LEVEL ONE

Reference No.: 2344-155

SURVEILLANCE

AND INSPECTION REPORT

Carried Out By



PREPARED FOR: -

1152 TAYLORS DEVELOPMENT PTY LTD



GEOTECHNICAL LABORATORIES PTY LTD ABN 51 102 571 077 14 RAVENHALL WAY RAVENHALL 3023 PH. (03) 8361-9140

Table of Contents

1)	Introduction & Scope	2
2)	Site Preparation	2
3)	Fill Material	2
4)	Fill Construction Procedure	3
5)	Compaction Control Testing	3
6)	Testing Frequency	3
7)	Statement of Compliance	4
8)	Limitations of this Report	4

Appendices

Appendix A Construction Drawings

Appendix B Daily Field Compaction Summary Results



GEOTECHNICAL LABORATORIES PTY LTD ABN 51 102 571 077 14 RAVENHALL WAY RAVENHALL 3023 PH. (03) 8361-9140

Client Name: 1152 Taylors Development Pty Ltd

Project Name: Botania Estate Stage 4B

Date: 14th of March 2023

Author: Mr. Sam Loza

Reference No.: 2344-155

Revision: 0

Project Manager: Mr. Dom Modric

1. Introduction & Scope

At the request of 1152 Taylors Development Pty Ltd, Geotechnical Laboratories has carried out inspection and testing of the above-mentioned site from the 1st of February 2022 to the 8th of March 2022 where a residential development is being constructed. Inspection and testing of stripping, material quality and compaction control tests were carried out to comply with the requirements of AS 3798 Appendix B, Level 1.

The following documentation was submitted to Geotechnical Laboratories by 1152 Taylors Development Pty Ltd and was used to determine compliance of earthworks in conjunction with the requirements of AS 3798 – 2007.

(1). Road & Drainage Layout Plan Drawing Number 3070E-04B-111 (Rev. A).

General site works involved the placement of fill, using mainly on-site derived materials, to bring the fill construction regions to the required finished levels as indicated on the civil construction drawings.

2. Site Preparation

Site inspections were undertaken on the 24th of January 2022 confirming that selected areas to be filled were completely stripped of topsoil prior to filling. The topsoils were stockpiled around the site for later removal off-site.

Initial proof roll inspections were performed and subsequently throughout the project duration to ensure no significant soft areas were present prior to filling.

3. Fill Material

The fill material used was sourced from service trench excavations, road boxing and site cut areas.



GEOTECHNICAL LABORATORIES PTY LTD ABN 51 102 571 077 14 RAVENHALL WAY RAVENHALL 3023 PH. (03) 8361-9140

The material is best described as a silty CLAY, brown, dark brown, slightly moist to moist, high plasticity with gravels and cobbles of a basalt origin.

The fill material is consistent with the naturally occurring soils for this region.

Source material was deemed a **Suitable Material** in accordance with guidelines set out in AS 3798 - 2007 Section 4.4.

4. Fill Construction Procedure

The following plant (but not always limited to) were engaged in the fill placement process:

- Highway trucks / dump trucks
- A watercart
- A sheepsfoot compactor (815)

The sheepsfoot compactor placed material in horizontal loose layers of approximately 250mm-300mm. The compactor also performed compaction of the fill operating in a criss-cross pattern where possible.

The moisture condition of the fill was closely monitored and moisture conditioning procedures were applied to bring the material closer to its Standard Optimum Moisture Content (AS 1289 5.7.1).

5. Compaction Control Testing

Compaction control testing was performed on-site using a Nuclear Densometer in accordance with AS 1289 5.8.1. Laboratory reference densities were determined from material sampled at each test site location using the Hilf Rapid Compaction Method in accordance with AS 1289 5.7.1.

A total of twelve compaction tests were performed on the fill construction. Results are presented in Appendix B of this report.

