



REPORT

Level One Inspection and Testing Services

Meridian Estate Stage 11, Clyde North,
Lots 1111 to 1129

Prepared for:

Grosvenor Lodge Pty Ltd

August 2018

Our Ref: 3807351.011.v2

Document Control

Title: Level One Inspection and Testing Services					
Date	Version	Description	Prepared by:	Reviewed by:	Authorised by:
17-05-18	1	Level One report, 3807351.011.v1	PRS	RHB	TJC
17-08-18	2	Level One report, 3807351.011.v2	RHB	RHB	TJC

Distribution:

Grosvenor Lodge Pty Ltd

Chadwick Geotechnics Pty Ltd (FILE)

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1 Introduction

This report supersedes report (3807351.011.v1 dated May 2018, Meridian Estate Stage 11, Clyde North, Lots 1120 to 1129). Additional earthworks were undertaken in December 2017 to February 2018 across lots 1111 to 1119, the field testing relating to these earthworks were not reported within the initial Stage 11 report. This reissued report takes the laboratory test results into consideration, resulting in additional residential lots being included within this report.

Chadwick Geotechnics Pty Ltd (Chadwick Geotechnics) was engaged by Grosvenor Lodge Pty Ltd, to provide Level 1 Inspection and Testing services for the earthworks within Stage 11 of the Meridian Estate in Clyde North.

2 Project details

The project included the preparation and filling of lot's 1111 to 1129. The specification required the earthworks to be completed under Level 1 Supervision that is, full-time Inspection and Testing of the earthworks. Chadwick Geotechnics were onsite for the duration of the earthworks program.

The approximate location of the site is shown in figure 1 below.



Figure 1: Approximate site location (*Image sourced from Nearmaps*)

3 Geology

Published information¹ shows that the site is underlain by various geologies listed as follows;

- Quaternary Age Unnamed dune deposits Formation (Qd1) comprising of sand, clay and calcareous sand.
- Quaternary Age Unnamed swamp and lake deposits Formation (Qm1) comprising of silt and clay.
- Palaeozoic Age Murrindindi Supergroup (Sm) comprising of mudstone and sandstone
Neogene Age Baxter Sandstone Formation (Nxx) comprising of sandstone, conglomerate, siltstone and ironstone.

4 Specification

A summary of the specification is shown below:

Compaction Requirement	95 % Standard Compaction
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5 Inspection and testing

The inspection and testing of earthworks has been carried out in accordance with AS3798-2007, 'Guidelines on earthworks for commercial and residential developments', with a frequency of field density tests as per a type one project (large scale operation). Compaction control laboratory testing was undertaken in our NATA accredited Dandenong South laboratory in accordance with AS1289 'Methods of Testing Soils for Engineering Purposes'.

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

Full time Level 1 Inspection and testing of the filling operations commenced on the 19th December 2017 and was completed on the 28th February 2018. During this period Chadwick Geotechnics observed the filling works including the supply of material, conditioning of material (moisture conditioning and oversize removal), placement and compaction of the fill.

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

Field density and moisture content testing was carried out using a calibrated nuclear density 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.

A total of twenty three (23) tests were performed during the filling process.

The results show that three (3) tests failed to meet the specification requirements for the project. The earthworks contractor was advised of the tests that failed and the fill relevant to those areas

¹ BIBBY, L.M., 2004. Simplified 1: 4 000 000 Geology of Victoria. Geological Survey of Victoria Special Publication. GeoScience Victoria.

was reworked, reconditioned, re-compacted and subsequently retested. The final results show the tests achieved the specification requirements for the project.

A summary table of Hilf density tests is provided in Appendix B and the laboratory test reports and Fill Certificates are provided in Appendix C and D.

6 Conclusion

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

- The materials used by the earthworks contractor met the geotechnical property requirements of the specification.
- The sourced fill was considered to be natural and 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.

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.

7 Applicability

This report has been prepared for the exclusive use of our client Grosvenor Lodge 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 conditions present in, factors affecting the soil at the time of the inspections, namely the 19th December 2017 to the 28th February 2018. 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:

Authorised for Chadwick Geotechnics Pty Ltd by:



