557 (5781032) |  |  |  |
| EL:              | 37.210            | 37.783            |  |  |  |
| Lot / Layer:     | 4504 / 4          | 4502 / 4          |  |  |  |

## 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 Moisture Content (%)                     | 17.7          | 18.7          |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.07          | 2.02          |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.76          | 1.70          |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.09          | 2.07          |  |  |  |
| Optimum Moisture Content (%)                   | 18.0          | 18.5          |  |  |  |
| Compactive Effort                              | Standard      | Standard      |  |  |  |
| Moisture Ratio (%)                             | 97.5          | 100.5         |  |  |  |
| Moisture Variation (%)                         | 0.5 dry       | 0.0           |  |  |  |
| Hilf Density Ratio (%)                         | <b>99.0</b>   | <b>97.5</b>   |  |  |  |

## Comments





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**Report No: HDR:W23DS01220**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 25/05/2023  
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## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy Clay

## Sample Data

| Sample ID        | S23DS-04085       | S23DS-04086       |  |  |  |
|------------------|-------------------|-------------------|--|--|--|
| Field Sample ID  | 1                 | 2                 |  |  |  |
| Client Sample ID | 80                | 81                |  |  |  |
| Date Tested      | 17/05/2023        | 17/05/2023        |  |  |  |
| Time Tested      | 13:48             | 13:55             |  |  |  |
| E:               | 2743.319 (356568) | 2713.185 (356536) |  |  |  |
| N:               | 181.361 (5781027) | 186.519 (5781031) |  |  |  |
| EL:              | 37.752            | 38.282            |  |  |  |
| Lot / Layer:     | 4503 / 5          | 4501 / 5          |  |  |  |

## 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 Moisture Content (%)                     | 16.0          | 14.9          |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.12          | 2.16          |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.82          | 1.88          |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.17          | 2.05          |  |  |  |
| Optimum Moisture Content (%)                   | 16.0          | 16.0          |  |  |  |
| Compactive Effort                              | Standard      | Standard      |  |  |  |
| Moisture Ratio (%)                             | 100.5         | 94.0          |  |  |  |
| Moisture Variation (%)                         | 0.0           | 1.0 dry       |  |  |  |
| Hilf Density Ratio (%)                         | <b>97.5</b>   | <b>105.5</b>  |  |  |  |

## Comments



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**Report No: HDR:W23DS01268**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 25/05/2023  
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## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy clay, traces of Gravel

## Sample Data

| Sample ID        | S23DS-04315       | S23DS-04316        | S23DS-04317       | S23DS-04318       |
|------------------|-------------------|--------------------|-------------------|-------------------|
| Field Sample ID  | 1                 | 2                  | 3                 | 4                 |
| Client Sample ID | 82                | 83                 | 84                | 85                |
| Date Tested      | 23/05/2023        | 23/05/2023         | 23/05/2023        | 23/05/2023        |
| Time Tested      | 09:36             | 09:43              | 15:06             | 15:35             |
| E:               | 2757.864 (356582) | 2732.149 (3565565) | 2719.878 (356548) | 2746.485 (356569) |
| N:               | 201.225 (5781045) | 204.520 (5781048)  | 208.311 (5781055) | 202.159 (5781043) |
| EL:              | 37.178            | 37.641             | 38.137            | 37.637            |
| Lot / Layer:     | 4520 / 1          | 4522 / 1           | 4523 / 2          | 4521 / 2          |

## Field and Laboratory Data

|                                                |               |               |               |               |
|------------------------------------------------|---------------|---------------|---------------|---------------|
| Depth of Test (mm)                             | 275           | 275           | 275           | 275           |
| Depth of Layer (mm)                            | 300           | 300           | 300           | 300           |
| AS Sieve Size (mm)                             | 19.0          | 19.0          | 19.0          | 19.0          |
| Oversize Wet (%)                               | 0             | 0             | 0             | 0             |
| Field Moisture Content (%)                     | 14.6          | 21.7          | 19.0          | 12.5          |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |
| Field Wet Density (t/m <sup>3</sup> )          | 2.10          | 1.98          | 2.03          | 2.02          |
| Field Dry Density (t/m <sup>3</sup> )          | 1.83          | 1.63          | 1.71          | 1.80          |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.09          | 1.99          | 2.00          | 2.12          |
| Optimum Moisture Content (%)                   | 15.0          | 22.5          | 21.0          | 13.0          |
| Compactive Effort                              | Standard      | Standard      | Standard      | Standard      |
| Moisture Ratio (%)                             | 97.5          | 95.5          | 91.0          | 96.0          |
| Moisture Variation (%)                         | 0.5 dry       | 1.0 dry       | 2.0 dry       | 0.5 dry       |
| Hilf Density Ratio (%)                         | <b>100.5</b>  | <b>99.5</b>   | <b>101.5</b>  | <b>95.5</b>   |

## Comments



**Dandenong South**  
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**Report No: HDR:W23DS01300**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**Order No.:**  
**TRN:**

**CG Request No.:**  
**Lot No.:**

Accredited for compliance with ISO/IEC 17025  
 - Testing



Accreditation Number: 12719  
 Site Number: 12712

Approved Signatory: M. Longfield  
 (Senior Technician)  
 Date of Issue: 20/06/2023

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95% (+- 3% of OMC)  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** AS1289.1.2.1 Clause 6.4 (b)  
**Source:** Onsite  
**Material:** Sandy Clay, traces of Gravel

## Sample Data

| Sample ID        | S23DS-04410       | S23DS-04411       |  |  |  |
|------------------|-------------------|-------------------|--|--|--|
| Field Sample ID  | 1                 | 2                 |  |  |  |
| Client Sample ID | 86                | 87                |  |  |  |
| Date Tested      | 25/05/2023        | 25/05/2023        |  |  |  |
| Time Tested      | 12:03             | 12:06             |  |  |  |
| E:               | 2776.229 (356598) | 2750.881 (356573) |  |  |  |
| N:               | 200.848 (5781041) | 203.440 (5781043) |  |  |  |
| EL:              | 37.510            | 37.902            |  |  |  |
| Lot / Layer:     | 4519 / 1          | 4521 / 3          |  |  |  |

## Field and Laboratory Data

|                                   |             |             |  |  |  |
|-----------------------------------|-------------|-------------|--|--|--|
| Depth of Test (mm)                | 275         | 275         |  |  |  |
| Depth of Layer (mm)               | 300         | 300         |  |  |  |
| AS Sieve Size (mm)                | 19.0        | 19.0        |  |  |  |
| Oversize Wet (%)                  | 0           | 0           |  |  |  |
| Field Wet Density (t/m³)          | 2.07        | 2.04        |  |  |  |
| Peak Converted Wet Density (t/m³) | 2.13        | 2.12        |  |  |  |
| Compactive Effort                 | Standard    | Standard    |  |  |  |
| Moisture Variation (%)            | 0.5 dry     | 0.0         |  |  |  |
| Hilf Density Ratio (%)            | <b>97.0</b> | <b>96.0</b> |  |  |  |

## Comments



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**Report No: HDR:W23DS01556**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 3/07/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

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

## Sample Data

|                 |                   |  |  |  |  |
|-----------------|-------------------|--|--|--|--|
| Sample ID       | S23DS-05161       |  |  |  |  |
| Field Sample ID | 1                 |  |  |  |  |
| Date Tested     | 27/06/2023        |  |  |  |  |
| Time Tested     | 14:24             |  |  |  |  |
| E:              | 2720.508 (356546) |  |  |  |  |
| N:              | 217.726 (5781062) |  |  |  |  |
| EL:             | 38.126            |  |  |  |  |
| Lot / Layer:    | 4523 / 1          |  |  |  |  |

## Field and Laboratory Data

|                                                |               |  |  |  |  |
|------------------------------------------------|---------------|--|--|--|--|
| Depth of Test (mm)                             | 225           |  |  |  |  |
| Depth of Layer (mm)                            | 250           |  |  |  |  |
| AS Sieve Size (mm)                             | 19.0          |  |  |  |  |
| Oversize Wet (%)                               | 0             |  |  |  |  |
| Field Moisture Content (%)                     | 20.6          |  |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.04          |  |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.69          |  |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 1.98          |  |  |  |  |
| Optimum Moisture Content (%)                   | 21.5          |  |  |  |  |
| Compactive Effort                              | Standard      |  |  |  |  |
| Moisture Ratio (%)                             | 97.0          |  |  |  |  |
| Moisture Variation (%)                         | 0.5 dry       |  |  |  |  |
| Hilf Density Ratio (%)                         | <b>102.5</b>  |  |  |  |  |

## Comments



**Dandenong South**  
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**Report No: HDR:W23DS01660**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 17/07/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

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

## Sample Data

|                  |                   |  |  |  |  |
|------------------|-------------------|--|--|--|--|
| Sample ID        | S23DS-05584       |  |  |  |  |
| Field Sample ID  | 1                 |  |  |  |  |
| Client Sample ID | 90                |  |  |  |  |
| Date Tested      | 13/07/2023        |  |  |  |  |
| Time Tested      | 14:22             |  |  |  |  |
| E:               | 2747.220 (356571) |  |  |  |  |
| N:               | 156.850 (5780997) |  |  |  |  |
| EL:              | 35.865            |  |  |  |  |
| Layer:           | 1                 |  |  |  |  |

## Field and Laboratory Data

|                                                |               |  |  |  |  |
|------------------------------------------------|---------------|--|--|--|--|
| Depth of Test (mm)                             | 175           |  |  |  |  |
| Depth of Layer (mm)                            | 200           |  |  |  |  |
| AS Sieve Size (mm)                             | 19.0          |  |  |  |  |
| Oversize Wet (%)                               | 0             |  |  |  |  |
| Field Moisture Content (%)                     | 19.6          |  |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 1.89          |  |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.58          |  |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.06          |  |  |  |  |
| Optimum Moisture Content (%)                   | 19.0          |  |  |  |  |
| Compactive Effort                              | Standard      |  |  |  |  |
| Moisture Ratio (%)                             | 104.0         |  |  |  |  |
| Moisture Variation (%)                         | 0.5 wet       |  |  |  |  |
| Hilf Density Ratio (%)                         | <b>91.5</b>   |  |  |  |  |

