LEVEL ONE

Reference No.: 9005-076

SURVEILLANCE

AND INSPECTION REPORT

Carried Out By



PREPARED FOR: -

SYMON BROS. CONSTRUCTIONS PTY LTD



GEOTECHNICAL LABORATORIES PTY LTD ABN 51 102 571 077 14 RAVENHALL WAY RAVENHALL 3023 PH. (03) 8361-9140

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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 48 Date: 8th of June 2023 Author: Mr. Sam Loza Reference No.: 9005-076 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 8th of June 2022 to the 20th of October 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 and Drainage Layout Plan 2190E-048-111 (Rev. 1)(2) Road and Drainage Layout Plan 2190E-048-112 (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 10th of May 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 offsite.

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

3. <u>Fill Material</u>

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
- A watercart
- A sheepsfoot compactor (815)
- Scrapers
- A padfoot roller

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. <u>Compaction Control Testing</u>

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

6. <u>Testing Frequency</u>

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. <u>Statement of Compliance</u>

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 8th of June 2022 to the 20th of October 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







LEVEL ONE

SURVEILLANCE

AND INSPECTION REPORT

APPENDIX B



GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/001

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140 LOCATION: SYMON BROS - The Grove - South West Precinct - Stage 48 & 49

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	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)
8/06/22	1		1.91	21.0	98.5	∞ 1.94	23.0	175	2.0 Drier	90.5	5	0	400
8/06/22	2		1.91	23.5	98.0	1.94	23.0	175	0.5 Wette	102.0	0	0	400
8/06/22	3	Refer to #9005/002 for	1.94	20.5	101.0	1.92	23.0	175	2.0 Drier	90.5	0	0	400
8/06/22	4	locations.	1.87	25.0	95.0	⊮ 1.97	23.0	175	2.0 Wette	108.5	4	0	400
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite				Compaction	n specimens	s sampled	after comp	action.			
	Test s	ites located - Geolab Procedure 4, P	'art 4.4.			Start Time:	12:30pm	Finish Ti	me:1:15pm				
A Hilf Rap	id Cor	mpaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	in the Con	npaction Pa	arameters ta	abulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1				
Soil Layer	thickr	ness: 200mm				Compa	action Test:	AS 1289	5.7.1		M	LQ.	
Hilf Densit	Hilf Density Ratio and Hilf Moisture Variation, Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1												
Field Den	Field Density, Nuclear Gauge: AS 1289 5.8.1 Accredited for compliance with ISO/IEC												/E
Materials	Sampl	ed: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	e <u>sting</u>		<u></u>		(Approv	ed Sign	atory)
✤ Indicate	s APC	WD				<u>NATA Acc</u>	redited Labord	atory Numb	<u>er 14561</u>		Issue D	0ate: 10/6/2	2022







GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/004

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140 LOCATION: SYMON BROS - The Grove, South West Precinct, Stage 48

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIA FRO OPTI MOIS CONT (%	ATION OM MUM TURE TENT 6)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
17/06/22	5		1.86	21.0	97.5	1.90	23.5	175	2.5	Drier	89.5	0	0	1200
17/06/22	6		1.96	28.0	101.5	1.92	26.5	175	1.5 \	Wetter	105.0	0	0	1200
17/06/22	7	Refer to #9005/005 for	2.04	25.5	103.0	1.98	24.0	175	2.0 \	Wetter	107.5	0	0	1200
-	-	locations.	-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite				Compaction	n specimens	s sampled	after	comp	action.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	2:00pm F	-inish Tim	ie: 2:3	0pm				
A Hilf Rap	id Co	mpaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npactio	on Pa	rameters ta	bulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1					
Soil Layer	thickr	ness: 200mm				Compa	action Test:	AS 1289	5.7.1			M	LQ.	
Hilf Densi	f Density Ratio and Hilf Moisture Variation, Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1													
Field Den	ield Density, Nuclear Gauge: AS 1289 5.8.1 Accredited for compliance with ISO/IEC MICK CROWE													
Materials	Materials Sampled : AS 1289 1.2.1 Clause 6.4(b)												atory)	
₩	ACCREDITED FOR <u>NATA Accredited Laboratory Number 14561</u> Issue Date: 22/6/2022												2022	
*														







GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/006

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140 LOCATION: SYMON BROS - The Grove, South West Precinct, Stage 48 & 50

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	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)
21/06/22	8		1.99	20.0	104.5	1.91	22.5	175	3.0 Drie	87.5	0	0	300
21/06/22	9		1.97	26.0	98.5	⊯ 1.99	24.0	175	2.0 Wette	r 107.5	5	0	0
21/06/22	10	Refer to #9005/007 for	1.91	25.0	96.0	1.98	24.0	175	0.5 Wette	r 103.0	0	0	0
21/06/22	11	locations.	1.98	21.0	103.0	1.93	23.0	175	2.5 Drie	89.5	0	0	1000
21/06/22	12		1.93	21.5	101.5	1.90	24.0	175	2.5 Drie	89.0	0	0	1000
21/06/22	13		1.93	20.5	98.5	∞ 1.96	23.0	175	2.0 Drie	90.5	5	0	1000
NOTES:	Claye	ey Fill Ex. Onsite				Compaction	n specimens	s sampled	after com	oaction.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	1:10pm I	-inish Tim	e: 2:20pm				
A Hilf Rap	id Co	mpaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npaction P	arameters ta	abulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1				
Soil Layer	thick	ness: 200mm				Compa	action Test:	AS 1289	5.7.1		M	LQ.	
Hilf Densit	ty Rat	o and Hilf Moisture Variation ,Hil	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289 5.7.1		ſ	/	
Field Dens	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO/	<i>TEC</i>		MIC	K CROV	/E
Materials	Samp	ed: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	esting				(Approv	ed Sign	atory)
✤ Indicate	s APC	WD				NATA Acc	redited Labor	atory Numb	<u>er 14561</u>		Issue D)ate: 23/6/2	2022









GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/008

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140 LOCATION: SYMON BROS - The Grove SWP - Stage 48 & 49

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)	VARIA FR OPT MOIS CON	ATION OM IMUM TURE TENT %)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
23/06/22	14		2.02	27.5	102.5	∞ 1.97	25.5	175	2.0	Wetter	108.0	6	0	-
23/06/22	15		2.00	26.0	101.0	∞ 1.98	23.5	175	2.5	Wetter	110.5	4	0	-
23/06/22	16	Refer to #9005/009 for	1.90	23.0	96.0	∞ 1.98	21.5	175	1.0	Wetter	105.5	5	0	-
23/06/22	17	locations.	2.03	24.0	102.5	∞ 1.97	24.0	175	0.0	Drier	100.0	4	0	-
-	-		-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite				Compaction	n specimens	s sampled	l after	comp	action.			
	Test s	ites located - Geolab Procedure 4, F	art 4.4.			Start Time:	12:50pm	Finish Ti	me:1:	50pm				
A Hilf Rap	id Co	mpaction test was carried out on	a sample	taken from	each Field	Density loca	tion to obtai	n the Cor	npacti	on Pa	rameters ta	bulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1					
Soil Layer	thickr	ness: 200mm				Compa	action Test:	AS 1289	5.7.1			M	LQ.	
Hilf Densi	If Density Ratio and Hilf Moisture Variation, Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1													
Field Den	ield Density, Nuclear Gauge: AS 1289 5.8.1 Accredited for compliance with ISO/IEC MICK CROWE													
Materials	Samp	led:AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	esting					(Approv	ed Sign	atory)
✤ Indicate	s APC	WD				<u>NATA Acc</u>	redited Labord	atory Numb	er 1450	<u>51</u>		Issue D)ate: 29/6/2	2022
*					ACCREDITATIO	ED DN								







GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9006/020

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140 LOCATION: SYMON BROS - The Grove SWP - Stage 49/48

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	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)
29/06/22	25		1.95	20.0	100.5	1.94	22.0	175	2.5 Drier	89.0	0	0	300
29/06/22	26		1.98	20.5	98.0	2.02	19.5	175	0.5 Wetter	103.5	0	0	300
29/06/22	27	Refer to #9006/021 for	1.91	27.0	96.5	1.98	23.5	175	3.5 Wetter	115.0	0	0	0
29/06/22	28	locations.	1.85	23.5	96.5	∞ 1.92	23.5	175	0.0 Wetter	101.0	3	0	0
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite				Compaction	n specimens	s sampled	after comp	action.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	1:20pm F	-inish Tim	e:2:15pm				
A Hilf Rap	id Co	npaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npaction Pa	arameters ta	abulated	I on this	Report.
						Moistu	re Content:	AS 1289	2.1.1				
Soil Layer	thickr	ness: 200mm				Compa	action Test:	AS 1289	5.7.1		M	LQ.	
Hilf Densi	Hilf Density Ratio and Hilf Moisture Variation, Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1												
Field Den	Field Density, Nuclear Gauge: AS 1289 5.8.1 Accredited for compliance with ISO/IEC												/E
Materials	Samp	ed: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	esting				(Approv	ved Signa	atory)
✤ Indicate	s APC	WD				<u>NATA Acc</u>	redited Labord	atory Numb	<u>er 14561</u>		Issue I	Date: 7/7/2	022







GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/010

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140 LOCATION: SYMON BROS - The Grove SWP - Stage 48 & 49

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARI FF OPT MOIS CON	ATION ROM TIMUM STURE ITENT %)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
5/07/22	18		2.07	23.5	106.0	1.95	23.5	175	0.0	Drier	100.0	0	0	600
5/07/22	19		1.97	22.0	101.0	1.95	22.5	175	0.5	Drier	98.0	0	0	800
5/07/22	20	Refer to #9005/011 for	2.06	24.0	105.5	1.95	24.5	175	0.0	Drier	99.0	0	0	800
5/07/22	21	locations.	2.08	24.0	105.0	1.99	23.0	175	1.0	Wetter	104.5	0	0	800
-	-		-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
NOTES:	Claye	y Fill Ex. Onsite				Compaction	n specimens	s sampled	lafter	comp	action.			
	Test s	ites located - Geolab Procedure 4, P	Part 4.4.			Start Time:	8:45am I	-inish Tim	e:9:4	5am				
A Hilf Rap	id Co	npaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npact	ion Pa	rameters ta	abulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1					
Soil Layer	thickr	1ess: 200mm				Compa	action Test:	AS 1289	5.7.1			M	LQ.	
Hilf Densi	lilf Density Ratio and Hilf Moisture Variation, Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1													
Field Den	Field Density, Nuclear Gauge: AS 1289 5.8.1 Accredited for compliance with ISO/IEC MICK CROWE												/E	
Materials	Materials Sampled : AS 1289 1.2.1 Clause 6.4(b) NATA <u>17025 - Testing</u> (Approved Signatory)												atory)	
₩						<u>NATA Acc</u>	redited Labor	atory Numb	er 145	<u>61</u>		Issue D	Date: 11/7/2	2022
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GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9002/012

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140 LOCATION: SYMON BROS - The Grove SWP - Stage 45 & 48

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIATIO FROM OPTIMU MOISTUI CONTEN (%)	N MOISTURE RATIO T (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
6/07/22	16		1.92	20.5	97.0	∞ 1.97	21.5	175	1.0 Dr	er 95.5	3	0	200
6/07/22	17		1.87	24.0	96.5	⊯ 1.94	23.0	175	1.0 We	ter 105.5	3	0	300
6/07/22	18	Refer to #9002/013 for	1.99	22.5	101.0	1.97	22.5	175	0.0 We	ter 101.0	0	0	400
6/07/22	19	locations.	2.02	20.5	104.0	1.94	22.5	175	2.0 Dr	er 91.5	0	0	600
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite				Compactio	n specimen:	s sampled	after co	npaction.			
	Test s	ites located - Geolab Procedure 4, P	'art 4.4.			Start Time:	9:45am I	-inish Tim	e:11:10a	n			
A Hilf Rap	id Co	mpaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npaction	Parameters t	abulated	d on this	Report.
						Moistu	re Content:	AS 1289	2.1.1				
Soil Layer	thickr	ness: 200mm				Comp	action Test:	AS 1289	5.7.1		M	LQ.	
Hilf Densi	ilf Density Ratio and Hilf Moisture Variation, Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1												
Field Den	ield Density, Nuclear Gauge: AS 1289 5.8.1 Accredited for compliance with ISO/IEC												
Materials	Samp	ed: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	esting				(Approv	ed Sign	atory)
✤ Indicate	s APC	WD				<u>NATA Acc</u>	redited Labor	atory Numb	<u>er 14561</u>		Issue [Date: 12/7/2	2022
*					ACCREDITATIO	N N							







GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/012

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140 LOCATION: SYMON BROS - The Grove SW, Stage 48

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VAR FF OPT MOIS CON	ATION ROM TIMUM STURE ITENT %)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
7/07/22	22		2.00	22.5	99.0	2.02	20.5	175	1.5	Wetter	108.5	0	0	700
7/07/22	23		1.89	20.0	99.0	1.92	22.5	175	2.5	Drier	88.5	0	0	700
7/07/22	24	Refer to #9005/013 for	1.91	19.0	98.5	1.94	22.0	175	2.5	Drier	88.0	0	0	800
7/07/22	25	locations.	1.96	19.0	100.0	1.96	21.5	175	2.0	Drier	90.0	0	0	900
-	-		-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite				Compaction	n specimens	s sampled	afte	r comp	action.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	1:55pm F	-inish Tim	ie: 3	:10pm				
A Hilf Rap	id Co	mpaction test was carried out on	a sample	taken from	each Field	Density loca	tion to obtai	n the Con	npact	ion Pa	rameters ta	bulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1					
Soil Layer	thickr	ness: 200mm				Compa	action Test:	AS 1289	5.7.1			M	LQ.	
Hilf Densi	nsity Ratio and Hilf Moisture Variation, Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1													
Field Den	ield Density, Nuclear Gauge: AS 1289 5.8.1 Accredited for compliance with ISO/IEC MICK CROWE												/E	
Materials	Samp	led: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	esting		120			(Approv	ved Signa	atory)
₩						<u>NATA Acc</u>	redited Labor	atory Numb	er 145	<u>61</u>		Issue D	Date: 15/7/2	2022
*					WORLD RECOGNIS	ED DN								







GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/017

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140 LOCATION: SYMON BROS - The Grove, South West Precint, Stage 48

