LEVEL ONE

Reference No.: 9024-115

SURVEILLANCE

AND INSPECTION REPORT

Carried Out By



PREPARED FOR: -

SYMON BROS. CONSTRUCTIONS 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: Symon Bros. Constructions Pty Ltd

Project Name: Mambourin Estate Stage 18

Date: 8th of June 2023 Author: Mr. Sam Loza Reference No.: 9024-115

Revision: 0

Project Manager: Mr. George Dimopoulos

1. Introduction & Scope

At the request of Symon Bros. Constructions Pty Ltd, Geotechnical Laboratories has carried out inspection and testing of the above-mentioned site from the 4th of August 2022 to the 5th of June 2023 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 Symon Bros. Constructions Pty Ltd and was used to determine compliance of earthworks in conjunction with the requirements of AS 3798 – 2007.

- (1). Bulk Earthworks Plan Drawing No. 309504CG01 Rev. 0
- (2). Bulk Earthworks Plan Drawing No. 309504CG02 Rev. 0

General site works involved the placement of fill, using on-site derived clay, to bring the fill region to the required finished levels as indicated on the faceplan drawings.

2. Site Preparation

Initial site inspections were undertaken on the 25th of July 2022 confirming that selected areas to be filled were completely stripped of topsoil prior to filling. The brown silty topsoils had been stockpiled around the site for later removal offsite.

Proof roll inspections were performed throughout the project duration to ensure no significant soft areas were present prior to filling.

3. Fill Material

It is understood that the fill material used was sourced from on-site excavations, mainly drainage trenches and road boxing. The material had been screened to remove any boulders.



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

The fill material is best described as a basaltic CLAY, brown, red brown, slightly moist to moist, slightly silty, medium to high plasticity with basalt gravels and cobbles.

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)
- Scrapers

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

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 fifty-two 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 **Large Scale Operations.**

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

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.



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

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, Symon Bros. Constructions 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 Symon Bros. Constructions Pty Ltd from the 4th of August 2022 to the 5th of June 2023 can be categorised as CONTROLLED FILL in accordance with AS 2870-2011.

8. <u>Limitations and Liability of this Report</u>

This report has been produced for and remains the property of Symon Bros. Constructions 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 Symon Bros. Constructions 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.

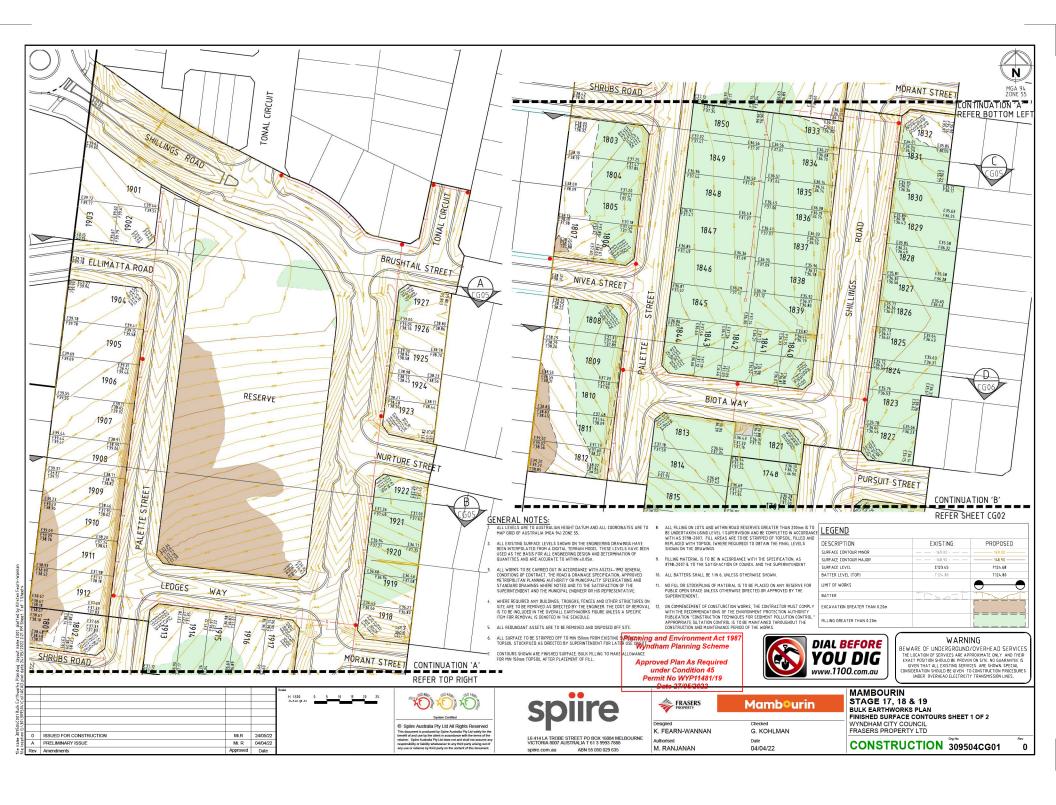


LEVEL ONE

SURVEILLANCE

AND INSPECTION REPORT

APPENDIX A







LEGEND		
DESCRIPTION	EXISTING	PROPOSED
SURFACE CONTOUR MINOR	— · 169.00 · — —	169.00
SURFACE CONTOUR MAJOR	— · 168.90 · — —	168.90
SURFACE LEVEL	E123.45	F124.68
BATTER LEVEL (TOP)	T124.80	T124.80
LIMIT OF WORKS		•
BATTER	TDSZI	
EXCAVATION GREATER THAN 0.20m		
FILLING GREATER THAN 0.20m		

GENERAL NOTES:

- ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM AND ALL COORDINATES ARE TO MAP GRID OF AUSTRALIA (MGA 94) ZONE 55.
- ALL EXISTING SURFACE LEVELS SHOWN ON THE ENGINEERING DRAWINGS HAVE BEEN INTERPOLATED FROM A DIGITAL TERRAIN MODEL. THESE LEVELS HAVE BEEN USED AS THE BASIS FOR ALL ENGINEERING OS GION AND DETERMINATION OF QUANTITIES AND ARE ACCURATE TO WITHIN ±0.05m.
- 3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH AS2124-1992 GENERAL ALL WORKS TO BE CAMPILED OUT IN FOLKOWANCE WITH ASSISTANT PAR CONDITIONS OF CONTRACT, THE ROAD & DRAINAGE SPECIFICATION, APPROVED METROPOLITAN PLANNING AUTHORITY OR MUNICIPALITY SPECIFICATIONS AND STANDARD DRAININGS WHERE NOTED AND TO THE SATISFACTION OF THE SUPERINTENDENT AND THE MUNICIPAL ENGINEER OR HIS REPRESENTATIVE.
- WHERE REQUIRED ANY BUILDINGS, TROUGHS, FENCES AND OTHER STRUCTURES ON SITE ARE TO BE REMOVED AS DIRECTED BY THE ENGINEER. THE COST OF REMOVAL IS TO BE INCLUDED IN THE OVERALL EARTHWORKS FIGURE UNLESS A SPECIFIC ITEM FOR REMOVAL IS DENOTED IN THE SCHEDULE.
- 5. ALL REDUNDANT ASSETS ARE TO BE REMOVED AND DISPOSED OFF SITE.
- ALL SURFACE TO BE STRIPPED OFF TO MIN ISOmm FROM EXISTING SURFACE & TOPSOIL STOCKPILED AS DIRECTED BY SUPERINTENDENT FOR LATER USE ONSITE.
- CONTOURS SHOWN ARE FINISHED SURFACE. BULK FILLING TO MAKE ALLOWANCE FOR MIN 150mm TOPSOIL AFTER PLACEMENT OF FILL.
- ALL FILLING ON LOTS AND WITHIN ROAD RESERVES GREATER THAN 200mm IS TO BELLINEID ON DISTANCE WHICH AND WHITH AND RESONANCE HE HAS A COMPONENT HE HAS A STORE OF THE ARCONDANCE WITH AS 3798-2007. FILL AREAS ARE TO BE STRIPPED OF TOPSOIL, FILLED AND REPLACED WITH TOPSOIL WHERE REQUIRED TO OBTAIN THE FINAL LEVELS SHOWN ON THE DRAWINGS.
- FILLING MATERIAL IS TO BE IN ACCORDANCE WITH THE SPECIFICATION, AS 3798-2007 & TO THE SATISFACTION OF COUNCIL AND THE SUPERINTENDEN.
- 10 ALL BATTERS SHALL BE LINE UNLESS OTHERWISE SHOWN
- 11. NO FILL OR STOCKPLING OF MATERIAL IS TO BE PLACED ON ANY RESERVE FOR PUBLIC OPEN SPACE UNLESS OTHERWISE DIRECTED OR APPROVED BY THE SUPERINTENDENT.
- 12. ON COMMENCEMENT OF CONSTURCTION WORKS, THE CONTRACTOR MUST COMPLY WITH THE RECOMMENDATIONS OF THE ENVIRONMENT PROTECTION AUTHORITY PUBLICATION "CONSTRUCTION TECHNIQUES FOR SOSIONET POLLUTION CONTROL." APPROPRIATE SILT

