

LTD. BALLARAT OFFICE:

S.A. OFFICE:

VIC HEAD OFFICE:

Geotechnical Engineers

SINCE 1963

P.O. Box 1319 **BAKERY HILL Vic 3354** 03 5333 5911

ballarat@asjames.com.au

1/12 Theen Avenue WILLASTON SA 5118

08 8504 7467

15 Libbett Avenue Clayton South Vic 3169

Office 03 95474811

melb@asjames.com.au Laboratory 03 95624709 lab@asjames.com.au

Pipecon Pty Ltd 48 Icon Drive

DELACOMBE VIC 3356

Date:

18/5/2020

Ref:

120208 B023

Marked attention to. Jayson Frawley

Purchase Order No:

RE:

Shortridge Drive

Lucas

We enclose Reports 120208 B019, B021 & B023 being results of field and laboratory testing, along with level one superv carried out on the above project between 11/5/2020 and 13/5/2020

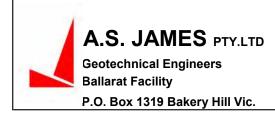
Our Invoice is also enclosed.

Yours faithfully,



T.J. HOLT MIEAust CPEng NER APEC Eng IntPE (Aus) EC-1022

A.S. JAMES PTY LTD



House Lot Fill

Section Tested:

JOB:	Job No.	120208
Shortridge Drive	Report No.	B019
Lucas	Date	18-May-20

FOR

Pipecon Pty Ltd 48 Icon Drive

DELACOMBE VIC 3356

		ı	T	 <u> </u>	1
Test Number		82			
Date of Test		11/05/20			
Time of Test		14:17			
Location	Chainage:	See			
	Offset:	Sketch			
Depth of Test		600			
Probe Depth (mm)		300			
Material Type					
		Silty CLAY, Gravelly			
Maximum Converted Wet Density	(t/m3)	2.06			
Optimum Moisture Content (%)		21.5			
Field Wet Density (t/m3)		2.13			
Field Dry Density (t/m3)		1.74			
Field Moisture Content (%)		22.5			
Oversize Material (%)		3			
Compaction Type		Standard			
Oversize Retained on :		19mm			
Moisture Ratio (%)		104.5			
Moisture Variation (%)		1.0			
Wet/Dry of Optimum		Wet			
Hilf Density Ratio		103.0			

Notes: DEPTH OF TESTS TAKEN FROM BELOW FINISHED FILL LEVEL



Approved Signatory

H.Pyke

18-May-20

HILF DENSITY/MOISTURE RATIO, NUCLEAR GAUGE METHOD	TESTED BY :	J.Murphy	FIGURE
AS PER AS1289 - 1.1, 1.2.1(6.4),2.1.1,5.7.1,5.8.1			
A.S.JAMES FORM No: LR005 FIG 1 / REV 9 / 10/01/17	CHECKED BY:	A.White	1 of 2



Geotechnical Engineers
Ballarat Facility
P.O. Box 1319 Bakery Hill Vic.
Accreditation No 9855

JOB:

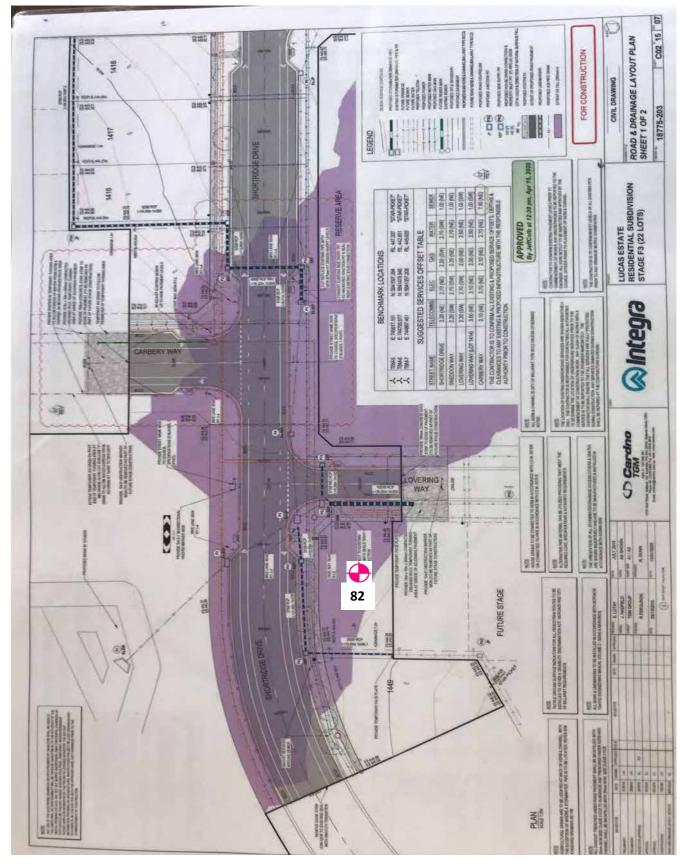
Shortridge Drive Lucas Job No.

