

Reference  
No.: 9087-053

LEVEL ONE

SURVEILLANCE

AND INSPECTION REPORT

*Carried Out  
By*



PREPARED FOR: -

SYMON BROS. CONSTRUCTIONS PTY LTD



## Table of Contents

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

## Appendices

Appendix A Construction Drawings

Appendix B Daily Field Compaction Summary Results



Client Name: Symon Bros. Constructions Pty Ltd

Project Name: Maple Grove, Stage 1

Date: 7<sup>th</sup> of August 2023

Author: Mr. Sam Loza

Reference No.: 9087-053

Revision: 0

Project Manager: Mr. Vince Colubriale

### **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 19<sup>th</sup> of April 2023 to the 2<sup>nd</sup> 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). Layout Plan Ref No. 1701814 (Drawing No. 011, Stage No. 1) Rev. P4

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 14<sup>th</sup> of April 2023 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 on-site excavations, mainly drainage trenches and road boxing. The material had been screened to remove any boulders.



The fill material is best described as a silty CLAY, brown, orange 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 padfoot roller
- A dozer
- Scrapers

The dozer placed material in horizontal loose layers of approximately 250-300mm. The padfoot roller 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-one 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.



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 19<sup>th</sup> of April 2023 to the 2<sup>nd</sup> of June 2023 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.

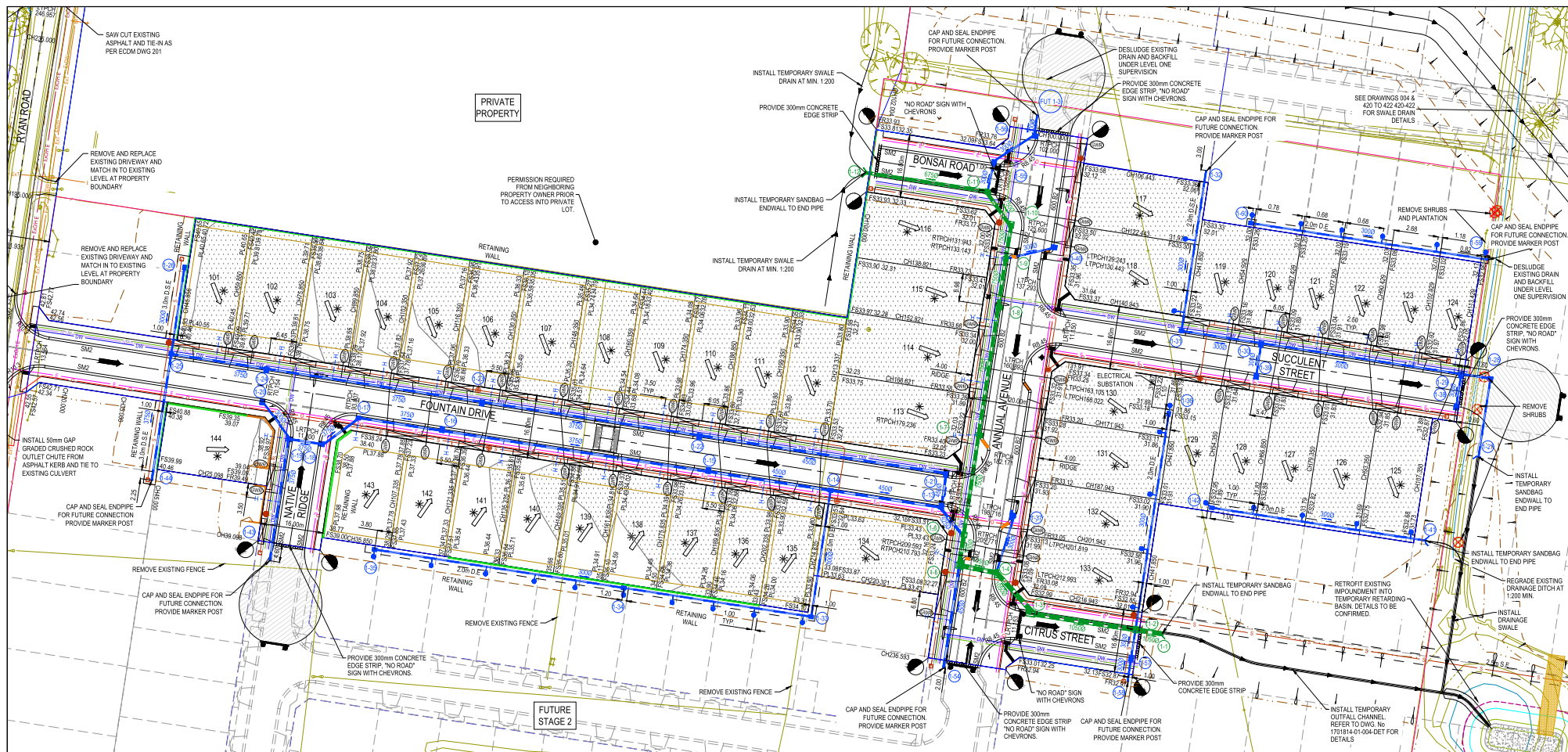
Test results and controlled fill compliance relates only to fill placed by Symon Bros. Constructions Pty Ltd and for earthworks completed at the time of inspection and testing. Any previous or subsequent earthworks will require a separate evaluation.

For & on behalf of  
Geotechnical Laboratories Pty Ltd.

Sam Loza  
Laboratory Manager.



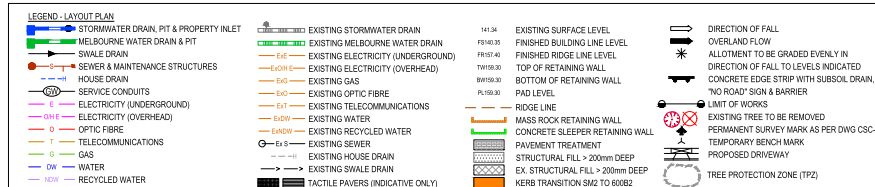
LEVEL ONE  
SURVEILLANCE  
AND INSPECTION REPORT  
  
APPENDIX A



SERVICE OFFSET TABLE

Location	Gas		ND - Water		Water		Electricity		Telecommunication		Sewer	
	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)
FOUNTAIN DRIVE	N	2.10	N	2.55	N	3.00	S	2.40	S	1.80	N	1.00
ANNUAL AVENUE	W	2.10	W	2.60	W	3.10	E	2.40	E	1.80	E & W	1.00
SUCCULENT STREET	N	2.10	N	2.55	N	3.00	S	2.40	N	1.80	N & S	1.00
BONSAI ROAD	S	2.10	S	2.55	S	3.00	N	2.40	N	1.80	S	1.00
CITRUS STREET	S	2.10	S	2.55	S	3.00	N	2.40	N	1.80	N	1.00
NATIVE RIDGE	W	2.10	W	2.55	W	3.00	E	2.40	E	1.80	W	1.00

NOTE: STREET TREES ARE TO BE PLANTED IN THE CENTRE OF ALL NATURE STRIPS



**WARNING**  
**BEWARE OF UNDERGROUND SERVICES**  
The locations of underground services are approximate only and their exact location should be proven on site. No guarantee is given that all existing services are shown. Locate all underground services before commencement of works  
**DIAL 1100 BEFORE YOU DIG**  
www.1100.com.au

**WARNING!**  
OVERHEAD ELECTRICITY LINES IN VICINITY.  
CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN OPERATING IN THE VICINITY OF THESE LINES. THE CONTRACTOR MUST ADHERE TO ALL "NO GO ZONE" REQUIREMENTS OF THE POWER AUTHORITY.

**PRELIMINARY PRINT**  
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REV	DESCRIPTION	DATE	DRN	APP	REV	DESCRIPTION	DATE	DRN	APP
04	ISSUED FOR COUNCIL REVIEW	21.11.22	VS	NM					
P3	AMENDED DESIGN AS PER FLP COMMENTS	14.10.22	VS	NM					
P2	AMENDED DRAINAGE DESIGN	28.09.22	VS	NM					
P1	ISSUED FOR INFORMATION	29.06.22	VS	NM					
P0	ISSUED FOR INFORMATION	24.06.22	VS	NM					



Designed Date: 9.12.2020  
V.MURUGA  
Drawn: L.SUTHERLAND  
Approved Date: 01.01.2020  
N.MARTENS  
PS Number: PSM8725Y

**BW** Beveridge Williams  
1 Glenferrie Road  
Malvern VIC 3144  
ph. 03 9524 8888  
www.beveridgewilliams.com.au

Project Details  
10 CANTY LANE, PAKENHAM  
STAGE 01  
CARDINIA SHIRE COUNCIL  
Drawing Title: LAYOUT PLAN

Sheet 06 of 42

Scale: 1:500 @ A1

Project Ref	Stage No	Drawing No	Rev
1701814	01	011	P4

© Issue Date 17/01/24 10 Canty Lane, Pakenham, Eng Stage 01 Drawing 1701814-01-004-01 LAYOUT PLAN



# LEVEL ONE SURVEILLANCE AND INSPECTION REPORT

## APPENDIX B





**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.: # 9087/003

LOCATION: SYMON BROS - Maple Grove, Stage 1

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m <sup>3</sup> )	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m <sup>3</sup> )	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)
19/04/23	1	<b><i>Refer to #9087/004 for approx. test site locations.</i></b>	1.95	28.5	101.0	1.93	28.0	175	0.5 Wetter	101.0	0	0	200
19/04/23	2		1.99	28.5	103.0	1.93	31.0	175	2.5 Drier	92.5	0	0	200
19/04/23	3		1.98	23.5	104.5	1.89	23.5	175	0.0 Drier	100.0	0	0	600
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 10:30am Finish Time: 11:05am

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

Compaction Test: AS 1289 5.7.1

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)

