

LEVEL ONE

Reference
No.: 9294-016

SURVEILLANCE

AND INSPECTION REPORT

*Carried Out
By*



PREPARED FOR: -

SYMON BROS. CONSTRUCTIONS PTY LTD



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Appendices

Appendix A Construction Drawings

Appendix B Daily Field Compaction Summary Results



Client Name: Symon Bros. Constructions Pty Ltd

Project Name: Samara Estate, Stage 2

Date: 27th of October 2025

Author: Mr. Thomas Crowe

Reference No.: 9294-016

Revision: 0

Project Manager: Mr. Anthony Gabriele

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 14th of March 2025 to the 19th of March 2025 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). Detail Plan Reference 22-0098-02RD02 (Rev. A)

General site works involved the placement of fill, using 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 6th of March 2025 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 mainly sourced from service trench excavations, road boxing and site cut areas.



The material is best described as a silty CLAY, brown, red 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:

- Dump trucks / Highway trucks
- A watercart
- A sheepfoot compactor (815)

The sheepfoot compactor placed material in horizontal loose layers of approximately 250mm-300mm. The sheepfoot 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 Hilt 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**.



As a result, the compliance criteria adopted by Geotechnical Laboratories was a half density ratio not less than 95 percent of the maximum half density value as determined by the Standard Half 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 criterion 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 14th of March 2025 to the 19th of March 2025 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 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.

Thomas Crowe
Technical 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



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LEVEL ONE
SURVEILLANCE
AND INSPECTION REPORT

APPENDIX B



GEOTECHNICAL LABORATORIES

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14 Ravenhall Way, Ravenhall, Vic 3023

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FIELD DENSITY TESTING SUMMARY

REPORT NO: 9294/006

PROJECT: SYMON BROS - Samara Estate, Stage 2

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m ³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	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)											
14/03/25	1	<i>Refer to #9294/007 for approx. test site locations.</i>	1.85	20.5	103.0	✖ 1.79	26.0	175	5.5 Drier	78.5	4	0	0											
14/03/25	2		1.83	23.0	97.5	✖ 1.88	24.0	175	1.0 Drier	96.0	6	0	0											
14/03/25	3		1.88	25.5	100.0	✖ 1.88	27.5	175	2.5 Drier	92.0	3	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: 8:00am Finish Time: 8:45am																				
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.																								
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: 21/3/2025																	



GEOTECHNICAL LABORATORIES

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14 Ravenhall Way, Ravenhall, Vic 3023

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

CLIENT: SYMON BROS

DATE: 14/03/2025

JOB No: 9294/007

LOCATION: Samara Estate, Stage 2

OPERATOR: AB

CHECKED: KK

Sketch indicating compaction test locations

SCALE: NTS

FIGURE No: -



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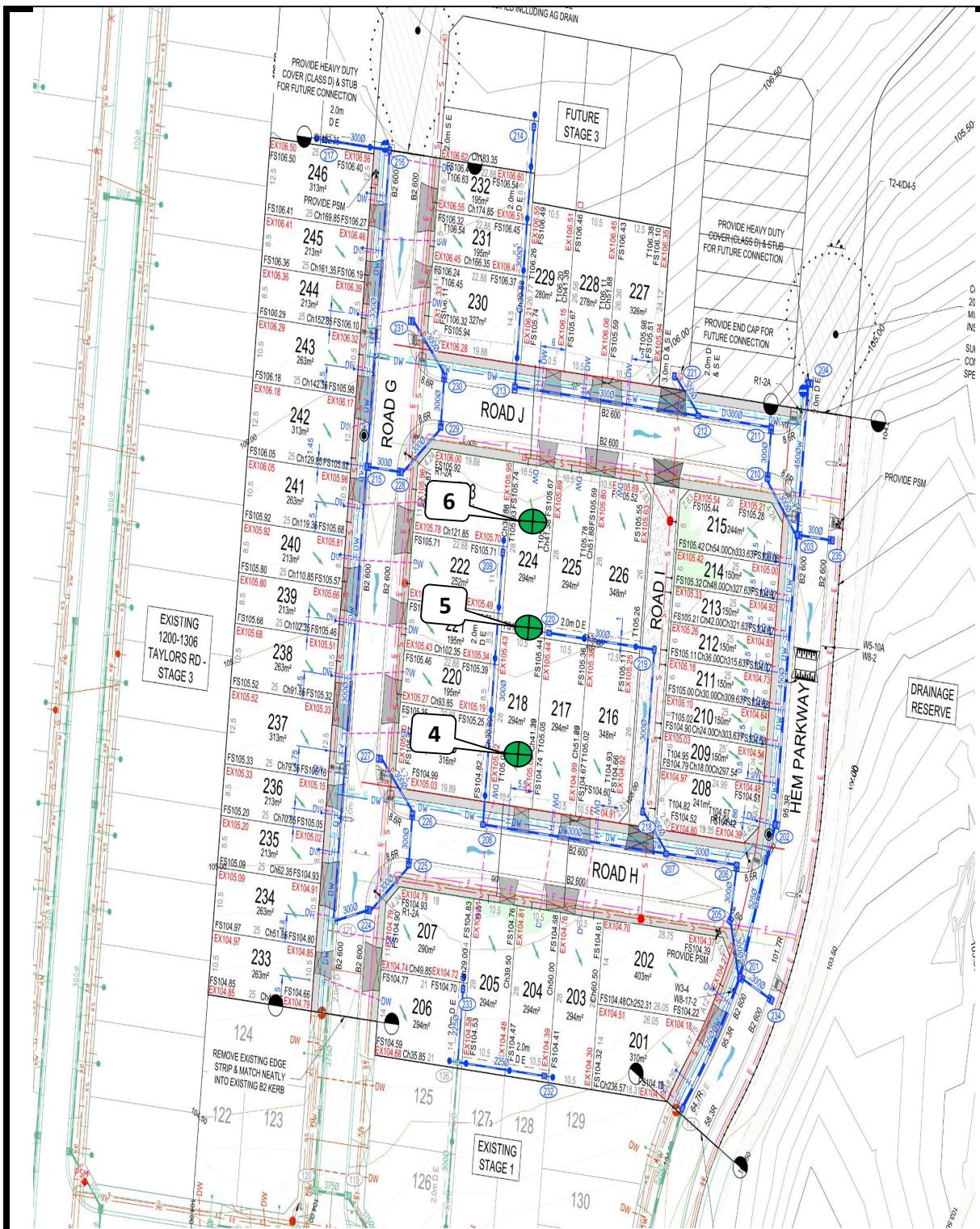
Email: info@geolab.com.au Phone: (03) 8361 9140

