

LEVEL ONE

Reference
No.: 9008-036

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: The Grove South West Precinct Stage 51
Date: 19th of February 2024
Author: Mr. Thomas Crowe
Reference No.: 9008-036
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 1st of July 2022 to the 10th of August 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) Road & Drainage Layout Plan Drawing No. 2190E-051-111 (Rev. 1)

General site works involved the placement of fill, using on-site derived clay, to bring the fill region to the required finished levels as indicated on the faceplan drawings.

2. Site Preparation

Site inspections were undertaken on the 17th of June 2022 confirming that selected areas to be filled were completely stripped of topsoil prior to filling. The brown silty topsoils had been stockpiled around the site for later removal off-site.

Proof roll inspections were performed throughout the project duration to ensure no significant soft areas were present prior to filling.

3. Fill Material

It is understood that the fill material used was sourced from site cut areas.



The fill material is best described as a silty CLAY, brown, red 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 & highway trucks
- Scrapers
- A watercart
- A sheepsfoot compactor (815)
- A padfoot roller
- A dozer

The sheepsfoot compactor and dozer placed material in horizontal loose layers of approximately 250-300mm. The sheepsfoot compactor and 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 sixty-three 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 hilt density ratio not less than 95 percent of the maximum hilt density value as determined by the Standard Hilt 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 1st of July 2022 to the 10th of August 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.

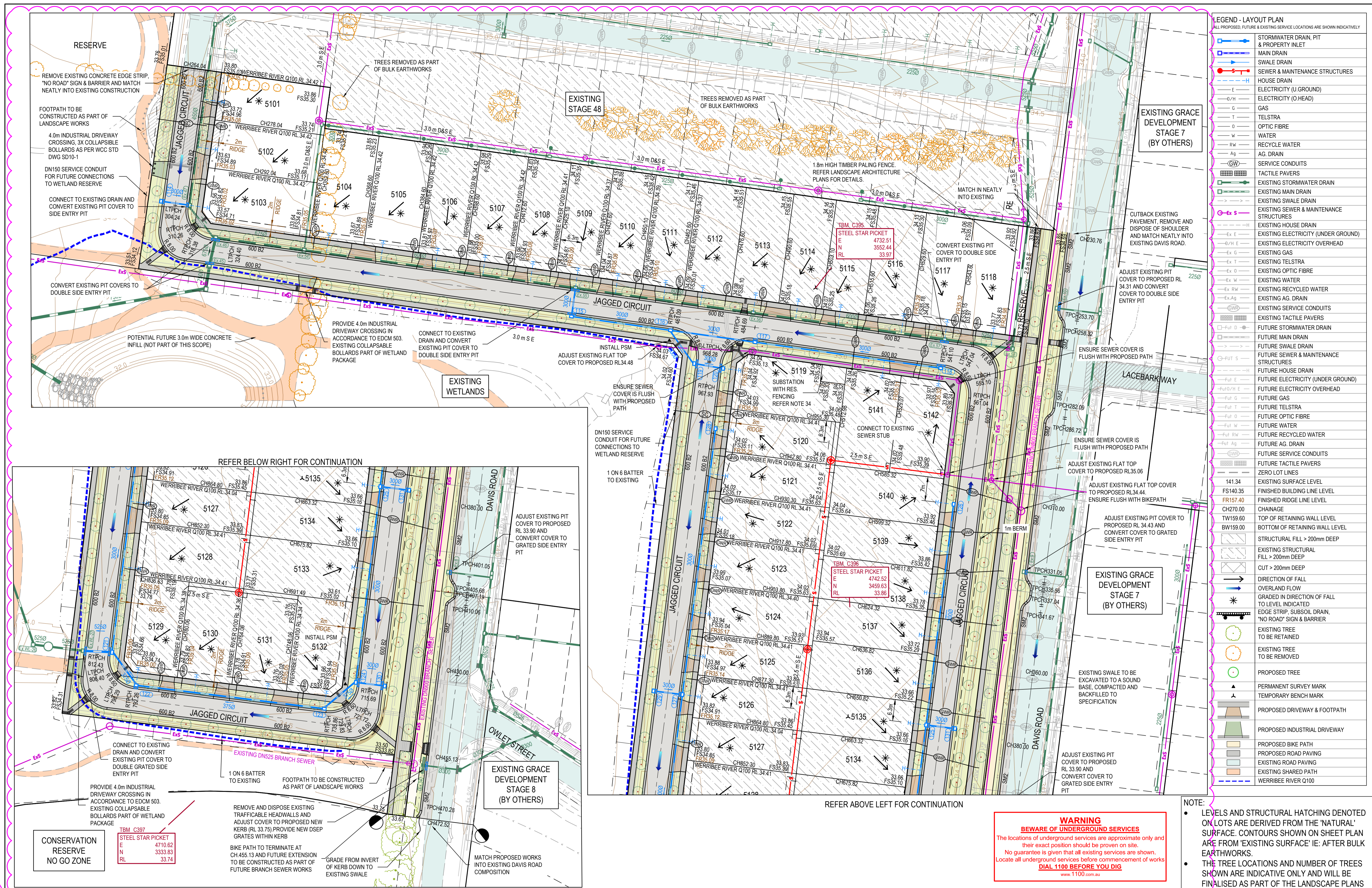
For & on behalf of
Geotechnical Laboratories Pty Ltd.

Thomas Crowe
Technical Manager



LEVEL ONE
SURVEILLANCE
AND INSPECTION REPORT

APPENDIX A



LEGEND - LAYOUT PLAN	
ALL PROPOSED, FUTURE & EXISTING SERVICE LOCATIONS ARE SHOWN INDICATIVELY	
	STORMWATER DRAIN, PIT & PROPERTY INLET
	MAIN DRAIN
	SWALE DRAIN
	SEWER & MAINTENANCE STRUCTURES
	HOUSE DRAIN
	ELECTRICITY (U.GROUND)
	ELECTRICITY (O.HEAD)
	GAS
	TELSTRA
	OPTIC FIBRE
	WATER
	RECYCLE WATER
	AG. DRAIN
	SERVICE CONDUITS
	TACTILE PAVERS
	EXISTING STORMWATER DRAIN
	EXISTING MAIN DRAIN
	EXISTING SWALE DRAIN
	EXISTING SEWER & MAINTENANCE STRUCTURES
	EXISTING HOUSE DRAIN
	EXISTING ELECTRICITY (UNDER GROUND)
	EXISTING ELECTRICITY OVERHEAD
	EXISTING GAS
	EXISTING TELSTRA
	EXISTING OPTIC FIBRE
	EXISTING WATER
	EXISTING RECYCLED WATER
	EXISTING AG. DRAIN
	EXISTING SERVICE CONDUITS
	EXISTING TACTILE PAVERS
	FUTURE STORMWATER DRAIN
	FUTURE MAIN DRAIN
	FUTURE SWALE DRAIN
	FUTURE SEWER & MAINTENANCE STRUCTURES
	FUTURE HOUSE DRAIN
	FUTURE ELECTRICITY (UNDER GROUND)
	FUTURE ELECTRICITY OVERHEAD
	FUTURE GAS
	FUTURE TELSTRA
	FUTURE OPTIC FIBRE
	FUTURE WATER
	FUTURE RECYCLED WATER
	FUTURE AG. DRAIN
	FUTURE SERVICE CONDUITS
	FUTURE TACTILE PAVERS
	ZERO LOT LINES
	141.34 EXISTING SURFACE LEVEL
	FS140.35 FINISHED BUILDING LINE LEVEL
	FR157.40 FINISHED RIDGE LINE LEVEL
	CH270.00 CHAINAGE
	TW159.60 TOP OF RETAINING WALL LEVEL
	BW159.00 BOTTOM OF RETAINING WALL LEVEL
	STRUCTURAL FILL > 200mm DEEP
	EXISTING STRUCTURAL FILL > 200mm DEEP
	CUT > 200mm DEEP
	DIRECTION OF FALL
	OVERLAND FLOW
	GRADED IN DIRECTION OF FALL TO LEVEL INDICATED
	EDGE STRIP, SUBSOIL DRAIN, 'NO ROAD' SIGN & BARRIER
	EXISTING TREE TO BE RETAINED
	EXISTING TREE TO BE REMOVED
	PROPOSED TREE
	PERMANENT SURVEY MARK
	TEMPORARY BENCH MARK
	PROPOSED DRIVEWAY & FOOTPATH
	PROPOSED INDUSTRIAL DRIVEWAY
	PROPOSED BIKE PATH
	PROPOSED ROAD PAVING
	EXISTING ROAD PAVING
	EXISTING SHARED PATH
	WERRIBEE RIVER Q100

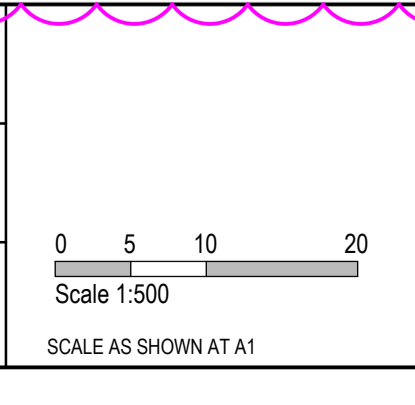
WARNING
BEWARE OF UNDERGROUND SERVICES
 The locations of underground services are approximate only and their exact position should be proven on site.
 No guarantee is given that all existing services are shown. Locate all underground services before commencement of works.
DIAL 1100 BEFORE YOU DIG
 www.1100.com.au

- NOTE:
- LEVELS AND STRUCTURAL HATCHING DENOTED ON LOTS ARE DERIVED FROM THE 'NATURAL' SURFACE. CONTOURS SHOWN ON SHEET PLAN ARE FROM 'EXISTING SURFACE' IE: AFTER BULK EARTHWORKS.
 - THE TREE LOCATIONS AND NUMBER OF TREES SHOWN ARE INDICATIVE ONLY AND WILL BE FINALISED AS PART OF THE LANDSCAPE PLANS

REV	DATE	AMENDMENT / REVISION DESCRIPTION
0	02.11.22	ISSUED FOR CONSTRUCTION
1	09.03.23	UPDATED AS PER SERVICE OFFSET CHANGES

DRAFTER	DESIGNER	CHECKER	APPROVER
E. GLASSON	G. CHIUMBURU	N. FREEMAN	P. SHELLIE
E. GLASSON	G. CHIUMBURU	N. FREEMAN	H. SADRI

Quality Management logo
 Environmental Management logo
 PLAN OF SUB. NO. 838524R
 PERMIT REF. NO. WYP11051/18
ISSUED FOR CONSTRUCTION



SMEC
 Member of the Surlana Jurong Group
 Collins Square, Tower 4, Level 20, 727 Collins St
 Melbourne, VIC 3008
 Ph 03 9514 1500

FRASERS PROPERTY

MELWAYS REF 234 F9	PROJECT / DRAWING No 2190E-051-111	SHEET No 03 of 22	REVISION 1
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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.: # 9008/003A

LOCATION: SYMON BROS - The Grove SWP - Stage 51

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)	
1/07/22	1	<i>Refer to #9008/004A for approx. test site locations.</i>	1.81	26.0	97.5	1.86	27.5	175	1.5 Drier	94.5	0	0	1000	
1/07/22	2		1.80	28.5	97.0	1.85	30.0	175	2.0 Drier	94.0	0	0	1000	
1/07/22	3		1.84	32.0	98.0	1.87	30.0	175	2.5 Wetter	108.0	0	0	900	
1/07/22	4		1.87	29.5	96.5	1.94	28.5	175	1.0 Wetter	102.5	0	0	900	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 9:00am Finish Time:9:40am

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.

This Report Supersedes Report # 9008/003

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)

✘

❖

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

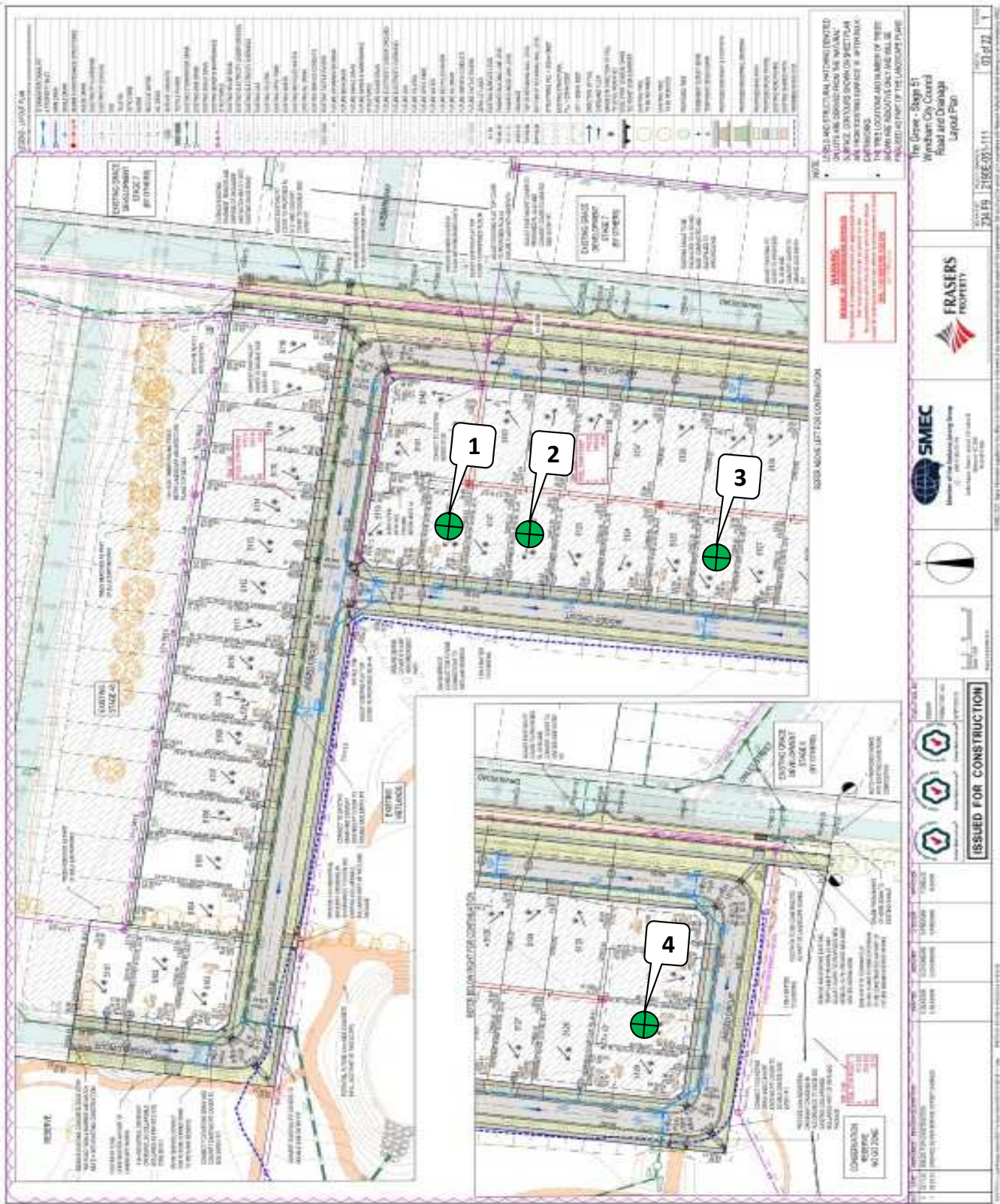
MICK CROWE
 (Approved Signatory)

Issue Date: 11/10/2023



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

NATA Accredited Laboratory Number 14561



GEOTECHNICAL LABORATORIES

GEOTECHNICAL LABORATORIES

ACN 102 571 077

14 Ravenhall Way, Ravenhall, Vic 3023

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 51

Sketch indicating compaction test locations

DATE: 01/07/2022

OPERATOR: PV

SCALE: NTS

JOB No.: 9008/004A

CHECKED: DM

FIGURE No: 1 of 2



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.: # 9005/019A

LOCATION: SYMON BROS - The Grove, South West Precinct, Stage 48 & 51

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)	
15/07/22	30	<i>Refer to #9005/020A for approx. test site locations.</i>	1.91	21.0	97.0	1.97	22.5	175	1.5 Drier	93.5	0	0	1500	
15/07/22	31		1.89	25.0	95.5	1.98	24.0	175	1.5 Wetter	105.0	0	0	1200	
15/07/22	32		1.88	27.0	97.5	✘ 1.93	25.5	175	1.5 Wetter	105.0	3	0	500	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

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: 12:45pm

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.