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Robert Barden

Timothy Chadwick

Geotechnical Engineer

Project Director

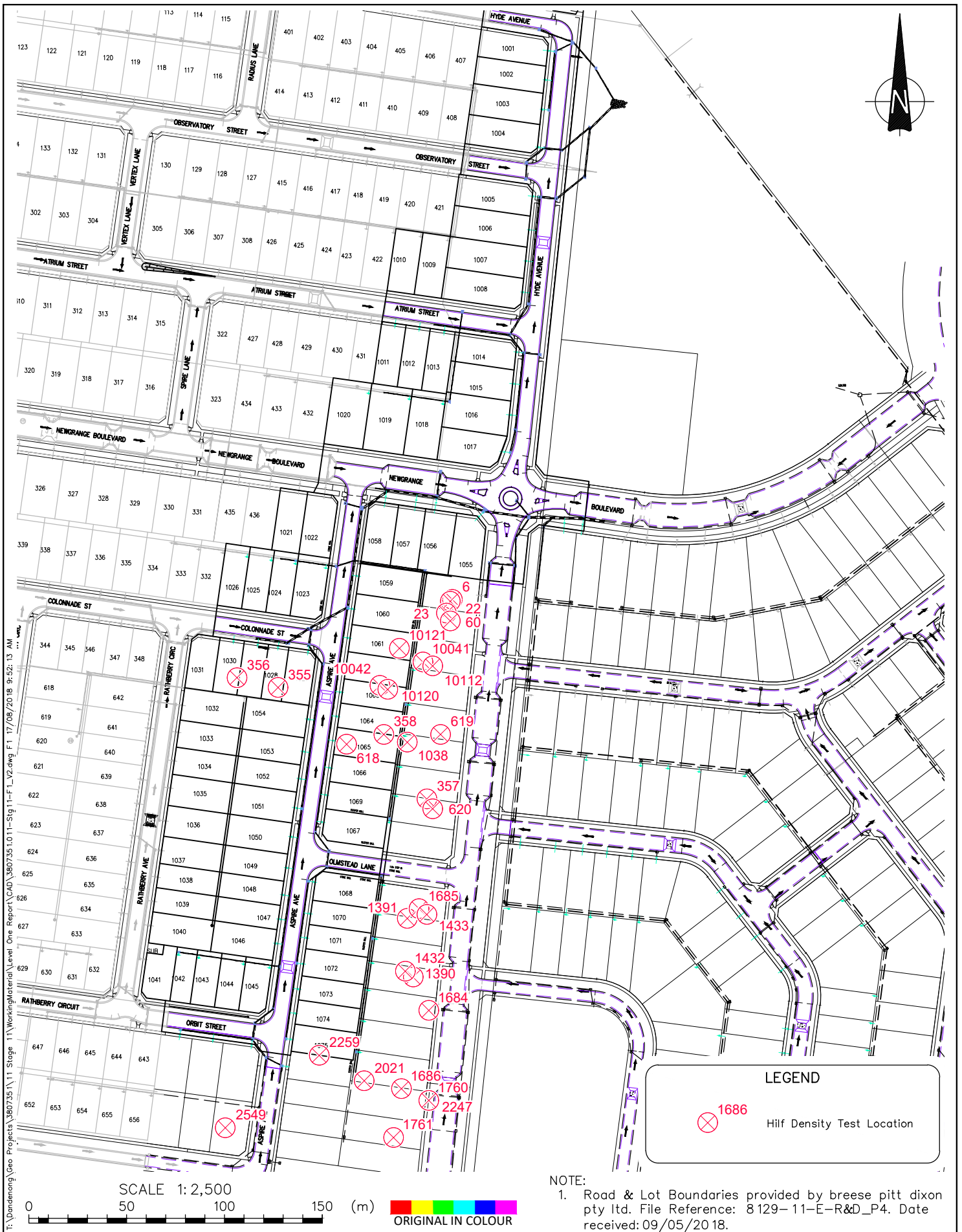
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www.chadwickgeotechnics.com.au

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Appendix A: Density Test Location Plan



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DRAWN	KMJA	Aug. 18
DRAFTING CHECKED		
APPROVED		
CADFILE :	380735.1.011-Stg 11-F1_V2.dwg	
SCALES (AT A4 SIZE)	1:2500	
PROJECT No.	380735.1.011	

GROSVENOR LODGE PTY LTD
 LEVEL ONE INSPECTION AND TESTING
 MERIDIAN ESTATE STAGE 11
 Hilf Density Test Location Plan

FIG. No. Figure 1	REV. 2
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Appendix B: Table of field density results

Report No	Sample No	Date	Test Number	Location [E]	Location [N]	Layer	Density Ratio HILF test (%)	Density Ratio test (%)	Moisture Variation From OMC	Pass / Fail	Remarks
HDR:W17DS02687	10041	19/12/2017	1	355336	5782386	1	96.5		0 wet	Pass	
HDR:W17DS02687	10042	19/12/2017	2	355314	5782374	1	94.5		2 wet	Fail	See Retest 10120
HDR:W17DS02707	10112	20/12/2017	1	355341	5782384	2	99.5		2 dry	Pass	
HDR:W17DS02711	10120	21/12/2017	1	355318	5782372	1	105		2 dry	Pass	Retest of 10042
HDR:W17DS02711	10121	21/12/2017	2	355324	5782393	3	100.5		0 dry	Pass	
HDR:W18DS00007	6	3/01/2018	1	355351	5782418	1	99		0.5 dry	Pass	
HDR:W18DS00013	22	4/01/2018	1	355350	5782417	2	103.5		0.5 dry	Pass	
HDR:W18DS00013	23	4/01/2018	2	355348	5782411	3	100.5		2 dry	Pass	
HDR:W18DS00015	60	5/01/2018	1	355350	5782407	4	100.5		1 dry	Pass	
HDR:W18DS00088	355	16/01/2018	1	355262	5782373	1	98		0 dry	Pass	
HDR:W18DS00088	356	16/01/2018	2	355241	5782378	3	99.5		0.5 dry	Pass	
HDR:W18DS00088	357	16/01/2018	3	355338	5782316	1	100		3 dry	Pass	
HDR:W18DS00088	358	16/01/2018	4	355316	5782349	1	99.5		0.5 dry	Pass	
HDR:W18DS00160	618	23/01/2018	1	355297	5782344	3	102		0.5 dry	Pass	
HDR:W18DS00160	619	23/01/2018	2	355345	5782349	2	96.5		0 wet	Pass	
HDR:W18DS00160	620	23/01/2018	3	355341	5782311	2	103.5		2.5 dry	Pass	

