

LEVEL ONE

Reference
No.: 2172-212

SURVEILLANCE

AND INSPECTION REPORT

*Carried Out
By*



PREPARED FOR: -

SYMON BROS. CONSTRUCTIONS PTY LTD



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Appendix A Construction Drawings

Appendix B Daily Field Compaction Summary Results



Client Name: Symon Bros. Constructions Pty Ltd

Project Name: Mambourin Estate Stage 15

Date: 30th of June 2022

Author: Mr. Sam Loza

Reference No.: 2172-212

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 7th of September 2021 to the 17th of June 2022 where a residential development is being constructed. Inspection and testing of stripping, material quality and compaction control tests were carried out to comply with the requirements of AS 3798 Appendix B, Level 1.

The following documentation was submitted to Geotechnical Laboratories by Symon Bros. Constructions Pty Ltd and was used to determine compliance of earthworks in conjunction with the requirements of AS 3798 – 2007.

(1). Standard Face Plan Layout Drawing No. 305180R02 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

Initial site inspections were undertaken on the 3rd of September 2021 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 CLAY, brown, grey-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
- A watercart
- A sheepsfoot compactor (815)

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 forty-eight compaction tests were performed on the fill construction. Results are presented in Appendix B of this report.

6. Testing Frequency

Testing frequencies were in accordance with **AS 3798 - 2007 Table 8.1 for 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 7th of September 2021 to the 17th of June 2022 can be categorised as CONTROLLED FILL in accordance with AS 2870-2011.

8. Limitations and Liability of this Report

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

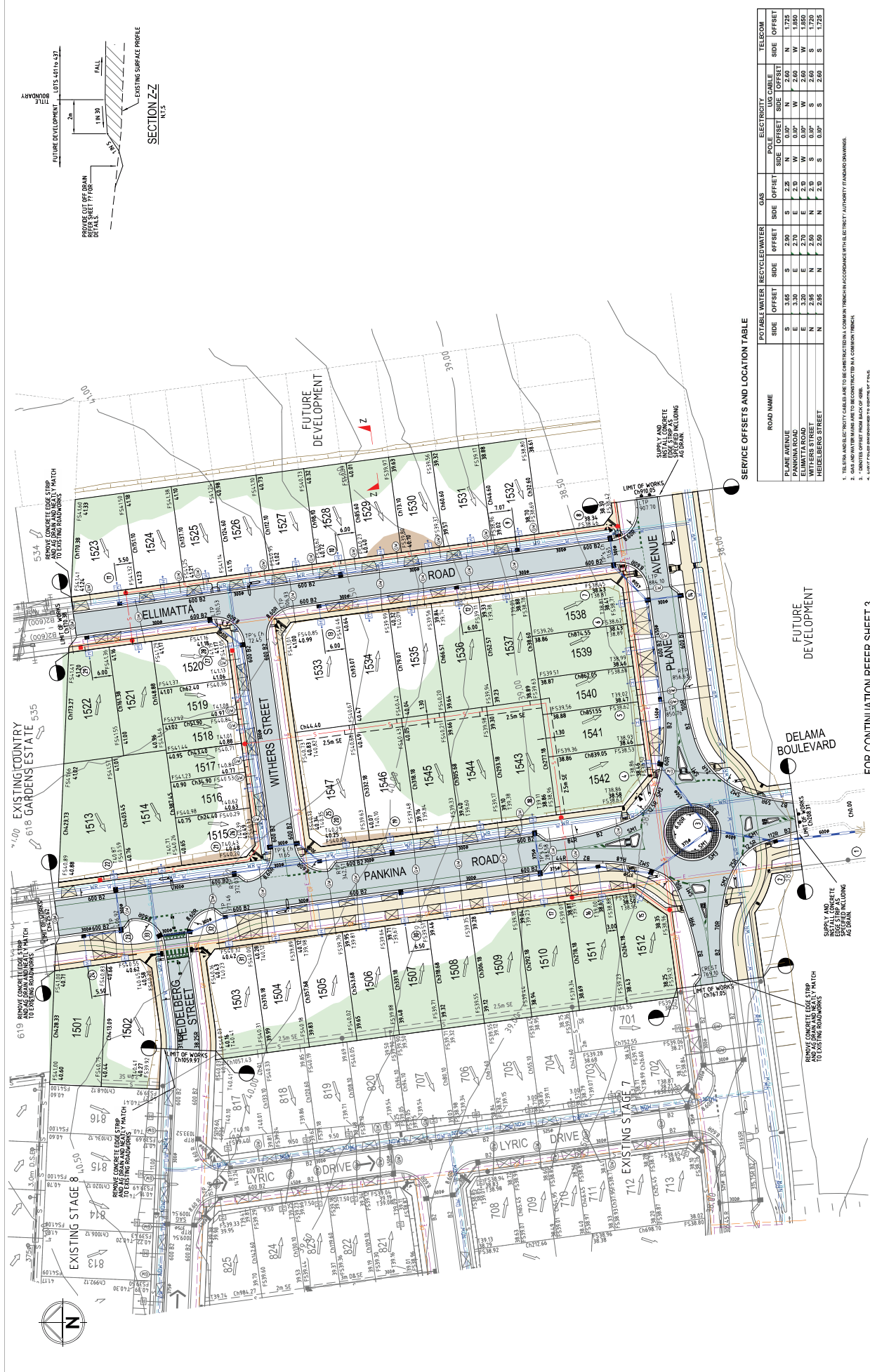
For & on behalf of
Geotechnical Laboratories Pty Ltd.