This Report Supersedes Report # 9005/019

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

❖

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

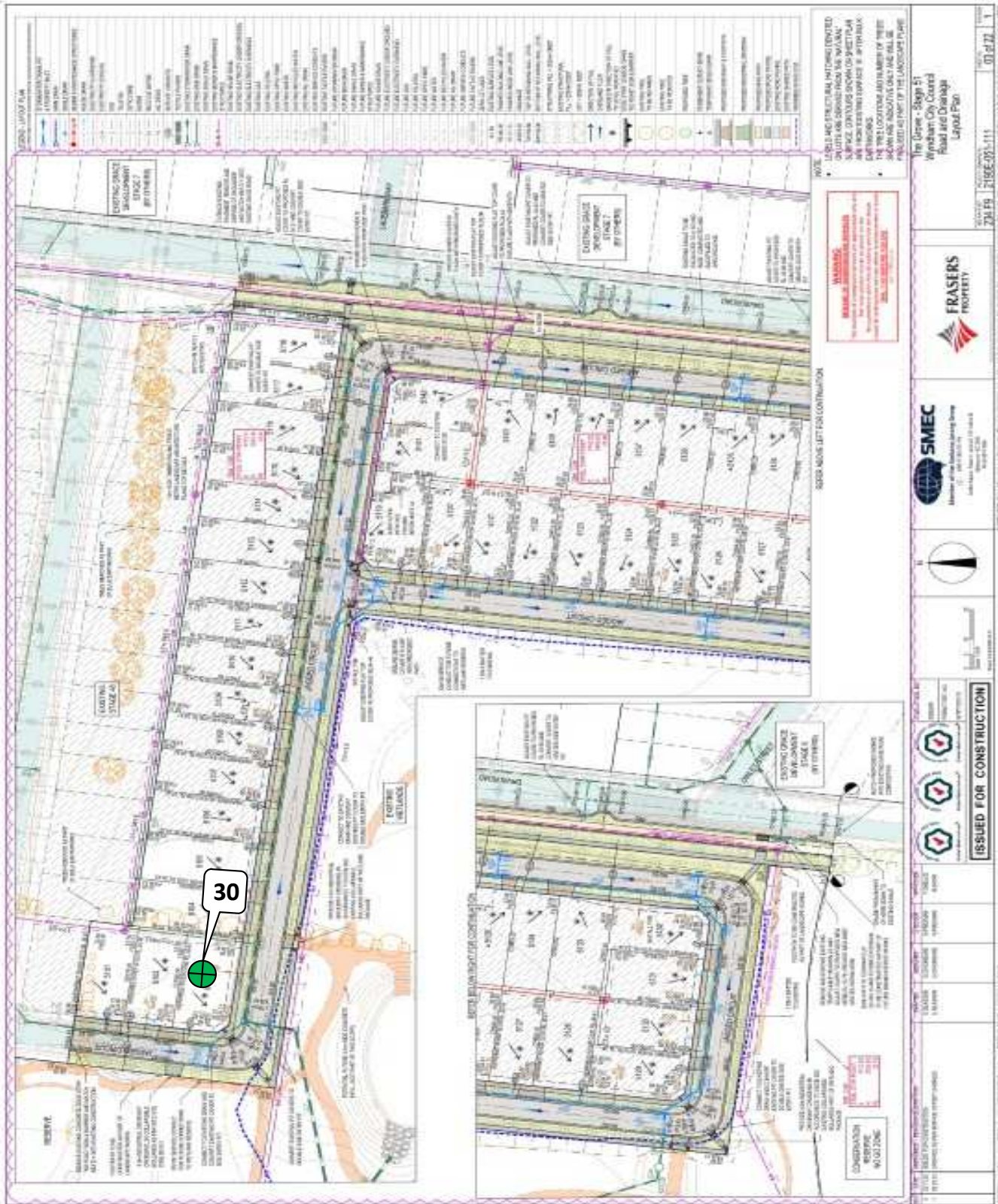
MICK CROWE
 (Approved Signatory)

Issue Date: 24/10/2023



Accredited for compliance with ISO/IEC 17025 - Testing

NATA Accredited Laboratory Number 14561



GEOTECHNICAL LABORATORIES

GEOTECHNICAL LABORATORIES
ACN 102 571 077

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 48 & 51

Sketch indicating compaction test locations

DATE: 15/07/2022

OPERATOR: TC

SCALE: NTS

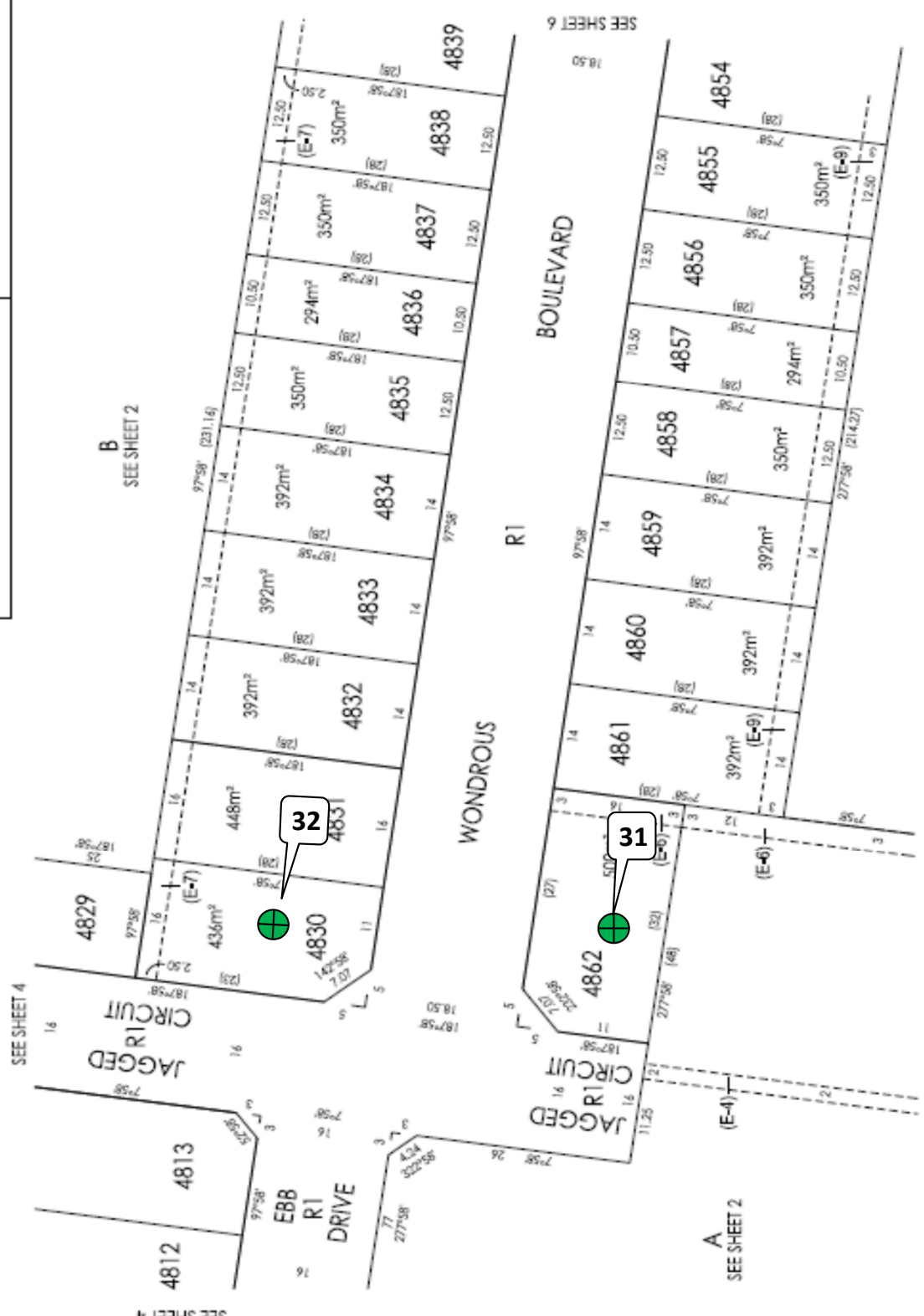
JOB No.: 9005/020A

CHECKED: KK

FIGURE No: 1 of 2

PLAN NUMBER
PS 844183G

PLAN OF SUBDIVISION



REF: 8352/48 VERSION: 4 ORIGINAL SHEET SIZE A3 SHEET 5



SCALE
1:500

see Pitt Dixon Pty Ltd
1119 Cain Street
Melbourn East Vic 3123
823 2588 Fax 8823 9150



GEOTECHNICAL LABORATORIES

GEOTECHNICAL LABORATORIES
ACN 102 571 077

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

CLIENT: SYMON BROS
LOCATION: The Grove South West Precinct, Stage 48 & 51
Sketch indicating compaction test locations

DATE: 15/07/2022
OPERATOR: TC
SCALE: NTS

JOB No.: 9005/020A
CHECKED: KK
FIGURE No: 2 of 2



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.: # 9005/032A

LOCATION: SYMON BROS - The Grove, South West Precinct, Stage 48 & 51

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)	
26/07/22	45	<i>Refer to #9005/033A for approx. test site locations.</i>	2.07	23.0	105.5	1.95	23.5	175	0.0 Drier	99.0	0	0	300	
26/07/22	46		2.01	25.0	100.0	2.01	23.0	175	1.5 Wetter	107.5	0	0	300	
26/07/22	47		1.94	25.5	98.5	✘ 1.96	24.5	175	1.5 Wetter	105.0	5	0	600	
26/07/22	48		2.05	26.0	104.5	1.96	25.5	175	1.0 Wetter	103.0	0	0	600	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 11:40am Finish Time: 12:20pm

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.

This Report Supersedes Report # 9005/032

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

❖

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1



Accredited for compliance with ISO/IEC 17025 - Testing

NATA Accredited Laboratory Number 14561

MICK CROWE
 (Approved Signatory)

Issue Date: 24/10/2023

PLAN NUMBER
PS 844183G

PLAN OF SUBDIVISION



REF: 8352/48
VERSION: 4
LICENSED SURVEYOR: SIMON COX



SCALE
1:500

Breese Pitt Dixon Pty Ltd
1719 Cain Street
Hawthorn East, Vic 3123
Ph: 8623 2528 Fax: 8623 2510



GEOTECHNICAL LABORATORIES

GEOTECHNICAL LABORATORIES
ACN 102 571 077

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 48 & 51

Sketch indicating compaction test locations

DATE: 26/07/2022

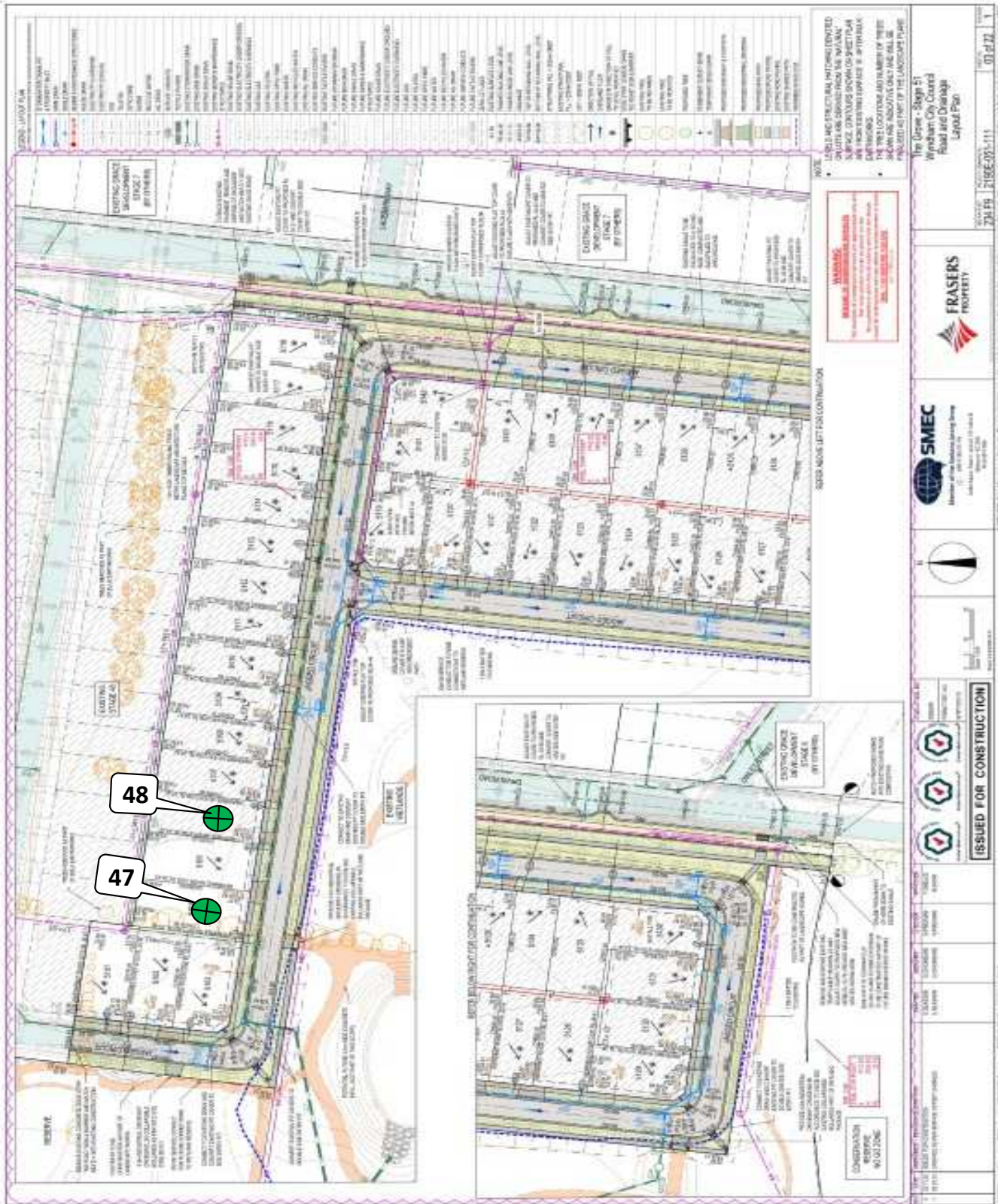
OPERATOR: BM

SCALE: NTS

JOB No.: 9005/033A

CHECKED: KK

FIGURE No: 1 of 2



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ACN 102 571 077

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 48 & 51

Sketch indicating compaction test locations

DATE: 26/07/2022

OPERATOR: BM

SCALE: NTS

JOB No.: 9005/033A

CHECKED: KK

FIGURE No: 2 of 2



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.: # 9005/036A

LOCATION: SYMON BROS - The Grove, South West Precinct, Stage 48 & 51

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)	
28/07/22	52	<i>Refer to #9005/037A for approx. test site locations.</i>	2.10	24.5	107.0	1.97	23.5	175	0.5 Wetter	103.0	0	0	500	
28/07/22	53		2.04	23.5	102.5	1.99	23.0	175	0.0 Wetter	101.0	0	0	500	
28/07/22	54		2.04	21.0	105.0	✕ 1.94	23.5	175	2.5 Drier	89.5	5	0	500	
28/07/22	55		2.06	23.0	106.5	1.94	24.5	175	1.5 Drier	94.0	0	0	500	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 12:35pm Finish Time: 1:15pm

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.