Appendix C NATA endorsed laboratory reports

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 10
Project No.: 3807351.010
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Approved Signatory: M. Robinson
 (Senior Technician)
 Date of Issue: 28/12/2017

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Sample Details

Location: Clyde North
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% Standard Compaction
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: General Fill

Sample Data

Sample ID	S17DS-10041	S17DS-10042			
Field Sample ID	1	2			
Date Tested	19/12/2017	19/12/2017			
E	355336	355314			
N	5782386	5782374			
Layer	1	1			
Soil Description	Clay	Clay			

Field and Laboratory Data

Depth of Test (mm)	150	150			
Depth of Layer (mm)	200	200			
Field Wet Density (t/m ³)	1.97	1.94			
Peak Converted Wet Density (t/m ³)	2.04	2.06			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	0.0	2.0 wet			
Hilf Density Ratio (%)	96.5	94.5			

Comments

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 10
Project No.: 3807351.010
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
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NATA
 Accreditation No. 12719
 The results of the tests, calibrations and/or
 measurements included in this document are
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Approved Signatory: M. Robinson
 (Senior Technician)
 Date of Issue: 28/12/2017

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Sample Details

Location: Clyde North
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% Standard Compaction
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: General Fill

Sample Data

Sample ID	S17DS-10112				
Field Sample ID	1				
Date Tested	20/12/2017				
E	355341				
N	5782384				
Layer	2				
Soil Description	Clay				

Field and Laboratory Data

Depth of Test (mm)	150				
Depth of Layer (mm)	200				
Field Wet Density (t/m ³)	2.05				
Peak Converted Wet Density (t/m ³)	2.06				
Compactive Effort	Standard				
Moisture Variation (%)	2.0 dry				
Hilf Density Ratio (%)	99.5				

Comments

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 10
Project No.: 3807351.010
Order No.:
TRN:

CG Request No.:
Lot No.:

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Approved Signatory: M. Robinson
 (Senior Technician)
 Date of Issue: 28/12/2017

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Sample Details

Location: Clyde North
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% Standard Compaction
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: General Fill

Sample Data

Sample ID	S17DS-10120	S17DS-10121			
Field Sample ID	1	2			
Date Tested	21/12/2017	21/12/2017			
E	5782372	5782393			
N	Retest	Layer 3			
	Layer 1				
Soil Description	Clay	Clay			

Field and Laboratory Data

Depth of Test (mm)	150	150			
Depth of Layer (mm)	200	200			
Field Wet Density (t/m ³)	1.99	2.01			
Peak Converted Wet Density (t/m ³)	1.90	2.00			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	2.0 dry	0.0			
Hilf Density Ratio (%)	105.0	100.5			

Comments

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
AUBURN VIC 3123
Project: Merdian Estate - Stage 10
Project No.: 3807351.010
Order No.: **CG Request No.:**
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Approved Signatory: M. Robinson
(Senior Technician)

Sample Details

Location: Clyde North
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% Standard Compaction
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: General Fill

Sample Data

Sample ID	S18DS-00006				
Field Sample ID	1				
Date Tested	3/01/2018				
E	355351				
N	5782418				
	Layer 1				
Soil Description	Clay				

Field and Laboratory Data

Field Wet Density (t/m ³)	2.04				
Peak Converted Wet Density (t/m ³)	2.05				
Compactive Effort	Standard				
Moisture Variation (%)	0.5 dry				
Hilf Density Ratio (%)	99.0				

Comments

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Merdian Estate - Stage 10
Project No.: 3807351.010
Order No.:
TRN:

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Lot No.:

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Approved Signatory: M. Robinson
 (Senior Technician)
 Date of Issue: 8/01/2018

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Sample Details

Location: Clyde North
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% Standard Compaction
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: General Fill

Sample Data

Sample ID	S18DS-00022	S18DS-00023			
Field Sample ID	1	2			
Date Tested	4/01/2018	4/01/2018			
E	5782417	5782411			
N	Layer 2	Layer 3			
Soil Description	Clay	Clay			

Field and Laboratory Data

Depth of Test (mm)	150	150			
Depth of Layer (mm)	200	200			
Field Wet Density (t/m ³)	2.12	2.03			
Peak Converted Wet Density (t/m ³)	2.05	2.02			
Compactive Effort	Standard	Standard			
Moisture Variation (%)	0.5 dry	2.0 dry			
Hilf Density Ratio (%)	103.5	100.5			

