

Level 1 Supervision & Inspection Report

Merrifield Estate – Stage 29

Ref: 14874/P/621

Prepared for
BMD Urban Pty Ltd

1 March 2018



**Construction
Sciences**

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Date

1 March 2018

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1	01/03/2018	Mathew Grech		Robert Harris	R.H
2					
3					

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Testing Results

- Hilf Density Locations
- Hilf Density Ratio (%)

1 INTRODUCTION

Construction Sciences was commissioned by BMD Urban Pty Ltd to provide Level 1 supervision and testing services for the Merrifield Estate Development – Stage 29 project located at Mickleham, Victoria.

This report represents the results of inspection activities, compaction and moisture control, and laboratory testing carried out for the placement of fill material for the Merrifield Estate Development – Stage 29 as shown in the attached site location plan in Appendix A.

All works were carried out in accordance with:

- AS 1289 “*Methods of Testing Soils for Engineering Purposes*”.
- AS3798-2007 “*Guidelines on earthworks for commercial & residential developments*”

Material used in the earthworks for level 1 areas was sourced from the existing on site materials and imported materials.

A total of approximately 32,500m³ of compacted fill has been placed on stage 29 over the duration of Level 1 supervision. The fill volume has been determined from site supervision records and supported information provided by the client.

2 EARTHWORK SPECIFICATIONS

The earthworks are to be carried out in general accordance with AS3798-2007 ‘*Guidelines on earthworks for commercial & residential developments*’.

The specification requirements were that fill materials are to be placed and compacted to a density ratio of not less than 95% standard compaction as determined by AS 1289 “*Methods of Testing Soils for Engineering Purposes*”.

3 SITE INSPECTION & TESTING

3.1 Existing Surface Assessments

Prior to commencement of filling, Construction Sciences confirmed that all unsuitable and weaker material such as top soil, silt, uncontrolled or loose soil, organic effected material and other wet areas had been appropriately stripped in accordance with AS 3798-2007. The exposed surface after removal of unsuitable material was compacted and checked for soft areas by proof rolling.

Where no movement or vertical deflection was detected, the stripped surface was assessed to be suitable for the placement of fill.

3.2 Fill Placement

All fill material on site was thoroughly inspected by Construction Sciences site representative to ensure it meets the “**suitable material**” requirements outlined in AS3798-2007.

The fill material typically comprised of:

- Gravelly Clay/ Mudstone, Medium plasticity, Light Brown

Placement of fill was carried out using the following plant:

- 1* Excavator
- 1* Sheep-foot compactor.
- 1* Grader
- 1* Water Cart

The fill material was spread in near-horizontal layers, and compacted in successive layers, using a sheep-foot compactor.

3.3 Compaction Control Testing

Compaction control tests were carried out at regular intervals throughout the placement of fill in accordance with the minimum test frequency recommendations included in AS3798-2007 ‘*Guidelines on Earthworks for commercial and residential developments*’.

The in-situ density tests were conducted using a nuclear density/moisture meter in accordance with AS 1289 5.8.1 “*Determination of field density and field moisture content of a soil a nuclear surface moisture-density gauge*”.

Disturbed samples taken from each density test site were tested at Construction Sciences’ NATA accredited soil laboratory, using the Hilf rapid compaction method, in accordance with AS 1289.5.7.1.

A total of seventy-four (74) field density tests were carried out throughout the earthworks as shown in tables below. These 74 tests equates to 1 test to approximately every 439m³ of fill.

Table 3-1 Summary of Field Density Test Results

Tests Conducted	Mean Density (%)	Standard Deviation (%)
74	98.4	1.280

All density test results carried out in the engineered fill material are included in Appendix B. A summary of test results is presented in below in Table 3-2.

Table 3-2 Summary of Density Testing

No	Sample Number	Report Number	Date	Density Ratio (%)
1	14874/S/82681	14874/R/37983-1	19/06/2017	98.5
2	14874/S/82682	14874/R/37983-1	19/06/2017	98.0
3	14874/S/82683	14874/R/37983-1	19/06/2017	97.0
4	14874/S/82684	14874/R/37983-1	19/06/2017	98.0
5	14874/S/82685	14874/R/37983-1	19/06/2017	97.5
6	14874/S/82686	14874/R/37983-1	19/06/2017	98.0
7	147874/S/79673	14874/R/37785-1	21/06/2017	102.5
8	147874/S/79674	14874/R/37785-1	21/06/2017	103.0
9	147874/S/79675	14874/R/37785-1	21/06/2017	101.5
10	147874/S/79676	14874/R/37785-1	21/06/2017	103.5
11	14874/S/82585	14874/R/37985-1	29/06/2017	100.0
12	14874/S/82586	14874/R/37985-1	29/06/2017	99.0
13	14874/S/82587	14874/R/37985-1	29/06/2017	98.0
14	14874/S/88555	14874/R/39524-1	11/07/2017	98.5
15	14874/S/88556	14874/R/39524-1	11/07/2017	98.5
16	14874/S/88557	14874/R/39524-1	11/07/2017	98.5
17	14874/S/88514	14874/R/39509-1	17/07/2017	101.5
18	14874/S/88515	14874/R/39509-1	17/07/2017	98.5
19	14874/S/88516	14874/R/39509-1	17/07/2017	100.5
20	14874/S/109677	14874/R/46959-1	26/09/2017	99.0
21	14874/S/109678	14874/R/46959-1	26/09/2017	99.0
22	14874/S/109679	14874/R/46959-1	26/09/2017	98.5
23	14874/S/139363	14874/R/57175-1	15/01/2018	99.0
24	14874/S/139364	14874/R/57175-1	15/01/2018	99.5
25	14874/S/139365	14874/R/57175-1	15/01/2018	98.5
26	14874/S/139366	14874/R/57175-1	15/01/2018	98.0
27	14874/S/139367	14874/R/57175-1	15/01/2018	98.5
28	14874/S/139368	14874/R/57175-1	15/01/2018	99.0
29	14874/S/139369	14874/R/57175-1	15/01/2018	98.0
30	14874/S/139370	14874/R/57175-1	15/01/2018	99.0
31	14874/S/139371	14874/R/57175-1	15/01/2018	99.0
32	14874/S/139372	14874/R/57175-1	15/01/2018	98.0
33	14874/S/139373	14874/R/57175-1	15/01/2018	97.5
34	14874/S/139374	14874/R/57175-1	15/01/2018	97.5
35	14874/S/139375	14874/R/57175-1	15/01/2018	98.0

Table 3-2 Summary of Density Testing Continued...

36	14874/S/139376	14874/R57175-1	15/01/2018	98.5
37	14874/S/139377	14874/R57175-1	15/01/2018	97.5
38	14874/S/139378	14874/R57175-1	15/01/2018	98.0
39	14874/S/139379	14874/R57175-1	15/01/2018	99.0
40	14874/S/139380	14874/R57175-1	15/01/2018	98.5
41	14874/S/139381	14874/R57175-1	15/01/2018	98.0
42	14874/S/139382	14874/R57175-1	15/01/2018	97.5
43	14874/S/139383	14874/R57175-1	15/01/2018	97.5
44	14874/S/139384	14874/R57175-1	15/01/2018	97.5
45	14874/S/139385	14874/R57175-1	15/01/2018	96.5
46	14874/S/139386	14874/R57175-1	15/01/2018	98.0
47	14874/S/139387	14874/R57175-1	15/01/2018	97.5
48	14874/S/139388	14874/R57175-1	15/01/2018	97.5
49	14874/S/139389	14874/R57175-1	15/01/2018	98.5
50	14874/S/139390	14874/R57175-1	15/01/2018	97.5
51	14874/S/139391	14874/R57175-1	15/01/2018	98.0
52	14874/S/139392	14874/R57175-1	15/01/2018	98.0
53	14874/S/139393	14874/R57175-1	15/01/2018	98.0
54	14874/S/139394	14874/R57175-1	15/01/2018	97.5
55	14874/S/139395	14874/R57175-1	15/01/2018	98.5
56	14874/S/139396	14874/R57175-1	15/01/2018	98.0
57	14874/S/139397	14874/R57175-1	15/01/2018	98.0
58	14874/S/139398	14874/R57175-1	15/01/2018	98.0
59	14874/S/139399	14874/R57175-1	15/01/2018	97.5
60	14874/S/139400	14874/R57175-1	15/01/2018	97.5
61	14874/S/139401	14874/R57175-1	15/01/2018	98.5
62	14874/S/139402	14874/R57175-1	15/01/2018	98.0
63	14874/S/139403	14874/R57175-1	15/01/2018	98.5
64	14874/S/139404	14874/R57175-1	15/01/2018	98.0
65	14874/S/139405	14874/R57175-1	15/01/2018	98.0
66	14874/S/139406	14874/R57175-1	15/01/2018	97.5
67	14874/S/139407	14874/R57175-1	15/01/2018	97.5
68	14874/S/139408	14874/R57175-1	15/01/2018	98.0
69	14874/S/139409	14874/R57175-1	15/01/2018	98.0
70	14874/S/139410	14874/R57175-1	15/01/2018	97.0
71	14874/S/139411	14874/R57175-1	15/01/2018	97.5
72	14874/S/139412	14874/R57175-1	15/01/2018	98.0
73	14874/S/139413	14874/R57175-1	15/01/2018	98.0
74	14874/S/139414	14874/R57175-1	15/01/2018	97.5
Results	Mean Density (%)	Standard Deviation (%)	Lowest Result	Highest Result
74	98.4	1.280	96.5	103.5