## Comments



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**Report No: HDR:W23DS01668**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**Order No.:** **CG Request No.:**  
**TRN:** **Lot No.:**

Accredited for compliance with ISO/IEC 17025  
 - Testing



Accreditation Number: 12719  
 Site Number: 12712  
 Approved Signatory: M. Longfield  
 (Senior Technician)  
 Date of Issue: 18/07/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

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

## Sample Data

| Sample ID        | S23DS-05602              | S23DS-05603       |  |  |  |  |
|------------------|--------------------------|-------------------|--|--|--|--|
| Field Sample ID  | 1                        | 2                 |  |  |  |  |
| Client Sample ID | 91                       | 92                |  |  |  |  |
| Date Tested      | 14/07/2023               | 14/07/2023        |  |  |  |  |
| Time Tested      | 11:54                    | 12:03             |  |  |  |  |
| E:               | -(356571)                | 2717.200 (356541) |  |  |  |  |
| N:               | -(5780999)               | 158.800 (5781003) |  |  |  |  |
| EL:              | -                        | 36.715            |  |  |  |  |
| Layer:           | 1                        | 2                 |  |  |  |  |
|                  | Retest of<br>S23DS-05584 | Alambadi Circuit  |  |  |  |  |

## Field and Laboratory Data

|                                                |               |               |  |  |  |  |
|------------------------------------------------|---------------|---------------|--|--|--|--|
| Depth of Test (mm)                             | 175           | 275           |  |  |  |  |
| Depth of Layer (mm)                            | 200           | 300           |  |  |  |  |
| AS Sieve Size (mm)                             | 19.0          | 19.0          |  |  |  |  |
| Oversize Wet (%)                               | 0             | 0             |  |  |  |  |
| Field Moisture Content (%)                     | 15.1          | 16.7          |  |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.08          | 2.11          |  |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.81          | 1.81          |  |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.02          | 2.09          |  |  |  |  |
| Optimum Moisture Content (%)                   | 17.5          | 17.0          |  |  |  |  |
| Compactive Effort                              | Standard      | Standard      |  |  |  |  |
| Moisture Ratio (%)                             | 86.0          | 98.5          |  |  |  |  |
| Moisture Variation (%)                         | 2.5 dry       | 0.0           |  |  |  |  |
| Hilf Density Ratio (%)                         | <b>103.5</b>  | <b>101.0</b>  |  |  |  |  |

## Comments



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**Report No: HDR:W23DS01680**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 20/07/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

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

## Sample Data

| Sample ID       | S23DS-05678       | S23DS-05679       |  |  |  |
|-----------------|-------------------|-------------------|--|--|--|
| Field Sample ID | 1                 | 2                 |  |  |  |
| Date Tested     | 17/07/2023        | 17/07/2023        |  |  |  |
| Time Tested     | 10:30             | 14:42             |  |  |  |
| E:              | 2735.305 (356560) | 2759.445 (356582) |  |  |  |
| N:              | 158.140 (5781000) | 154.920 (5780998) |  |  |  |
| EL:             | 36.480            | 36.238            |  |  |  |
| Layer:          | 3                 | 4                 |  |  |  |
|                 | Alambadi Circuit  | Alambadi Circuit  |  |  |  |

## Field and Laboratory Data

|                                                |               |               |  |  |  |
|------------------------------------------------|---------------|---------------|--|--|--|
| Depth of Test (mm)                             | 275           | 225           |  |  |  |
| Depth of Layer (mm)                            | 300           | 250           |  |  |  |
| AS Sieve Size (mm)                             | 19.0          | 19.0          |  |  |  |
| Oversize Wet (%)                               | 0             | 0             |  |  |  |
| Field Moisture Content (%)                     | 16.7          | 16.2          |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.08          | 2.06          |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.78          | 1.77          |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.07          | 2.11          |  |  |  |
| Optimum Moisture Content (%)                   | 17.0          | 16.0          |  |  |  |
| Compactive Effort                              | Standard      | Standard      |  |  |  |
| Moisture Ratio (%)                             | 97.0          | 100.0         |  |  |  |
| Moisture Variation (%)                         | 0.5 dry       | 0.0           |  |  |  |
| Hilf Density Ratio (%)                         | <b>100.5</b>  | <b>97.5</b>   |  |  |  |

## Comments



**Dandenong South**  
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**Report No: HDR:W23DS01688**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 20/07/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

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

## Sample Data

|                  |                   |  |  |  |  |
|------------------|-------------------|--|--|--|--|
| Sample ID        | S23DS-05709       |  |  |  |  |
| Field Sample ID  | 1                 |  |  |  |  |
| Client Sample ID | 95                |  |  |  |  |
| Date Tested      | 18/07/2023        |  |  |  |  |
| Time Tested      | 13:48             |  |  |  |  |
| E:               | 2738.145 (356564) |  |  |  |  |
| N:               | 159.050 (5781001) |  |  |  |  |
| EL:              | 37.020            |  |  |  |  |
| Layer:           | 5                 |  |  |  |  |
|                  | Alambadi Circuit  |  |  |  |  |

## Field and Laboratory Data

|                                                |               |  |  |  |  |
|------------------------------------------------|---------------|--|--|--|--|
| Depth of Test (mm)                             | 225           |  |  |  |  |
| Depth of Layer (mm)                            | 250           |  |  |  |  |
| AS Sieve Size (mm)                             | 19.0          |  |  |  |  |
| Oversize Wet (%)                               | 0             |  |  |  |  |
| Field Moisture Content (%)                     | 21.9          |  |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.07          |  |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.70          |  |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.00          |  |  |  |  |
| Optimum Moisture Content (%)                   | 21.5          |  |  |  |  |
| Compactive Effort                              | Standard      |  |  |  |  |
| Moisture Ratio (%)                             | 102.5         |  |  |  |  |
| Moisture Variation (%)                         | 0.5 wet       |  |  |  |  |
| Hilf Density Ratio (%)                         | <b>103.5</b>  |  |  |  |  |

**Comments**





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**Report No: HDR:W23DS01698**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 24/07/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

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

## Sample Data

|                         |                   |                   |  |  |  |
|-------------------------|-------------------|-------------------|--|--|--|
| <b>Sample ID</b>        | S23DS-05734       | S23DS-05735       |  |  |  |
| <b>Field Sample ID</b>  | 1                 | 2                 |  |  |  |
| <b>Client Sample ID</b> | 96                | 97                |  |  |  |
| <b>Date Tested</b>      | 19/07/2023        | 19/07/2023        |  |  |  |
| <b>Time Tested</b>      | 10:56             | 12:38             |  |  |  |
| <b>E:</b>               | 2779.333 (356602) | 2746.400 (356570) |  |  |  |
| <b>N:</b>               | 213.250 (5781056) | 157.300 (5781000) |  |  |  |
| <b>EL:</b>              | 37.350            | 36.920            |  |  |  |
| <b>Lot / Layer:</b>     | 4519 / 1          | - / 6             |  |  |  |
|                         |                   | Alambadi Circuit  |  |  |  |

## Field and Laboratory Data

|                                          |               |               |  |  |  |
|------------------------------------------|---------------|---------------|--|--|--|
| <b>Depth of Test (mm)</b>                | 175           | 250           |  |  |  |
| <b>Depth of Layer (mm)</b>               | 200           | 275           |  |  |  |
| <b>AS Sieve Size (mm)</b>                | 19.0          | 19.0          |  |  |  |
| <b>Oversize Wet (%)</b>                  | 0             | 0             |  |  |  |
| <b>Field Moisture Content (%)</b>        | 17.9          | 18.6          |  |  |  |
| <b>Field Moisture Content Method</b>     | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |  |
| <b>Field Wet Density (t/m³)</b>          | 2.08          | 2.07          |  |  |  |
| <b>Field Dry Density (t/m³)</b>          | 1.76          | 1.74          |  |  |  |
| <b>Peak Converted Wet Density (t/m³)</b> | 2.08          | 2.07          |  |  |  |
| <b>Optimum Moisture Content (%)</b>      | 17.5          | 18.0          |  |  |  |
| <b>Compactive Effort</b>                 | Standard      | Standard      |  |  |  |
| <b>Moisture Ratio (%)</b>                | 102.5         | 104.0         |  |  |  |
| <b>Moisture Variation (%)</b>            | 0.5 wet       | 0.5 wet       |  |  |  |
| <b>Hilf Density Ratio (%)</b>            | <b>100.0</b>  | <b>100.0</b>  |  |  |  |

## Comments



**Dandenong South**  
**ACN 143 009 330**  
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**Report No: HDR:W23DS01705**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**Order No.:**  
**TRN:**

**CG Request No.:**  
**Lot No.:**

Accredited for compliance with ISO/IEC 17025  
 - Testing

Accreditation Number: 12719  
 Site Number: 12712  
 Approved Signatory: M. Longfield  
 (Senior Technician)  
 Date of Issue: 24/07/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

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

## Sample Data

| Sample ID        | S23DS-05750       | S23DS-05751       | S23DS-05752       | S23DS-05753       |
|------------------|-------------------|-------------------|-------------------|-------------------|
| Field Sample ID  | 1                 | 2                 | 3                 | 4                 |
| Client Sample ID | 98                | 99                | 100               | 101               |
| Date Tested      | 20/07/2023        | 20/07/2023        | 20/07/2023        | 20/07/2023        |
| Time Tested      | 10:27             | 12:35             | 12:44             | 13:38             |
| E:               | 2764.530 (356590) | 2775.260 (356599) | 2821.720 (356647) | 2747.940 (356572) |
| N:               | 215.190 (5781058) | 152.236 (5780992) | 158.400 (5781001) | 214.922 (5781057) |
| EL:              | 37.658            | 35.445            | 34.630            | 37.625            |
| Lot / Layer:     | 4520 / 2          | - / 1             | - / 1             | 4521 / 1          |
|                  |                   | Alambadi Circuit  | Alambadi Circuit  |                   |