Comments

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Merdian Estate - Stage 10
Project No.: 3807351.010
Order No.:
TRN:

CG Request No.:
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 Date of Issue: 9/01/2018

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Sample Details

Location: Clyde North
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% Standard Compaction
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: General Fill

Sample Data

Sample ID	S18DS-00060				
Field Sample ID	1				
Date Tested	5/01/2018				
E	355350				
N	5782407				
	Layer 4				
Soil Description	Clay				

Field and Laboratory Data

Depth of Test (mm)	150				
Depth of Layer (mm)	200				
Field Wet Density (t/m ³)	2.09				
Peak Converted Wet Density (t/m ³)	2.08				
Compactive Effort	Standard				
Moisture Variation (%)	1.0 dry				
Hilf Density Ratio (%)	100.5				

Comments

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Merdian Estate - Stage 10
Project No.: 3807351.010
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Approved Signatory: M. Robinson
 (Senior Technician)
 Date of Issue: 30/01/2018

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Sample Details

Location: Clyde North
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% Standard Compaction
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: General Fill

Sample Data

Sample ID	S18DS-00355	S18DS-00356	S18DS-00357	S18DS-00358
Field Sample ID	1	2	3	4
Date Tested	16/01/2018	16/01/2018	16/01/2018	16/01/2018
E	355262	355241	355338	355316
N	5782373	5782378	5782316	5782349
Soil Description	Layer 1 Clay	Layer 3 Clay	Layer 1 Clay	Layer 1 Clay

Field and Laboratory Data

Depth of Test (mm)	150	150	150	150
Depth of Layer (mm)	200	200	200	200
Field Wet Density (t/m ³)	1.98	2.00	1.86	2.03
Peak Converted Wet Density (t/m ³)	2.02	2.01	1.85	2.04
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Variation (%)	0.0	0.5 dry	3.0 dry	0.5 dry
Hilf Density Ratio (%)	98.0	99.5	100.0	99.5

Comments

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 10
Project No.: 3807351.010
Order No.:
TRN:

CG Request No.:
Lot No.:

Accredited for compliance with ISO/IEC 17025
 - Testing



Approved Signatory: M. Robinson
 (Senior Technician)
 Date of Issue: 30/01/2018

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Sample Details

Location: Clyde North
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% Standard Compaction
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: General Fill

Sample Data

Sample ID	S18DS-00618	S18DS-00619	S18DS-00620			
Field Sample ID	1	2	3			
Date Tested	23/01/2018	23/01/2018	23/01/2018			
E	355297	355345	355341			
N	5782344	5782349	5782311			
	Layer 3	Layer 2	Layer 2			
Soil Description	Clay	Clay	Clay			

Field and Laboratory Data

Depth of Test (mm)	150	150	150			
Depth of Layer (mm)	200	200	200			
Field Wet Density (t/m ³)	1.99	2.01	2.07			
Peak Converted Wet Density (t/m ³)	1.95	2.08	2.00			
Compactive Effort	Standard	Standard	Standard			
Moisture Variation (%)	0.5 dry	0.0	2.5 dry			
Hilf Density Ratio (%)	102.0	96.5	103.5			

Comments

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Merdian Estate - Stage 10
Project No.: 3807351.010
Order No.: **CG Request No.:**
TRN: **Lot No.:**

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 - Testing



Accreditation No. 12719
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 traceable to Australian/national standards.

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Approved Signatory: J. A. Smith
 (Senior Technician)
 Date of Issue: 7/02/2018

Sample Details

Location: Clyde North
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% Standard Compaction
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: General Fill

Sample Data

Sample ID	S18DS-01038				
Field Sample ID	1				
Date Tested	2/02/2018				
E	355328				
N	5782345				
Soil Description	Silty Clay				

Field and Laboratory Data

Depth of Test (mm)	150				
Depth of Layer (mm)	200				
AS Sieve Size (mm)	19.0				
Field Wet Density (t/m ³)	2.01				
Peak Converted Wet Density (t/m ³)	2.02				
Compactive Effort	Standard				
Moisture Variation (%)	1.5 dry				
Hilf Density Ratio (%)	100.0				

Comments

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 11
Project No.: 3807351.011
Order No.: **CG Request No.:** 2708
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



NATA
 Accreditation No. 12719
 The results of the tests, calibrations
 12712



Approved Signatory: D. Henke
 (Senior Technician)
 Date of Issue: 14/02/2018
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Sample Details

Location: Lot Fill
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% Standard Compaction
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: General Fill