Table 3-3 Summary of Field Moisture Results

Tests Conducted	Mean Moisture (%)	Standard Deviation (%)
74	96.6	5.133

Table 3-4 Summary of Field Moistures

No	Sample Number	Report Number	Date	Moisture Ratio (%)
1	14874/S/82681	14874/R/37983-1	19/06/2017	85.5
2	14874/S/82682	14874/R/37983-1	19/06/2017	84.5
3	14874/S/82683	14874/R/37983-1	19/06/2017	88.5
4	14874/S/82684	14874/R/37983-1	19/06/2017	90.0
5	14874/S/82685	14874/R/37983-1	19/06/2017	96.0
6	14874/S/82686	14874/R/37983-1	19/06/2017	98.0
7	147874/S/79673	14874/R/37785-1	21/06/2017	88.0
8	147874/S/79674	14874/R/37785-1	21/06/2017	89.0
9	147874/S/79675	14874/R/37785-1	21/06/2017	83.0
10	147874/S/79676	14874/R/37785-1	21/06/2017	87.5
11	14874/S/82585	14874/R/37985-1	29/06/2017	97.0
12	14874/S/82586	14874/R/37985-1	29/06/2017	99.5
13	14874/S/82587	14874/R/37985-1	29/06/2017	98.0
14	14874/S/88555	14874/R/39524-1	11/07/2017	98.5
15	14874/S/88556	14874/R/39524-1	11/07/2017	98.5
16	14874/S/88557	14874/R/39524-1	11/07/2017	102.0
17	14874/S/88514	14874/R/39509-1	17/07/2017	87.0
18	14874/S/88515	14874/R/39509-1	17/07/2017	96.5
19	14874/S/88516	14874/R/39509-1	17/07/2017	86.0
20	14874/S/109677	14874/R/46959-1	26/09/2017	84.0
21	14874/S/109678	14874/R/46959-1	26/09/2017	82.5
22	14874/S/109679	14874/R/46959-1	26/09/2017	81.5
23	14874/S/139363	14874/R/57175-1	15/01/2018	100.0
24	14874/S/139364	14874/R/57175-1	15/01/2018	99.0
25	14874/S/139365	14874/R/57175-1	15/01/2018	99.5
26	14874/S/139366	14874/R/57175-1	15/01/2018	99.5
27	14874/S/139367	14874/R/57175-1	15/01/2018	99.0
28	14874/S/139368	14874/R/57175-1	15/01/2018	100.0
29	14874/S/139369	14874/R/57175-1	15/01/2018	99.5
30	14874/S/139370	14874/R/57175-1	15/01/2018	99.5
31	14874/S/139371	14874/R/57175-1	15/01/2018	99.0
32	14874/S/139372	14874/R/57175-1	15/01/2018	99.5
33	14874/S/139373	14874/R/57175-1	15/01/2018	99.5
34	14874/S/139374	14874/R/57175-1	15/01/2018	99.0
35	14874/S/139375	14874/R/57175-1	15/01/2018	99.0

Table 3-4 Summary of Field Moistures Continued...

36	14874/S/139376	14874/R57175-1	15/01/2018	99.0
37	14874/S/139377	14874/R57175-1	15/01/2018	99.0
38	14874/S/139378	14874/R57175-1	15/01/2018	99.5
39	14874/S/139379	14874/R57175-1	15/01/2018	99.0
40	14874/S/139380	14874/R57175-1	15/01/2018	99.5
41	14874/S/139381	14874/R57175-1	15/01/2018	99.0
42	14874/S/139382	14874/R57175-1	15/01/2018	98.0
43	14874/S/139383	14874/R57175-1	15/01/2018	97.5
44	14874/S/139384	14874/R57175-1	15/01/2018	99.5
45	14874/S/139385	14874/R57175-1	15/01/2018	99.5
46	14874/S/139386	14874/R57175-1	15/01/2018	99.5
47	14874/S/139387	14874/R57175-1	15/01/2018	99.0
48	14874/S/139388	14874/R57175-1	15/01/2018	99.0
49	14874/S/139389	14874/R57175-1	15/01/2018	99.5
50	14874/S/139390	14874/R57175-1	15/01/2018	99.0
51	14874/S/139391	14874/R57175-1	15/01/2018	99.0
52	14874/S/139392	14874/R57175-1	15/01/2018	98.0
53	14874/S/139393	14874/R57175-1	15/01/2018	99.5
54	14874/S/139394	14874/R57175-1	15/01/2018	99.0
55	14874/S/139395	14874/R57175-1	15/01/2018	99.5
56	14874/S/139396	14874/R57175-1	15/01/2018	99.0
57	14874/S/139397	14874/R57175-1	15/01/2018	99.5
58	14874/S/139398	14874/R57175-1	15/01/2018	98.0
59	14874/S/139399	14874/R57175-1	15/01/2018	99.0
60	14874/S/139400	14874/R57175-1	15/01/2018	98.0
61	14874/S/139401	14874/R57175-1	15/01/2018	99.0
62	14874/S/139402	14874/R57175-1	15/01/2018	99.0
63	14874/S/139403	14874/R57175-1	15/01/2018	98.0
64	14874/S/139404	14874/R57175-1	15/01/2018	99.0
65	14874/S/139405	14874/R57175-1	15/01/2018	97.0
66	14874/S/139406	14874/R57175-1	15/01/2018	99.0
67	14874/S/139407	14874/R57175-1	15/01/2018	99.0
68	14874/S/139408	14874/R57175-1	15/01/2018	98.0
69	14874/S/139409	14874/R57175-1	15/01/2018	99.0
70	14874/S/139410	14874/R57175-1	15/01/2018	98.0
71	14874/S/139411	14874/R57175-1	15/01/2018	97.5
72	14874/S/139412	14874/R57175-1	15/01/2018	99.5
73	14874/S/139413	14874/R57175-1	15/01/2018	99.0
74	14874/S/139414	14874/R57175-1	15/01/2018	97.0
Results	Mean Moisture (%)	Standard Deviation (%)	Lowest Result	Highest Result
74	96.6	5.133	81.5	102.0

4 GENERAL STATEMENT OF COMPLIANCE

It is considered that the placement of fill material at the Merrifield Estate Development – Stage 29 was carried out in accordance with AS3798-2007 “*Guidelines on earthworks for commercial and residential developments*”. It is concluded that the fill was compacted to a density ratio not less than the specified requirement.

5 LIMIT OF LIABILITY

This report has been produced for, and is the property of our client BMD Urban Pty Ltd.

Construction Sciences accepts no liability to any third party, and will not enter into any communication with a third party regarding this report.

Appendix A

2 Pages

Site Location Plan

- Stage 29

FOR CONTINUATION REFER TO RD200

FUTURE OUTER METROPOLITAN RING ROAD

EXISTING DRAINAGE SWALE

STAR PICKET
R.L. 262.735 A.H.D.
E 313879.40
N 5843824.62

5.20m KERB LAYBACK

CABLE BOLLARDS TO BE INSTALLED AS PART OF LANDSCAPING. REFER TO LANDSCAPE PLAN FOR DETAILS

DONNYBROOK ROAD

PROVIDE TEMPORARY BARRIER FENCING

5.20m INDUSTRIAL DRIVEWAY AS PER EDCM503

3.0m SHARED PATH

5.20m KERB LAYBACK

T.B.M. STAR PICKET
R.L. 265.40 A.H.D.
E 314176.60
N 5843789.93

CABLE BOLLARDS TO BE INSTALLED AS PART OF LANDSCAPING. REFER TO LANDSCAPE PLAN FOR DETAILS

5.20m KERB LAYBACK

TABLE DRAIN
PROPERTY INLET
HOUSE DRAIN
SWD PIT NUMBERS
EXISTING SEWER
PROPOSED SEWER
CUT >150mm DEPTH
FILL >300mm DEPTH

NO DRAINAGE WORKS SHALL COMMENCE UNTIL
THE CONTRACTOR CONFIRMS INVERT LEVEL OF
ALL EXISTING DRAINS

H 1 : 500
@ A1


verve
Level 1, 173 Burke Road, Glen Iris VIC 3146
Tel : 03 8573 1500 Fax: 03 8573 1555
verveprojects.com