Sam Loza
Laboratory Manager.



LEVEL ONE
SURVEILLANCE
AND INSPECTION REPORT

APPENDIX A



SERVICE OFFSETS AND LOCATION TABLE

ROAD NAME	POTABLE WATER		RECYCLED WATER		GAS		ELECTRICITY		TELECOM	
	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET	POLE SIDE	POLE OFFSET	URG CABLE SIDE	URG CABLE OFFSET
PLANE AVENUE	E	3.00	E	2.50	E	2.50	N	0.00*	N	1.50
PANKINA ROAD	E	3.00	E	2.70	E	2.70	N	0.00*	N	1.850
ELIMATTA ROAD	E	3.20	E	2.70	E	2.70	N	0.00*	N	1.850
WITHERS STREET	N	2.50	N	2.50	N	2.50	N	0.00*	N	1.720
DELAMA BOULEVARD	N	2.50	N	2.50	N	2.50	N	0.00*	N	1.720

1. THE ROAD WIDTH CABLES ARE TO BE LOCATED IN ACCORDANCE WITH ELECTRICITY AUTHORITY STANDARD DRAWINGS.
2. * 0.00 OFFSET FROM BACK OF CURB.
3. 0.00 OFFSET FROM BACK OF CURB.
4. URGY FOR USE APPROVED BY COUNCIL OR FRAC.

FOR CONTINUATION REFER SHEET 3

spire

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Client: **R. WEINBER**

Author: **M. READMAN**

Checker: **M. READMAN**

Drawn: **D. CAMERON**

Project: **MAMBOURIN ESTATE STAGE 15 DETAIL PLAN**

Location: **FRASERS PROPERTY AUSTRALIA CITY OF WYNDHAM**

Doc No: **305180R02**

Rev: **A**

Rev	Amendments	Approved	Date
A	ISSUE TO COUNCIL	M/R	04/05/21



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.: # 2182/216

LOCATION: SYMON BROS - Mambourin Stage 15

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)	
7/09/21	1	<i>Refer to #2182/217 for approx. test site locations.</i>	1.97	25.5	101.5	✘ 1.95	26.0	175	0.5 Drier	99.0	5	0	200	
7/09/21	2		1.94	26.5	105.0	1.85	27.5	175	1.0 Drier	96.5	0	0	200	
7/09/21	3		1.95	30.5	104.0	✘ 1.87	33.5	175	3.0 Drier	91.5	15	0	200	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 1:10pm Finish Time: 1:35pm

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

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



*Accredited for compliance with ISO/IEC
 17025 - Testing*

NATA Accredited Laboratory Number 14561

MICK CROWE
 (Approved Signatory)

Issue Date: 10/9/2021



SERVICE OFFSETS AND LOCATION TABLE

NO	NAME	DATE	OFFSET	DATE	OFFSET
1	DELAMA AVENUE	11/10/18	1.50	11/10/18	1.50
2	WITMERS STREET	11/10/18	1.50	11/10/18	1.50
3	LYRIC DRIVE	11/10/18	1.50	11/10/18	1.50
4	DELAMA BOULEVARD	11/10/18	1.50	11/10/18	1.50

1. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
 2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
 3. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.



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: Mambourin Estate Stage 15

Sketch indicating compaction test locations

DATE: 7/09/2021

JOB No.: 2182/217

OPERATOR: BM/SA CHECKED: KK

SCALE: NTS

FIGURE No: -

FOR CONTINUATION REFER SHEET 3



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

REPORT NO.: # 2182/218

LOCATION: SYMON BROS - Mambourin Stage 15

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)	
8/09/21	1	<i>Refer to #2182/219 for approx. test site locations.</i>	2.03	21.5	103.0	✘ 1.97	23.0	175	1.5 Drier	93.5	8	0	0	
8/09/21	2		2.04	21.0	99.5	✘ 2.05	21.5	175	0.0 Drier	99.0	7	0	0	
8/09/21	3		1.97	23.0	103.5	✘ 1.90	25.5	175	2.5 Drier	90.5	9	0	0	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 12:30pm Finish Time: 12:50pm

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)

✘ Indicates APCWD



*Accredited for compliance with ISO/IEC
17025 - Testing*

NATA Accredited Laboratory Number 14561

MICK CROWE
(Approved Signatory)

