

LEVEL ONE

Reference
No.: 2306-054

SURVEILLANCE

AND INSPECTION REPORT

*Carried Out
By*



PREPARED FOR: -

SYMON BROS. CONSTRUCTIONS PTY LTD



Table of Contents

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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: The Grove West Stage 62

Date: 23rd July 2021

Author: Mr. Sam Loza

Reference No.: 2306-054

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 10th of September 2020 to the 20th of July 2021 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) Road & Drainage Layout Plan Drawing No. 2190E-62-02 & 2190E-62-03 – Rev A.

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

Site inspections were undertaken on the 10th of September 2020 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 off-site.

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 site cut areas.



The fill material is best described as a silty CLAY, brown, grey-brown, slightly moist to moist, 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:

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

The sheepfoot compactor placed material in horizontal loose layers of approximately 250-300mm. The sheepfoot 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 Hilt Rapid Compaction Method in accordance with AS 1289 5.7.1.

A total of twenty-six 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 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 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 10th of September 2020 to the 20th of July 2021 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.

A handwritten signature in black ink, appearing to read 'Sam Loza'.

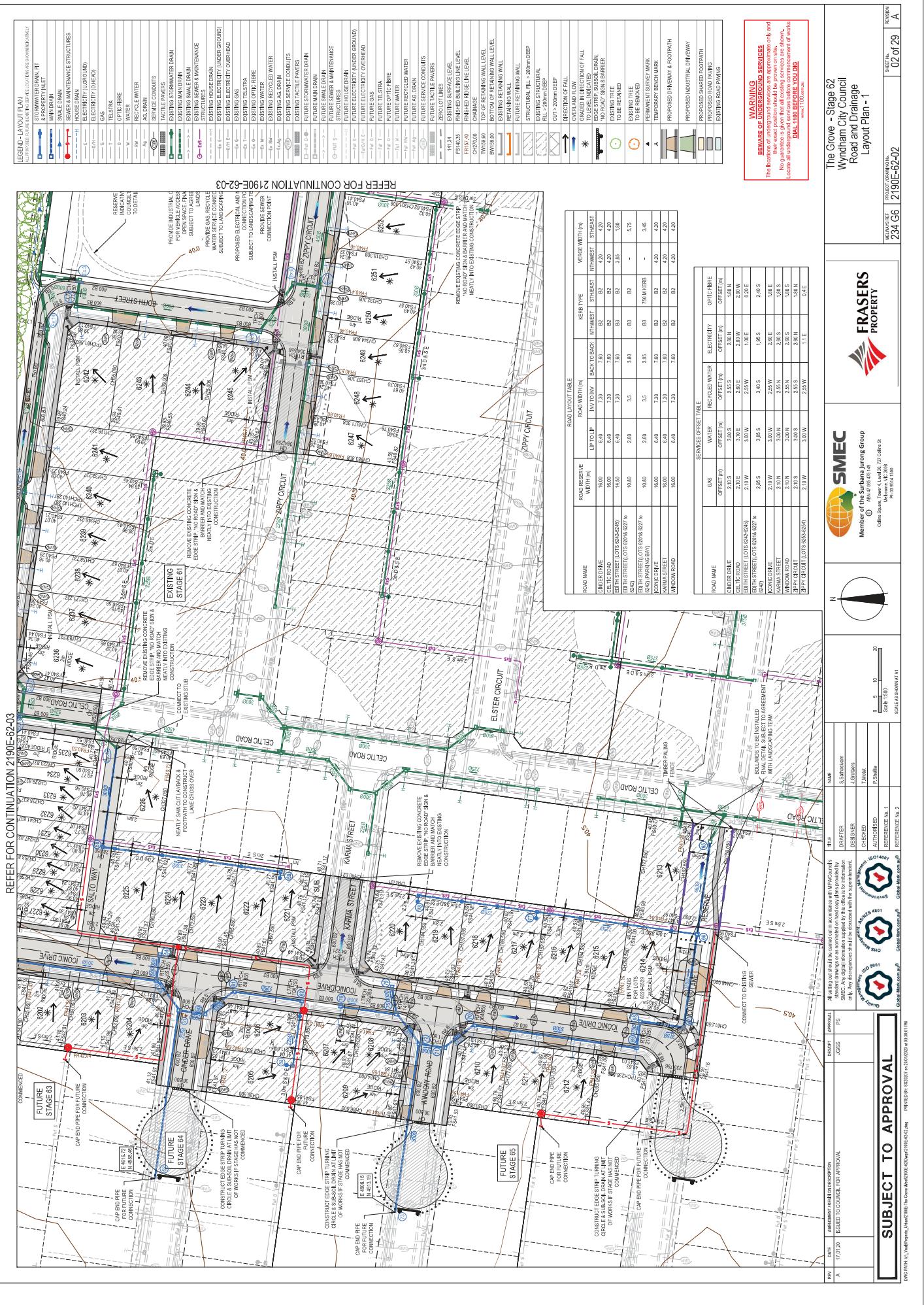
Sam Loza
Laboratory Manager.