 01 LOGICAL	PROJECT
	ISSUE:

DETAIL PLAN - 2

DWG No:	REVISION:
RD201	3

Appendix B

42 Pages

HILF Density Testing

- **Hilf Density Locations**
- **Hilf Density Ratio (%)**

Site Location Sketch

MELBOURNE

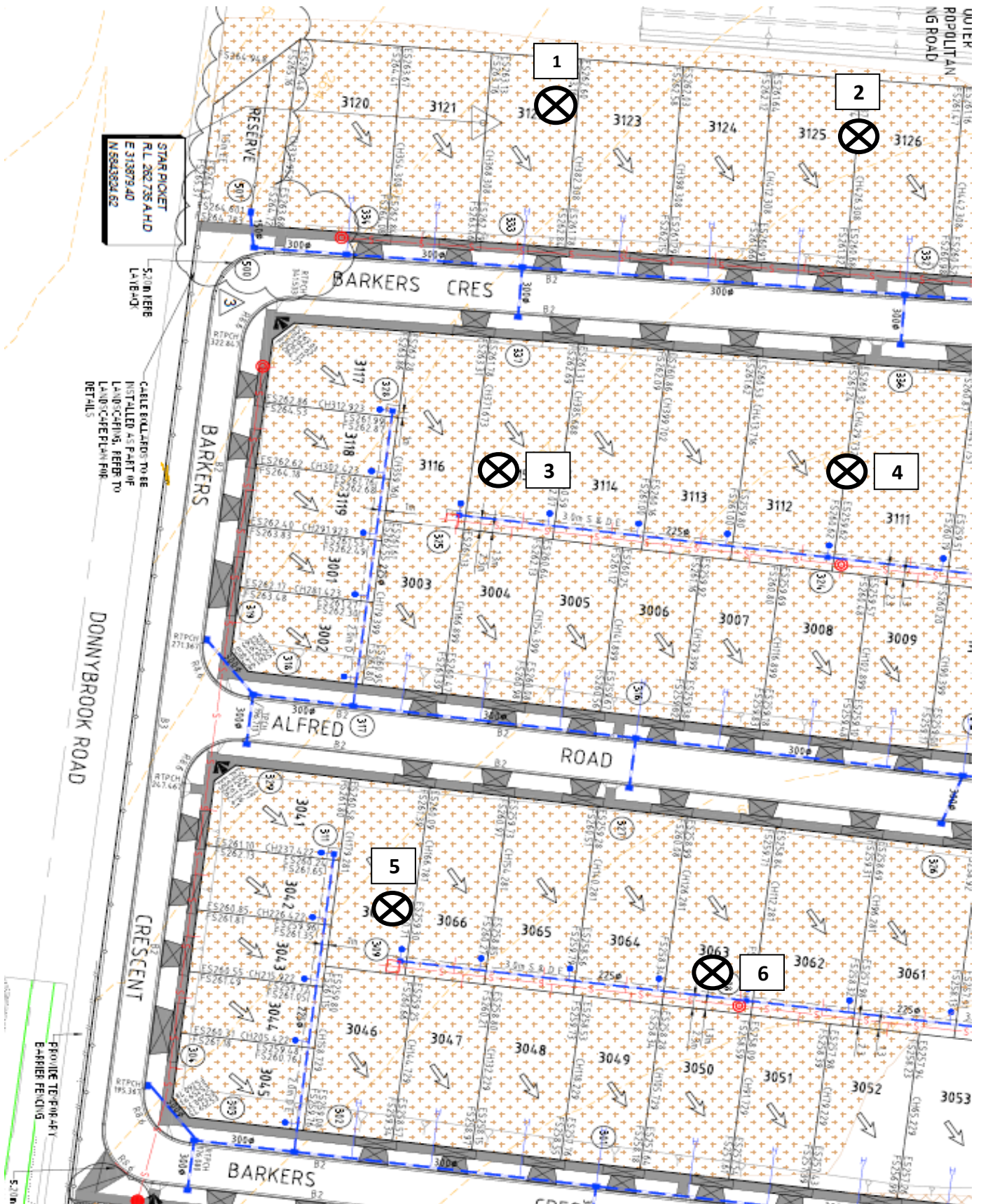
Test site locations only
NOT TO SCALE

Client: BMD

Job No. 14874/P/621

Test Request No. T-22957

Date Tested: 19/06/2017



LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/37983-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/22957
Component:	Level 1 Fill	Client Reference/s:	Density Testing - 19/6/17
Area Description:	Refer to Map	Report Date / Page:	10/07/2017 Page 1 of 3

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	14874/S/82681	14874/S/82682	14874/S/82683	14874/S/82684
ID / Client ID	Refer to Map	Refer to Map	Refer to Map	Refer to Map
Lot Number	-	-	-	-
Date / Time Tested	19/06/2017	19/06/2017	19/06/2017	19/06/2017
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Insitu	Insitu	Insitu	Insitu
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)	175 / 200 / -	175 / 200 / -	175 / 200 / -	175 / 200 / -
Standard or Modified	Standard	Standard	Standard	Standard
Layer Number	Layer 1	Layer 1	Layer 1	Layer 1
Location Number	1	2	3	4
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	14874/S/82681	14874/S/82682	14874/S/82683	14874/S/82684
Sample Description	Onsite	Onsite	Onsite	Onsite
Moisture Test Results:				
Field Moisture Content (%)	13.9	13.6	14.5	16.9
Adjusted / Moisture Variation (%)	2.5	2.5	2.0	2.0
Optimum Moisture Content (%)	16.5	16.0	16.5	19.0
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	85.5	84.5	88.5	90.0
Density Test Results:				
Field Wet Density (t/m ³)	1.90	1.91	1.89	1.92
Adj/Peak Conv Wet Density (t/m ³)	1.93	1.95	1.95	1.96
Density Ratio Required (%)	95	95	95	95
Hilf Density Ratio (%)	98.5	98.0	97.0	98.0

Remarks

	The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing		
	Accreditation Number:	1986	
	Corporate Site Number:	14874	
	Approved Signatory: Daniel Boyd		Form ID: W5ASRepSum Rev 4

LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/37983-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/22957
Component:	Level 1 Fill	Client Reference/s:	Density Testing - 19/6/17
Area Description:	Refer to Map	Report Date / Page:	10/07/2017 Page 2 of 3

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
------------------	--

Sample Number	14874/S/82685	14874/S/82686		
ID / Client ID	Refer to Map	Refer to Map		
Lot Number	-	-		
Date / Time Tested	19/06/2017	19/06/2017		
Material Source	Onsite	Onsite		
Material Type	Insitu	Insitu		
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b		
Depths: Test / Nom / Actual (mm)	175 / 200 / -	175 / 200 / -		
Standard or Modified	Standard	Standard		
Layer Number	Layer 1	Layer 1		
Location Number	5	6		
Test Fraction (mm)	< 19.0 mm	< 19.0 mm		
Sample Oversize (%)	0	0		
Compaction Sample Number	14874/S/82685	14874/S/82686		
Sample Description	Insitu	Insitu		
Moisture Test Results:				
Field Moisture Content (%)	15.3	14.1		
Adjusted / Moisture Variation (%)	0.5	0.5		
Optimum Moisture Content (%)	16.0	14.5		
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)		
Moisture Ratio (%)	96.0	98.0		
Density Test Results:				
Field Wet Density (t/m ³)	1.90	1.88		
Adj/Peak Conv Wet Density (t/m ³)	1.95	1.91		
Density Ratio Required (%)	95	95		
Hilf Density Ratio (%)	97.5	98.0		

Remarks



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Accreditation Number: 1986
Corporate Site Number: 14874



Approved Signatory: Daniel Boyd
Form ID: W5ASRepSum Rev 4

LOT REPORT - WET DENSITY RATIO

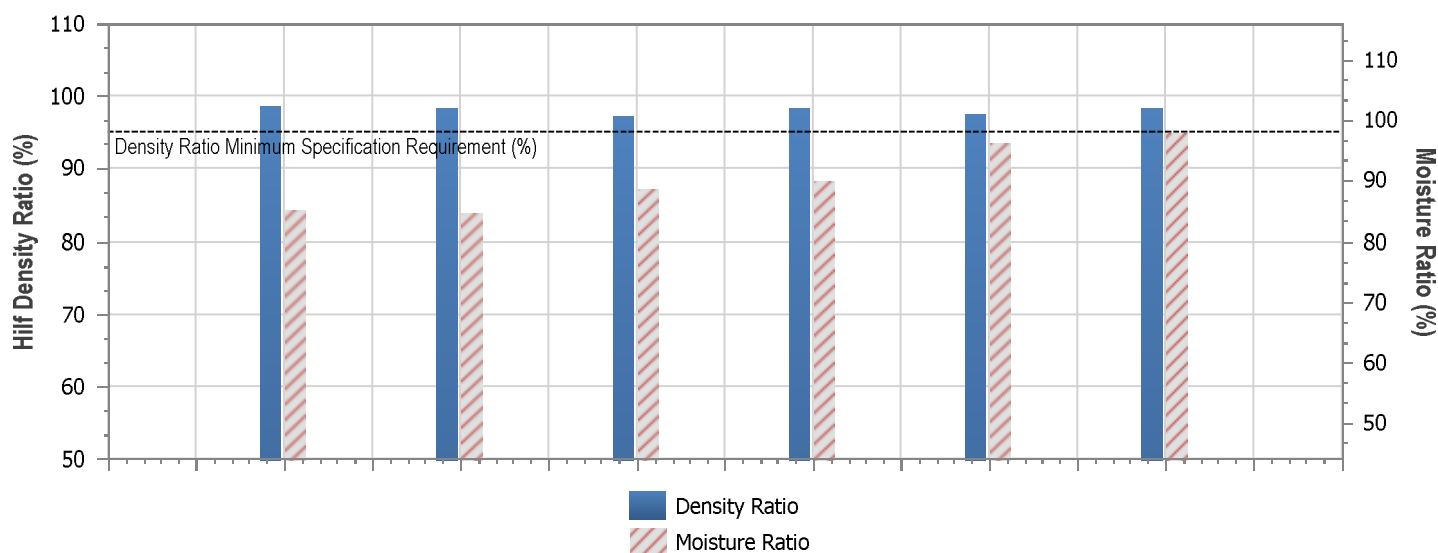
Client:	BMD Urban Pty Ltd	Report Number:	14874/R/37983-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/22957
Component:	Level 1 Fill	Client Reference/s:	Density Testing - 19/6/17
Area Description:	Refer to Map	Report Date / Page:	10/07/2017 Page 3 of 3

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
Statistical Analysis Test Method:	Lot Average (Lot average calculations are not covered by NATA endorsement)

Nuclear Gauge Calibration Details

Calibration Number	-	Material Source	-
Calibration Last Updated	-	Material Type	-
Nominated Calibration Layer Depth (mm)	-		-

LOT TEST RESULT SUMMARY



Tests in Lot = 6	Lot Minimum	Lot Maximum	Lot Mean	Standard Deviation
Moisture Ratio (%)	84.5	97.9	90.4	5.567
Half Density Ratio (%)	97.0	98.3	97.8	0.525

Lot Number: -

Mean Density Ratio (%): 97.8

Mean Moisture Ratio (%): 90.4

Remarks



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Accreditation Number: 1986
Corporate Site Number: 14874



