

LTD. BALLARAT OFFICE:

S.A. OFFICE:

VIC HEAD OFFICE:

15 Libbett Avenue

**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

Clayton South Vic 3169 08 8504 7467 Office 03 95474811

melb@asjames.com.au

Laboratory 03 95624709 lab@asjames.com.au

Pipecon Pty Ltd 48 Icon Drive

**DELACOMBE VIC 3356** 

Marked attention to. Jayson Frawley

Date:

18/5/2020

Ref:

120208

B023

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

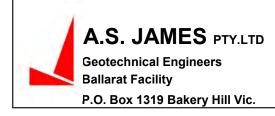
Our Invoice is also enclosed.

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

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	-		

DEPTH OF TESTS TAKEN FROM BELOW FINISHED FILL LEVEL Notes:



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

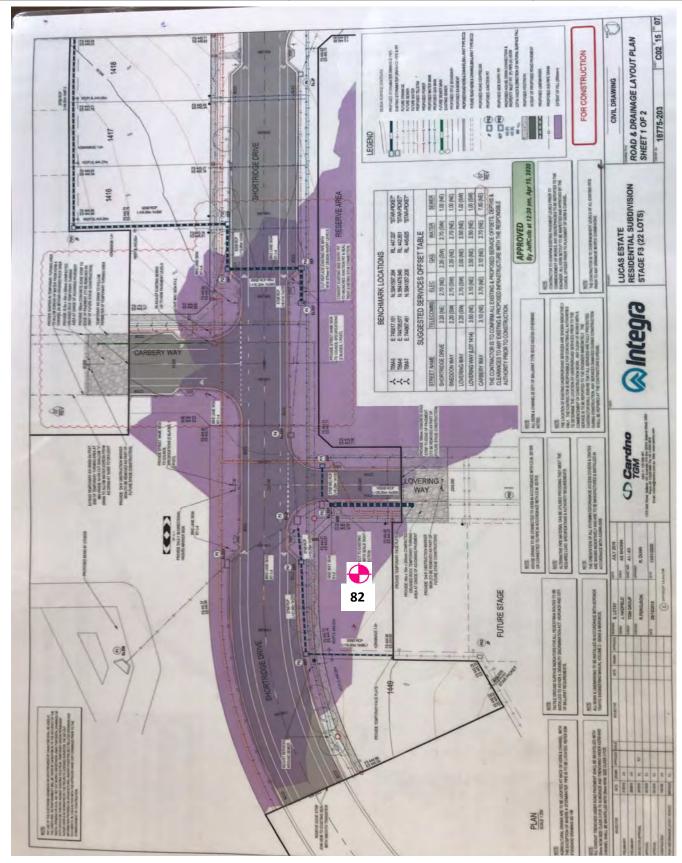
Job No.

Report No.

B019

120208

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



## A.S. JAMES

PTY. LTD.

**Geotechnical Engineers** 

JOB:

Lucas

Shortridge Drive

JOB No: REPORT No: B019/1

120208

18/05/2020 DATE:

	oratory Reg									
DAILY GEOTECHNICAL	ACTIVITY RE	EPURI	On	Site :- 14:00	Off S	ite: 14:30				
Developer :		Constructor:	Pipecon		Superintende	ent: Shaun				
Testing Authority: A.S.Jan	nes Pty Ltd	Level of GTA	brief:	Level one S	upervision by	Testing Autho	rity			
Weather Conditions: Sunr	ny, windy					-				
Equipment on Site	In Use	Not in Use				In Use	Not in Use			
Excavator	٧			Water cart (	small)	٧				
Pad Foot vibrating roller	٧			D6 Dozer						
815 Compactor	٧			<b>Dump Truck</b>	(On Site)	٧				
Grader		٧	,	Scraper						
Manta in management				•	'					
Location	Works in progress  Location									
Stripping										
Excavating										
Filling House Lot										
Rolling House Lot										
Comments, Details & Obs	ervations:									
The constructor has place	d the first lay	er of material	on house lot	1414. One te	st was carried	out on this lo	t. Material			
appears well compacted a										
appears wen sempasied a		aro corrainorn	Ju. 1110 001101	. actor was g	von approvan	to place the fit	5/11 layer.			
Inspections										
Inspection Type & Locatio	n:									
Visual Inspection - House	Lot 1414									
Comments & Details:										
The constructor has excav	ated a test p	it on house lo	t 1414. The c	onstructor ha	s exposed the	e natural silty	clav			
subgrade in this pit. It app	•				•	•	•			
underlying natural clay, ho	•	•		•	•	•	•			
l	Wever the ex	posed base w	as not mope.	ned prior to t		it of fill places	TIOTIL.			
Material Type / Quality / S	Source / Apr	roval·								
	ourse / App	7.014								
Site won material - CLAY,	Silty Gravell	v contains so	me oversize	rocks						
Olle Wolf Material - OLAT,	Only, Graven	y, contains so	ille oversize	IOCKS						
Compaction Testing:										
Numbers performed	1	Test No.s	82	Location	House Lot Fi	II				
Numbers performed		Test No.s		Location						
Numbers performed		Test No.s		Location						
	4-	. Ot	!:£:!	   D = = :# + D = #:	- (0/)	0.5				
Specification Requireme	ents	Standard / M	oaitiea I	Density Rati		95	4			
	4.	STD		Moisture Ra	110 (%)	85-115				
Compliance to Specifica	tion									
Conforming <sup>-</sup>	Tests			Non Conform	mina Tests					
Density 82										
Moisture 82										
Woldtare <u>62</u>										
Site Instructions Given	(Tick box)									
Approval to Place Fill	[ \/ ]	Filling Metho	ds Approved	[ \[ 1 \]	Rework / Re-	roll required	[ ]			
Stripped surface Not / App		Filled Area U		[]		nditioning requ				
Comments & Details							5 [ ]			
Commonto & Dotallo							1			
Lovel 1 cupomision della	iootoobaical :	conort ourses	n,	Operator	Muroby					
Level 1 supervision daily g		•	у	Operator: J.						
A.S.JAMES LW053 (Fig 2	)/KEV 1/2	1/0/14		Date: 11/5/2	.UZU					

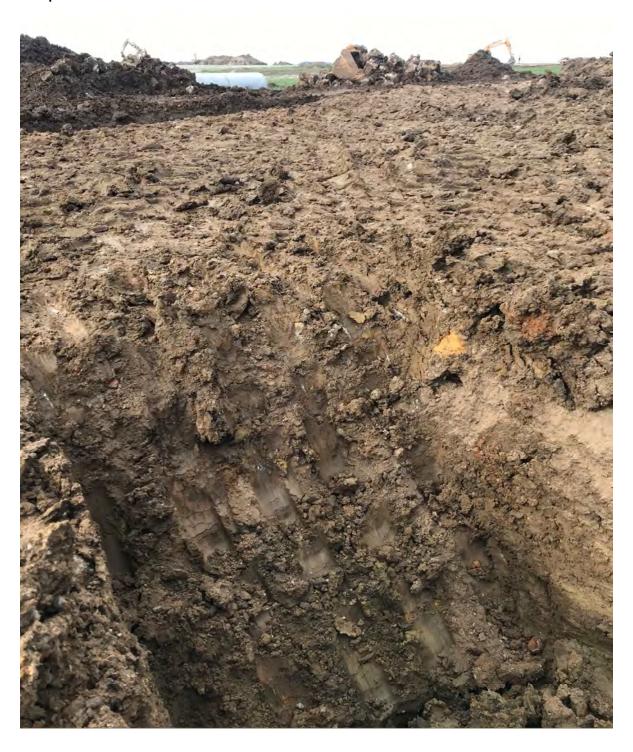


Geotechnical Engineers Ballarat Laboratory 73-77 Humffray Street North Accreditation No. 9855

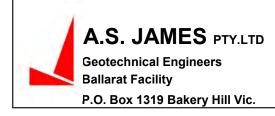
JOB: Shortridge Drive Lucas

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

### Lot 1414 test pit



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

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 Density (	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			

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

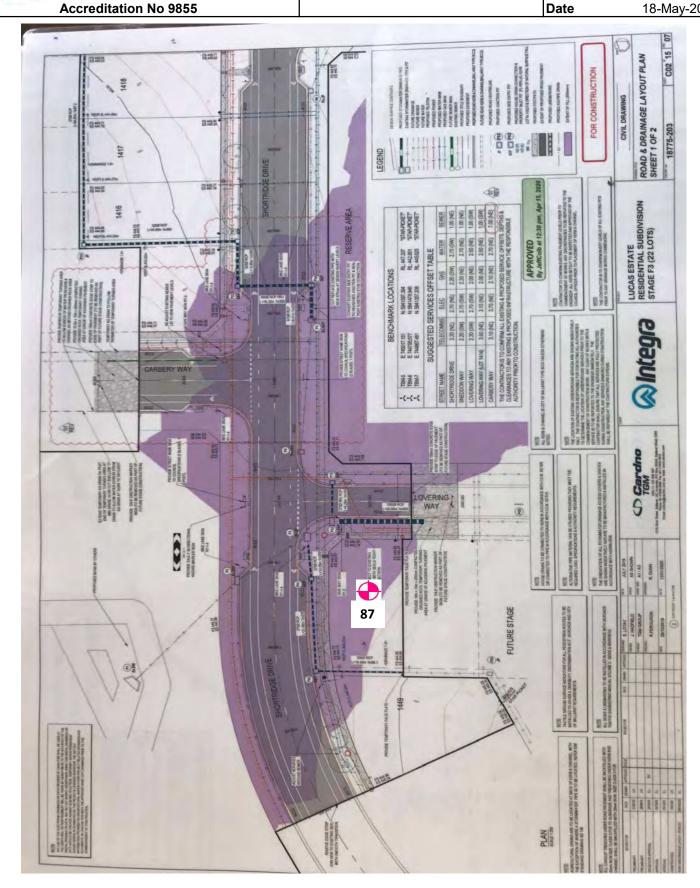
Job No.