Issue Date: 13/9/2021



GEOTECHNICAL LABORATORIES

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ACN 102 571 077

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

CLIENT: SYMON BROS

LOCATION: Mambourin Estate Stage 15

Sketch indicating compaction test locations

DATE: 8/09/2021

OPERATOR: DB

SCALE: NTS

JOB No.: 2182/219

CHECKED: KK

FIGURE No: -



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DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 2182/220

LOCATION: SYMON BROS - Mambourin Stage 15

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)
9/09/21	1	<i>Refer to #2182/221 for approx. test site locations.</i>	1.91	27.0	103.5	✘ 1.85	29.5	175	2.5 Drier	91.5	6	0	200
9/09/21	2		1.78	28.5	101.0	1.76	32.0	175	3.5 Drier	88.5	0	0	200
9/09/21	3		1.80	28.5	105.0	1.71	33.5	175	5.0 Drier	84.5	0	0	200
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 12:30pm Finish Time: 12:42pm

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



Accredited for compliance with ISO/IEC 17025 - Testing

NATA Accredited Laboratory Number 14561

MICK CROWE
 (Approved Signatory)

Issue Date: 13/9/2021



SERVICE OFFSETS AND LOCATION TABLE

NO	NAME	DATE	OFFSET	DATE	OFFSET
1	DELAMA AVENUE	15/08/20	2.00	15/08/20	2.00
2	WITMERS STREET	15/08/20	2.00	15/08/20	2.00
3	DELAMA BOULEVARD	15/08/20	2.00	15/08/20	2.00
4	WITMERS STREET	15/08/20	2.00	15/08/20	2.00
5	DELAMA AVENUE	15/08/20	2.00	15/08/20	2.00

1. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
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 4. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.



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

CLIENT: SYMON BROS

LOCATION: Mambourin Estate Stage 15

Sketch indicating compaction test locations

DATE: 9/09/2021

JOB No.: 2182/221

OPERATOR: FK/NE CHECKED: KK

SCALE: NTS

FIGURE No: -

FOR CONTINUATION REFER SHEET 3



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DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 2182/222

LOCATION: SYMON BROS - Mambourin Stage 15

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)
10/09/21	1	<i>Refer to #2182/223 for approx. test site locations.</i>	1.75	28.0	96.0	1.82	31.0	175	3.0 Drier	90.0	0	0	0
10/09/21	2		1.77	28.0	100.5	1.76	32.0	175	3.5 Drier	88.5	0	0	0
10/09/21	3		1.77	28.5	99.0	1.79	31.5	175	3.5 Drier	89.5	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: 3:05pm Finish Time: 3:24pm

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: 14/9/2021



SERVICE OFFSETS AND LOCATION TABLE

NO	NAME	DATE	OFFSET	DATE	OFFSET
1	DELAMA BOULEVARD	15/08/20	1.50	15/08/20	1.50
2	LYRIC DRIVE	15/08/20	1.50	15/08/20	1.50
3	WITMERS STREET	15/08/20	1.50	15/08/20	1.50
4	ELLMATA ROAD	15/08/20	1.50	15/08/20	1.50
5	PANKNA ROAD	15/08/20	1.50	15/08/20	1.50

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 3. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
 4. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.



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CLIENT: SYMON BROS

LOCATION: Mambourin Estate Stage 15

Sketch indicating compaction test locations

DATE: 10/09/2021

OPERATOR: FK

SCALE: NTS

JOB No.: 2182/223

CHECKED: KK

FIGURE No: -

FOR CONTINUATION REFER SHEET 3



GEOTECHNICAL LABORATORIES
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DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 2182/224

LOCATION: SYMON BROS - Mambourin Stage 15

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)	
11/09/21	1	<i>Refer to #2182/225 for approx. test site locations.</i>	1.91	25.5	95.5	✘ 1.99	25.0	175	1.0 Wetter	103.0	9	0	0	
11/09/21	2		2.04	24.5	102.5	✘ 2.00	23.5	175	1.0 Wetter	105.5	18	0	0	
11/09/21	3		1.94	24.0	96.5	✘ 2.01	24.0	175	0.0 Wetter	101.0	12	0	0	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 10:35am Finish Time: 10:54am

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



Accredited for compliance with ISO/IEC 17025 - Testing

NATA Accredited Laboratory Number 14561

MICK CROWE
(Approved Signatory)

Issue Date: 15/9/2021



**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: Mambourin Estate Stage 15

Sketch indicating compaction test locations

DATE: 11/09/2021

JOB No.: 2182/225

OPERATOR: SA

CHECKED: KK

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.: # 2182/226

LOCATION: SYMON BROS - Mambourin Stage 15

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)	
15/09/21	1	<i>Refer to #2182/227 for approx. test site locations.</i>	1.90	24.5	96.0	✘ 1.98	24.0	175	0.0 Wetter	101.0	4	0	0	
15/09/21	2		1.97	23.0	100.5	1.97	23.0	175	0.0 Drier	100.0	0	0	0	
15/09/21	3		1.96	22.5	103.0	✘ 1.90	25.5	175	3.0 Drier	88.5	4	0	0	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 1:20pm Finish Time: 1:45pm

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

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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17025 - Testing*