Approved Signatory: Daniel Boyd
Form ID: W5ASRepSum Rev 4



Site Location Sketch

MELBOURNE

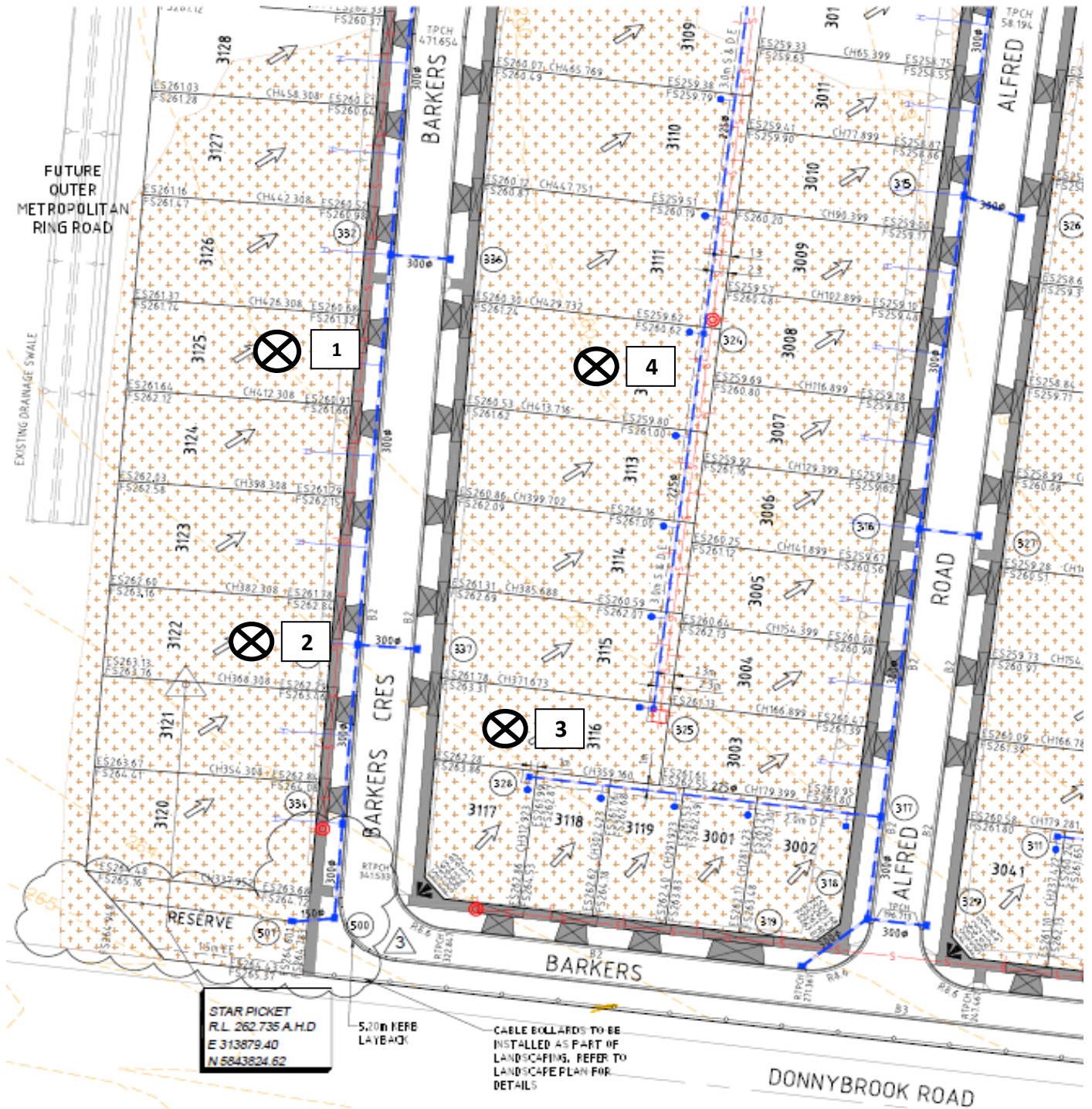
Test site locations only
NOT TO SCALE

Client: BMD

Job No. 14874/P/621

Test Request No. T-22493

Date Tested: 21/06/2017



LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/37785-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/22493
Component:		Client Reference/s:	Level 1 Testing
Area Description:	Refer to Map	Report Date / Page:	6/07/2017 Page 1 of 2

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
------------------	--

Sample Number	14874/S/79673	14874/S/79674	14874/S/79675	14874/S/79676
ID / Client ID	Refer to Map	Refer to Map	Refer to Map	Refer to Map
Lot Number	-	-	-	-
Date / Time Tested	21/06/2017	21/06/2017	21/06/2017	21/06/2017
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Clay	Clay	Clay	Clay
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)	175 / 200 / 200	175 / 200 / 200	175 / 200 / 200	175 / 200 / 200
Standard or Modified	Standard	Standard	Standard	Standard
Layer Number				
Location Number	1	2	3	4
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	14874/S/79673	14874/S/79674	14874/S/79675	14874/S/79676
Sample Description	Clay	Clay	Clay	Clay
Moisture Test Results:				
Field Moisture Content (%)	18.6	19.3	14.1	19.7
Adjusted / Moisture Variation (%)	2.5	2.5	3.0	2.5
Optimum Moisture Content (%)	21.0	21.5	17.0	22.5
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	88.0	89.0	83.0	87.5
Density Test Results:				
Field Wet Density (t/m ³)	2.06	2.04	2.05	2.05
Adj/Peak Conv Wet Density (t/m ³)	2.01	1.98	2.02	1.98
Density Ratio Required (%)	95	95	95	95
Hill Density Ratio (%)	102.5	103.0	101.5	103.5

Remarks

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	Accreditation Number:	1986	
	Corporate Site Number:	14874	
	Approved Signatory: Daniel Boyd		
	Form ID: W5ASRepSum Rev 4		

LOT REPORT - WET DENSITY RATIO

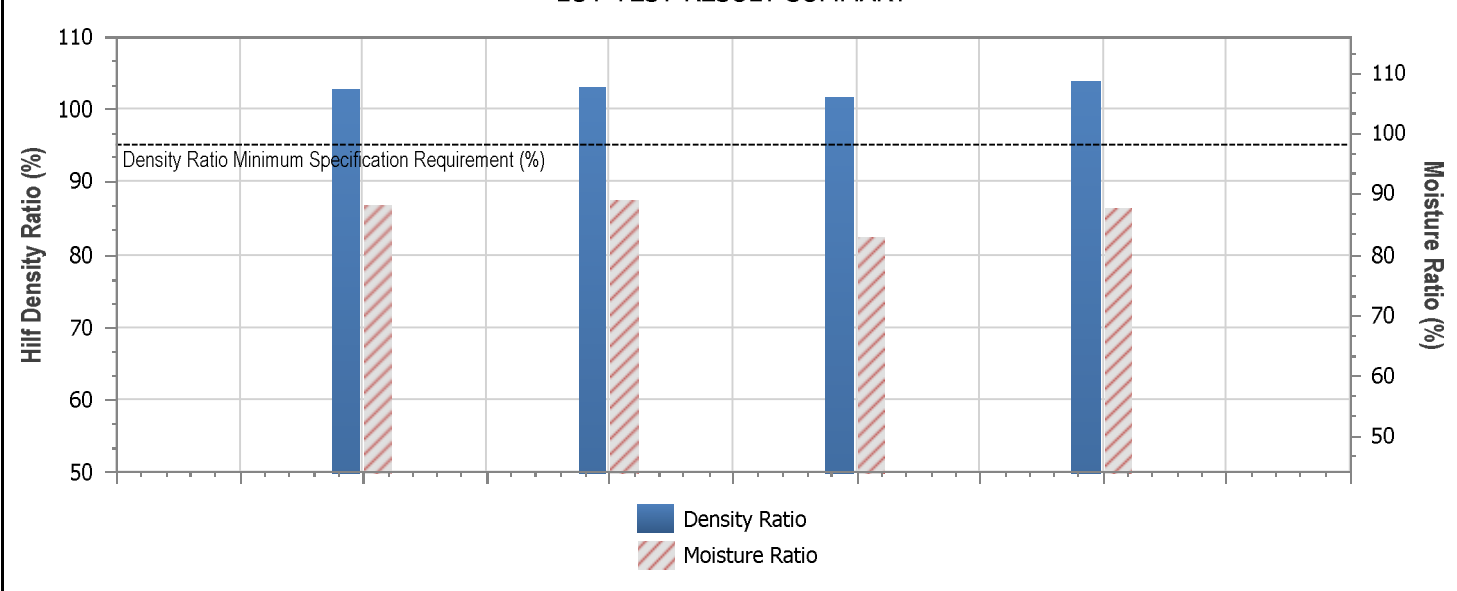
Client:	BMD Urban Pty Ltd	Report Number:	14874/R/37785-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/22493
Component:		Client Reference/s:	Level 1 Testing
Area Description:	Refer to Map	Report Date / Page:	6/07/2017 Page 2 of 2

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
Statistical Analysis Test Method:	Lot Average (Lot average calculations are not covered by NATA endorsement)

Nuclear Gauge Calibration Details

Calibration Number	-	Material Source	-
Calibration Last Updated	-	Material Type	-
Nominated Calibration Layer Depth (mm)	-		-

LOT TEST RESULT SUMMARY



Tests in Lot = 4	Lot Minimum	Lot Maximum	Lot Mean	Standard Deviation
Moisture Ratio (%)	82.9	88.9	86.9	2.719
Half Density Ratio (%)	101.5	103.6	102.6	0.883