## Field and Laboratory Data

|                                                | S23DS-05750   | S23DS-05751   | S23DS-05752   | S23DS-05753   |
|------------------------------------------------|---------------|---------------|---------------|---------------|
| Depth of Test (mm)                             | 175           | 175           | 175           | 175           |
| Depth of Layer (mm)                            | 200           | 200           | 200           | 200           |
| AS Sieve Size (mm)                             | 19.0          | 19.0          | 19.0          | 19.0          |
| Oversize Wet (%)                               | 0             | 0             | 0             | 0             |
| Field Moisture Content (%)                     | 19.3          | 16.7          | 16.8          | 18.0          |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |
| Field Wet Density (t/m <sup>3</sup> )          | 2.03          | 2.09          | 2.09          | 2.07          |
| Field Dry Density (t/m <sup>3</sup> )          | 1.70          | 1.79          | 1.79          | 1.76          |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.03          | 2.10          | 2.10          | 2.12          |
| Optimum Moisture Content (%)                   | 18.5          | 17.0          | 17.0          | 18.5          |
| Compactive Effort                              | Standard      | Standard      | Standard      | Standard      |
| Moisture Ratio (%)                             | 103.0         | 97.5          | 99.0          | 98.0          |
| Moisture Variation (%)                         | 0.5 wet       | 0.5 dry       | 0.0           | 0.5 dry       |
| Hilf Density Ratio (%)                         | <b>100.5</b>  | <b>99.5</b>   | <b>99.5</b>   | <b>98.0</b>   |

## Comments



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**Report No: HDR:W23DS01710**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 7/08/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

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

## Sample Data

| Sample ID        | S23DS-05767        | S23DS-05768       | S23DS-05769       |  |  |
|------------------|--------------------|-------------------|-------------------|--|--|
| Field Sample ID  | 1                  | 2                 | 3                 |  |  |
| Client Sample ID | 102                | 03                | 104               |  |  |
| Date Tested      | 21/07/2023         | 21/07/2023        | 21/07/2023        |  |  |
| Time Tested      | 11:03              | 14:11             | 14:20             |  |  |
| E:               | 2735.250 (3566561) | 2786.070 (356610) | 2832.835 (356656) |  |  |
| N:               | 224.750 (5781067)  | 151.444 (5780997) | 162.135 (5781006) |  |  |
| EL:              | 38.186             | 35.560            | 34.815            |  |  |
| Lot / Layer:     | 4522 / 2           | - / 2             | - / 2             |  |  |
|                  |                    | Alambadi Circuit  | Alambadi Circuit  |  |  |

## Field and Laboratory Data

|                                                |               |               |               |  |  |
|------------------------------------------------|---------------|---------------|---------------|--|--|
| Depth of Test (mm)                             | 175           | 175           | 175           |  |  |
| Depth of Layer (mm)                            | 200           | 200           | 200           |  |  |
| AS Sieve Size (mm)                             | 19.0          | 19.0          | 19.0          |  |  |
| Oversize Wet (%)                               | 0             | 0             | 0             |  |  |
| Field Moisture Content (%)                     | 16.4          | 16.3          | 15.8          |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.06          | 2.09          | 2.09          |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.77          | 1.79          | 1.81          |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.09          | 2.05          | 2.07          |  |  |
| Optimum Moisture Content (%)                   | 16.5          | 16.5          | 16.5          |  |  |
| Compactive Effort                              | Standard      | Standard      | Standard      |  |  |
| Moisture Ratio (%)                             | 99.0          | 100.0         | 97.0          |  |  |
| Moisture Variation (%)                         | 0.0           | 0.0           | 0.5 dry       |  |  |
| Hilf Density Ratio (%)                         | <b>98.5</b>   | <b>102.0</b>  | <b>101.0</b>  |  |  |

## Comments



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**Report No: HDR:W23DS01732**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 7/08/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

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

## Sample Data

| Sample ID        | S23DS-05848       | S23DS-05849       |  |  |  |
|------------------|-------------------|-------------------|--|--|--|
| Field Sample ID  | 1                 | 2                 |  |  |  |
| Client Sample ID | 105               | 106               |  |  |  |
| Date Tested      | 24/07/2023        | 24/07/2023        |  |  |  |
| Time Tested      | 14:49             | 14:57             |  |  |  |
| E:               | 2747.240 (356571) | 2778.310 (356602) |  |  |  |
| N:               | 216.940 (5781062) | 212.320 (5781053) |  |  |  |
| EL:              | 38.200            | 37.870            |  |  |  |
| Lot / Layer:     | 4521 / 3          | 4519 / 3          |  |  |  |

## Field and Laboratory Data

|                                                |               |               |  |  |  |
|------------------------------------------------|---------------|---------------|--|--|--|
| Depth of Test (mm)                             | 175           | 175           |  |  |  |
| Depth of Layer (mm)                            | 200           | 200           |  |  |  |
| AS Sieve Size (mm)                             | 19.0          | 19.0          |  |  |  |
| Oversize Wet (%)                               | 0             | 0             |  |  |  |
| Field Moisture Content (%)                     | 19.9          | 17.8          |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.03          | 2.05          |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.69          | 1.74          |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.05          | 2.08          |  |  |  |
| Optimum Moisture Content (%)                   | 19.5          | 17.5          |  |  |  |
| Compactive Effort                              | Standard      | Standard      |  |  |  |
| Moisture Ratio (%)                             | 102.0         | 101.5         |  |  |  |
| Moisture Variation (%)                         | 0.5 wet       | 0.5 wet       |  |  |  |
| Hilf Density Ratio (%)                         | <b>99.0</b>   | <b>98.0</b>   |  |  |  |

## Comments



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**Report No: HDR:W23DS01749**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 7/08/2023

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## Sample Details

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

## Sample Data

| Sample ID       | S23DS-05913       | S23DS-05914       |  |  |  |
|-----------------|-------------------|-------------------|--|--|--|
| Field Sample ID | 1                 | 2                 |  |  |  |
| Date Tested     | 25/07/2023        | 25/07/2023        |  |  |  |
| Time Tested     | 11:57             | 12:06             |  |  |  |
| E:              | 2798.970 (356623) | 2830.840 (355654) |  |  |  |
| N:              | 150.595 (5780993) | 163.590 (5781002) |  |  |  |
| EL:             | 35.420            | 35.030            |  |  |  |
| Layer:          | 3                 | 3                 |  |  |  |
|                 | Alambadi Circuit  | Alambadi Circuit  |  |  |  |

## 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 Moisture Content (%)                     | 16.1          | 14.7          |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.07          | 2.07          |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.78          | 1.80          |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.13          | 2.13          |  |  |  |
| Optimum Moisture Content (%)                   | 16.0          | 15.0          |  |  |  |
| Compactive Effort                              | Standard      | Standard      |  |  |  |
| Moisture Ratio (%)                             | 99.5          | 99.5          |  |  |  |
| Moisture Variation (%)                         | 0.0           | 0.0           |  |  |  |
| Hilf Density Ratio (%)                         | <b>97.5</b>   | <b>97.0</b>   |  |  |  |

## Comments



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**Report No: HDR:W23DS01759**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 7/08/2023  
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## Sample Details

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

## Sample Data

| Sample ID        | S23DS-05961       | S23DS-05962       | S23DS-05963       | S23DS-05964        | S23DS-05965       |
|------------------|-------------------|-------------------|-------------------|--------------------|-------------------|
| Field Sample ID  | 1                 | 2                 | 3                 | 4                  | 5                 |
| Client Sample ID | 109               | 110               | 111               | 112                | 113               |
| Date Tested      | 26/07/2023        | 26/07/2023        | 26/07/2023        | 26/07/2023         | 26/07/2023        |
| Time Tested      | 10:29             | 10:40             | 11:54             | 12:03              | 13:43             |
| E:               | 2736.770 (356561) | 2763.240 (356588) | 2773.078 (356597) | 28069.123 (356633) | 2853.430 (356677) |
| N:               | 228.690 (5781071) | 220.510 (5781063) | 154.106 (5781000) | 154.060 (5780995)  | 170.710 (5781014) |
| EL:              | 38.675            | 38.185            | 36.459            | 35.480             | 34.550            |
| Lot / Layer:     | 4522 / 4          | 4520 / 4          | - / 4             | - / 4              | - / 1             |
|                  |                   |                   | Alambadi Circuit  | Alambadi Circuit   | Alambadi Circuit  |

## Field and Laboratory Data

|                                                | S23DS-05961   | S23DS-05962   | S23DS-05963   | S23DS-05964   | S23DS-05965   |
|------------------------------------------------|---------------|---------------|---------------|---------------|---------------|
| 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             |
| Field Moisture Content (%)                     | 13.7          | 15.7          | 14.7          | 17.6          | 18.7          |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |
| Field Wet Density (t/m <sup>3</sup> )          | 2.12          | 2.05          | 2.05          | 2.08          | 2.08          |
| Field Dry Density (t/m <sup>3</sup> )          | 1.87          | 1.77          | 1.79          | 1.77          | 1.76          |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.13          | 2.11          | 2.13          | 2.11          | 2.04          |
| Optimum Moisture Content (%)                   | 14.0          | 15.5          | 15.0          | 17.5          | 18.5          |
| Compactive Effort                              | Standard      | Standard      | Standard      | Standard      | Standard      |
| Moisture Ratio (%)                             | 98.0          | 100.5         | 99.0          | 100.0         | 100.0         |
| Moisture Variation (%)                         | 0.5 dry       | 0.0           | 0.0           | 0.0           | 0.0           |
| Hilf Density Ratio (%)                         | <b>100.0</b>  | <b>97.5</b>   | <b>96.5</b>   | <b>98.5</b>   | <b>102.0</b>  |

## Comments



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**Report No: HDR:W23DS01771**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 7/08/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

