LEVEL ONE

Reference No.: 2344-156

SURVEILLANCE

AND INSPECTION REPORT

Carried Out By



PREPARED FOR: -

451 BEATTYS DEVELOPMENT PTY LTD



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

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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: 451 Beattys Development Pty Ltd

Project Name: Botania Estate Stage 5A

Date: 16th of March 2023 Author: Mr. Sam Loza

Reference No.: 2344-156

Revision: 0

Project Manager: Mr. Dom Modric

1. Introduction & Scope

At the request of 451 Beattys Development Pty Ltd, Geotechnical Laboratories has carried out inspection and testing of the above-mentioned site from the 21st of December 2021 to the 15th 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 451 Beattys 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-05A-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 29th of November 2021 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 twenty-eight 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, 451 Beattys 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 451 Beattys Development Pty Ltd from the 21st of December 2021 to the 15th 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 451 Beattys 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 451 Beattys 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.

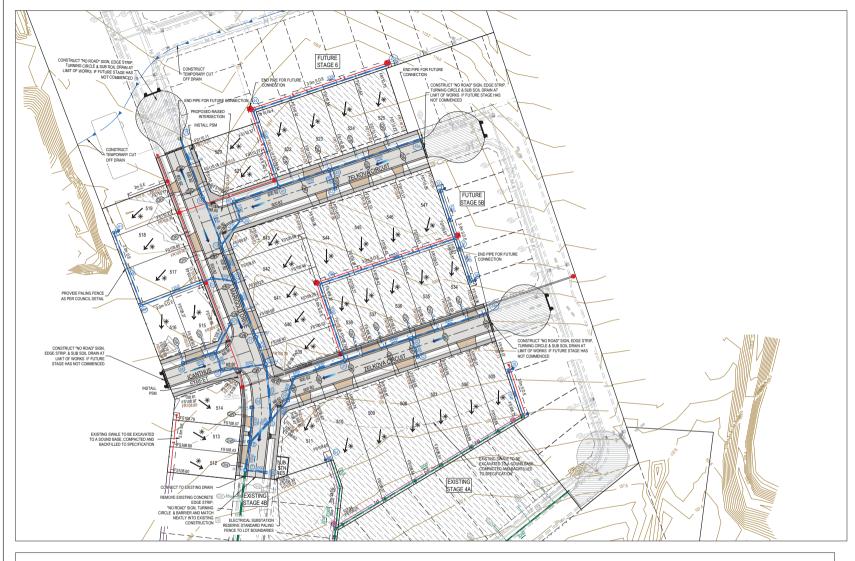
GEOTECHNICAL LABORATORIES PTY LTD ABN 51 102 571 077 14 RAVENHALL WAY RAVENHALL 3023 PH. (03) 8361-9140

LEVEL ONE

SURVEILLANCE

AND INSPECTION REPORT

APPENDIX A



	ROAD LAYOUT TABLE										
ROAD NAME	ROAD	RESERVE		ROAD WIDTH (m)		KERB	TYPE	VERGE V	VIDTH (m)		
NOAD NAME	CLASSIFICATION	WIDTH (m)	LIP TO LIP	INV TO INV	BACK TO BACK	NTH/WEST	STH/EAST	NTH/WEST	STH/EAST		
MARIGOLD DRIVE	AS	16.00	6.40	7.30	7.60	600 B2	600 B2	4.35	4.35		
ZELKOVA CIRCUIT	AS	16.00	6.40	7.30	7.60	600 B2	600 B2	4.35	4.35		
ICANTHUS STREET	AS	16.00	6.40	7.30	7.60	600 B2	600 B2	4.35	4.35		

SERVICES OFFSET TABLE								
ROAD NAME	GAS	WATER	ELECTRICITY	OPTIC FIBRE				
ROAD NAME	OFFSET (m)	OFFSET (m)	OFFSET (m)	OFFSET (m)				
MARIGOLD DRIVE	2.00 W	2.50 W	2.60 E	1.90 E				
ZELKOVA CIRCUIT	2.00 N	2.50 N	2.60 S	1.90 S				
ICANTHUS STREET	2.00 N	2.50 N	2.60 S	1.90 S				

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DRAFTER	DESIGNER	CHECKER	APPROVER	Г
А	12.08.2021	ISSUED FOR INFORMATION ONLY	V.HOPE	S.MACLAREN	C.CATHCART	B.SANDERSON	Questly.
							Gid
							r





INFORMATION ONLY







Botania - Stage 5A Melton City Council Road and Drainage Layout Plan

LEGEND - LAYOUT PLAN

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G-fx s-

141 34

FS140.35

FR157 40

CH270.00 TW159 60

BW159.00

*

STORMWATER DRAIN, PIT & PROPERTY INLET

SWALE DRAIN SEWER & MAINTENANCE STRUCTURES

RECYCLE WATER

SERVICE CONDUITS

EXISTING OPTIC FIBRE EXISTING WATER

EXISTING RECYCLED WATER

EXISTING AG DRAIN EXISTING SERVICE CONDUITS

FUTURE MAIN DRAIN FUTURE SWALE DRAIN
FUTURE SEWER & MAINTENANCE
STRUCTURES
FUTURE HOUSE DRAIN FUTURE ELECTRICITY (UNDER GROUND) FUTURE ELECTRICITY OVERHEAD FUTURE GAS