Lot Number: -
 Mean Density Ratio (%): 102.6
 Mean Moisture Ratio (%): 86.9

Remarks

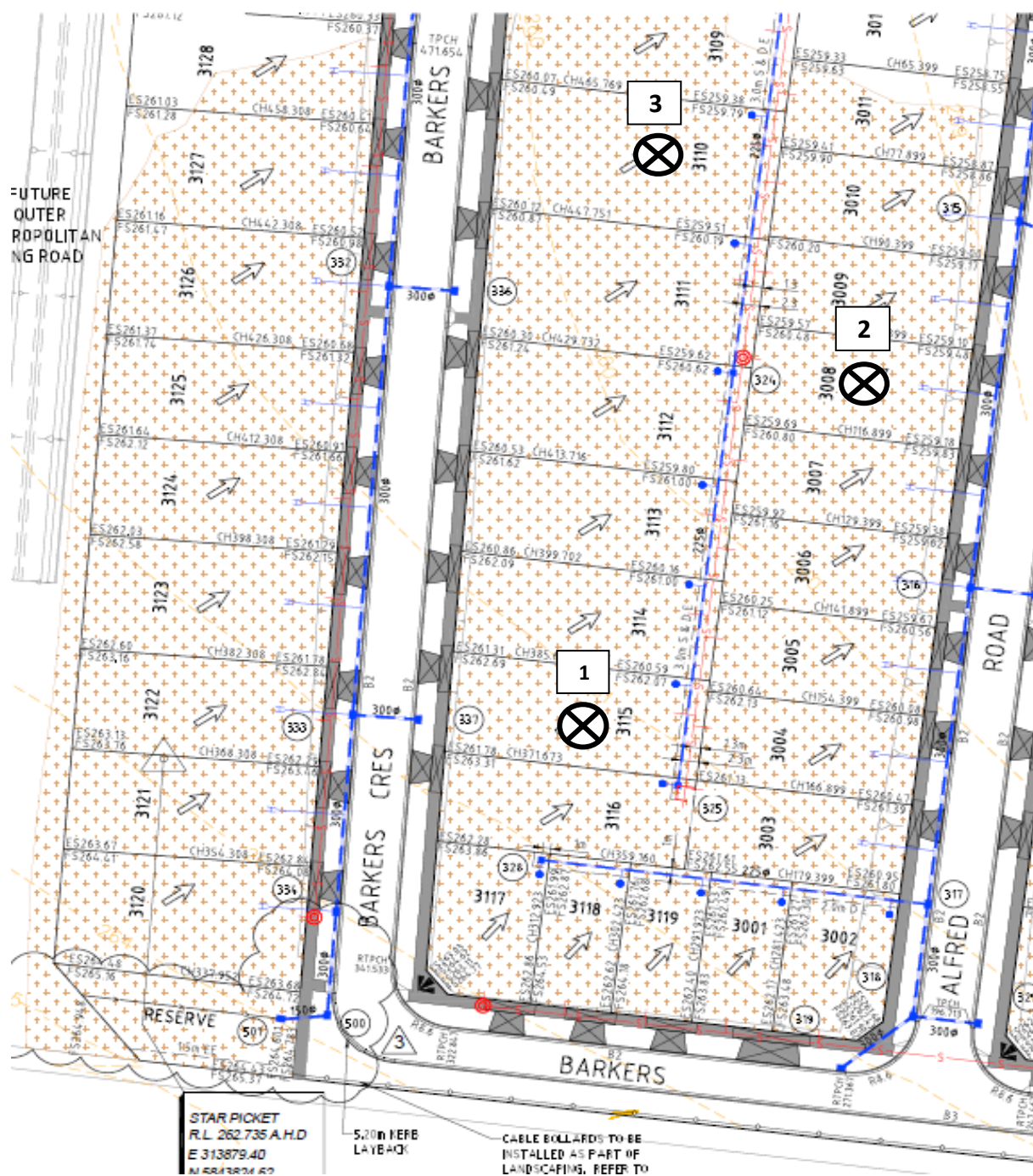


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Accreditation Number: 1986
 Corporate Site Number: 14874



Approved Signatory: Daniel Boyd
 Form ID: W5ASRepSum Rev 4



LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/37985-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/22949
Component:		Client Reference/s:	Level 1 Fill 29/6
Area Description:	Stage 29	Report Date / Page:	10/07/2017 Page 1 of 2

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	14874/S/82585	14874/S/82586	14874/S/82587	
ID / Client ID	Refer to Map	Refer to Map	Refer to Map	
Lot Number	-	-	-	
Date / Time Tested	29/06/2017	29/06/2017	29/06/2017	
Material Source	Onsite	Onsite	Onsite	
Material Type	Clay	Clay	Clay	
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	
Depths: Test / Nom / Actual (mm)	175 / 200 / 200	175 / 200 / 200	175 / 200 / 200	
Standard or Modified	Standard	Standard	Standard	
Layer Number	Layer 3	Layer 3	Layer 3	
Location Number	1	2	3	
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	
Sample Oversize (%)	0	0	0	
Compaction Sample Number	14874/S/82585	14874/S/82586	14874/S/82587	
Sample Description	Onsite	Onsite	Onsite	
Moisture Test Results:				
Field Moisture Content (%)	18.9	18.4	19.3	
Adjusted / Moisture Variation (%)	0.5	0.0	0.5	
Optimum Moisture Content (%)	19.5	18.5	19.5	
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	
Moisture Ratio (%)	97.0	99.5	98.0	
Density Test Results:				
Field Wet Density (t/m³)	2.10	2.10	2.09	
Adj/Peak Conv Wet Density (t/m³)	2.10	2.12	2.13	
Density Ratio Required (%)	95	95	95	
Hill Density Ratio (%)	100.0	99.0	98.0	

Remarks

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LOT REPORT - WET DENSITY RATIO

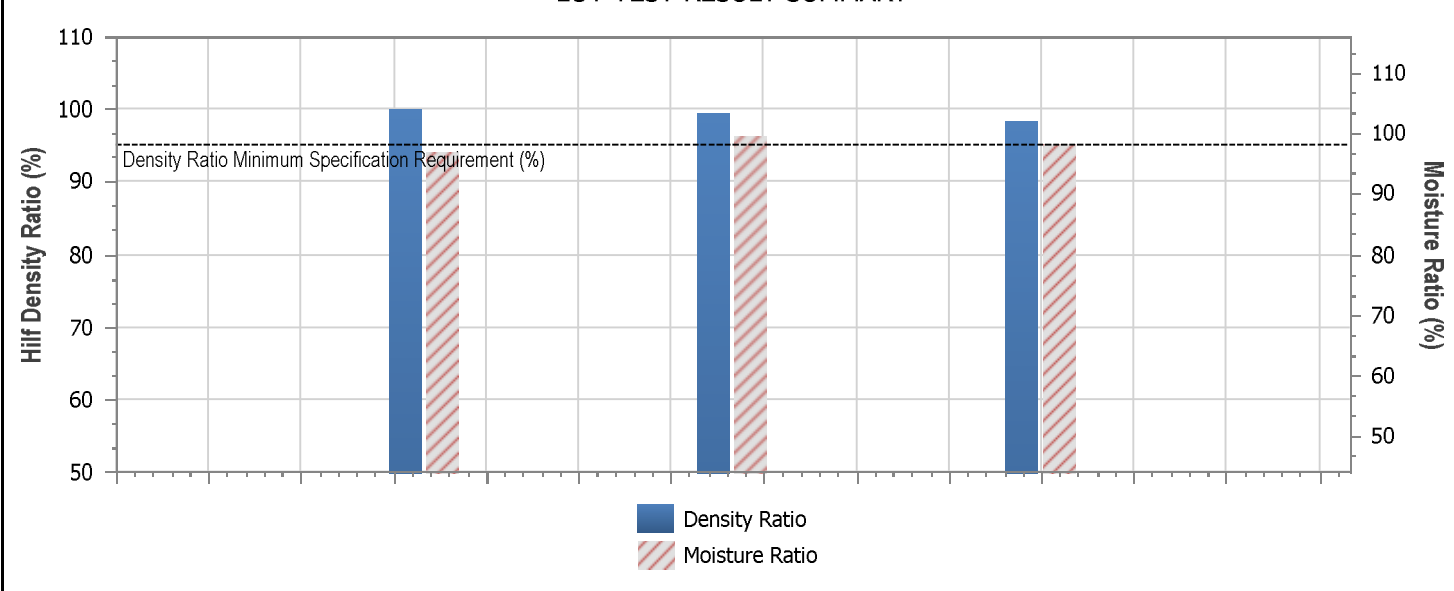
Client:	BMD Urban Pty Ltd	Report Number:	14874/R/37985-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/22949
Component:		Client Reference/s:	Level 1 Fill 29/6
Area Description:	Stage 29	Report Date / Page:	10/07/2017 Page 2 of 2

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
Statistical Analysis Test Method:	Lot Average (Lot average calculations are not covered by NATA endorsement)

Nuclear Gauge Calibration Details

Calibration Number	-	Material Source	-
Calibration Last Updated	-	Material Type	-
Nominated Calibration Layer Depth (mm)	-		-

LOT TEST RESULT SUMMARY



Tests in Lot = 3	Lot Minimum	Lot Maximum	Lot Mean	Standard Deviation
Moisture Ratio (%)	96.9	99.5	98.1	1.306
Half Density Ratio (%)	98.0	99.9	99.0	0.962

Lot Number: -

Mean Density Ratio (%): 99.0

Mean Moisture Ratio (%): 98.1

Remarks



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Accreditation Number: 1986
Corporate Site Number: 14874



Approved Signatory: Daniel Boyd
Form ID: W5ASRepSum Rev 4

Site Location Sketch

MELBOURNE

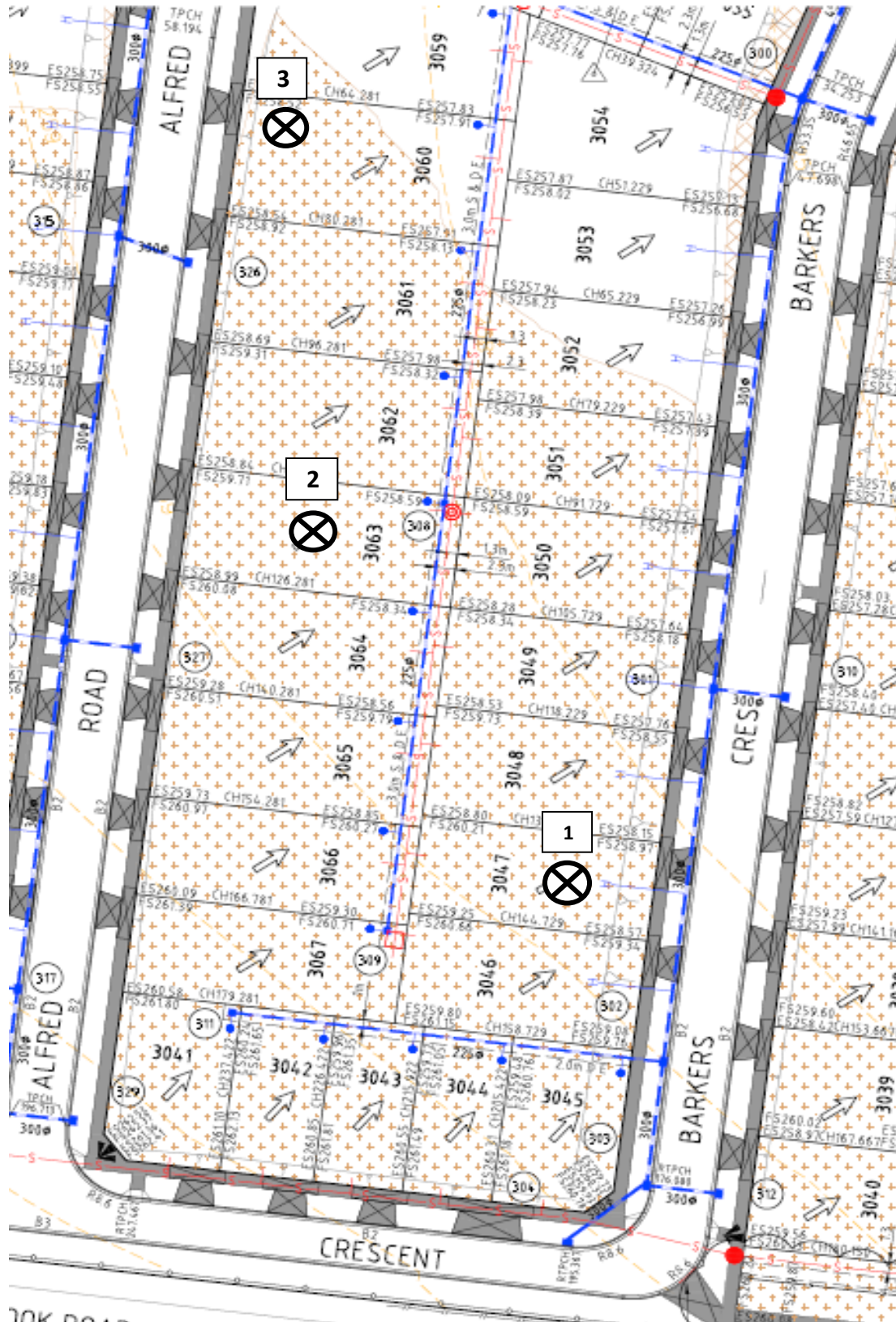
Test site locations only
NOT TO SCALE

Client: BMD

Job No. 14874/P/621

Test Request No. T-24008

Date Tested: 11/07/2017



LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/39524-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/24008
Component:		Client Reference/s:	Stage 29 Level 1 Testing
Area Description:		Report Date / Page:	27/07/2017 Page 1 of 2