NATA Accredited Laboratory Number 14561

MICK CROWE
(Approved Signatory)

Issue Date: 20/9/2021



SERVICE OFFSETS AND LOCATION TABLE

NO	NAME	DATE	OFFSET	DATE	OFFSET
1	DELAMA AVENUE	15/09/2021	2.00	15/09/2021	2.00
2	WITMERS STREET	15/09/2021	2.00	15/09/2021	2.00
3	LYRIC DRIVE	15/09/2021	2.00	15/09/2021	2.00
4	DELAMA BOULEVARD	15/09/2021	2.00	15/09/2021	2.00

1. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
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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: Mambourin Estate Stage 15

Sketch indicating compaction test locations

DATE: 15/09/2021

OPERATOR: DB

SCALE: NTS

JOB No.: 2182/227

CHECKED: KK

FIGURE No: -

FOR CONTINUATION REFER SHEET 3



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.: # 2182/228

LOCATION: SYMON BROS - Mambourin, Stage 15

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)
15/09/21	1	<i>Refer to #2182/229 for approx. test site locations.</i>	1.85	29.0	102.0	1.81	28.0	175	1.0 Wetter	103.5	0	0	400
15/09/21	2		1.83	28.5	106.5	1.72	31.5	175	3.0 Drier	90.0	0	0	400
15/09/21	3		1.90	25.5	102.5	✱ 1.85	28.0	175	2.5 Drier	91.0	5	0	400
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

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

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.

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

❖



Accredited for compliance with ISO/IEC 17025 - Testing

NATA Accredited Laboratory Number 14561

MICK CROWE
(Approved Signatory)

Issue Date: 20/9/2021



SERVICE OFFSETS AND LOCATION TABLE

ROAD NAME	EDGE OFFSET	EDGE OFFSET	EDGE OFFSET	EDGE OFFSET
ELMATA ROAD	3.00	3.00	3.00	3.00
LYRIC DRIVE	3.00	3.00	3.00	3.00
PANKINA ROAD	3.00	3.00	3.00	3.00
DELAMA BOULEVARD	3.00	3.00	3.00	3.00
WITHERS STREET	3.00	3.00	3.00	3.00

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 2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
 3. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.

FOR CONTINUATION REFER SHEET 3



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: Mambourin Estate Stage 15
Sketch indicating compaction test locations

DATE: 15/09/2021

JOB No.: 2182/229

OPERATOR: NE

CHECKED: KK

SCALE: NTS

FIGURE No: -



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DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 2182/230

LOCATION: SYMON BROS - Mambourin Stage 15

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)	
20/09/21	1	<i>Refer to #2182/231 for approx. test site locations.</i>	1.93	20.5	98.5	1.96	22.5	175	2.5 Drier	89.5	0	0	0	
20/09/21	2		2.00	20.5	103.5	1.94	23.5	175	3.0 Drier	87.5	0	0	0	
20/09/21	3		1.94	20.5	100.5	✱ 1.93	23.5	175	3.0 Drier	87.5	4	0	200	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 2:50pm Finish Time: 3:35pm

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

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



Accredited for compliance with ISO/IEC 17025 - Testing

NATA Accredited Laboratory Number 14561

MICK CROWE
(Approved Signatory)

Issue Date: 8/10/2021



SERVICE OFFSETS AND LOCATION TABLE

ROAD NAME	EDGE OFFSET	EDGE OFFSET	EDGE OFFSET	EDGE OFFSET
LYRIC DRIVE	3.00	3.00	3.00	3.00
ELMATIA ROAD	3.00	3.00	3.00	3.00
WITHERS STREET	3.00	3.00	3.00	3.00
DELAMA BOULEVARD	3.00	3.00	3.00	3.00

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 3. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.

FOR CONTINUATION REFER SHEET 3



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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

LOCATION: Mambourin Estate Stage 15

Sketch indicating compaction test locations

DATE: 20/09/2021

JOB No.: 2182/231

OPERATOR: DB

CHECKED: KK

SCALE: NTS

FIGURE No: -



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DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 2182/232

LOCATION: SYMON BROS - Mambourin Stage 15 & 16

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)	
6/10/21	1	<i>Refer to #2182/233 for approx. test site locations.</i>	2.00	25.0	102.0	1.96	25.5	175	0.5 Drier	99.0	0	0	0	
6/10/21	2		1.95	21.5	99.5	✱ 1.96	24.0	175	2.5 Drier	89.0	3	0	0	
6/10/21	3		1.99	27.0	101.0	1.97	27.5	175	0.5 Drier	98.0	0	0	150	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 12:30pm Finish Time: 2:25pm

