



A.S.JAMES

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Pipecon Pty Ltd
48 Icon Drive
Delacombe, VIC, 3356

Date: 19/2/20

Ref : 120208

Marked attention to. Scott Mann

B006

Purchase Order No :

Dear Sirs,


RE: Shortridge Drive
Lucas

We enclose Reports 120208 B002, B004 and B006 being results of field and laboratory testing, along with level one supervision, carried out on the above project between 3/2/20 and 5/2/20

Our Invoice is also enclosed.

Yours faithfully,

T.J.Holt MIEAust
A.S. JAMES PTY. LTD.

 A.S. JAMES PTY.LTD Geotechnical Engineers Ballarat Facility P.O. Box 1319 Bakery Hill Vic.	JOB: Shortridge Drive Lucas	Job No. 120208
		Report No. B002
		Date 10-Feb-20

Section Tested: House Lot Fill

FOR
 Pipecon Pty Ltd
 48 Icon Drive
 DELACOMBE VIC 3356

Test Number	8	9	10			
Date of Test	3/02/20	3/02/20	3/02/20			
Time of Test	13:50	13:54	13:59			
Location Chainage:	See	See	See			
	Offset: Sketch	Sketch	Sketch			
Depth of Test	600	600	600			
Probe Depth (mm)	275	275	275			
Material Type	CLAY, Silty, Gravelly	CLAY, Silty, Gravelly	CLAY, Silty, Gravelly			
Maximum Converted Wet Density (t/m3)	2.09	2.06	2.08			
Optimum Moisture Content (%)	19.0	20.5	18.0			
Field Wet Density (t/m3)	2.02	2.04	2.07			
Field Dry Density (t/m3)	1.70	1.68	1.75			
Field Moisture Content (%)	18.5	21.0	18.0			
Oversize Material (%)	3	6	7			
Compaction Type	Standard	Standard	Standard			
Oversize Retained on :	19mm	19mm	19mm			
Moisture Ratio (%)	99.5	102.5	99.5			
Moisture Variation (%)	0.0	0.5	0.0			
Wet/Dry of Optimum	Dry	Wet	Dry			
Hilf Density Ratio	96.5	99.0	99.5			

Notes: DEPTH OF TESTS TAKEN FROM BELOW FINISHED FILL LEVEL



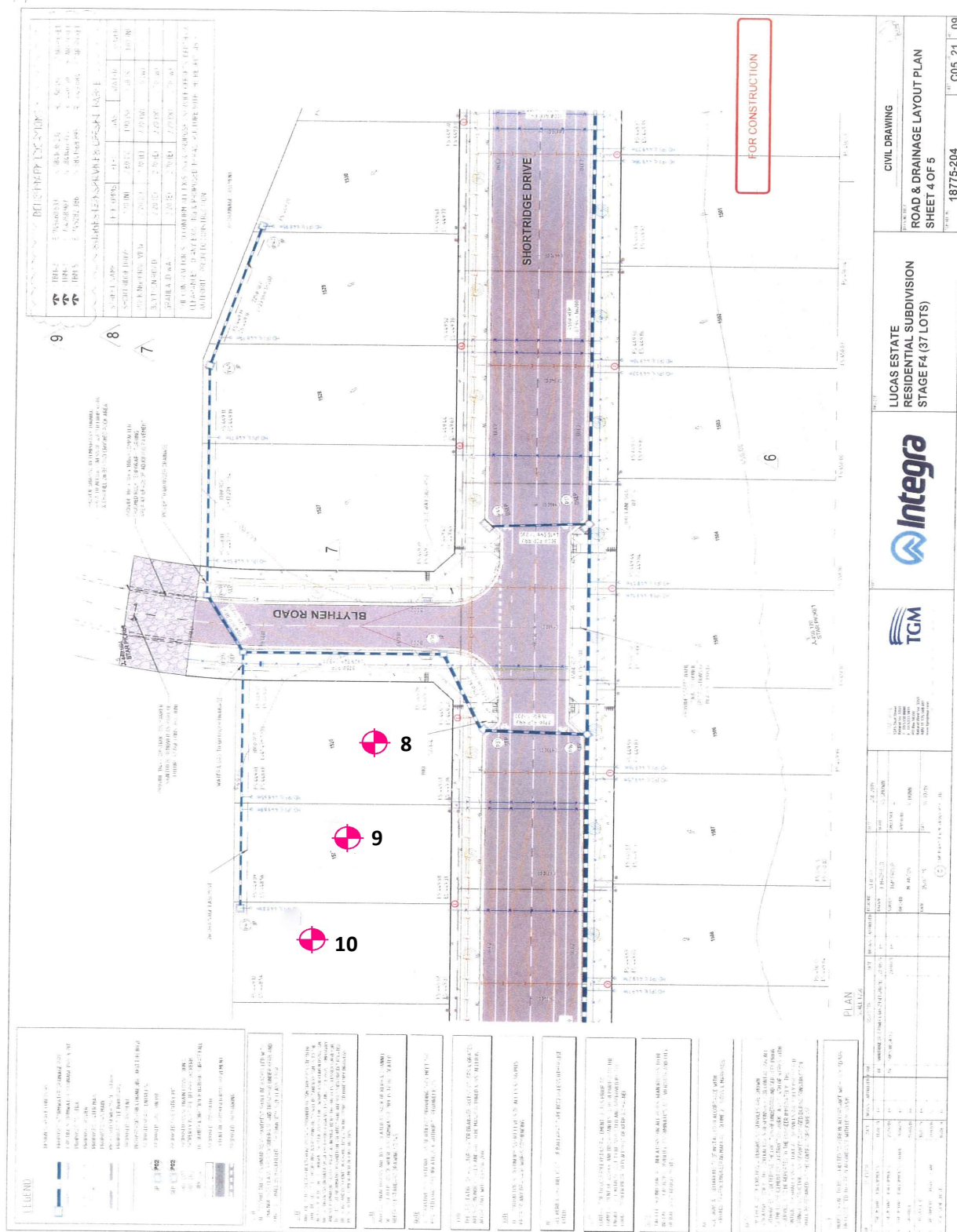
Accredited for compliance with ISO/IEC 17025 - Testing
 Accreditation No 9855