FUTURE TELSTRA

FUTURE OPTIC FIRR FUTURE WATER FUTURE RECYCLED WATER FUTURE AG. DRAIN FUTURE SERVICE CONDUITS

FUTURE TACTILE PAVERS ZERO LOT LINES

EXISTING SURFACE LEVEL
FINISHED BUILDING LINE LEVEL

TOP OF RETAINING WALL LEVEL BOTTOM OF RETAINING WALL LEVEL

FINISHED RIDGE LINE LEVEL

EXISTING RETAINING WALL

FUTURE RETAINING WALL STRUCTURAL FILL > 200mm DEEP EXISTING STRUCTURAL FILL > 200mm DEEP CUT > 200mm DEEP DIRECTION OF FALL OVERLAND FLOW GRADED IN DIRECTION OF FALL TO LEVEL INDICATED

EDGE STRIP, SUBSOIL DRAIN, "NO ROAD" SIGN & BARRIER

PERMANENT SURVEY MARK

TEMPORARY BENCH MARK PROPOSED DRIVEWAY & FOOTPATH

PROPOSED INDUSTRIAL DRIVEWAY

PROPOSED SHARED FOOTPATH PROPOSED ROAD PAVING EXISTING ROAD PAVING

WARNING
BEWARE OF UNDERGROUND SERVICES
locations of underground services are approximate only
their exact position should be proven on site.
o guarantee is given that all existing services are shown
te all underground services before commencement of we DIAL 1100 BEFORE YOU DIG

EXISTING TREE TO BE REMOVED

EXISTING TACTILE PAVERS FUTURE STORMWATER DRAIN

STRUCTURES
EXISTING HOUSE DRAIN
EXISTING ELECTRICITY (UNDER GROUND) EXISTING ELECTRICITY OVERHEAD EXISTING GAS EXISTING TELSTRA

TACTILE PAVERS EXISTING STORMWATER DRAIN EXISTING SWALE DRAIN EXISTING SEWER & MAINTENANCE

-0/H - ELECTRICITY (O.HEAD)

- 0 OPTIC FIBRE
- w WATER
- RW RECYCLE WA
- Ag AG DRAIN
- SID SERVICE CON

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MELWAYS REF PROJECT / DRAWING No. 355 G5 3070E-05A-111 02 of 26 A

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



REPORT NO.: # 2343/097

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

1152 TAYLORS DEVELOPMENT - Botania, Plumpton, Stage 5 LOCATION:

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)
21/12/21	1		1.90	23.0	103.5	1.83	25.5	175	2.5 Drier	90.5	0	0	400
21/12/21	2		1.96	23.0	108.0	1.81	25.5	175	2.5 Drier	89.5	0	0	400
21/12/21	3	Refer to #2343/098 for	1.89	23.5	106.5	1.77	28.5	175	5.5 Drier	81.0	0	0	0
-	-	approx. test site locations.	-	1	-	-	ı	-	-	-	1	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	ı	-	-	-	-	ı	-	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 12:25pm 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

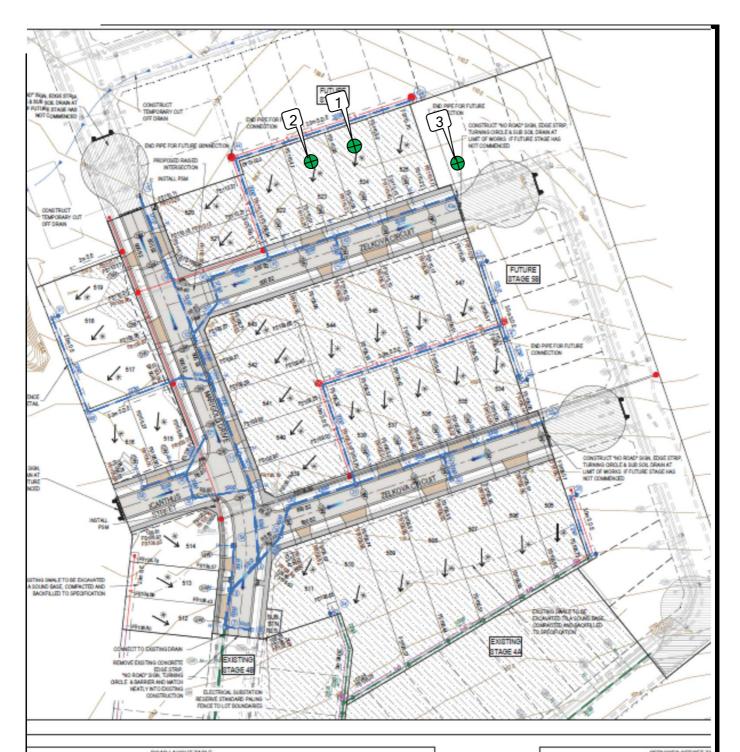
NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 12/1/2022

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RANGESIA NO

	HDAD L	AYOUT TABLE						
ROAD RESERVE		ROAD WIDTH (m	0	KERB	TYPE	VERGE WIDTH (m)		
WIDTH (w)	LIPTOUP	INV TO INV	BACK TO BACK	NTH/WEST	STHUEAST	NTHIWEST	STHEAST	
16.00	6.40	7.30	7.80	600 82	600 B2	4.35	4.35	
16.00	6.40	7.30	7.60	600 B2	600 B2	4.35	4.35	
16.00	6.40	7.30	7.60	600 B2	600 B2	4.35	4.35	
	WIDTH (w) 16.00 16.00	PESERVE WIOTH (m) LIP TO LIP 16.00 6.40 16.00 6.40	RESERVE ROAD MIDTH (m) LIP TO LIP INV TO INV 16.00 6.40 7.30 16.00 6.40 7.30	RESERVE ROAD WIDTH (m) LIP TO LIP INV TO INV BACK TO BACK 16.00 6.40 7.50 7.60 16.00 6.40 7.50 7.60	RESERVE ROAD WIDTH (m) KERB WIDTH (m) LIP TO LIP INV TO INV BACK TO BACK MTH/WEST 16.00 6.40 7.50 7.50 600 B2 16.00 6.40 7.50 7.50 600 B2	RESERVE ROAD WIDTH (m) KERB TYPE	WIOTH # LIP TO LIP	