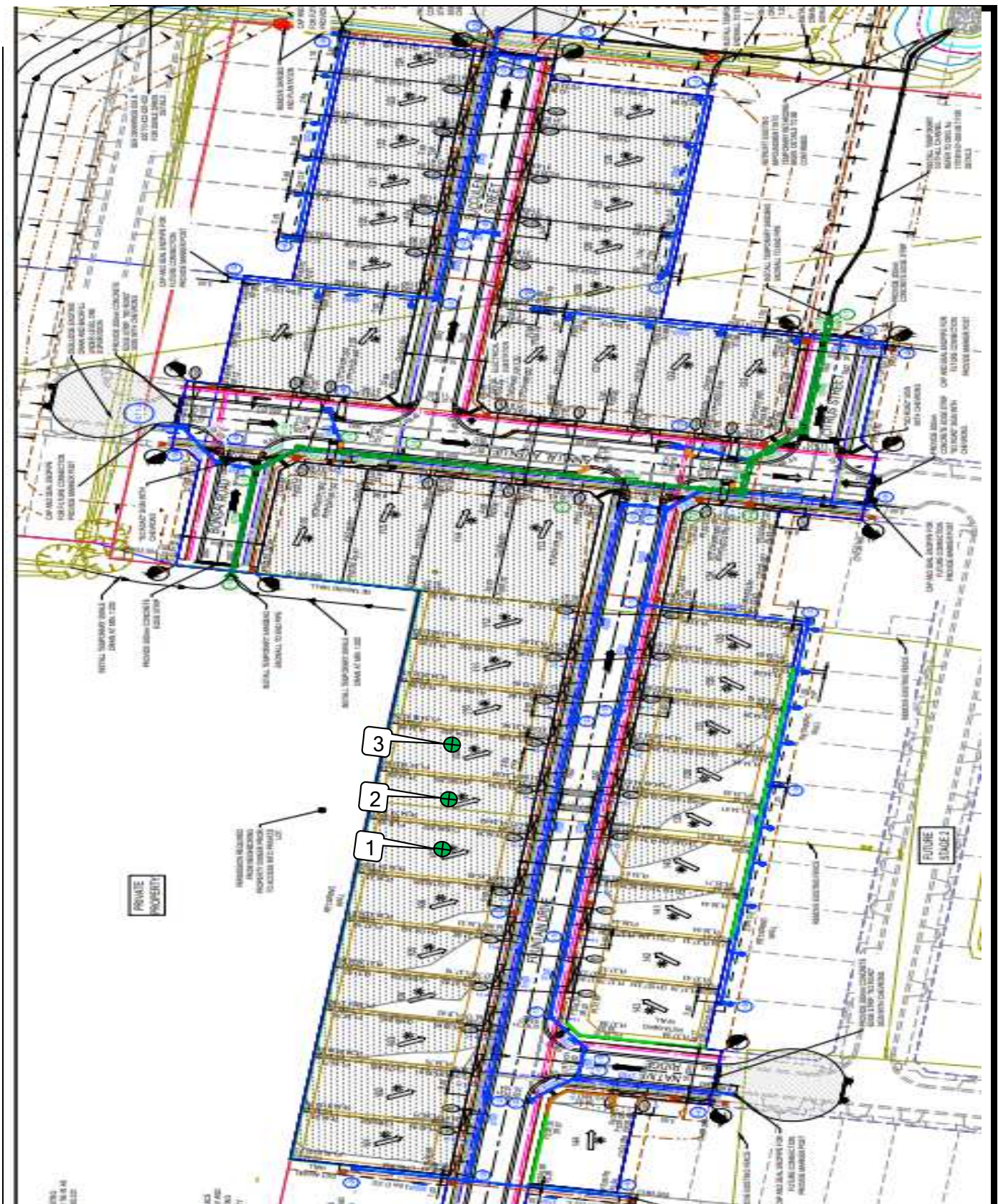


Accredited for compliance with ISO/IEC  
17025 - Testing

NATA Accredited Laboratory Number 14561

**MICK CROWE**  
 (Approved Signatory)

Issue Date: 24/4/2023



**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: Maple Grove, Stage 1**

**Sketch indicating compaction test locations**

**DATE: 19/04/2023**

**OPERATOR: BM**

**SCALE: NTS**

**JOB No.: 9087/004**

**CHECKED: KK**

**FIGURE No: -**





**GEOTECHNICAL LABORATORIES**  
**ACN 102 571 077**

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## DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 9087/006

LOCATION: SYMON BROS - Maple Grove, Stage 1

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m <sup>3</sup> )	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m <sup>3</sup> )	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)
20/04/23	4	<b>Refer to #9087/007 for approx. test site locations.</b>	2.10	25.0	102.5	✱ 2.05	24.0	175	0.5 Wetter	103.0	15	0	750
20/04/23	5		2.11	25.5	103.5	✱ 2.04	24.5	175	1.0 Wetter	104.0	16	0	750
20/04/23	6		1.95	28.0	101.0	1.93	27.0	175	1.0 Wetter	104.0	0	0	400
20/04/23	7		1.97	27.5	102.0	1.93	26.5	175	1.0 Wetter	103.0	0	0	400
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 11:20am Finish Time: 12:00pm

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.

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

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

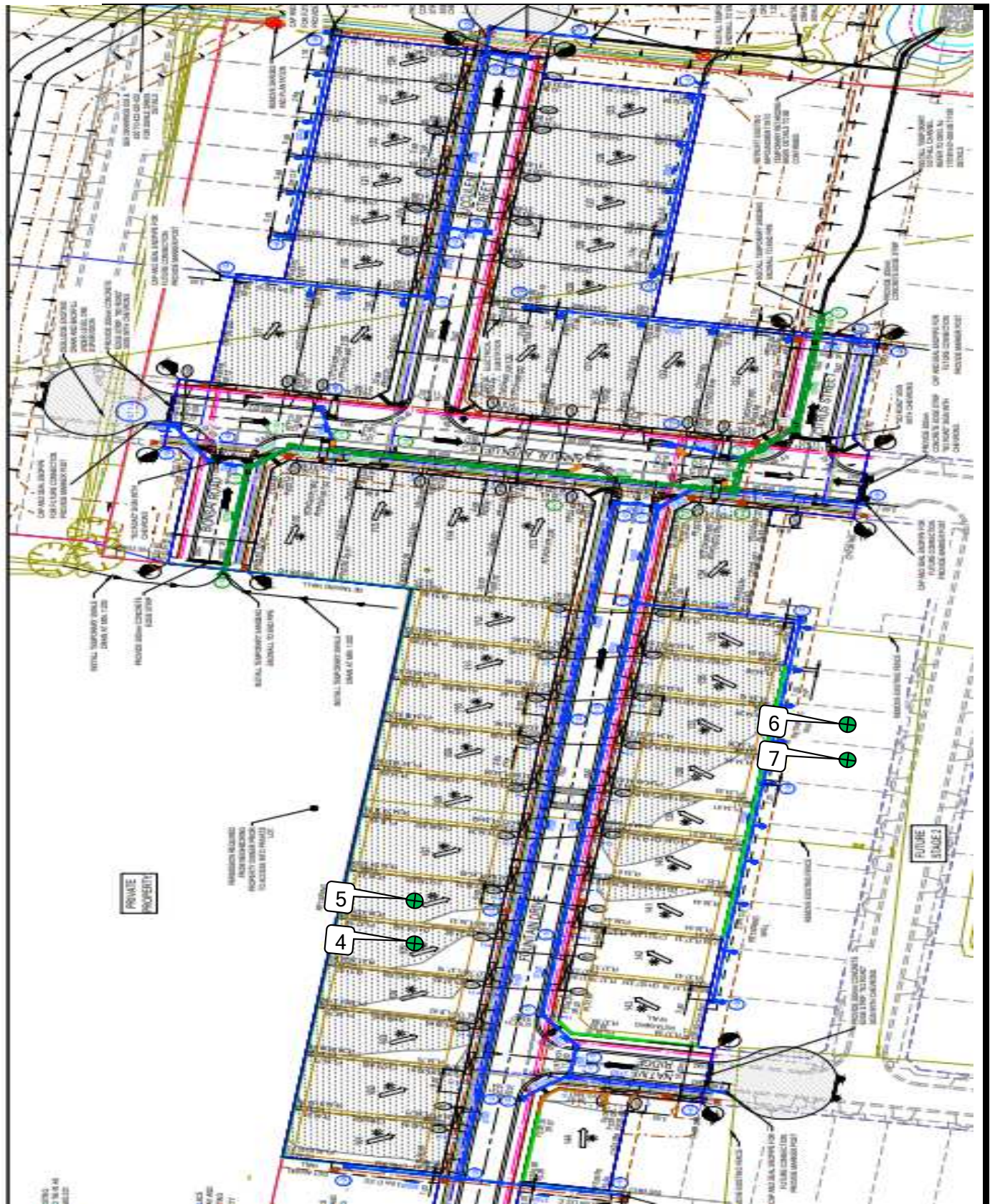


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NATA Accredited Laboratory Number 14561

**MICK CROWE**  
 (Approved Signatory)

Issue Date: 27/4/2023



**GEOTECHNICAL  
LABORATORIES**

**GEOTECHNICAL LABORATORIES**

**ACN 102 571 077**

14 Ravenhall Way, Ravenhall, Vic 3023

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

**CLIENT: SYMON BROS**

**LOCATION: Maple Grove, Stage 1**

**Sketch indicating compaction test locations**

**DATE: 20/04/2023**

**OPERATOR: BM**

**SCALE: NTS**

**JOB No.: 9087/007**

**CHECKED: KK**

**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.: # 9087/010

LOCATION: SYMON BROS - Maple Grove, Stage 1

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m <sup>3</sup> )	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m <sup>3</sup> )	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)
26/04/23	12	<b><i>Refer to #9087/011 for approx. test site locations.</i></b>	1.97	34.0	103.0	1.90	35.0	175	1.0 Drier	97.5	0	0	1050
26/04/23	13		1.91	29.5	102.0	1.87	30.0	175	0.5 Drier	99.0	0	0	750
26/04/23	14		1.92	27.5	102.0	1.88	27.5	175	0.5 Drier	99.0	0	0	100
26/04/23	15		2.19	13.5	102.5	2.14	13.5	175	0.0 Wetter	101.5	0	0	300
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 9:50am Finish Time: 10:30am

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

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

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)