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

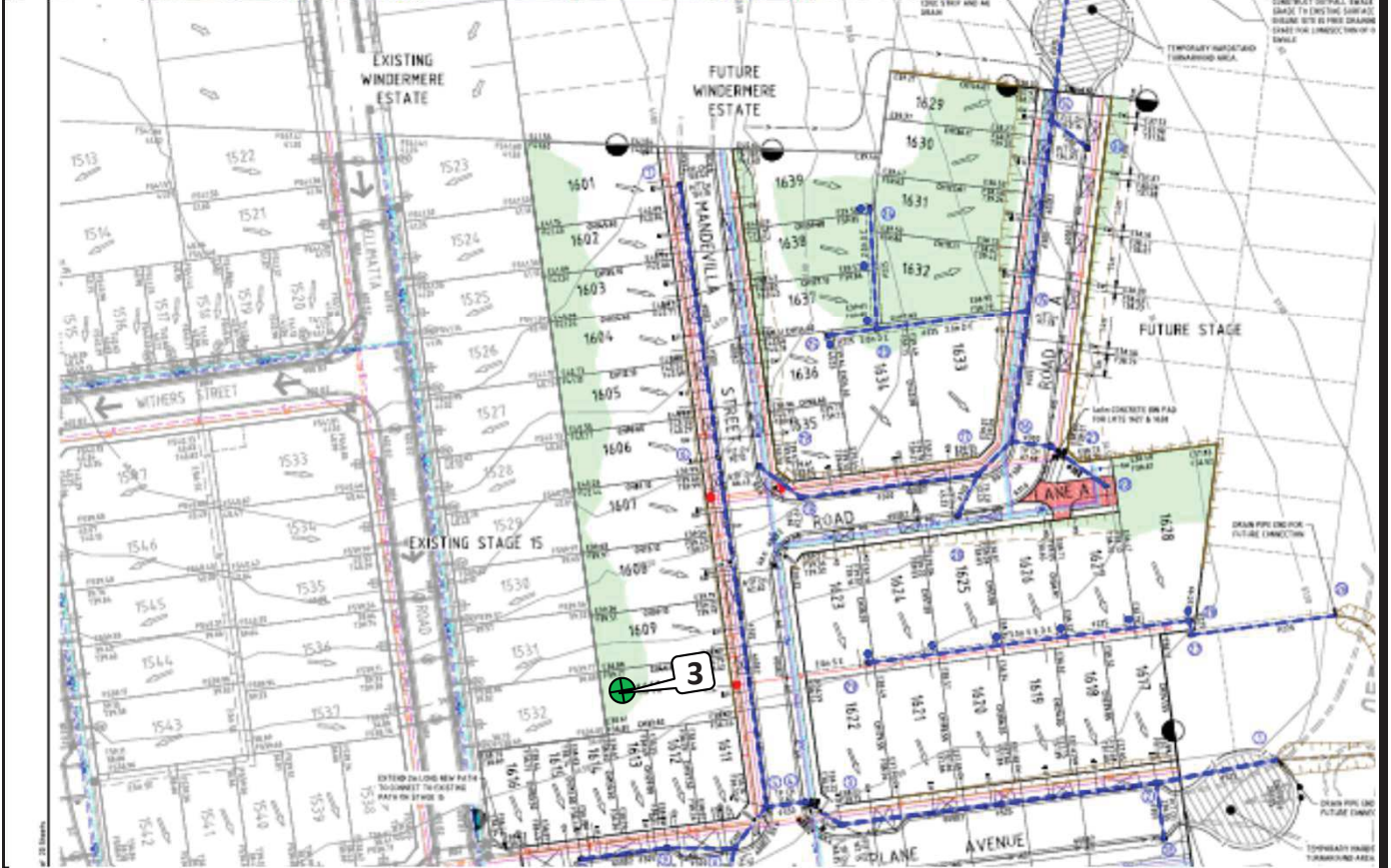
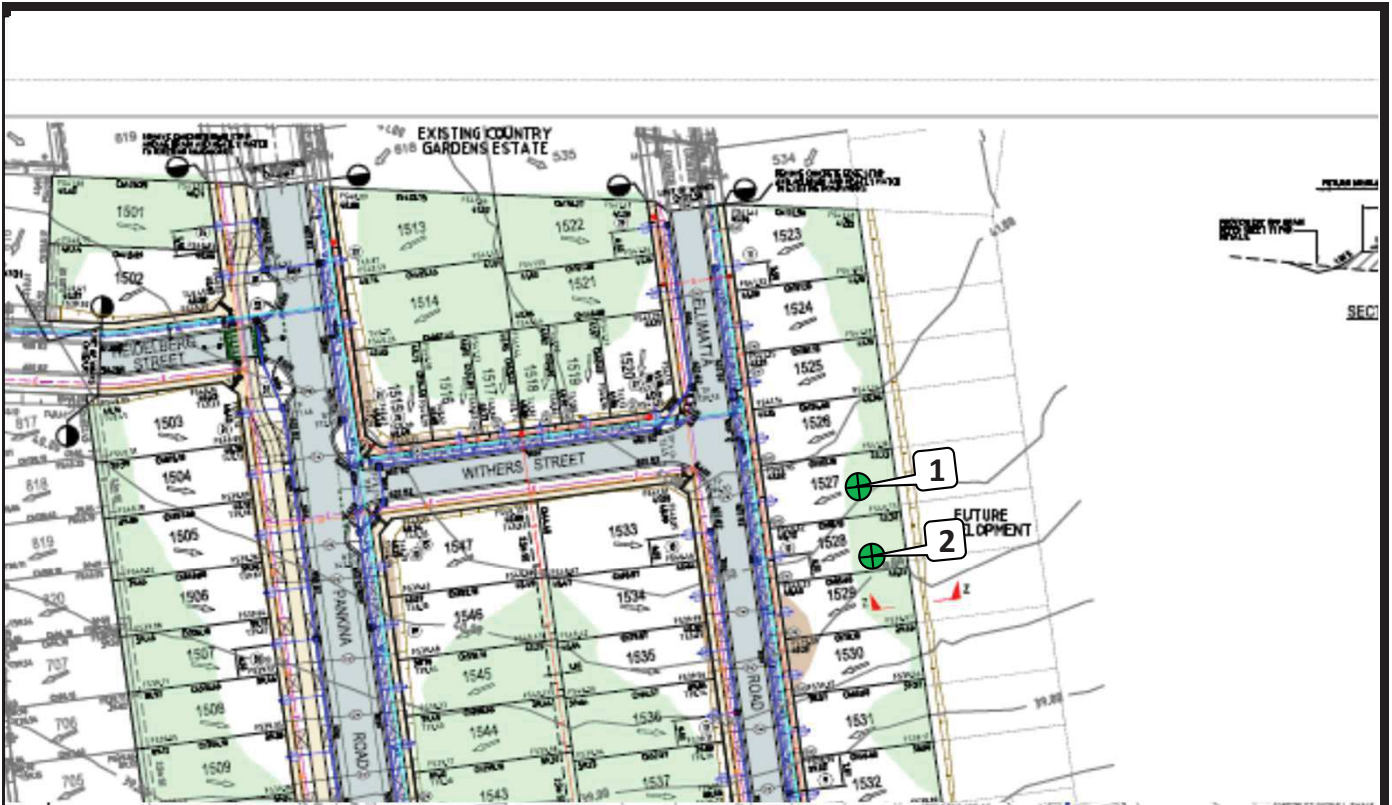