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

## Sample Data

| Sample ID        | S23DS-06011       | S23DS-06012       | S23DS-06013       |  |  |
|------------------|-------------------|-------------------|-------------------|--|--|
| Field Sample ID  | 1                 | 2                 | 3                 |  |  |
| Client Sample ID | 114               | 115               | 116               |  |  |
| Date Tested      | 27/07/2023        | 27/07/2023        | 27/07/2023        |  |  |
| Time Tested      | 11:26             | 11:32             | 11:43             |  |  |
| E:               | 2765.520 (356590) | 2795.020 (356619) | 2840.690 (356663) |  |  |
| N:               | 155.966 (5780995) | 151.480 (5780992) | 164.840 (5781007) |  |  |
| EL:              | 36.610            | 36.070            | 34.805            |  |  |
| Layer:           | 5                 | 5                 | 2                 |  |  |
|                  | Alambadi Circuit  | Alambadi Circuit  | Alambadi Circuit  |  |  |

## Field and Laboratory Data

|                                                |               |               |               |  |  |
|------------------------------------------------|---------------|---------------|---------------|--|--|
| Depth of Test (mm)                             | 225           | 225           | 225           |  |  |
| Depth of Layer (mm)                            | 250           | 250           | 250           |  |  |
| AS Sieve Size (mm)                             | 19.0          | 19.0          | 19.0          |  |  |
| Oversize Wet (%)                               |               |               | 0             |  |  |
| Field Moisture Content (%)                     | 17.2          | 18.3          | 17.5          |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.07          | 2.09          | 2.06          |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.77          | 1.76          | 1.75          |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.10          | 2.10          | 2.09          |  |  |
| Optimum Moisture Content (%)                   | 16.5          | 16.0          | 18.0          |  |  |
| Compactive Effort                              | Standard      | Standard      | Standard      |  |  |
| Moisture Ratio (%)                             | 104.0         | 115.5         | 97.5          |  |  |
| Moisture Variation (%)                         | 0.5 wet       | 2.5 wet       | 0.5 dry       |  |  |
| Hilf Density Ratio (%)                         | <b>98.5</b>   | <b>99.5</b>   | <b>98.5</b>   |  |  |

**Comments**



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**Report No: HDR:W23DS01798**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 7/08/2023  
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## Sample Details

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

## Sample Data

| Sample ID        | S23DS-06118       | S23DS-06119       | S23DS-06120       |  |  |
|------------------|-------------------|-------------------|-------------------|--|--|
| Field Sample ID  | 1                 | 2                 | 3                 |  |  |
| Client Sample ID | 117               | 118               | 119               |  |  |
| Date Tested      | 31/07/2023        | 31/07/2023        | 31/07/2023        |  |  |
| Time Tested      | 07:59             | 08:24             | 12:47             |  |  |
| E:               | 2782.795 (356606) | 2836.980 (356657) | 2870.975 (356695) |  |  |
| N:               | 157.535 (5780999) | 164.700 (5781006) | 189.480 (5781033) |  |  |
| EL:              | 36.380            | 35.245            | 34.790            |  |  |
| Layer:           | 6                 | 6                 | 1                 |  |  |
|                  | Alambadi Circuit  | Alambadi Circuit  | Alambadi Circuit  |  |  |

## Field and Laboratory Data

|                                                |               |               |               |  |  |
|------------------------------------------------|---------------|---------------|---------------|--|--|
| Depth of Test (mm)                             | 225           | 225           | 225           |  |  |
| Depth of Layer (mm)                            | 250           | 250           | 250           |  |  |
| AS Sieve Size (mm)                             | 19.0          | 19.0          | 19.0          |  |  |
| Oversize Wet (%)                               | 0             | 0             | 0             |  |  |
| Field Moisture Content (%)                     | 16.9          | 17.7          | 21.4          |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.11          | 2.04          | 2.02          |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.80          | 1.73          | 1.66          |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.08          | 2.05          | 1.99          |  |  |
| Optimum Moisture Content (%)                   | 16.5          | 18.0          | 21.0          |  |  |
| Compactive Effort                              | Standard      | Standard      | Standard      |  |  |
| Moisture Ratio (%)                             | 101.0         | 98.5          | 103.0         |  |  |
| Moisture Variation (%)                         | 0.0           | 0.0           | 0.5 wet       |  |  |
| Hilf Density Ratio (%)                         | <b>101.5</b>  | <b>99.5</b>   | <b>101.0</b>  |  |  |

## Comments





**Dandenong South**  
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**Report No: HDR:W23DS01811**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 7/08/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

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

## Sample Data

|                         |                   |                   |  |  |  |
|-------------------------|-------------------|-------------------|--|--|--|
| <b>Sample ID</b>        | S23DS-06162       | S23DS-06163       |  |  |  |
| <b>Field Sample ID</b>  | 1                 | 2                 |  |  |  |
| <b>Client Sample ID</b> | 120               | 121               |  |  |  |
| <b>Date Tested</b>      | 1/08/2023         | 1/08/2023         |  |  |  |
| <b>Time Tested</b>      | 07:40             |                   |  |  |  |
| <b>E:</b>               | 2842.560 (356666) | 2872.400 (356695) |  |  |  |
| <b>N:</b>               | 166.500 (5781010) | 207.580 (5781051) |  |  |  |
| <b>EL:</b>              | 35.026            | 35.515            |  |  |  |
| <b>Layer:</b>           | 3                 | 2                 |  |  |  |
|                         | Alambadi Circuit  | Alambadi Circuit  |  |  |  |

## Field and Laboratory Data

|                                          |               |               |  |  |  |
|------------------------------------------|---------------|---------------|--|--|--|
| <b>Depth of Test (mm)</b>                | 225           | 225           |  |  |  |
| <b>Depth of Layer (mm)</b>               | 250           | 250           |  |  |  |
| <b>AS Sieve Size (mm)</b>                | 19.0          | 19.0          |  |  |  |
| <b>Oversize Wet (%)</b>                  | 0             | 0             |  |  |  |
| <b>Field Moisture Content (%)</b>        | 16.5          | 15.3          |  |  |  |
| <b>Field Moisture Content Method</b>     | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |  |
| <b>Field Wet Density (t/m³)</b>          | 2.09          | 2.15          |  |  |  |
| <b>Field Dry Density (t/m³)</b>          | 1.79          | 1.87          |  |  |  |
| <b>Peak Converted Wet Density (t/m³)</b> | 2.09          | 2.06          |  |  |  |
| <b>Optimum Moisture Content (%)</b>      | 16.5          | 15.0          |  |  |  |
| <b>Compactive Effort</b>                 | Standard      | Standard      |  |  |  |
| <b>Moisture Ratio (%)</b>                | 99.5          | 102.0         |  |  |  |
| <b>Moisture Variation (%)</b>            | 0.0           | 0.5 wet       |  |  |  |
| <b>Hilf Density Ratio (%)</b>            | <b>100.0</b>  | <b>104.5</b>  |  |  |  |

## Comments



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**Report No: HDR:W23DS01820**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 7/08/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

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

## Sample Data

|                  |                   |  |  |  |  |
|------------------|-------------------|--|--|--|--|
| Sample ID        | S23DS-06192       |  |  |  |  |
| Field Sample ID  | 1                 |  |  |  |  |
| Client Sample ID | 122               |  |  |  |  |
| Date Tested      | 2/08/2023         |  |  |  |  |
| Time Tested      | 13:45             |  |  |  |  |
| E:               | 2867.774 (356692) |  |  |  |  |
| N:               | 215.306 (5781058) |  |  |  |  |
| EL:              | 35.810            |  |  |  |  |
| Layer:           | 3                 |  |  |  |  |
|                  | Alambadi Circuit  |  |  |  |  |

## Field and Laboratory Data

|                                                |               |  |  |  |  |
|------------------------------------------------|---------------|--|--|--|--|
| Depth of Test (mm)                             | 225           |  |  |  |  |
| Depth of Layer (mm)                            | 250           |  |  |  |  |
| AS Sieve Size (mm)                             | 19.0          |  |  |  |  |
| Oversize Wet (%)                               | 0             |  |  |  |  |
| Field Moisture Content (%)                     | 18.3          |  |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.07          |  |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.75          |  |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.01          |  |  |  |  |
| Optimum Moisture Content (%)                   | 18.5          |  |  |  |  |
| Compactive Effort                              | Standard      |  |  |  |  |
| Moisture Ratio (%)                             | 99.0          |  |  |  |  |
| Moisture Variation (%)                         | 0.0           |  |  |  |  |
| Hilf Density Ratio (%)                         | <b>103.5</b>  |  |  |  |  |

**Comments**



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**Report No: HDR:W23DS01837**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 7/08/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

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

## Sample Data

|                  |                   |  |  |  |  |
|------------------|-------------------|--|--|--|--|
| Sample ID        | S23DS-06264       |  |  |  |  |
| Field Sample ID  | 1                 |  |  |  |  |
| Client Sample ID | 123               |  |  |  |  |
| Date Tested      | 3/08/2023         |  |  |  |  |
| Time Tested      | 12:42             |  |  |  |  |
| E:               | 2857.675 (356680) |  |  |  |  |
| N:               | 232.060 (5781070) |  |  |  |  |
| EL:              | 35.845            |  |  |  |  |
| Layer:           | 1                 |  |  |  |  |

## Field and Laboratory Data

|                                                |               |  |  |  |  |
|------------------------------------------------|---------------|--|--|--|--|
| Depth of Test (mm)                             | 275           |  |  |  |  |
| Depth of Layer (mm)                            | 300           |  |  |  |  |
| AS Sieve Size (mm)                             | 19.0          |  |  |  |  |
| Oversize Wet (%)                               | 0             |  |  |  |  |
| Field Moisture Content (%)                     | 20.3          |  |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.06          |  |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.71          |  |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.04          |  |  |  |  |
| Optimum Moisture Content (%)                   | 20.0          |  |  |  |  |
| Compactive Effort                              | Standard      |  |  |  |  |
| Moisture Ratio (%)                             | 102.0         |  |  |  |  |
| Moisture Variation (%)                         | 0.5 wet       |  |  |  |  |
| Hilf Density Ratio (%)                         | <b>101.5</b>  |  |  |  |  |

## Comments



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**Report No: HDR:W23DS01859**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 23/08/2023  
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## Sample Details