Approved Signatory
 H.Pyke

H2Pj

10-Feb-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 : T.Reece CHECKED BY: A.White	FIGURE 1 of 2
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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 : T.Reece CHECKED BY: A.White	FIGURE 2 of 2
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A.S. JAMES PTY. LTD.
Geotechnical Engineers
Ballarat Laboratory Reg No.-9855

JOB:
Shortridge Drive
Lucas

JOB No: 120208
REPORT No: B002/1
DATE: 10/02/2020

DAILY GEOTECHNICAL ACTIVITY REPORT

On Site :- 13:00 Off Site : 14:00

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			Loader	√	

Works in progress

	Location
Stripping	
Excavating	House Lots
Filling	House Lots
Rolling	House Lots

Comments, Details & Observations:

The constructor has prepared the first layer of material placed on house lots 1524, 1525 and 1526. One density test was completed on each lot. The material tested appears to be well compacted. The material appears to be well moisture conditioned, however may be slightly dry of optimum moisture content. The material contains some small oversize rock. The constructor began placing the next layer of material immediately after testing was completed. This layer will be ready for testing tomorrow morning.

Inspections

Inspection Type & Location:

House lots 1524, 1525 and 1526

Comments & Details:

The constructor has excavated some test pits spread evenly across lots 1524-1526. The constructor has exposed the natural clay subgrade on each test pit. From the test pits excavated, it appears as though the constructor has removed the majority of the silt/topsoil and exposed the underlying natural clay, however the exposed base was not inspected prior to commencement of fill placement.

Material Type / Quality / Source / Approval:

Site won material - Brown silty, gravelly CLAY
The material contains some small oversize.
Some loads of material appear to be very silty.

Compaction Testing:

Numbers performed	3	Test No.s	8-10	Location	House Lots
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	8, 9, 10	
Moisture	8, 9, 10	

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: T.Reece/W.Cousens Date: 3/2/20
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House lots



Test pits



N.T.S

 A.S. JAMES PTY.LTD Geotechnical Engineers Ballarat Facility P.O. Box 1319 Bakery Hill Vic.	JOB: Shortridge Drive Lucas	Job No. 120208
		Report No. B004
		Date 10-Feb-20