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	14874/S/88555	14874/S/88556	14874/S/88557	
ID / Client ID	Refer to Map	Refer to Map	Refer to Map	
Lot Number	-	-	-	
Date / Time Tested	11/07/2017	11/07/2017	11/07/2017	
Material Source	Onsite	Onsite	Onsite	
Material Type	Clay	Clay	Clay	
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	
Depths: Test / Nom / Actual (mm)	200 / 225 / -	200 / 225 / -	200 / 225 / -	
Standard or Modified	Standard	Standard	Standard	
Layer Number	2	2	2	
Location Number	1	2	3	
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	
Sample Oversize (%)	0	0	0	
Compaction Sample Number	14874/S/88555	14874/S/88556	14874/S/88557	
Sample Description	Onsite	Onsite	Onsite	
Moisture Test Results:				
Field Moisture Content (%)	23.8	25.2	27.2	
Adjusted / Moisture Variation (%)	0.5	0.5	-0.5	
Optimum Moisture Content (%)	24.0	25.5	26.5	
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Wetter than OMC)	
Moisture Ratio (%)	98.5	98.5	102.0	
Density Test Results:				
Field Wet Density (t/m³)	1.93	1.91	1.91	
Adj/Peak Conv Wet Density (t/m³)	1.95	1.94	1.94	
Density Ratio Required (%)	95	95	95	
Hill Density Ratio (%)	98.5	98.5	98.5	

Remarks

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	Accreditation Number:	1986	
	Corporate Site Number:	14874	
	Approved Signatory: Daniel Boyd		
	Form ID: W5ASRepSum Rev 4		

LOT REPORT - WET DENSITY RATIO

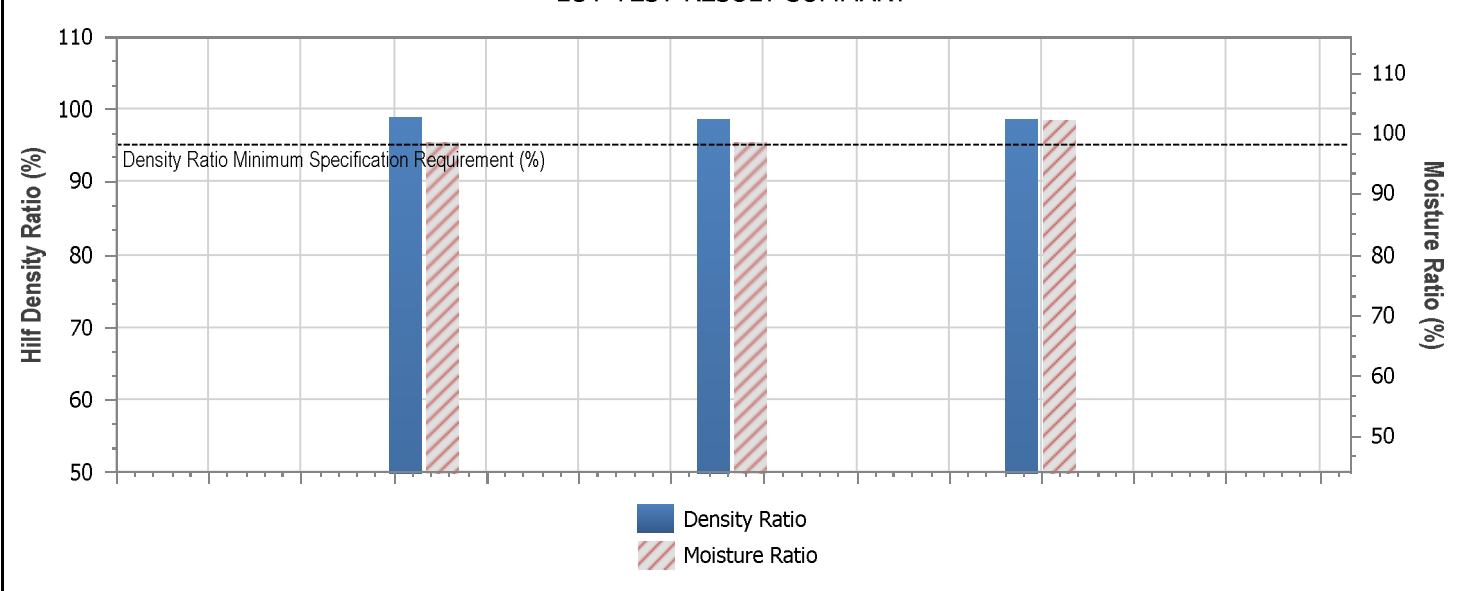
Client:	BMD Urban Pty Ltd	Report Number:	14874/R/39524-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/24008
Component:		Client Reference/s:	Stage 29 Level 1 Testing
Area Description:		Report Date / Page:	27/07/2017 Page 2 of 2

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
Statistical Analysis Test Method:	Lot Average (Lot average calculations are not covered by NATA endorsement)

Nuclear Gauge Calibration Details

Calibration Number	-	Material Source	-
Calibration Last Updated	-	Material Type	-
Nominated Calibration Layer Depth (mm)	-		-

LOT TEST RESULT SUMMARY



Tests in Lot = 3	Lot Minimum	Lot Maximum	Lot Mean	Standard Deviation
Moisture Ratio (%)	98.3	101.9	99.5	2.051
Half Density Ratio (%)	98.3	98.7	98.5	0.200

Lot Number: -
 Mean Density Ratio (%): 98.5
 Mean Moisture Ratio (%): 99.5

Remarks



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Accreditation Number: 1986
 Corporate Site Number: 14874



Approved Signatory: Daniel Boyd
 Form ID: W5ASRepSum Rev 4

Site Location Sketch

MELBOURNE

Test site locations only

NOT TO SCALE

Client: BMD

Job No. 14874/P/621

Test Request No. T-23993

Date Tested: 17/07/2017



LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/39509-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/23993
Component:		Client Reference/s:	Stage 29 level 1 Fill
Area Description:	Level 1 Fill	Report Date / Page:	27/07/2017 Page 1 of 2

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	14874/S/88514	14874/S/88515	14874/S/88516	
ID / Client ID	Refer to Map	Refer to Map	Refer to Map	
Lot Number	-	-	-	
Date / Time Tested	17/07/2017	17/07/2017	17/07/2017	
Material Source	Onsite	Onsite	Onsite	
Material Type	Clay	Clay	Clay	
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	
Depths: Test / Nom / Actual (mm)	175 / 200 / 200	175 / 200 / 200	175 / 200 / 200	
Standard or Modified	Standard	Standard	Standard	
Layer Number	1	1	1	
Location Number	1	2	3	
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	
Sample Oversize (%)	0	0	0	
Compaction Sample Number	14874/S/88514	14874/S/88515	14874/S/88516	
Sample Description	Onsite	Onsite	Onsite	
Moisture Test Results:				
Field Moisture Content (%)	13.1	13.6	13.3	
Adjusted / Moisture Variation (%)	2.0	0.5	2.0	
Optimum Moisture Content (%)	15.0	14.0	15.5	
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	
Moisture Ratio (%)	87.0	96.5	86.0	
Density Test Results:				
Field Wet Density (t/m³)	1.93	1.92	1.93	
Adj/Peak Conv Wet Density (t/m³)	1.90	1.96	1.92	
Density Ratio Required (%)	95	95	95	
Hill Density Ratio (%)	101.5	98.5	100.5	

Remarks

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LOT REPORT - WET DENSITY RATIO