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

## Sample Data

| Sample ID       | S23DS-06344       | S23DS-06345       |  |  |  |
|-----------------|-------------------|-------------------|--|--|--|
| Field Sample ID | 1                 | 2                 |  |  |  |
| Date Tested     | 4/08/2023         | 4/08/2023         |  |  |  |
| Time Tested     | 09:36             | 13:54             |  |  |  |
| E:              | 2846.210 (356669) | 2844.445 (356666) |  |  |  |
| N:              | 247.467 (5781091) | 244.966 (5781093) |  |  |  |
| EL:             | 36.100            | 36.273            |  |  |  |
| Layer:          | 1                 | 2                 |  |  |  |
|                 | Alambadi Circuit  | Alambadi Circuit  |  |  |  |

## 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 Moisture Content (%)                     | 17.7          | 20.0          |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.04          | 1.96          |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.74          | 1.64          |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.07          | 2.04          |  |  |  |
| Optimum Moisture Content (%)                   | 18.0          | 20.0          |  |  |  |
| Compactive Effort                              | Standard      | Standard      |  |  |  |
| Moisture Ratio (%)                             | 99.5          | 100.5         |  |  |  |
| Moisture Variation (%)                         | 0.0           | 0.0           |  |  |  |
| Hilf Density Ratio (%)                         | <b>99.0</b>   | <b>96.5</b>   |  |  |  |

## Comments



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**Report No: HDR:W23DS01877**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 23/08/2023  
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## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95%  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:**  
**Source:** Onsite  
**Material:** Sandy Clay

## Sample Data

|                  |                   |  |  |  |  |
|------------------|-------------------|--|--|--|--|
| Sample ID        | S23DS-06386       |  |  |  |  |
| Field Sample ID  | 1                 |  |  |  |  |
| Client Sample ID | 126               |  |  |  |  |
| Date Tested      | 7/08/2023         |  |  |  |  |
| Time Tested      | 11:02             |  |  |  |  |
| E:               | 2865.320 (356689) |  |  |  |  |
| N:               | 222.605 (5781062) |  |  |  |  |
| EL:              | 36.065            |  |  |  |  |
| Layer:           | 2                 |  |  |  |  |
|                  | Alambadi Circuit  |  |  |  |  |

## Field and Laboratory Data

|                                                |               |  |  |  |  |
|------------------------------------------------|---------------|--|--|--|--|
| Depth of Test (mm)                             | 225           |  |  |  |  |
| Depth of Layer (mm)                            | 250           |  |  |  |  |
| AS Sieve Size (mm)                             | 19.0          |  |  |  |  |
| Oversize Wet (%)                               | 0             |  |  |  |  |
| Field Moisture Content (%)                     | 17.6          |  |  |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 |  |  |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.07          |  |  |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.76          |  |  |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.01          |  |  |  |  |
| Optimum Moisture Content (%)                   | 18.5          |  |  |  |  |
| Compactive Effort                              | Standard      |  |  |  |  |
| Moisture Ratio (%)                             | 94.5          |  |  |  |  |
| Moisture Variation (%)                         | 1.0 dry       |  |  |  |  |
| Hilf Density Ratio (%)                         | <b>102.5</b>  |  |  |  |  |

## Comments



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**Report No: HDR:W23DS01888**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 23/08/2023  
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## Sample Details

**Location:**  
**Client Request ID:**  
**Specification Requirements:** Minimum Hilf Density Ratio of 95%  
**Field Test procedures:** AS 1289.5.8.1  
**Laboratory Test procedures:** AS 1289.2.1.1, AS 1289.5.7.1  
**Sampling Method:** TSA-MAT-TP226 - Sampling of Soil, Agg. and Rocks  
**Source:** Onsite  
**Material:** Silty Clay

## Sample Data

|                  |                   |  |  |  |  |
|------------------|-------------------|--|--|--|--|
| Sample ID        | S23DS-06453       |  |  |  |  |
| Field Sample ID  | 1                 |  |  |  |  |
| Client Sample ID | 127               |  |  |  |  |
| Date Tested      | 8/08/2023         |  |  |  |  |
| Time Tested      | 11:02             |  |  |  |  |
| E:               | 2846.160 (356670) |  |  |  |  |
| N:               | 256.660 (5781101) |  |  |  |  |
| EL:              | 36.990            |  |  |  |  |
| Layer:           | 3                 |  |  |  |  |
|                  | Alambadi Circuit  |  |  |  |  |

## 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)          | 1.99        |  |  |  |  |
| Peak Converted Wet Density (t/m³) | 2.07        |  |  |  |  |
| Compactive Effort                 | Standard    |  |  |  |  |
| Moisture Variation (%)            | 0.5 wet     |  |  |  |  |
| Hilf Density Ratio (%)            | <b>96.5</b> |  |  |  |  |

**Comments**



**Dandenong South**  
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**Report No: HDR:W23DS01915**

**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 23/08/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

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

## Sample Data

| Sample ID        | S23DS-06596       | S23DS-06597       | S23DS-06598       |  |  |
|------------------|-------------------|-------------------|-------------------|--|--|
| Field Sample ID  | 1                 | 2                 | 3                 |  |  |
| Client Sample ID | 128               | 129               | 130               |  |  |
| Date Tested      | 9/08/2023         | 9/08/2023         | 9/08/2023         |  |  |
| Time Tested      | 10:46             | 10:55             | 11:06             |  |  |
| E:               | 2815.400 (356639) | 2833.327 (356658) | 2879.150 (356702) |  |  |
| N:               | 305.340 (5781147) | 280.280 (5781122) | 192.540 (5781033) |  |  |
| EL:              | 38.065            | 37.350            | 35.500            |  |  |
| Layer:           | 1                 | 2                 | 4                 |  |  |
|                  | Alambadi Circuit  | Alambadi Circuit  | Alambadi Circuit  |  |  |

## Field and Laboratory Data

|                                                |               |               |               |  |  |
|------------------------------------------------|---------------|---------------|---------------|--|--|
| Depth of Test (mm)                             | 225           | 225           | 225           |  |  |
| Depth of Layer (mm)                            | 250           | 250           | 250           |  |  |
| AS Sieve Size (mm)                             | 19.0          | 19.0          | 19.0          |  |  |
| Oversize Wet (%)                               | 0             | 0             | 0             |  |  |
| Field Moisture Content (%)                     | 16.3          | 17.9          | 14.3          |  |  |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |  |  |
| Field Wet Density (t/m <sup>3</sup> )          | 2.06          | 2.03          | 2.11          |  |  |
| Field Dry Density (t/m <sup>3</sup> )          | 1.77          | 1.72          | 1.85          |  |  |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.10          | 2.03          | 2.05          |  |  |
| Optimum Moisture Content (%)                   | 16.0          | 20.5          | 16.0          |  |  |
| Compactive Effort                              | Standard      | Standard      | Standard      |  |  |
| Moisture Ratio (%)                             | 101.0         | 88.0          | 89.0          |  |  |
| Moisture Variation (%)                         | 0.0           | 2.5 dry       | 2.0 dry       |  |  |
| Hilf Density Ratio (%)                         | <b>98.5</b>   | <b>100.0</b>  | <b>103.0</b>  |  |  |

## Comments



**Dandenong South**  
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**Report No: HDR:W23DS01941**


**Issue No: 1**

# HILF Density Ratio Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 23/08/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

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

## Sample Data

| Sample ID        | S23DS-06677       | S23DS-06678       | S23DS-06679       | S23DS-06680       | S23DS-06681       |
|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Field Sample ID  | 1                 | 2                 | 3                 | 4                 | 5                 |
| Client Sample ID | 131               | 132               | 133               | 134               | 135               |
| Date Tested      | 11/08/2023        | 11/08/2023        | 11/08/2023        | 11/08/2023        | 11/08/2023        |
| Time Tested      | 08:20             | 08:27             | 14:00             | 14:12             | 14:21             |
| E:               | 2807.240 (356632) | 2821.120 (356643) | 2835.110 (356658) | 2851.735 (356677) | 2867.400 (356689) |
| N:               | 316.055 (5781159) | 289.465 (5781130) | 277.890 (5781121) | 244.600 (5781085) | 218.680 (5781060) |
| EL:              | 38.405            | 37.850            | 37.695            | 36.930            | 36.292            |
| Layer:           | 3                 | 3                 | 5                 | 5                 | 5                 |
|                  | Alambadi Circuit  | Alambadi Circuit  | Alambadi Circuit  | Alambadi Circuit  | Alambadi Circuit  |

## Field and Laboratory Data

|                                                |               |               |               |               |               |
|------------------------------------------------|---------------|---------------|---------------|---------------|---------------|
| Depth of Test (mm)                             | 225           | 225           | 225           | 225           | 225           |
| Depth of Layer (mm)                            | 250           | 250           | 250           | 250           | 250           |
| AS Sieve Size (mm)                             | 19.0          | 19.0          | 19.0          | 19.0          | 19.0          |
| Oversize Wet (%)                               | 0             | 0             | 0             | 0             | 0             |
| Field Moisture Content (%)                     | 16.7          | 15.9          | 16.5          | 18.0          | 16.5          |
| Field Moisture Content Method                  | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 | AS 1289.2.1.1 |
| Field Wet Density (t/m <sup>3</sup> )          | 2.10          | 2.10          | 2.10          | 2.06          | 2.09          |
| Field Dry Density (t/m <sup>3</sup> )          | 1.80          | 1.81          | 1.80          | 1.75          | 1.80          |
| Peak Converted Wet Density (t/m <sup>3</sup> ) | 2.10          | 2.09          | 2.08          | 2.03          | 2.03          |
| Optimum Moisture Content (%)                   | 17.0          | 16.5          | 17.0          | 18.5          | 19.0          |
| Compactive Effort                              | Standard      | Standard      | Standard      | Standard      | Standard      |
| Moisture Ratio (%)                             | 97.0          | 97.5          | 98.0          | 98.5          | 88.0          |
| Moisture Variation (%)                         | 0.5 dry       | 0.5 dry       | 0.5 dry       | 0.5 dry       | 2.0 dry       |
| Hilf Density Ratio (%)                         | <b>100.0</b>  | <b>100.5</b>  | <b>101.0</b>  | <b>101.5</b>  | <b>103.0</b>  |