DOIN HAVE	GAS	WAT	
ROAD NAME	OFFSET (m)	OFFSE	
MARIGOLD DRIVE	2.00 W	2.50	
ZELIXOVA CIRCUIT	2.00 N	2.50	
ICANTHUS STREET	2.00 N	2.50	

(C)	GEOTECHNICAL
	LABORATORIES

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 5

Sketch indicating compaction test locations

DATE: 21/12/2021 JOB No.: 2343/098

OPERATOR: WS CHECKED: KK

SCALE: NTS FIGURE No: 1 of 1



14 Ravenhall Way, Ravenhall, Vic 3023

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

DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 2343/099

LOCATION: 1152 TAYLORS DEVELOPMENT - Botania, Plumpton, Stage 5

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)
13/01/22	1		2.06	18.5	104.0	№ 1.98	21.5	175	3.0 Drier	86.5	6	0	0
13/01/22	2		1.89	21.5	99.5	№ 1.90	24.5	175	3.5 Drier	86.0	7	0	0
13/01/22	3	Refer to #2343/100 for	1.95	21.5	103.0	№ 1.90	25.0	175	3.5 Drier	85.5	5	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: 2:15pm Finish Time: 3:00pm

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

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

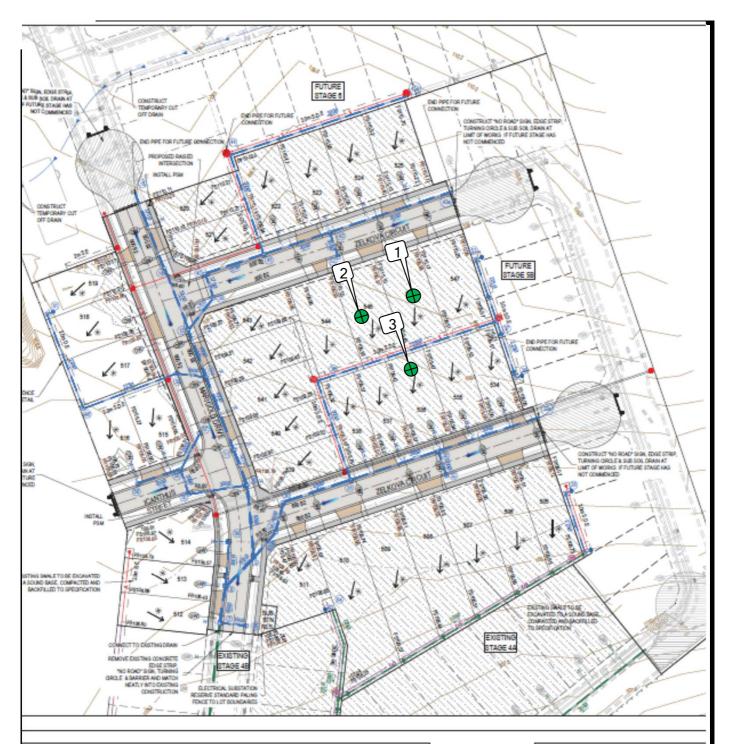
17025 - Testing

NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 18/1/2022



PANOFSUS NO.

	HDAD L	AYOUT TABLE						
ROAD RESERVE		ROAD WIDTH (m	0	KERB	TYPE	VERGE WIDTH (m)		
WIDTH (w)	LIPTOUP	INV TO INV	BACK TO BACK	NTH/WEST	STHUEAST	NTHIWEST	STHEAST	
16.00	6.40	7.30	7.80	600 82	600 B2	4.35	4.35	
16.00	6.40	7.30	7.60	600 B2	600 B2	4.35	4.35	
16.00	6.40	7.30	7.60	600 B2	600 B2	4.35	4.35	
	WIDTH (w) 16.00 16.00	PESERVE WIOTH (m) LIP TO LIP 16.00 6.40 16.00 6.40	RESERVE ROAD MIDTH (m) LIP TO LIP INV TO INV 16.00 6.40 7.30 16.00 6.40 7.30	RESERVE ROAD WIDTH (m) LIP TO LIP INV TO INV BACK TO BACK 16.00 6.40 7.50 7.60 16.00 6.40 7.50 7.60	RESERVE ROAD WIDTH (m) KERB WIDTH (m) LIP TO LIP INV TO INV BACK TO BACK MTH/WEST 16.00 6.40 7.50 7.50 600 B2 16.00 6.40 7.50 7.50 600 B2	RESERVE ROAD WIDTH (m) KERB TYPE	WIOTH # LIP TO LIP	

SERVICES OFFISET							
DOLONIE	GAS	OFFSE					
ROAD NAME	OFFSET (m)						
MARIGOLD DRIVE	2.00 W	2.50					
ZELKOVA CIRCUIT	2.00 N	2.50					
ICANTHUS STREET	2.00 N	2.50					