This Report Supersedes Report # 9005/036

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

❖

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1



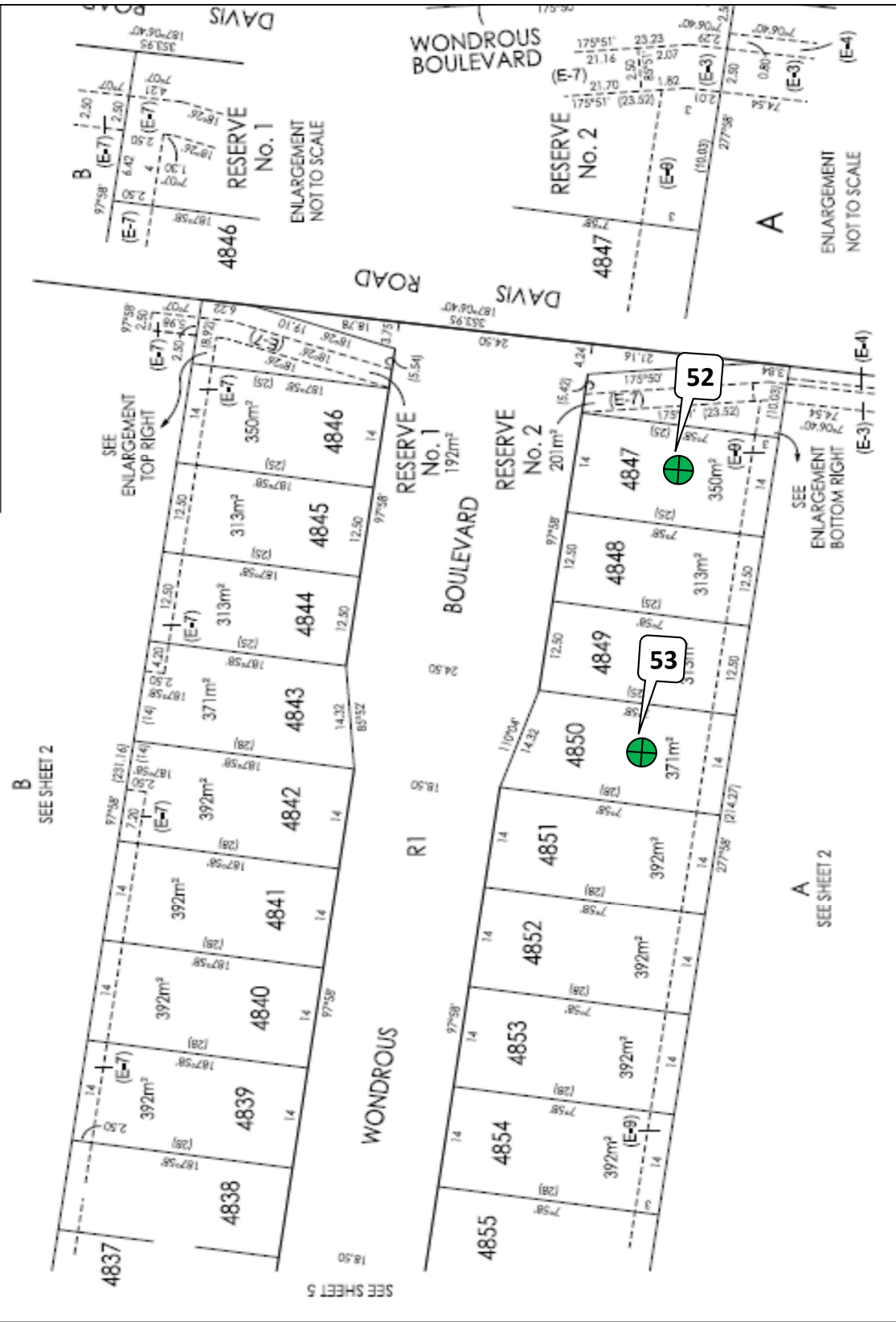
Accredited for compliance with ISO/IEC
17025 - Testing

NATA Accredited Laboratory Number 14561

MICK CROWE
(Approved Signatory)

Issue Date: 24/10/2023

PLAN OF SUBDIVISION
 PLAN NUMBER
PS 844183



REF: 8352/48	VERSION: 4	ORIGINAL SHEET SIZE A3
		LICENSED SURVEYOR: SIMON COX
SCALE	1:500	
Breese Pitt Dixon Pty Ltd 1/19 Cato Street Hawthorn East, Vic 3123 Ph: 8523 2300 Fax: 8523 2310		



GEOTECHNICAL LABORATORIES

GEOTECHNICAL LABORATORIES

ACN 102 571 077

14 Ravenhall Way, Ravenhall, Vic 3023

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 48 & 51

Sketch indicating compaction test locations

DATE: 28/07/2022

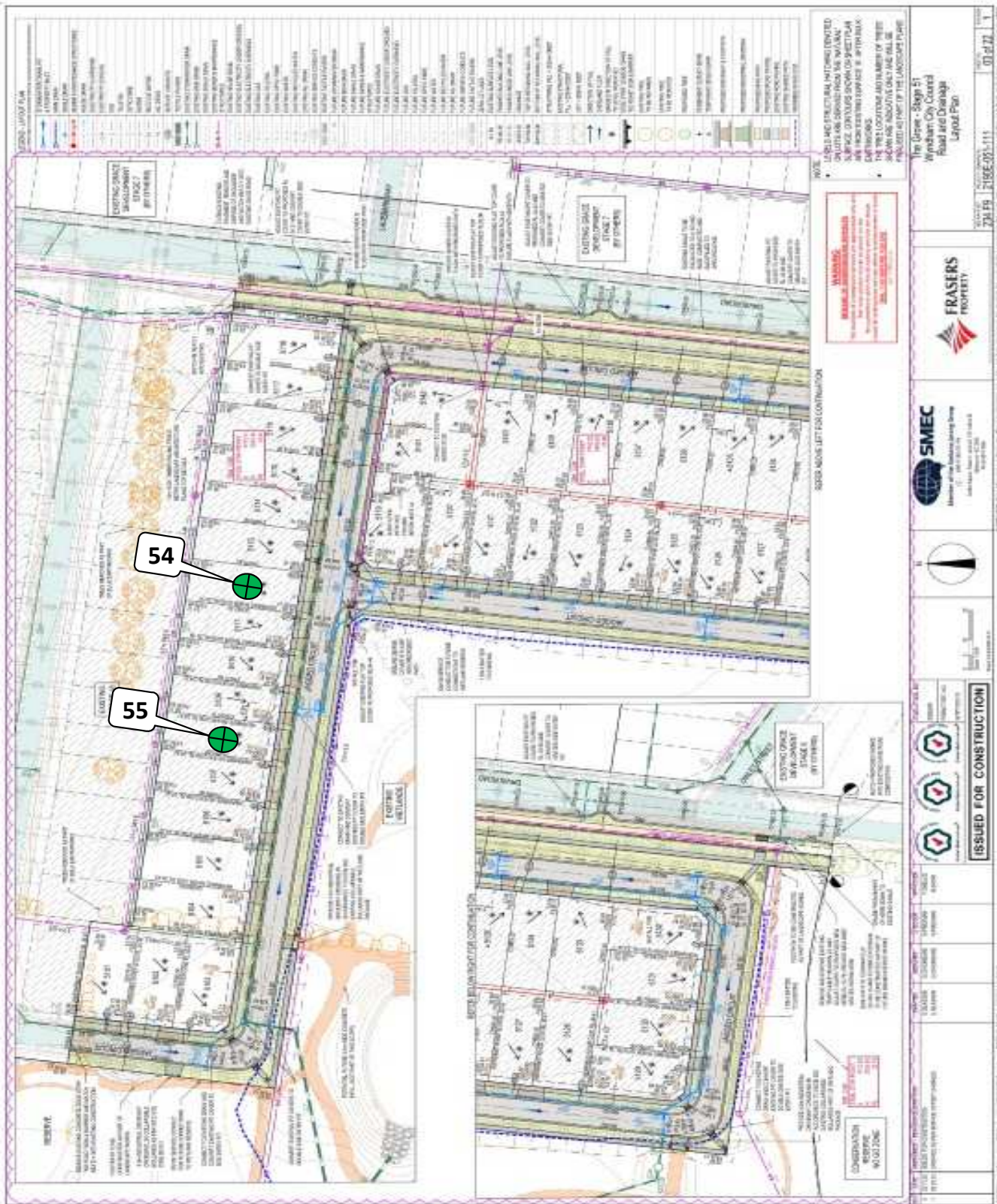
OPERATOR: BM

SCALE: NTS

JOB No.: 9005/037A

CHECKED: KK

FIGURE No: 1 of 2



GEOTECHNICAL LABORATORIES

GEOTECHNICAL LABORATORIES
ACN 102 571 077

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 48 & 51

Sketch indicating compaction test locations

DATE: 28/07/2022

OPERATOR: BM

SCALE: NTS

JOB No.: 9005/037A

CHECKED: KK

FIGURE No: 2 of 2

DAILY SUMMARY - FIELD DENSITY TESTS

 REPORT NO.: # **9005/038A**

 LOCATION: **SYMON BROS - The Grove, South West Precinct, Stage 48 & 51**

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIATION FROM OPTIMUM MOISTURE CONTENT (%)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)	
29/07/22	56	Refer to #9005/039A for approx. test site locations.	1.99	21.0	105.5	1.88	23.5	175	2.5 Drier	89.0	0	0	0	
29/07/22	57		2.00	20.5	101.5	✕ 1.96	21.5	175	1.0 Drier	94.5	14	0	300	
29/07/22	58		2.10	21.5	105.0	2.00	22.0	175	0.5 Drier	98.0	0	0	500	
29/07/22	59		2.04	19.0	101.5	✕ 2.00	20.0	175	1.0 Drier	94.0	9	0	1000	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 12:20pm Finish Time: 1:00pm

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.

This Report Supersedes Report # 9005/038

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

❖

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1



Accredited for compliance with ISO/IEC
17025 - Testing

NATA Accredited Laboratory Number 14561

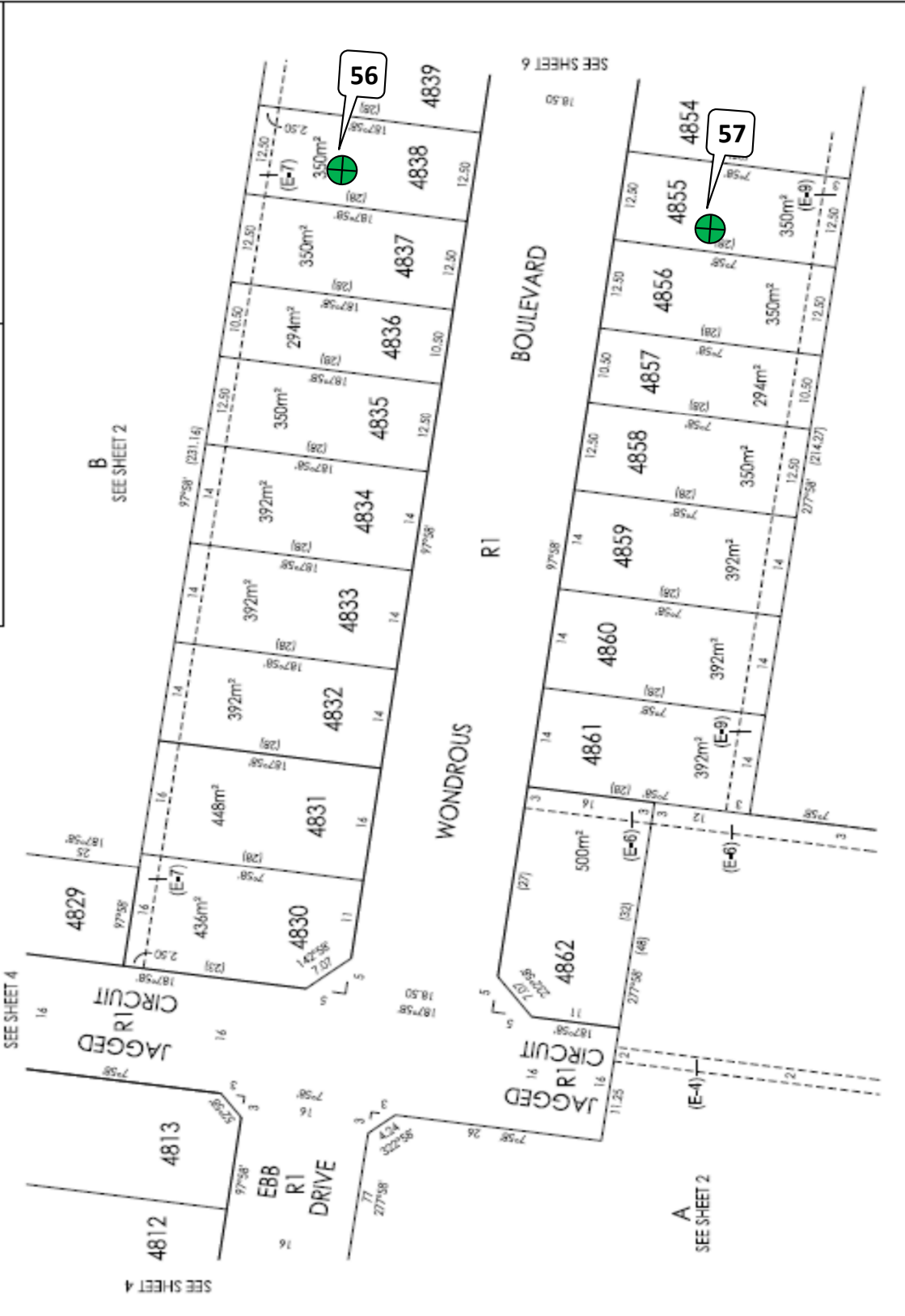


MICK CROWE
(Approved Signatory)

Issue Date: 24/10/2023

PLAN NUMBER
PS 844183G

PLAN OF SUBDIVISION



REF: 8352/48	VERSION: 4	ORIGINAL SHEET SIZE A3	SHEET 5
LICENSED SURVEYOR: SIMON COX			
SCALE	1:500		
Breese Pitt Dixon Pty Ltd 1/19 Cato Street Hawthorn East Vic 3123 Ph: 8823 2300 Fax: 8823 9310			



GEOTECHNICAL LABORATORIES

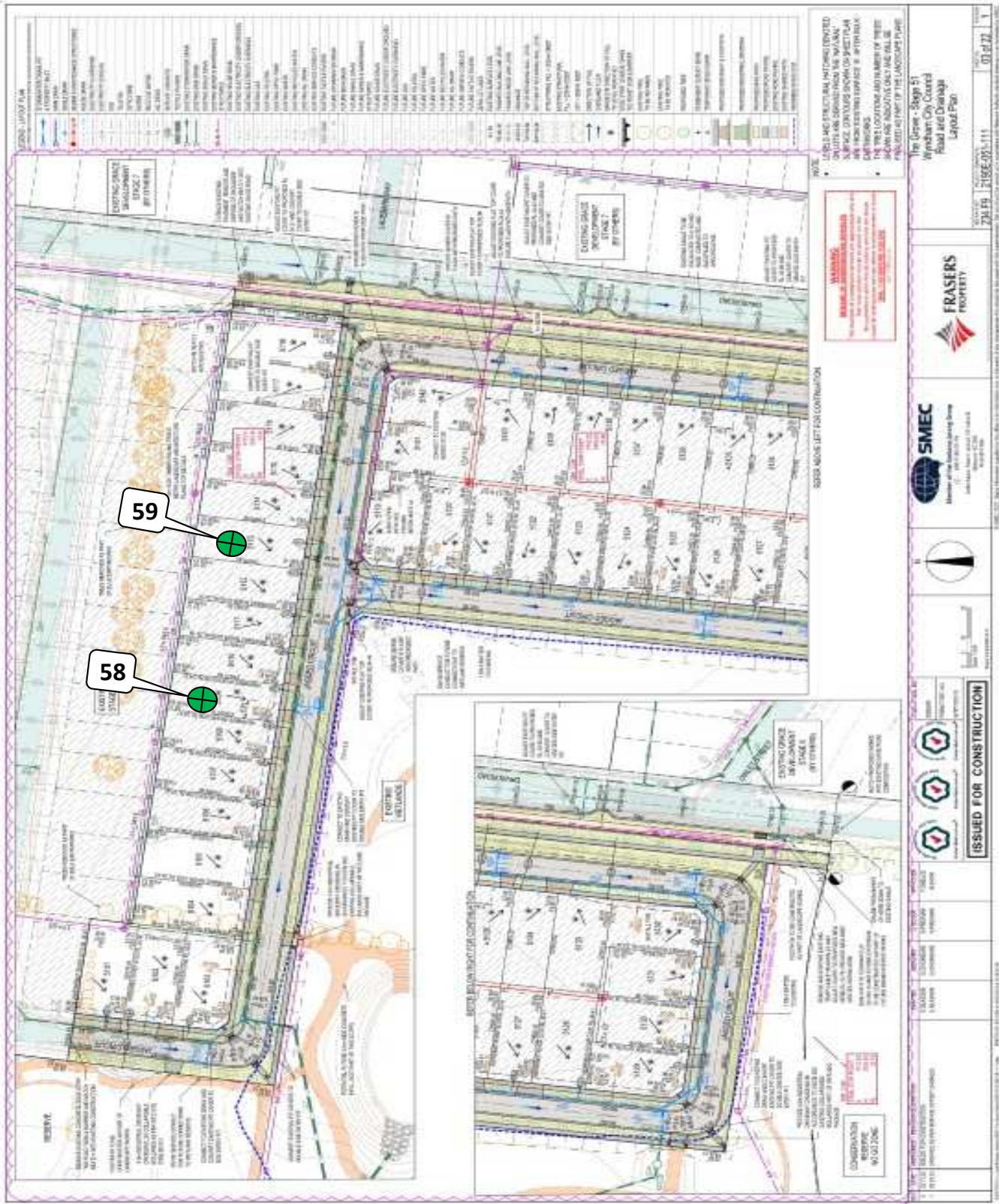
GEOTECHNICAL LABORATORIES
ACN 102 571 077