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17025 - Testing

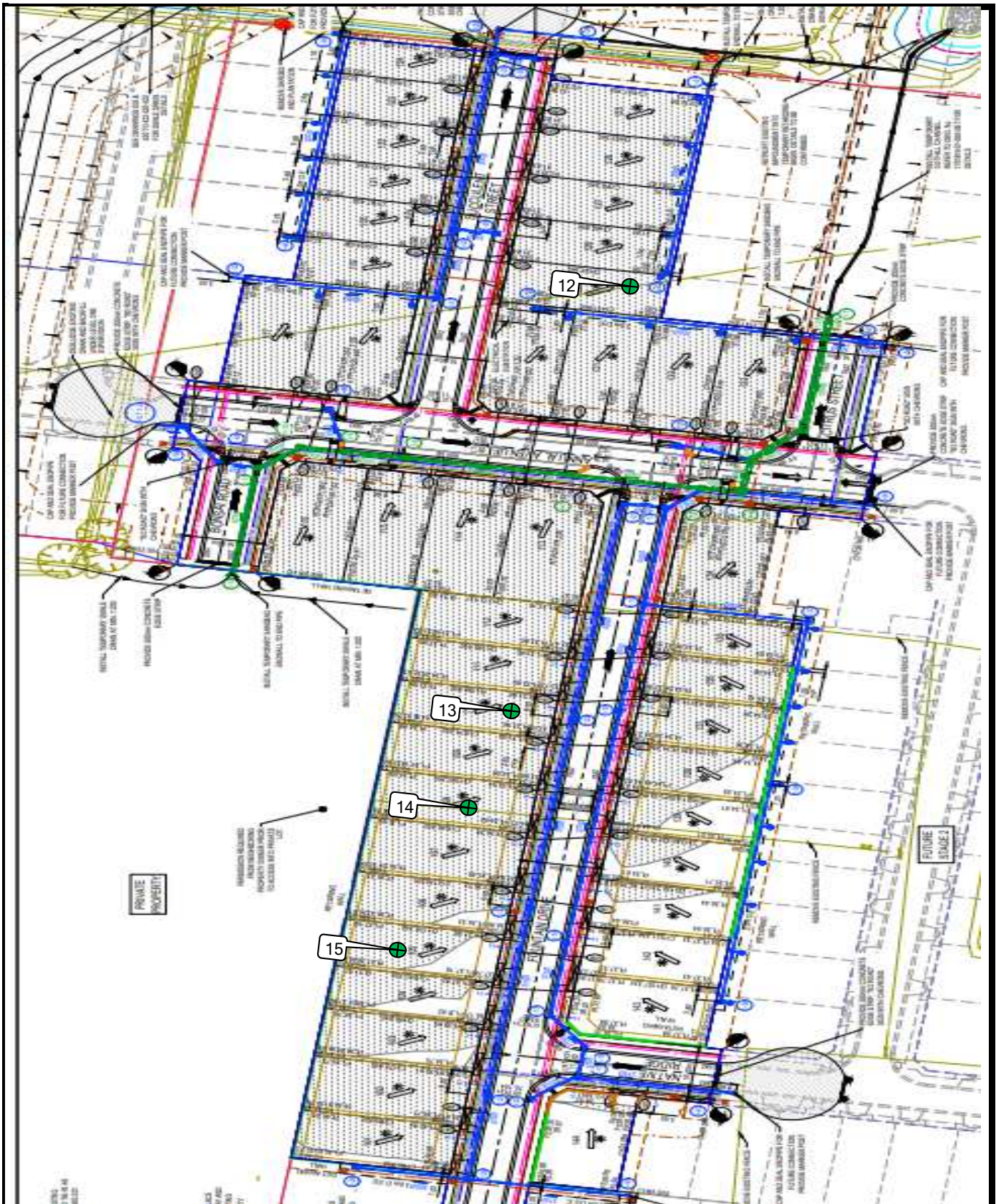
NATA Accredited Laboratory Number 14561

**MICK CROWE**  
 (Approved Signatory)

Issue Date: 2/5/2023

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**GEOTECHNICAL  
LABORATORIES**

**GEOTECHNICAL LABORATORIES**

**ACN 102 571 077**

14 Ravenhall Way, Ravenhall, Vic 3023

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

**CLIENT: SYMON BROS**

**LOCATION: Maple Grove, Stage 1**

**Sketch indicating compaction test locations**

**DATE: 26/04/2023**

**OPERATOR: BM**

**SCALE: NTS**

**JOB No.: 9087/011**

**CHECKED: KK**

**FIGURE No: -**





**GEOTECHNICAL LABORATORIES**  
**ACN 102 571 077**

14 Ravenhall Way, Ravenhall, Vic 3023  
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## DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 9087/012

LOCATION: SYMON BROS - Maple Grove, Stage 1

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m <sup>3</sup> )	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m <sup>3</sup> )	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)
21/04/23	8	<b><i>Refer to #9087/013 for approx. test site locations.</i></b>	1.92	27.5	99.0	1.93	27.0	175	0.5 Wetter	101.0	0	0	1300
21/04/23	9		1.98	27.5	103.0	1.92	27.5	175	0.0 Drier	100.0	0	0	1300
21/04/23	10		1.83	31.0	101.0	1.82	32.5	175	1.5 Drier	95.0	0	0	900
21/04/23	11		1.92	30.5	105.5	1.82	32.5	175	2.0 Drier	93.5	0	0	0
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 12:00pm Finish Time: 12:40pm

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.

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

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 compliance with ISO/IEC  
17025 - Testing

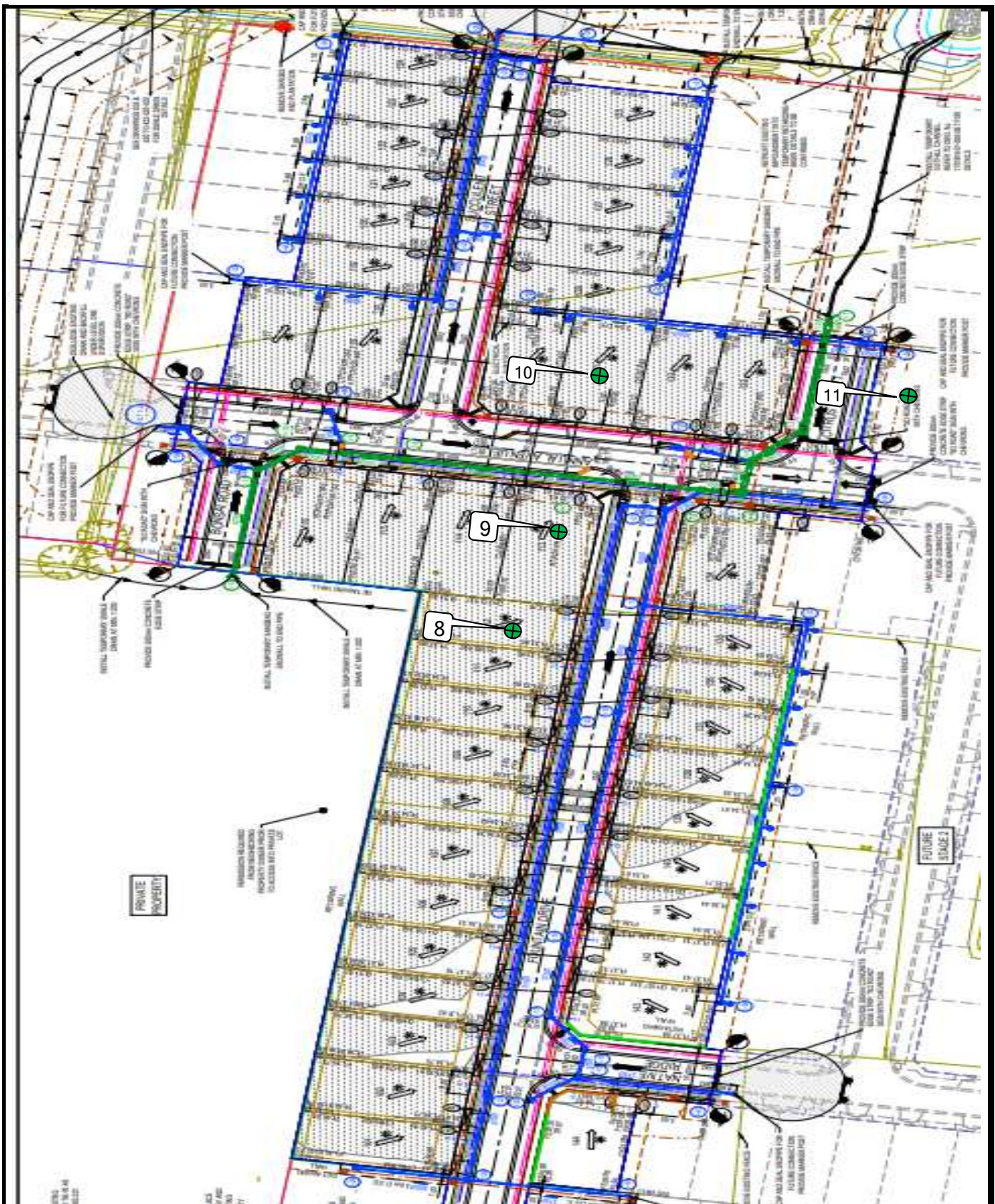
NATA Accredited Laboratory Number 14561

**MICK CROWE**  
 (Approved Signatory)

Issue Date: 1/5/2023

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**GEOTECHNICAL  
LABORATORIES**

**GEOTECHNICAL LABORATORIES**

**ACN 102 571 077**

14 Ravenhall Way, Ravenhall, Vic 3023

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

**CLIENT: SYMON BROS**

**LOCATION: Maple Grove, Stage 1**

**Sketch indicating compaction test locations**

**DATE: 21/04/2023**

**OPERATOR: BM**

**SCALE: NTS**

**JOB No.: 9087/013**

**CHECKED: KK**

**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.: # 9087/016

LOCATION: SYMON BROS - Maple Grove, Stage 1

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m <sup>3</sup> )	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m <sup>3</sup> )	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)
27/04/23	16	<b><i>Refer to #9087/017 for approx. test site locations.</i></b>	1.98	19.0	100.5	1.97	19.0	175	0.0 Drier	100.0	0	0	800
27/04/23	17		1.90	24.0	102.5	1.86	27.0	175	3.0 Drier	89.0	0	0	400
27/04/23	18		1.96	20.5	101.5	1.93	21.5	175	1.5 Drier	93.5	0	0	50
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 9:50am Finish Time: 10:20am

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.

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

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 compliance with ISO/IEC  
17025 - Testing