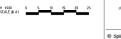
Wyndham Planning Scheme

Approved Plan As Required Permit No WYP11481/19 Date 27/05/2022

WARNING

BEWARE OF UNDERGROUND/OVERHEAD SERVICES THE LOCATION OF SERVICES ARE APPROXIMATE ONLY AND THE EXACT POSITION SHOULD BE PROVEN ON SITE, NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN, SPECIAL INSIDERATION SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.

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io.	0	ISSUED FOR CONSTRUCTION	Mi. R	24/05/22	ı
location	Α	PRELIMINARY ISSUE	Mi. R	04/04/22	ı
ţ,	Rev	Amendments	Approved	Date	ı





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spiire
L6 414 LA TROBE STREET PO BOX 16084 MELBOURI VICTORIA 8007 AUSTRALIA T 61 3 9993 7888

ABN 55 050 029 635

FRASERS

M. RANJANAN

K. FEARN-WANNAN

Mambourin

G. KOHLMAN 04/04/22

MAMBOURIN **STAGE 17, 18 & 19 BULK EARTHWORKS PLAN** FINISHED SURFACE CONTOURS SHEET 2 OF 2 FRASERS PROPERTY LTD

CONSTRUCTION 309504CG02



LEVEL ONE

SURVEILLANCE

AND INSPECTION REPORT

APPENDIX B



REPORT NO.: # 9024/004

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

SYMON BROS - Mambourin, Stage 17 & 18 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)
4/08/22	4		1.97	22.0	104.0	№ 1.90	24.0	175	2.0 Drier	91.0	4	0	600
4/08/22	5		2.06	24.5	104.5	₩ 1.97	26.0	175	1.5 Drier	93.5	13	0	600
4/08/22	6	Refer to #9024/005 for	1.96	24.5	103.5	1.90	26.0	175	1.5 Drier	93.5	0	0	500
-	-	approx. test site locations.	-	-	ı	-	ı	-	-	-	1	1	-
-	-		-	-	-	1	ı	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: 1:25pm Finish Time: 2:15pm

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.

WORLD RECOGNISED

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

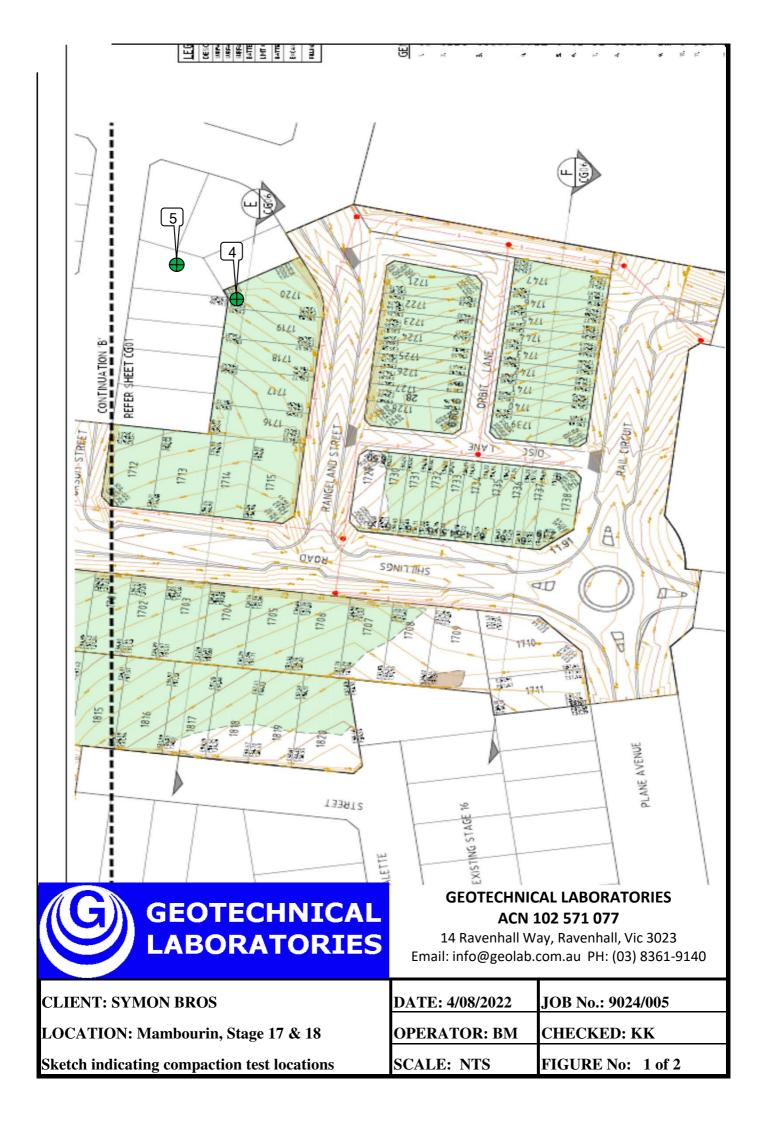
17025 - Testing

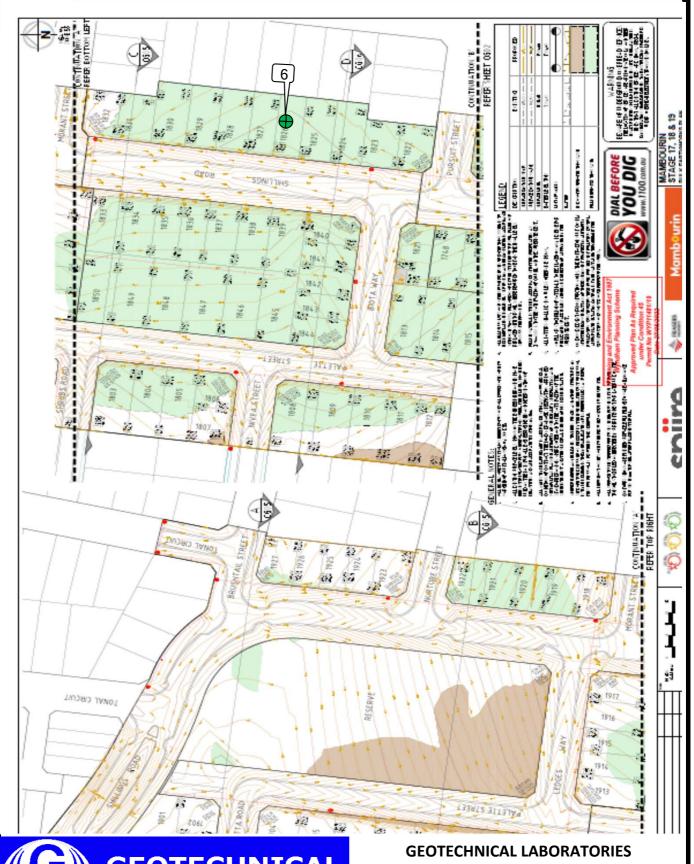
NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 10/8/2022