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

CLIENT: SYMON BROS
LOCATION: The Grove South West Precinct, Stage 48 & 51
Sketch indicating compaction test locations

DATE: 29/07/2022
OPERATOR: BM
SCALE: NTS

JOB No.: 9005/039A
CHECKED: KK
FIGURE No: 1 of 2



GEOTECHNICAL LABORATORIES
ACN 102 571 077

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

CLIENT: SYMON BROS

DATE: 29/07/2022

JOB No.: 9005/039A

LOCATION: The Grove South West Precinct, Stage 48 & 51

OPERATOR: BM

CHECKED: KK

Sketch indicating compaction test locations

SCALE: NTS

FIGURE No: 2 of 2



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.: # 9005/040A

LOCATION: SYMON BROS - The Grove, South West Precinct, Stage 48 & 51

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)	
30/07/22	60	<i>Refer to #9005/041A for approx. test site locations.</i>	1.96	21.0	98.5	✘ 1.99	23.0	175	2.0 Drier	91.5	10	0	0	
30/07/22	61		2.00	25.5	100.5	1.99	23.5	175	2.0 Wetter	107.5	0	0	0	
30/07/22	62		1.89	24.0	95.0	✘ 1.98	23.5	175	0.0 Wetter	101.0	3	0	0	
30/07/22	63		1.99	25.5	97.5	✘ 2.04	24.0	175	1.5 Wetter	106.5	11	0	0	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 10:05am 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.

This Report Supersedes Report # 9005/040

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



Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1



WORLD RECOGNISED ACCREDITATION

Accredited for compliance with ISO/IEC

17025 - Testing

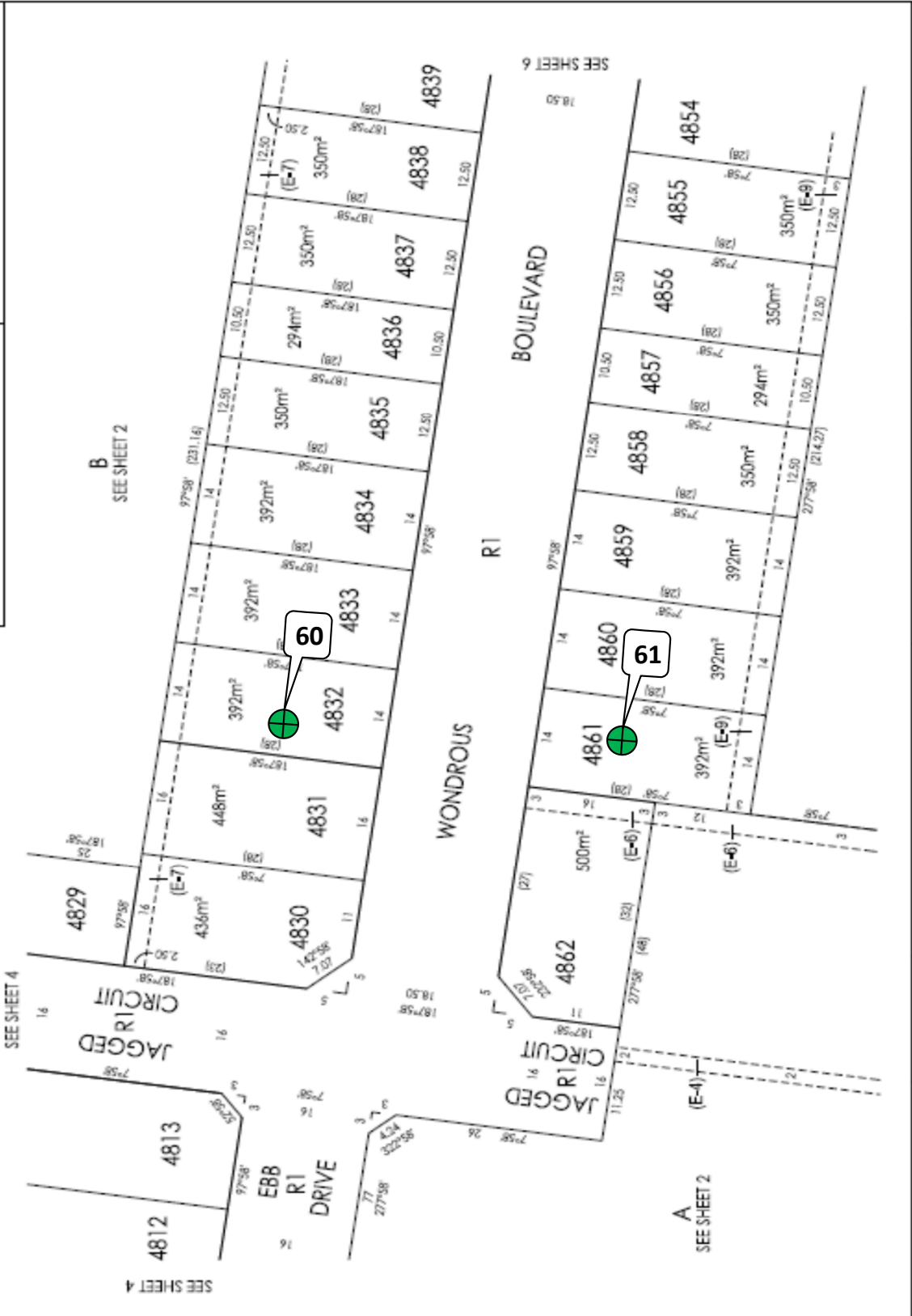
NATA Accredited Laboratory Number 14561

MICK CROWE
(Approved Signatory)

Issue Date: 24/10/2023

PLAN NUMBER
PS 844183G

PLAN OF SUBDIVISION



REF: 8352/48	VERSION: 4	ORIGINAL SHEET SIZE A3	SHEET 5
LICENSED SURVEYOR: SIMON COX			
SCALE 1:500			
Breese Pitt Dixon Pty Ltd 1/19 Cato Street Hawthorn East Vic 3123 Ph: 8823 2300 Fax: 8823 9310			



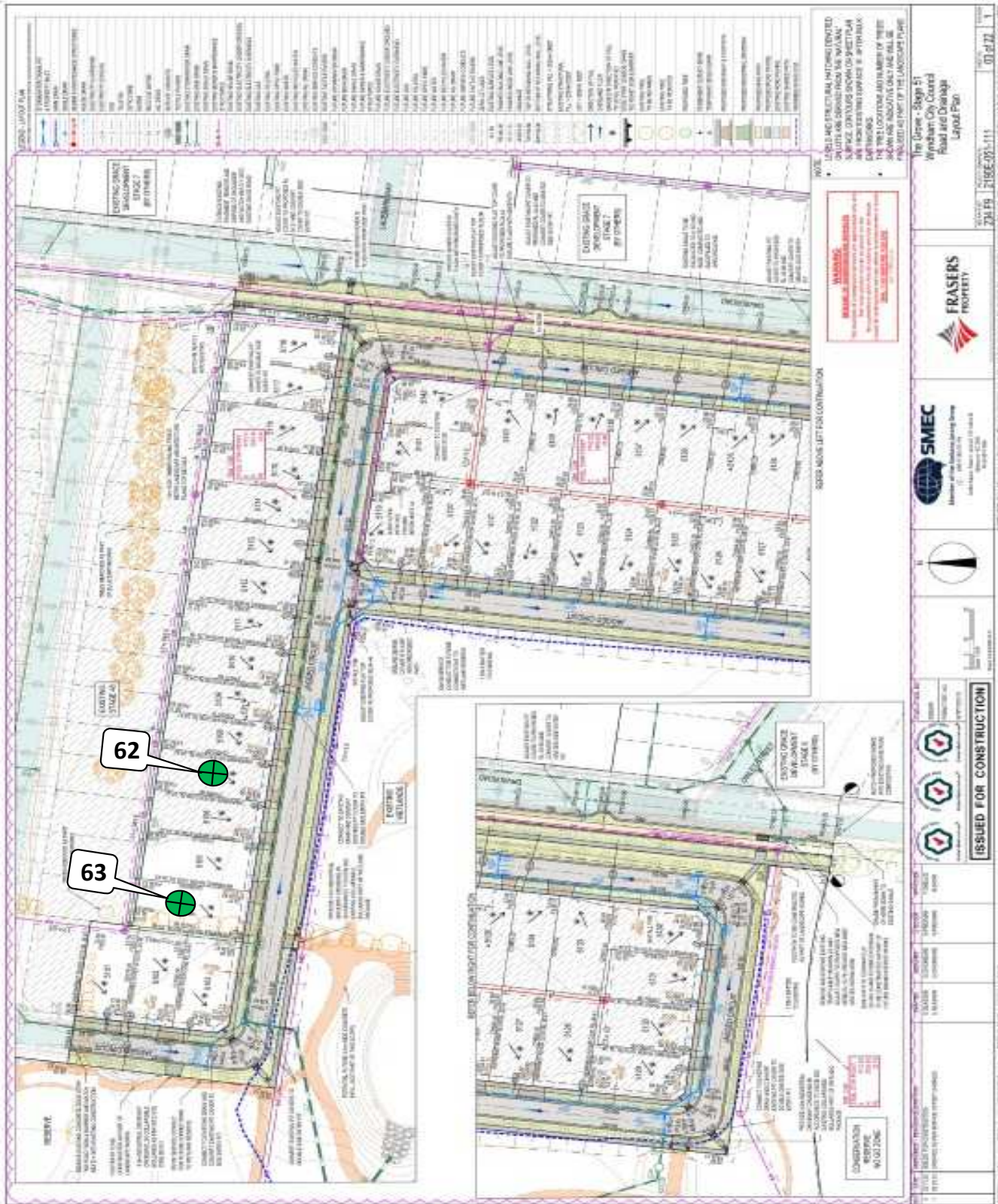
GEOTECHNICAL LABORATORIES
ACN 102 571 077

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

CLIENT: SYMON BROS
LOCATION: The Grove South West Precinct, Stage 48 & 51
Sketch indicating compaction test locations

DATE: 30/07/2022
OPERATOR: TC
SCALE: NTS

JOB No.: 9005/041A
CHECKED: KK
FIGURE No: 1 of 2



GEOTECHNICAL LABORATORIES

GEOTECHNICAL LABORATORIES
ACN 102 571 077

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 48 & 51

Sketch indicating compaction test locations

DATE: 30/07/2022

OPERATOR: TC

SCALE: NTS

JOB No.: 9005/041A

CHECKED: KK

FIGURE No: 2 of 2

NOTES:

- 1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
- 2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
- 3. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
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- 15. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
- 16. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
- 17. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
- 18. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
- 19. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
- 20. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.

WARNING:

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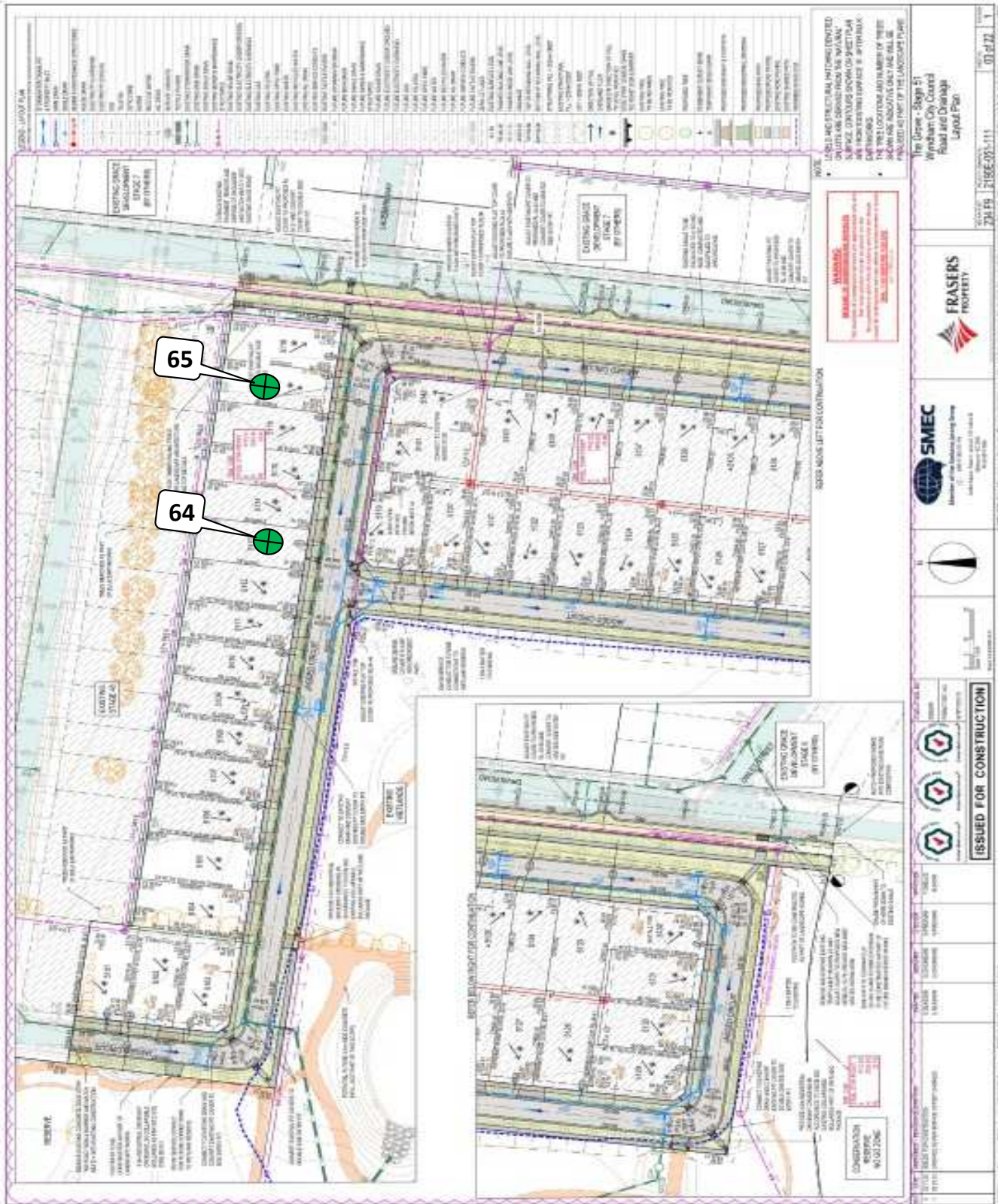
ISSUED FOR CONSTRUCTION

SMC
 Member of the SMC Group
 1000 South Street, Suite 1000, Melbourne, VIC 3000
 Tel: (03) 9412 1000
 Fax: (03) 9412 1001
 Email: info@smc.com.au