Sample ID	S18DS-01390	S18DS-01391				
Field Sample ID	1	2				
Date Tested	12/02/2018	12/02/2018				
E:	355331	355328				
N:	5782225	5782255				
Layer	L1	L1				
Soil Description	Silty Clay	Silty Clay				
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 (%)	0.0	0.0				
Field Wet Density (t/m ³)	1.91	2.03				
Peak Converted Wet Density (t/m ³)	2.03	2.02				
Compactive Effort	Standard	Standard				
Moisture Variation (%)	2.0 dry	0.5 wet				
Hilf Density Ratio (%)	93.8	100.4				

Comments

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 11
Project No.: 3807351.011
Order No.: **CG Request No.:** 2725
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation No. 12719
 The results of the tests, calibrations
 12712

Approved Signatory: D.Henke
 (Senior Technician)
 Date of Issue: 14/02/2018

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location: Lot Fill
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% Standard Compaction +- 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: General Fill


Sample ID	S18DS-01432	S18DS-01433				
Field Sample ID	1	2				
Date Tested	13/02/2018	13/02/2018				
E:	355327	355338				
N:	5782228	5782257				
Layer	L1	L2				
	Retest of S-01390 from 12/02/18					
Soil Description	Silty Clay	Silty Clay				
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 (%)	0.0	0.0				
Field Wet Density (t/m ³)	1.97	1.96				
Peak Converted Wet Density (t/m ³)	2.01	2.05				
Compactive Effort	Standard	Standard				
Moisture Variation (%)	1.0 dry	0.5 dry				
Hilf Density Ratio (%)	97.8	95.6				

Comments

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 11
Project No.: 3807351.011
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Approved Signatory: *K. B. Patel*
 (Senior Geotechnician)
 Date of Issue: 23/02/2018

Accreditation No. 12719
 The results of the tests, calibrations
 and/or measurements included in this
 document are traceable to
 Australian/national standards.
 12712

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% Standard Compaction +- 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: General Fill


Sample ID	S18DS-01684	S18DS-01685	S18DS-01686
Field Sample ID	1	2	3
Date Tested	16/02/2018	16/02/2018	16/02/2018
E	355339	355334	355325
N	5782208	5782260	5782168
Soil Description	Layer 3 Clay	Layer 3 Clay	Layer 1 Clay
Depth of Test (mm)	150	150	150
Depth of Layer (mm)	200	200	200
AS Sieve Size (mm)	19.0	19.0	19.0
Field Wet Density (t/m ³)	1.97	2.03	1.97
Peak Converted Wet Density (t/m ³)	2.01	2.06	2.00
Compactive Effort	Standard	Standard	Standard
Moisture Variation (%)	0.0	1.5 dry	0.5 wet
Hilf Density Ratio (%)	98.0	98.6	98.6

Comments

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 11
Project No.: 3807351.011
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation No. 12719
 The results of the tests, calibrations
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 Australian/national standards.
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K. B. Patel

Approved Signatory: Krushik Patel
 (Senior Geotechnician)
 Date of Issue: 23/02/2018

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% Standard Compaction +- 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: General Fill

Sample ID	S18DS-01760	S18DS-01761	
Field Sample ID	1	2	
Date Tested	19/02/2018	19/02/2018	
E	5782162	5782143	
N	355339	355321	
	Layer 2	Layer 2	
Soil Description	Clay	Clay	
Depth of Test (mm)	150	150	
Depth of Layer (mm)	200	200	
AS Sieve Size (mm)	19.0	19.0	
Field Wet Density (t/m ³)	2.04	1.94	
Peak Converted Wet Density (t/m ³)	0.00	2.02	
Compactive Effort	Standard	Standard	
Moisture Variation (%)		0.5 dry	
Hilf Density Ratio (%)		96.2	

Comments

Sample no S18DS-01760 is converted to MDD due to it exceed its range of moisture variation of AS1289.5.7.1
 please refer sample No. s18ds-02247

Dry Density Ratio Report

Client: Greenridge Properties Pty Ltd Address: PO Box 3131 AUBURN VIC 3123 Project: Meridian Estate - Stage 11 Project No.: 3807351.011 Order No.: TRN:	CG Request No.: Lot No.:	 <p>Accredited for compliance with ISO/IEC 17025 - Testing</p> <p><i>K. B. Patel</i></p> <p>Accreditation No. 12719 The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. 12712</p> <p>Approved Signatory: Krushik Patel (Senior Geotechnician) Date of Issue: 23/02/2018</p> <p>THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL</p>
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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 1289.5.1.1, AS 1289.2.1.1, AS 1289.5.4.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: General Fill

Sample ID	S18DS-02247		
Field Sample ID	1		
Date Tested	19/02/2018		
Location	355339		
	5782162		
	Layer 2		
Soil Description	CLAY		
Depth of Test (mm)	150		
Depth of Layer (mm)	200		
Compactive Effort	AS 1289.5.1.1		
AS Sieve Size (mm)	19.0		
Oversize Wet (%)	0		
Field Moisture Content (%)	26.8		
Field Wet Density (t/m³)	2.04		
Field Dry Density (t/m³)	1.61		
Lab Result from Test No.	S18DS-02247		
Maximum Dry Density (t/m³)	1.61		
Optimum Moisture Content (%)	22.5		
Moisture Ratio (%)	120.5		
Moisture Variation	4.5 wet		
Density Ratio (%)	100.0		

Comments

This sample is converted in AS1289.5.1.1 from sample no s18ds-01760 AS1289.5.7.1 due to moisture variation has exceeded its range.

