



A.S.JAMES

PTY.
LTD.

BALLARAT OFFICE:

A.C.N.004 584 534 A.B.N. 40 004 584 534

Geotechnical Engineers

SINCE 1963

P.O. Box 1319

BAKERY HILL Vic 3354

03 5333 5911

ballarat@asjames.com.au

S.A. OFFICE:

1/12 Theen Avenue

WILLASTON SA 5118

08 8504 7467

asjabsa@asjames.com.au

VIC HEAD OFFICE:

15 Libbitt Avenue

Clayton South Vic 3169

Office 03 95474811

melb@asjames.com.au

Laboratory 03 95624709

lab@asjames.com.au

Pipecon

8 Liberator Drive

MITCHELL PARK, VIC, 3355

Date: 24/11/2020

Ref : 120208

Marked attention to. Jayson Frawley

B040

Purchase Order No :

RE: Lucas Estate
Shortridge Drive
Lucas

We enclose Reports 120208 B039 to B040 being results of field and laboratory testing, along with level one supervision, carried out on the above project between 29/10/2020 and 30/10/2020

Our Invoice is also enclosed.

Yours faithfully,

T.J. HOLT MIEAust CPEng
NER APEC Eng IntPE (Aus) EC-1022
A.S. JAMES PTY LTD



A.S. JAMES PTY. LTD.

Geotechnical Engineers
Ballarat

JOB:
Lucas Estate
Shortridge Drive
Lucas

JOB No: 120208
REPORT No: B039
DATE: 5/11/2020

REPORT OF SITE INSPECTION

Developer : Constructor: Pipecon Superintendent: Shaun

TYPE OF INSPECTION: Visual Inspection

LOCATION: Lots 1533, 1534, 1563, 1564, 1565

MEAN LEVEL: Finished Subgrade Level

MATERIAL TYPE: CLAY, Silty, Gravelly

EQUIPMENT USED: Excavator

OBSERVATIONS:

The constructor has stripped off the top soil and organics from lots 1533, 1534, 1563, 1564 and 1565 to expose a predominately stiff underlying clay base. Although there are some small pockets of buckshot gravel/silt present, the constructor has it at an acceptable 80% clay/20% buckshot ratio. The constructor has also encountered some large basaltic rock in the process of stripping and has excavated out rocks that have become loose.

CONCLUSIONS AND REMARKS:

The constructor was advised that any large basaltic rocks that were at the surface would not have to be excavated out as AS James was comfortable that these rocks would show little to no movement once filling works commence. The constructor was advised to compact the exposed subgrade with a compactor or padfoot roller prior to filling works beginning. The constructor was also advised to compact around the large basaltic rocks as attempting to roll over these would potentially loosen them or break them up. Once this has been completed the constructor has been given approval to commence filling works.