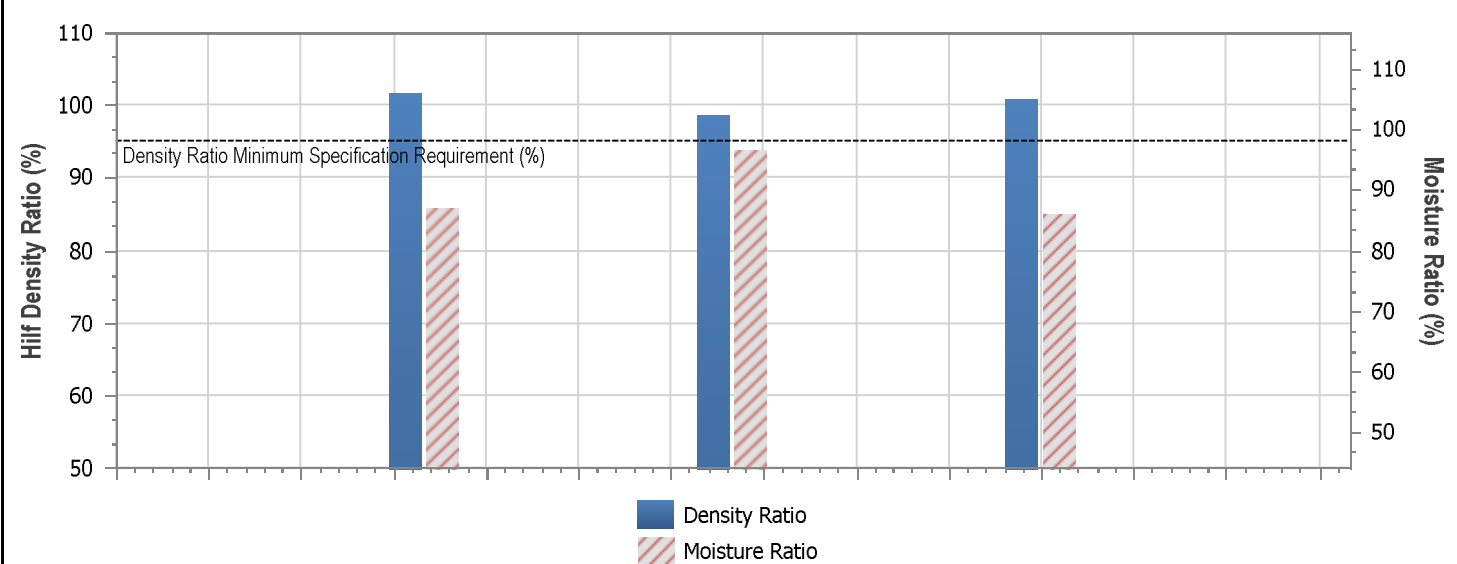
Client:	BMD Urban Pty Ltd	Report Number:	14874/R/39509-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/23993
Component:		Client Reference/s:	Stage 29 level 1 Fill
Area Description:	Level 1 Fill	Report Date / Page:	27/07/2017 Page 2 of 2

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
Statistical Analysis Test Method:	Lot Average (Lot average calculations are not covered by NATA endorsement)

Nuclear Gauge Calibration Details

Calibration Number	-	Material Source	-
Calibration Last Updated	-	Material Type	-
Nominated Calibration Layer Depth (mm)	-		

LOT TEST RESULT SUMMARY



Tests in Lot = 3	Lot Minimum	Lot Maximum	Lot Mean	Standard Deviation
Moisture Ratio (%)	85.8	96.5	89.7	5.910
Half Density Ratio (%)	98.3	101.3	100.1	1.570

Lot Number: -
 Mean Density Ratio (%): 100.1
 Mean Moisture Ratio (%): 89.7

Remarks



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Accreditation Number: 1986
 Corporate Site Number: 14874



Approved Signatory: Daniel Boyd
 Form ID: W5ASRepSum Rev 4

Site Location Sketch

MELBOURNE

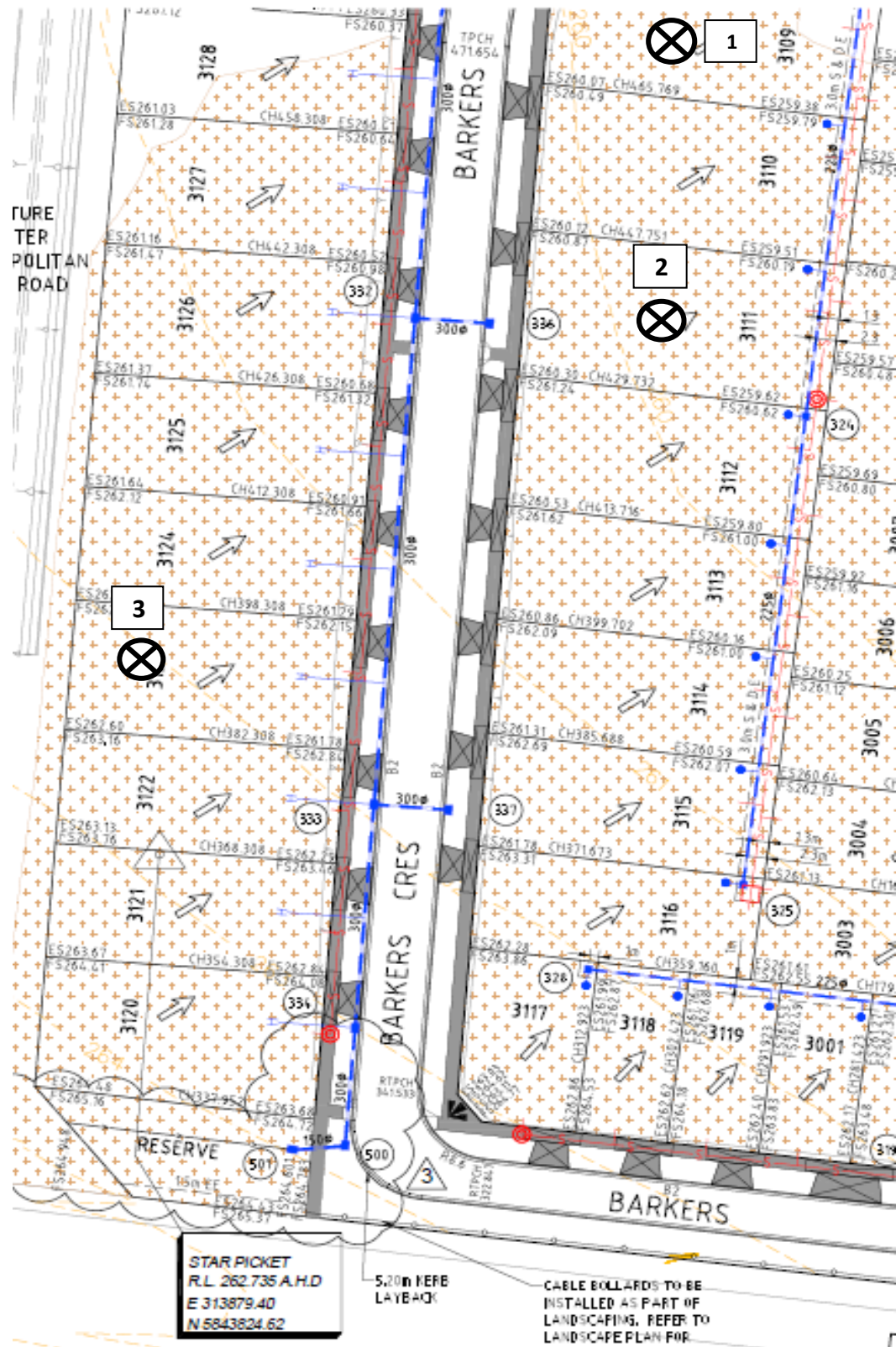
Test site locations only
NOT TO SCALE

Client: BMD

Job No. 14874/P/621

Test Request No. T-27300

Date Tested: 26/09/2017



LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/46959-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/27300
Component:		Client Reference/s:	Level 1 Supervision Stg 29
Area Description:	Stg 29	Report Date / Page:	9/10/2017 Page 1 of 2

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	14874/S/109677	14874/S/109678	14874/S/109679	
ID / Client ID	Refer to Map	Refer to Map	Refer to Map	
Lot Number	-	-	-	
Date / Time Tested	26/09/2017	26/09/2017	26/09/2017	
Material Source	Onsite	Onsite	Onsite	
Material Type	Clay	Clay	Clay	
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	
Depths: Test / Nom / Actual (mm)	175 / 200 / 200	175 / 200 / -	175 / 200 / -	
Standard or Modified	Standard	Standard	Standard	
Layer Number	1	1	1	
Location Number	1	2	3	
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	
Sample Oversize (%)	0	0	0	
Compaction Sample Number	14874/S/109677	14874/S/109678	14874/S/109679	
Sample Description	Clay	Clay	Clay	
Moisture Test Results:				
Field Moisture Content (%)	11.7	12.9	12.4	
Adjusted / Moisture Variation (%)	2.0	2.5	3.0	
Optimum Moisture Content (%)	14.0	15.5	15.0	
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	
Moisture Ratio (%)	84.0	82.5	81.5	
Density Test Results:				
Field Wet Density (t/m³)	2.05	2.05	2.04	
Adj/Peak Conv Wet Density (t/m³)	2.07	2.08	2.08	
Density Ratio Required (%)	95	95	95	
Hilf Density Ratio (%)	99.0	99.0	98.5	

Remarks

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LOT REPORT - WET DENSITY RATIO

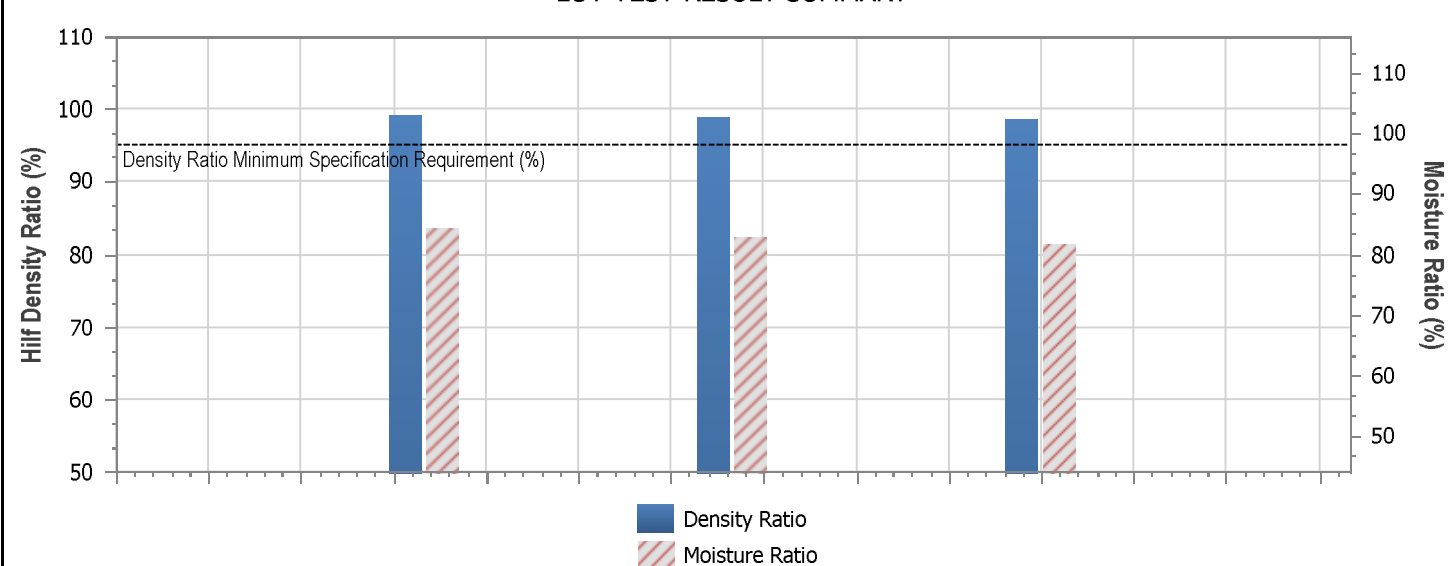
Client:	BMD Urban Pty Ltd	Report Number:	14874/R/46959-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/27300
Component:		Client Reference/s:	Level 1 Supervision Stg 29
Area Description:	Stg 29	Report Date / Page:	9/10/2017 Page 2 of 2