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 11
Project No.: 3807351.011
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Approved Signatory: *K. B. Patel*
 (Senior Geotechnician)
 Date of Issue: 23/02/2018

Accreditation No. 12719
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 Australian/national standards.
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THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% Standard Compaction +- 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: General Fill


Sample ID	S18DS-02021		
Field Sample ID	1		
Date Tested	21/02/2018		
E	355306		
N	5782172		
	Layer 1		
Soil Description	Clay		
Depth of Test (mm)	150		
Depth of Layer (mm)	200		
AS Sieve Size (mm)	19.0		
Field Wet Density (t/m³)	1.81		
Peak Converted Wet Density (t/m³)	2.03		
Compactive Effort	Standard		
Moisture Variation (%)	0.0		
Hilf Density Ratio (%)	89.4		

Comments

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Merdian Estate - Stage 10
Project No.: 3807351.010
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Approved Signatory: *K. B. Patel*
 (Senior Geotechnician)
 Date of Issue: 26/02/2018

Accreditation No. 12719
 The results of the tests, calibrations
 and/or measurements included in this
 document are traceable to
 Australian/national standards.
 12712

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Location:
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95% Standard Compaction +- 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: General Fill

Sample ID	S18DS-02258	S18DS-02259	
Field Sample ID	1	2	
Date Tested	23/02/2018	23/02/2018	
E	355284	355283	
N	5782239	5782185	
	Layer 1	Layer 1	
Soil Description	Clay	Clay	
Depth of Test (mm)	150	150	
Depth of Layer (mm)	200	200	
AS Sieve Size (mm)	19.0	19.0	
Field Wet Density (t/m ³)	2.01	2.06	
Peak Converted Wet Density (t/m ³)	1.96	2.03	
Compactive Effort	Standard	Standard	
Moisture Variation (%)	2.5 dry	1.5 dry	
Hilf Density Ratio (%)	102.6	101.4	

Comments

HILF Density Ratio Report

Client: Greenridge Properties Pty Ltd
Address: PO Box 3131
 AUBURN VIC 3123
Project: Meridian Estate - Stage 10
Project No.: 3807351.010
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025
 - Testing



Accreditation No. 12719



The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.
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Approved Signatory: J. A. Smith
 (Senior Technician)
 Date of Issue: 1/03/2018

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% Standard Compaction +- 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: General Fill

Sample ID	S18DS-02549				
Field Sample ID	1				
Date Tested	28/02/2018				
E	355235				
N	5782148				
Layer	1				
Soil Description	Clay				
Depth of Test (mm)	150				
Depth of Layer (mm)	200				
AS Sieve Size (mm)	19.0				
Field Wet Density (t/m³)	1.91				
Peak Converted Wet Density (t/m³)	1.97				
Compactive Effort	Standard				
Moisture Variation (%)	2.5 dry				
Hilf Density Ratio (%)	97.0				

Comments

Appendix D: Controlled fill certificates

CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot 1111 CGEO REF: 3807351.011.v2
Meridian Estate Stage 11
Clyde North VIC

CLIENT : Grosvenor Lodge Pty Ltd DATE: : August 2018
PO Box 4136
DANDENONG SOUTH VIC 3164

SUMMARY

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

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

LIMITATIONS

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

This report is based on the conditions present and factors affecting the soil at the time of inspection, namely the 19th December 2017 to the 28th February 2018. No responsibility or liability will be accepted and Chadwick Geotechnics Pty Ltd is indemnified to the full extent permitted by law in respect of the use of this Certificate where there has been a change in the nature of the project, or in the site conditions since the site testing.

CHADWICK GEOTECHNICS PTY LTD



Robert Barden
Geotechnical Engineer



Tim Chadwick
Project Director

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CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot 1112 CGEO REF: 3807351.011.v2
Meridian Estate Stage 11
Clyde North VIC

CLIENT : Grosvenor Lodge Pty Ltd DATE: : August 2018
PO Box 4136
DANDENONG SOUTH VIC 3164

SUMMARY

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

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

LIMITATIONS

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

This report is based on the conditions present and factors affecting the soil at the time of inspection, namely the 19th December 2017 to the 28th February 2018. No responsibility or liability will be accepted and Chadwick Geotechnics Pty Ltd is indemnified to the full extent permitted by law in respect of the use of this Certificate where there has been a change in the nature of the project, or in the site conditions since the site testing.