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





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



DAILY SUMMARY - FIELD DENSITY TESTS

GEOTECHNICAL LABORATORIES

ACN 102 571 077

14 Ravenhall Way, Ravenhall, Vic 3023

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

REPORT NO.: # 2305/021

LOCATION: SYMON BROS - The Grove Stage 62

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)											
10/09/20	1	<i>Refer to #2305/022 for approx. test site locations.</i>	1.98	28.5	108.5	1.82	30.5	175	2.0 Drier	94.0	0	0	0											
10/09/20	2		1.93	23.5	105.5	1.83	28.0	175	4.0 Drier	85.0	0	0	200											
10/09/20	3		1.96	24.5	107.5	1.83	28.5	175	4.0 Drier	86.0	0	0	0											
-	-		-	-	-	-	-	-	-	-	-	-	-											
-	-		-	-	-	-	-	-	-	-	-	-	-											
-	-		-	-	-	-	-	-	-	-	-	-	-											
NOTES: Clayey Fill Ex. Onsite				Compaction specimens sampled after compaction.																				
Test sites located - Geolab Procedure 4, Part 4.4.				Start Time: 8:55am Finish Time: 9:15pm																				
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.																								
Soil Layer thickness: 200mm																								
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 TECHNICAL COMPETENCE							<u>Accredited for compliance with ISO/IEC</u> <u>17025 - Testing</u> <u>NATA Accredited Laboratory Number 14561</u>																	
MICK CROWE (Approved Signatory) Issue Date: 15/9/2020																								