## Comments





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

**Report No: MAT:S23DS-05754/1**

**Issue No: 1**

# Material Test Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 7/08/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

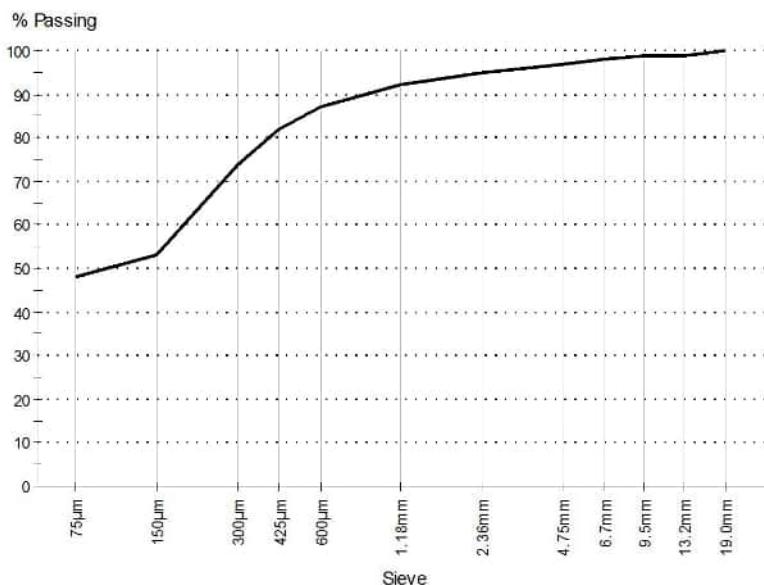
**Sample Location** 2764.530 (356590), 215.190 (5781058), EL: 37.6588, Lot: 4520, Layer: 2  
**Field Sample ID** 1  
**Date Sampled** 20/07/2023  
**Time Sampled** 10:27  
**Source** Onsite  
**Material** Sandy Clay, traces of Gravel  
**Specification** AS Grading  
**Sampling Method** AS1289.1.2.1 Clause 6.4 (b)  
**Sample ID** S23DS-05754

## Other Test Results

| Description          | Method        | Result     | Limits |
|----------------------|---------------|------------|--------|
| Moisture Content (%) | AS 1289.2.1.1 | 20.5       |        |
| Sample History       | AS 1289.1.1   | Oven-dried |        |
| Preparation          | AS 1289.1.1   | Dry Sieved |        |
| Linear Shrinkage (%) | AS 1289.3.4.1 | 10.0       |        |
| Mould Length (mm)    |               | 250        |        |
| Crumbling            |               | No         |        |

## Particle Size Distribution

AS 1289.3.6.1



**Drying By:** Oven  
**Date Tested:** 24/07/2023

**Note:** Sample Washed

| Sieve Size | % Passing | Limits |
|------------|-----------|--------|
| 19.0mm     | 100       |        |
| 13.2mm     | 99        |        |
| 9.5mm      | 99        |        |
| 6.7mm      | 98        |        |
| 4.75mm     | 97        |        |
| 2.36mm     | 95        |        |
| 1.18mm     | 92        |        |
| 600µm      | 87        |        |
| 425µm      | 82        |        |
| 300µm      | 74        |        |
| 150µm      | 53        |        |
| 75µm       | 48        |        |

## Comments

N/A



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**Report No: MAT:S23DS-05754/1**

**Issue No: 1**

# Material Test Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 7/08/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Other Test Results

| Description          | Method        | Result     | Limits |
|----------------------|---------------|------------|--------|
| Curling              |               | No         |        |
| Cracking             |               | No         |        |
| Liquid Limit (%)     | AS 1289.3.1.2 | 42         |        |
| Plastic Limit (%)    | AS 1289.3.2.1 | 17         |        |
| Plasticity Index (%) | AS 1289.3.3.1 | 25         |        |
| Date Tested          |               | 25/07/2023 |        |

## Comments

N/A



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**Report No: MAT:S23DS-01826/1**

**Issue No: 1**

# Material Test Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 19/04/2023  
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## Sample Details

**Sample Location** Lot: 4548, Layer: 3  
**Field Sample ID** 1  
**Date Sampled** 28/02/2023  
**Time Sampled** 15:39  
**Source** Onsite  
**Material** CL: Sandy CLAY trace gravel, light brown, low plasticity.  
**Specification** AS Grading  
**Sampling Method** AS1289.1.2.1 Clause 6.4 (b)  
**Sample ID** S23DS-01826

## Particle Size Distribution

**Method:** AS 1289.3.6.1  
**Drying By:** Oven  
**Date Tested:** 16/03/2023

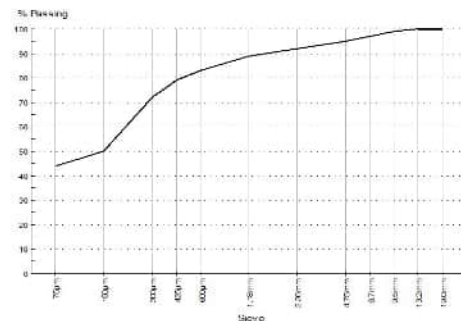
**Note:** Sample Washed

| Sieve Size | % Passing | Limits |
|------------|-----------|--------|
| 19.0mm     | 100       |        |
| 13.2mm     | 100       |        |
| 9.5mm      | 99        |        |
| 6.7mm      | 97        |        |
| 4.75mm     | 95        |        |
| 2.36mm     | 92        |        |
| 1.18mm     | 89        |        |
| 600µm      | 83        |        |
| 425µm      | 79        |        |
| 300µm      | 72        |        |
| 150µm      | 50        |        |
| 75µm       | 44        |        |

## Other Test Results

| Description          | Method        | Result     | Limits |
|----------------------|---------------|------------|--------|
| Moisture Content (%) | AS 1289.2.1.1 | 12.2       |        |
| Sample History       | AS 1289.1.1   | Oven-dried |        |
| Preparation          | AS 1289.1.1   | Dry Sieved |        |
| Linear Shrinkage (%) | AS 1289.3.4.1 | 7.0        |        |
| Mould Length (mm)    |               | 250        |        |
| Crumbling            |               | No         |        |
| Curling              |               | No         |        |
| Cracking             |               | Yes        |        |
| Liquid Limit (%)     | AS 1289.3.1.2 | 26         |        |
| Plastic Limit (%)    | AS 1289.3.2.1 | 14         |        |
| Plasticity Index (%) | AS 1289.3.3.1 | 12         |        |
| Date Tested          |               | 16/03/2023 |        |

## Chart



## Comments

N/A



**Dandenong South**  
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**Report No: MAT:S23DS-02258/1**

**Issue No: 1**

# Material Test Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 19/04/2023  
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**Sample Details**

**Sample Location** E: 2774.688 (356600), N: 178.870 (5781021), EL: 37.187, Layer: 7  
**Field Sample ID** 1  
**Date Sampled** 10/03/2023  
**Time Sampled** 10:57  
**Source** Onsite  
**Material** CL: Sandy CLAY trace gravel, dark brown, low plasticity.  
**Specification** AS Grading  
**Sampling Method** AS1289.1.2.1 Clause 6.4 (b)  
**Sample ID** S23DS-02258

**Particle Size Distribution**

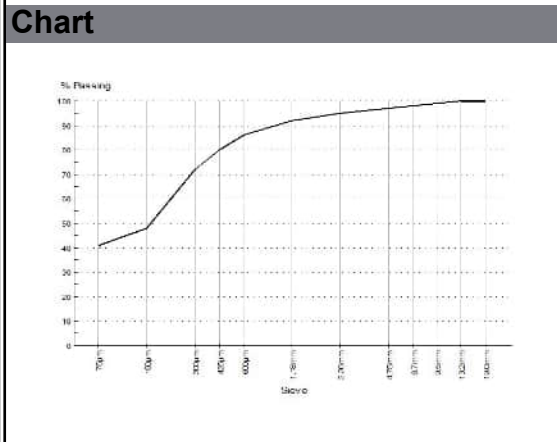
**Method:** AS 1289.3.6.1  
**Drying By:** Oven  
**Date Tested:** 31/03/2023

**Note:** Sample Washed

| Sieve Size | % Passing | Limits |
|------------|-----------|--------|
| 19.0mm     | 100       |        |
| 13.2mm     | 100       |        |
| 9.5mm      | 99        |        |
| 6.7mm      | 98        |        |
| 4.75mm     | 97        |        |
| 2.36mm     | 95        |        |
| 1.18mm     | 92        |        |
| 600µm      | 86        |        |
| 425µm      | 80        |        |
| 300µm      | 72        |        |
| 150µm      | 48        |        |
| 75µm       | 41        |        |

**Other Test Results**

| Description          | Method        | Result     | Limits |
|----------------------|---------------|------------|--------|
| Moisture Content (%) | AS 1289.2.1.1 | 14.0       |        |
| Sample History       | AS 1289.1.1   | Oven-dried |        |
| Preparation          | AS 1289.1.1   | Dry Sieved |        |
| Linear Shrinkage (%) | AS 1289.3.4.1 | 5.0        |        |
| Mould Length (mm)    |               | 250        |        |
| Crumbling            |               | No         |        |
| Curling              |               | No         |        |
| Cracking             |               | Yes        |        |
| Liquid Limit (%)     | AS 1289.3.1.2 | 30         |        |
| Plastic Limit (%)    | AS 1289.3.2.1 | 11         |        |
| Plasticity Index (%) | AS 1289.3.3.1 | 19         |        |
| Date Tested          |               | 4/04/2023  |        |



**Comments**  
 N/A



**Dandenong South**  
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**Report No: MAT:S23DS-03013/1**

**Issue No: 1**

# Material Test Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**Order No.:**  
**TRN:**

**CG Request No.:**  
**Lot No.:**

Accredited for compliance with ISO/IEC 17025  
 - Testing

Accreditation Number: 12719  
 Site Number: 12712

Approved Signatory: M. Longfield  
 (Senior Technician)  
 Date of Issue: 18/04/2023