6. Testing Frequency

Testing frequencies were in accordance with **AS 3798 - 2007 Table 8.1** for **Type 1 - Large Scale Operations.**

Acceptance of fill layers for compaction was based on the requirements of **AS** 3798 - 2007 Table 5.1 Item 1. Residential.



GEOTECHNICAL LABORATORIES PTY LTD ABN 51 102 571 077 14 RAVENHALL WAY RAVENHALL 3023 PH. (03) 8361-9140

As a result, the compliance criteria adopted by Geotechnical Laboratories was a hilf density ratio not less than 95 percent of the maximum hilf density value as determined by the Standard Hilf Rapid Compaction Method in accordance with AS 1289 5.7.1.

Test results indicate that the above-mentioned requirements have been successfully achieved.

No moisture criteria was specified.

7. Statement of Compliance

So far as can be determined, 1152 Taylors Development Pty Ltd has satisfactorily complied with the compaction and construction processes required for the structural filling of this site. As such, structural filling placed on this site by 1152 Taylors Development Pty Ltd from the 1st of February 2022 to the 8th of March 2022 can be categorised as CONTROLLED FILL in accordance with AS 2870-2011.

8. Limitations and Liability of this Report

This report has been produced for and remains the property of 1152 Taylors Development Pty Ltd.

The release of this report to a third party will only occur if Geotechnical Laboratories Pty Ltd has received, in writing, the authority to do so by our client.

Geotechnical Laboratories Pty Ltd will not engage in any third-party communication regarding this report.

Where information has been supplied by the client or third party, the assumption is made that this is correct. Geotechnical Laboratories Pty Ltd will not be held responsible for any inaccuracies supplied.

Test results and controlled fill compliance relates only to fill placed by 1152 Taylors Development Pty Ltd and for earthworks completed at the time of inspection and testing. Any previous or subsequent earthworks will require a separate evaluation.

For & on behalf of Geotechnical Laboratories Pty Ltd.

Sam Loza

Laboratory Manager.

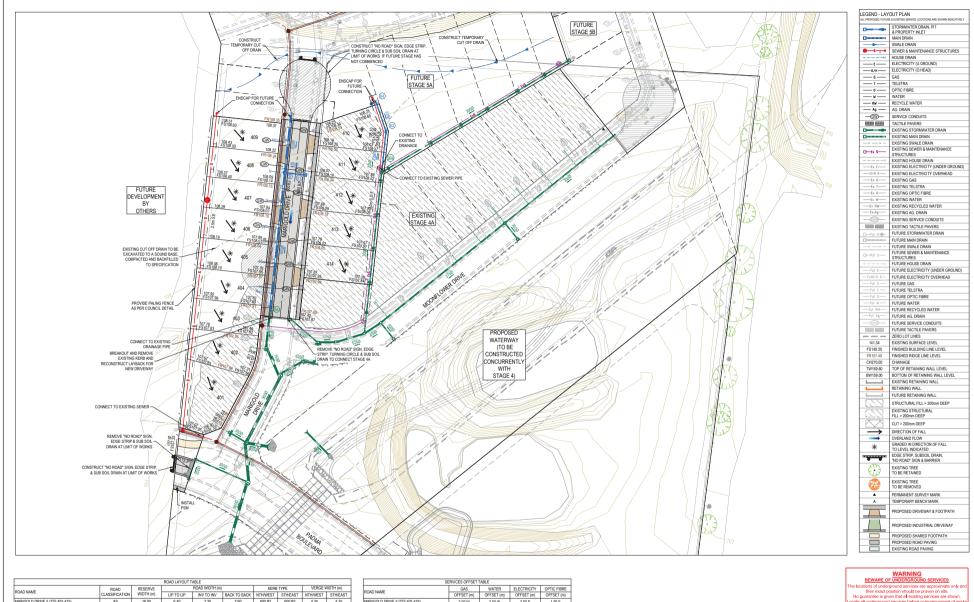
GEOTECHNICAL LABORATORIES PTY LTD ABN 51 102 571 077 14 RAVENHALL WAY RAVENHALL 3023 PH. (03) 8361-9140