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIA FRC OPTIM MOIST CONT (%	FION M IUM URE ENT)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
11/07/22	26		1.97	21.0	104.0	1.89	21.5	175	0.5	Drier	98.0	0	0	0
11/07/22	27		1.89	24.0	95.5	∞ 1.98	24.5	175	0.0	Drier	99.0	8	0	300
11/07/22	28	Refer to #9005/018 for	1.97	24.0	104.0	1.89	26.0	175	2.0	Drier	92.5	0	0	400
11/07/22	29	locations.	1.87	24.5	100.5	1.86	26.0	175	1.0	Drier	95.0	0	0	800
-	-		-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite				Compaction	n specimens	s sampled	l after c	omp	action.			
	Test s	ites located - Geolab Procedure 4, P	'art 4.4.			Start Time:	9:30am I	-inish Tim	ie: 10:0	0am	1			
A Hilf Rap	oid Co	mpaction test was carried out on	a sample	taken from	each Field	Density loca	tion to obtai	n the Con	npactio	n Pa	rameters ta	bulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1					
Soil Layer	thick	ness: 200mm				Compa	action Test:	AS 1289	5.7.1			M	LQ.	
Hilf Densi	Hilf Density Ratio and Hilf Moisture Variation, Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1													
Field Den	Field Density, Nuclear Gauge: AS 1289 5.8.1 Accredited for compliance with ISO/IEC MICK CROWE												/E	
Materials	Samp	led:AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	esting_					(Approv	ed Signa	atory)
✤ Indicate	s APC	CWD				<u>NATA Acc</u>	redited Labor	atory Numb	<u>er 14561</u>	-		Issue D	ate: 18/7/2	2022




GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/019

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

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIA FRI OPTI MOIS CON	ATION OM MUM TURE TENT 6)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
15/07/22	30		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	Refer to #9005/020 for	1.88	27.0	97.5	∞ 1.93	25.5	175	1.5	Wetter	105.0	3	0	500
-	-	locations.	-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
NOTES:	Claye	y Fill Ex. Onsite	-			Compaction	n specimens	s sampled	after	comp	action.			
	Test s	ites located - Geolab Procedure 4, P	Part 4.4.			Start Time:	12:00pm	Finish Ti	me: 12	2:45pi	m			
A Hilf Rap	id Co	npaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npacti	on Pa	rameters ta	bulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1					
Soil Layer	thickr	iess: 200mm				Compa	action Test:	AS 1289	5.7.1			M	LQ.	,
Hilf Densi	ty Rati	o and Hilf Moisture Variation ,Hilf	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289	5.7.1		ľ	/00	
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO/	TEC			MIC	K CROW	/E
Materials	Samp	ed: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	esting					(Approv	ed Signa	atory)
✤ Indicate	s APC	WD				<u>NATA Acc</u>	redited Labor	atory Numb	er 1456	<u>61</u>		Issue D	ate: 22/7/2	2022
*					ACCREDITATIO	N N								







GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/021

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

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	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)
16/07/22	33		1.93	24.0	98.5	∞ 1.96	25.5	175	1.5 Drier	93.0	8	0	300
16/07/22	34		1.87	24.0	95.0	₩ 1.97	23.5	175	0.5 Wetter	102.0	8	0	300
16/07/22	35	Refer to #9005/022 for	1.97	22.0	101.5	∞ 1.93	24.5	175	2.5 Drier	89.0	10	0	0
16/07/22	36	locations.	1.89	29.0	98.0	∞ 1.93	28.5	175	1.0 Wetter	102.5	11	0	500
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite		-	-	Compaction	n specimens	s sampled	after comp	action.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	10:40am	Finish Ti	me: 11:20a	m			
A Hilf Rap	id Co	mpaction test was carried out on	a sample	taken from	each Field	Density loca	tion to obtai	in the Con	npaction Pa	rameters ta	abulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1				
Soil Layer	thickr	ness: 200mm				Compa	action Test:	AS 1289	5.7.1		M	LQ.	
Hilf Densit	ty Rati	o and Hilf Moisture Variation ,Hil	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289 5.7.1		ľ	/00	
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO	/IEC		MIC	K CROW	/E
Materials	Samp	ed: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u> 17025 - Te</u>	esting				(Approv	ed Sign	atory)
✤ Indicate	s APC	WD				<u>NATA Acc</u>	redited Labor	atory Numb	<u>er 14561</u>		Issue D)ate: 22/7/2	2022







GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/024

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

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIATIO FROM OPTIMU MOISTUF CONTEN (%)	N MOISTURE RATIO T (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
18/07/22	37		2.02	20.0	101.5	∞ 1.99	21.0	175	1.5 Dr	er 93.0	5	0	300
18/07/22	38		2.03	22.5	101.5	2.00	23.0	175	0.5 Dr	er 98.0	0	0	500
18/07/22	39	Refer to #9005/025 for	2.13	18.5	104.0	₩ 2.05	21.0	175	2.5 Dr	er 87.5	16	0	600
-	I	locations.	-	-	-	-	-	-	-	-	-	-	-
-	I		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite				Compaction	n specimens	s sampled	after co	npaction.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	1:50pm I	-inish Tim	e: 2:20p	า			
A Hilf Rap	id Co	npaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npaction	Parameters ta	abulated	on this	Report.
						Moistu	re Content:	AS 1289	2.1.1				
Soil Layer	thickr	ness: 200mm				Compa	action Test:	AS 1289	5.7.1		M	LQ	
Hilf Densi	ty Rati	o and Hilf Moisture Variation ,Hill	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289 5.7	1	l	/~~	
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO	<i>IFC</i>		MIC	K CROV	/E
Materials	Samp	ed: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	<u>esting</u>	<i>ce wiii</i> 150/			(Approv	ed Sign	atory)
✤ Indicate	s APC	WD				<u>NATA Acc</u>	redited Labor	atory Numb	er 14561		Issue E	Date: 22/7/2	2022
*					WORLD RECOGNIS	ED DN							







GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/026

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

LOCATION: SYMON BROS - The Grove, South West Precinct, Stage 48, 49 & 51 Wetlands

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)
21/07/22	40		1.92	32.0	98.5	1.94	28.5	175	3.0 Wetter	111.0	0	0	300
21/07/22	41		2.05	23.5	105.0	1.96	22.5	175	1.0 Wetter	104.5	0	0	0
21/07/22	42	Refer to #9005/027 for	1.91	23.0	100.5	1.90	21.0	175	1.5 Wetter	108.0	0	0	0
21/07/22	43	locations.	2.00	22.5	104.0	⊯ 1.92	25.0	175	2.5 Drier	89.5	4	0	0
21/07/22	44		1.96	20.0	99.0	⊯ 1.98	21.5	175	1.5 Drier	92.0	5	0	0
-	-		-	-	-	-	-	-	-	-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite				Compactio	n specimens	s sampled	after comp	paction.			
	Test s	ites located - Geolab Procedure 4, F	art 4.4.			Start Time:	11:50am	Finish Ti	me: 1:20pm	ו			
A Hilf Rap	id Co	mpaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	in the Con	npaction Pa	arameters ta	abulated	d on this	Report.
						Moistu	re Content:	AS 1289	2.1.1				
Soil Layer	thick	ness: 200mm				Comp	action Test:	AS 1289	5.7.1		M	HQ	•
Hilf Densi	ty Rat	o and Hilf Moisture Variation ,Hil	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289 5.7.1		1	/	
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO/	<i>TEC</i>		MIC	K CROV	VE
Materials	Samp	led: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	esting				(Approv	ed Sign	atory)
✤ Indicate	s APC	WD				<u>NATA Acc</u>	redited Labor	atory Numb	<u>er 14561</u>		Issue E	Date: 27/7/2	2022