G	GEOTECHNICAL
	LABORATORIES

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 5

DATE: 13/01/2022	JOB No.: 2343/100
OPERATOR: BM	CHECKED: KK
SCALE: NTS	FIGURE No: -



REPORT NO.: # 2343/101

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

1152 TAYLORS DEVELOPMENT - Botania, Plumpton, Stage 5 LOCATION:

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)
17/01/22	1	Refer to #2343/102 for approx. test site locations.	1.96	23.5	100.5	₩ 1.95	23.5	175	0.0 Wetter	101.0	10	0	150
17/01/22	2		1.87	23.5	101.0	1.86	26.0	175	2.5 Drier	89.5	0	0	0
17/01/22	3		1.84	23.5	95.0	₩ 1.94	24.0	175	0.0 Drier	99.0	6	0	0
-	1		-	-	-	1	ı	ı	•	ı	ı	-	-
-	-		-	-	-	1	ı	1	1	ı	1	-	-
-	-		-	-	-	ı	-	-	-	-	ı	-	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 12:00pm 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)

■ Indicates APCWD

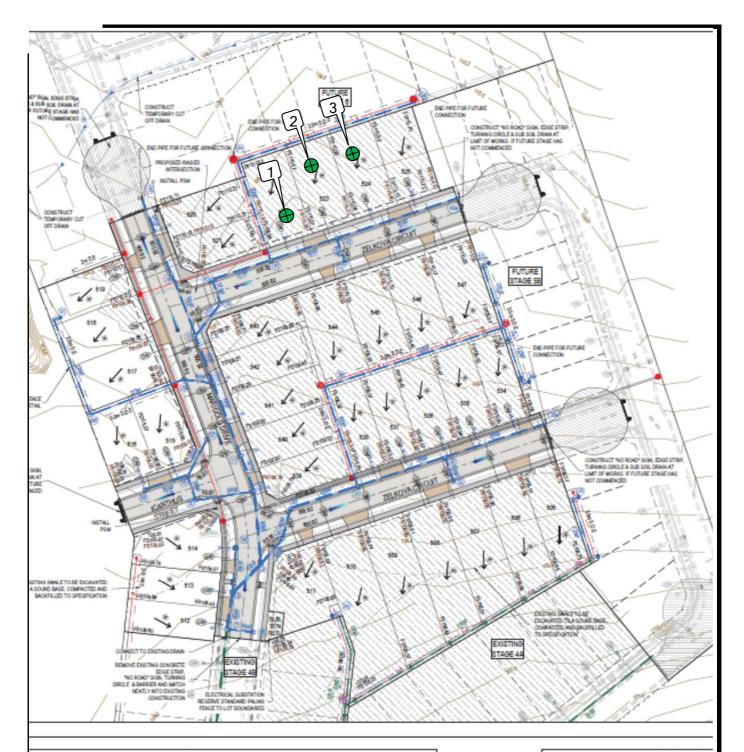
Accredited for compliance with ISO/IEC

NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 21/1/2022



		ROADI	AYOUT TABLE							
ROAD	RESERVE		ROAD WIDTH (m	0	KERB TYPE			VERGE WIDTH (m)		
ASSIFICATION	WIDTH (m)	LIPTOLIP	INV TO INV	BACK TO BACK	NTH/WEST	STHVEAST	NTHIWEST	STHIEAST		
28	16.00	6.40	7.30	7.60	600 B2	600 B2	4.35	4.25		
AS	16.00	6.40	7.30	7.80	600 B2	600 B2	4.35	4.35		
AS	16.00	6.40	7.30	7.80	600 B2	600 B2	4.35	4.35		

	SERVICES OFFSET TA					
ACAD NAME MARIGOLD DRIVE SELKOVA CIRCUIT	GAS	WATE				
	OFFSET (m)	OFFSE				
MARIGOLD DRIVE	2.00 W	2.50				
ZELKOVA CIRCUIT	2.00 N	2.50				
ICANTHUS STREET	2.00 N	2.50				

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

CLIENT: 1152 TAYLORS DEVELOPMENT

LOCATION: Botania, Plumpton Stage 5

DATE: 17/01/2022	JOB No.: 2343/102
OPERATOR: TC	CHECKED: KK
SCALE: NTS	FIGURE No: -



REPORT NO.: # 2343/103

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

1152 TAYLORS DEVELOPMENT - Botania, Plumpton, Stage 5 LOCATION:

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)
18/01/22	1		1.89	27.5	97.5	1.94	25.5	175	2.5 Wetter	109.0	0	0	0
18/01/22	2		1.89	27.0	100.5	1.88	27.0	175	0.5 Drier	99.0	0	0	0
18/01/22	3	Refer to #2343/104 for approx. test site locations.	1.95	23.0	104.0	1.88	27.0	175	3.5 Drier	86.5	0	0	0
-	-		-	1	-	-	-	-	-	-	1	-	-
-	-		-		-	1	ı	1	-	ı	1	-	-
-	-		-	-	-	ı	-	-	-	-	ı	-	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 2:40pm Finish Time: 3:30pm