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NATA Accredited Laboratory Number 14561

MICK CROWE
 (Approved Signatory)

Issue Date: 8/10/2021



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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

LOCATION: Mambourin Estate Stage 15 & 16

Sketch indicating compaction test locations

DATE: 6/10/2021

OPERATOR: WS

SCALE: NTS

JOB No.: 2182/233

CHECKED: KK

FIGURE No: -



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DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 2182/236

LOCATION: SYMON BROS - Mambourin Stage 15

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)
8/10/21	1	<i>Refer to #2182/237 for approx. test site locations.</i>	1.87	24.5	100.5	1.87	27.0	175	2.5 Drier	91.0	0	0	0
8/10/21	2		1.89	20.5	95.5	1.97	21.0	175	0.5 Drier	96.5	0	0	0
8/10/21	3		1.97	26.5	102.0	1.93	25.0	175	2.0 Wetter	107.0	0	0	0
8/10/21	4		2.02	23.0	102.5	✘ 1.96	21.5	175	1.0 Wetter	105.5	4	0	0
8/10/21	5		1.93	24.0	98.5	1.96	22.0	175	2.0 Wetter	110.0	0	0	0
8/10/21	6		1.88	21.0	99.5	✘ 1.90	24.0	175	3.0 Drier	87.0	8	0	0

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 11:30am 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)

✘ Indicates APCWD

❖



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NATA Accredited Laboratory Number 14561

MICK CROWE
 (Approved Signatory)

Issue Date: 14/10/2021



SERVICE OFFSETS AND LOCATION TABLE

ROAD NAME	OFFSET	DATE	OFFICE
ELLMATTA ROAD	3.00	8/2021	3.20
WITHERS STREET	3.00	8/2021	3.20
PANKINA ROAD	3.00	8/2021	3.20
LYRIC DRIVE	3.00	8/2021	3.20
DELAMA BOULEVARD	3.00	8/2021	3.20

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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

LOCATION: Mambourin Estate Stage 15

Sketch indicating compaction test locations

DATE: 8/10/2021

OPERATOR: VN

SCALE: NTS

JOB No.: 2182/237

CHECKED: KK

FIGURE No: -

FOR CONTINUATION REFER SHEET 3



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.: # 2182/242

LOCATION: SYMON BROS - Mambourin Stage 15

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)	
12/10/21	1	<i>Refer to #2182/243 for approx. test site locations.</i>	1.86	21.0	96.0	1.93	24.0	175	3.0 Drier	88.0	0	0	0	
12/10/21	2		1.82	23.0	98.0	1.86	26.0	175	2.5 Drier	89.5	0	0	0	
12/10/21	3		1.96	22.5	102.5	1.91	25.5	175	3.0 Drier	88.5	0	0	0	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 11:00am 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: 14/10/2021