FIELD DENSITY TESTING SUMMARY

REPORT NO: 9294/008

PROJECT: SYMON BROS - Samara Estate, Stage 2

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m ³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	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)											
14/03/25	4	<i>Refer to #9294/009 for approx. test site locations.</i>	1.93	25.0	98.0	✖ 1.97	25.5	175	0.5 Drier	97.0	10	0	0											
14/03/25	5		2.06	24.0	103.0	✖ 2.00	26.5	175	2.5 Drier	90.5	9	0	0											
14/03/25	6		2.04	25.0	103.0	✖ 1.98	27.5	175	2.5 Drier	91.0	3	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: 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.																								
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: 21/3/2025																	



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14 Ravenhall Way, Ravenhall, Vic 3023

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

CLIENT: SYMON BROS

LOCATION: Samara Estate, Stage 2

Sketch indicating compaction test locations

DATE: 14/03/2025

JOB No: 9294/009

OPERATOR: TC

CHECKED: KK

SCALE: NTS

FIGURE No: -



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FIELD DENSITY TESTING SUMMARY

REPORT NO: 9294/011

PROJECT: SYMON BROS - Samara Estate, Stage 2

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m ³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	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)												
17/03/25	7	<i>Refer to #9294/012 for approx. test site locations.</i>	1.93	24.0	102.0	1.89	25.5	175	1.5 Drier	93.0	0	0	150												
17/03/25	8		1.95	26.0	103.0	1.89	28.5	175	2.5 Drier	92.0	0	0	0												
17/03/25	9		1.90	24.5	105.5	☒ 1.81	28.0	175	3.5 Drier	87.5	5	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: 2:00pm Finish Time: 2:35pm																							
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.																									
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																									
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Materials Sampled: AS 1289 1.2.1 Clause 6.4(b)																									
☒ Indicates APCWD																									
❖																									
 <i>Accredited for compliance with ISO/IEC 17025 - Testing</i> <i>NATA Accredited Laboratory Number 14561</i>																									
MICK CROWE (Approved Signatory) Issue Date: 21/3/2025																									



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CLIENT: SYMON BROS

DATE: 17/03/2025

JOB No: 9294/012

LOCATION: Samara Estate, Stage 2

OPERATOR: SA

CHECKED: KK

Sketch indicating compaction test locations

SCALE: NTS

FIGURE No: -



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FIELD DENSITY TESTING SUMMARY

REPORT NO: 9294/013

PROJECT: SYMON BROS - Samara, Stage 2

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m ³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	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)											
19/03/25	10	<i>Refer to #9294/014 for approx. test site locations.</i>	1.91	23.5	99.5	✖ 1.91	26.0	175	2.5 Drier	90.5	5	0	0											
19/03/25	11		1.85	29.0	97.0	✖ 1.91	29.5	175	0.5 Drier	98.0	4	0	200											
19/03/25	12		1.90	25.5	97.0	✖ 1.96	25.5	175	0.0 Drier	100.0	9	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: 2.10PM 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.																								
Moisture Content: AS 1289 2.1.1																								
Soil Layer thickness: 200mm																								
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CLIENT: SYMON BROS

DATE: 19/03/2025

JOB No: 9294/014

LOCATION: Samara Estate, Stage 2

OPERATOR: SLI

CHECKED: NF

Sketch indicating compaction test locations

SCALE: NTS

FIGURE No: -