ACN 102 571 077

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

CLIENT:	SYMON BROS	

LOCATION: Mambourin, Stage 17 & 18

Sketch indicating compaction test locations

DATE: 4/08/2022	JOB No.: 9024/005
OPERATOR: BM	CHECKED: KK
SCALE: NTS	FIGURE No. 2 of 2



REPORT NO.: # 9024/032

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

SYMON BROS - Mambourin, Stage 17,18 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)
17/08/22	35		1.88	23.0	95.0	№ 1.97	23.5	175	0.5 Drier	98.0	5	0	400
17/08/22	36		1.92	22.5	98.0	1.96	22.5	175	0.0 Drier	100.0	0	0	400
17/08/22	37	Refer to #9024/033 for	1.96	25.0	100.0	1.96	24.5	175	0.0 Wetter	101.0	0	0	400
17/08/22	38	approx. test site locations.	1.94	29.5	100.0	1.93	26.0	175	3.5 Wetter	113.0	0	0	400
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 1:20pm

Finish Time: 2:20pm

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

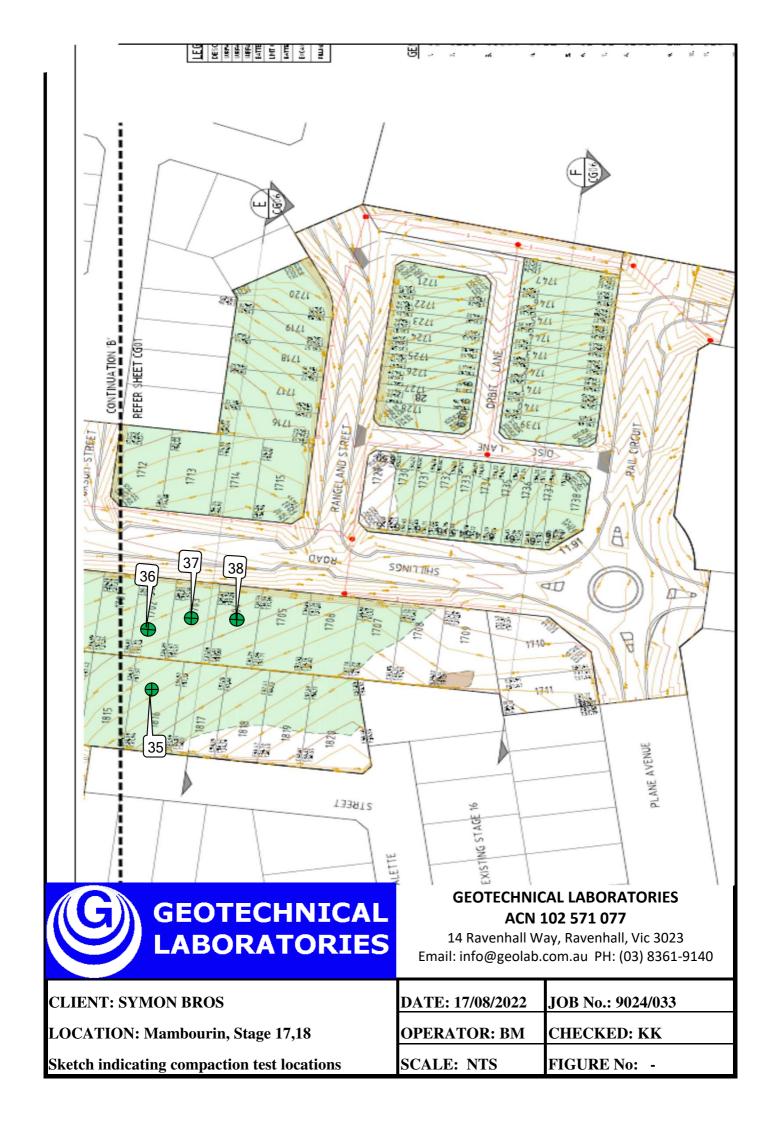
Accredited for compliance with ISO/IEC

NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 23/8/2022





REPORT NO.: # 9024/034

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

SYMON BROS - Mambourin, Stage 18 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)
18/08/02	39		1.86	23.0	99.0	1.88	25.0	175	2.0 Drier	91.0	0	0	400
18/08/02	40		1.90	24.0	102.0	1.87	25.5	175	1.5 Drier	94.0	0	0	400
18/08/02	41	Refer to #9024/035 for	1.90	24.0	99.5	1.90	25.5	175	1.5 Drier	93.0	0	0	400
18/08/02	42	approx. test site locations.	1.97	26.0	106.5	1.85	27.0	175	1.0 Drier	97.0	0	0	400
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 1:55pm 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.

WORLD RECOGNISED

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

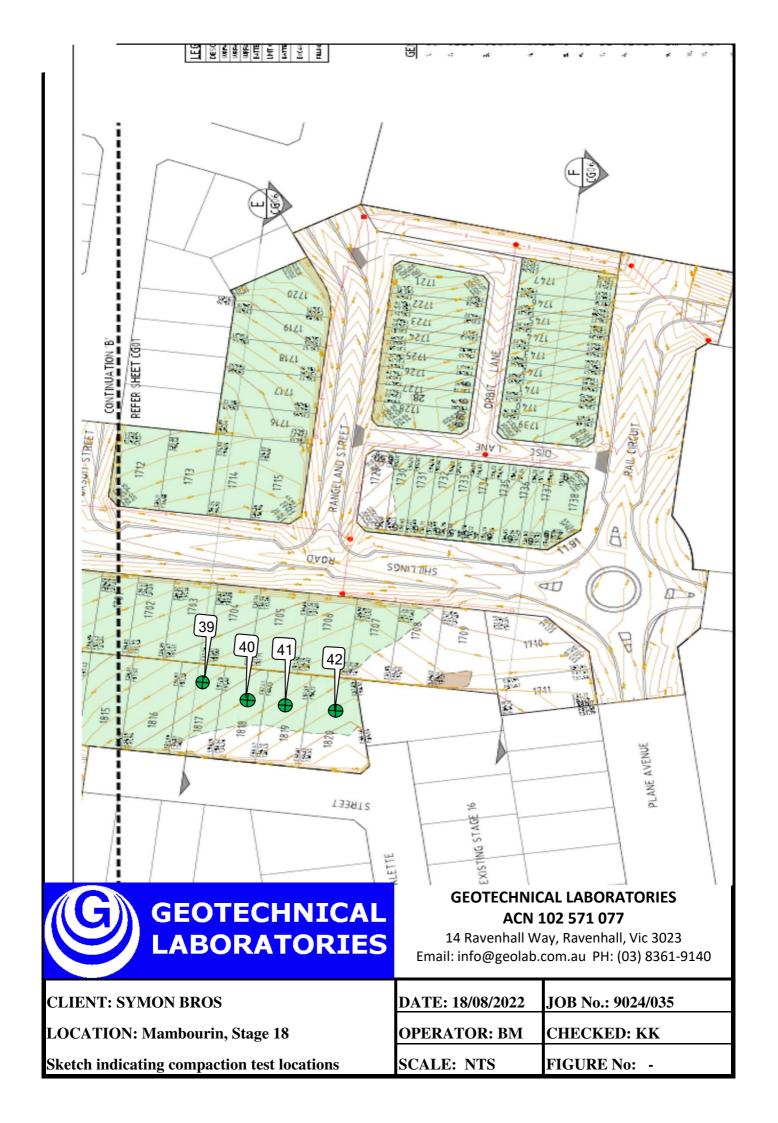
NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 23/8/2022