CHADWICK GEOTECHNICS PTY LTD



Robert Barden
Geotechnical Engineer



Tim Chadwick
Project Director

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CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot 1113 CGEO REF: 3807351.011.v2
Meridian Estate Stage 11
Clyde North VIC

CLIENT : Grosvenor Lodge Pty Ltd DATE: : August 2018
PO Box 4136
DANDENONG SOUTH VIC 3164

SUMMARY

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

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

LIMITATIONS

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

This report is based on the conditions present and factors affecting the soil at the time of inspection, namely the 19th December 2017 to the 28th February 2018. No responsibility or liability will be accepted and Chadwick Geotechnics Pty Ltd is indemnified to the full extent permitted by law in respect of the use of this Certificate where there has been a change in the nature of the project, or in the site conditions since the site testing.

CHADWICK GEOTECHNICS PTY LTD



Robert Barden
Geotechnical Engineer



Tim Chadwick
Project Director

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CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot 1114 CGEO REF: 3807351.011.v2
Meridian Estate Stage 11
Clyde North VIC

CLIENT : Grosvenor Lodge Pty Ltd DATE: : August 2018
PO Box 4136
DANDENONG SOUTH VIC 3164

SUMMARY

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

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

LIMITATIONS

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

This report is based on the conditions present and factors affecting the soil at the time of inspection, namely the 19th December 2017 to the 28th February 2018. No responsibility or liability will be accepted and Chadwick Geotechnics Pty Ltd is indemnified to the full extent permitted by law in respect of the use of this Certificate where there has been a change in the nature of the project, or in the site conditions since the site testing.

CHADWICK GEOTECHNICS PTY LTD



Robert Barden
Geotechnical Engineer



Tim Chadwick
Project Director

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CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot 1115 CGEO REF: 3807351.011.v2
Meridian Estate Stage 11
Clyde North VIC

CLIENT : Grosvenor Lodge Pty Ltd DATE: : August 2018
PO Box 4136
DANDENONG SOUTH VIC 3164

SUMMARY

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

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

LIMITATIONS

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

This report is based on the conditions present and factors affecting the soil at the time of inspection, namely the 19th December 2017 to the 28th February 2018. No responsibility or liability will be accepted and Chadwick Geotechnics Pty Ltd is indemnified to the full extent permitted by law in respect of the use of this Certificate where there has been a change in the nature of the project, or in the site conditions since the site testing.

CHADWICK GEOTECHNICS PTY LTD



Robert Barden
Geotechnical Engineer



Tim Chadwick
Project Director

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CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot 1116 CGEO REF: 3807351.011.v2
Meridian Estate Stage 11
Clyde North VIC

CLIENT : Grosvenor Lodge Pty Ltd DATE: : August 2018
PO Box 4136
DANDENONG SOUTH VIC 3164

SUMMARY

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

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

LIMITATIONS

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

This report is based on the conditions present and factors affecting the soil at the time of inspection, namely the 19th December 2017 to the 28th February 2018. No responsibility or liability will be accepted and Chadwick Geotechnics Pty Ltd is indemnified to the full extent permitted by law in respect of the use of this Certificate where there has been a change in the nature of the project, or in the site conditions since the site testing.

CHADWICK GEOTECHNICS PTY LTD



Robert Barden
Geotechnical Engineer



Tim Chadwick
Project Director

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CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot 1117 CGEO REF: 3807351.011.v2
Meridian Estate Stage 11
Clyde North VIC

CLIENT : Grosvenor Lodge Pty Ltd DATE: : August 2018
PO Box 4136
DANDENONG SOUTH VIC 3164

SUMMARY

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

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

LIMITATIONS

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

This report is based on the conditions present and factors affecting the soil at the time of inspection, namely the 19th December 2017 to the 28th February 2018. No responsibility or liability will be accepted and Chadwick Geotechnics Pty Ltd is indemnified to the full extent permitted by law in respect of the use of this Certificate where there has been a change in the nature of the project, or in the site conditions since the site testing.

CHADWICK GEOTECHNICS PTY LTD



Robert Barden
Geotechnical Engineer



Tim Chadwick
Project Director

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CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot 1118 CGEO REF: 3807351.011.v2
Meridian Estate Stage 11
Clyde North VIC

CLIENT : Grosvenor Lodge Pty Ltd DATE: : August 2018
PO Box 4136
DANDENONG SOUTH VIC 3164

SUMMARY

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

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

LIMITATIONS

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

This report is based on the conditions present and factors affecting the soil at the time of inspection, namely the 19th December 2017 to the 28th February 2018. No responsibility or liability will be accepted and Chadwick Geotechnics Pty Ltd is indemnified to the full extent permitted by law in respect of the use of this Certificate where there has been a change in the nature of the project, or in the site conditions since the site testing.

CHADWICK GEOTECHNICS PTY LTD



Robert Barden
Geotechnical Engineer



Tim Chadwick
Project Director

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CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot 1119 CGEO REF: 3807351.011.v2
Meridian Estate Stage 11
Clyde North VIC

CLIENT : Grosvenor Lodge Pty Ltd DATE: : August 2018
PO Box 4136
DANDENONG SOUTH VIC 3164

SUMMARY

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

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

LIMITATIONS

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

This report is based on the conditions present and factors affecting the soil at the time of inspection, namely the 19th December 2017 to the 28th February 2018. No responsibility or liability will be accepted and Chadwick Geotechnics Pty Ltd is indemnified to the full extent permitted by law in respect of the use of this Certificate where there has been a change in the nature of the project, or in the site conditions since the site testing.