LEVEL ONE

SURVEILLANCE

AND INSPECTION REPORT

APPENDIX A



			ROAD LAYOUT T	ABLE					
ROAD NAME	ROAD	RESERVE		ROAD WIDTH (m)		KERB	TYPE	VERGE V	/IDTH (m)
RUAD NAME	CLASSIFICATION	WIDTH (m)	LIP TO LIP	INV TO INV	BACK TO BACK	NTHWEST	STH/EAST	NTH/WEST	STH/EAST
MARIGOLD DRIVE (LOTS 401-415)	AS	16.00	6.40	7.30	7.60	600 B2	600 B2	4.35	4.35
PADMA BOULEVARD	CS	25.00	6.40	7.30	7.60	600 B2	600 B2	11.40	6.40

SERVICES OFFSET TABLE												
ROAD NAME	GAS	WATER	ELECTRICITY	OPTIC FIBRE								
KUALI NAME	OFFSET (m)	OFFSET (m)	OFFSET (m)	OFFSET (m)								
ARIGOLD DRIVE (LOTS 401-415)	2.00 W	2.50 W	2.60 E	1.90 E								
PADMA BOULEVARD	2.00 S	2.50 S	2.60 N	1.90 N								

ROAD NAME				
KUALI NAME	OFFSET (m)	OFFSET (m)	OFFSET (m)	OFFSET (m)
MARIGOLD DRIVE (LOTS 401-415)	2.00 W	2.50 W	2.60 E	1.90 E
PADMA BOULEVARD	2.00 S	2.50 S	2.60 N	1.90 N

DESIGNER CHECKER
S.MACLAREN C.CATHCART













Botania - Stage 4B Melton City Council Road and Drainage

Layout Plan

Melbourne, VIC 3008 Ph 03 9514 1500 **GROWLAND**

MELWAYS REF | PROJECT / DRAWING No. 355 G5 | 3070E-04B-111 02 of 13 A

DIAL 1100 BEFORE YOU DIG

GEOTECHNICAL LABORATORIES PTY LTD ABN 51 102 571 077 14 RAVENHALL WAY RAVENHALL 3023 PH. (03) 8361-9140

LEVEL ONE

SURVEILLANCE

AND INSPECTION REPORT

APPENDIX B



Email: info@geolab.com.au PH: (03) 8361-9140

DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 2343/119

2040/113

LOCATION: 1152 TAYLORS DEVELOPMENT - Botania, Plumpton, Stage 4

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIATION FROM OPTIMUM MOISTURE CONTENT (%)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
1/02/22	1		1.93	25.0	98.5	№ 1.96	25.5	175	0.5 Drier	98.0	6	0	0
1/02/22	2		1.89	22.5	98.5	₩ 1.93	25.5	175	3.0 Drier	87.5	4	0	0
1/02/22	3	Refer to #2343/120 for	1.90	23.5	97.5	№ 1.95	24.5	175	1.0 Drier	96.0	5	0	0
-	-	approx. test site locations.	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	1	ı	1	1	-	1	1	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 12:30pm Finish Time: 1:20pm

A Hilf Rapid Compaction test was carried out on a sample taken from each Field Density location to obtain the Compaction Parameters tabulated on this Report.