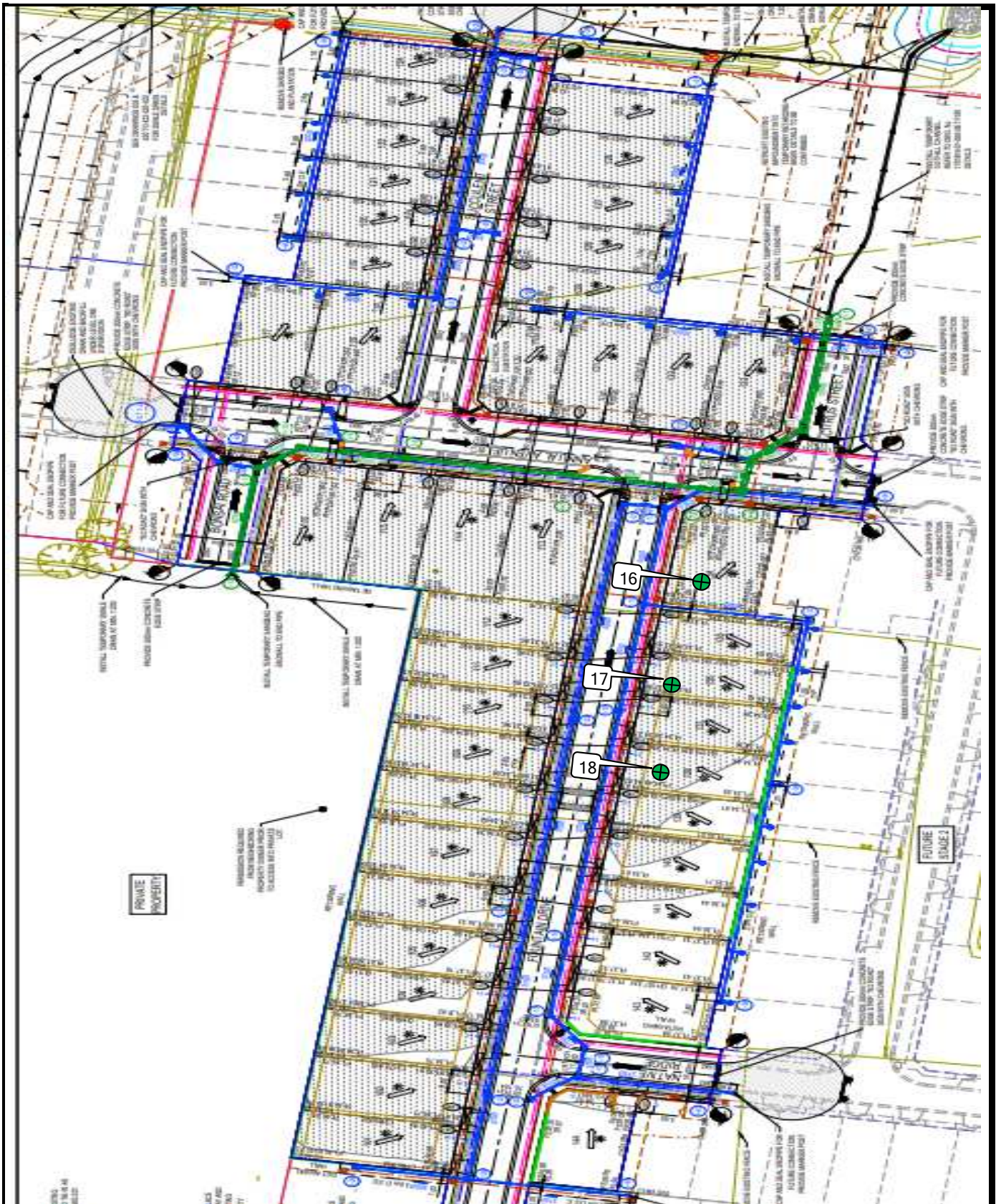
NATA Accredited Laboratory Number 14561

**MICK CROWE**  
 (Approved Signatory)

Issue Date: 3/5/2023

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**GEOTECHNICAL  
LABORATORIES**

**GEOTECHNICAL LABORATORIES**

**ACN 102 571 077**

14 Ravenhall Way, Ravenhall, Vic 3023

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

**CLIENT: SYMON BROS**

**LOCATION: Maple Grove, Stage 1**

**Sketch indicating compaction test locations**

**DATE: 27/04/2023**

**OPERATOR: BM**

**SCALE: NTS**

**JOB No.: 9087/017**

**CHECKED: KK**

**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.: # 9087/020

LOCATION: SYMON BROS - Maple Grove, Stage 1

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m <sup>3</sup> )	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m <sup>3</sup> )	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIATION FROM OPTIMUM MOISTURE CONTENT (%)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
1/05/23	19	<b><i>Refer to #9087/021 for approx. test site locations.</i></b>	2.01	26.5	105.5	1.90	27.0	175	0.5 Drier	99.0	0	0	700
1/05/23	20		2.06	24.0	106.0	1.94	26.5	175	2.0 Drier	91.5	0	0	750
1/05/23	21		1.92	27.5	104.5	1.83	29.0	175	1.5 Drier	95.5	0	0	800
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

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.

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

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)

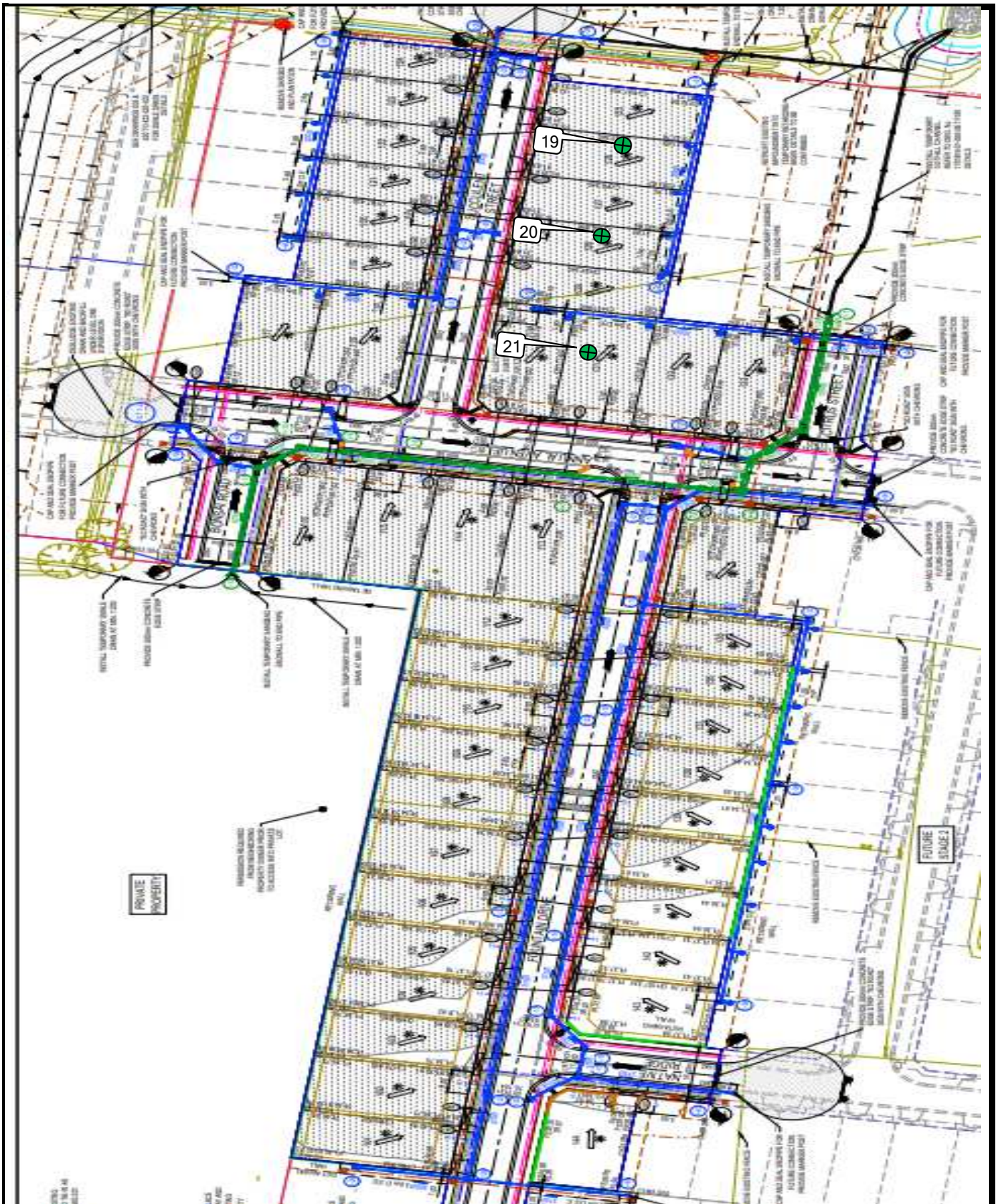


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NATA Accredited Laboratory Number 14561

**MICK CROWE**  
 (Approved Signatory)

Issue Date: 8/5/2023



**GEOTECHNICAL  
LABORATORIES**

**GEOTECHNICAL LABORATORIES**

**ACN 102 571 077**

14 Ravenhall Way, Ravenhall, Vic 3023

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

**CLIENT: SYMON BROS**

**LOCATION: Maple Grove, Stage 1**

**Sketch indicating compaction test locations**

**DATE: 1/05/2023**

**OPERATOR: BM**

**SCALE: NTS**

**JOB No.: 9087/021**

**CHECKED: KK**

**FIGURE No: -**





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## DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 9087/022

LOCATION: SYMON BROS - Maple Grove, Stage 1 & 2

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m <sup>3</sup> )	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m <sup>3</sup> )	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIATION FROM OPTIMUM MOISTURE CONTENT (%)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
2/05/23	22	<b><i>Refer to #9087/023 for approx. test site locations.</i></b>	2.00	27.0	104.5	1.92	27.0	175	0.0 Drier	100.0	0	0	400
2/05/23	23		1.92	28.5	103.5	1.85	30.5	175	1.5 Drier	95.0	0	0	100
2/05/23	24		1.91	29.5	101.0	1.88	29.0	175	0.5 Wetter	101.0	0	0	1000
2/05/23	25		1.96	28.5	103.0	1.90	28.0	175	0.5 Wetter	102.0	0	0	1000
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 9:45am Finish Time: 10:25am

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

Compaction Test: AS 1289 5.7.1

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)



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**MICK CROWE**  
 (Approved Signatory)