**GEOTECHNICAL
LABORATORIES**

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: 10/9/2020

JOB No.: 2305/022

LOCATION: The Grove West Stage 62

OPERATOR: TI

CHECKED: KK

Sketch indicating compaction test locations

SCALE: NTS

FIGURE No: -

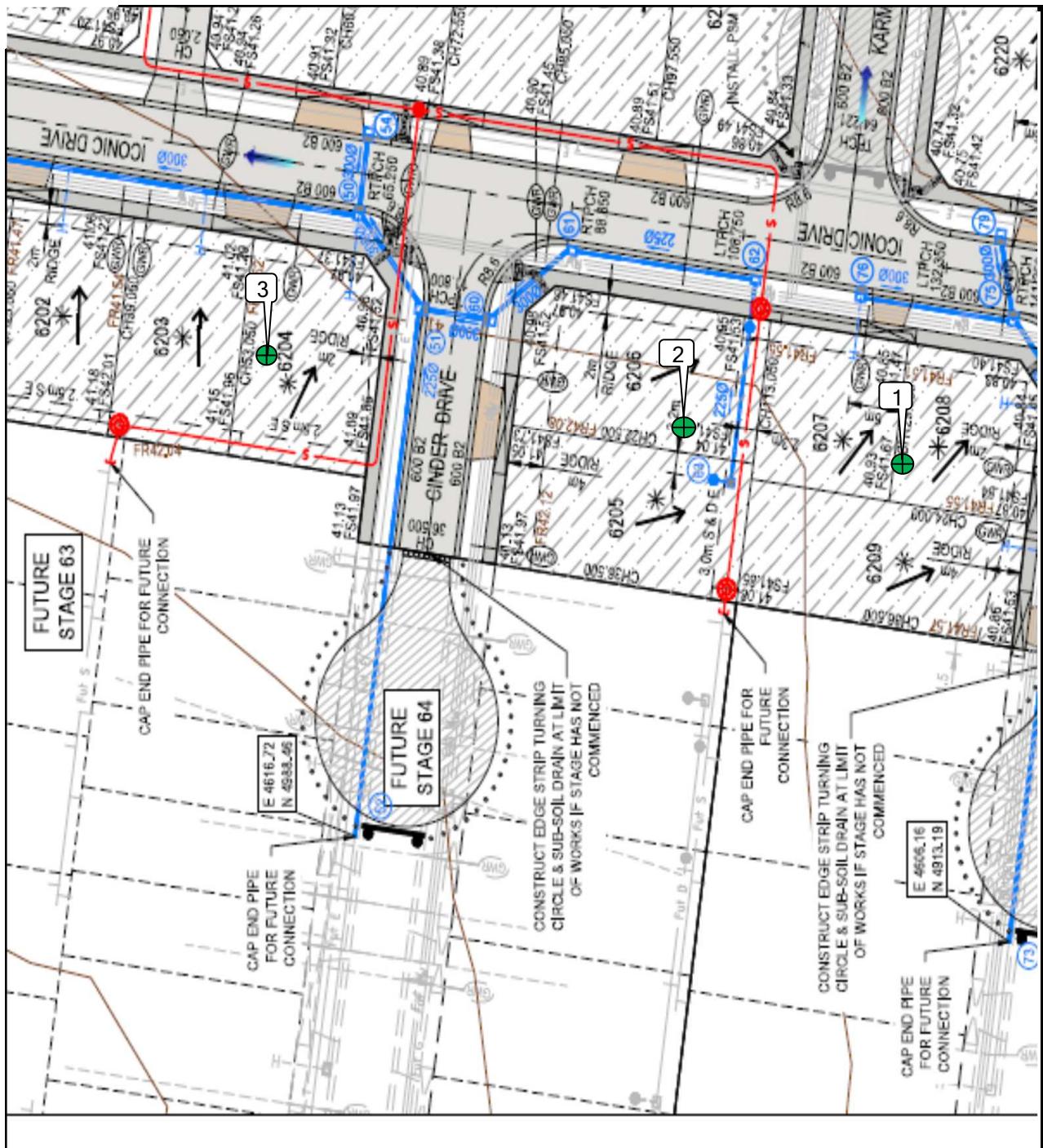


DAILY SUMMARY - FIELD DENSITY TESTS

GEOTECHNICAL LABORATORIES
ACN 102 571 077
14 Ravenhall Way, Ravenhall, Vic 3023
Email: info@geolab.com.au PH: (03) 8361-9140

REPORT NO.: # 2305/023
LOCATION: SYMON BROS - The Grove West Stage 62

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)											
15/09/20	1	<i>Refer to #2305/024 for approx. test site locations.</i>	1.92	31.0	100.0	✖ 1.92	29.5	175	1.5 Wetter	104.5	8	0	200											
15/09/20	2		1.86	27.5	100.0	1.87	29.0	175	1.5 Drier	95.5	0	0	200											
15/09/20	3		2.01	27.5	103.0	1.95	27.0	175	1.0 Wetter	103.0	0	0	100											
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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: 12:00pm 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.																								
Soil Layer thickness: 200mm																								
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																								
❖																								
 <i>Accredited for compliance with ISO/IEC</i> <i>17025 - Testing</i> <i>NATA Accredited Laboratory Number 14561</i>							MICK CROWE (Approved Signatory) Issue Date: 18/9/2020																	