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

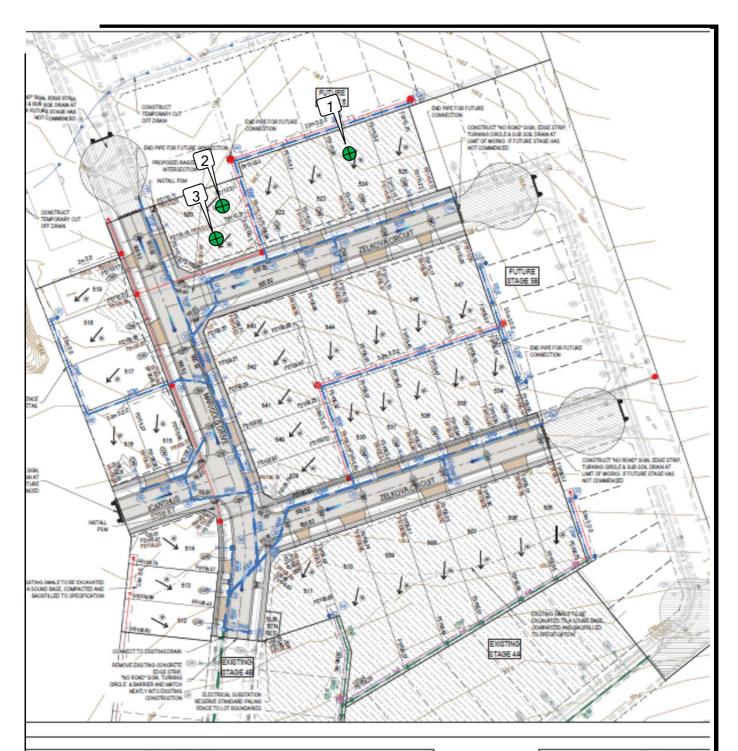
NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 21/1/2022

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		ROADI	AYOUT TABLE						
ROAD	RESERVE		ROAD WIDTH (m	0	KERB	TYPE	VERGE WIDTH (m)		
ASSIFICATION	WIDTH (m)	LIPTOLIP	INV TO INV	BACK TO BACK	NTH/WEST	STHVEAST	NTHIWEST	STHIEAST	
AS	16.00	6.40	7.30	7.60	600 B2	600 B2	4.35	4.25	
AS	16.00	6.40	7.30	7.80	600 B2	600 B2	4.35	4.35	
AS	16.00	6.40	7.30	7.80	600 B2	600 B2	4.35	4.35	

	SERVICES OFFSET TA					
CAD NAME MARIGOLD DRIVE	GAS	WATE				
	OFFSET (m)	OFFSE				
MARIGOLD DRIVE	2.00 W	2.50				
ZELKOVA CIRCUIT	2.00 N	2.50				
ICANTHUS STREET	2.00 N	2.50				

GEOTECHNICAL LABORATORIES

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 5

DATE: 18/01/2022	JOB No.: 2343/104
OPERATOR: WS	CHECKED: KK
SCALE: NTS	FIGURE No: -



REPORT NO.: # 2343/105

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140 LOCATION: 1152 TAYLORS DEVELOPMENT - Botania, Plumpton, Stage 5

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)
19/01/22	1	Refer to #2343/106 for approx. test site locations.	1.96	24.0	99.0	№ 1.98	22.0	175	2.0 Wetter	109.0	5	0	0
19/01/22	2		1.94	24.5	101.0	1.92	24.0	175	0.0 Wetter	101.0	0	0	0
19/01/22	3		1.90	24.0	96.5	₩ 1.97	21.5	175	2.0 Wetter	110.5	6	0	0
-	-		-	-	ı	-	-	-	-	-	1	1	-
-	-		-	-	-	1	-	1	-	1		1	-
-	-		-	-	-	ı	-	ı	-	-	ı	ı	-

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: 1:10pm

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)

■ Indicates APCWD

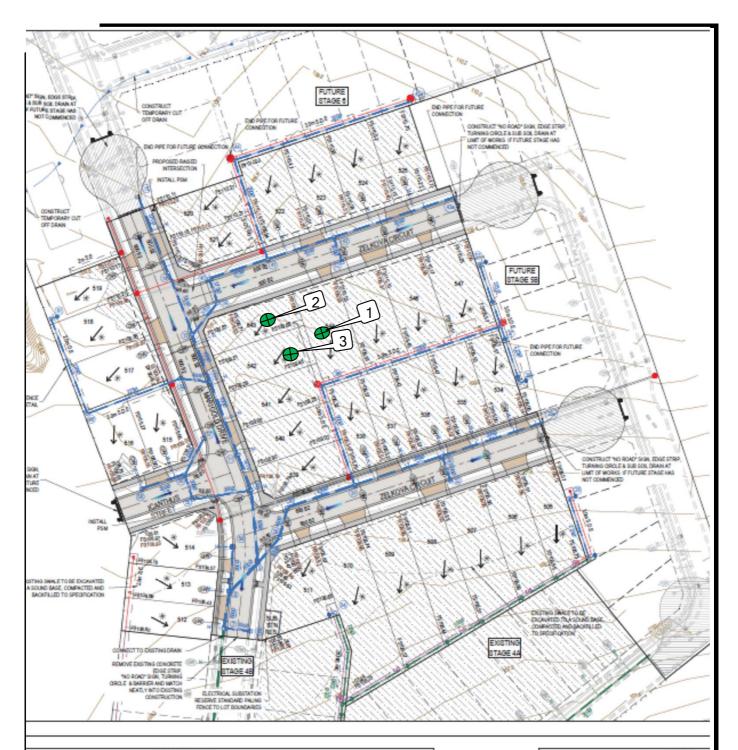
Accredited for compliance with ISO/IEC

NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 25/1/2022



		ROADI	AYOUT TABLE						
ROAD	RESERVE		ROAD WIDTH (m	0	KERB	TYPE	VERGE WIDTH (m)		
ASSIFICATION	WIDTH (m)	LIPTOLIP	INV TO INV	BACK TO BACK	NTHAMEST	STHVEAST	NTHWEST	STHIEAST	
AS	16.00	6.40	7.30	7.60	600 B2	600 B2	4.35	4.35	
AS	16.00	6.40	7.30	7.60	600 82	600 B2	4.35	4.35	
AS	16.00	6.40	7.30	7.80	600 B2	600 B2	4.35	4.35	