Issue Date: 9/5/2023

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**CLIENT: SYMON BROS**

**LOCATION: Maple Grove, Stage 1 & 2**

**Sketch indicating compaction test locations**

**DATE: 2/05/2023**

**OPERATOR: BM**

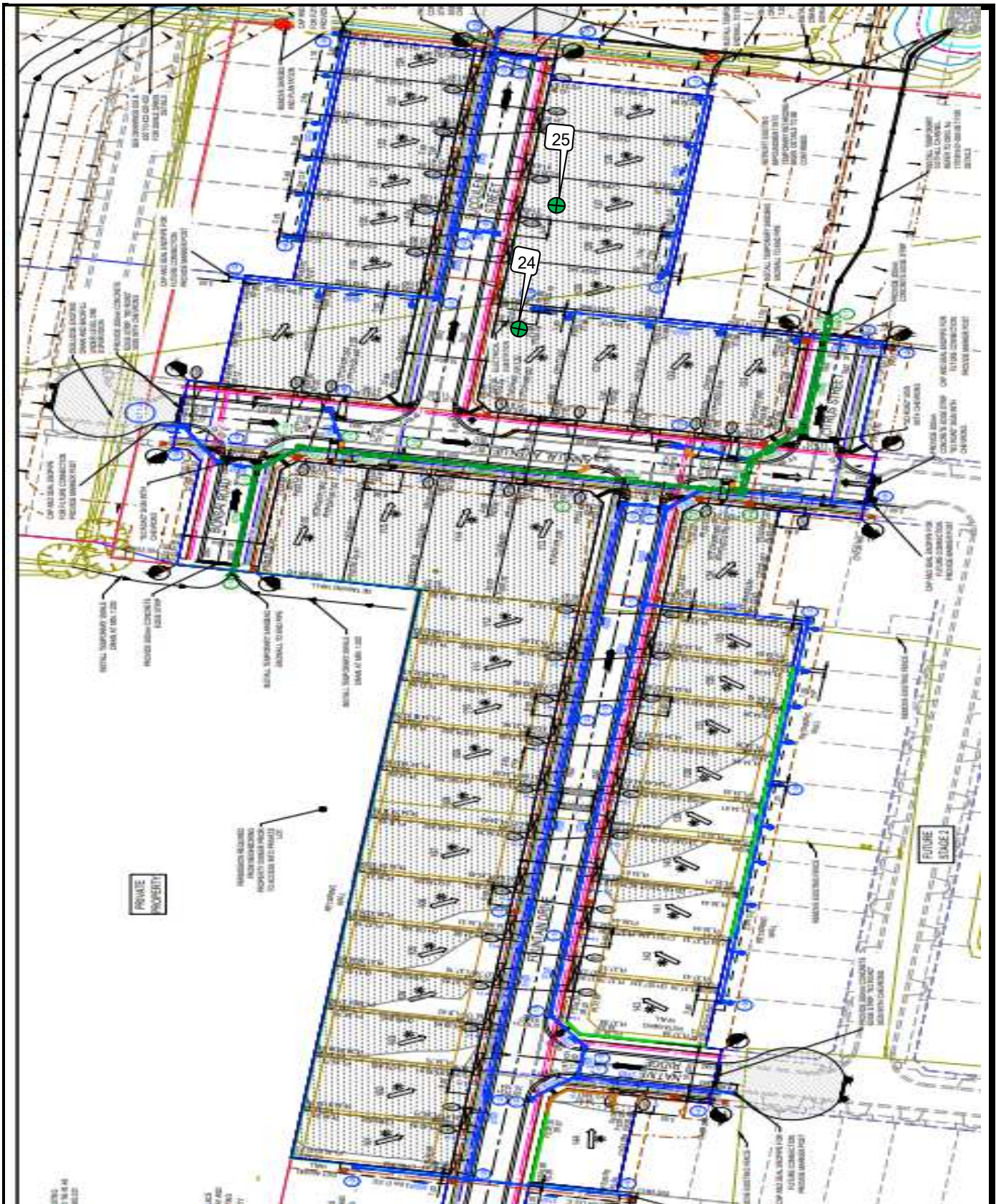
**SCALE: NTS**

**JOB No.: 9087/023**

**CHECKED: KK**

**FIGURE No: 1 of 2**





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**CLIENT: SYMON BROS**

**LOCATION: Maple Grove, Stage 1 & 2**

**Sketch indicating compaction test locations**

**DATE: 2/05/2023**

**OPERATOR: BM**

**SCALE: NTS**

**JOB No.: 9087/023**

**CHECKED: KK**

**FIGURE No: 2 of 2**



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## DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 9087/025

LOCATION: SYMON BROS - Maple Grove, Stage 1

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m <sup>3</sup> )	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m <sup>3</sup> )	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)
16/05/23	26	<b>Refer to #9087/026 for approx. test site locations.</b>	1.90	25.5	99.5	1.90	26.5	175	1.0 Drier	96.0	0	0	1200
16/05/23	27		1.90	27.0	101.0	1.88	27.5	175	1.0 Drier	97.0	0	0	1200
16/05/23	28		1.89	25.5	98.5	1.91	26.5	175	1.0 Drier	96.0	0	0	900
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-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 10.30AM 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.

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

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)



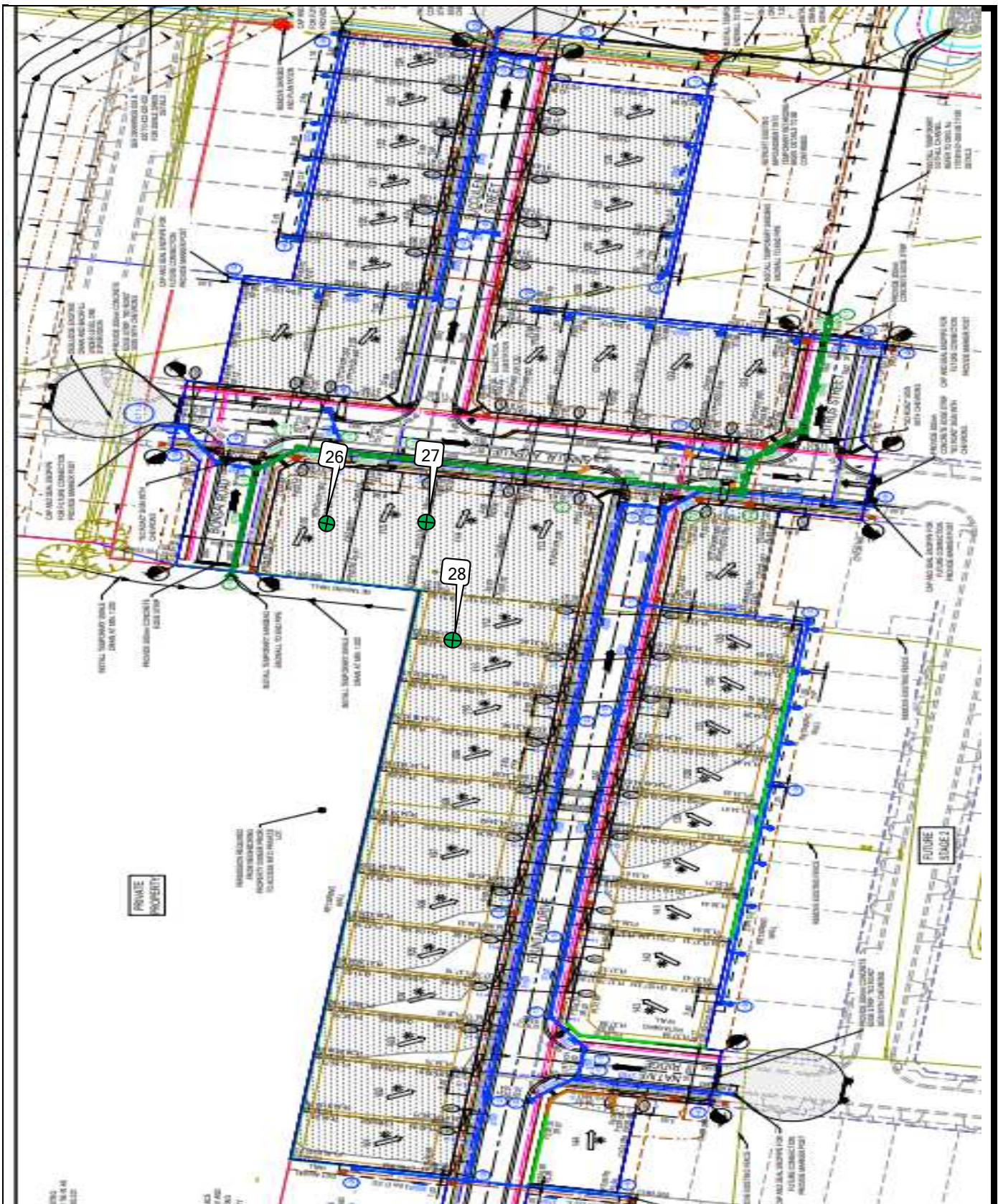
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NATA Accredited Laboratory Number 14561

**MICK CROWE**  
 (Approved Signatory)

Issue Date: 22/5/2023





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**CLIENT: SYMON BROS**

**LOCATION: Maple Grove, Stage 1**

**Sketch indicating compaction test locations**

**DATE: 16/05/2023**

**OPERATOR: AB**

**SCALE: NTS**

**JOB No.: 9087/026**

**CHECKED: NF**

**FIGURE No: -**



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## DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 9087/029

LOCATION: SYMON BROS - Maple Grove, Stage 1

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m <sup>3</sup> )	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m <sup>3</sup> )	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)
17/05/23	29	<b><i>Refer to #9087/030 for approx. test site locations.</i></b>	2.01	27.5	103.0	1.95	25.5	175	2.0 Wetter	107.0	0	0	800
17/05/23	30		2.09	24.0	105.0	1.98	23.5	175	0.5 Wetter	102.0	0	0	500
17/05/23	31		2.00	24.5	102.5	1.95	24.0	175	0.5 Wetter	103.0	0	0	300
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 10.45AM 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.

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

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)



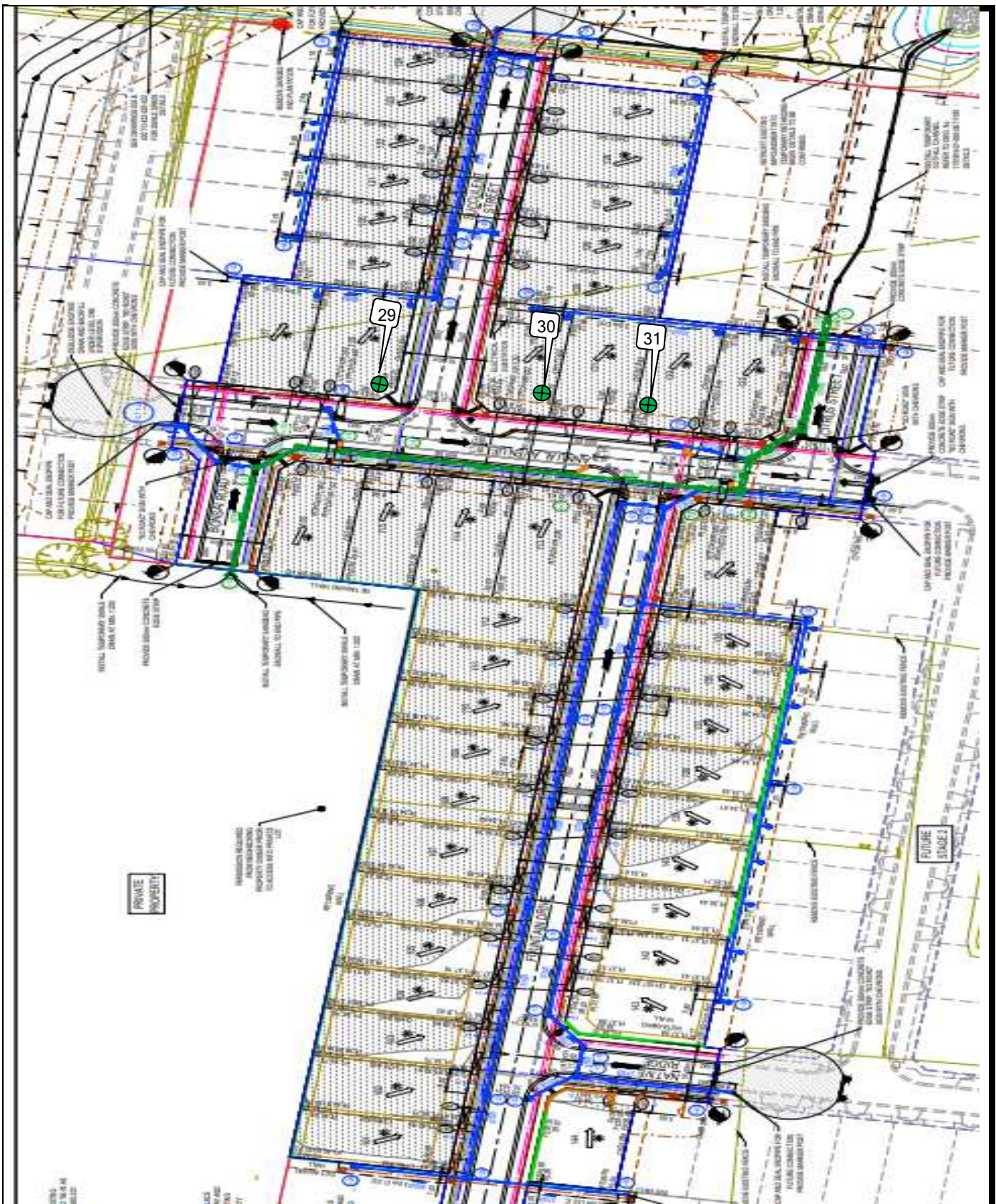
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**MICK CROWE**  
 (Approved Signatory)