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REPORT NO.: # 9024/036

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

SYMON BROS - Mambourin, Stage 18 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)
22/08/22	43		1.94	26.0	99.5	1.95	25.5	175	1.0 Wetter	103.0	0	0	600
22/08/22	44		1.91	25.0	96.5	1.97	24.5	175	1.0 Wetter	103.0	0	0	600
22/08/22	45	Refer to #9024/037 for	1.92	22.5	99.0	1.94	22.5	175	0.0 Drier	100.0	0	0	700
22/08/22	46	approx. test site locations.	1.99	23.0	105.5	1.89	25.5	175	2.5 Drier	90.5	0	0	800
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

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: 11:00am

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

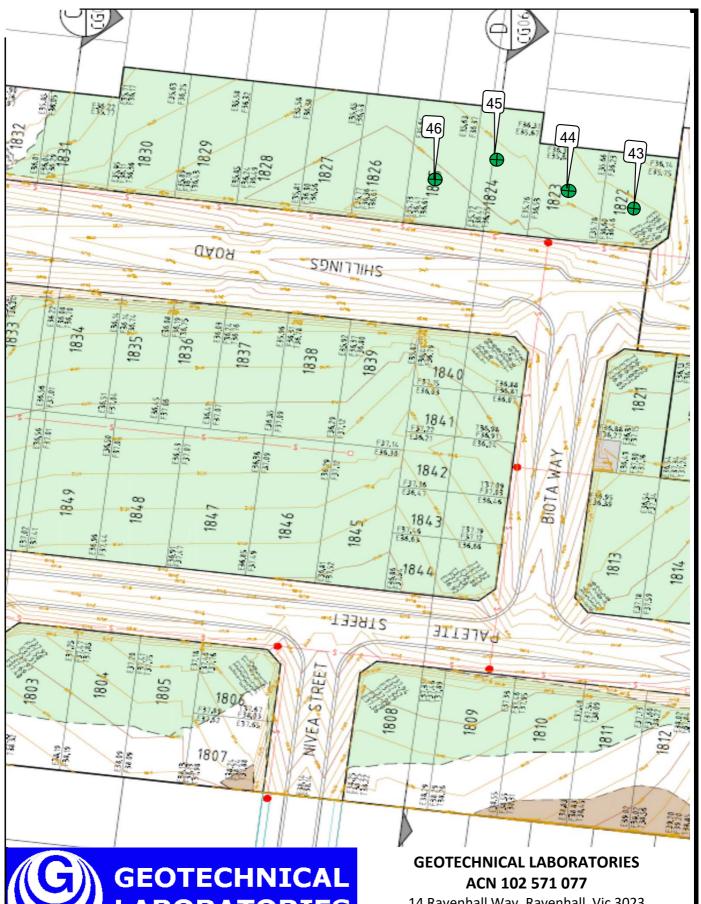
NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 25/8/2022

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

CLIENT: SYMON BROS

LOCATION: Mambourin, Stage 18

Sketch indicating compaction test locations

DATE: 22/08/2022 JOB No.: 9024/037

OPERATOR: SLI/Al CHECKED: KK

SCALE: NTS FIGURE No: -



REPORT NO.: # 9024/038

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

SYMON BROS - Mambourin, Stage 18 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)
23/08/22	47		1.88	24.0	98.5	1.91	25.0	175	0.5 Drier	97.0	0	0	0
23/08/22	48		1.98	26.0	102.0	1.93	26.5	175	0.5 Drier	99.0	0	0	0
23/08/22	49	Refer to #9024/039 for	1.89	26.5	97.0	1.95	26.5	175	0.5 Wetter	101.0	0	0	0
23/08/22	50	approx. test site locations.	1.90	27.0	97.0	1.95	26.5	175	0.5 Wetter	102.0	0	0	0
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 11:35am Finish Time: 12:30pm

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.

WORLD RECOGNISED

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: 25/8/2022

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CLIENT: SYMON BROS

LOCATION: Mambourin, Stage 18

Sketch indicating compaction test locations

DATE: 23/08/2022 JOB No.: 9024/039

OPERATOR: SLI/Al CHECKED: KK

SCALE: NTS FIGURE No: -



14 Ravenhall Way, Ravenhall, Vic 3023

Email: info@geolab.com.au

DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 9024/040

LOCATION:

SYMON BROS - Mambourin, Stage 18 PH: (03) 8361-9140

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)
24/08/22	51		1.97	23.5	102.5	1.93	24.0	175	0.5 Drier	97.0	0	0	500
24/08/22	52		1.90	24.0	98.0	1.94	25.0	175	0.5 Drier	97.0	0	0	500
24/08/22	53	Refer to #9024/041 for	1.89	26.0	95.5	1.97	25.0	175	1.0 Wetter	103.0	0	0	500
24/08/22	54	approx. test site locations.	1.99	27.5	102.0	1.95	25.0	175	3.0 Wetter	111.5	0	0	500
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 11:00am Finish Time: 11:45am

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.

WORLD RECOGNISED

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: 26/8/2022

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CLIENT: SYMON BROS

LOCATION: Mambourin, Stage 18

Sketch indicating compaction test locations

DATE: 24/08/2022 JOB No.: 9024/041

OPERATOR: AB CHECKED: KK

SCALE: NTS FIGURE No: -



REPORT NO.: # 9024/042

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

SYMON BROS - Mambourin, Stage 18 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)
25/08/22	55		1.90	21.0	96.5	1.97	21.0	175	0.0 Wetter	101.0	0	0	200
25/08/22	56		1.95	22.5	97.5	2.00	22.0	175	0.5 Wetter	102.0	0	0	200
25/08/22	57	Refer to #9024/043 for	1.91	26.0	97.5	1.96	26.0	175	0.0 Drier	100.0	0	0	200
25/08/22	58	approx. test site locations.	1.99	25.5	101.0	№ 1.97	25.5	175	0.5 Wetter	101.0	6	0	200
-	-		-	-	-	-	ı	1	-	1		1	-
-	-		-	-	-	-	ı	-	-	-	ı	ı	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 11:50am Finish Time: 1:15pm

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.

WORLD RECOGNISED

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: 29/8/2022



NOTES:

JEE TO AUSTRALIAN HEIGHT DATUM AND ALL COORDINATES ARE TO AUSTRALIA IMGA 941 ZONE 55. ALL RILING ON LOTS AND WITHIN ROAD RESERVES GREATER THAN 200mm IS TO BE UNDERTAKEN USING LEVEL 1 SUPERVISION AND BE COMPLETED IN ACCORDANCE LEGEND



GEOTECHNICAL LABORATORIES ACN 102 571 077

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

CLIENT: SYMON BROS	DATE: 25/08/2022	JOB No.: 9024/043
LOCATION: Mambourin, Stage 18	OPERATOR: PS	CHECKED: KK
Sketch indicating compaction test locations	SCALE: NTS	FIGURE No: -



REPORT NO.: # 9024/052

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

SYMON BROS - Mambourin, Stage 18 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)
27/08/22	65		1.97	23.5	101.0	№ 1.95	24.0	175	0.5 Drier	98.0	3	0	300
27/08/22	66		1.95	25.0	99.0	₩ 1.97	25.5	175	0.5 Drier	97.0	12	0	300
27/08/22	67	Refer to #9024/053 for	1.91	24.0	102.5	1.87	26.5	175	2.5 Drier	90.5	0	0	300
27/08/22	68	approx. test site locations.	1.96	25.5	103.5	1.89	27.0	175	1.5 Drier	94.5	0	0	300
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.3.