**GEOTECHNICAL
LABORATORIES**

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: The Grove West Stage 62

Sketch indicating compaction test locations

DATE: 15/9/2020

OPERATOR: RW

SCALE: NTS

JOB No.: 2305/024

CHECKED: KK

FIGURE No: -

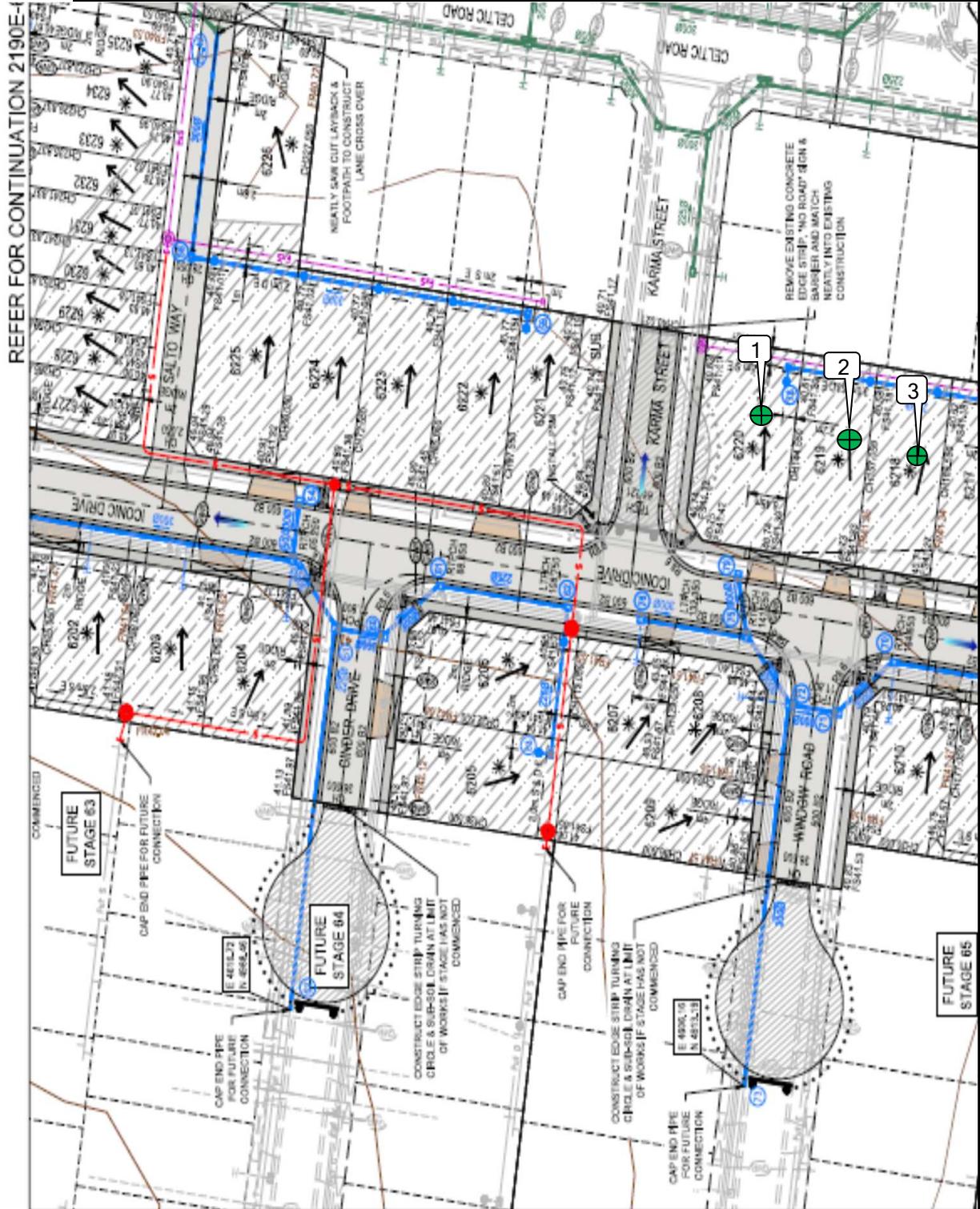


DAILY SUMMARY - FIELD DENSITY TESTS

GEOTECHNICAL LABORATORIES
ACN 102 571 077
14 Ravenhall Way, Ravenhall, Vic 3023
Email: info@geolab.com.au PH: (03) 8361-9140

REPORT NO.: # 2305/025
LOCATION: SYMON BROS - The Grove West Stage 62

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)											
17/09/20	1	<i>Refer to #2305/026 for approx. test site locations.</i>	1.90	28.5	100.5	1.89	26.5	175	2.0 Wetter	107.5	0	0	0											
17/09/20	2		1.98	23.5	103.0	1.92	24.5	175	1.0 Drier	95.0	0	0	0											
17/09/20	3		2.09	22.5	103.0	✖ 2.03	23.0	175	0.5 Drier	98.0	15	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: 9:30am Finish Time: 10:00am																				
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.																								
Soil Layer thickness: 200mm																								
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																								
❖																								
 <i>Accredited for compliance with ISO/IEC</i> <i>17025 - Testing</i> <i>NATA Accredited Laboratory Number 14561</i>							MICK CROWE (Approved Signatory) Issue Date: 21/9/2020																	



