

LEVEL ONE

Reference
No.: 9267-010

SURVEILLANCE

AND INSPECTION REPORT

*Carried Out
By*



PREPARED FOR: -

SYMON BROS. CONSTRUCTIONS PTY LTD



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Appendices

Appendix A Construction Drawings

Appendix B Daily Field Compaction Summary Results



Client Name: Symon Bros. Constructions Pty Ltd

Project Name: Botanical Estate, Stage 26

Date: 20th of May 2025

Author: Mr. Thomas Crowe

Reference No.: 9267-010

Revision: 1

Project Manager: Mr. Francesco Fusca

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 31st of October 2024 to the 15th of May 2025 where a residential development is being constructed. Inspection and testing of stripping, material quality and compaction control tests were carried out to comply with the requirements of AS 3798 Appendix B, Level 1.

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

(1). Road & Drainage Layout Plan Drawing No. 310892CR200 (Rev. 2)

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 inspections were undertaken on the 30th of October 2024 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.

Initial proof roll inspections were undertaken 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 fill material is best described as a silty CLAY, brown, pale brown, slightly moist to moist, medium to high plasticity with basalt gravel and occasional 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

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 ten 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 criterion was specified.

7. Statement of Compliance

So far as can be determined, Symon Bros. Constructions Pty Ltd has satisfactorily complied with the compaction and construction processes required for the structural filling of this site. As such, structural filling placed on this site by Symon Bros. Constructions Pty Ltd from the 31st of October 2024 to the 15th of May 2025 can be categorised as CONTROLLED FILL in accordance with AS 2870-2011.

8. Limitations and Liability of this Report

This report has been produced for and remains the property of Symon Bros Construction Pty Ltd.

The release of this report to a third party will only occur if Geotechnical Laboratories Pty Ltd has received, in writing, the authority to do so by our client.

Geotechnical Laboratories Pty Ltd will not engage in any third-party communication regarding this report.

Where information has been supplied by the client or third party, the assumption is made that this is correct. Geotechnical Laboratories Pty Ltd will not be held responsible for any inaccuracies supplied.

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

For & on behalf of
Geotechnical Laboratories Pty Ltd.