Issue Date: 22/5/2023





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**CLIENT: SYMON BROS**

**LOCATION: Maple Grove, Stage 1**

**Sketch indicating compaction test locations**

**DATE: 17/05/2023**

**OPERATOR: BM**

**SCALE: NTS**

**JOB No.: 9087/030**

**CHECKED: NF**

**FIGURE No: -**



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## DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 9087/033

LOCATION: SYMON BROS - Maple Grove, Stage 1

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m <sup>3</sup> )	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m <sup>3</sup> )	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)
18/05/23	32	<b>Refer to #9087/034 for approx. test site locations.</b>	1.98	24.5	99.0	2.00	24.0	175	0.5 Wetter	102.0	0	0	900
18/05/23	33		1.98	27.5	105.0	1.89	28.5	175	1.0 Drier	97.5	0	0	600
18/05/23	34		2.06	26.0	104.0	1.98	26.5	175	0.5 Drier	99.0	0	0	300
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 10:45am 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.

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

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)



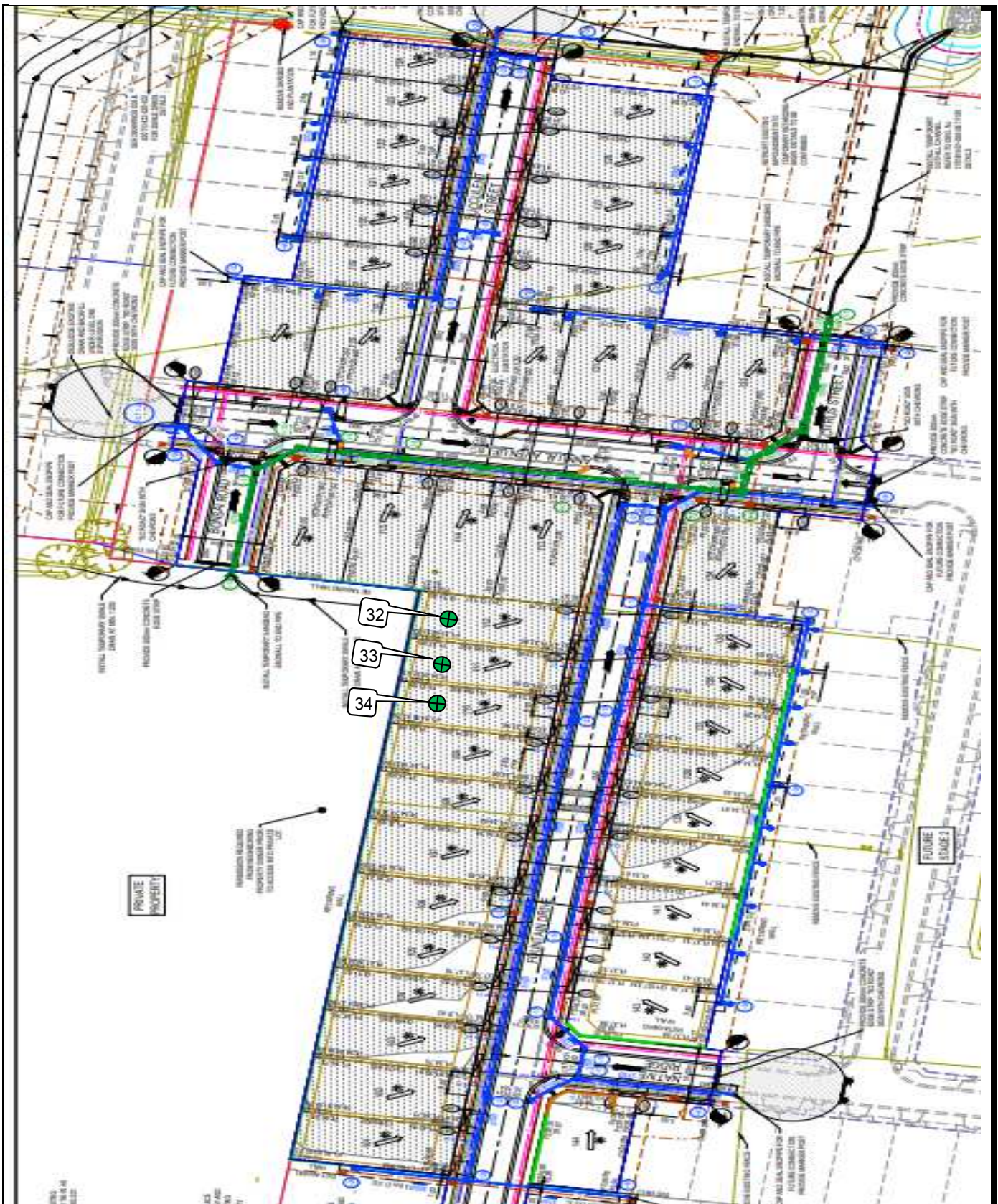
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**MICK CROWE**  
 (Approved Signatory)

Issue Date: 25/5/2023





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**CLIENT: SYMON BROS**

**LOCATION: Maple Grove, Stage 1**

**Sketch indicating compaction test locations**

**DATE: 18/05/2023**

**OPERATOR: BM**

**SCALE: NTS**

**JOB No.: 9087/034**

**CHECKED: KK**

**FIGURE No: -**



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## DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 9087/036

LOCATION: SYMON BROS - Maple Grove, Stage 1

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m <sup>3</sup> )	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m <sup>3</sup> )	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)
24/05/23	35	<b><i>Refer to #9087/037 for approx. test site locations.</i></b>	1.97	27.0	101.5	1.94	26.5	175	0.5 Wetter	101.0	0	0	900
24/05/23	36		2.03	28.0	105.0	1.93	27.5	175	0.5 Wetter	102.0	0	0	900
24/05/23	37		2.00	29.5	103.5	1.93	28.0	175	1.5 Wetter	104.5	0	0	350
24/05/23	38		1.98	29.0	103.5	1.92	28.5	175	0.5 Wetter	102.0	0	0	750
24/05/23	39		1.97	26.0	101.0	1.96	25.0	175	1.0 Wetter	104.0	0	0	800
24/05/23	40		1.99	25.5	102.0	1.95	25.5	175	0.5 Wetter	101.0	0	0	750

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 9:40am Finish Time: 11:35am

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

Compaction Test: AS 1289 5.7.1

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)



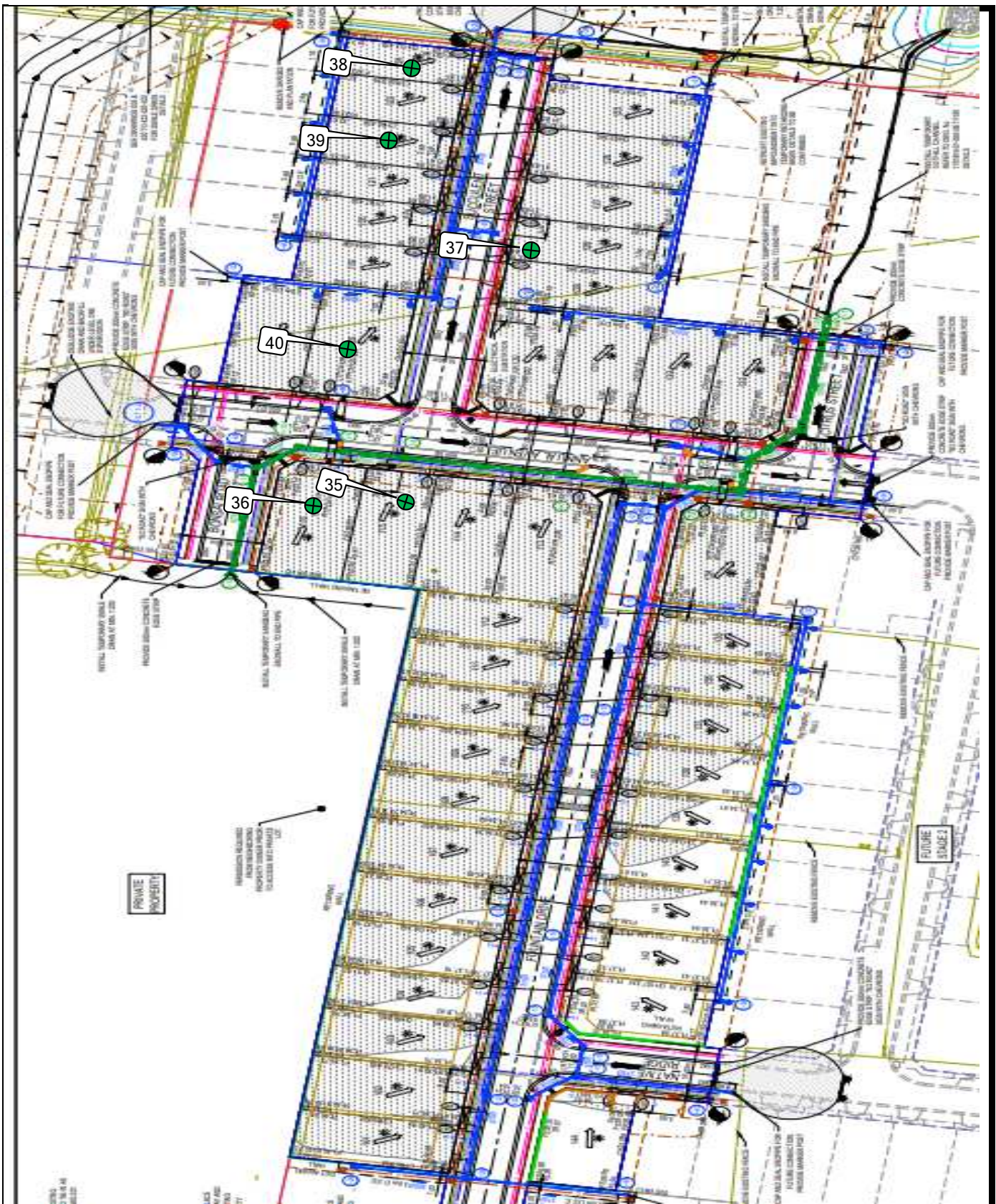
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NATA Accredited Laboratory Number 14561

**MICK CROWE**  
 (Approved Signatory)

Issue Date: 30/5/2023





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**CLIENT: SYMON BROS**

**LOCATION: Maple Grove, Stage 1**

**Sketch indicating compaction test locations**

**DATE: 24/05/2023**

**OPERATOR: BM**

**SCALE: NTS**

**JOB No.: 9087/037**

**CHECKED: KK**

**FIGURE No: -**



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## DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 9087/038

LOCATION: SYMON BROS - Maple Grove, Stage 1

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m <sup>3</sup> )	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m <sup>3</sup> )	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)
25/05/23	41	<b><i>Refer to #9087/039 for approx. test site locations.</i></b>	1.91	26.5	101.0	1.89	27.5	175	1.0 Drier	97.0	0	0	550
25/05/23	42		1.96	22.0	101.0	1.94	23.0	175	1.0 Drier	95.5	0	0	550
25/05/23	43		1.92	26.0	102.0	1.88	27.5	175	1.5 Drier	94.5	0	0	550
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NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 11:00am 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.