**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: Mambourin Estate Stage 15

Sketch indicating compaction test locations

DATE: 12/10/2021

OPERATOR: WS

SCALE: NTS

JOB No.: 2182/243

CHECKED: KK

FIGURE No: -



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

REPORT NO.: # 2182/469

LOCATION: SYMON BROS - Mambourin, Stage 15

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)
16/06/22	1	<i>Refer to #2182/471 for approx. test site locations.</i>	1.83	25.5	97.0	1.89	27.5	175	2.0 Drier	93.5	0	0	0
16/06/22	2		1.99	22.5	101.0	1.96	24.5	175	1.5 Drier	93.0	0	0	0
16/06/22	3		1.86	25.5	97.0	1.92	27.0	175	1.5 Drier	94.5	0	0	0
16/06/22	4		2.02	25.0	104.0	1.94	26.0	175	1.0 Drier	96.0	0	0	0
16/06/22	5		1.82	27.5	102.0	1.78	30.5	175	3.0 Drier	90.0	0	0	0
16/06/22	6		1.86	25.0	100.5	1.85	28.0	175	3.0 Drier	89.5	0	0	0

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 8:10am Finish Time: 9:30am

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)



Accredited for compliance with ISO/IEC

17025 - Testing

NATA Accredited Laboratory Number 14561

MICK CROWE
(Approved Signatory)

Issue Date: 21/6/2022



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.: # 2182/470

LOCATION: SYMON BROS - Mambourin, Stage 15

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)	
16/06/22	7	<i>Refer to #2182/471 for approx. test site locations.</i>	1.95	29.5	107.0	1.83	31.5	175	2.0 Drier	94.0	0	0	0	
-	-		-	-	-	-	-	-	-	-	-	-	-	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 8:10am Finish Time: 9:30am

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: 21/6/2022



SERVICE OFFSETS AND LOCATION TABLE

ROAD NAME	TYPE	OFFSET	WIDTH	DEPTH	UTILITIES	REMARKS
LYRIC DRIVE	ASPH	1.50	3.00	0.15	N, S, G, W, E	EXISTING
WITHERS STREET	ASPH	1.50	3.00	0.15	N, S, G, W, E	EXISTING
PANKINA ROAD	ASPH	1.50	3.00	0.15	N, S, G, W, E	EXISTING
DELAMA BOULEVARD	ASPH	1.50	3.00	0.15	N, S, G, W, E	EXISTING

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 2. THE INFORMATION ON THIS PLAN IS TO BE USED IN CONNECTION WITH THE PROJECT AND IS NOT TO BE USED FOR ANY OTHER PURPOSE.
 3. THE INFORMATION ON THIS PLAN IS TO BE USED IN CONNECTION WITH THE PROJECT AND IS NOT TO BE USED FOR ANY OTHER PURPOSE.
 4. THE INFORMATION ON THIS PLAN IS TO BE USED IN CONNECTION WITH THE PROJECT AND IS NOT TO BE USED FOR ANY OTHER PURPOSE.

MAMBOURIN ESTATE
STAGE 15
DETAIL PLAN
 FRASERS PROPERTY AUSTRALIA
 CITY OF WYNDHAM
PRELIMINARY (In No. 305180802)

FRASERS PROPERTY
 CONSULTANT
 R. WENNER
 PROJECT MANAGER
 J. CARRISON
 CLIENT
 M. HEADMAN
 PROJECT NO.
 305180802

spire
 FOR CONTINUATION REFER SHEET 3

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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: Mambourin - Stage 15
 Sketch indicating compaction test locations

DATE: 16/06/2022
OPERATOR: VN
SCALE: NTS

JOB No.: 2182/471
CHECKED: KK
FIGURE No: -



GEOTECHNICAL LABORATORIES
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DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 2182/472

LOCATION: SYMON BROS - Mambourin, Stage 15

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)
17/06/22	1	<i>Refer to #2182/473 for approx. test site locations.</i>	1.94	22.5	102.0	1.90	24.0	175	1.5 Drier	93.0	0	0	0
17/06/22	2		2.07	26.0	102.0	✘ 2.03	25.0	175	1.0 Wetter	104.0	4	0	0
17/06/22	3		2.09	23.0	103.0	✘ 2.03	23.5	175	0.0 Drier	99.0	4	0	0
17/06/22	4		1.91	24.0	95.0	✘ 2.01	23.5	175	0.5 Wetter	103.0	4	0	0
17/06/22	5		1.88	32.0	95.5	✘ 1.97	30.5	175	1.5 Wetter	104.5	5	0	0
17/06/22	6		1.92	20.0	95.0	2.02	18.5	175	1.0 Wetter	106.5	0	0	0