DATE OF INSPECTION: 29/10/2020

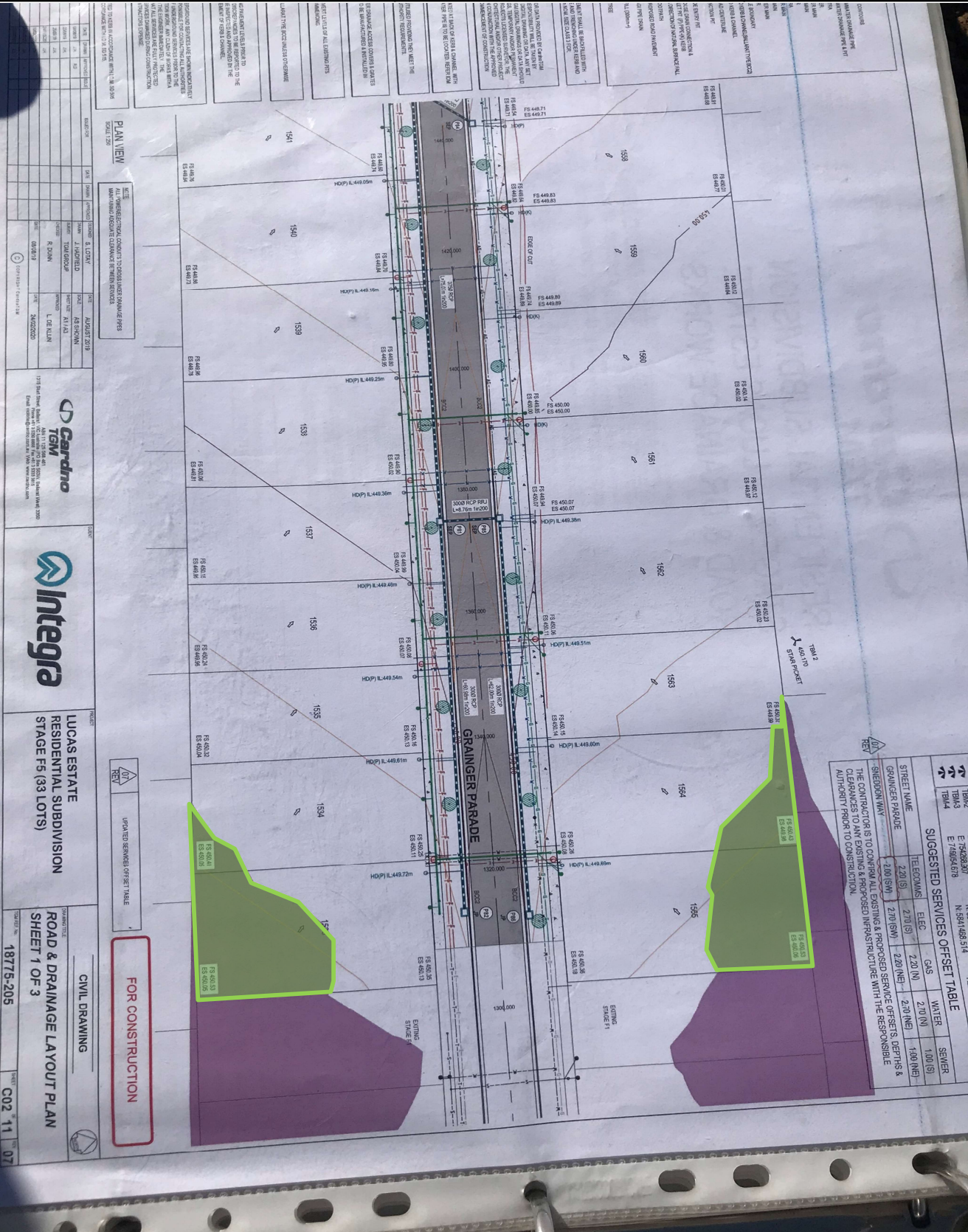
INSPECTION CARRIED OUT BY: J.Murphy

IN THE PRESENCE OF: Shaun


CERTIFIED BY:

5 / 11 / 20

A.S.JAMES SUPERVISING GEOTECHNICAL ENGINEER



Indicates inspected areas

 A.S. JAMES PTY.LTD Geotechnical Engineers Ballarat Facility P.O. Box 1319 Bakery Hill Vic.	JOB:	Job No. 120208
	Lucas Estate Shortridge Drive Lucas	Report No. B040
		Date 5/11/2020

Section Tested: House Lots

FOR
Pipecon Pty Ltd
8 Liberator Drive
MITCHELL PARK VIC 3355

Test Number	173	174	175	176	177	178
Date of Test	30/10/2020	30/10/2020	30/10/2020	30/10/2020	30/10/2020	30/10/2020
Time of Test	12:49	12:52	12:59	13:03	13:10	13:16
Location Chainage:	See	See	See	See	See	See
	Offset: Sketch	Sketch	Sketch	Sketch	Sketch	Sketch
Depth of Test	FFL	FFL	400	400	FFL	FFL
Probe Depth (mm)	300	300	300	300	300	300
Material Type	Silty CLAY, Gravelly	Silty CLAY, Gravelly	Silty CLAY, Gravelly	Silty CLAY, Gravelly	Silty CLAY, Gravelly	Silty CLAY, Gravelly
Maximum Converted Wet Density (t/m3)	2.07	2.05	1.96	2.05	2.09	2.06
Optimum Moisture Content (%)	24.5	22.5	27.5	23.5	20.0	24.0
Field Wet Density (t/m3)	2.01	2.12	1.95	2.10	2.03	2.12
Field Dry Density (t/m3)	1.62	1.74	1.51	1.71	1.70	1.71
Field Moisture Content (%)	24.5	22.0	29.0	23.0	19.5	23.5
Oversize Material (%)	0	0	0	0	4	0
Compaction Type	Standard	Standard	Standard	Standard	Standard	Standard
Oversize Retained on :	19mm	19mm	19mm	19mm	19mm	19mm
Moisture Ratio (%)	100.5	98.0	106.0	97.0	99.5	99.5
Moisture Variation (%)	0.0	0.5	1.5	0.5	0.0	0.0
Wet/Dry of Optimum	Wet	Dry	Wet	Dry	Dry	Dry
Hilf Density Ratio	97.5	103.0	99.5	102.5	97.0	103.0