120208

Report No.

B019

Date 18-May-20





TEST LOCATIONS

DISTANCES GIVEN IN METRES

HILF DENSITY/MOISTURE RATIO, NUCLEAR GAUGE METHOD AS PER AS1289 - 1.1, 1.2.1(6.4),2.1.1,5.7.1,5.8.1 A.S.JAMES FORM No: LR005 FIG 3 / REV 3 / 30/01/03

TESTED BY:

J.Murphy

FIGURE

CHECKED BY:

A.White

2 of 2

N.T.S



A.S. JAMES PTY. LTD. Shortridge Drive

JOB:

JOB No: 120208 REPORT No: B019/1

	/ (.O. O/		TITLETO.	John linge D	IIVG		INEI OINI NO.	D0 13/1
	Geotechnica	•		Lucas			DATE:	18/05/2020
DAILY GEO	Ballarat Lab			On	Site :- 14:0	n Off S	l <u>l</u> ite : 14:30	
Developer:			Constructor:		OILE 14.0	Superintende		
	nority: A.S.Jam	nes Pty Ltd	Level of GTA		Level one S	Supervision by		rity
	nditions: Sunr					, ,	J	,
Equipment	on Site	In Use	Not in Use				In Use	Not in Use
Excavator		٧		1	Water cart (small)	٧	
	orating roller	٧		1	D6 Dozer	,====,	-	
815 Compa	ctor	٧]	Dump Truck	(On Site)	٧	
Grader			٧]	Scraper			
Works in p	ogress Location							
Stripping	Eddallon							
Excavating								
Filling	House Lot							
Rolling	House Lot							
	Details & Obs		- u - e u e - ui - l	h l-t	1111 0 1	4		Matarial
						est was carried iven approval		
appears we	i compacted a	na wen moist	are condition	cu. The const	ructor was g	iven approvai	to place the he	At layer.
Inspections	,							
	ype & Locatio	n:						
	ction - House	Lot 1414						
Comments &				1 4 4 4 4 TI		1.0		1
						as exposed the ority of the silt	•	•
•			•		•	commenceme	•	•
andonying n	atarar olay, me	110 OX	poodu bado i	vao not mopot	tou prior to		it of fill placeri	iont.
Material Ty	oe / Quality / S	Source / App	roval:					
Site won ma	terial - CLAY,	Silty, Gravell	y, contains sc	me oversize	rocks			
Compactio	n Testing:							
-	_	4	1 Tark Na a		l	[] []		
Numbers pe Numbers pe		1	Test No.s Test No.s	82	Location Location	House Lot Fi	<u> </u>	
Numbers pe			Test No.s		Location			
•	'	nto	Standard / M	L		io (9/)	0.5]
Specification	n Requireme	HILS	STD]	Density Rat Moisture Ra		95 85-115	
Compliance	to Specifica	tion	3.2			(75)	00 1.10	
•	-				Non Confor	mina Tooto		
Density	Conforming 82	1 6515			Non Confor	ming resis		
Moisture	82							
	<u> </u>	(T : a.l., la a)						
	tions Given	•	E		r / z	5		
Approval to		[\]	-	ds Approved		Rework / Re	•	[]
Stripped sui Comments 8	face Not / App 2. Details	proved [1]	Filled Area C	Inder Review	[]	Moisture Cor	nditioning requ	irea []
JOHNHOIRS (, Dotalia							
	ervision daily g		•	ry	Operator: J.			
A.S.JAMES	LW053 (Fig 2) / REV 1 / 21	1/5/14		Date: 11/5/2	2020		