Section Tested: House Lot Fill

FOR
 Pipecon Pty Ltd
 48 Icon Drive
 DELACOMBE VIC 3356

Test Number	20	21	22			
Date of Test	4/02/20	4/02/20	4/02/20			
Time of Test	8:26	8:32	8:39			
Location	Chainage:	See	See	See		
	Offset:	Sketch	Sketch	Sketch		
Depth of Test	300	300	300			
Probe Depth (mm)	300	300	300			
Material Type	CLAY, Silty, Gravelly	CLAY, Silty, Gravelly	CLAY, Silty, Gravelly			
Maximum Converted Wet Density (t/m3)	2.06	2.03	2.04			
Optimum Moisture Content (%)	24.0	23.5	24.0			
Field Wet Density (t/m3)	2.05	2.05	2.12			
Field Dry Density (t/m3)	1.69	1.69	1.71			
Field Moisture Content (%)	21.5	21.5	24.0			
Oversize Material (%)	11	7	10			
Compaction Type	Standard	Standard	Standard			
Oversize Retained on :	19mm	19mm	19mm			
Moisture Ratio (%)	90.0	90.0	99.0			
Moisture Variation (%)	2.0	2.0	0.0			
Wet/Dry of Optimum	Dry	Dry	Dry			
Hilf Density Ratio	99.5	101.0	104.0			

Notes: DEPTH OF TESTS TAKEN FROM BELOW FINISHED FILL LEVEL



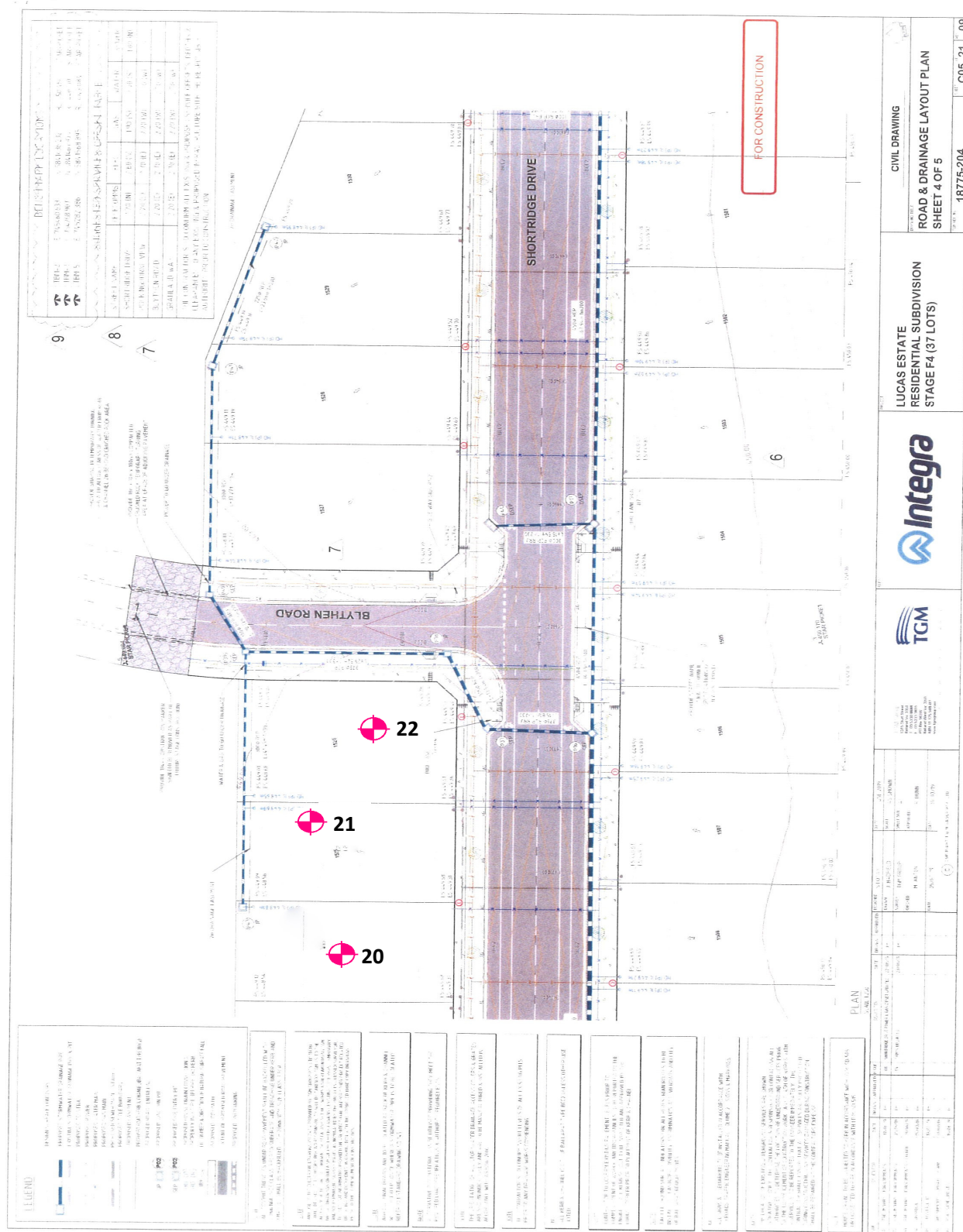
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 Accreditation No 9855