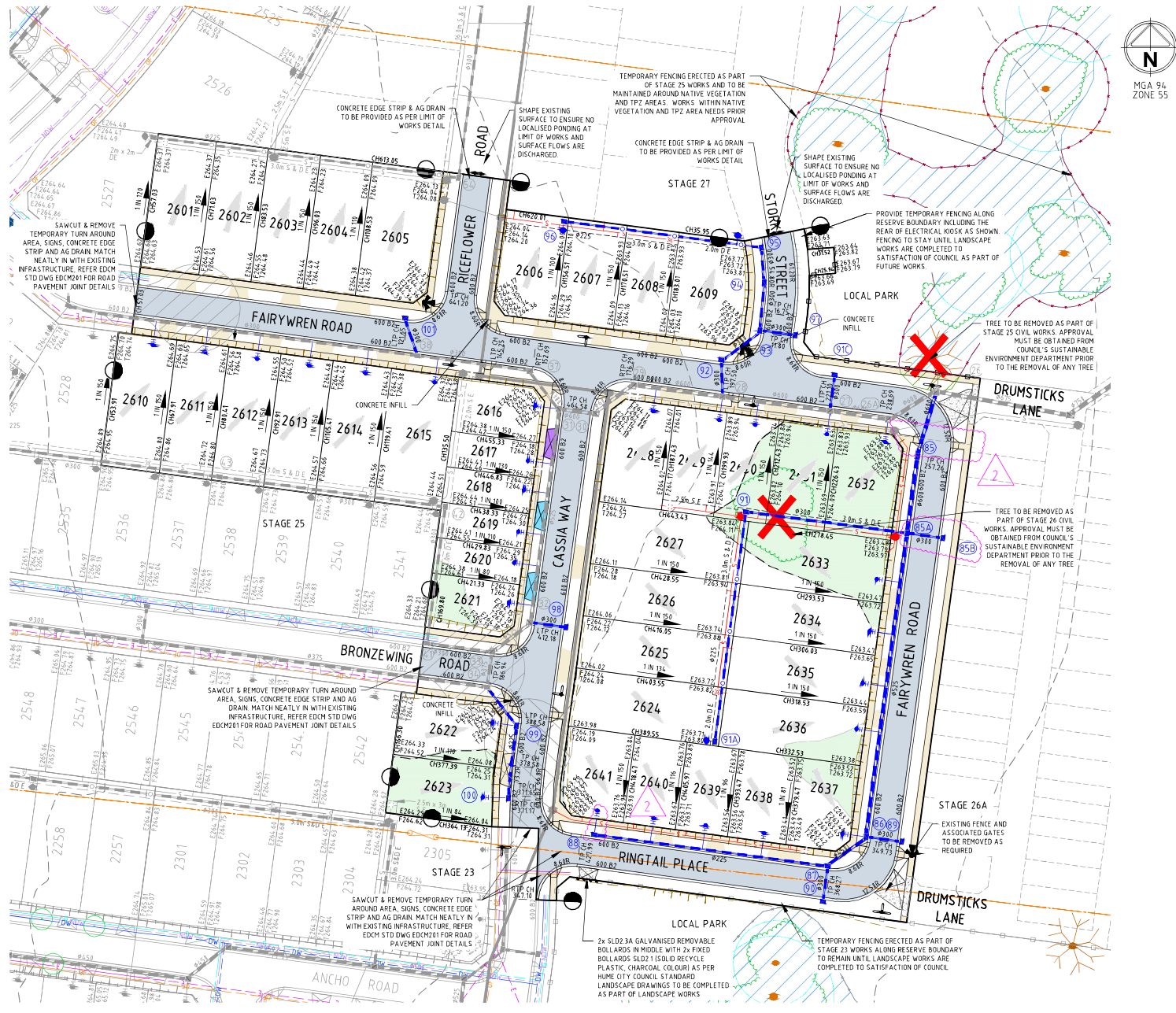
Thomas Crowe
Technical Manager



LEVEL ONE
SURVEILLANCE
AND INSPECTION REPORT

APPENDIX A

File name: 310892CR200.dwg; layout: 310892CR200; plotted by: satterley; printer: satterley; plot date: 20/06/23; plot time: 10:00:00; plot scale: 1:1; plot sheet: 2 of 18 sheets



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

Rev	Amendments	Approved	Date
2	REVISED DRAINAGE PITS & PRAM CROSSING	J.P.P.	24/07/24
1	LOT CONFIGURATION & STAGING AMENDED	J.P.P.	29/04/24
0	ISSUED FOR CONSTRUCTION	J.P.P.	09/01/24
C	REVISED DRAINAGE OUTFALL PITS 26A-90 & 85-89 TO Q100 PIPES	J.P.P.	17/12/23
B	NOTATION AMENDED & ADDED, CONCRETE INFILL ADDED	J.P.P.	03/11/23
A	ISSUED TO COUNCIL	J.P.P.	20/06/23



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Satterley

Designed
H.KURMUS

Checked
J.POYNER

Authorised
J.POYNER

Date
20/06/23

**BOTANICAL ESTATE
STAGE 26
ROAD AND DRAINAGE
ROAD LAYOUT PLANS
HUME CITY COUNCIL
SATTERLEY PROPERTY GROUP**

CONSTRUCTION 310892CR200 2



LEVEL ONE
SURVEILLANCE
AND INSPECTION REPORT

APPENDIX B



**GEOTECHNICAL
LABORATORIES**

**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.: # 9267/005

LOCATION: SYMON BROS - Botanical Estate, Stage 26

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)	
31/10/24	1	<i>Refer to #9267/006 for approx. test site locations.</i>	2.08	15.0	99.0	✘ 2.11	16.0	175	1.0 Drier	94.0	5	0	0	
31/10/24	2		1.99	17.0	95.0	✘ 2.09	17.5	175	0.5 Drier	96.0	4	0	0	
31/10/24	3		2.02	15.5	96.0	✘ 2.11	16.0	175	0.5 Drier	97.0	5	0	0	
31/10/24	4		2.06	17.5	97.5	2.11	16.5	175	0.5 Wetter	104.0	0	0	0	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 11:05am Finish Time: 11:45am