LOCATION: The Grove South West Precinct, Stage 48, 49 & 51 Wetlands

Sketch indicating compaction test locations

SCALE: NTS FIGURE No: 1 of 3

CHECKED: KK

OPERATOR: BM







GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9006/034

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

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)
23/07/22	48		2.00	24.0	98.5	2.02	23.0	175	1.0 Wetter	104.5	0	0	0
23/07/22	49		1.97	23.5	97.5	₩ 2.02	23.0	175	0.5 Wetter	102.0	4	0	0
23/07/22	50	Refer to #9006/035 for	1.91	26.0	97.0	1.97	23.5	175	2.5 Wetter	111.0	0	0	0
23/07/22	51	locations.	2.01	25.0	100.0	2.01	23.5	175	2.0 Wetter	107.5	0	0	0
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
NOTES:	Claye	y Fill Ex. Onsite				Compaction	n specimens	s sampled	after comp	action.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	10:50am	Finish Tir	me: 11:20a	m			
A Hilf Rap	id Co	npaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npaction Pa	arameters ta	bulated	I on this	Report.
						Moistu	re Content:	AS 1289	2.1.1				
Soil Layer	thickr	ness: 200mm				Compa	action Test:	AS 1289	5.7.1		M	HQ.	
Hilf Densit	ty Rati	o and Hilf Moisture Variation ,Hill	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289 5.7.1		ľ	/00	
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO/	<i>TEC</i>		MIC	K CROW	/E
Materials	Samp	ed: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u> 17025 - Te</u>	esting				(Approv	ed Sign	atory)
✤ Indicate	s APC	WD				<u>NATA Acc</u>	redited Labor	atory Numbe	e <u>r 14561</u>		Issue I	Date: 3/8/2	022







GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9006/037

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

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	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)
25/07/22	52		2.05	26.0	101.0	₩ 2.02	23.0	175	3.0 Wetter	112.0	4	0	0
25/07/22	53		1.97	24.5	100.0	1.98	24.0	175	0.5 Wetter	102.0	0	0	0
25/07/22	54	Refer to #9006/038 for	1.88	22.5	99.5	∞ 1.88	25.5	175	3.0 Drier	87.5	4	0	0
25/07/22	55	locations.	2.06	25.5	101.0	₩ 2.03	24.0	175	1.5 Wetter	105.0	11	0	0
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite				Compaction	n specimens	s sampled	after comp	action.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	10:45am	Finish Ti	me: 11:25a	m			
A Hilf Rap	id Co	mpaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npaction Pa	arameters ta	abulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1				
Soil Layer	thickr	ness: 200,,				Compa	action Test:	AS 1289	5.7.1		M	LQ.	
Hilf Densi	ty Rati	o and Hilf Moisture Variation ,Hil	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289 5.7.1		1		
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for compliant	ce with ISO	/IEC		MIC	K CROV	/E
Materials	Samp	led: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	esting	<u>ee min 190/</u>	<u>120</u>		(Approv	ed Sign	atory)
✤ Indicate	s APC	CWD				<u>NATA Acc</u>	redited Labord	atory Numb	<u>er 14561</u>		Issue I	Date: 3/8/2	022







GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/032

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

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIA FRC OPTIN MOIST CONT (%	TION DM JUM TURE ENT	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
26/07/22	45		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 V	Vetter	107.5	0	0	300
26/07/22	47	Refer to #9005/033 for	1.94	25.5	98.5	₩ 1.96	24.5	175	1.5 V	Vetter	105.0	5	0	600
26/07/22	48	locations.	2.05	26.0	104.5	1.96	25.5	175	1.0 V	Vetter	103.0	0	0	600
-	-		-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite				Compaction	n specimens	s sampled	after	comp	action.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	11:40am	Finish Tir	me: 12	:20pr	n			
A Hilf Rap	id Co	mpaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npactic	on Pa	rameters ta	bulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1					
Soil Layer	thickr	ness: 200mm				Compa	action Test:	AS 1289	5.7.1			M	HQ.	
Hilf Densi	ty Rati	o and Hilf Moisture Variation ,Hill	Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289 5	5.7.1		ľ	/	
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO/	<i>IEC</i>			MICI	K CROW	/E
Materials	Samp	ed: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u> 17025 - Te</u>	esting					(Approv	ed Signa	atory)
✤ Indicate	s APC	WD				<u>NATA Acc</u>	redited Labord	atory Numbe	<u>er 1456.</u>	<u>1</u>		Issue [Date: 3/8/2	022







GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/034

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

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARI FR OPT MOIS CON	ATION OM IMUM TURE TENT %)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
27/07/22	49		2.02	26.0	102.5	1.97	25.5	175	0.5	Wetter	102.0	0	0	0
27/07/22	50		1.96	26.0	99.5	1.97	24.5	175	1.5	Wetter	106.0	0	0	0
27/07/22	51	Refer to #9005/035 for	1.99	22.5	100.5	1.97	23.0	175	0.0	Drier	99.0	0	0	0
-	-	locations.	-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite				Compaction	n specimens	s sampled	lafter	comp	action.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	12:45pm	Finish Tir	me: 1	:20pm				
A Hilf Rap	id Co	mpaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npacti	ion Pa	rameters ta	bulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1					
Soil Layer	thickr	ness: 200mm				Compa	action Test:	AS 1289	5.7.1			M	LQ.	
Hilf Densit	ty Rati	o and Hilf Moisture Variation ,Hill	Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289	5.7.1		1		
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO/	/IEC			MICI	K CROV	/E
Materials	Samp	led: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	esting		120			(Approv	ed Sign	atory)
Ð					ACCREDITED FOR	<u>NATA Acc</u>	redited Labor	atory Numb	er 1450	<u>61</u>		Issue [Date: 3/8/2	022
*														





GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/036

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

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)	VARI FR OPT MOIS CON	ATION OM IMUM STURE TENT %)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
28/07/22	52		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	Refer to #9005/037 for	2.04	21.0	105.0	⊮ 1.94	23.5	175	2.5	Drier	89.5	5	0	500
28/07/22	55	locations.	2.06	23.0	106.5	1.94	24.5	175	1.5	Drier	94.0	0	0	500
-	-		-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
NOTES:	Claye	y Fill Ex. Onsite				Compaction	n specimens	s sampled	after	comp	action.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	12:35pm	Finish Tir	me: 1	:15pm				
A Hilf Rap	id Co	mpaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npacti	ion Pa	rameters ta	bulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1					
Soil Layer	thickr	ness: 200mm				Compa	action Test:	AS 1289	5.7.1			M	LQ.	
Hilf Densit	ty Rati	o and Hilf Moisture Variation ,Hil	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289	5.7.1		1	/00	
Field Dens	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO/	TEC			MICI	K CROW	/E
Materials	Samp	ed: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	e <u>sting</u>		<u>1120</u>			(Approv	ed Signa	atory)
✤ Indicate	s APC	WD				<u>NATA Acc</u>	redited Labord	atory Numbe	er 1450	<u>51</u>		Issue [Date: 3/8/2	022







GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/038

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

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		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	Refer to #9005/039 for	2.10	21.5	105.0	2.00	22.0	175	0.5 Drier	98.0	0	0	500
29/07/22	59	locations.	2.04	19.0	101.5	₩ 2.00	20.0	175	1.0 Drier	94.0	9	0	1000
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite				Compaction	n specimens	s sampled	after com	baction.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	12:20pm	Finish Tir	me: 1:00pn	ı			
A Hilf Rap	id Co	mpaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npaction Pa	arameters ta	abulated	d on this	Report.
						Moistu	re Content:	AS 1289	2.1.1				
Soil Layer	thickr	ness: 200mm				Compa	action Test:	AS 1289	5.7.1		M	LQ.	
Hilf Densi	ty Rati	o and Hilf Moisture Variation ,Hill	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289 5.7.1		1		
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO/	/IEC		MIC	K CROV	/E
Materials	Samp	led: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	esting		<u>120</u>		(Approv	ved Signa	atory)
✤ Indicate	s APC	WD				<u>NATA Acc</u>	redited Labor	atory Numbe	<u>er 14561</u>		Issue	Date: 3/8/2	022
*					COMPETENCE								







GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/040

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

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIATION FROM OPTIMUM MOISTURE CONTENT (%)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
30/07/22	60		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	Refer to #9005/041 for	1.89	24.0	95.0	⊮ 1.98	23.5	175	0.0 Wetter	101.0	3	0	0
30/07/22	63	locations.	1.99	25.5	97.5	ቋ 2.04	24.0	175	1.5 Wetter	106.5	11	0	0
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
NOTES:	Claye	y Fill Ex. Onsite				Compaction	n specimens	s sampled	after comp	action.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	10:05am	Finish Ti	me: 11:00a	m			
A Hilf Rap	id Co	npaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	in the Con	npaction Pa	arameters ta	abulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1				
Soil Layer	thickr	ness: 200mm				Compa	action Test:	AS 1289	5.7.1		M	HQ.	
Hilf Densit	ty Rati	o and Hilf Moisture Variation ,Hil	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289 5.7.1		ľ	/	
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO/	<i>TEC</i>		MIC	K CROW	/E
Materials	Samp	ed: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u> 17025 - Te</u>	esting				(Approv	ed Signa	atory)
✤ Indicate	s APC	WD				<u>NATA Acc</u>	redited Labor	atory Numb	e <u>r 14561</u>		Issue I	Date: 3/8/2	022







GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/043

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

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARI FF OPT MOIS CON	ATION ROM IMUM STURE ITENT %)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
1/08/22	64		1.99	21.5	104.5	1.90	24.5	175	2.5	Drier	89.0	0	0	600
1/08/22	65		1.97	20.5	101.0	1.94	23.0	175	2.5	Drier	89.5	0	0	600
1/08/22	66	Refer to #9005/044 for	1.99	23.5	100.0	1.99	23.5	175	0.0	Drier	100.0	0	0	600
1/08/22	67	locations.	2.06	21.0	104.0	1.98	22.0	175	1.0	Drier	95.5	0	0	600
-	-		-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite				Compaction	n specimens	s sampled	l after	comp	action.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	12:00pm	Finish Ti	me: 1	2:45pi	n			
A Hilf Rap	id Co	npaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npact	ion Pa	rameters ta	bulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1					
Soil Layer	thickr	ness: 200mm				Compa	action Test:	AS 1289	5.7.1			M	HQ.	
Hilf Densi	ty Rati	o and Hilf Moisture Variation ,Hill	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289	5.7.1		ľ	/	
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO	/IEC			MICI	K CROW	/E
Materials	Samp	ed: AS 1289 1.2.1 Clause 6.4(b)		NATA	17025 - Te	esting					(Approv	ed Signa	atory)
₩ ∻						<u>NATA Acc</u>	redited Labord	atory Numb	<u>er 145</u>	<u>61</u>		Issue [Date: 3/8/2	022



 ${f LOCATION}$: The Grove South West Precinct, Stage 48 & 51

Sketch indicating compaction test locations

OPERATOR: BM	CHECKED: KK
SCALE: NTS	FIGURE No: 1 of 2




GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/045

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

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VAR FF OPT MOIS CON	IATION ROM TIMUM STURE NTENT (%)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
2/08/22	68		1.92	20.5	102.0	1.88	24.5	175	4.0	Drier	84.0	0	0	100
2/08/22	69		2.06	22.5	103.0	2.00	22.0	175	0.5	Wetter	103.5	0	0	100
2/08/22	70	Refer to #9005/046 for approx. test site locations.	1.94	21.0	100.5	1.93	23.5	175	2.5	Drier	89.5	0	0	100
2/08/22	71	locations.	2.08	20.0	107.0	1.94	22.0	175	2.5	Drier	89.0	0	0	100
-	-	locations.	-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
NOTES:	Claye	y Fill Ex. Onsite	-			Compaction	n specimens	s sampled	afte	r comp	action.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	1:30pm I	-inish Tim	ie: 2:	10pm				
A Hilf Rap	id Co	npaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npact	ion Pa	rameters ta	bulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1					
Soil Layer	thickr	iess: 200mm				Compa	action Test:	AS 1289	5.7.1			M	HQ.	
Hilf Densi	ty Rati	o and Hilf Moisture Variation ,Hilf	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289	5.7.1		ľ	/	
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO/	IEC			MIC	K CROW	/E
Materials	Samp	ed: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u> 17025 - Te</u>	esting					(Approv	ed Signa	atory)
₩ ∻						<u>NATA Acc</u>	redited Labor	atory Numb	<u>er 145</u>	<u>61</u>		Issue I	Date: 4/8/2	022





GEOTECHNICAL LABORATORIES	GEOTECHNIC ACN : 14 Ravenhall W Email: info@geolab.	CAL LABORATORIES 102 571 077 ay, Ravenhall, Vic 3023 com.au PH: (03) 8361-9140
CLIENT: SYMON BROS	DATE: 1/08/2022	JOB No.: 9005/046
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

REPORT NO.: # 9005/047

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

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)	VARIA FRO OPTI MOIS ⁻ CON ⁻ (%	ATION OM MUM TURE TENT 6)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
3/08/22	72		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	Refer to #9005/048 for	1.88	23.0	99.0	1.90	26.0	175	3.0	Drier	88.5	0	0	0
3/08/22	75	locations.	2.03	22.5	106.0	1.92	24.5	175	1.5	Drier	93.0	0	0	0
-	-	locations.	-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite				Compactio	n specimens	s sampled	after	comp	action.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	12:40pm	Finish Tir	me: 1:	45pm				
A Hilf Rap	oid Co	mpaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npactio	on Pa	rameters ta	bulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1					
Soil Layer	thick	ness: 200mm				Comp	action Test:	AS 1289	5.7.1			M	LQ.	
Hilf Densi	ty Rat	o and Hilf Moisture Variation ,Hil	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289	5.7.1		ľ	/00	
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO/	TEC			MICI	K CROW	/E
Materials	Samp	led: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	esting					(Approv	ed Signa	atory)
✤ Indicate	s APC	CWD			WORLD RECOGNIS	NATA Acc	redited Labor	atory Numb	er 1456	<u>51</u>		Issue [Date: 9/8/2	022
*					ACCREDITATIO	ÎN								





GEOTECHNICAL LABORATORIES	GEOTECHNIC ACN 14 Ravenhall W Email: info@geolab.	CAL LABORATORIES 102 571 077 'ay, Ravenhall, Vic 3023 com.au PH: (03) 8361-9140
CLIENT: SYMON BROS	DATE: 3/08/2022	JOB No.: 9005/048
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

REPORT NO.: # 9005/049

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

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	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)
4/08/22	76		2.06	23.0	105.0	1.97	22.5	175	0.0 Wette	r 101.0	0	0	1000
4/08/22	77		1.91	29.5	98.0	1.95	27.5	175	2.0 Wette	r 106.5	0	0	300
4/08/22	78	Refer to #9005/050 for	2.00	17.0	96.5	₩ 2.07	18.5	175	1.0 Drier	93.5	6	0	0
4/08/22	79	locations.	2.02	19.5	102.5	1.97	22.5	175	3.0 Drier	87.0	0	0	0
-	-	locations.	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
NOTES:	Claye	y Fill Ex. Onsite				Compaction	n specimens	s sampled	after com	baction.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	8:40am F	-inish Tim	e: 9:20am				
A Hilf Rap	id Co	npaction test was carried out on a	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npaction Pa	arameters ta	abulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1				
Soil Layer	thickr	ness: 200mm				Compa	action Test:	AS 1289	5.7.1		M	HQ.	
Hilf Densi	ty Rati	o and Hilf Moisture Variation ,Hill	Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289 5.7.1		ľ	/00	
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO/	/IEC		MIC	K CROW	/E
Materials	Samp	ed: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	esting_				(Approv	ed Sign	atory)
✤ Indicate	s APC	WD				<u>NATA Acc</u>	redited Labord	atory Numbe	<u>er 14561</u>		Issue D)ate: 10/8/2	2022









GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/051

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

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	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)
8/08/22	80		2.03	21.5	100.5	2.02	22.0	175	0.5 Drie	96.5	0	0	900
8/08/22	81		1.93	21.0	105.0	⊯ 1.84	26.5	175	5.0 Drie	80.5	5	0	400
8/08/22	82	Refer to #9005/052 for	1.84	29.0	95.0	⊮ 1.93	27.0	175	2.0 Wette	r 106.5	6	0	300
8/08/22	83	locations.	1.94	23.0	102.5	1.89	25.0	175	2.0 Drie	92.0	0	0	0
-	-	locations.	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite				Compaction	n specimens	s sampled	l after com	paction.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	9:40am I	-inish Tim	ie: 12:35pi	n			
A Hilf Rap	id Co	mpaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npaction P	arameters ta	abulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1				
Soil Layer	thickr	ness: 200mm				Compa	action Test:	AS 1289	5.7.1		M	LQ.	
Hilf Densi	ty Rati	o and Hilf Moisture Variation ,Hil	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289 5.7.1		1		
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO	/IEC		MIC	K CROW	/E
Materials	Samp	led: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	e <u>sting</u>		<u>180</u>		(Approv	ed Sign	atory)
✤ Indicate	s APC	SWD				<u>NATA Acc</u>	redited Labor	atory Numb	<u>er 14561</u>		Issue D)ate: 12/8/2	2022







GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/053

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

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VAR FF OPT MOIS CON	ATION ROM TIMUM STURE ITENT %)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
9/08/22	84		1.86	26.5	102.0	1.82	29.5	175	3.0	Drier	89.5	0	0	300
9/08/22	85		1.85	29.0	101.0	1.83	30.5	175	1.5	Drier	95.0	0	0	500
9/08/22	86	Refer to #9005/054 for approx. test site locations.	1.89	23.0	102.5	1.85	26.5	175	3.5	Drier	86.0	0	0	600
-	-	locations.	-	-	-	-	-	-	-		-	-	-	-
-	-	locations.	-	-	-	-	-	-	1		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
NOTES:	Claye	y Fill Ex. Onsite				Compaction	n specimens	s sampled	afte	^r comp	action.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	2:00pm F	-inish Tim	e: 2:	30pm				
A Hilf Rap	id Co	npaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npact	ion Pa	rameters ta	bulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1					
Soil Layer	thickr	1ess: 200mm				Compa	action Test:	AS 1289	5.7.1			M	ID.	
Hilf Densi	ty Rati	o and Hilf Moisture Variation ,Hilf	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289	5.7.1		· ['		
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO	<i>IEC</i>			MICI	K CROW	/E
Materials	Samp	led: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	e <u>sting</u>	<u>ee waa 1507</u>				(Approv	ed Signa	atory)
æ					ACCREDITED FOR	<u>NATA Acc</u>	redited Labord	atory Numb	er 145	<u>61</u>		Issue D	ate: 15/8/2	2022
*														





GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/055

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

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIA FR OPTI MOIS CON	ATION OM MUM TURE TENT 6)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
10/08/22	87		1.91	27.5	101.0	1.89	27.5	175	0.0	Drier	100.0	0	0	0
10/08/22	88		1.92	25.0	105.0	1.83	27.5	175	2.5	Drier	91.0	0	0	0
10/08/22	89	Refer to #9005/056 for	1.88	30.5	105.0	1.79	33.0	175	2.5	Drier	93.0	0	0	600
-	-	locations.	-	-	-	-	-	-	-		-	-	-	-
-	-	locations.	-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
NOTES:	Claye	y Fill Ex. Onsite				Compaction	n specimens	s sampled	after	comp	action.			
	Test s	ites located - Geolab Procedure 4, P	'art 4.4.			Start Time:	8:15am	Finish Tin	ne: 8:	50am				
A Hilf Rap	id Co	npaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npacti	on Pa	rameters ta	bulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1					
Soil Layer	thickr	iess: 200mm				Compa	action Test:	AS 1289	5.7.1			M	LQ.	
Hilf Densit	ty Rati	o and Hilf Moisture Variation ,Hilf	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289	5.7.1		ľ	/	
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO/	<i>IEC</i>			MICI	K CROW	/E
Materials	Samp	ed: AS 1289 1.2.1 Clause 6.4(b)		NATA	17025 - Te	esting					(Approv	ed Sign	atory)
æ					ACCREDITED FOR	<u>NATA Acc</u>	redited Labor	atory Numb	er 1456	<u>61</u>		Issue D	ate: 16/8/2	2022
*					COMPETENCE									





GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9003/002

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

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VAR FI OP ⁻ MOI CON	IATION ROM FIMUM STURE NTENT (%)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
11/08/22	1		1.92	25.5	98.5	1.95	25.0	175	0.5	Wetter	101.0	0	0	300
11/08/22	2		2.03	24.0	102.0	1.99	22.5	175	1.5	Wetter	107.5	0	0	300
11/08/22	3	Refer to #9003/003 for approx. test site locations.	2.11	20.5	107.0	1.97	22.5	175	2.0	Drier	90.5	0	0	300
11/08/22	4	locations.	1.81	25.0	99.5	1.81	28.0	175	3.0	Drier	89.5	0	0	200
-	-	locations.	-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
NOTES:	Claye	y Fill Ex. Onsite				Compaction	n specimens	s sampled	lafte	r comp	action.			
	Test s	ites located - Geolab Procedure 4, P	Part 4.4.			Start Time:	8:30am I	-inish Tim	ie: 10):30am				
A Hilf Rap	id Co	npaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npac	tion Pa	rameters ta	bulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1					
Soil Layer	thickr	1ess: 200mm				Compa	action Test:	AS 1289	5.7.1			M	LQ.	
Hilf Densi	ty Rati	o and Hilf Moisture Variation ,Hilf	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289	5.7.1		1		
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO/	/IEC			MICI	K CROW	/E
Materials	Samp	ed: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	esting		120			(Approv	ed Signa	atory)
₽					ACCREDITED FOR	<u>NATA Acc</u>	redited Labor	atory Numb	er 145	<u>61</u>		Issue D)ate: 18/8/2	2022
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GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/057