Approved Signatory
 H.Pyke

H284

10-Feb-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 2
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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.
Geotechnical Engineers
Ballarat Laboratory Reg No.-9855

JOB:
Shortridge Drive
Lucas

JOB No: 120208
REPORT No: B004/1
DATE: 10/02/2020

DAILY GEOTECHNICAL ACTIVITY REPORT

On Site :- 8:00 Off Site : 9:00

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, fine		

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 placed approximately a 300mm layer across house lots 1524-1526. The constructor is using site won material that contains some oversize rock. One test was taken on each house lot with material appearing well compacted but possibly slightly dry of optimum moisture content. Constructor has been given approval to place the next layer.

Inspections

Inspection Type & Location:

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Comments & Details:

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Material Type / Quality / Source / Approval:

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Compaction Testing:

Numbers performed	3	Test No.s	20-22	Location	House Lots
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	20, 21, 22	
Moisture	20, 21, 22	

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

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

Operator: J.Murphy
Date: 4/2/20



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.	B004/1
Date	10-Feb-20



N.T.S

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

 A.S. JAMES PTY.LTD Geotechnical Engineers Ballarat Facility P.O. Box 1319 Bakery Hill Vic.	JOB: Shortridge Drive Lucas	Job No. 120208
		Report No. B006
		Date 11-Feb-20

Section Tested: House Lots

FOR
 Pipecon Pty Ltd
 48 Icon Drive
 DELACOMBE VIC 3356

Test Number	32	33	34			
Date of Test	5/02/20	5/02/20	5/02/20			
Time of Test	14:14	14:16	14:18			
Location	Chainage:	See	See	See		
	Offset:	Sketch	Sketch	Sketch		
Depth of Test	FFL	FFL	FFL			
Probe Depth (mm)	300	300	300			
Material Type	CLAY, Silty, Gravelly	CLAY, Silty, Gravelly	CLAY, Silty, Gravelly			
Maximum Converted Wet Density (t/m3)	2.02	2.02	2.11			
Optimum Moisture Content (%)	25.0	22.0	22.0			
Field Wet Density (t/m3)	2.05	2.09	2.16			
Field Dry Density (t/m3)	1.67	1.72	1.78			
Field Moisture Content (%)	22.5	21.5	21.5			
Oversize Material (%)	1	4	2			
Compaction Type	Standard	Standard	Standard			
Oversize Retained on :	19mm	19mm	19mm			
Moisture Ratio (%)	89.0	96.5	98.0			
Moisture Variation (%)	2.5	0.5	0.5			
Wet/Dry of Optimum	Dry	Dry	Dry			
Hilf Density Ratio	101.0	103.5	102.5			

Notes: DEPTH OF TESTS TAKEN FROM FINISHED FILL LEVEL



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 Accreditation No 9855

Approved Signatory
 H.Pyke

H284

11-Feb-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 2
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A.S. JAMES PTY. LTD.
Geotechnical Engineers
Ballarat Laboratory Reg No.-9855

JOB:
Shortridge Drive
Lucas

JOB No: 120208
REPORT No: B006/1
DATE: 11/02/2020

DAILY GEOTECHNICAL ACTIVITY REPORT

On Site :- 13:40 Off Site : 14:40

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, hot		

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 placed the final layer on house lots 1524-1526. The constructor is using site won material that contains some oversize rock. One test was taken on each house lot, with material appearing well compacted and dry of optimum moisture content. Tests will likely still fall within allowable moisture tolerances.