Start Time: 10.20AM Finish Time: 11.10AM

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.

WORLD RECOGNISED

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: 1/9/2022



NOTES:

RE TO AUSTRALIAN HEIGHT DATUM AND ALL COORDINATES ARE TO 8. ALL FILLING ON LOTS AND WITHIN ROAD RESERVES GREATER THAN 200mm IS TO BE UNDERTAKEN USING LEVEL 1 SUPERVISION AND BE COMPLETED IN ACCORDANCE LEGEND



GEOTECHNICAL LABORATORIES ACN 102 571 077

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

CLIENT: SYMON BROS	DATE: 27/08/2022	JOB No.: 9024/053
LOCATION: Mambourin, Stage 18	OPERATOR: PS	CHECKED: KK
Sketch indicating compaction test locations	SCALE: NTS	FIGURE No: -



REPORT NO.: # 9024/065

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

SYMON BROS - Mambourin, Stage 18 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)
9/09/22	84		1.94	20.5	101.0	₩ 1.92	24.0	175	3.0 Drier	87.0	5	0	0
9/09/22	85		1.90	25.0	98.5	₩ 1.93	26.0	175	1.0 Drier	97.0	3	0	0
9/09/22	86	Refer to #9024/066 for	1.85	25.0	95.0	№ 1.95	26.0	175	1.0 Drier	96.0	9	0	0
-	-	approx. test site locations.	-	-	-	-	ı	-	ı	-	ı	-	-
-	-		-	-	1	-	1	ı		ı	ı	ı	-
-	-		-	-	-	-	1	-	-	-		1	-

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: 12:30pm

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

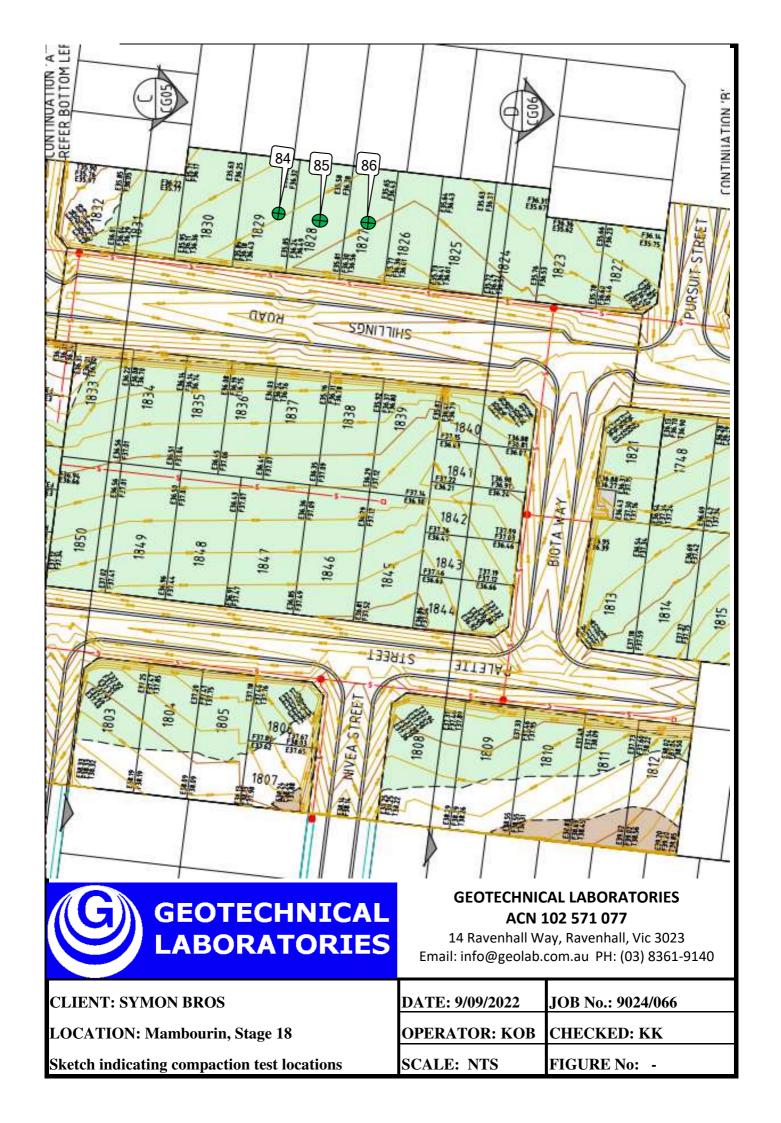
Accredited for compliance with ISO/IEC

NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 13/9/2022





REPORT NO.: # 9024/072

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

SYMON BROS - Mambourin, Stage 17, 18 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)
14/09/22	87		1.93	22.0	101.0	₩ 1.92	24.5	175	2.0 Drier	91.0	6	0	0
14/09/22	88		1.89	23.5	98.5	1.91	25.5	175	1.5 Drier	93.0	0	0	0
14/09/22	89	Refer to #9024/073 for	1.99	23.5	103.0	№ 1.94	25.5	175	1.5 Drier	93.0	11	0	0
14/09/22	90	approx. test site locations.	2.02	26.0	105.5	1.92	24.0	175	2.0 Wetter	108.5	0	0	0
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 12:45pm 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.