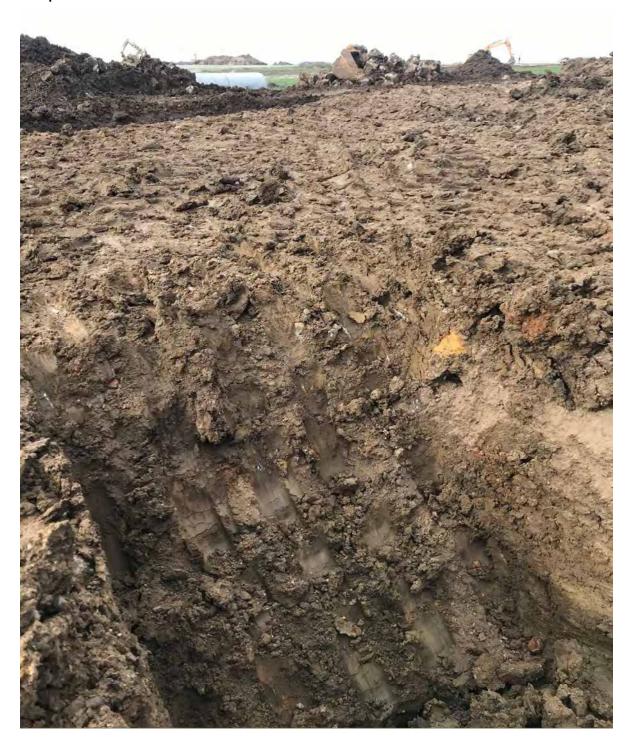


A.S. JAMES PTY.LTD Geotechnical Engineers Ballarat Laboratory 73-77 Humffray Street North Accreditation No. 9855

JOB: Shortridge Drive Lucas

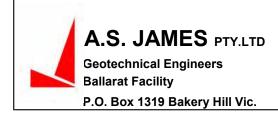
Job No.	120208		
Report No.	B019/1		
Date	18-May-20		

Lot 1414 test pit



N.T.S

Site Location Plan	TESTED BY: J.Murphy	FIGURE
	CHECKED BY: A.White	2



House Lot Fill

Section Tested:

JOB:	Job No.	120208
Shortridge Drive	Report No.	B021
Lucas	Date	18-May-20

FOR

Pipecon Pty Ltd 48 Icon Drive

DELACOMBE VIC 3356

		1		1		
Test Number		87				
Date of Test		12/05/20				
Time of Test		14:12				
Location	Chainage:	See				
	Offset:	Sketch				
Depth of Test		300				
Probe Depth (mm)		300				
Material Type						
		Silty CLAY,				
		Gravelly				
Maximum Converted Wet Dens	sity (t/m3)	2.07				
Optimum Moisture Content (%))	21.5				
Field Wet Density (t/m3)		1.99				
Field Dry Density (t/m3)		1.64				
Field Moisture Content (%)		21.5				
Oversize Material (%)		0				
Compaction Type		Standard				
Oversize Retained on :		19mm				
Moisture Ratio (%)		98.5				
Moisture Variation (%)		0.5				
Wet/Dry of Optimum		Dry				
Hilf Density Ratio		96.0	-			

DEPTH OF TESTS TAKEN FROM BELOW FINISHED FILL LEVEL Notes:

NATA	Accredited for compliance with ISO/IEC 17025 - Testing Accreditation No 9855

Approved Signatory H.Pyke

18-May-20

HILF DENSITY/MOISTURE RATIO, NUCLEAR GAUGE METHOD	TESTED BY:	J.Murphy	FIGURE
AS PER AS1289 - 1.1, 1.2.1(6.4),2.1.1,5.7.1,5.8.1			
A.S.JAMES FORM No: LR005 FIG 1 / REV 9 / 10/01/17	CHECKED BY:	A.White	1 of 2



Geotechnical Engineers Ballarat Facility P.O. Box 1319 Bakery Hill Vic. **Accreditation No 9855**

JOB:

Shortridge Drive Lucas

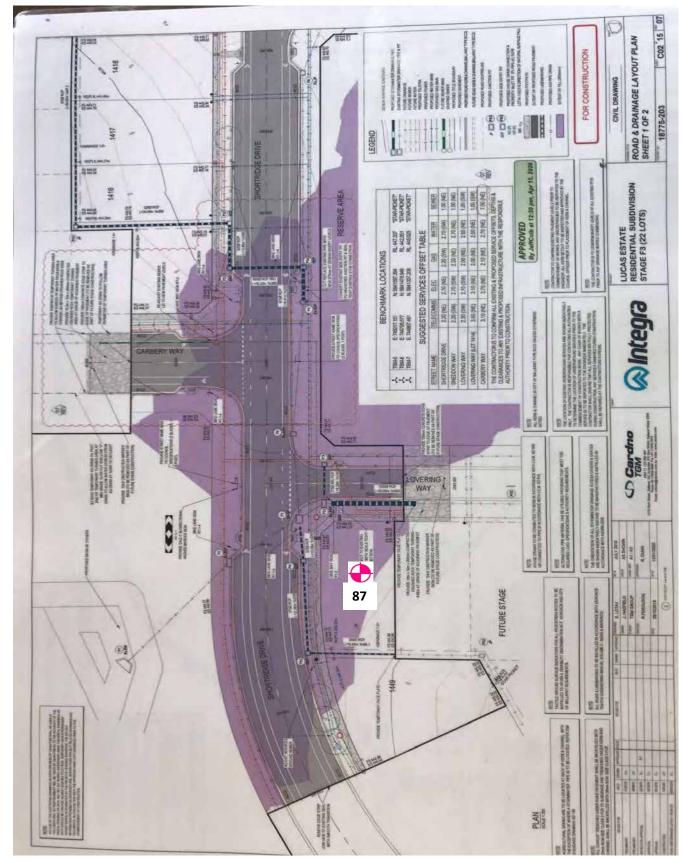
Job No.

120208

Report No.

B021

Date 18-May-20





TEST LOCATIONS

DISTANCES GIVEN IN METRES

HILF DENSITY/MOISTURE RATIO, NUCLEAR GAUGE METHOD AS PER AS1289 - 1.1, 1.2.1(6.4),2.1.1,5.7.1,5.8.1 A.S.JAMES FORM No: LR005 FIG 3 / REV 3 / 30/01/03

TESTED BY:

J.Murphy

FIGURE

N.T.S

CHECKED BY:

A.White

2 of 2



Comments & Details

Level 1 supervision daily geotechnical report summary

A.S.JAMES LW053 (Fig 2) / REV 1 / 21/5/14

A.S. JAMES

JOB:

JOB No: 120208 REPORT No: B021/1

PTY. LTD. Shortridge Drive **Geotechnical Engineers** Lucas DATE: 18/05/2020 **Ballarat Laboratory Reg No.-9855** DAILY GEOTECHNICAL ACTIVITY REPORT On Site :- 13:45 Off Site: 14:15 Developer: Constructor: Pipecon Superintendent: Shaun Testing Authority: A.S.James Pty Ltd Level of GTA brief: Level one Supervision by Testing Authority Weather Conditions: Sunny, windy Not in Use In Use Not in Use **Equipment on Site** In Use Water cart (small) Excavator Pad Foot vibrating roller ٧ D6 Dozer 815 Compactor ٧ Dump Truck (On Site) V ٧ Grader Scraper Works in progress Location Stripping Excavating Filling House Lot Rolling House Lot Comments, Details & Observations: The constructor has placed the next layer of material on house lot 1414. One test was carried out on this lot. Material appears well compacted and well moisture conditioned. The constructor was given approval to place the next layer. Inspections Inspection Type & Location: Comments & Details: Material Type / Quality / Source / Approval: Site won material - CLAY, Silty, Gravelly, contains some oversize rocks **Compaction Testing:** Numbers performed Test No.s 87 Location House Lot Fill Numbers performed Test No.s Location Numbers performed Test No.s Location **Specification Requirements** Standard / Modified Density Ratio (%) 95 STD Moisture Ratio (%) 85-115 **Compliance to Specification** Conforming Tests Non Conforming Tests Density 87 Moisture 87 Site Instructions Given (Tick box) Approval to Place Fill Filling Methods Approved [\[\] Rework / Re-roll required [\/] Stripped surface Not Approved [$\sqrt{\ }$] Filled Area Under Review Moisture Conditioning required []

Operator: J.Murphy

Date: 12/5/2020



Geotechnical Engineers Ballarat Laboratory 73-77 Humffray Street North Accreditation No. 9855 JOB: Shortridge Drive Lucas

 Job No.
 120208

 Report No.
 B021/1

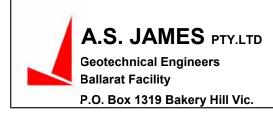
 Date
 18-May-20

Lot 1414 test pad



N.T.S

Site Location Plan	TESTED BY: J.Murphy	FIGURE
	CHECKED BY: A.White	2



House Lot Fill

Section Tested:

JOB:	Job No.	120208
Shortridge Drive	Report No.	B023
Lucas	Date	18-May-20

FOR

Pipecon Pty Ltd 48 Icon Drive

DELACOMBE VIC 3356

			1	T			
Test Number		92	93	94	95	96	
Date of Test		13/05/20	13/05/20	13/05/20	13/05/20	13/05/20	
Time of Test		14:39	15:03	15:05	15:07	15:09	
Location	Chainage:	See	See	See	See	See	
	Offset:	Sketch	Sketch	Sketch	Sketch	Sketch	
Depth of Test		FFL	FFL	FFL	FFL	FFL	
Probe Depth (mm)		300	300	300	300	300	
Material Type		Silty CLAY, Gravelly					
Maximum Converted Wet Density (t/m3)		2.02	2.00	2.04	2.05	2.08	
Optimum Moisture Content (%)		25.0	25.0	27.0	23.5	21.5	
Field Wet Density (t/m3)		2.07	2.03	2.09	2.14	2.13	
Field Dry Density (t/m3)		1.64	1.60	1.65	1.73	1.74	
Field Moisture Content (%)		26.0	27.0	27.0	24.0	22.0	
Oversize Material (%)		2	0	2	0	0	
Compaction Type		Standard	Standard	Standard	Standard	Standard	
Oversize Retained on :		19mm	19mm	19mm	19mm	19mm	
Moisture Ratio (%)		104.0	109.0	100.5	101.5	101.0	
Moisture Variation (%)		1.0	2.0	0.0	0.5	0.0	
Wet/Dry of Optimum	Wet/Dry of Optimum		Wet	Wet	Wet	Wet	
Hilf Density Ratio		102.0	101.5	103.0	104.5	102.0	

Notes: DEPTH OF TESTS TAKEN FROM FINISHED FILL LEVEL



Approved Signatory

H.Pyke

18-May-20

HILF DENSITY/MOISTURE RATIO, NUCLEAR GAUGE METHOD	TESTED BY :	J.Murphy	FIGURE
AS PER AS1289 - 1.1, 1.2.1(6.4),2.1.1,5.7.1,5.8.1			
A.S.JAMES FORM No: LR005 FIG 1 / REV 9 / 10/01/17	CHECKED BY:	A.White	1 of 2



Geotechnical Engineers Ballarat Facility P.O. Box 1319 Bakery Hill Vic. **Accreditation No 9855**

JOB:

Shortridge Drive Lucas

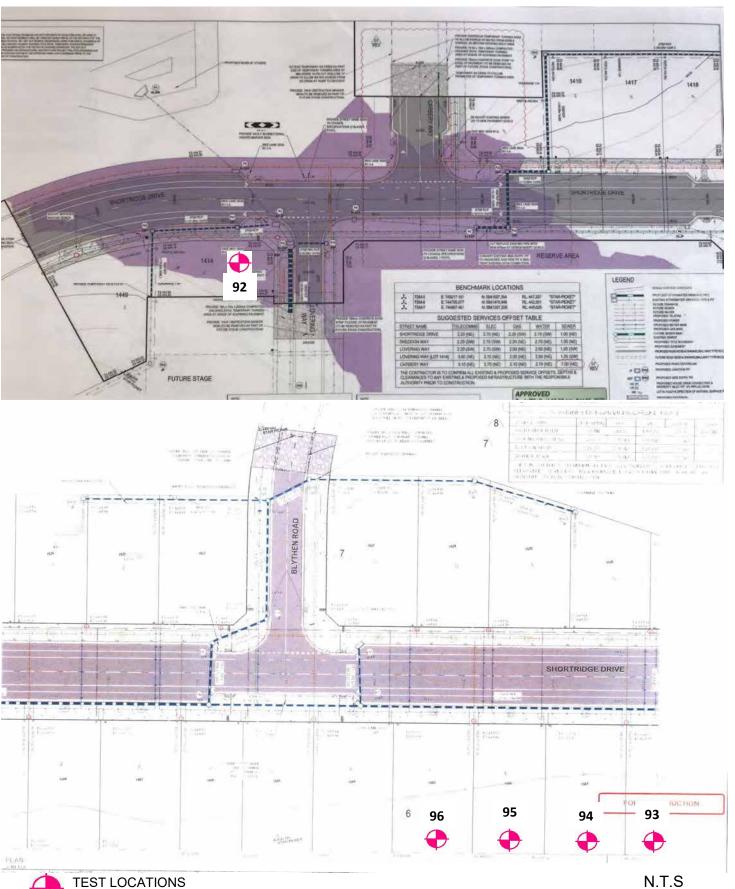
Job No.