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

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



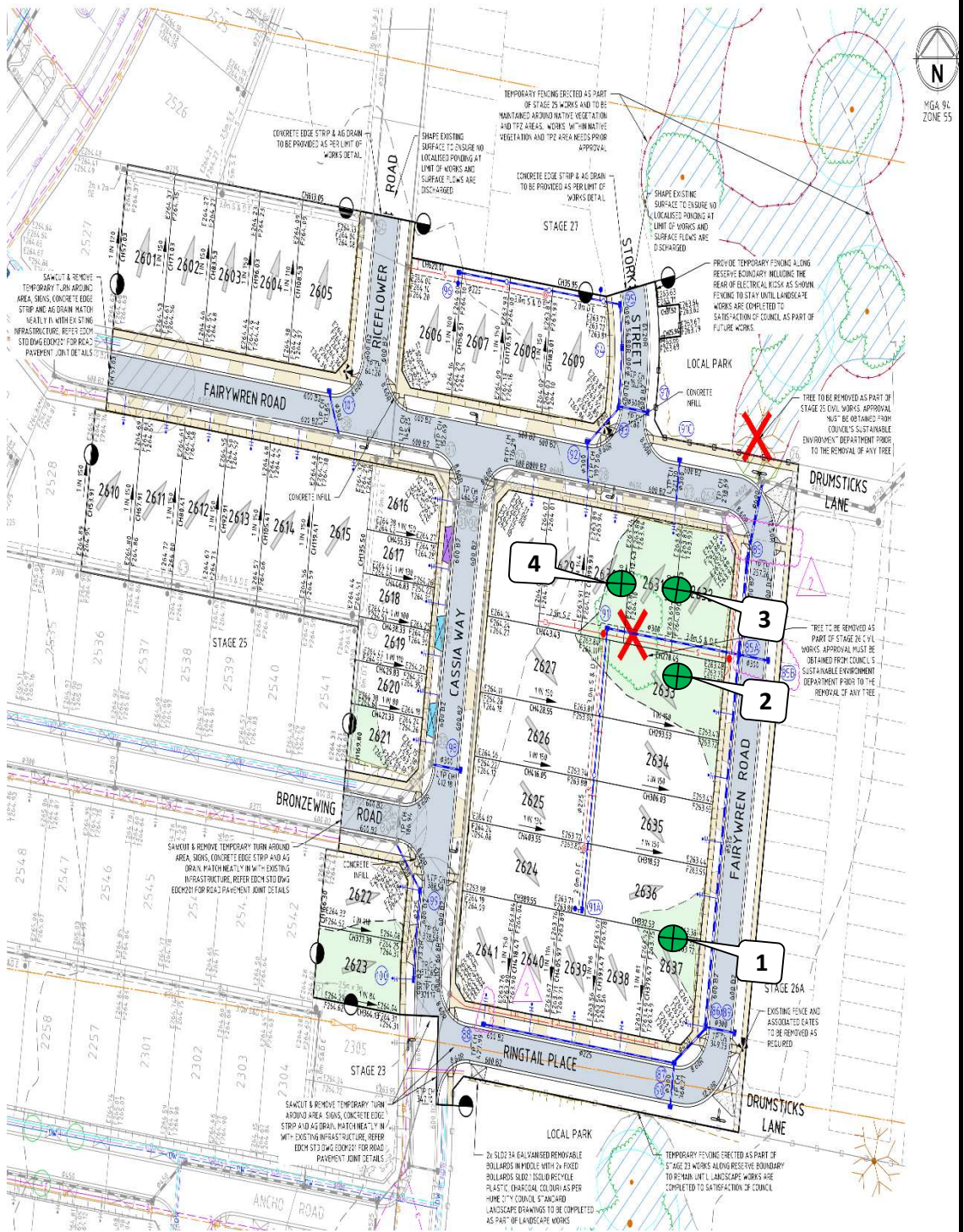
Accredited for compliance with ISO/IEC

17025 - Testing

NATA Accredited Laboratory Number 14561

MICK CROWE
(Approved Signatory)

Issue Date: 8/11/2024



GEOTECHNICAL LABORATORIES

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CLIENT: SYMON BROS

LOCATION: Botanical, Stage 26

Sketch indicating compaction test locations

DATE: 31/10/2024

OPERATOR: SA

SCALE: NTS

JOB No.: 9267/006

CHECKED: KK

FIGURE No: -



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DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 9267/007

LOCATION: SYMON BROS - Botanical Estate, Stage 26

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)	
1/11/24	5	<i>Refer to #9267/008 for approx. test site locations.</i>	2.01	16.5	100.5	2.01	18.5	175	2.0 Drier	90.0	0	0	0	
1/11/24	6		2.01	15.0	102.5	1.96	17.0	175	2.0 Drier	89.0	0	0	0	
1/11/24	7		2.01	16.0	98.5	2.03	17.0	175	0.5 Drier	96.0	0	0	0	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex, Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 10:25am Finish Time: 10:50am

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

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: 12/11/2024



GEOTECHNICAL LABORATORIES

GEOTECHNICAL LABORATORIES

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CLIENT: SYMON BROS

LOCATION: Botanical, Stage 26

Sketch indicating compaction test locations

DATE: 1/11/2024

JOB No.: 9267/008

OPERATOR: SA

CHECKED: KK

SCALE: NTS

FIGURE No: -

FIELD DENSITY TESTING SUMMARY
REPORT NO: 9267/013

PROJECT: SYMON BROS - Botanical Estate, Stage 26

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)	
15/05/25	8	<i>Refer to #9267/014 for approx. test site locations.</i>	2.09	15.5	101.5	2.06	16.5	175	0.5 Drier	96.0	0	0	0	
15/05/25	9		2.09	18.0	103.0	✱ 2.03	19.0	175	0.5 Drier	96.0	12	0	0	
15/05/25	10		2.05	19.0	103.0	1.99	20.5	175	1.5 Drier	92.0	0	0	0	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