Notes: DEPTH OF TEST TAKEN FROM AND BELOW FINISHED FILL LEVEL




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

Approved Signatory
D.Gunn

05-Nov-20

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 1 / REV 9 / 10/01/17	TESTED BY : J.Murphy CHECKED BY: A.White	FIGURE 1 of 3
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 A.S. JAMES PTY.LTD Geotechnical Engineers Ballarat Facility P.O. Box 1319 Bakery Hill Vic.	JOB:	Job No. 120208
	Lucas Estate	Report No. B040
	Shortridge Drive Lucas	Date 5/11/2020

Section Tested: House Lots

FOR
 Pipecon Pty Ltd
 8 Liberator Drive
 MITCHELL PARK VIC 3355

Test Number	179	180	181			
Date of Test	30/10/2020	30/10/2020	30/10/2020			
Time of Test	13:18	13:25	13:30			
Location Chainage:	See	See	See			
	Offset: Sketch	Sketch	Sketch			
Depth of Test	FFL	400	400			
Probe Depth (mm)	300	300	300			
Material Type	Silty CLAY, Gravelly	Silty CLAY, Gravelly	Silty CLAY, Gravelly			
Maximum Converted Wet Density (t/m3)	2.05	1.92	2.07			
Optimum Moisture Content (%)	25.5	31.0	26.0			
Field Wet Density (t/m3)	2.05	1.85	2.13			
Field Dry Density (t/m3)	1.63	1.40	1.69			
Field Moisture Content (%)	25.5	31.5	26.0			
Oversize Material (%)	0	1	1			
Compaction Type	Standard	Standard	Standard			
Oversize Retained on :	19mm	19mm	19mm			
Moisture Ratio (%)	100.5	102.5	101.0			
Moisture Variation (%)	0.0	0.5	0.0			
Wet/Dry of Optimum	Wet	Wet	Wet			
Hilf Density Ratio	100.0	96.0	103.0			