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

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)



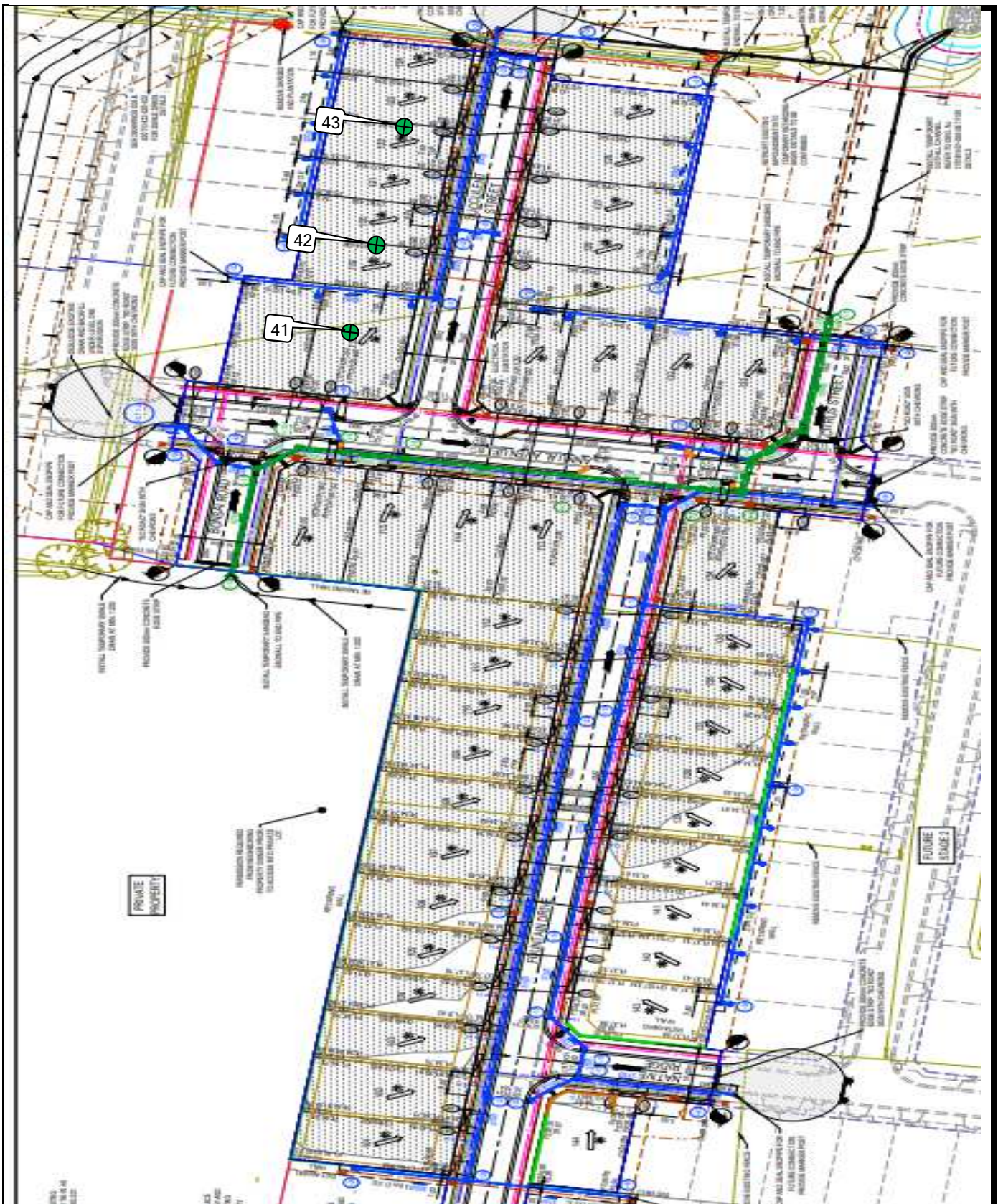
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NATA Accredited Laboratory Number 14561

**MICK CROWE**  
 (Approved Signatory)

Issue Date: 30/5/2023





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**GEOTECHNICAL LABORATORIES**

**ACN 102 571 077**

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**CLIENT: SYMON BROS**

**LOCATION: Maple Grove, Stage 1**

**Sketch indicating compaction test locations**

**DATE: 25/05/2023**

**OPERATOR: BM**

**SCALE: NTS**

**JOB No.: 9087/039**

**CHECKED: KK**

**FIGURE No: -**



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## DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 9087/041

LOCATION: SYMON BROS - Maple Grove, Stage 1

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m <sup>3</sup> )	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m <sup>3</sup> )	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)
30/05/23	44	<b><i>Refer to #9087/042 for approx. test site locations.</i></b>	1.93	26.0	98.0	1.97	25.0	175	1.5 Wetter	105.0	0	0	200
30/05/23	45		1.95	29.5	101.0	1.93	29.0	175	0.5 Wetter	102.0	0	0	200
30/05/23	46		1.99	23.0	99.0	2.00	22.5	175	0.0 Wetter	101.0	0	0	200
30/05/23	47		1.95	27.0	101.0	1.94	26.5	175	0.5 Wetter	101.0	0	0	200
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

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

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

Compaction Test: AS 1289 5.7.1

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)



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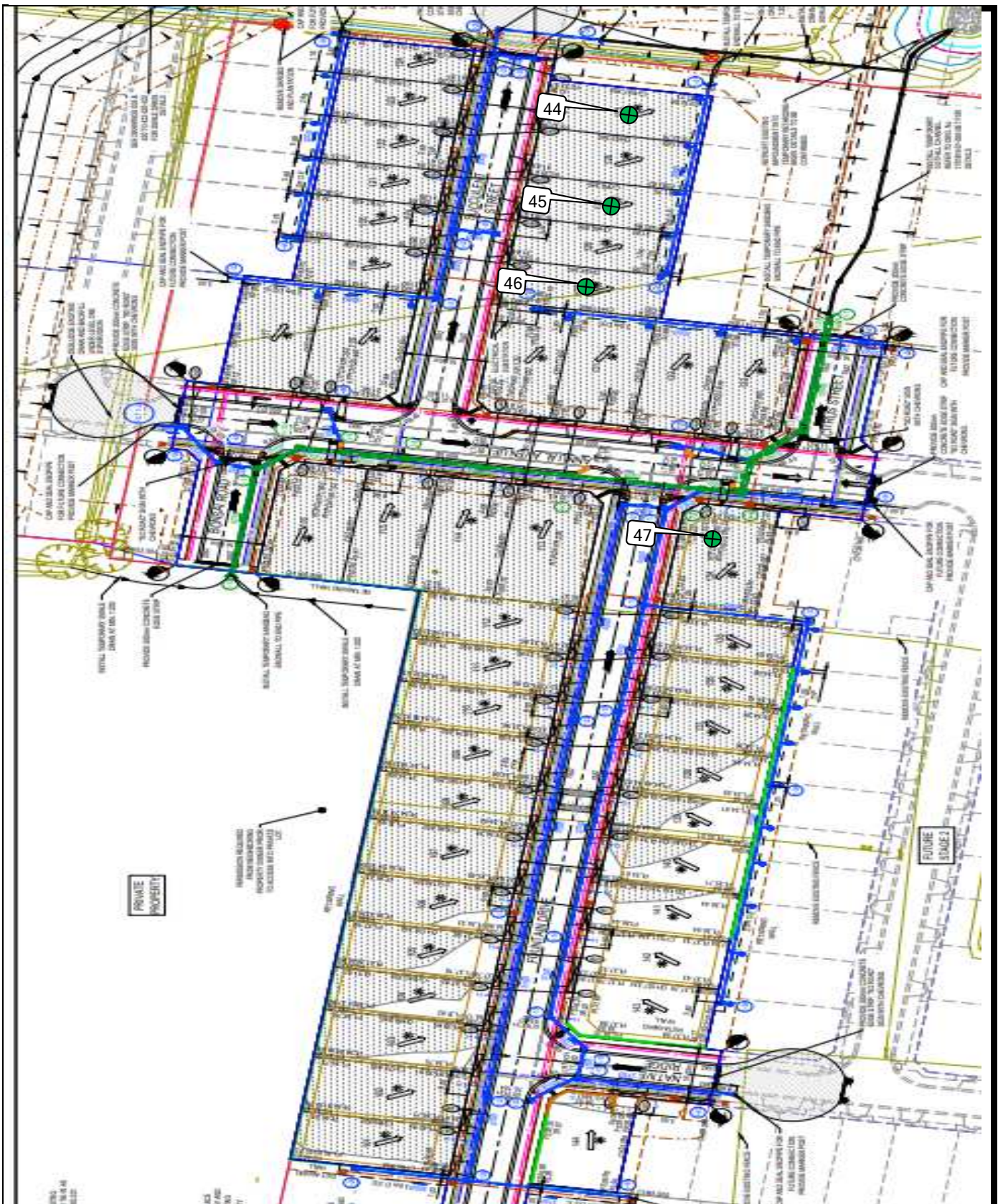
**MICK CROWE**  
 (Approved Signatory)

Issue Date: 2/6/2023

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**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: Maple Grove, Stage 1**

**Sketch indicating compaction test locations**

**DATE: 30/05/2023**

**OPERATOR: BM**

**SCALE: NTS**

**JOB No.: 9087/042**

**CHECKED: KK**

**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.: # 9087/043

LOCATION: SYMON BROS - Maple Grove, Stage 1 & 2

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m <sup>3</sup> )	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m <sup>3</sup> )	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)
31/05/23	48	<b><i>Refer to #9087/044 for approx. test site locations.</i></b>	1.99	26.5	104.0	1.91	27.0	175	0.5 Drier	98.0	0	0	0
31/05/23	49		1.96	27.0	103.5	1.90	27.0	175	0.5 Wetter	101.0	0	0	0
31/05/23	50		2.03	24.0	103.0	1.97	24.0	175	0.0 Wetter	101.0	0	0	100
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-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 11:45am Finish Time: 12:15pm

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.