WORLD RECOGNISED

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

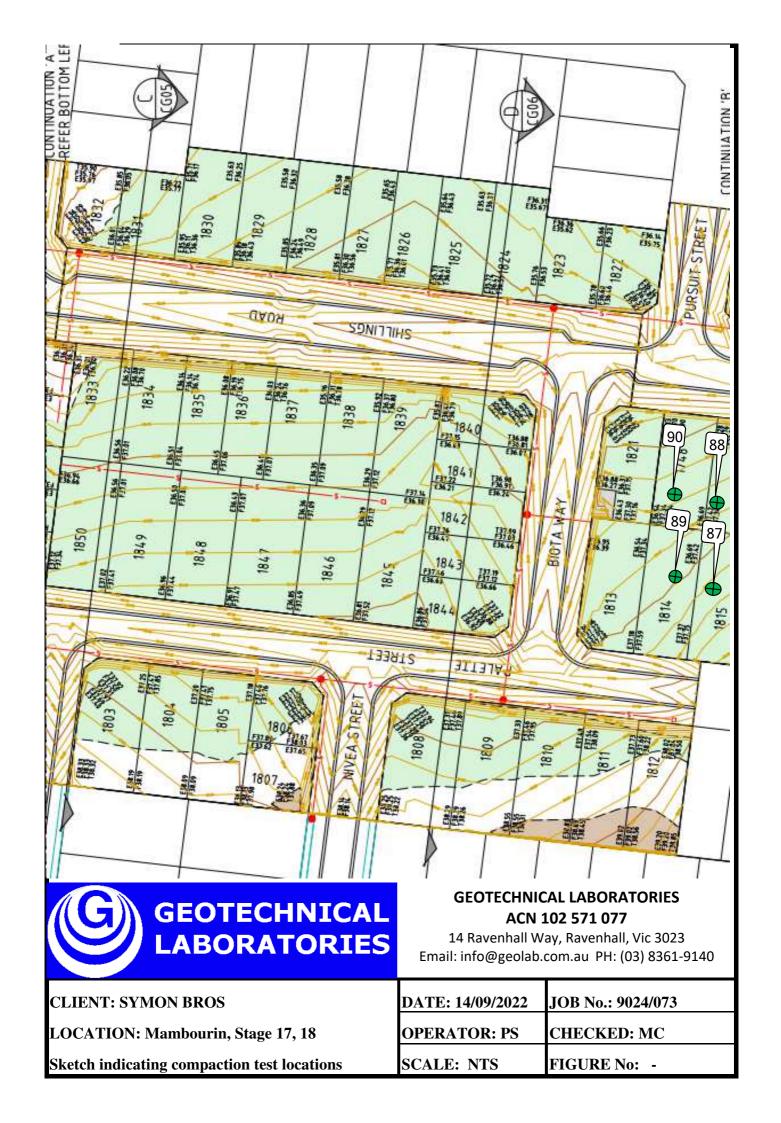
17025 - Testing

NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 16/9/2022





REPORT NO.: # 9024/074

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

SYMON BROS - Mambourin, Stage 18 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)
15/09/22	91		1.88	21.5	95.5	1.97	20.5	175	0.5 Wetter	103.5	0	0	0
15/09/22	92		1.88	22.5	97.0	₩ 1.94	23.5	175	0.5 Drier	97.0	4	0	0
15/09/22	93	Refer to #9024/075 for	1.87	22.0	96.5	1.93	23.0	175	0.5 Drier	97.0	0	0	0
-	-	approx. test site locations.	-	-	-	ı	ı	ı	-	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: 10:15am Finish Time: 11:30am

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.

WORLD RECOGNISED

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

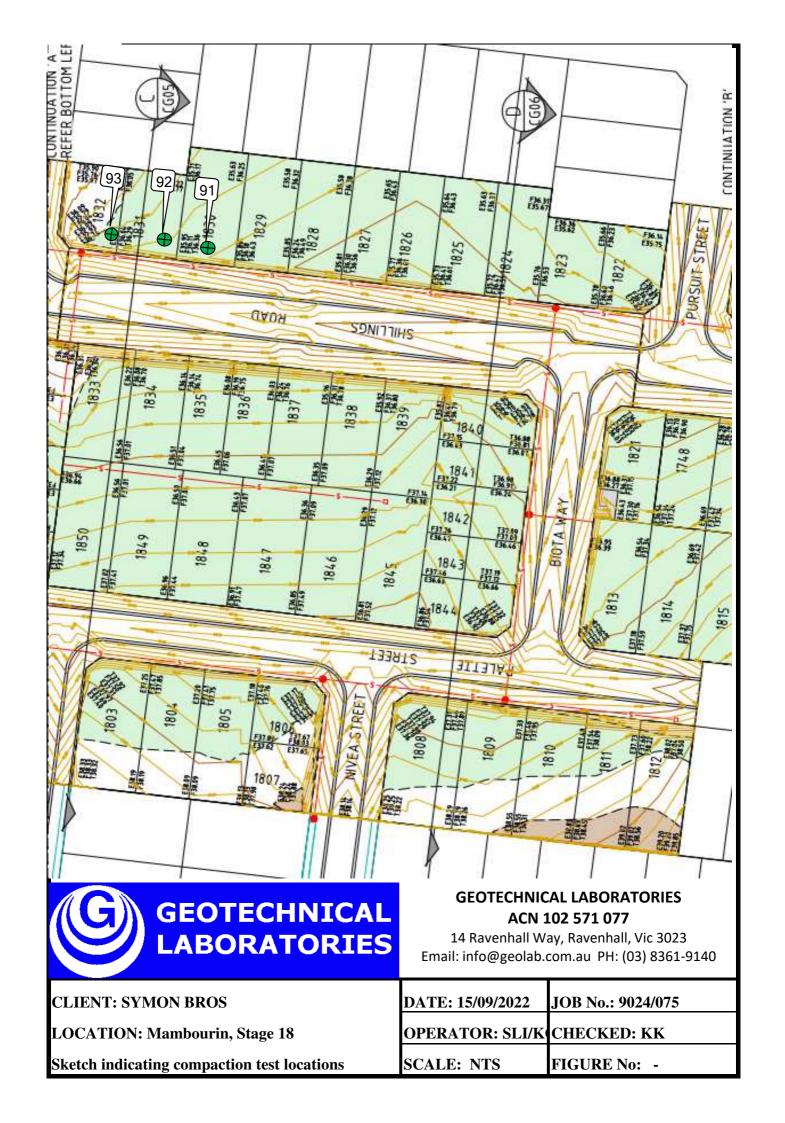
17025 - Testing

NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 26/9/2022





REPORT NO.: # 9024/077

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

SYMON BROS - Mambourin, Stage 18 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)
16/09/22	94		1.91	21.5	97.5	1.96	22.0	175	0.0 Drier	99.0	0	0	0
16/09/22	95		1.90	25.5	100.5	1.89	27.0	175	1.5 Drier	94.5	0	0	0
16/09/22	96	Refer to #9024/078 for	1.85	26.0	96.5	1.91	26.0	175	0.0 Drier	100.0	0	0	0
16/09/22	97	approx. test site locations.	1.92	24.0	100.0	1.93	24.5	175	0.0 Drier	99.0	0	0	0
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 1:50pm Finish Time: 2:30pm

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

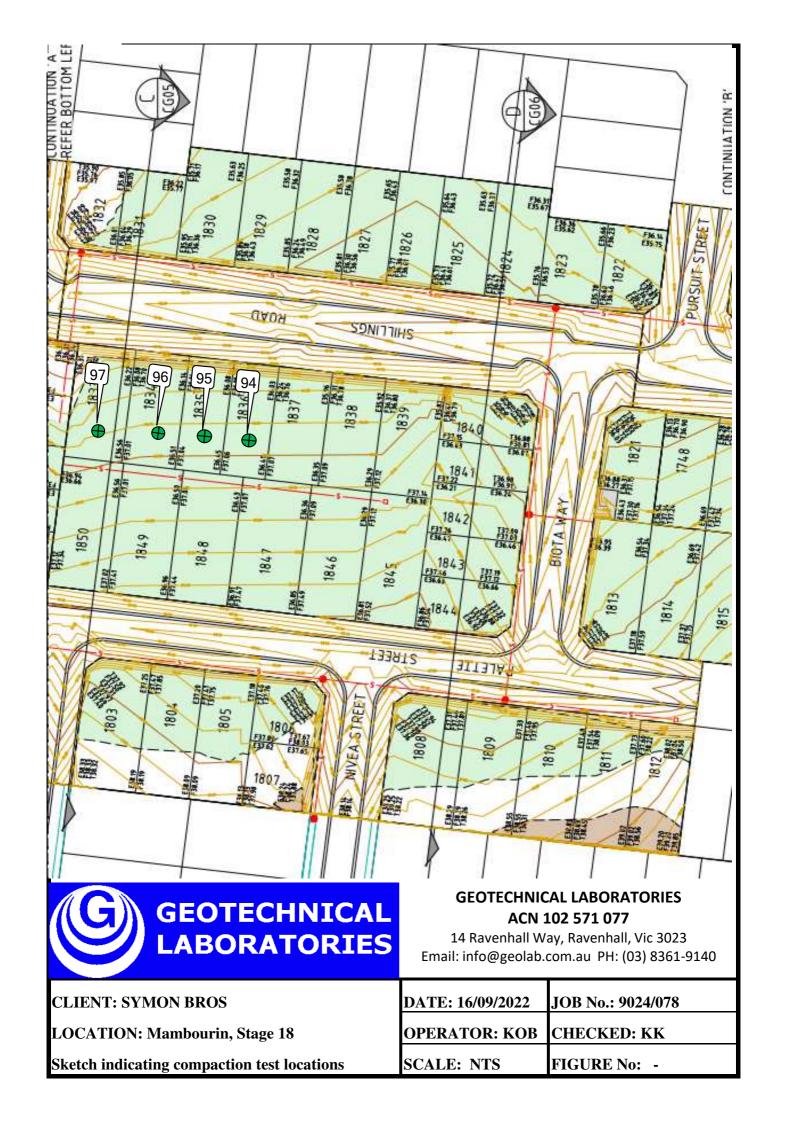
NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 26/9/2022

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14 Ravenhall Way, Ravenhall, Vic 3023

Email: info@geolab.com.au

DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 9024/079

LOCATION: SYMON BROS - Mambourin Estate, Stage 18

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)
20/09/22	98		1.88	20.5	99.5	1.89	23.5	175	3.0 Drier	87.5	0	0	200
20/09/22	99		1.92	22.0	100.0	₩ 1.92	24.0	175	2.0 Drier	92.0	5	0	200
20/09/22	100	Refer to #9024/080 for	1.90	26.0	99.5	1.91	26.0	175	0.5 Wetter	101.0	0	0	200
-	-	approx. test site locations.	-	1	-	-	ı	-	-	-	-	-	-
-	-		-		-	-	ı	1	-	1	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

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: 11.10AM Finish Time: 11.45AM

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.