FRASERS PROPERTY

THE GROVE - Stage 51
 Wetland City Council
 Road and Drainage
 Layout Plan

DATE: 30/07/2022
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 SCALE: NTS



**GEOTECHNICAL
LABORATORIES**

GEOTECHNICAL LABORATORIES

ACN 102 571 077

14 Ravenhall Way, Ravenhall, Vic 3023

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 48 & 51

Sketch indicating compaction test locations

DATE: 1/08/2022

OPERATOR: BM

SCALE: NTS

JOB No.: 9005/044A

CHECKED: KK

FIGURE No: 1 of 2

PLAN NUMBER
PS 844183C

PLAN OF SUBDIVISION



REF: 8352/48	VERSION: 4	ORIGINAL SHEET SIZE A3
LISCENCED SURVEYOR: SIMON COX		
SCALE	1:500	
Breese Pitt Dixon Pty Ltd 1/19 Cain Street Hawthorn East, Vic. 3123 Ph: 8823 2300 Fax: 8823 2310		



GEOTECHNICAL LABORATORIES

GEOTECHNICAL LABORATORIES
ACN 102 571 077

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 48 & 51

Sketch indicating compaction test locations

DATE: 1/08/2022

OPERATOR: BM

SCALE: NTS

JOB No.: 9005/044A

CHECKED: KK

FIGURE No: 2 of 2

PLAN NUMBER
PS 844183G

PLAN OF SUBDIVISION



Breese Pitt Dixon Pty Ltd
1119 Cain Street
Hawthorn East, Vic. 3123
Ph: 8523 2300 Fax: 8523 2310

SCALE
1:500



REF: 8352/48
VERSION: 4
LICENSED SURVEYOR: SIMON COX

ORIGINAL SHEET SIZE A3
SHEET 5



GEOTECHNICAL LABORATORIES

GEOTECHNICAL LABORATORIES

ACN 102 571 077

14 Ravenhall Way, Ravenhall, Vic 3023

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 48 & 51

Sketch indicating compaction test locations

DATE: 2/08/2022

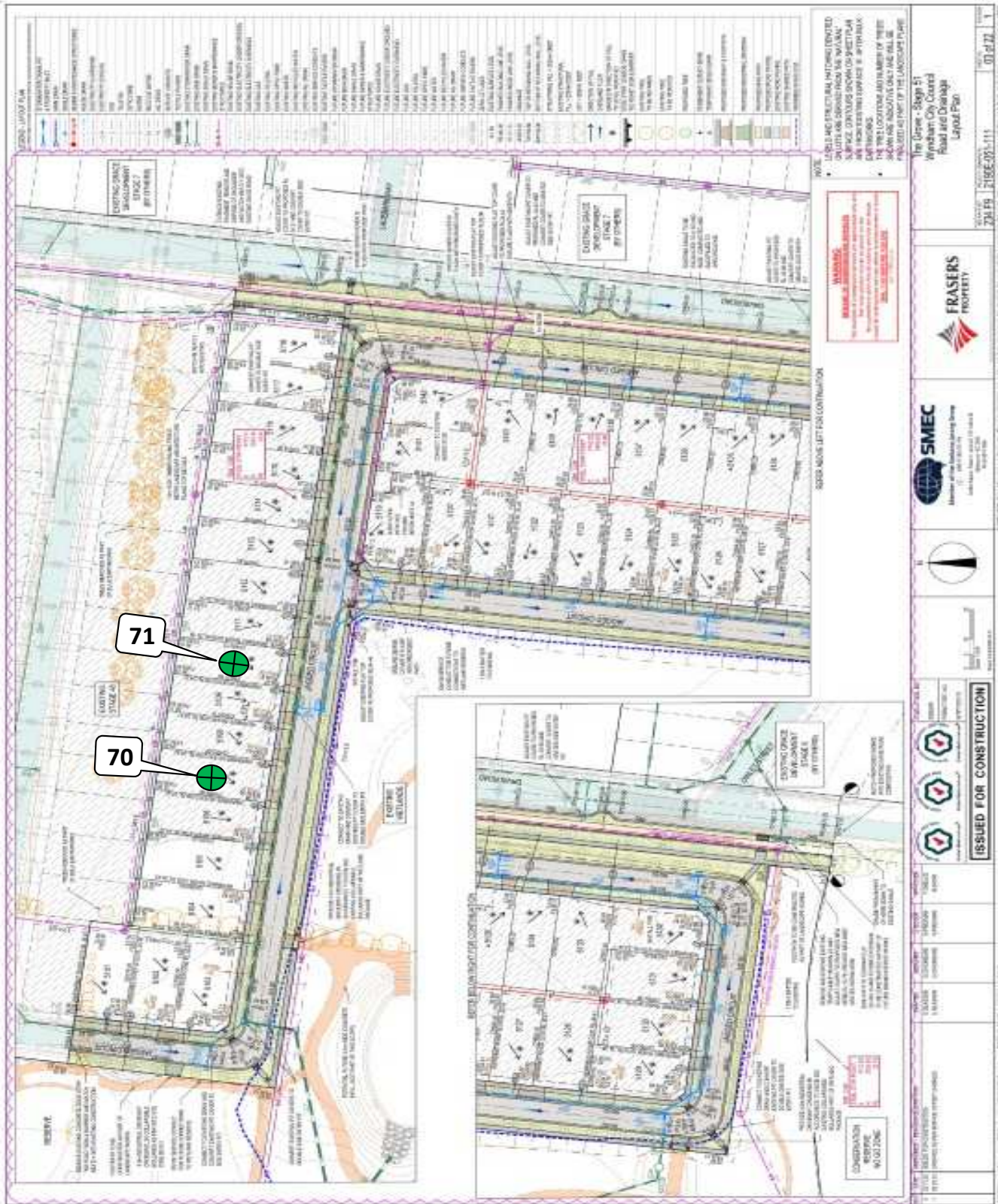
OPERATOR: BM

SCALE: NTS

JOB No.: 9005/046A

CHECKED: KK

FIGURE No: 1 of 2



**GEOTECHNICAL
LABORATORIES**

GEOTECHNICAL LABORATORIES

ACN 102 571 077

14 Ravenhall Way, Ravenhall, Vic 3023

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 48 & 51

Sketch indicating compaction test locations

DATE: 2/08/2022

OPERATOR: BM

SCALE: NTS

JOB No.: 9005/046A

CHECKED: KK

FIGURE No: 2 of 2



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.: # 9005/047A

LOCATION: SYMON BROS - The Grove, South West Precinct, Stage 48 & 51

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)	
3/08/22	72	<i>Refer to #9005/048A for approx. test site locations.</i>	1.92	22.0	97.5	✘ 1.97	22.5	175	0.5 Drier	97.0	6	0	0	
3/08/22	73		1.92	23.5	99.0	1.94	25.0	175	1.5 Drier	93.0	0	0	0	
3/08/22	74		1.88	23.0	99.0	1.90	26.0	175	3.0 Drier	88.5	0	0	0	
3/08/22	75		2.03	22.5	106.0	1.92	24.5	175	1.5 Drier	93.0	0	0	0	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 12:40pm 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.

This Report Supersedes Report # 9005/047

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



Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

MICK CROWE
(Approved Signatory)

Issue Date: 24/10/2023



Accredited for compliance with ISO/IEC 17025 - Testing

NATA Accredited Laboratory Number 14561

PLAN OF SUBDIVISION
 PS 844183



REF: 8352/48	VERSION: 4	ORIGINAL SHEET SIZE A3
LICENSED SURVEYOR: SIMON COX		
SCALE	1:500	
Breese Pitt Dixon Pty Ltd 1/19 Cain Street Hawthorn East, Vic 3123 PH: 8823 2300 FAX: 8823 2310		



GEOTECHNICAL LABORATORIES

GEOTECHNICAL LABORATORIES

ACN 102 571 077

14 Ravenhall Way, Ravenhall, Vic 3023

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 48 & 51

Sketch indicating compaction test locations

DATE: 3/08/2022

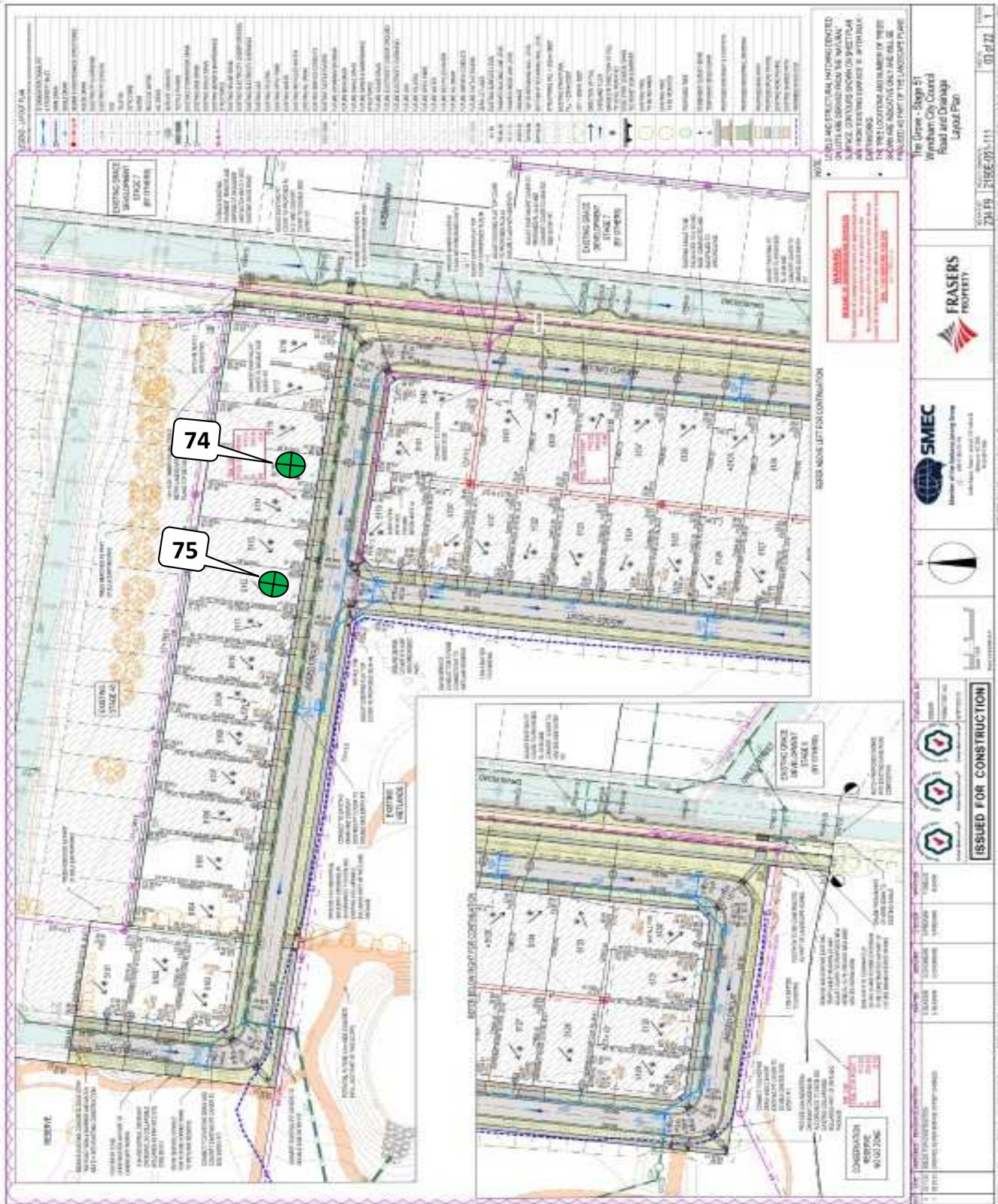
OPERATOR: BM

SCALE: NTS

JOB No.: 9005/048A

CHECKED: KK

FIGURE No: 1 of 2



GEOTECHNICAL LABORATORIES

GEOTECHNICAL LABORATORIES
ACN 102 571 077

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 48 & 51

Sketch indicating compaction test locations

DATE: 3/08/2022

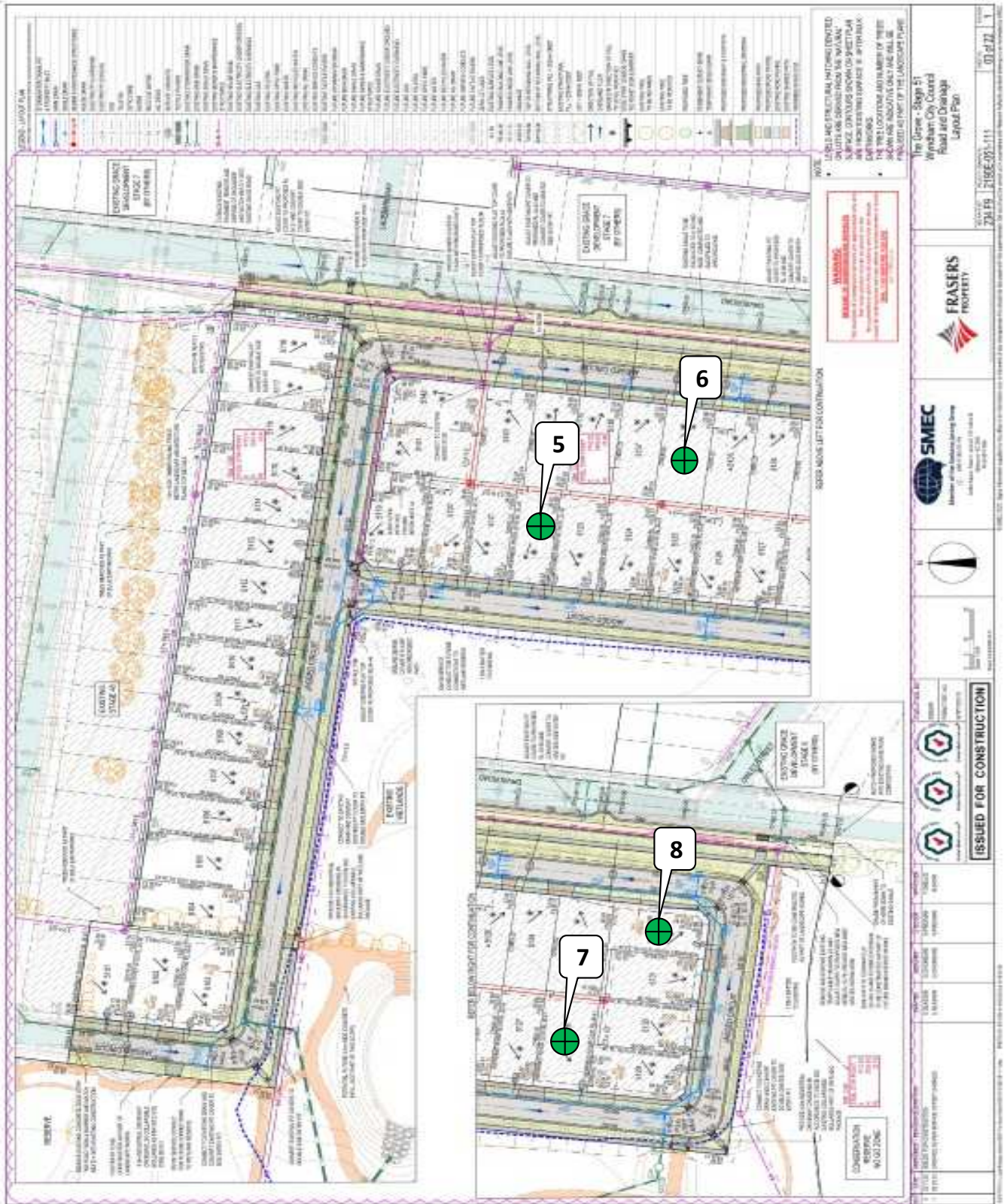
OPERATOR: BM

SCALE: NTS

JOB No.: 9005/048A

CHECKED: KK

FIGURE No: 2 of 2



GEOTECHNICAL LABORATORIES

GEOTECHNICAL LABORATORIES

ACN 102 571 077

14 Ravenhall Way, Ravenhall, Vic 3023

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 51

Sketch indicating compaction test locations

DATE: 02/07/2022

OPERATOR: PV

SCALE: NTS

JOB No.: 9008/006A

CHECKED: DM

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.: # 9008/008A

LOCATION: SYMON BROS - The Grove SWP - Stage 51

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)	
5/07/22	9	Refer to #9008/009A for approx. test site locations.	1.86	31.0	99.0	1.88	30.5	175	0.5 Wetter	101.5	0	0	1100	
5/07/22	10		1.91	28.0	101.5	1.88	28.5	175	1.0 Drier	97.5	0	0	1000	
5/07/22	11		1.91	27.5	101.0	1.89	28.0	175	0.5 Drier	98.0	0	0	1100	
5/07/22	12		1.96	24.0	102.5	1.91	25.0	175	1.0 Drier	96.0	0	0	1000	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-