NATA

TECHNICAL COMPETENCE Moisture Content: AS 1289 2.1.1

Soil Layer thickness: 200mm Compaction Test: AS 1289 5.7.1

Hilf Density Ratio and Hilf Moisture Variation ,Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1

Field Density, Nuclear Gauge: AS 1289 5.8.1

Materials Sampled: AS 1289 1.2.1 Clause 6.4(b)

Accredited for compliance with ISO/IEC

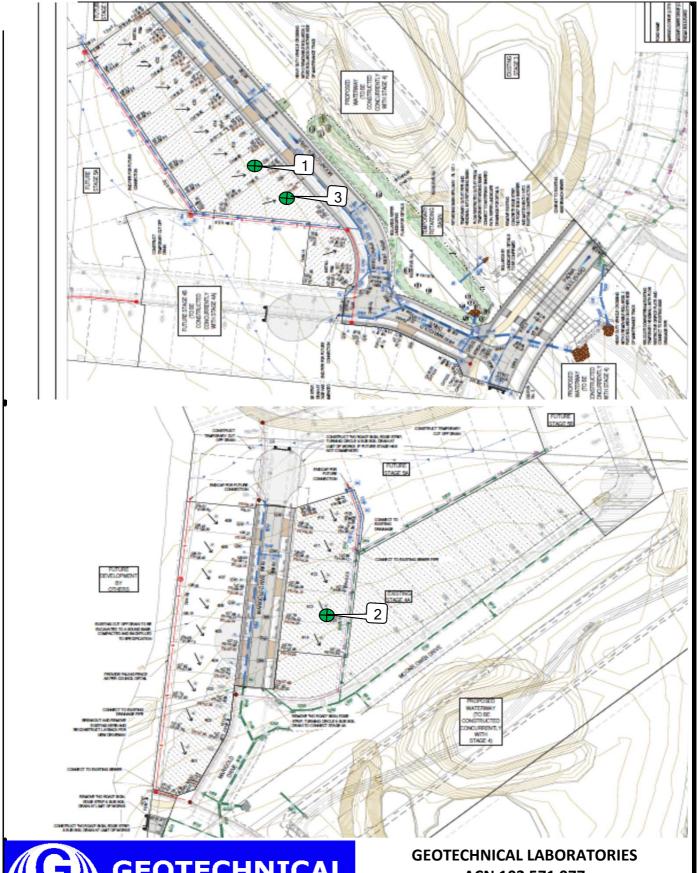
17025 - Testing

NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 3/2/2022





ACN 102 571 077

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140

CLIENT: 1152 TAYLORS DEVELOPMENT

LOCATION: Botania, Plumpton Stage 4

Sketch indicating compaction test locations

DATE: 1/02/2022	JOB No.: 2343/120
OPERATOR: BM	CHECKED: KK
SCALE: NTS	FIGURE No: -



Email: info@geolab.com.au PH: (03) 8361-9140

DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 2353/121

LOCATION: 1152 TAYLORS DEVELOPMENT - Botania, Plumpton, Stage 4

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIATION FROM OPTIMUM MOISTURE CONTENT (%)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
2/02/22	1		1.86	26.0	97.0	₩ 1.92	27.0	175	1.0 Drier	96.5	6	0	0
2/02/22	2		1.92	25.0	100.0	1.92	25.0	175	0.0 Drier	100.0	0	0	0
2/02/22	3	Refer to #2353/122 for	2.00	21.5	105.5	1.89	24.5	175	3.0 Drier	87.0	0	0	0
-	-	approx. test site locations.	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	1	ı	-	-	ı	-	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 12:40pm Finish Time: 1:10pm

A Hilf Rapid Compaction test was carried out on a sample taken from each Field Density location to obtain the Compaction Parameters tabulated on this Report.

NATA

TECHNICAL COMPETENCE Moisture Content: AS 1289 2.1.1

Soil Layer thickness: 200mm Compaction Test: AS 1289 5.7.1

Hilf Density Ratio and Hilf Moisture Variation ,Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1

Field Density, Nuclear Gauge: AS 1289 5.8.1

Materials Sampled: AS 1289 1.2.1 Clause 6.4(b)