	SERVICES OFF SET 13						
DOLD KALE	GAS	WATE					
ROAD NAME	OFFSET (m)	OFFSE					
MARIGOLD DRIVE	2.00 W	2.50					
ZELKOVA CIRCUIT	2.00 N	2.50					
ICANTHUS STREET	2.00 N	2.50					

A	GEOTECHNICAL
	LABORATORIES

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

CLIENT: 1152 TAYLORS DEVELOPMENT

LOCATION: Botania, Plumpton Stage 5

DATE: 19/01/2022	JOB No.: 2343/106						
OPERATOR: WS	CHECKED: KK						
SCALE: NTS	FIGURE No: -						



14 Ravenhall Way, Ravenhall, Vic 3023

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

DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 2343/107

1152 TAYLORS DEVELOPMENT - Botania, Plumpton, Stage 5 LOCATION:

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)
21/01/22	1		1.94	20.5	104.5	1.86	22.5	175	2.0 Drier	91.5	0	0	0
21/01/22	2		1.85	26.5	96.5	₩ 1.91	25.5	175	1.0 Wetter	104.0	4	0	0
21/01/22	3	Refer to #2343/108 for	1.88	27.0	99.5	1.89	27.5	175	0.5 Drier	99.0	0	0	0
-	-	approx. test site locations.	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	1	1	-	-	1	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 12:45pm 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

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

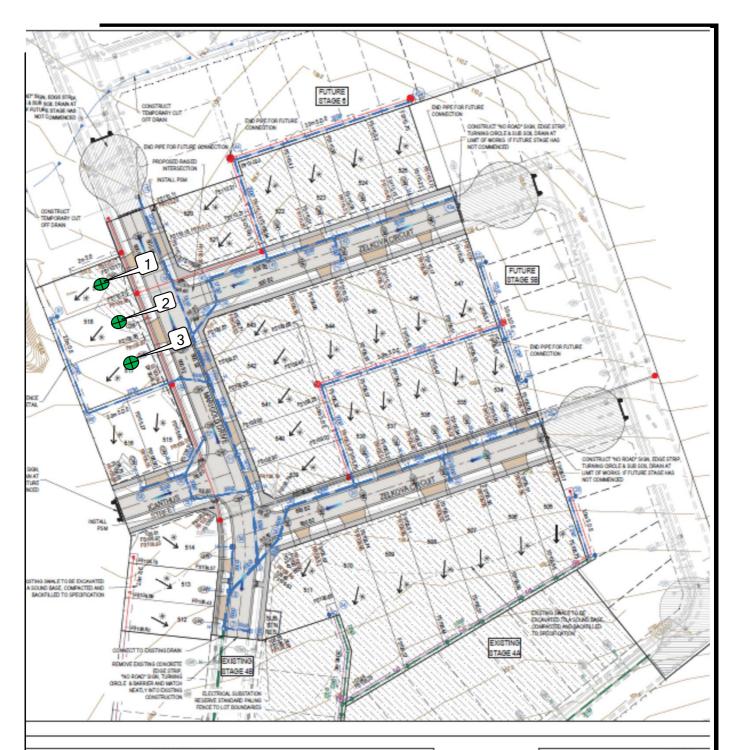
Accredited for compliance with ISO/IEC

NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 25/1/2022



ROAD LAYOUT TABLE											
ROAD ASSIFICATION	RESERVE		ROAD WIDTH (m	0	KERB	TYPE	VERGE WIDTH (m)				
	WIDTH (to)	LIPTOLIP	INV TO INV	BACK TO BACK	NTH/WEST	STHVEAST	NTHIWEST	STHEAST			
28	16.00	6.40	7.30	7.60	600 B2	600 B2	4.35	4.25			
AS	16.00	6.40	7.30	7.60	600 B2	600 B2	4.35	4.35			
AS	16.00	6.40	7.30	7.80	600 B2	600 B2	4.35	4.35			

	SERVICES OFF SET TA						
DOLD KALE	GAS	WATE					
ROAD NAME	OFFSET (m)	OFFSE					
MARIGOLD DRIVE	2.00 W	2.50					
ZELKOVA CIRCUIT	2.00 N	2.50					
ICANTHUS STREET	2.00 N	2.50					

GEOTECHNICAL LABORATORIES

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 5

DATE: 21/01/2022	JOB No.: 2343/108
OPERATOR: BM	CHECKED: KK
SCALE: NTS	FIGURE No: -



REPORT NO.: # 2343/115 LOCATION:

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140 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)
28/01/22	1		2.01	23.5	108.0	1.86	26.0	175	2.5 Drier	90.5	0	0	0
28/01/22	2		1.92	28.0	102.0	1.88	28.5	175	0.5 Drier	99.0	0	0	0
28/01/22	3	Refer to #2343/116 for	1.90	23.5	102.5	1.85	25.0	175	1.0 Drier	95.0	0	0	0
-	-	approx. test site locations.	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	1	ı	1	1	-	1	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 1:30pm Finish Time: 2:10pm