CHADWICK GEOTECHNICS PTY LTD



Robert Barden
Geotechnical Engineer



Tim Chadwick
Project Director

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CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot 1120 CGEO REF: 3807351.011.v2
Meridian Estate Stage 11
Clyde North VIC

CLIENT : Grosvenor Lodge Pty Ltd DATE: : August 2018
PO Box 4136
DANDENONG SOUTH VIC 3164

SUMMARY

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

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

LIMITATIONS

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

This report is based on the conditions present and factors affecting the soil at the time of inspection, namely the 19th December 2017 to the 28th February 2018. No responsibility or liability will be accepted and Chadwick Geotechnics Pty Ltd is indemnified to the full extent permitted by law in respect of the use of this Certificate where there has been a change in the nature of the project, or in the site conditions since the site testing.

CHADWICK GEOTECHNICS PTY LTD



Robert Barden
Geotechnical Engineer



Tim Chadwick
Project Director

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CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot 1121 CGEO REF: 3807351.011.v2
Meridian Estate Stage 11
Clyde North VIC

CLIENT : Grosvenor Lodge Pty Ltd DATE: : August 2018
PO Box 4136
DANDENONG SOUTH VIC 3164

SUMMARY

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

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

LIMITATIONS

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

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CHADWICK GEOTECHNICS PTY LTD



Robert Barden
Geotechnical Engineer



Tim Chadwick
Project Director

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CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot 1122 CGEO REF: 3807351.011.v2
Meridian Estate Stage 11
Clyde North VIC

CLIENT : Grosvenor Lodge Pty Ltd DATE: : August 2018
PO Box 4136
DANDENONG SOUTH VIC 3164

SUMMARY

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

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

LIMITATIONS

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

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CHADWICK GEOTECHNICS PTY LTD



Robert Barden
Geotechnical Engineer



Tim Chadwick
Project Director

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CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot 1123 CGEO REF: 3807351.011.v2
Meridian Estate Stage 11
Clyde North VIC

CLIENT : Grosvenor Lodge Pty Ltd DATE: : August 2018
PO Box 4136
DANDENONG SOUTH VIC 3164

SUMMARY

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

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

LIMITATIONS

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CHADWICK GEOTECHNICS PTY LTD



Robert Barden
Geotechnical Engineer



Tim Chadwick
Project Director

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CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot 1124 CGEO REF: 3807351.011.v2
Meridian Estate Stage 11
Clyde North VIC

CLIENT : Grosvenor Lodge Pty Ltd DATE: : August 2018
PO Box 4136
DANDENONG SOUTH VIC 3164

SUMMARY

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

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

LIMITATIONS

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CHADWICK GEOTECHNICS PTY LTD



Robert Barden
Geotechnical Engineer



Tim Chadwick
Project Director

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CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot 1125 CGEO REF: 3807351.011.v2
Meridian Estate Stage 11
Clyde North VIC

CLIENT : Grosvenor Lodge Pty Ltd DATE: : August 2018
PO Box 4136
DANDENONG SOUTH VIC 3164

SUMMARY

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

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

LIMITATIONS

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CHADWICK GEOTECHNICS PTY LTD



Robert Barden
Geotechnical Engineer



Tim Chadwick
Project Director

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CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot 1126 CGEO REF: 3807351.011.v2
Meridian Estate Stage 11
Clyde North VIC

CLIENT : Grosvenor Lodge Pty Ltd DATE: : August 2018
PO Box 4136
DANDENONG SOUTH VIC 3164

SUMMARY

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

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

LIMITATIONS

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Robert Barden
Geotechnical Engineer



Tim Chadwick
Project Director

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CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot 1127 CGEO REF: 3807351.011.v2
Meridian Estate Stage 11
Clyde North VIC

CLIENT : Grosvenor Lodge Pty Ltd DATE: : August 2018
PO Box 4136
DANDENONG SOUTH VIC 3164

SUMMARY

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

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

LIMITATIONS

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Robert Barden
Geotechnical Engineer



Tim Chadwick
Project Director

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CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot 1128 CGEO REF: 3807351.011.v2
Meridian Estate Stage 11
Clyde North VIC

CLIENT : Grosvenor Lodge Pty Ltd DATE: : August 2018
PO Box 4136
DANDENONG SOUTH VIC 3164

SUMMARY

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

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LIMITATIONS

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CONTROLLED FILL CERTIFICATE - LEVEL 1 INSPECTION & TESTING

PROJECT : Lot 1129 CGEO REF: 3807351.011.v2
Meridian Estate Stage 11
Clyde North VIC

CLIENT : Grosvenor Lodge Pty Ltd DATE: : August 2018
PO Box 4136
DANDENONG SOUTH VIC 3164

SUMMARY

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

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