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

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIATIO FROM OPTIMUN MOISTUR CONTEN (%)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
15/08/22	90		1.96	21.5	95.0	₩ 2.06	20.5	175	1.0 Wet	er 105.0	3	0	0
15/08/22	91		1.87	23.5	96.0	1.95	23.0	175	0.5 Wet	er 102.0	0	0	0
15/08/22	92	Refer to #9005/058 for approx. test site locations.	2.02	26.0	102.0	1.98	25.5	175	0.5 Wet	er 102.0	0	0	300
15/08/22	93	locations.	1.99	24.5	100.0	1.99	24.0	175	0.5 Wet	er 102.0	0	0	300
-	-	locations.	-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite				Compaction	n specimens	s sampled	l after con	paction.			
	Test s	ites located - Geolab Procedure 4, P	Part 4.4.			Start Time:	8:30am I	-inish Tim	ie: 9:15an				
A Hilf Rap	id Co	mpaction test was carried out on	a sample	taken from	each Field	Density loca	tion to obtai	n the Con	npaction I	arameters ta	abulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1				
Soil Layer	thick	ness: 200mm				Compa	action Test:	AS 1289	5.7.1		M	la	
Hilf Densit	ty Rat	o and Hilf Moisture Variation ,Hil	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289 5.7.		1		
Field Dens	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO/	/IEC		MIC	K CROV	√E
Materials S	Samp	led:AS 1289 1.2.1 Clause 6.4(b))		NATA	<u>17025 - Te</u>	e <u>sting</u>		<u>120</u>		(Approv	ed Sign	atory)
✤ Indicate	s APC	CWD				<u>NATA Acc</u>	redited Labor	atory Numb	<u>er 14561</u>		Issue D)ate: 19/8/2	2022
15/08/22 15/08/22 15/08/22 - - NOTES: A Hilf Rap Soil Layer Hilf Densit Field Dens Materials \$ ♣ Indicate ◆	91 92 93 - Claye Test s oid Col thicki ty Rat sity, N Samp s APC	Refer to #9005/058 for approx. test site locations. ey Fill Ex. Onsite sites located - Geolab Procedure 4, P mpaction test was carried out on ness: 200mm to and Hilf Moisture Variation ,Hilt uclear Gauge: AS 1289 5.8.1 led : AS 1289 1.2.1 Clause 6.4(b CWD	1.87 2.02 1.99 - - - - - - - - - - - - - - - - - -	23.5 26.0 24.5 - - taken from (APCWD)	96.0 102.0 100.0 - - each Field I & Peak (PC	1.95 1.98 1.99 - Compaction Start Time: Density loca Moistu Compa WD) Convert Accredited 17025 - Te NATA Acc	23.0 25.5 24.0 - - n specimens 8:30am F tion to obtai re Content: action Test: erted Wet De tor compliance to comp	175 175 175 - s sampled Finish Tim AS 1289 AS 1289 AS 1289 ensity AS ce with ISO/	0.5 Wett 0.5 Wett 0.5 Wett - - after con e: 9:15an paction F 2.1.1 5.7.1 1289 5.7. <u>IEC</u> er 14561	er 102.0 er 102.0 er 102.0 - paction.	0 0 - abulatec MIC (Approv Issue [0 0 - - I on this K CROV /ed Sign Date: 19/8/;	0 30 30 - - - - - - - - - - - - - - - -





Sketch indicating compaction test locations

SCALE: NTS FIGURE No: 2 of 2



GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9004/003

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

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)	VARI FF OPT MOIS CON	ATION ROM TIMUM STURE ITENT %)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
16/08/22	1		1.92	24.5	98.0	1.96	25.0	175	0.5	Drier	98.0	0	0	0
16/08/22	2		1.92	25.5	98.5	1.95	25.0	175	0.5	Wetter	102.0	0	0	400
16/08/22	3	Refer to #9004/004 for	1.99	24.5	101.5	₩ 1.96	24.0	175	0.0	Wetter	101.0	3	0	400
16/08/22	4	locations.	2.06	22.0	107.5	1.91	24.5	175	2.5	Drier	90.0	0	0	400
-	-	locations.	-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite				Compaction	n specimens	s sampled	after	comp	action.			
	Test s	ites located - Geolab Procedure 4, P	'art 4.4.			Start Time:	9:30am I	-inish Tim	e: 10	:30am				
A Hilf Rap	id Co	mpaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npact	ion Pa	rameters ta	bulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1					
Soil Layer	thickr	ness: 200mm				Compa	action Test:	AS 1289	5.7.1			M	LQ.	
Hilf Densi	ty Rati	o and Hilf Moisture Variation ,Hill	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289	5.7.1		1	/~~	
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO/	<i>TEC</i>			MICI	K CROW	/E
Materials	Samp	ed: AS 1289 1.2.1 Clause 6.4(b)		NATA	17025 - Te	esting					(Approv	ed Sign	atory)
✤ Indicate	s APC	WD				<u>NATA Acc</u>	redited Labor	atory Numbe	er 1450	<u>61</u>		Issue D	ate: 22/8/2	2022







GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/065

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

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARI FF OPT MOIS CON	ATION ROM TIMUM STURE ITENT %)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
17/08/22	94		2.06	23.0	100.0	2.06	21.5	175	1.5	Wetter	108.0	0	0	800
17/08/22	95		2.03	26.5	101.5	2.00	24.0	175	2.5	Wetter	110.5	0	0	800
17/08/22	96	Refer to #9005/066 for approx. test site locations.	1.91	27.5	97.5	1.96	25.5	175	2.0	Wetter	108.0	0	0	200
17/08/22	97	locations.	1.93	26.5	99.5	1.95	26.0	175	0.5	Wetter	102.0	0	0	200
-	-	locations.	-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
NOTES:	Claye	y Fill Ex. Onsite				Compaction	n specimens	s sampled	lafter	comp	action.			
	Test s	ites located - Geolab Procedure 4, P	art 4.4.			Start Time:	11:30am	Finish Ti	me: 1	2:30pi	n			
A Hilf Rap	id Co	npaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	n the Con	npact	ion Pa	rameters ta	bulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1					
Soil Layer	thickr	1ess: 200mm				Compa	action Test:	AS 1289	5.7.1			M	IQ.	
Hilf Densit	ty Rati	o and Hilf Moisture Variation ,Hilf	f Adjusted	(APCWD)	& Peak (PC	WD) Conve	erted Wet De	ensity AS	1289	5.7.1		· ['		
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1				Accredited	l for complian	ce with ISO	/IEC			MICI	K CROW	/E
Materials	Samp	ed: AS 1289 1.2.1 Clause 6.4(b)		NATA	<u>17025 - Te</u>	esting	<u>.e wiii 190/</u>				(Approv	ed Signa	atory)
Ð					ACCREDITED FOR	<u>NATA Acc</u>	redited Labor	atory Numb	er 145	<u>61</u>		Issue D	ate: 23/8/2	2022
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GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/067

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

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	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)		
18/08/22	98	Refer to #9005/068 for approx. test site locations.	1.91	24.5	95.5	∞ 2.00	23.5	175	1.0 Wetter	104.0	3	0	0		
18/08/22	99		1.94	26.5	98.0	শ 1.98	25.0	175	2.0 Wetter	107.0	4	0	0		
18/08/22	100		1.87	25.5	95.5	1.96	24.5	175	1.0 Wetter	104.0	0	0	0		
18/08/22	101		1.87	23.5	97.0	1.93	24.5	175	1.0 Drier	96.0	0	0	400		
-	-		-	-	-	-	-	-	-	-	-	-	-		
-	-		-	-	-	-	-	-	-	-	-	-	-		
NOTES: Clayey Fill Ex. Onsite Compaction specimens sampled after compaction.															
Test sites located - Geolab Procedure 4, Part 4.4. Start Time: 1:40pm Finish Time: 1:30pm															
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															
Soil Layer thickness: 200mm Compaction Test: AS 1289 5.7.1 M.LQ															
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 Accredited for compliance with ISO/IEC MICK CROWE											/E				
Materials Sampled : AS 1289 1.2.1 Clause 6.4(b)							<u>17025 - Testing</u>					(Approved Signatory)			
✤ Indicates APCWD ♠ NATA Accredited Laboratory Number 14561 Issue Date: 23/8/2022															







GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9005/069

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

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	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)		
22/08/22	102	Refer to #9005/070 for approx. test site locations.	1.96	24.0	100.0	1.96	23.5	175	0.0 Wette	r 101.0	0	0	300		
22/08/22	103		1.89	25.0	95.5	1.97	24.0	175	0.5 Wette	r 103.0	0	0	0		
22/08/22	104		1.87	25.0	96.5	1.94	25.0	175	0.5 Wette	r 101.0	0	0	0		
-	-		-	-	-	-	-	-	-	-	-	-	-		
-	I		-	-	-	-	-	-	-	-	-	-	-		
-	-		-	-	-	-	-	-	-	-	-	-	-		
NOTES: Clayey Fill Ex. Onsite Compaction specimens sampled after compaction.															
Test sites located - Geolab Procedure 4, Part 4.4. Start Time: 12:15pm Finish Time: 1:25pm															
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															
Soil Layer thickness: 200mmCompaction Test: AS 1289 5.7.1M.LC										HQ.	•				
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 Accredited for compliance with ISO/IEC MICK CROWE											VE				
Materials Sampled : AS 1289 1.2.1 Clause 6.4(b)							<u>17025 - Testing</u>					(Approved Signatory)			
							<u>NATA Accredited Laboratory Number 14561</u> Issue Date: 25/8/2022						2022		






DAILY SUMMARY - FIELD DENSITY TESTS

GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9038/007

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140 LOCATION: SYMON BROS - The Grove, South West Precinct, Stage 48 & 55

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	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)
19/10/22	9	Refer to #9038/008 for approx. test site locations.	1.97	26.0	102.0	1.93	25.5	175	1.0 Wette	r 103.0	0	0	500
19/10/22	10		1.86	21.5	98.5	1.89	24.5	175	3.0 Drie	88.0	0	0	400
19/10/22	11		1.94	25.5	102.5	∞ 1.89	28.0	175	2.5 Drie	91.0	6	0	0
19/10/22	12		1.88	26.5	100.5	∞ 1.88	27.5	175	1.0 Drie	96.5	4	0	0
-	-		-	-	-	-	-	-	-	-	-	-	-
-	-		-	-	-	-	-	-	-	-	-	-	-
NOTES:	Claye	ey Fill Ex. Onsite	Compaction	Compaction specimens sampled after compaction.									
	Test sites located - Geolab Procedure 4, Part 4.4. Start Time: 8:15am Finish Time: 9:45am												
A Hilf Rap	id Co	npaction test was carried out on	a sample	taken from	each Field I	Density loca	tion to obtai	in the Con	npaction P	arameters ta	abulated	l on this	Report.
						Moistu	re Content:	AS 1289	2.1.1				
Soil Layer thickness: 200mm							Compaction Test: AS 1289 5.7.1 M:L/D						
Hilf Density Ratio and Hilf Moisture Variation ,Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1													
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1	Accredited	Accredited for compliance with ISO/IEC MICK CROWE									
Materials Sampled : AS 1289 1.2.1 Clause 6.4(b)							17025 - Testing (Approved Signa						
 ✤ Indicates APCWD ▲ Indicates APCWD ▲ Accredited Laboratory Number 14561 Assue Date: 21/10/2022 											2022		







DAILY SUMMARY - FIELD DENSITY TESTS

GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9038/005

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140 LOCATION: SYMON BROS - The Grove, South West Precinct, Stage 48 & 55

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VAR FF OPT MOIS CON	ATION ROM TIMUM STURE ITENT %)	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)	
18/10/22	5	Refer to #9038/006 for approx. test site locations.	1.95	27.5	104.5	1.87	28.0	175	0.5	Drier	98.0	0	0	0	
18/10/22	6		1.96	26.0	105.0	1.87	26.5	175	1.0	Drier	97.0	0	0	0	
18/10/22	7		1.81	29.0	96.0	1.89	28.5	175	0.5	Wetter	102.0	0	0	0	
18/10/22	8		1.84	31.0	99.0	1.85	31.0	175	0.0	Drier	100.0	0	0	0	
-	-		-	-	-	-	-	-	-		-	-	-	-	
-	-		-	-	-	-	-	-	-		-	-	-	-	
NOTES: Clayey Fill Ex. Onsite Compaction specimens sampled after compaction.															
Test sites located - Geolab Procedure 4, Part 4.4. Start Time: 10:00am Finish Time: 10:40am															
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.															
						Moistu	re Content:	AS 1289	2.1.1						
Soil Layer	thickr	1ess: 200mm	Comp	Compaction Test: AS 1289 5.7.1						MilQ.					
Hilf Density Ratio and Hilf Moisture Variation ,Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1															
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1	Accredited	Accordited for compliance with ISO/IEC MICK CROWE							/E				
Materials Sampled : AS 1289 1.2.1 Clause 6.4(b)							17025 - Testing					(Approved Signatory)			
ACCREDITED FOR TECHNICAL <u>NATA Accredited Laboratory Number 14561</u> Issue Date: 24,										ate: 24/10/	2022				
*					COMPETENCE										







DAILY SUMMARY - FIELD DENSITY TESTS

GEOTECHNICAL LABORATORIES

ACN 102 571 077

REPORT NO.: # 9038/013

14 Ravenhall Way, Ravenhall, Vic 3023 Email: info@geolab.com.au PH: (03) 8361-9140 LOCATION: SYMON BROS - The Grove, South West Precinct, Stage 48 & 55

DATE OF TESTS	TEST NUM.	TEST LOCATION	FIELD WET DENSITY (t/m³)	FIELD MOISTURE CONTENT (%)	HILF DENSITY RATIO STANDARD (%)	STANDARD PCWD OR APCWD (t/m ³)	STANDARD OPTIMUM MOISTURE CONTENT (%)	PROBE DEPTH SETTING (mm)	VARIA FRC OPTII MOIST CONT (%	TION DM MUM TURE ENT	MOISTURE RATIO (%)	WET +19mm (%)	WET +37.5mm (%)	APPROX. DEPTH BELOW FINISH LEVEL (mm)
20/10/22	13	Refer to #9038/014 for approx. test site locations.	1.89	31.0	101.5	1.86	31.0	175	0.5	Drier	99.0	0	0	400
20/10/22	14		1.89	28.0	97.5	1.93	27.0	175	1.0 V	Vetter	104.0	0	0	400
20/10/22	15		1.93	22.5	95.0	2.02	21.0	175	1.5 V	Vetter	108.0	0	0	0
20/10/22	16		1.96	27.5	95.0	₩ 2.06	24.0	175	3.5 V	Vetter	113.5	5	0	0
-	-		-	-	-	-	-	-	-		-	-	-	-
-	-		-	-	-	-	-	-	-		-	-	-	-
NOTES: Clayey Fill Ex. Onsite Compaction specimens s										comp	action.			
Test sites located - Geolab Procedure 4, Part 4.4. Start Time: 8:10am Finish Time: 9:20am														
A Hilf Rap	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											
Soil Layer thickness: 200mm							Compaction Test: AS 1289 5.7.1 Mile							
Hilf Density Ratio and Hilf Moisture Variation ,Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1														
Field Den	sity, N	uclear Gauge: AS 1289 5.8.1	Accredited	Accredited for compliance with ISO/IEC MICK CROWE							VE			
Materials	Samp	led: AS 1289 1.2.1 Clause 6.4(b	<u>17025 - Te</u>	<u>17025 - Testing</u>						(Approved Signatory)				
✤ Indicates APCWD ♦ Indicates APCWD ♦ NATA Accredited Laboratory Number 14561 Issue Date: 25/10/2022												2022		