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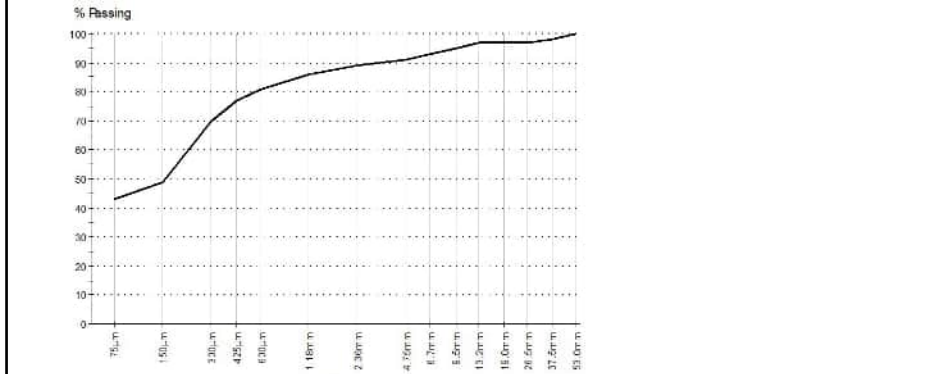
## Sample Details

**Sample Location** E: 2736.867 (356559), N: 280.249 (5781124), EL: 39.879, Lot: 4540, Layer: 4  
**Field Sample ID** 1  
**Date Sampled** 6/04/2023  
**Time Sampled** 08:42  
**Source** Onsite  
**Material** Silty Clay  
**Specification** AS Grading  
**Sampling Method** AS1289.1.2.1 Clause 6.4 (b)  
**Sample ID** S23DS-03013

## Other Test Results

| Description          | Method        | Result     | Limits |
|----------------------|---------------|------------|--------|
| Moisture Content (%) | AS 1289.2.1.1 | 11.8       |        |
| Sample History       | AS 1289.1.1   | Oven-dried |        |
| Preparation          | AS 1289.1.1   | Dry Sieved |        |
| Linear Shrinkage (%) | AS 1289.3.4.1 | 8.5        |        |
| Mould Length (mm)    |               | 250        |        |
| Crumbling            |               | No         |        |

## Particle Size Distribution



AS 1289.3.6.1  
**Drying By:** Oven  
**Date Tested:** 13/04/2023

**Note:** Sample Washed

| Sieve Size | % Passing | Limits |
|------------|-----------|--------|
| 53.0mm     | 100       |        |
| 37.5mm     | 98        |        |
| 26.5mm     | 97        |        |
| 19.0mm     | 97        |        |
| 13.2mm     | 97        |        |
| 9.5mm      | 95        |        |
| 6.7mm      | 93        |        |
| 4.75mm     | 91        |        |
| 2.36mm     | 89        |        |
| 1.18mm     | 86        |        |
| 600µm      | 81        |        |
| 425µm      | 77        |        |
| 300µm      | 70        |        |
| 150µm      | 49        |        |
| 75µm       | 43        |        |

## Comments

N/A



**Dandenong South**  
**ACN 143 009 330**  
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**Report No: MAT:S23DS-03013/1**

**Issue No: 1**

# Material Test Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**Order No.:** **CG Request No.:**  
**TRN:** **Lot No.:**

Accredited for compliance with ISO/IEC 17025  
 - Testing



Accreditation Number: 12719  
 Site Number: 12712  
 Approved Signatory: M. Longfield  
 (Senior Technician)  
 Date of Issue: 18/04/2023  
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## Other Test Results

| Description          | Method        | Result     | Limits |
|----------------------|---------------|------------|--------|
| Curling              |               | Yes        |        |
| Cracking             |               | No         |        |
| Liquid Limit (%)     | AS 1289.3.1.2 | 37         |        |
| Plastic Limit (%)    | AS 1289.3.2.1 | 14         |        |
| Plasticity Index (%) | AS 1289.3.3.1 | 23         |        |
| Date Tested          |               | 14/04/2023 |        |

## Comments

N/A



**Dandenong South**  
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**Report No: MAT:S23DS-04011/1**

**Issue No: 1**

# Material Test Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 6/06/2023

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## Sample Details

**Sample Location** E: 2744.420 (356571), N: 189.100 (5781034), EL: 37.041, Lot: 4503, Layer: 2  
**Field Sample ID** 1  
**Date Sampled** 12/05/2023  
**Time Sampled** 09:43  
**Source** Onsite  
**Material** Cl: Sandy CLAY trace gravel, Brown, medium plasticity.  
**Specification** AS Grading  
**Sampling Method** AS1289.1.2.1 Clause 6.4 (b)  
**Sample ID** S23DS-04011

## Particle Size Distribution

**Method:** AS 1289.3.6.1  
**Drying By:** Oven  
**Date Tested:** 19/05/2023

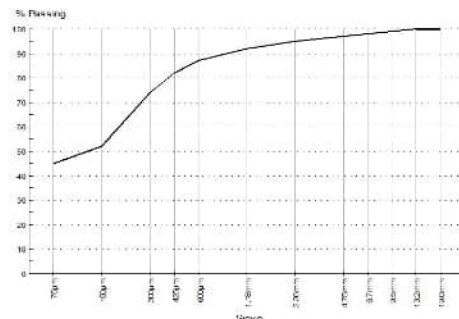
**Note:** Sample Washed

| Sieve Size | % Passing | Limits |
|------------|-----------|--------|
| 19.0mm     | 100       |        |
| 13.2mm     | 100       |        |
| 9.5mm      | 99        |        |
| 6.7mm      | 98        |        |
| 4.75mm     | 97        |        |
| 2.36mm     | 95        |        |
| 1.18mm     | 92        |        |
| 600µm      | 87        |        |
| 425µm      | 82        |        |
| 300µm      | 74        |        |
| 150µm      | 52        |        |
| 75µm       | 45        |        |

## Other Test Results

| Description          | Method        | Result     | Limits |
|----------------------|---------------|------------|--------|
| Moisture Content (%) | AS 1289.2.1.1 | 19.4       |        |
| Sample History       | AS 1289.1.1   | Oven-dried |        |
| Preparation          | AS 1289.1.1   | Dry Sieved |        |
| Linear Shrinkage (%) | AS 1289.3.4.1 | 11.0       |        |
| Mould Length (mm)    |               | 250        |        |
| Crumbling            |               | No         |        |
| Curling              |               | Yes        |        |
| Cracking             |               | No         |        |
| Liquid Limit (%)     | AS 1289.3.1.2 | 44         |        |
| Plastic Limit (%)    | AS 1289.3.2.1 | 15         |        |
| Plasticity Index (%) | AS 1289.3.3.1 | 29         |        |
| Date Tested          |               | 19/05/2023 |        |

## Chart



## Comments

N/A



**Dandenong South**  
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**Report No: MAT:S23DS-05185/1**

**Issue No: 1**

# Material Test Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 12/07/2023  
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## Sample Details

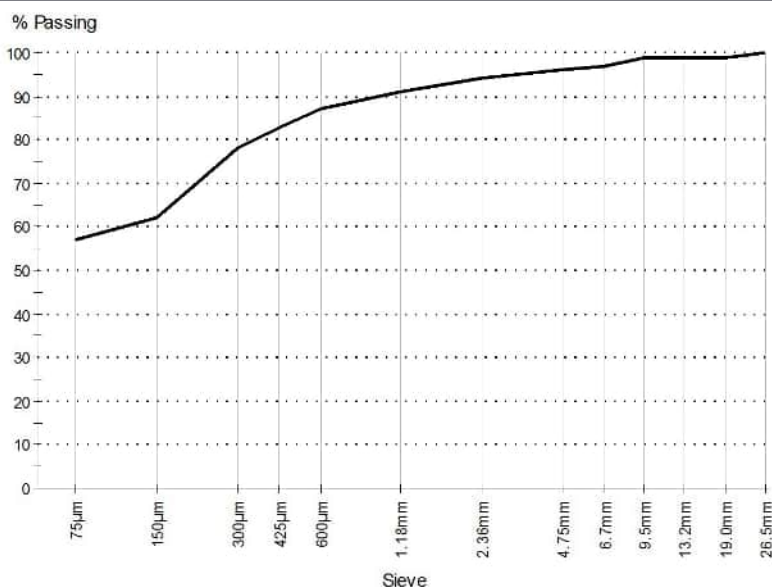
**Sample Location** E: 2718.876 (356544), N: 225.791 (5781069), EL: 38.754, Lot: 4523, Layer: 3  
**Field Sample ID** 1  
**Date Sampled** 29/06/2023  
**Source** Onsite  
**Material** Sandy Clay  
**Specification** AS Grading  
**Sampling Method** AS1289.1.2.1 Clause 6.4 (b)  
**Sample ID** S23DS-05185

## Other Test Results

| Description          | Method        | Result     | Limits |
|----------------------|---------------|------------|--------|
| Moisture Content (%) | AS 1289.2.1.1 | 20.7       |        |
| Sample History       | AS 1289.1.1   | Oven-dried |        |
| Preparation          | AS 1289.1.1   | Dry Sieved |        |
| Linear Shrinkage (%) | AS 1289.3.4.1 | 9.5        |        |
| Mould Length (mm)    |               | 250        |        |
| Crumbling            |               | No         |        |

## Particle Size Distribution

AS 1289.3.6.1



**Drying By:** Oven  
**Date Tested:** 3/07/2023

**Note:** Sample Washed

| Sieve Size | % Passing | Limits |
|------------|-----------|--------|
| 26.5mm     | 100       |        |
| 19.0mm     | 99        |        |
| 13.2mm     | 99        |        |
| 9.5mm      | 99        |        |
| 6.7mm      | 97        |        |
| 4.75mm     | 96        |        |
| 2.36mm     | 94        |        |
| 1.18mm     | 91        |        |
| 600µm      | 87        |        |
| 425µm      | 83        |        |
| 300µm      | 78        |        |
| 150µm      | 62        |        |
| 75µm       | 57        |        |