NOTES: Clayey Fill Ex. Onsite Compaction specimens sampled after compaction.
 Test sites located - Geolab Procedure 4, Part 4.4. Start Time:10:20am 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.
 This Report Supersedes Report # 9008/008 Moisture Content: AS 1289 2.1.1
 Soil Layer thickness: 200mm Compaction Test: AS 1289 5.7.1
 Hilf Density Ratio and Hilf Moisture Variation ,Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1
 Field Density, Nuclear Gauge: AS 1289 5.8.1
 Materials Sampled : AS 1289 1.2.1 Clause 6.4(b)

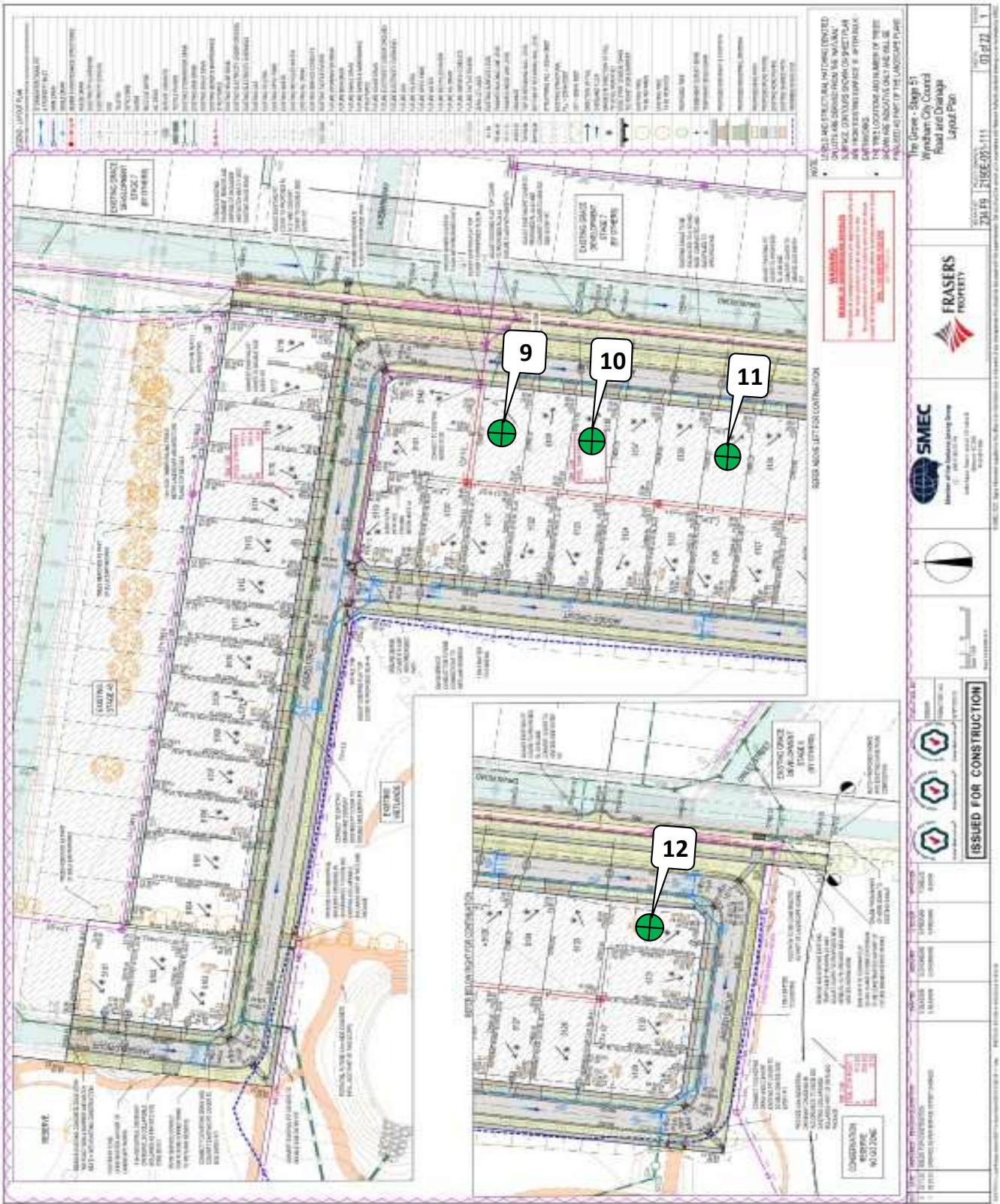


WORLD RECOGNISED ACCREDITATION

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



MICK CROWE
 (Approved Signatory)
 Issue Date: 11/10/2023



GEOTECHNICAL LABORATORIES
 ACN 102 571 077

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 51

Sketch indicating compaction test locations

DATE: 05/07/2022

OPERATOR: WS/BM

SCALE: NTS

JOB No.: 9008/009A

CHECKED: DM

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.: # 9008/010A

LOCATION: SYMON BROS - The Grove SWP - Stage 51

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)	
6/07/22	13	<i>Refer to #9008/011A for approx. test site locations.</i>	2.00	25.0	104.5	1.92	25.5	175	0.5 Drier	98.0	0	0	1000	
6/07/22	14		1.85	27.0	96.5	1.92	25.5	175	1.5 Wetter	106.0	0	0	1000	
6/07/22	15		1.84	23.0	96.0	1.91	23.0	175	0.0 Drier	100.0	0	0	950	
6/07/22	16		1.83	28.5	96.0	1.91	28.0	175	0.5 Wetter	102.0	0	0	950	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

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.

This Report Supersedes Report # 9008/010

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)

✘

❖

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

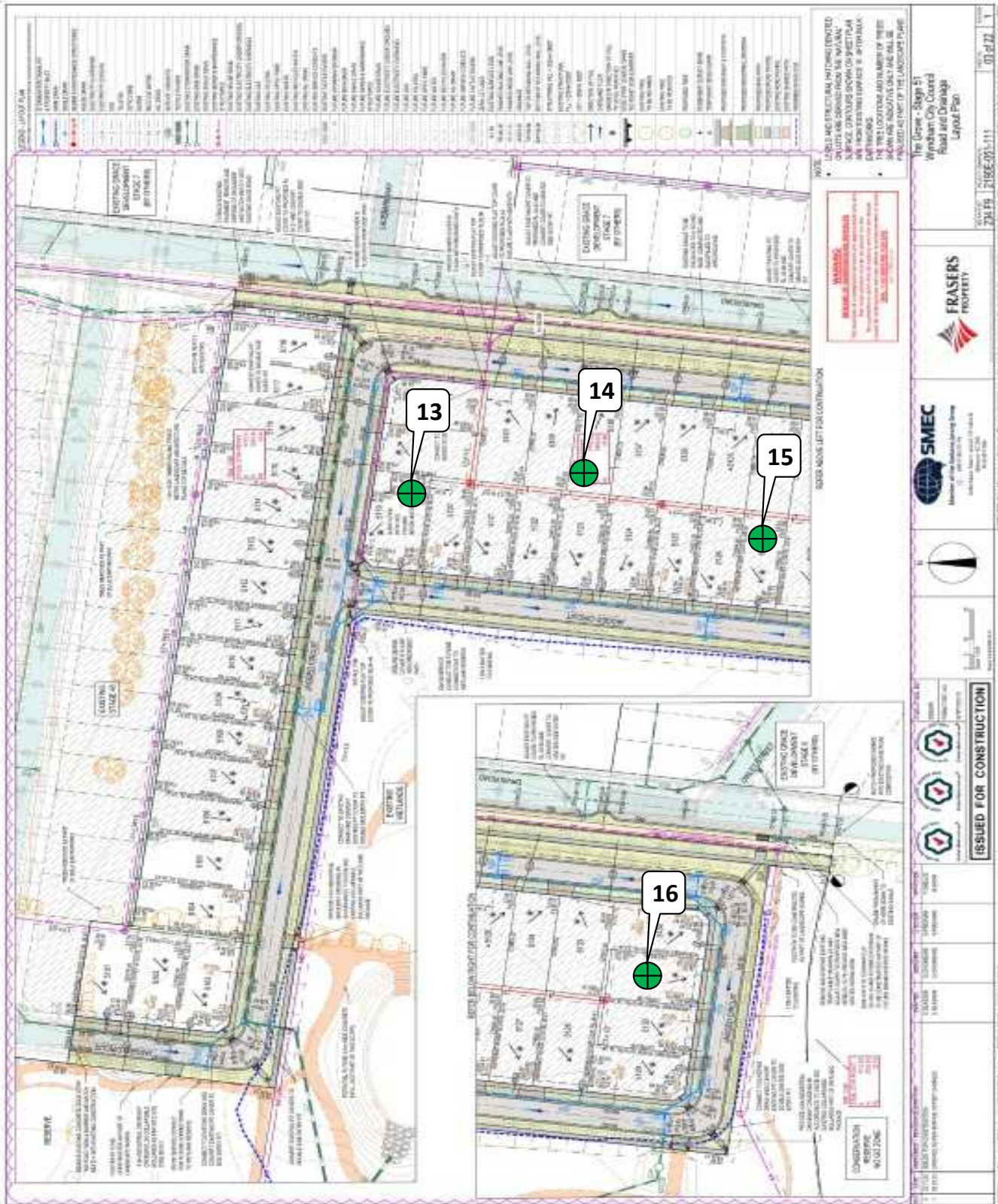
MICK CROWE
(Approved Signatory)

Issue Date: 11/10/2023



Accredited for compliance with ISO/IEC 17025 - Testing

NATA Accredited Laboratory Number 14561



GEOTECHNICAL LABORATORIES

GEOTECHNICAL LABORATORIES
ACN 102 571 077

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 51

Sketch indicating compaction test locations

DATE: 06/07/2022

JOB No.: 9008/011A

OPERATOR: AB

CHECKED: DM

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.: # 9008/013A

LOCATION: SYMON BROS - The Grove, South West Precinct, Stage 51

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m ³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIATION FROM OPTIMUM MOISTURE CONTENT (%)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
14/07/22	17	<i>Refer to #9008/014A for approx. test site locations.</i>	1.96	29.0	102.0	1.93	25.0	175	3.5 Wetter	114.5	0	0	600
14/07/22	18		1.98	28.5	101.5	1.95	24.5	175	4.0 Wetter	115.5	0	0	600
14/07/22	19		2.03	29.5	103.0	1.97	25.5	175	4.0 Wetter	115.0	0	0	600
14/07/22	20		2.04	26.0	106.0	1.92	25.0	175	1.0 Wetter	103.0	0	0	600
14/07/22	21		2.00	28.0	104.5	1.92	26.0	175	2.0 Wetter	107.0	0	0	600
-	-		-	-	-	-	-	-	-	-	-	-	-

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 12:50pm Finish Time: 1:40pm

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.

This Report Supersedes Report # 9008/013

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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Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

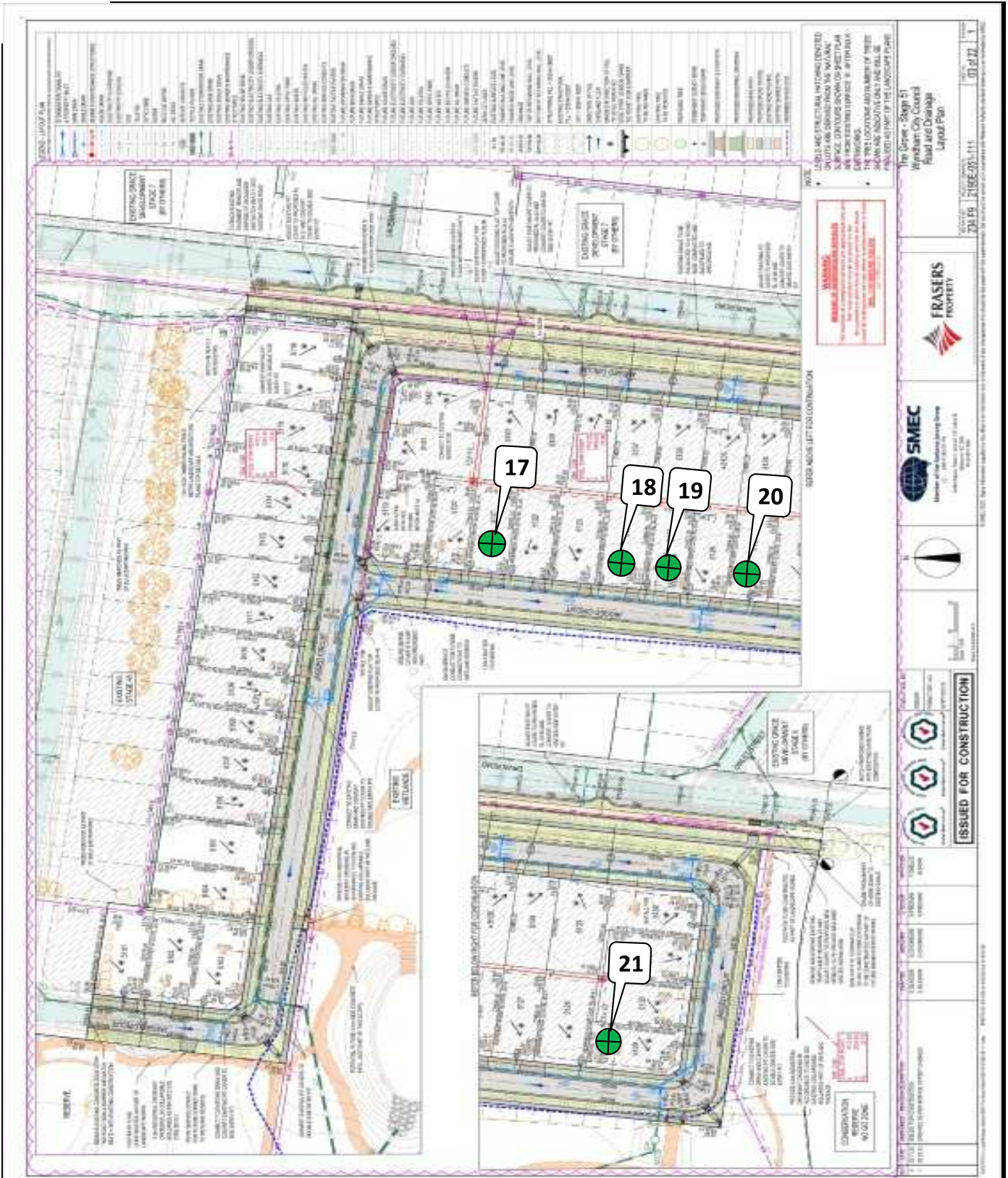
MICK CROWE
(Approved Signatory)

Issue Date: 11/10/2023



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

NATA Accredited Laboratory Number 14561



GEOTECHNICAL LABORATORIES

GEOTECHNICAL LABORATORIES

ACN 102 571 077

14 Ravenhall Way, Ravenhall, Vic 3023

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 51

Sketch indicating compaction test locations

DATE: 14/07/2022

JOB No.: 9008/014A

OPERATOR: BM

CHECKED: KK

SCALE: NTS

FIGURE No: -



GEOTECHNICAL LABORATORIES

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14 Ravenhall Way, Ravenhall, Vic 3023

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

DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 9008/015A

LOCATION: SYMON BROS - The Grove, South West Precinct, Stage 51

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)	
15/07/22	22	Refer to #9008/016A for approx. test site locations.	1.89	31.0	98.5	1.92	27.5	175	3.5 Wetter	113.5	0	0	600	
15/07/22	23		1.90	32.0	98.5	1.93	28.5	175	3.5 Wetter	112.0	0	0	600	
15/07/22	24		1.89	27.5	98.0	1.92	26.0	175	2.0 Wetter	107.0	0	0	600	
15/07/22	25		1.90	30.0	100.0	1.91	29.0	175	1.0 Wetter	102.5	0	0	600	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

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.