WORLD RECOGNISED

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

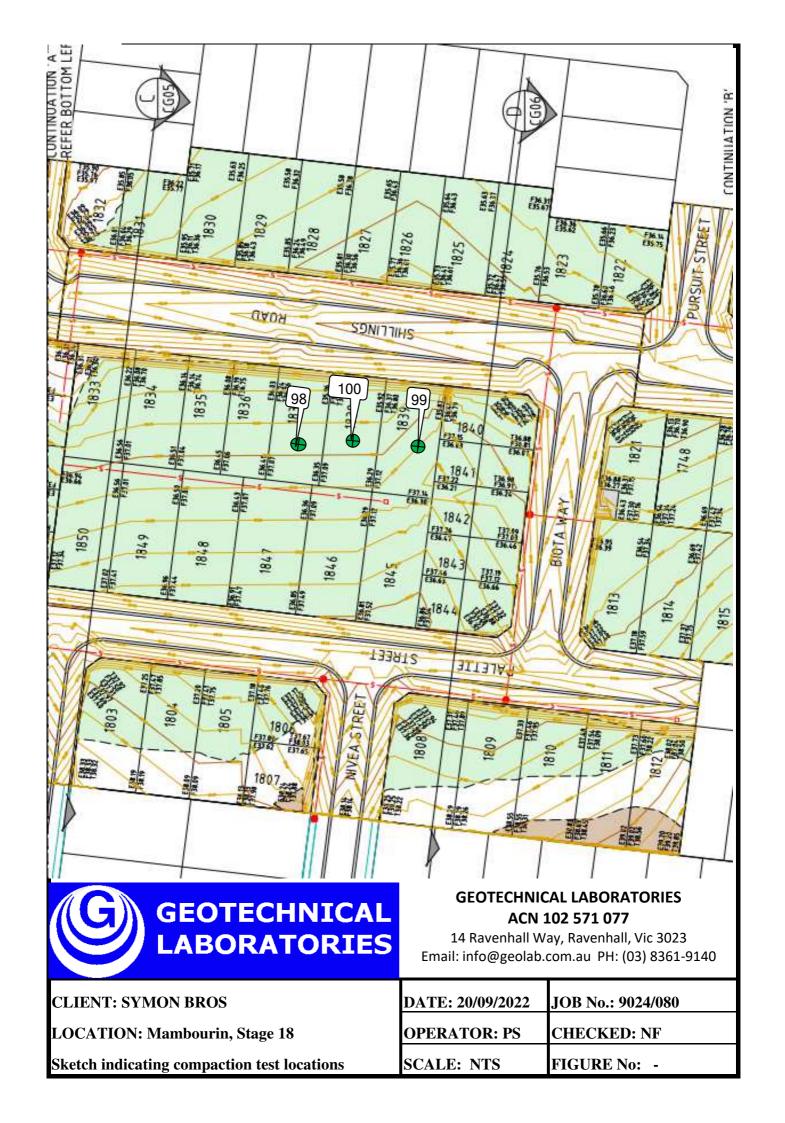
<u> 17025 - Testing</u>

NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 26/9/2022





REPORT NO.: # 9024/081

LOCATION: SYMON BROS - Mambourin, Stage 18 & 19

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

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)
21/09/22	101		1.90	24.5	99.5	1.91	23.5	175	1.0 Wetter	104.0	0	0	0
21/09/22	102		1.94	24.5	100.0	1.93	25.0	175	0.5 Drier	97.0	0	0	0
21/09/22	103	Refer to #9024/083 for	1.98	25.5	100.5	№ 1.97	25.0	175	0.5 Wetter	102.0	5	0	0
21/09/22	104	approx. test site locations.	1.98	24.5	103.0	1.92	25.5	175	1.0 Drier	96.0	0	0	0
21/09/22	105		1.88	22.5	97.0	1.94	23.0	175	0.5 Drier	97.0	0	0	0
21/09/22	106		1.89	23.5	95.0	1.99	21.0	175	2.0 Wetter	110.5	0	0	0

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: 11:20am

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.

WORLD RECOGNISED

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

<u> 17025 - Testing</u>

NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 27/9/2022



REPORT NO.: # 9024/082

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

SYMON BROS - Mambourin, Stage 18 & 19 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)
21/09/22	107		2.06	22.5	102.5	№ 2.01	22.5	175	0.0 Drier	100.0	12	0	0
21/09/22	108		1.94	22.0	99.5	1.95	23.5	175	2.0 Drier	92.0	0	0	0
-	-	Refer to #9024/083 for	-	-	-	-	-	-	-	-	-	-	-
-	-	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: 11:20am

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.

WORLD RECOGNISED

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

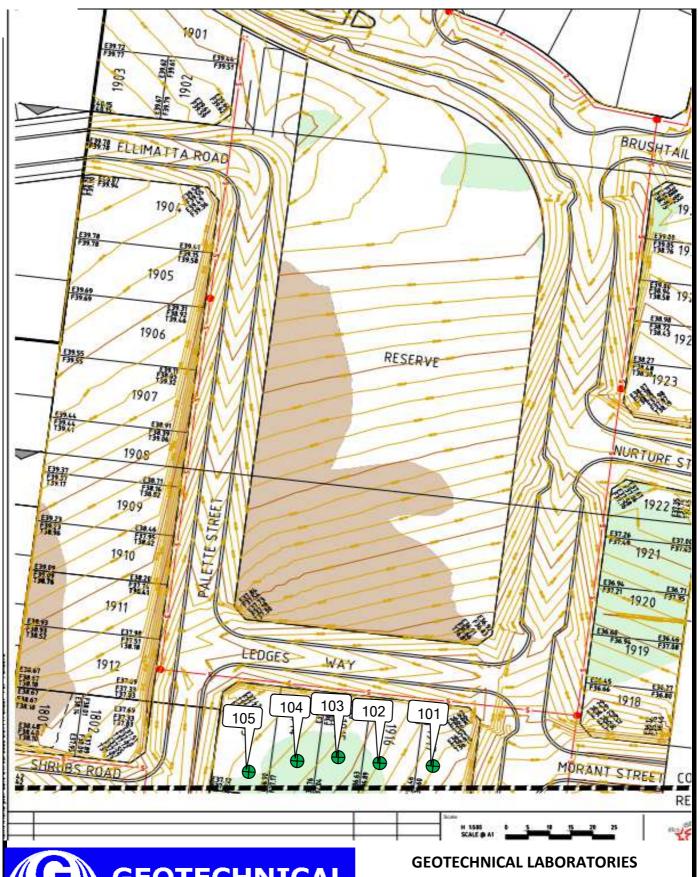
17025 - Testing

NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 27/9/2022





ACN 102 571 077

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

CLIENT: SYMON BROS

LOCATION: Mambourin, Stage 18 & 19

Sketch indicating compaction test locations

DATE: 21/09/2022 JOB No.: 9024/083 **OPERATOR: KOB CHECKED: KK** SCALE: NTS FIGURE No: 1 of 2



ALL FELING ON LOTS AND WITHIN ROAD RESERVES GREATER THAN 20000 IS TO BE UNDERTAKEN USING LEVEL 1 SUPERVISION AND BE COMPLETED IN ACCORDANCE GHT DATUM AND ALL COORDINATES ARE TO