**GEOTECHNICAL
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ACN 102 571 077

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

CLIENT: SYMON BROS

LOCATION: The Grove West Stage 62

Sketch indicating compaction test locations

DATE: 17/9/2020

OPERATOR: RW

SCALE: NTS

JOB No.: 2305/026

CHECKED: KK

FIGURE No: -



DAILY SUMMARY - FIELD DENSITY TESTS

GEOTECHNICAL LABORATORIES

ACN 102 571 077

14 Ravenhall Way, Ravenhall, Vic 3023

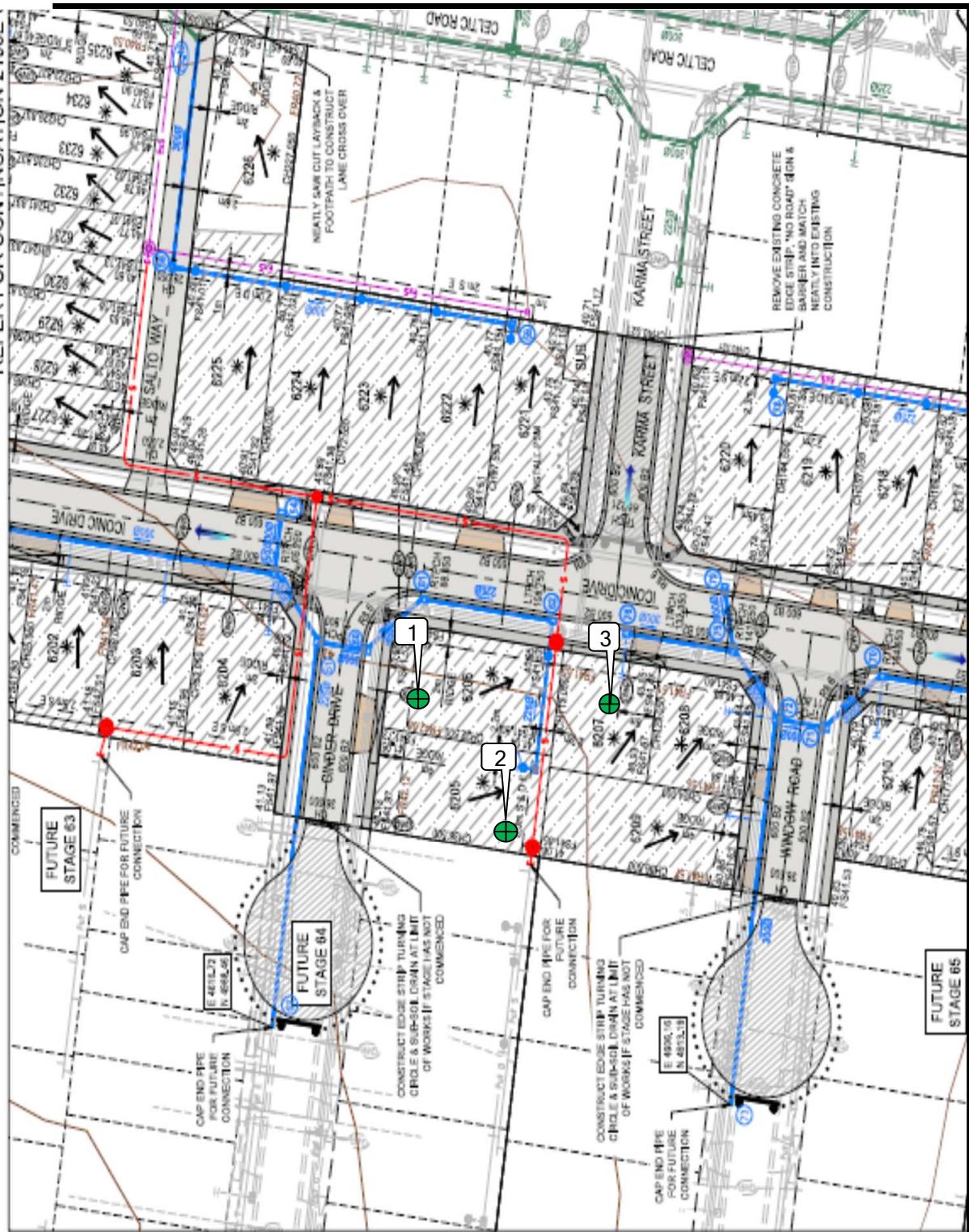
Email: info@geolab.com.au PH: (03) 8361-9140

REPORT NO.: # 2305/027

LOCATION: SYMON BROS - The Grove West Stage 62

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)											
16/09/20	1	<i>Refer to #2305/028 for approx. test site locations.</i>	1.90	27.0	100.5	1.89	28.0	175	1.0 Drier	96.5	0	0	400											
16/09/20	2		1.95	27.5	102.0	1.91	28.0	175	0.5 Drier	98.0	0	0	400											
16/09/20	3		1.91	27.5	99.5	☒ 1.92	27.0	175	0.5 Wetter	101.0	4	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: 7:51am Finish Time: 8:06am																				
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.																								
Soil Layer thickness: 200mm																								
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																								
❖																								
 <i>Accredited for compliance with ISO/IEC</i> <i>17025 - Testing</i> <i>NATA Accredited Laboratory Number 14561</i>							MICK CROWE (Approved Signatory) Issue Date: 21/9/2020																	

REFER FOR CONTINUATION 2190E-1



GEOTECHNICAL LABORATORIES

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: 16/9/2020	JOB No.: 2305/028
LOCATION: The Grove West Stage 62	OPERATOR: RW	CHECKED: KK
Sketch indicating compaction test locations	SCALE: NTS	FIGURE No: -