This Report Supersedes Report # 9008/015

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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Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1



WORLD RECOGNISED ACCREDITATION

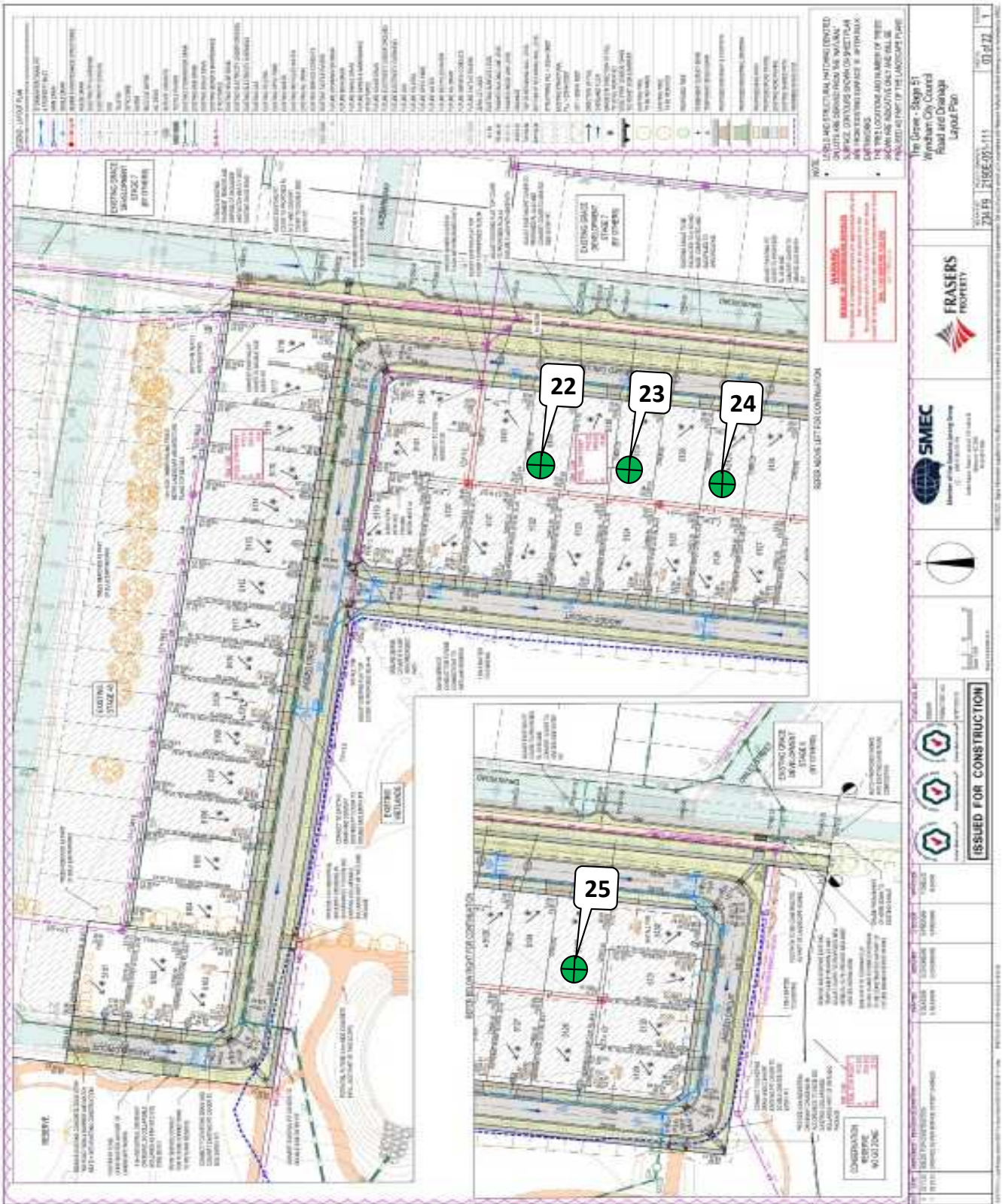
Accredited for compliance with ISO/IEC

17025 - Testing

NATA Accredited Laboratory Number 14561

MICK CROWE
(Approved Signatory)

Issue Date: 11/10/2023



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ACN 102 571 077

14 Ravenhall Way, Ravenhall, Vic 3023

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 51

Sketch indicating compaction test locations

DATE: 15/07/2022

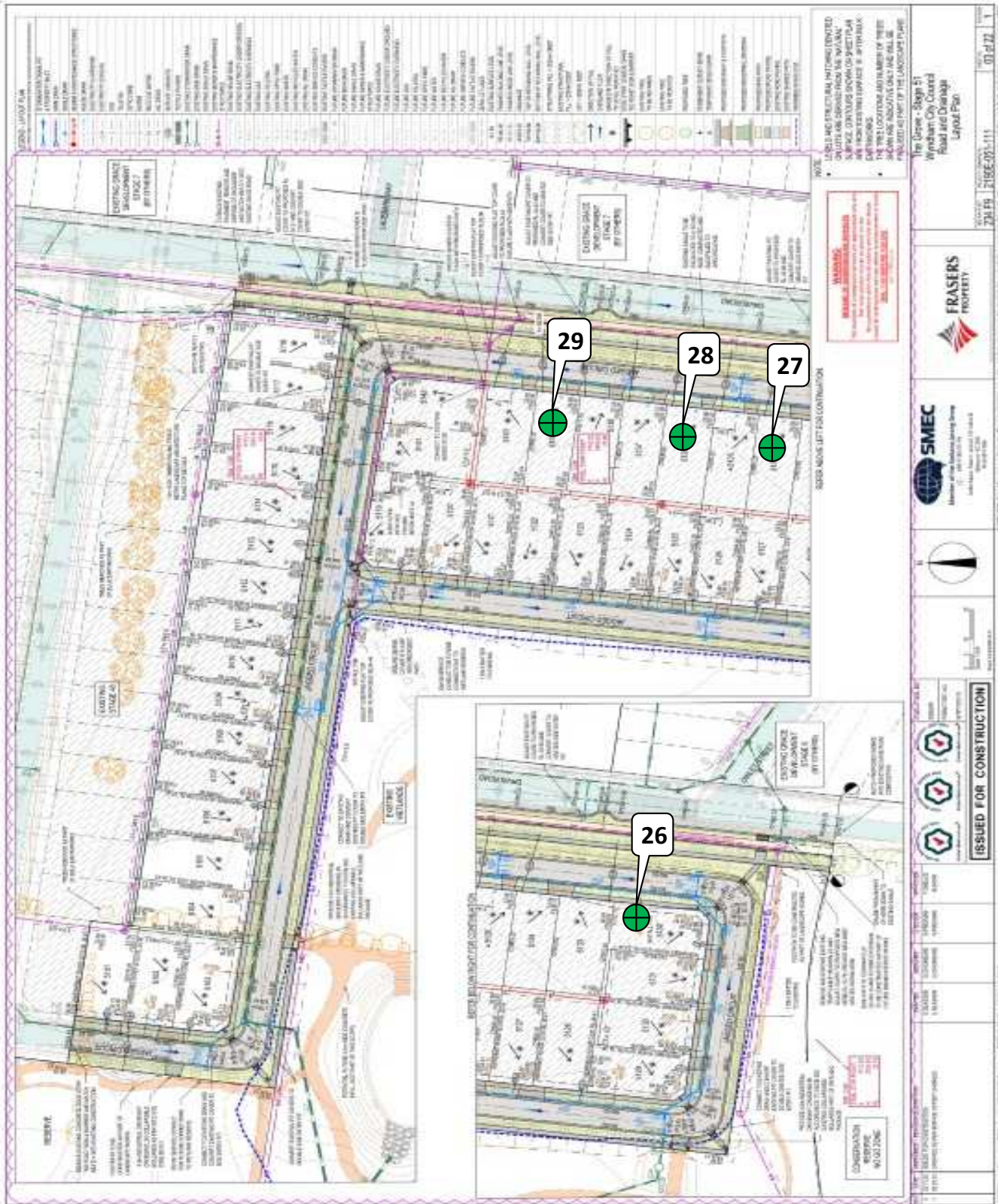
OPERATOR: TC

SCALE: NTS

JOB No.: 9008/016A

CHECKED: KK

FIGURE No: -



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ACN 102 571 077

14 Ravenhall Way, Ravenhall, Vic 3023

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 51

Sketch indicating compaction test locations

DATE: 18/07/2022

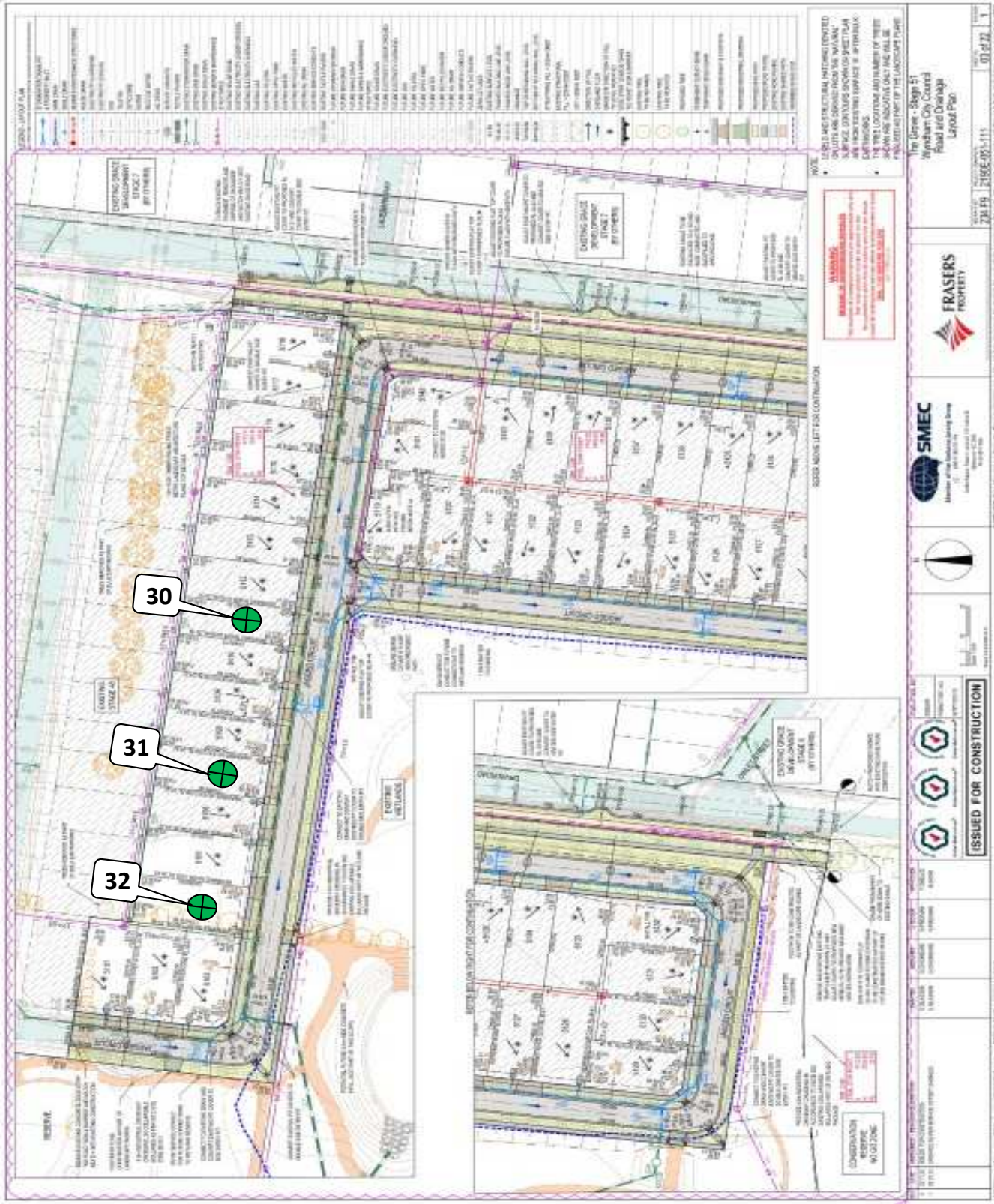
OPERATOR: BM

SCALE: NTS

JOB No.: 9008/019A

CHECKED: KK

FIGURE No: -



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CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 51

Sketch indicating compaction test locations

DATE: 19/07/2022

OPERATOR: BM

SCALE: NTS

JOB No.: 9008/021A

CHECKED: KK

FIGURE No: -



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

REPORT NO.: # 9008/024A

LOCATION: SYMON BROS - The Grove, South West Precinct, Stage 51

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)	
22/07/22	37	<i>Refer to #9008/025A for approx. test site locations.</i>	1.94	28.5	100.0	1.94	27.0	175	2.0 Wetter	106.5	0	0	300	
22/07/22	38		1.97	30.0	103.0	1.91	27.0	175	3.0 Wetter	110.5	0	0	300	
22/07/22	39		1.83	30.0	96.0	1.91	29.0	175	1.0 Wetter	103.5	0	0	300	
22/07/22	40		2.01	26.0	105.5	1.91	25.5	175	0.5 Wetter	102.0	0	0	300	
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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: 12:10pm

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

This Report Supersedes Report # 9008/024

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)

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

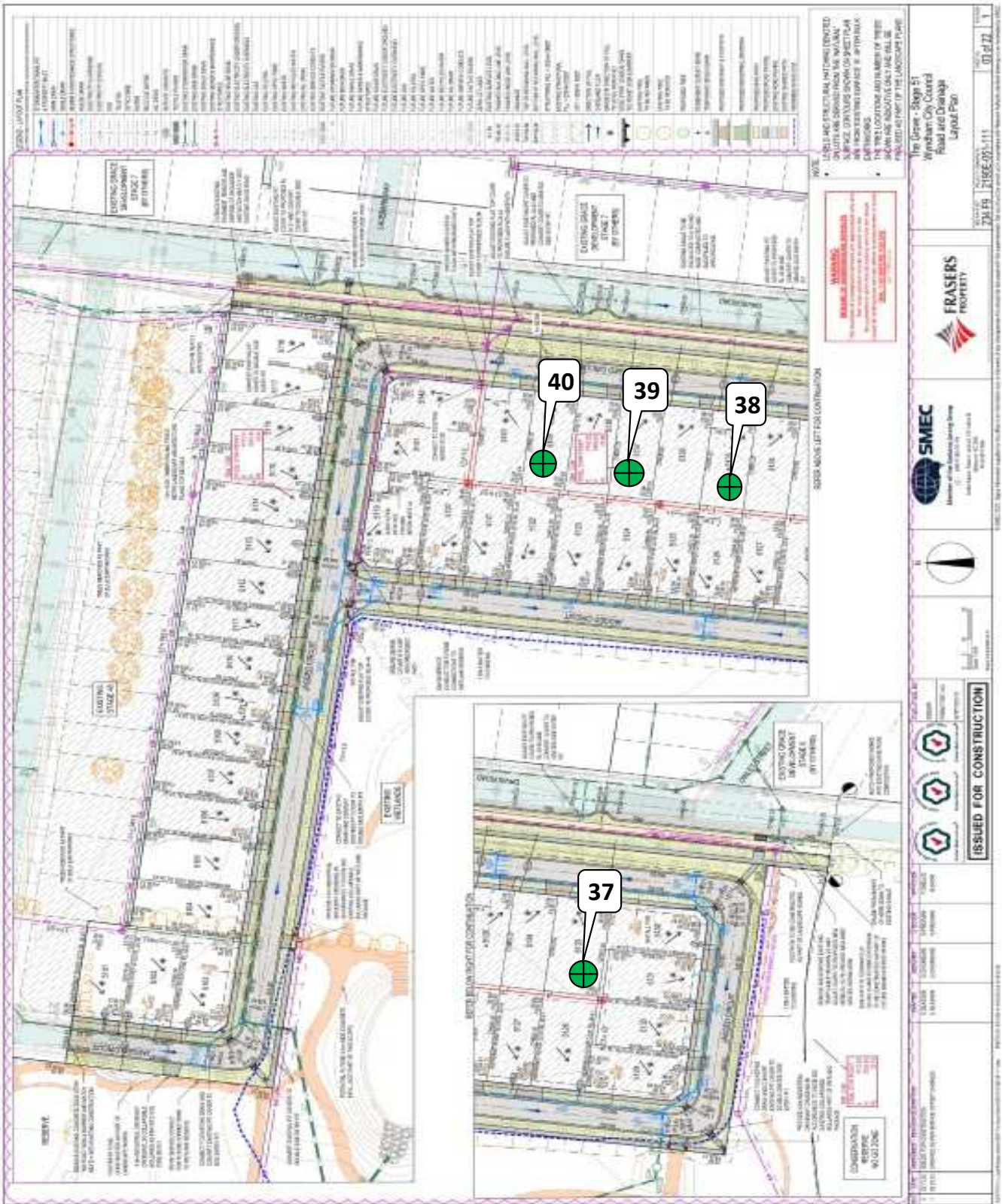
MICK CROWE
 (Approved Signatory)

Issue Date: 11/10/2023



Accredited for compliance with ISO/IEC 17025 - Testing

NATA Accredited Laboratory Number 14561



GEOTECHNICAL LABORATORIES

GEOTECHNICAL LABORATORIES
ACN 102 571 077

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 51

Sketch indicating compaction test locations

DATE: 22/07/2022

OPERATOR: BM

SCALE: NTS

JOB No.: 9008/025A

CHECKED: KK

FIGURE No: -



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DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 9008/031A

LOCATION: SYMON BROS - The Grove. South West Precinct, Stage 51

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)	
9/08/22	41	<i>Refer to #9008/032A for approx. test site locations.</i>	2.00	20.0	101.5	1.97	20.5	175	0.5 Drier	97.5	0	0	0	
9/08/22	42		2.00	19.0	101.5	1.97	21.0	175	2.0 Drier	90.0	0	0	0	
9/08/22	43		2.00	26.5	103.0	1.95	25.5	175	1.5 Wetter	105.0	0	0	0	
9/08/22	44		2.00	29.0	104.0	1.92	27.0	175	2.0 Wetter	106.5	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: 12:10pm Finish Time: 12:45pm

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.