## Comments

N/A





**Dandenong South**  
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**Report No: MAT:S23DS-05185/1**


**Issue No: 1**

# Material Test Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 12/07/2023

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## Other Test Results

| Description          | Method        | Result | Limits |
|----------------------|---------------|--------|--------|
| Curling              |               | No     |        |
| Cracking             |               | No     |        |
| Liquid Limit (%)     | AS 1289.3.1.2 | 52     |        |
| Plastic Limit (%)    | AS 1289.3.2.1 | 18     |        |
| Plasticity Index (%) | AS 1289.3.3.1 | 34     |        |

## Comments

N/A



**Dandenong South**  
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**Report No: MAT:S23DS-05710/1**

**Issue No: 1**

# Material Test Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 1/08/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

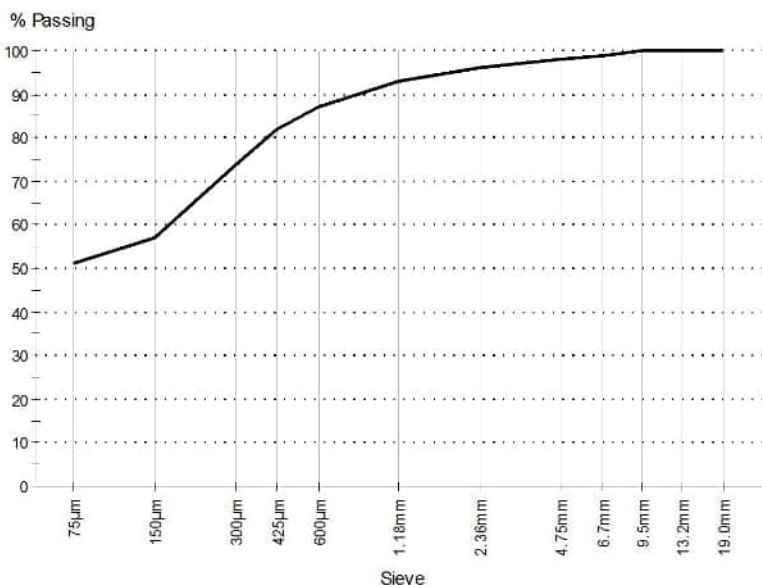
**Sample Location** E: 2738.145 (356564), 159.050 (5781001), EL: 37.020, Layer: 5  
**Field Sample ID** 1  
**Date Sampled** 18/07/2023  
**Time Sampled** 13:48  
**Source** Onsite  
**Material** Sandy Clay  
**Specification** AS Grading  
**Sampling Method** AS1289.1.2.1 Clause 6.4 (b)  
**Sample ID** S23DS-05710

## Other Test Results

| Description          | Method        | Result     | Limits |
|----------------------|---------------|------------|--------|
| Moisture Content (%) | AS 1289.2.1.1 | 20.0       |        |
| Sample History       | AS 1289.1.1   | Oven-dried |        |
| Preparation          | AS 1289.1.1   | Dry Sieved |        |
| Linear Shrinkage (%) | AS 1289.3.4.1 | 13.0       |        |
| Mould Length (mm)    |               | 250        |        |
| Crumbling            |               | No         |        |

## Particle Size Distribution

AS 1289.3.6.1



**Drying By:** Oven  
**Date Tested:** 20/07/2023

**Note:** Sample Washed

| Sieve Size | % Passing | Limits |
|------------|-----------|--------|
| 19.0mm     | 100       |        |
| 13.2mm     | 100       |        |
| 9.5mm      | 100       |        |
| 6.7mm      | 99        |        |
| 4.75mm     | 98        |        |
| 2.36mm     | 96        |        |
| 1.18mm     | 93        |        |
| 600µm      | 87        |        |
| 425µm      | 82        |        |
| 300µm      | 74        |        |
| 150µm      | 57        |        |
| 75µm       | 51        |        |

## Comments

N/A



**Dandenong South**  
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**Report No: MAT:S23DS-05710/1**

**Issue No: 1**

# Material Test Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 1/08/2023  
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## Other Test Results

| Description          | Method        | Result     | Limits |
|----------------------|---------------|------------|--------|
| Curling              |               | Yes        |        |
| Cracking             |               | No         |        |
| Liquid Limit (%)     | AS 1289.3.1.2 | 46         |        |
| Plastic Limit (%)    | AS 1289.3.2.1 | 17         |        |
| Plasticity Index (%) | AS 1289.3.3.1 | 29         |        |
| Date Tested          |               | 21/07/2023 |        |

## Comments

N/A



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**Report No: MAT:S23DS-05985/1**

**Issue No: 1**

# Material Test Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 13/09/2023  
 THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

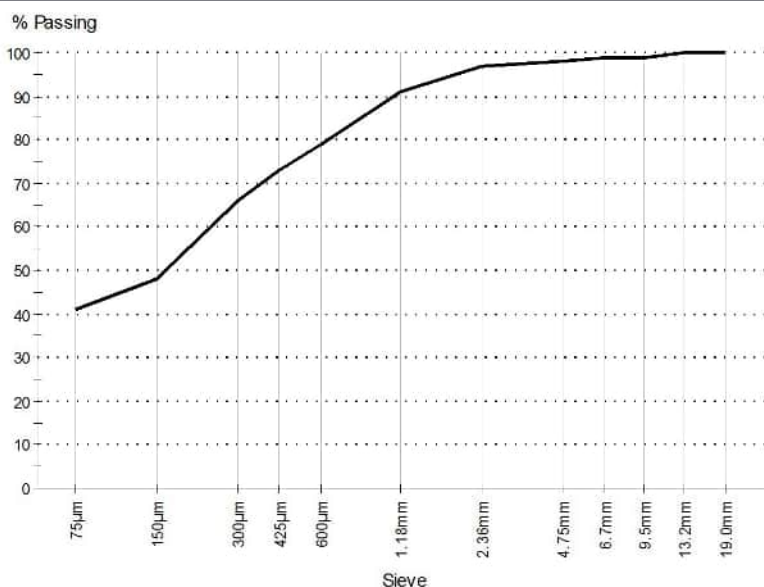
**Sample Location** E: 2806.123 (356633), N: 154.106 (5780995), EL: 35.480, Layer: 4, Alambadi Circuit  
**Field Sample ID** 1  
**Date Sampled** 26/07/2023  
**Time Sampled** 12:03  
**Source** Onsite  
**Material** Sandy Clay, traces of Silt/Gravel  
**Specification** AS Grading  
**Sampling Method** AS1289.1.2.1 Clause 6.4 (b)  
**Sample ID** S23DS-05985

## Other Test Results

| Description          | Method        | Result     | Limits |
|----------------------|---------------|------------|--------|
| Moisture Content (%) | AS 1289.2.1.1 | 16.0       |        |
| Sample History       | AS 1289.1.1   | Oven-dried |        |
| Preparation          | AS 1289.1.1   | Dry Sieved |        |
| Linear Shrinkage (%) | AS 1289.3.4.1 | 7.5        |        |
| Mould Length (mm)    |               | 250        |        |
| Crumbling            |               | No         |        |

## Particle Size Distribution

AS 1289.3.6.1



**Drying By:** Oven  
**Date Tested:** 3/08/2023

**Note:** Sample Washed

| Sieve Size | % Passing | Limits |
|------------|-----------|--------|
| 19.0mm     | 100       | 100    |
| 13.2mm     | 100       | 100    |
| 9.5mm      | 99        | 99     |
| 6.7mm      | 99        | 99     |
| 4.75mm     | 98        | 98     |
| 2.36mm     | 97        | 97     |
| 1.18mm     | 91        | 91     |
| 600µm      | 79        | 79     |
| 425µm      | 73        | 73     |
| 300µm      | 66        | 66     |
| 150µm      | 48        | 48     |
| 75µm       | 41        | 41     |

## Comments

N/A



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**Report No: MAT:S23DS-05985/1**

**Issue No: 1**

# Material Test Report

**Client:** Greenridge Properties Pty Ltd  
**Address:** PO Box 3131  
 AUBURN VIC 3123  
**Project:** Meridian Estate, Stage 45  
**Project No.:** 3807351.045  
**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: 13/09/2023  
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## Other Test Results

| Description          | Method        | Result    | Limits |
|----------------------|---------------|-----------|--------|
| Curling              |               | No        |        |
| Cracking             |               | Yes       |        |
| Liquid Limit (%)     | AS 1289.3.1.2 | 49        |        |
| Plastic Limit (%)    | AS 1289.3.2.1 | 18        |        |
| Plasticity Index (%) | AS 1289.3.3.1 | 31        |        |
| Date Tested          |               | 3/08/2023 |        |

## Comments

N/A

# **Appendix D      Controlled Fill Certificate**

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## CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

**PROJECT** : Meridian Central Estate Stage 45  
Lots 4501 to 4505 and 4519 to 4548

**Chadwick Geotechnics REF:** 3807351.045v1

**CLIENT** : Greenridge Properties Pty Ltd  
PO Box 4136  
Dandenong South VIC 3164

**DATE:** 11 October 2023

### SUMMARY

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

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

### LIMITATIONS

This Certificate has been commissioned for the filling of the area mentioned above. No responsibility or liability will be accepted for the use of this report for any purpose other than that for which Chadwick Geotechnics Pty Ltd was engaged, specifically for Level 1 Inspection and Testing of the structural fill (excluding topsoil).

This report is based on the conditions present and factors affecting the soil at the time of inspection (12 October 2021 and was completed on 11 August 2023). No responsibility or liability will be accepted and Chadwick Geotechnics Pty Ltd is indemnified to the full extent permitted by law in respect of the use of this Certificate where there has been a change in the nature of the project, or in the site conditions since the site testing.

### CHADWICK GEOTECHNICS PTY LTD

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

**Robert Barden**  
Project Manager

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

**Timothy Chadwick**  
Project Director

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[www.chadwickgeotechnics.com.au](http://www.chadwickgeotechnics.com.au)