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

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

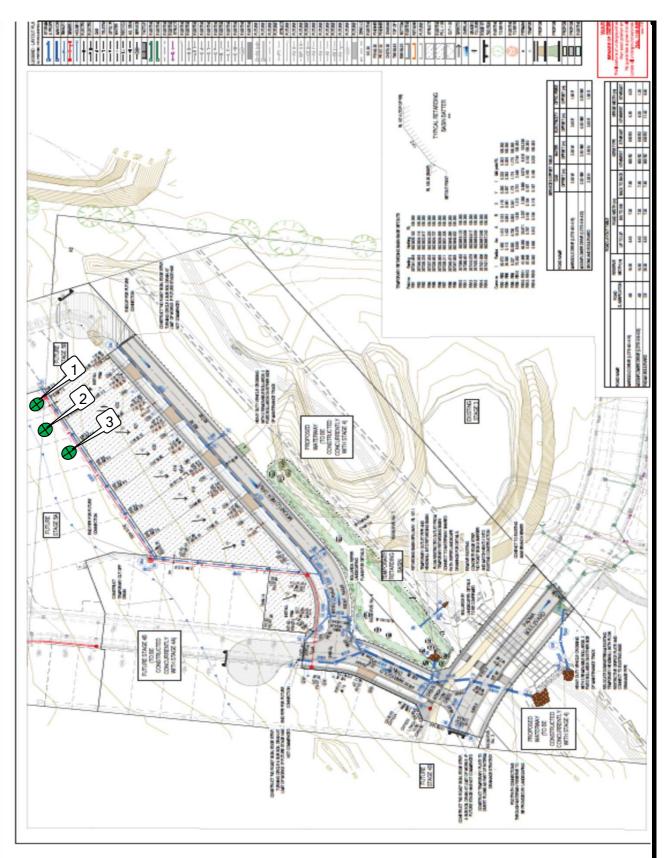
NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 2/2/2022

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

CLIENT: 1152 TAYLORS DEVELOPMENT

LOCATION: Botania, Plumpton Stage 4

DATE: 28/01/2022	JOB No.: 2343/116
OPERATOR: WS	CHECKED: KK
SCALE: NTS	FIGURE No: -



REPORT NO.: # 2343/117

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140 LOCATION: 1152 TAYLORS DEVELOPMENT - Botania, Plumpton, Stage 5A

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)
31/01/22	1		1.93	22.5	102.0	1.89	25.0	175	2.5 Drier	89.0	0	0	0
31/01/22	2		1.94	23.0	104.5	1.86	26.0	175	3.0 Drier	87.5	0	0	0
31/01/22	3	Refer to #2343/118 for	1.91	22.5	101.5	№ 1.88	25.5	175	2.5 Drier	89.5	4	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: 12:30pm 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)

■ Indicates APCWD

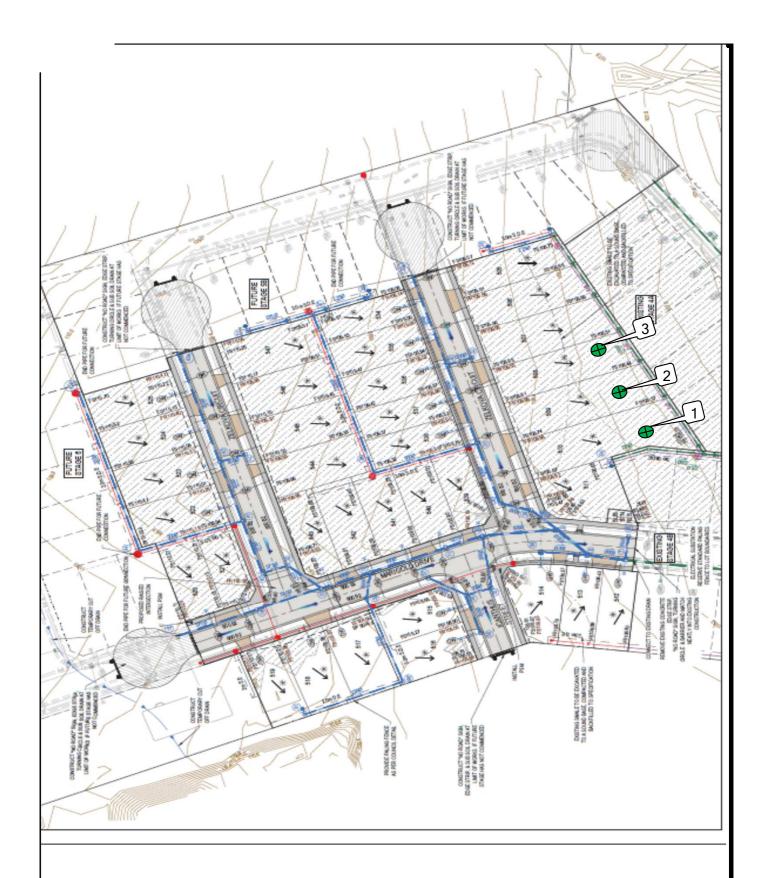
Accredited for compliance with ISO/IEC

NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 2/2/2022





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

CLIENT: 1152 TAYLORS DEVELOPMENT

LOCATION: Botania, Plumpton Stage 5

DATE: 31/01/2022	JOB No.: 2343/118
OPERATOR: PV	CHECKED: KK
SCALE: NTS	FIGURE No: -



REPORT NO.: # 2343/127

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

451 BEATY'S DEVELOPEMENT - Botania, Plumpton, Stage 5A,5B LOCATION:

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)
11/02/22	1		1.91	22.5	100.0	₩ 1.91	25.0	175	3.0 Drier	88.5	3	0	0
11/02/22	2		1.93	26.0	101.0	₩ 1.91	25.5	175	0.5 Wetter	102.0	4	0	0
11/02/22	3	Refer to #2343/128 for	1.95	24.5	101.5	№ 1.92	25.0	175	0.5 Drier	98.0	4	0	0
11/02/22	4	approx. test site locations.	1.89	24.5	98.5	1.92	24.5	175	0.0 Drier	100.0	0	0	0
11/02/22	5		1.90	25.5	98.5	1.93	24.5	175	1.0 Wetter	103.0	0	0	0
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 12:15pm Finish Time: 1:35pm