Accredited for compliance with ISO/IEC

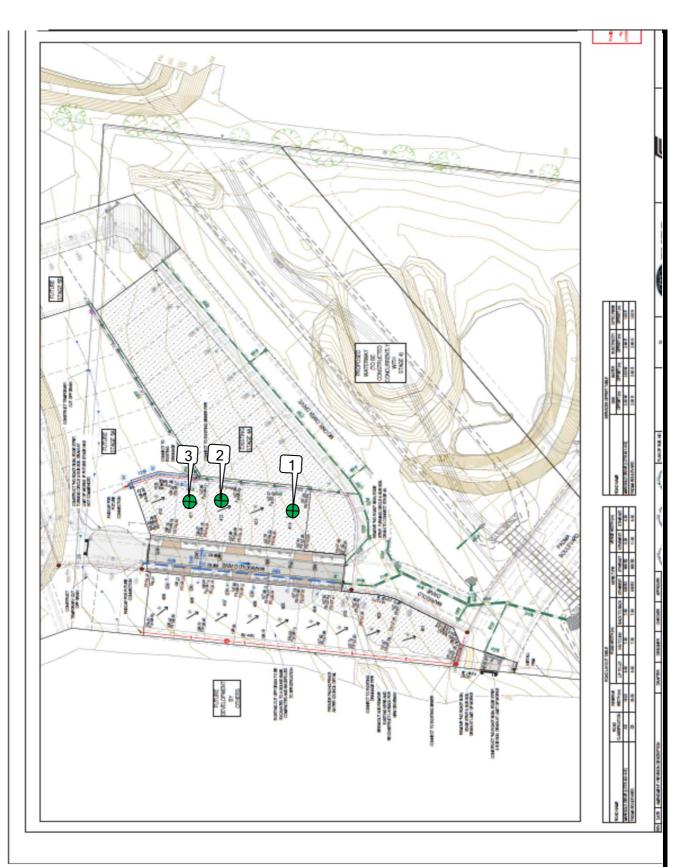
17025 - Testing

NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 4/2/2022





GEOTECHNICAL LABORATORIES ACN 102 571 077

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140

CLIENT: 1152 TAYLORS DEVELOPMENT

LOCATION: Botania, Plumpton Stage 4

Sketch indicating compaction test locations

DATE: 2/02/2022	JOB No.: 2343/122
OPERATOR: BM	CHECKED: KK
SCALE: NTS	FIGURE No: -



Email: info@geolab.com.au

DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 2343/123

LOCATION: 1152 TAYLORS DEVELOPMENT - Botania, Plumpton, Stage 4

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIATION FROM OPTIMUM MOISTURE CONTENT (%)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
3/02/22	1		1.81	28.0	96.5	1.87	28.5	175	0.5 Drier	98.0	0	0	0
3/02/22	2		1.95	26.0	103.5	1.88	26.5	175	0.5 Drier	99.0	0	0	0
3/02/22	3	Refer to #2343/124 for	1.89	26.0	103.5	1.83	29.0	175	3.0 Drier	90.5	0	0	0
-	-	approx. test site locations.	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

PH: (03) 8361-9140

Start Time: 1:00pm Finish Time: 1:30pm

A Hilf Rapid Compaction test was carried out on a sample taken from each Field Density location to obtain the Compaction Parameters tabulated on this Report.

NATA

TECHNICAL COMPETENCE Moisture Content: AS 1289 2.1.1

Soil Layer thickness: 200mm Compaction Test: AS 1289 5.7.1

Hilf Density Ratio and Hilf Moisture Variation ,Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1

Field Density, Nuclear Gauge: AS 1289 5.8.1

Materials Sampled: AS 1289 1.2.1 Clause 6.4(b)