120208

Report No.

B021

18-May-20





**TEST LOCATIONS DISTANCES GIVEN IN METRES**  N.T.S

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



# A.S. JAMES PTY. LTD. Shortridge Drive

JOB:

JOB No: 120208 REPORT No: B021/1

	al Engineers oratory Reg No9855	Lucas			DATE:	18/05/2020
DAILY GEOTECHNICAL		On	Site :- 13:45	5 Off S	ite : 14:15	
Developer :	Constructor:			Superintende		
Testing Authority: A.S.Jan			Level one Su		Testing Autho	rity
Weather Conditions: Sunr	ny, windy					
<b>Equipment on Site</b>	In Use Not in Use				In Use	Not in Use
Excavator	√	1	Water cart (s	small)	٧	
Pad Foot vibrating roller	V	1	D6 Dozer	,		
815 Compactor	√	]	Dump Truck	(On Site)	٧	
Grader	√	]	Scraper			
Works in progress						
Location						
Stripping						
Excavating						
Filling House Lot Rolling House Lot						
Comments, Details & Obs	ervations:					
	d the next layer of materia	l on house lo	t 1414. One te	est was carrie	d out on this lo	ot. Material
	and well moisture condition					
Inspections Inspection Type & Location	in:					
Inspection Type & Locatio	III.					
Comments & Details:						
Matarial True / Ovelity /	0					
Material Type / Quality /	Source / Approvai:					
Site won material - CLAY	Silty, Gravelly, contains so	ome oversize	rocks			
one won material object,	only, oravony, contains se	51110 0 0 0 10120	TOOKO			
Compaction Testing:						
Numbers performed	1 Test No.s	87	Location	House Lot Fi	II	
Numbers performed	Test No.s		Location			
Numbers performed	Test No.s		Location			
Specification Requireme	ents Standard / M	lodified	Density Ratio	o (%)	95	1
opoomoution requirement	STD	]	Moisture Rat		85-115	1
Compliance to Specifica	tion	-		, ,		_
Conforming <sup>1</sup>	Teete		Non Conforn	ning Tests		
Density 87	10313		Tron Comon	illig resis		
Moisture 87						
<u> </u>	/T: ala la ass)		1			
Site Instructions Given	•	.do	, r./i	Doursels / D	mall re	гэ
Approval to Place Fill		ds Approved		Rework / Re-	•	[] uirod []
Stripped surface Not/ App Comments & Details	oroved [√] Filled Area U	niuei Keview	[]	worsture Cor	nditioning requ	տես []
Commonto di Dotalio						
	geotechnical report summa	iry	Operator: J.N			
A.S.JAMES LW053 (Fig 2	2) / REV 1 / 21/5/14		Date: 12/5/2	020		



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

 Job No.
 120208

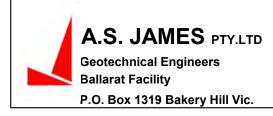
 Report No.
 B021/1

 Date
 18-May-20

### Lot 1414 test pad



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

			·				
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	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	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