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

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

Moisture Content: AS 1289 2.1.1

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)

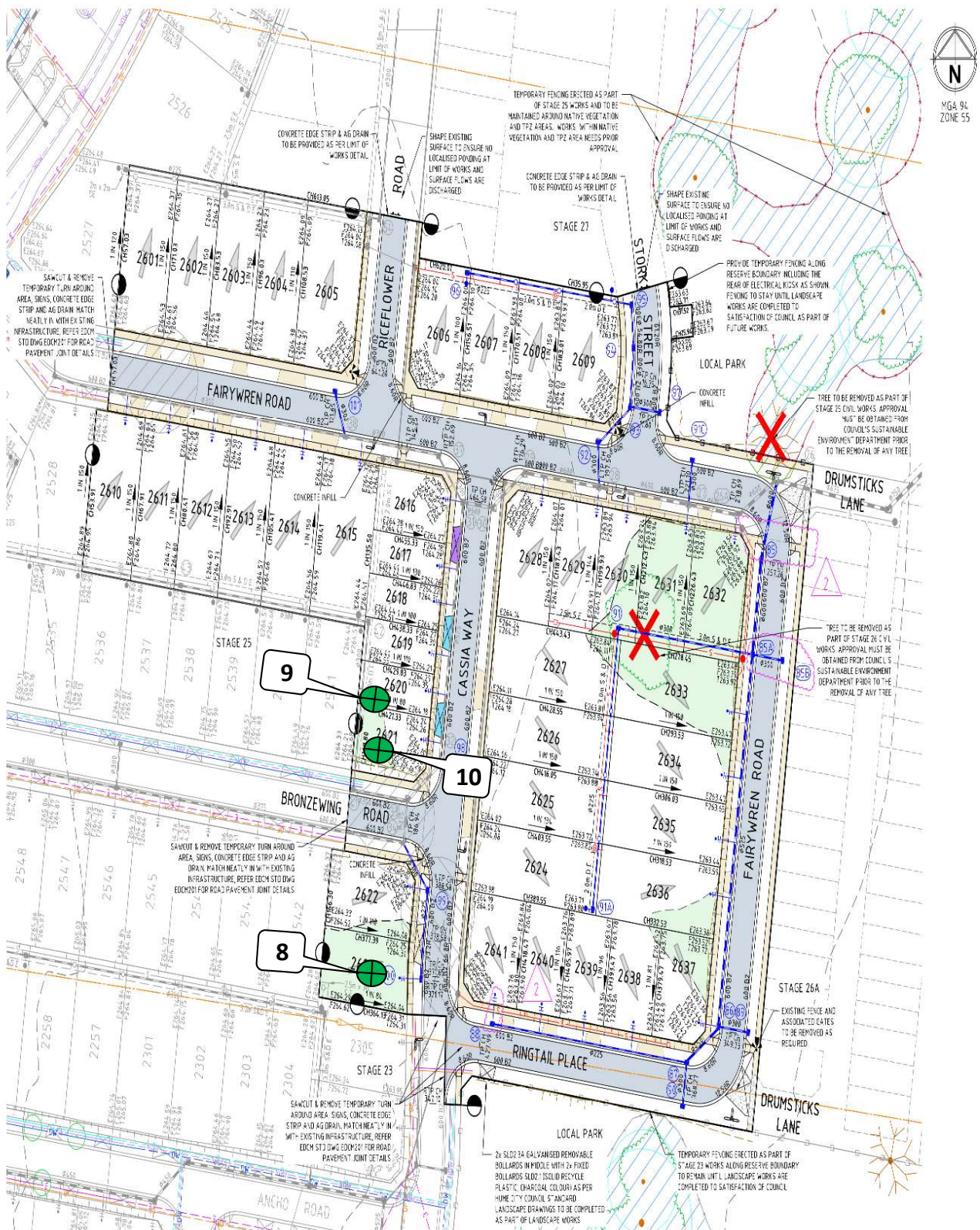
✱ Indicates APCWD

❖


Accredited for compliance with ISO/IEC
17025 - Testing
NATA Accredited Laboratory Number 14561

MICK CROWE
(Approved Signatory)

Issue Date: 20/5/2025



GEOTECHNICAL LABORATORIES

GEOTECHNICAL LABORATORIES

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CLIENT: SYMON BROS

LOCATION: Botanical, Stage 26

Sketch indicating compaction test locations

DATE: 15/052025

JOB No: 9267/014

OPERATOR: AB

CHECKED: KK

SCALE: NTS

FIGURE No: -