GEOTECHNICAL LABORATORIES ACN 102 571 077

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

CLIENT: SYMON BROS DATE: 21/09/2022 JOB No.: 9024/083 LOCATION: Mambourin, Stage 18 & 19 **OPERATOR: KOB CHECKED: KK** Sketch indicating compaction test locations SCALE: NTS FIGURE No: 2 of 2



REPORT NO.: # 9024/109

LOCATION:

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140 SYMON BROS - Mambourin, Stage 32

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)
12/05/23	135	Refer to #9024/110 for approx. test site locations.	2.01	22.0	102.5	₩ 1.96	24.0	175	2.0 Drier	92.0	5	0	0
12/05/23	136		2.03	22.0	106.5	1.91	24.5	175	2.5 Drier	89.0	0	0	0
12/05/23	137		1.92	19.0	102.0	1.89	22.5	175	3.0 Drier	86.0	0	0	0
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NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 10:35am Finish Time: 10:50am

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

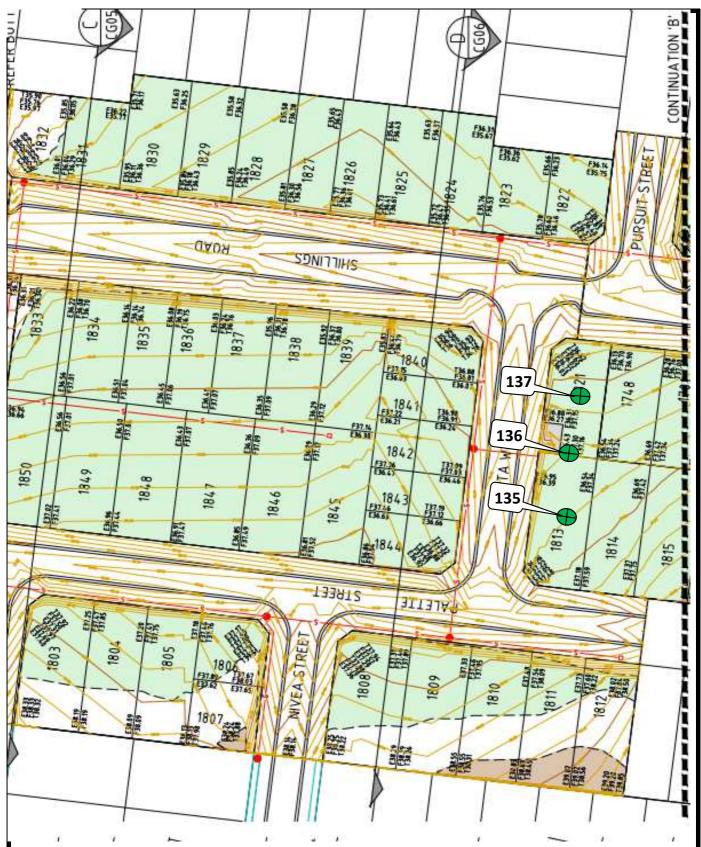
Accredited for compliance with ISO/IEC

NATA Accredited Laboratory Number 14561

MICK CROWE

(Approved Signatory)

Issue Date: 16/5/2023





GEOTECHNICAL LABORATORIES ACN 102 571 077

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

CLIENT: SYMON BROS

LOCATION: Mambourin, Stage 18

Sketch indicating compaction test locations

 DATE: 12/05/2023
 JOB No.: 9024/110

 OPERATOR: SA
 CHECKED: KK

SCALE: NTS FIGURE No: -



REPORT NO.: # 9024/112

14 Ravenhall Way, Ravenhall, Vic 3023

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

SYMON BROS - Mambourin, Stage 17 & 18 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)
5/06/23	138	Refer to #9024/113 for approx. test site locations.	1.92	25.0	99.5	1.93	24.5	175	0.5 Wetter	102.0	0	0	0
5/06/23	139		1.88	24.5	96.5	1.95	24.0	175	0.0 Wetter	101.0	0	0	0
5/06/23	140		1.99	22.0	99.5	2.01	22.0	175	0.0 Drier	100.0	0	0	0
-	-		-	-	-	-	-	-	-	-	-	-	-
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NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 1.00PM Finish Time: 1.40PM

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.

WORLD RECOGNISED
ACCREDITATION

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

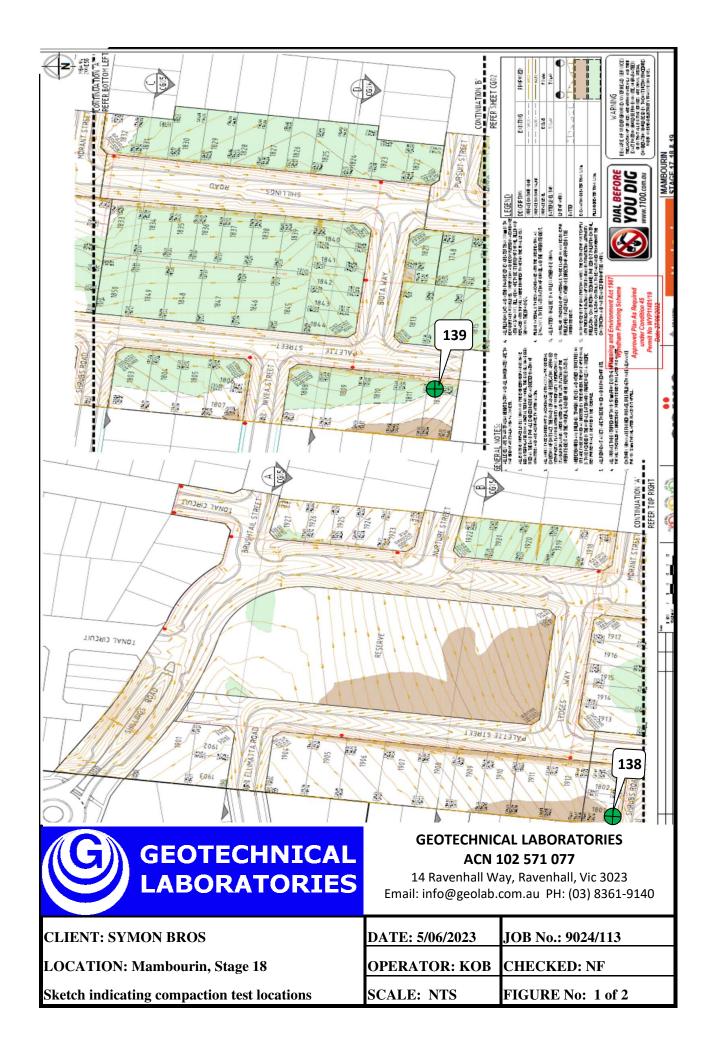
17025 - Testing

NATA Accredited Laboratory Number 14561

MICK CROWE (Approved Signatory)

Issue Date: 8/6/2023

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GEOTECHNICAL LABORATORIES ACN 102 571 077

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

CLIENT: SYMON BROS	DATE: 5/06/2023	JOB No.: 9024/113
LOCATION: Mambourin, Stage 17	OPERATOR: KOB	CHECKED: NF
Sketch indicating compaction test locations	SCALE: NTS	FIGURE No: 2 of 2