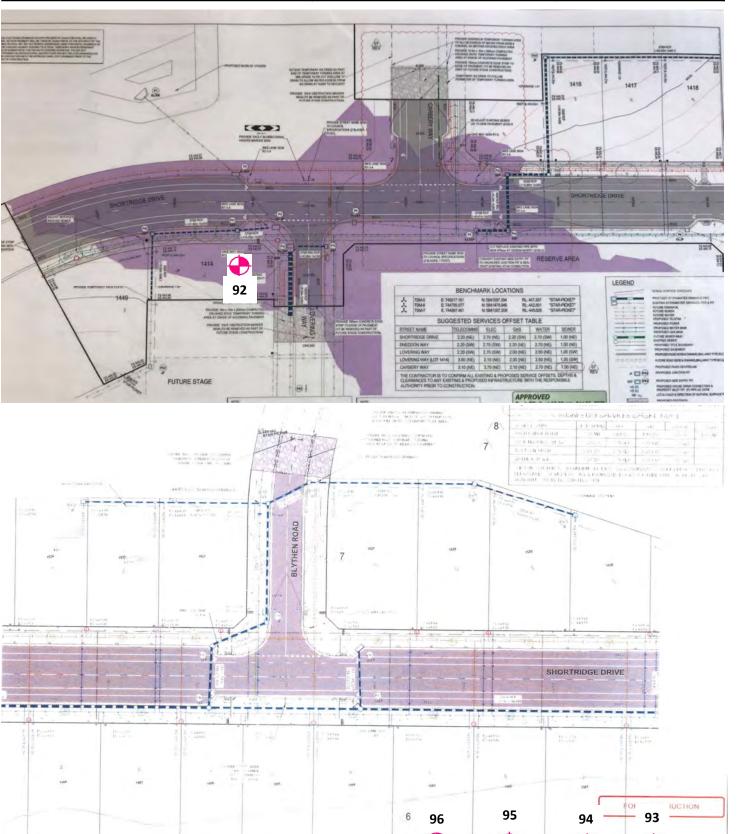
Geotechnical Engineers
Ballarat Facility
P.O. Box 1319 Bakery Hill Vic.
Accreditation No 9855

JOB:

Shortridge Drive Lucas **Job No.** 120208

Report No. B023

**Date** 18-May-20



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TEST LOCATIONS

DISTANCES GIVEN IN METRES

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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



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

**Geotechnical Engineers** 

JOB:

Shortridge Drive

Lucas

JOB No: 120208 REPORT No: B023/1

DATF: 18/05/2020

	Ballarat Lab	oratory Red	No -9855	Lucus			DATE.	10/00/2020
DAILY GEO	TECHNICAL A			On	Site :- 14:00	n Off S	Site: 15:30	
Developer :			Constructor:		01.0	Superintend		
	ority: A.S.Jan	nes Pty Ltd	Level of GTA		Level one S		Testing Autho	rity
	nditions: Sunr					,	J	,
Equipment	on Site	In Use	Not in Use				In Use	Not in Use
Excavator		٧	1		Water cart (	small)		V
Pad Foot vib	rating roller	v			D6 Dozer	ornan)		·
B15 Compactor V			Dump Truck (On Site		(On Site)	٧		
Grader		٧			Scraper	,		
Works in pr	oaross				•			
works iii pi	Location							
Stripping	Location							
Excavating								
Filling	House Lot							
Rolling	House Lot							
	Details & Obs							
					t 1414. One to	est was carrie	d out on this lo	ot. Material
	•		ture condition				1 1 1 20	
•					3. One test wa	as taken on ea	ach lot with ma	iterial
appearing w	eli moisture co	onditioned an	d well compa	ciea.				
nspections								
	ype & Locatio							
		ide on lots 15	500, 1501, 150	02 & 1503				
Comments 8					1 1 1500	4500 TI		
				•			structor has e	•
							the construct however the	
		•	encement of fil		andonying	, riatarar olay,	110110101 1110 0	жроооч
	e / Quality / S							
•								
Site won ma	terial - CLAY,	Silty, Gravell	y, contains so	me oversize	rocks			
Compaction	Testing:							
Numbers pe		5	Test No.s	92-96	Location	House Lot F	ill	
Numbers pe			Test No.s		Location			
Numbers pe	rformed		Test No.s		Location			
Specificatio	n Requireme	ents	Standard / M	lodified	Density Rati	o (%)	95	
			STD		Moisture Ra	tio (%)	85-115	]
Compliance	to Specifica	tion						
	Conforming 7	Tests			Non Confori	mina Tests		
Density	92,93,94,95,					<u> </u>		
Moisture	92,93,94,95,							
Sita Instruc	tions Given	(Tick boy)						
Site Instructions Given (Tick box)  Approval to Place Fill $[v]$ Filling Methods Approved $[\sqrt{2}]$ Rework / Re-roll required $[v]$								
			Filled Area U				nditioning requ	
Comments 8					. 1			[ ]
					T -			
evel 1 sune	rvision daily o	eotechnical i	report summa	rv	IOperator: .l	Murphy/H.Pvk	æ	

Date: 13/5/2020



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

JOB: Shortridge Drive

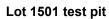
Lucas

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