This Report Supersedes Report # 9008/031

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)

Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

MICK CROWE
 (Approved Signatory)

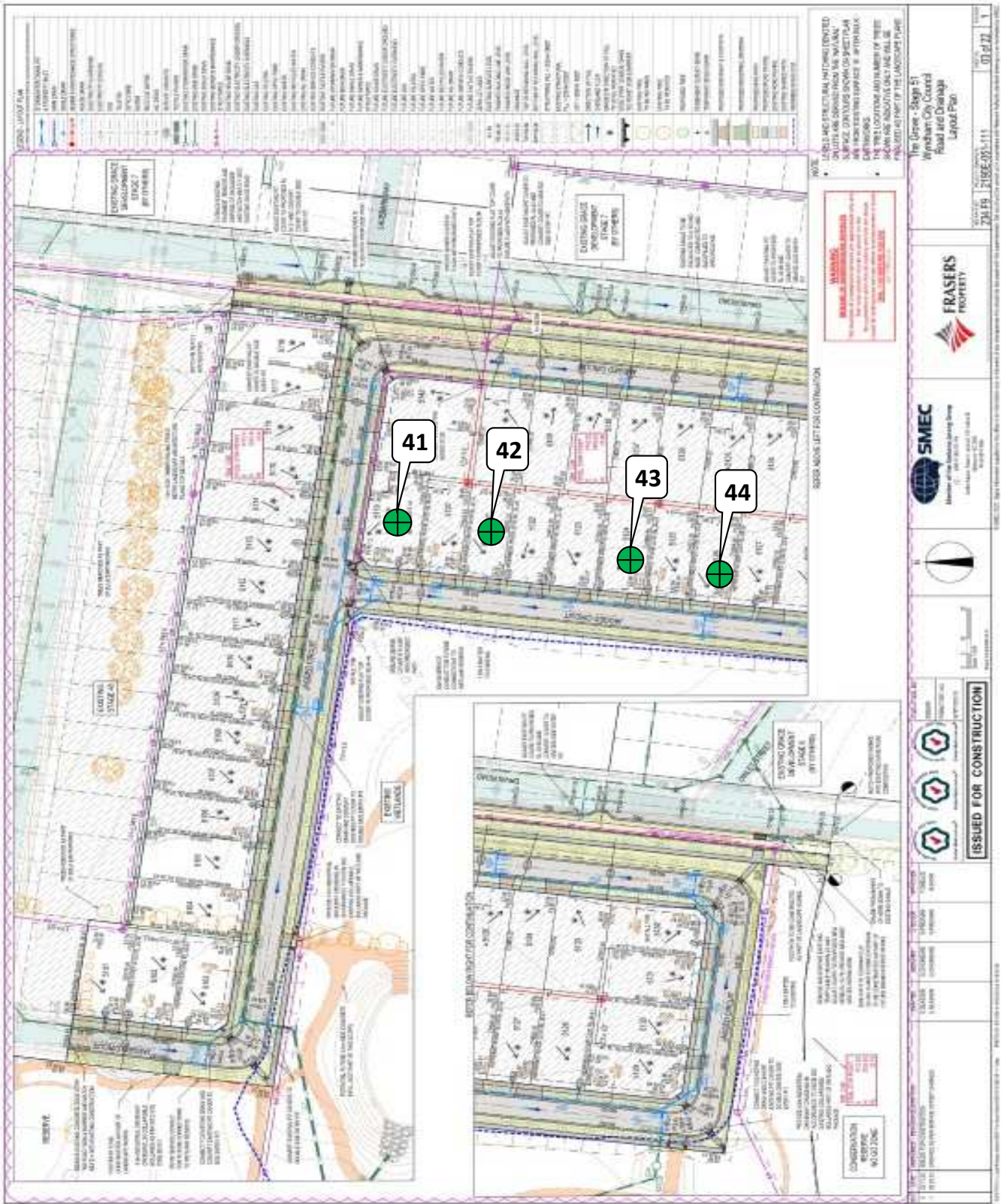
Issue Date: 11/10/2023



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14 Ravenhall Way, Ravenhall, Vic 3023

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

CLIENT: SYMON BROS

LOCATION: The Grove South West Precinct, Stage 51

Sketch indicating compaction test locations

DATE: 9/08/2022

OPERATOR: BM

SCALE: NTS

JOB No.: 9008/032A

CHECKED: KK

FIGURE No: -



GEOTECHNICAL LABORATORIES
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DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 9008/033A

LOCATION: SYMON BROS - The Grove, South West Precinct, Stage 51 & 51 Wetlands

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)	
10/08/22	45	Refer to #9008/034A for approx. test site locations.	1.99	29.0	102.5	1.95	25.5	175	3.5 Wetter	114.5	0	0	0	
10/08/22	46		1.99	29.5	103.5	1.92	27.5	175	2.0 Wetter	106.5	0	0	0	
10/08/22	47		2.03	27.5	103.0	1.96	24.5	175	3.0 Wetter	112.5	0	0	0	
10/08/22	48		1.90	30.0	100.5	1.89	28.0	175	2.0 Wetter	107.5	0	0	500	
-	-		-	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-	-

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: 12:25pm

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.

This Report Supersedes Report # 9008/033

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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Moisture Content: AS 1289 2.1.1

Compaction Test: AS 1289 5.7.1

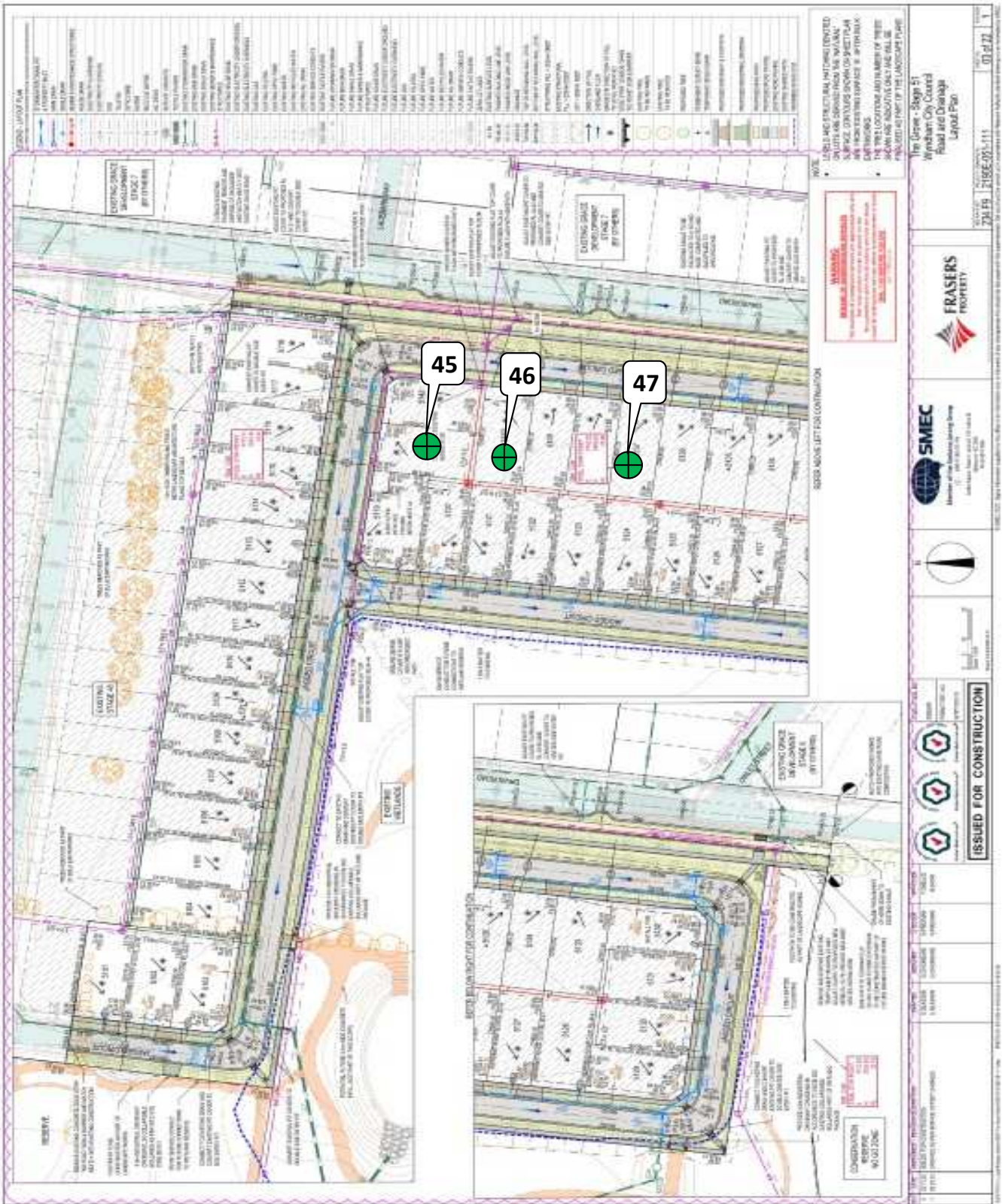
MICK CROWE
(Approved Signatory)

Issue Date: 11/10/2023



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

NATA Accredited Laboratory Number 14561



**GEOTECHNICAL
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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

DATE: 10/08/2022

JOB No.: 9008/034A

LOCATION: The Grove South West Precinct, Stage 51 & 51 V

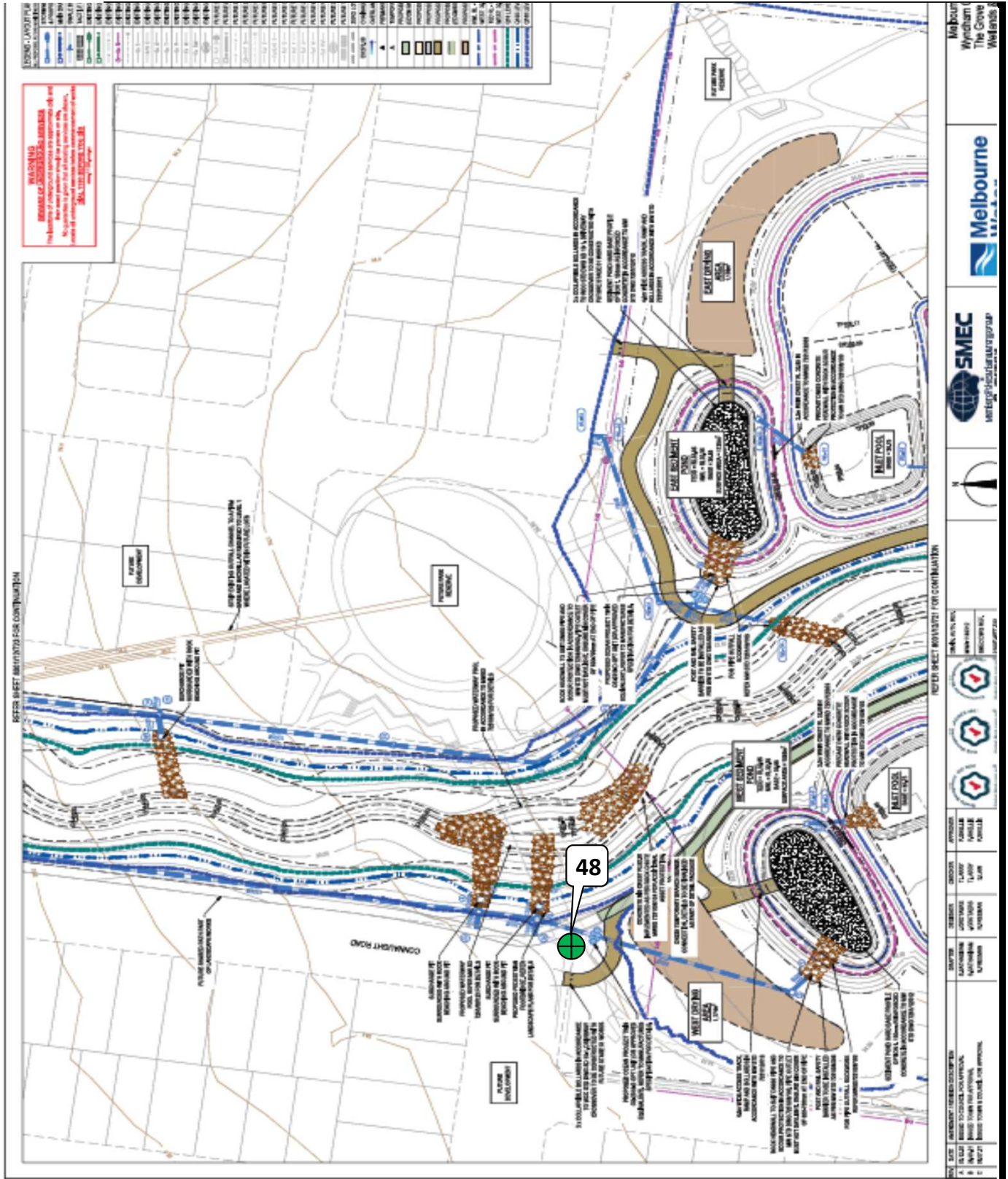
OPERATOR: BM

CHECKED: KK

Sketch indicating compaction test locations

SCALE: NTS

FIGURE No: 1 of 2



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NO.	DATE	DESCRIPTION	BY	CHECKED	STATUS
1	10/08/2022	ISSUED FOR TENDERS	BM	KK	ISSUED
2	10/08/2022	REVISED TO INCLUDE COMMENTS	BM	KK	ISSUED
3	10/08/2022	REVISED TO INCLUDE COMMENTS	BM	KK	ISSUED



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

CLIENT: SYMON BROS

DATE: 10/08/2022

JOB No.: 9008/034A

LOCATION: The Grove South West Precinct, Stage 51 & 51 V

OPERATOR: BM

CHECKED: KK

Sketch indicating compaction test locations

SCALE: NTS

FIGURE No: 2 of 2