GEOTECHNICAL LABORATORIES

ACN 102 571 077

14 Ravenhall Way, Ravenhall, Vic 3023

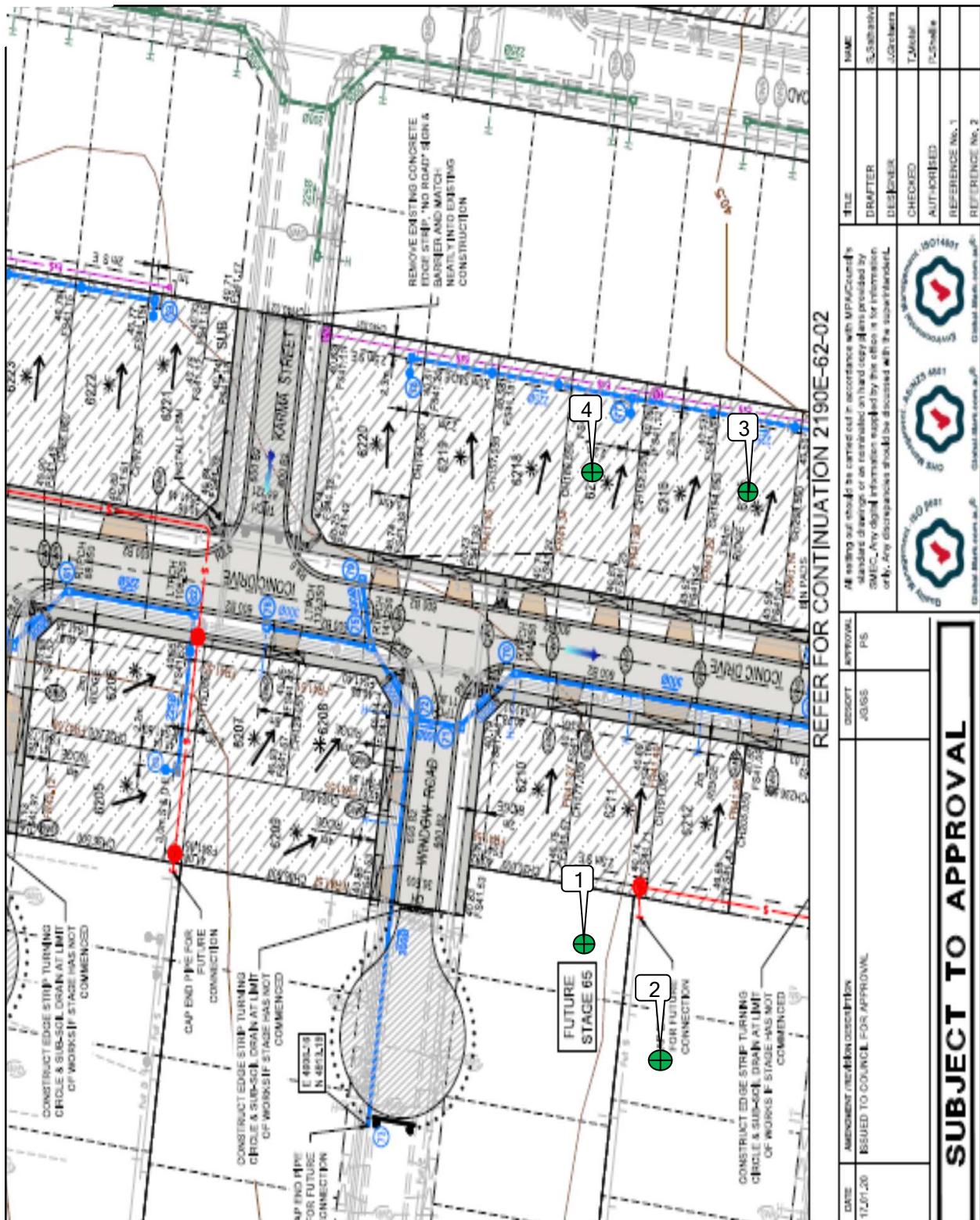
Email: info@geolab.com.au PH: (03) 8361-9140

DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 2305/029

LOCATION: SYMON BROS - The Grove West Stage 62 & 65

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)											
18/09/20	1	<i>Refer to #2305/030 for approx. test site locations.</i>	1.99	29.5	103.0	1.93	27.0	175	2.5 Wetter	109.5	0	0	200											
18/09/20	2		1.97	27.0	99.5	1.98	24.5	175	2.5 Wetter	109.5	8	0	200											
18/09/20	3		1.97	27.5	101.0	1.94	25.5	175	2.0 Wetter	107.0	0	0	0											
18/09/20	4		1.92	21.0	100.0	1.92	23.0	175	2.0 Drier	90.5	0	0	0											
-	-		-	-	-	-	-	-	-	-	-	-	-											
-	-		-	-	-	-	-	-	-	-	-	-	-											
NOTES: Clayey Fill Ex. Onsite				Compaction specimens sampled after compaction.																				
Test sites located - Geolab Procedure 4, Part 4.4.				Start Time: 8:40am Finish Time: 9:00am																				
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.																								
Soil Layer thickness: 200mm																								
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 TECHNICAL COMPETENCE							<u>Accredited for compliance with ISO/IEC</u> <u>17025 - Testing</u> <u>NATA Accredited Laboratory Number 14561</u>																	
										MICK CROWE (Approved Signatory)														
Issue Date: 24/9/2020																								



SUBJECT TO APPROVAL

DATE: 17/01/2020 AMENDMENT (REVISED) ISSUED TO COUNCIL FOR APPROVAL

NAME:	TS
SIGNATURE:	[Signature]
DRAFTER:	[Signature]
DESIGNER:	[Signature]
CHECKED:	[Signature]
AUTHORISED:	[Signature]
REFERENCE NO.:	[Signature]
REFERENCE NO.:	[Signature]

REFER FOR CONTINUATION 2190E-62-02

APPROVAL:	ISSUED
REF ID:	PS



**GEOTECHNICAL
LABORATORIES**

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: The Grove West Stage 62 & 65