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

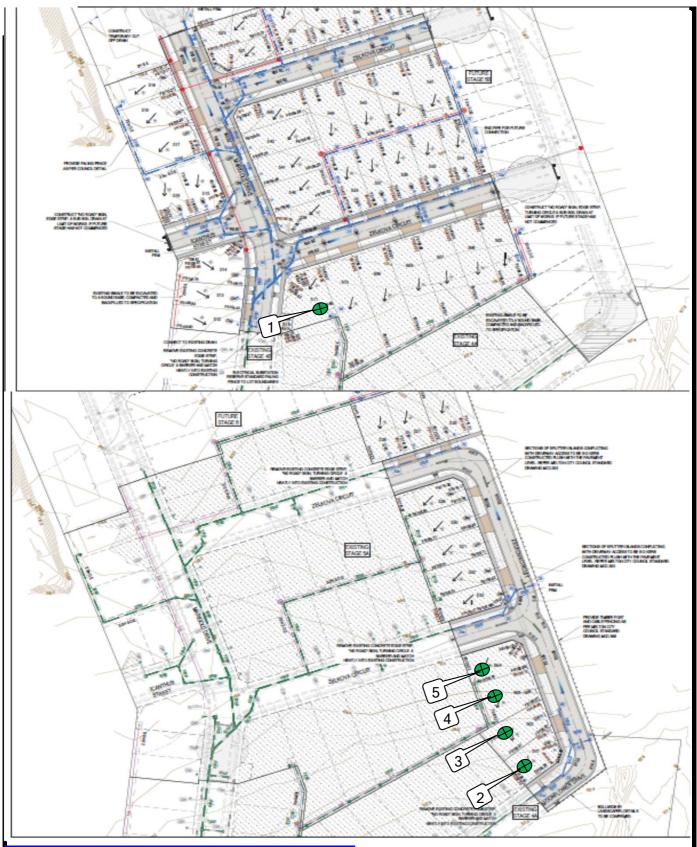
17025 - Testing

NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 18/2/2022





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

CLIENT: 451	BEATY'S	DEVELOPMENT
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LOCATION: Botania, Plumpton Stage 5a,5b

DATE: 11/02/2022	JOB No.: 2343/128
OPERATOR: TC	CHECKED: KK
SCALE: NTS	FIGURE No: -



REPORT NO.: # 2343/135

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140 LOCATION: 1152 TAYLORS DEVELOPMENT - Botania, Plumpton, Stage 5

DATE OF TESTS	TEST NUM.	I FSTTOCATION	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)
15/03/22	1	Refer to #2343/136 for approx. test site locations.	1.99	27.0	101.5	№ 1.96	26.0	175	1.0 Wetter	103.0	6	0	0
15/03/22	2		1.89	30.5	98.0	1.94	26.5	175	4.0 Wetter	115.0	0	0	0
15/03/22	3		1.87	24.0	97.5	1.91	23.5	175	0.5 Wetter	102.0	0	0	0
15/03/22	4		1.92	27.5	97.5	№ 1.97	26.0	175	1.5 Wetter	105.0	4	0	0
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 2:00pm Finish Time: 2:45pm

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

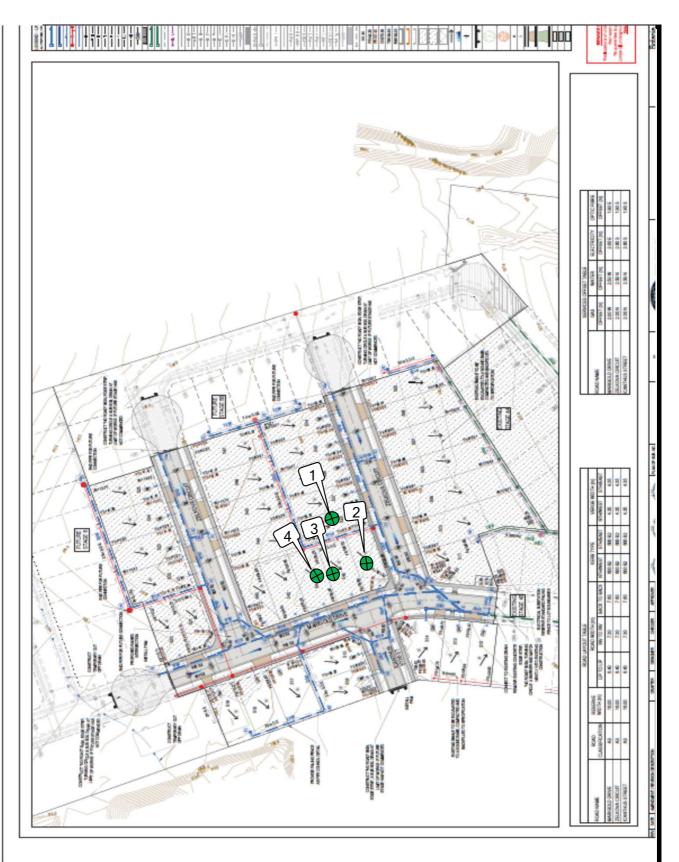
Accredited for compliance with ISO/IEC

NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 22/3/2022





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

CLIENT: 1152 TAYLORS DEVELOPMENT

LOCATION: Botania, Plumpton Stage 5A

DATE: 15/03/2022	JOB No.: 2343/136
OPERATOR: BM	CHECKED: KK
SCALE: NTS	FIGURE No: -