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

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)



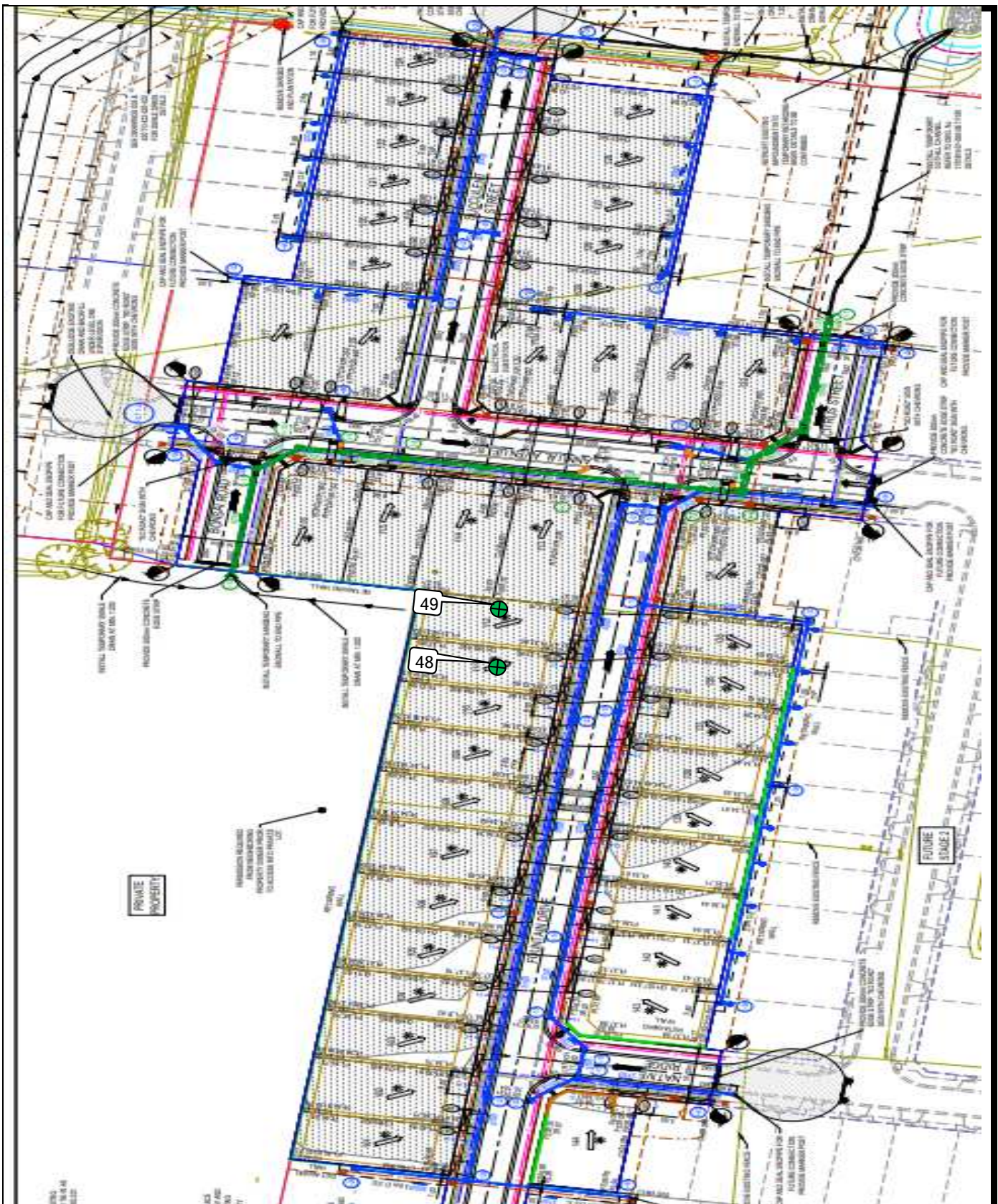
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NATA Accredited Laboratory Number 14561

**MICK CROWE**  
(Approved Signatory)

Issue Date: 5/6/2023





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**ACN 102 571 077**

14 Ravenhall Way, Ravenhall, Vic 3023

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

**CLIENT: SYMON BROS**

**LOCATION: Maple Grove, Stage 1 & 2**

**Sketch indicating compaction test locations**

**DATE: 31/05/2023**

**OPERATOR: BM**

**SCALE: NTS**

**JOB No.: 9087/044**

**CHECKED: KK**

**FIGURE No: 1 of 2**







**GEOTECHNICAL LABORATORIES**  
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## DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 9087/048

LOCATION: SYMON BROS - Maple Grove, Stage 1

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m <sup>3</sup> )	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m <sup>3</sup> )	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIATION FROM OPTIMUM MOISTURE CONTENT (%)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
1/06/23	51	<b><i>Refer to #9087/049 for approx. test site locations.</i></b>	1.85	30.0	100.0	1.85	29.0	175	1.5 Wetter	104.5	0	0	0
1/06/23	52		1.94	31.0	102.5	1.89	30.0	175	1.0 Wetter	102.5	0	0	0
1/06/23	53		2.03	23.5	100.5	2.03	22.5	175	1.0 Wetter	105.5	0	0	0
1/06/23	54		1.95	25.0	100.0	1.95	24.5	175	0.0 Wetter	101.0	0	0	0
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-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 11:20am Finish Time: 12:00pm

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.

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

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)



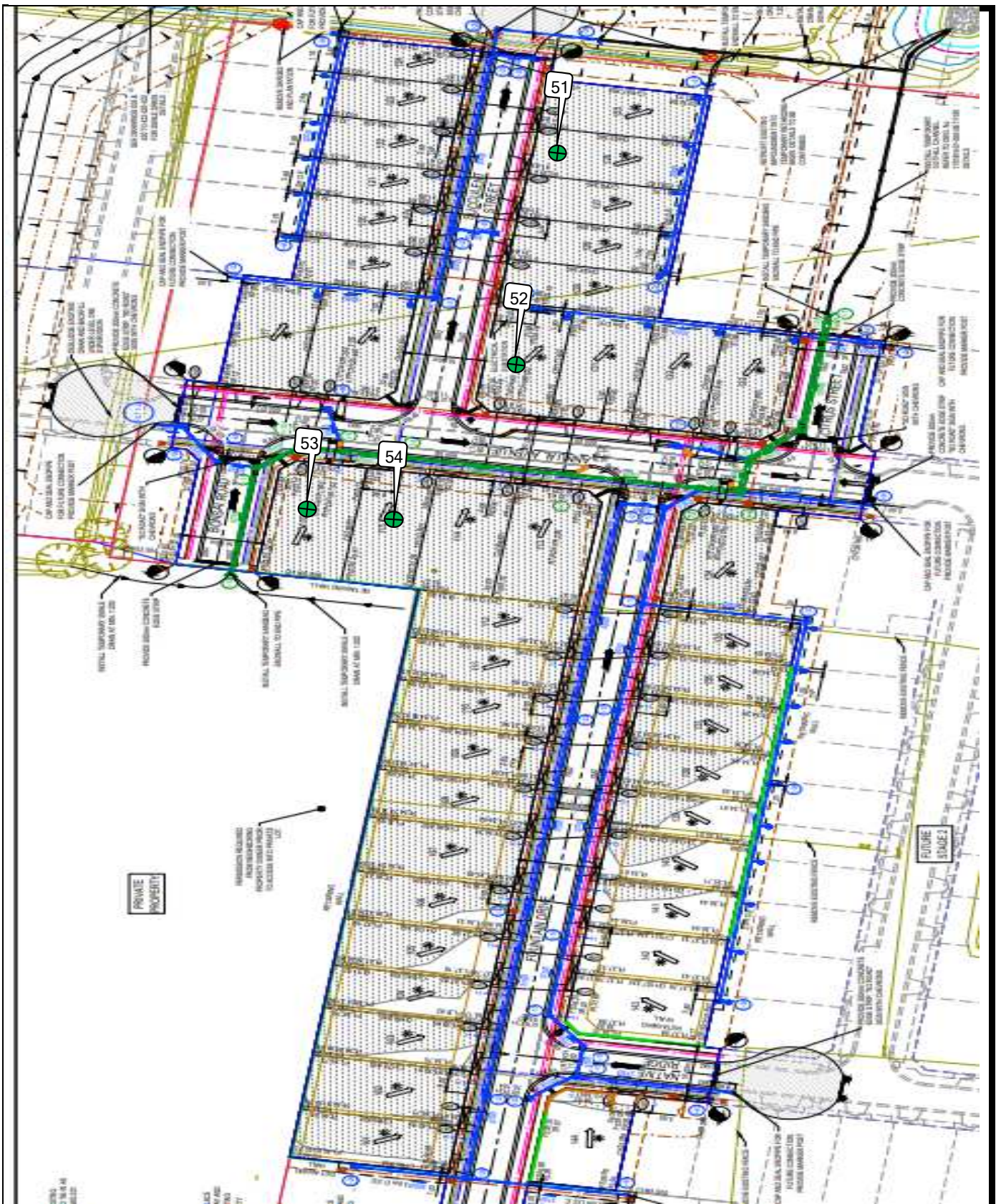
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NATA Accredited Laboratory Number 14561

**MICK CROWE**  
 (Approved Signatory)

Issue Date: 6/6/2023





**GEOTECHNICAL  
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**GEOTECHNICAL LABORATORIES**

**ACN 102 571 077**

14 Ravenhall Way, Ravenhall, Vic 3023

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

**CLIENT: SYMON BROS**

**LOCATION: Maple Grove, Stage 1**

**Sketch indicating compaction test locations**

**DATE: 1/06/2023**

**OPERATOR: BM**

**SCALE: NTS**

**JOB No.: 9087/049**

**CHECKED: KK**

**FIGURE No: -**





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

## DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 9087/051

LOCATION: SYMON BROS - Maple Grove, Stage 1

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m <sup>3</sup> )	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m <sup>3</sup> )	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIATION FROM OPTIMUM MOISTURE CONTENT (%)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
2/06/23	55	<i>Refer to #9087/052 for approx. test site locations.</i>	2.09	20.5	103.0	2.03	20.5	175	0.0 Wetter	101.0	0	0	0
2/06/23	56		1.91	17.5	96.5	1.98	19.5	175	1.5 Drier	91.5	0	0	0
2/06/23	57		1.98	19.5	98.0	2.02	20.0	175	0.5 Drier	96.5	0	0	0
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

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.

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

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)



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NATA Accredited Laboratory Number 14561

**MICK CROWE**  
(Approved Signatory)

Issue Date: 7/6/2023



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

**CLIENT: SYMON BROS**

**LOCATION:** Maple Grove, Stage 1

### Sketch indicating compaction test locations

**DATE: 2/06/2023**

**JOB No.: 9087/052**

**OPERATOR: BM**

**CHECKED: KK**

**SCALE: NTS**

**FIGURE No: -**