Inspections

Inspection Type & Location:

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Comments & Details:

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Material Type / Quality / Source / Approval:

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Compaction Testing:

Numbers performed	3	Test No.s	32-34	Location	House Lots
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	32, 33, 34	
Moisture	32, 33, 34	

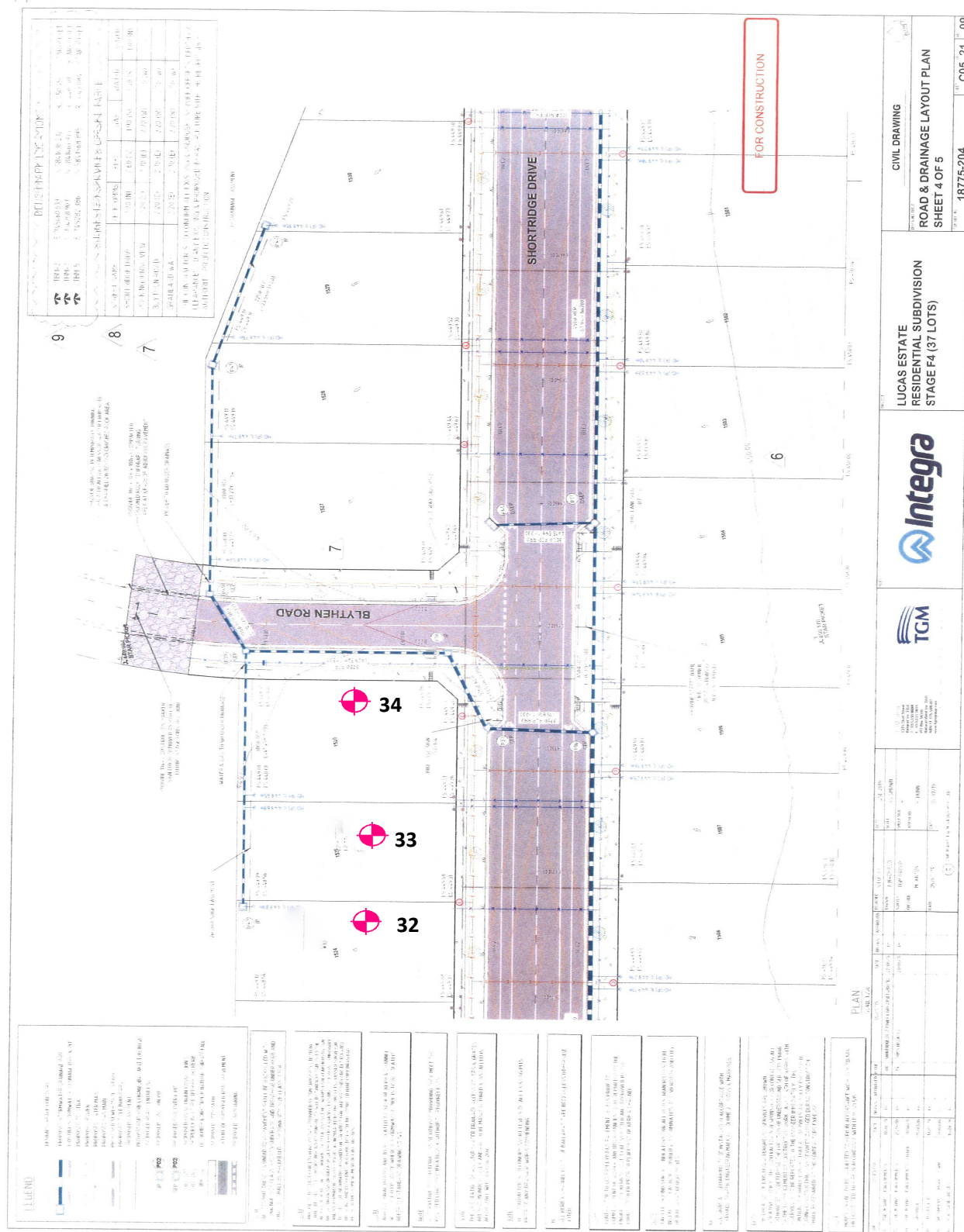
Site Instructions Given (Tick box)

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

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

Operator: J.Murphy
Date: 5/2/20



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