Notes: DEPTH OF TEST TAKEN FROM AND BELOW FINISHED FILL LEVEL

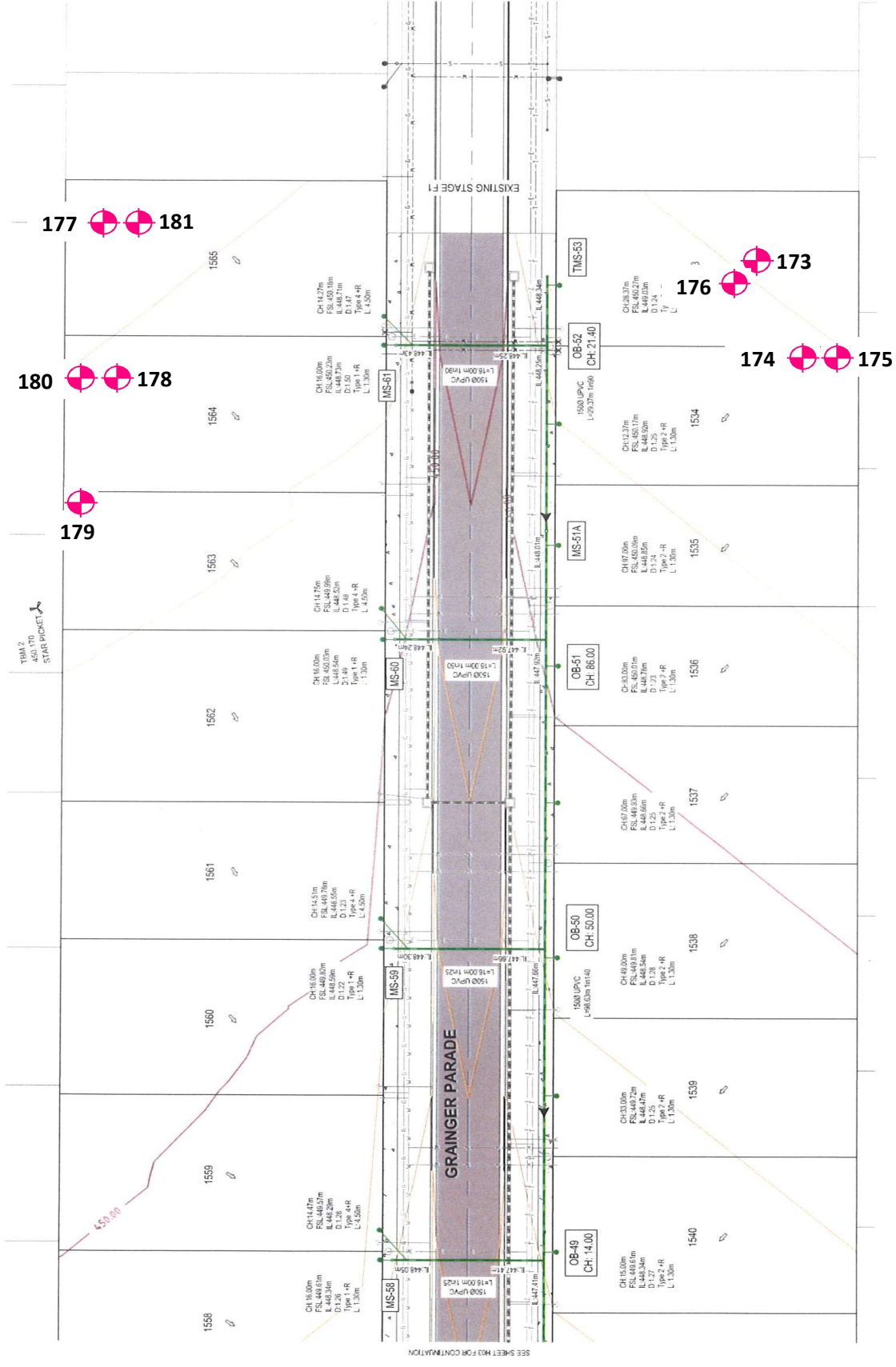


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HILF DENSITY/MOISTURE RATIO, NUCLEAR GAUGE METHOD AS PER AS1289 - 1.1, 1.2.1(6.4),2.1.1,5.7.1,5.8.1 A.S.JAMES FORM No: LR005 FIG 1 / REV 9 / 10/01/17	TESTED BY :	J.Murphy	FIGURE
	CHECKED BY:	A.White	2 of 3



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	3 of 3



A.S. JAMES PTY. LTD.
 Geotechnical Engineers
 Ballarat Laboratory Reg No.-9855

JOB:
 Lucas Estate
 Shortridge Drive
 Lucas

JOB No: 120208
 REPORT No: B040/1
 DATE: 5/11/2020

DAILY GEOTECHNICAL ACTIVITY REPORT

On Site :- 12:30 Off Site : 13:30

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		

Equipment on Site

	In Use	Not in Use		In Use	Not in Use
Excavator	√		Water cart (small)		
Pad Foot vibrating roller			D6 Dozer		
815 Compactor	√		Dump Truck (On Site)	√	
Grader			Scraper		

Works in progress

	Location
Stripping	
Excavating	
Filling	House Lots
Rolling	House Lots

Comments, Details & Observations:

The constructor has brought house lots 1533, 1534, 1563, 1564 and 1565 up to finished fill level. The constructor has placed approximately 800mm of fill in the deeper parts of these house lots with test pits excavated down to 400mm below finished fill level in order to test the deeper sections of fill. The material appears to be well compacted and well moisture conditioned across all lots.