Accredited for compliance with ISO/IEC

17025 - Testing

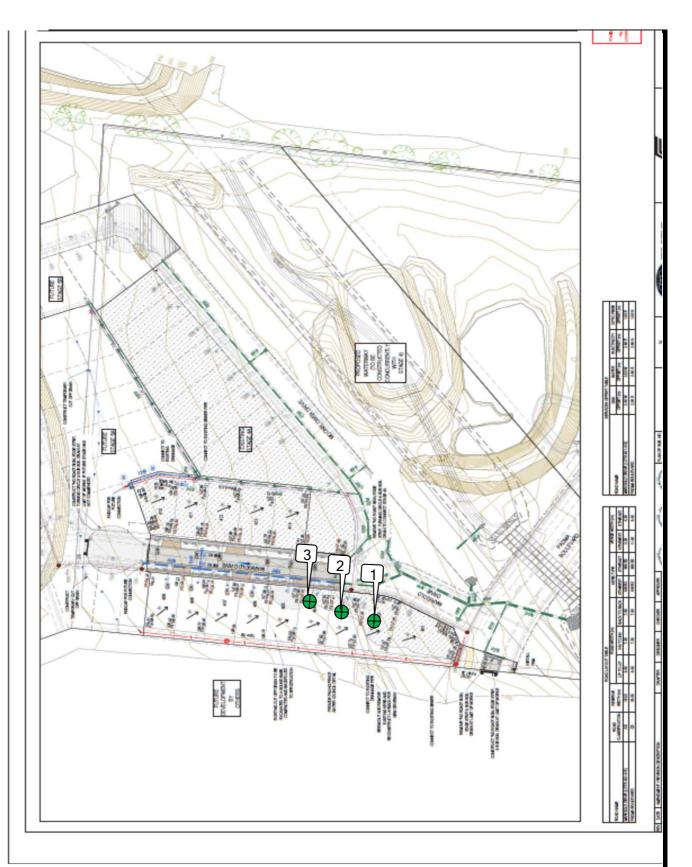
NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 7/2/2022

¥





GEOTECHNICAL LABORATORIES ACN 102 571 077

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140

CLIENT: 1152 TAYLORS DEVELOPMENT

LOCATION: Botania, Plumpton Stage 4

Sketch indicating compaction test locations

DATE: 3/02/2022	JOB No.: 2343/124
OPERATOR: PV	CHECKED: KK
SCALE: NTS	FIGURE No: -



DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 2343/125

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140 LOCATION: 1152 TAYLORS DEVELOPMENT - Botania, Plumpton, Stage 4

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIATION FROM OPTIMUM MOISTURE CONTENT (%)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
7/02/22	1		1.94	32.5	97.0	№ 2.00	28.5	175	4.0 Wetter	114.0	13	0	0
7/02/22	2		1.99	26.5	101.0	₩ 1.96	25.5	175	1.5 Wetter	105.0	11	0	0
7/02/22	3	Refer to #2343/126 for	1.93	24.0	99.0	№ 1.95	24.0	175	0.0 Wetter	101.0	9	0	0
-	-	approx. test site locations.	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 10:00am Finish Time: 10:30am

A Hilf Rapid Compaction test was carried out on a sample taken from each Field Density location to obtain the Compaction Parameters tabulated on this Report.

NATA

TECHNICAL COMPETENCE

Moisture Content: AS 1289 2.1.1

Soil Layer thickness: 200mm Compaction Test: AS 1289 5.7.1

Hilf Density Ratio and Hilf Moisture Variation, Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1

Field Density, Nuclear Gauge: AS 1289 5.8.1

Materials Sampled: AS 1289 1.2.1 Clause 6.4(b)