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 1:00pm Finish Time: 2:00pm

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



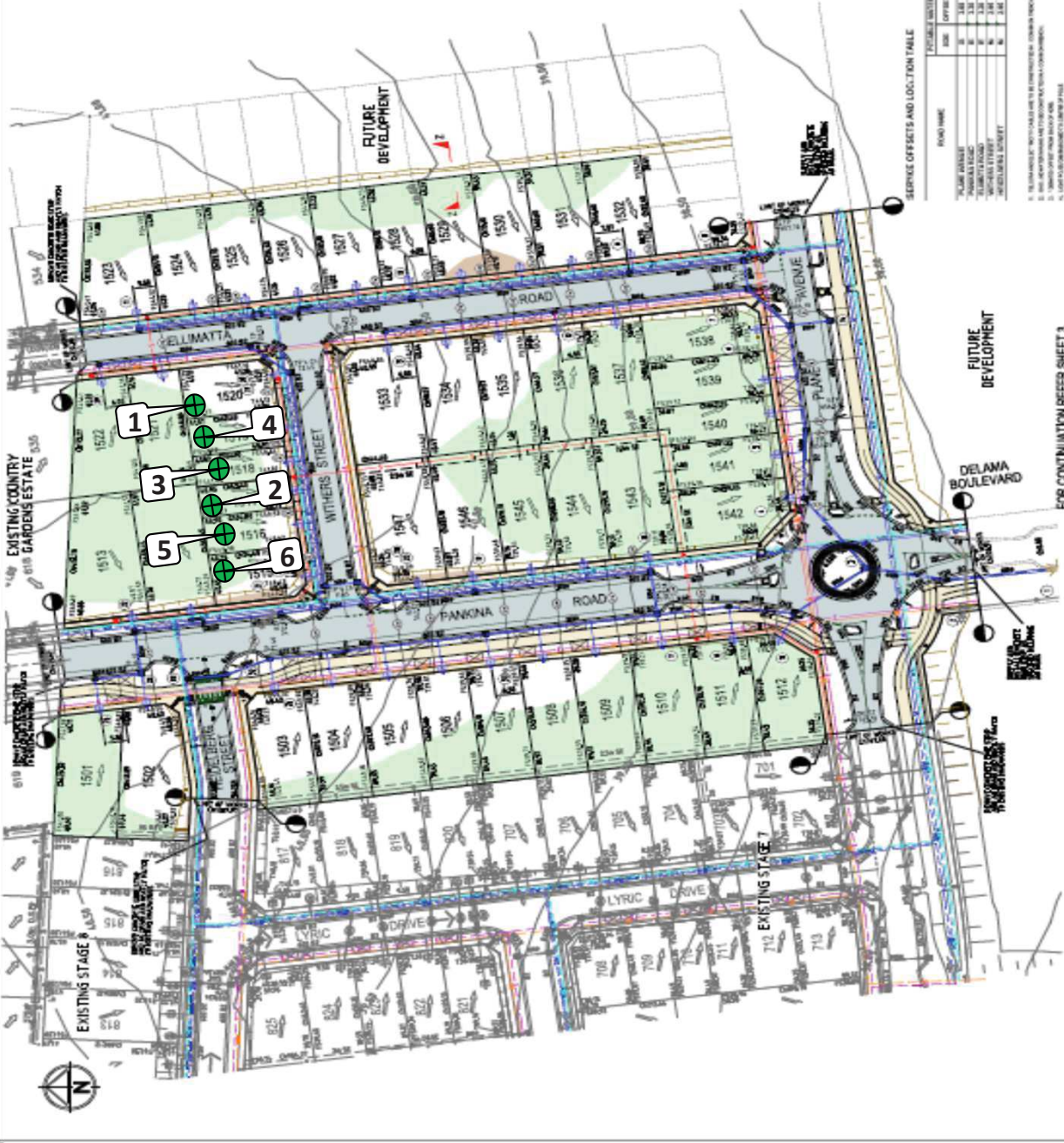
Accredited for compliance with ISO/IEC

17025 - Testing

NATA Accredited Laboratory Number 14561

MICK CROWE
(Approved Signatory)

Issue Date: 22/6/2022



SERVICE OFFSETS AND LOCATION TABLE

ROAD NAME	SIDE	OFFSET	TYPE	TOTAL WIDTH		TOTAL AREA	TOTAL VOLUME
				MIN	MAX		
DELAMA BOULEVARD	N	3.00	ASPH	3.00	3.00	3.00	3.00
FANKINA ROAD	N	3.00	ASPH	3.00	3.00	3.00	3.00
WITHERS STREET	N	3.00	ASPH	3.00	3.00	3.00	3.00
WITHERS STREET	S	3.00	ASPH	3.00	3.00	3.00	3.00
WITHERS STREET	N	3.00	ASPH	3.00	3.00	3.00	3.00
WITHERS STREET	S	3.00	ASPH	3.00	3.00	3.00	3.00

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FRASERS PROPERTY
 CONSULTANT
 R. WENNER
 PROJECT MANAGER
 J. CARRISTON

**MAMBOURIN ESTATE
 STAGE 15
 DETAIL PLAN**
 FRASERS PROPERTY AUSTRALIA
 CITY OF WYNDHAM

PRELIMINARY (In No. 305180802)

spire
 FOR CONTINUATION REFER SHEET 3

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Scale: 1:1000

NO.	DATE	BY	REVISION

GEOTECHNICAL LABORATORIES

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