B023

120208

Report No.

Date 18-May-20



DISTANCES GIVEN IN METRES HILF DENSITY/MOISTURE RATIO, NUCLEAR GAUGE METHOD AS PER AS1289 - 1.1, 1.2.1(6.4),2.1.1,5.7.1,5.8.1 A.S.JAMES FORM No: LR005 FIG 3 / REV 3 / 30/01/03

TESTED BY:

J.Murphy

FIGURE

CHECKED BY:

A.White

2 of 2



Geotechnical Engineers

Ballarat Laboratory Reg No.-9855

JOB:

Lucas

Shortridge Drive

JOB No: 120208 REPORT No: B023/1

18/05/2020 DATE:

DAILY GEO	TECHNICAL .	ACTIVITY RE		On	Site :- 14:00	Off S	ite : 15:30	
Developer: Constructor: Piped				Superintendent: Shaun				
	ority: A.S.Jan	nes Pty Ltd	Level of GTA		Level one S	upervision by		rity
Weather Cor	nditions: Sunr	ny, windy				-		
Equipment	on Site	In Use	Not in Use				In Use	Not in Use
Excavator		٧			Water cart (small)		٧
Pad Foot vib	_	٧			D6 Dozer			
815 Compactor		٧			Dump Truck	(On Site)	٧	
Grader		٧			Scraper			
Works in pr	ogress Location							
Stripping	Location							
Excavating								
Filling	House Lot							
Rolling	House Lot							
Comments, I	Details & Obs	ervations:						
					1414. One to	est was carried	d out on this lo	t. Material
			ure condition					
					. One test wa	as taken on ea	ich lot with ma	terial
appearing we	ell moisture co	onditioned an	d well compa	cted.				
l l l l l l l l l l l l l l l l l l l								
Inspections		n.						
	ype & Locatio		500, 1501, 150	22 8 1502				
Comments 8		ide on lots 15	100, 1001, 100	02 & 1303				
		vated some te	est nits snread	l evenly acros	ss lots 1500-	1503. The con	structor has e	ynosed
				•		ars as though		
						natural clay, l		
			ncement of fil		an anaonymig	, riatarar olay,		Дросси
	e / Quality / S							
7.		• • • • • • • • • • • • • • • • • • • •						
Site won mat	terial - CLAY,	Silty, Gravell	y, contains so	me oversize	rocks			
			-					
Compaction	Testing:							
Numbers per	rformed	5	Test No.s	92-96	Location	House Lot Fi	II	
Numbers per			Test No.s	02 00	Location	110000 20111		
Numbers per			Test No.s		Location			
•	'	nto.	•	adified		2 (0/)	0.E	1
Specificatio	n Requireme	ents	Standard / M STD	oaillea I	Density Rati Moisture Ra		95 85-115	-
Compliance	to Specifica	tion	010		Moisture IVa	110 (70)	00-110	1
Compliance	to opecifica	11011						
	Conforming ⁻				Non Conforr	ming Tests		
Density	92,93,94,95,							
Moisture	92,93,94,95,	96						
Site Instruct	tions Given	(Tick box)						
Approval to Place Fill $[v]$ Filling Methods Approved $[\sqrt{\ }]$ Rework / Re-roll required $[\]$								
Stripped surface Not-/ Approved $[\sqrt{\ }]$ Filled Area Under Review $[\]$ Moisture Conditioning required $[\]$								
Comments & Details								
Level 1 supe	rvision daily c	jeotechnical r	eport summa	ry	Operator: J.	Murphy/H.Pyk	e	
A.S.JAMES LW053 (Fig 2) / REV 1 / 21/5/14 Date: 13/5/2020								



Geotechnical Engineers Ballarat Laboratory 73-77 Humffray Street North Accreditation No. 9855

JOB: Shortridge Drive

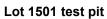
Lucas

Job No. 120208 Report No. B023/1

18-May-20

Date

Lot 1500 test pit







Lot 1502 test pit

Lot 1503 test pit





Site Location Plan	TESTED BY: J.Murphy/H.Pyke	FIGURE
	CHECKED BY: A.White	2