■ Indicates APCWD

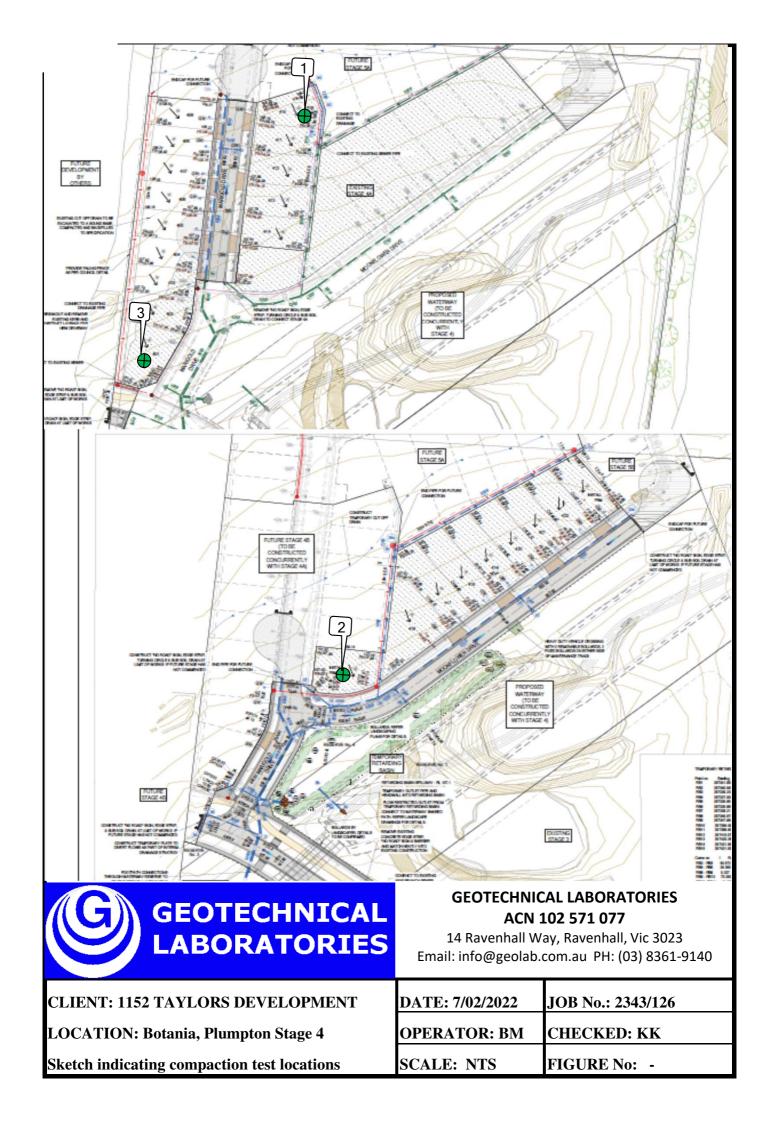
Accredited for compliance with ISO/IEC

NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 9/2/2022





Email: info@geolab.com.au PH: (03) 8361-9140

DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 2343/129

LOCATION: 1152 TAYLOR'S DEVELOPMENT - Botania Stage 4A,4B

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIATION FROM OPTIMUM MOISTURE CONTENT (%)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
8/03/22	1		1.85	22.5	95.0	₩ 1.95	23.0	175	0.0 Drier	99.0	4	0	0
8/03/22	2		1.84	29.5	96.5	1.90	28.5	175	1.0 Wetter	103.5	0	0	0
8/03/22	3	Refer to #2343/130 for	1.85	22.0	98.0	1.89	24.5	175	2.0 Drier	91.0	0	0	0
8/03/22	4	approx. test site locations.	1.88	25.0	98.5	1.91	26.0	175	1.0 Drier	97.0	0	0	0
8/03/22	5		1.87	22.5	97.0	1.93	24.0	175	1.0 Drier	95.0	0	0	0
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 8.30am Finish Time: 9.30am

A Hilf Rapid Compaction test was carried out on a sample taken from each Field Density location to obtain the Compaction Parameters tabulated on this Report.

NATA

TECHNICAL COMPETENCE Moisture Content: AS 1289 2.1.1

Soil Layer thickness: 200mm Compaction Test: AS 1289 5.7.1

Hilf Density Ratio and Hilf Moisture Variation ,Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1

Field Density, Nuclear Gauge: AS 1289 5.8.1

Materials Sampled: AS 1289 1.2.1 Clause 6.4(b)

<u>Accredited for compliance with ISO/IEC</u> 17025 - Testing

NATE A STATE

NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 16/3/2022