Inspections

Inspection Type & Location:

Comments & Details:

Material Type / Quality / Source / Approval:

Site won material - CLAY, Silty, Gravelly - contains oversize rock, slightly wet of optimum moisture content

Compaction Testing:

Numbers performed	9	Test No.s	173-181	Location	House Lots
Numbers performed		Test No.s		Location	
Numbers performed		Test No.s		Location	

Specification Requirements

Standard / Modified
 STD

Density Ratio (%)
 Moisture Ratio (%)

95
 85-115

Compliance to Specification

	Conforming Tests	Non Conforming Tests
Density	173, 174, 175, 176, 177, 178, 179, 180, 181	
Moisture	173, 174, 175, 176, 177, 178, 179, 180, 181	

Site Instructions Given (Tick box)

Approval to Place Fill Filling Methods Approved Rework / Re-roll required
 Stripped surface Not / Approved Filled Area Under Review Moisture Conditioning required
 Comments & Details

Level 1 supervision daily geotechnical report summary
 A.S.JAMES LW053 (Fig 2) / REV 1 / 21/5/14

Operator: J.Murphy/A.Wallis
 Date: 30/10/2020

24th Nov 2020

Pipecon Pty Ltd,
8 Liberator Drive,
MITCHELL PARK, VIC, 3355

Ref: 120208
B040

Marked Attention to: Shaun Maher

RE: Level one supervision & Testing – Lots 1533, 1534, 1563, 1564 & 1565, Lucas Estate, Shortridge Drive.

We were commissioned by Shaun Maher of Pipecon to provide Level one supervision and density testing on excavated areas within the footprints of lots 1533, 1534, 1563, 1564 & 1565 at Lucas Estate, Shortridge Drive, Lucas.

We can confirm that our involvement was limited to 'Level 1' as specified in AS 3798 – 2007.

The Standard describes 'Level 1' as follows-

"The primary objective of Level 1 Inspection and Testing is for the geotechnical inspection and testing authority (GITA) to be able to express an opinion on the compliance of the work. The GITA is responsible for ensuring that the inspection and testing is sufficient for this purpose".

All density testing exceeded the requirement of 95% standard density ratio as specified in Table 5.1 of AS 3798 – 2007.

The testing commenced at finished subgrade level and has extended to finished fill level within the building pad and externals. The levels given in the reports are approximate levels and some small variation in levels may be expected over each individual lot.

The Level 1 Inspections and Testing covers lots 1533, 1534, 1563, 1564 & 1565 only.

Based on the inspection and testing carried out by this office between the 29/10/2020 and 30/10/2020, the fill placed on the above mentioned lots satisfies the requirements of AS 3798 SECTION 8.2 and therefore can be categorised as controlled fill.

Our reports, daily reports and site plans – 120208/B039-B040 covers the above mentioned lots.

The results of these works indicate acceptable compliance to compaction requirements at the time our supervision of earthworks onsite ceased.

If the site is left for extended periods and is not free draining and is unprotected/un-maintained, softening of the surface fills may occur between the date of earthworks completion and building construction commencing. If this is the case it may be necessary at the commencement of construction to assess the site and determine the depth of moisture penetration into the surface fills and based on this information recommendations to either strip/rework may need to be provided.

Should any point remain in doubt please do not hesitate to contact us.

Yours faithfully,



D.C.Gunn AMIEAust CEngA
DIRECTOR
A.S. JAMES PTY LTD



A.S. JAMES PTY LTD
Geotechnical Engineers

JOB: Lucas Estate Shortridge
 Drive Lucas

JOB No: 120208/B040 **Date:** Nov '20

LEGEND

Denotes approximate extent of level 1 supervision and testing

A.S. James does not warrant the accuracy or completeness of the information displayed within this figure and any person using it does so at their own risk. A.S. James shall bear no responsibility or liability of any errors, faults, defects or omissions in information. The above is for indicative purposes only & is not to scale.

CHECKED: D.Gunn
DRAWN: A.White

LOTS 1533, 1534, 1563, 1564 & 1565
LUCAS ESTATE

A4

Figure 1