Sketch indicating compaction test locations

DATE: 18/9/2020

OPERATOR: RW

SCALE: NTS

JOB No.: 2305/030

CHECKED: KK

FIGURE No: -



DAILY SUMMARY - FIELD DENSITY TESTS

GEOTECHNICAL LABORATORIES

ACN 102 571 077

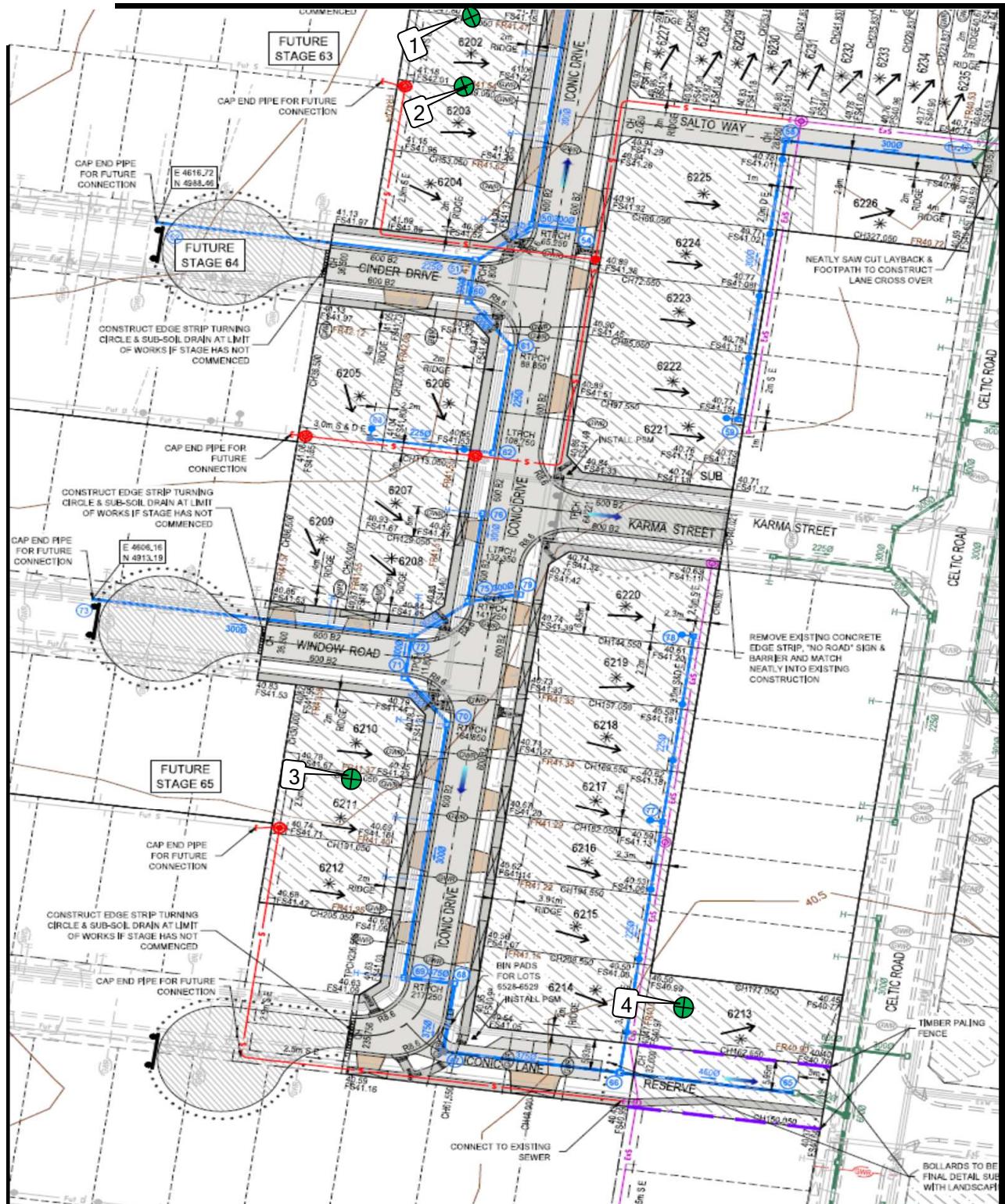
14 Ravenhall Way, Ravenhall, Vic 3023

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

REPORT NO.: # 2305/075

LOCATION: SYMON BROS - The Grove West Stage 62

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)											
30/10/20	1	<i>Refer to #2305/076 for approx. test site locations.</i>	1.87	23.5	102.0	1.83	26.5	175	3.0 Drier	88.0	0	0	0											
30/10/20	2		1.98	23.5	105.0	☒ 1.88	26.5	175	3.0 Drier	88.0	4	0	0											
30/10/20	3		1.90	27.5	100.0	☒ 1.90	28.0	175	0.5 Drier	99.0	3	0	0											
30/10/20	4		1.85	32.5	100.0	1.85	31.5	175	1.0 Wetter	103.5	0	0	0											
-	-		-	-	-	-	-	-	-	-	-	-	-											
-	-		-	-	-	-	-	-	-	-	-	-	-											
NOTES: Clayey Fill Ex. Onsite				Compaction specimens sampled after compaction.																				
Test sites located - Geolab Procedure 4, Part 4.4.				Start Time: 10:50am Finish Time: 11:15am																				
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.																								
Soil Layer thickness: 200mm																								
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																								
❖																								
 <i>Accredited for compliance with ISO/IEC</i> <i>17025 - Testing</i> <i>NATA Accredited Laboratory Number 14561</i>							<i>MICK CROWE</i> (Approved Signatory) Issue Date: 5/11/2020																	



GEOTECHNICAL LABORATORIES

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: 30/10/2020	JOB No.: 2305/076
LOCATION: The Grove West Stage 62	OPERATOR: JC	CHECKED: CL
Sketch indicating compaction test locations	SCALE: NTS	FIGURE No: -



GEOTECHNICAL LABORATORIES

ACN 102 571 077

14 Ravenhall Way, Ravenhall, Vic 3023

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

DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 2305/310

LOCATION: SYMON BROS - The Grove, Stage 62

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)
20/07/21	1	<i>Refer to #2305/311 for approx. test site locations.</i>	1.82	19.0	96.5	1.89	21.0	175	2.0 Drier	91.0	0	0	0
20/07/21	2		1.87	20.0	99.5	1.88	22.0	175	2.0 Drier	90.0	0	0	0
20/07/21	3		2.05	17.5	101.0	⌘ 2.03	20.0	175	2.0 Drier	89.5	5	0	0
20/07/21	4		2.17	22.0	107.5	⌘ 2.03	23.5	175	1.5 Drier	92.5	16	0	0
20/07/21	5		1.93	28.0	99.0	1.95	26.0	175	2.5 Wetter	109.0	0	0	0
20/07/21	6		1.85	24.5	95.0	⌘ 1.94	25.0	175	0.5 Drier	98.0	4	0	0

NOTES: Clayey Fill Ex. Onsite

Compaction specimens sampled after compaction.

Test sites located - Geolab Procedure 4, Part 4.4.

Start Time: 11:00am 12:10pm Finish Time:

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.

Soil Layer thickness: 200mm

Moisture Content: AS 1289 2.1.1

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

Compaction Test: 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

⌘ Indicates APCWD

NATA Accredited Laboratory Number 14561

MICK CROWE
(Approved Signatory)

Issue Date: 21/7/2021

❖



GEOTECHNICAL LABORATORIES

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CLIENT: SYMON BROS

LOCATION: The Grove West Stage 62

Sketch indicating compaction test locations

DATE: 20/07/2021

JOB No : 2305/311

OPERATOR: TI/V

CHECKED: KK

SCALE: NTS

FIGURE No: -