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
Statistical Analysis Test Method:	Lot Average (Lot average calculations are not covered by NATA endorsement)

Nuclear Gauge Calibration Details

Calibration Number	-	Material Source	-
Calibration Last Updated	-	Material Type	-
Nominated Calibration Layer Depth (mm)	-		-

LOT TEST RESULT SUMMARY



Tests in Lot = 3	Lot Minimum	Lot Maximum	Lot Mean	Standard Deviation
Moisture Ratio (%)	81.6	84.2	82.8	1.306
Half Density Ratio (%)	98.3	98.9	98.7	0.324

Lot Number: -
 Mean Density Ratio (%): 98.7
 Mean Moisture Ratio (%): 82.8

Remarks



The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.
 Accredited for compliance with ISO/IEC 17025 - Testing

Accreditation Number: 1986
 Corporate Site Number: 14874



Approved Signatory: Daniel Boyd
 Form ID: W5ASRepSum Rev 4

Site Location Sketch

MELBOURNE

Figure No. 1

Client: BMD

Job No. 14874/P/621

Test Request No. T-32363

Date Tested: 15/01/2018

Test site locations only

NOT TO SCALE



MELBOURNE

Figure No. 2

Client: BMD

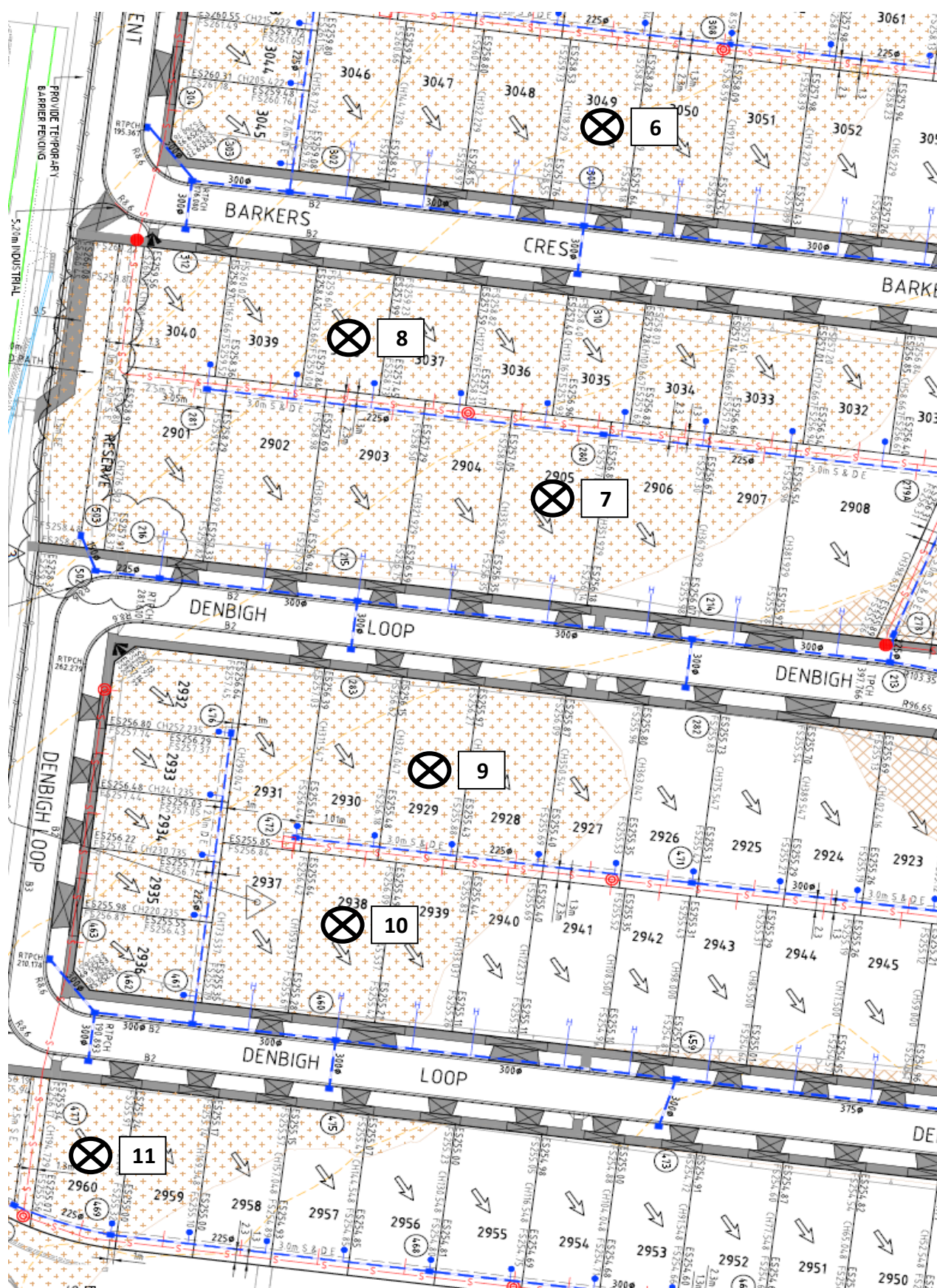
Job No. 14874/P/621

Test Request No. T-32363

Date Tested: 15/01/2018

Test site locations only

NOT TO SCALE



Site Location Sketch

MELBOURNE

Figure No. 3

Client: BMD

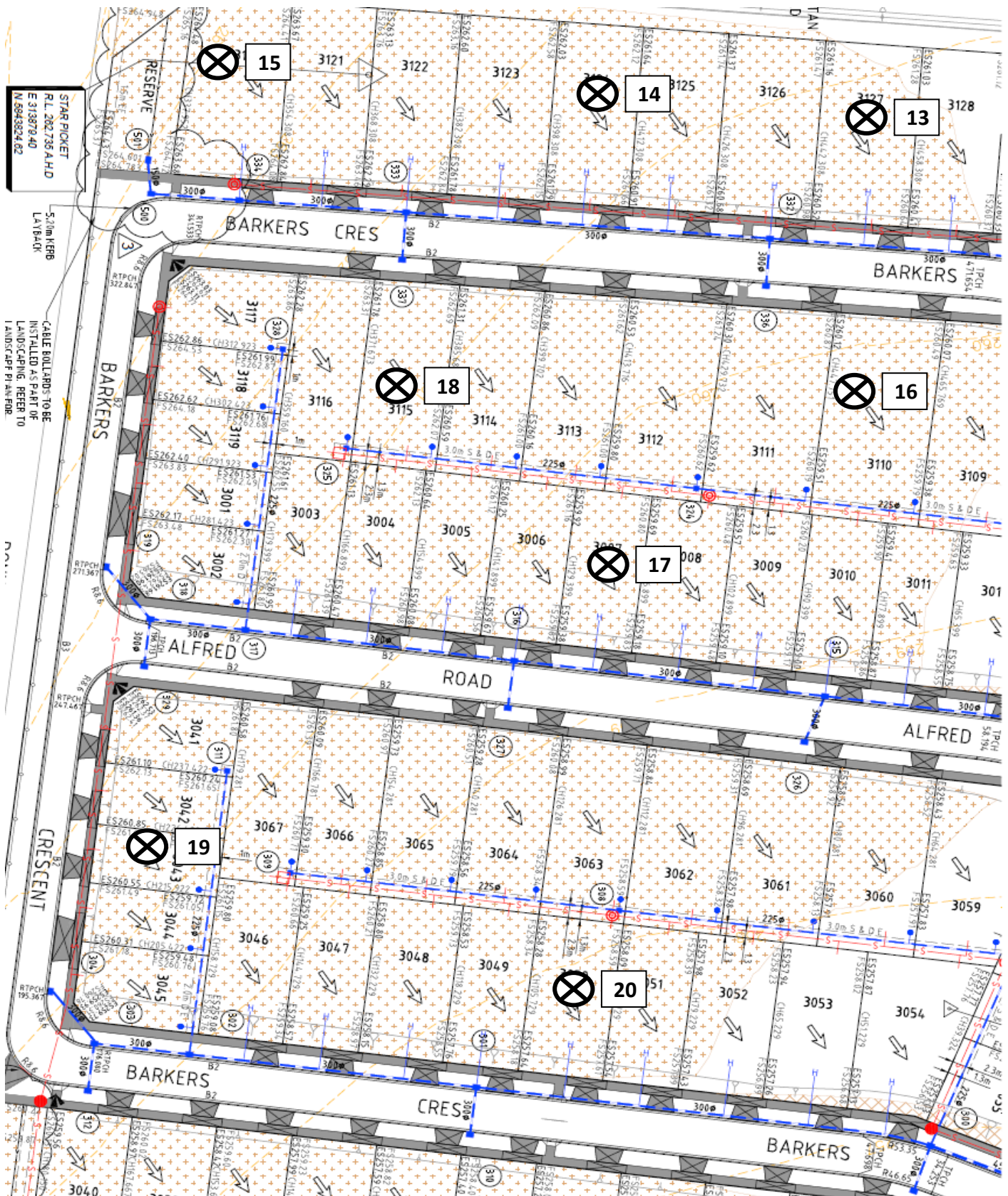
Job No. 14874/P/621

Test Request No. T-32363

Date Tested: 15/01/2018

Test site locations only

NOT TO SCALE



Site Location Sketch

MELBOURNE

Figure No. 4

Client: BMD

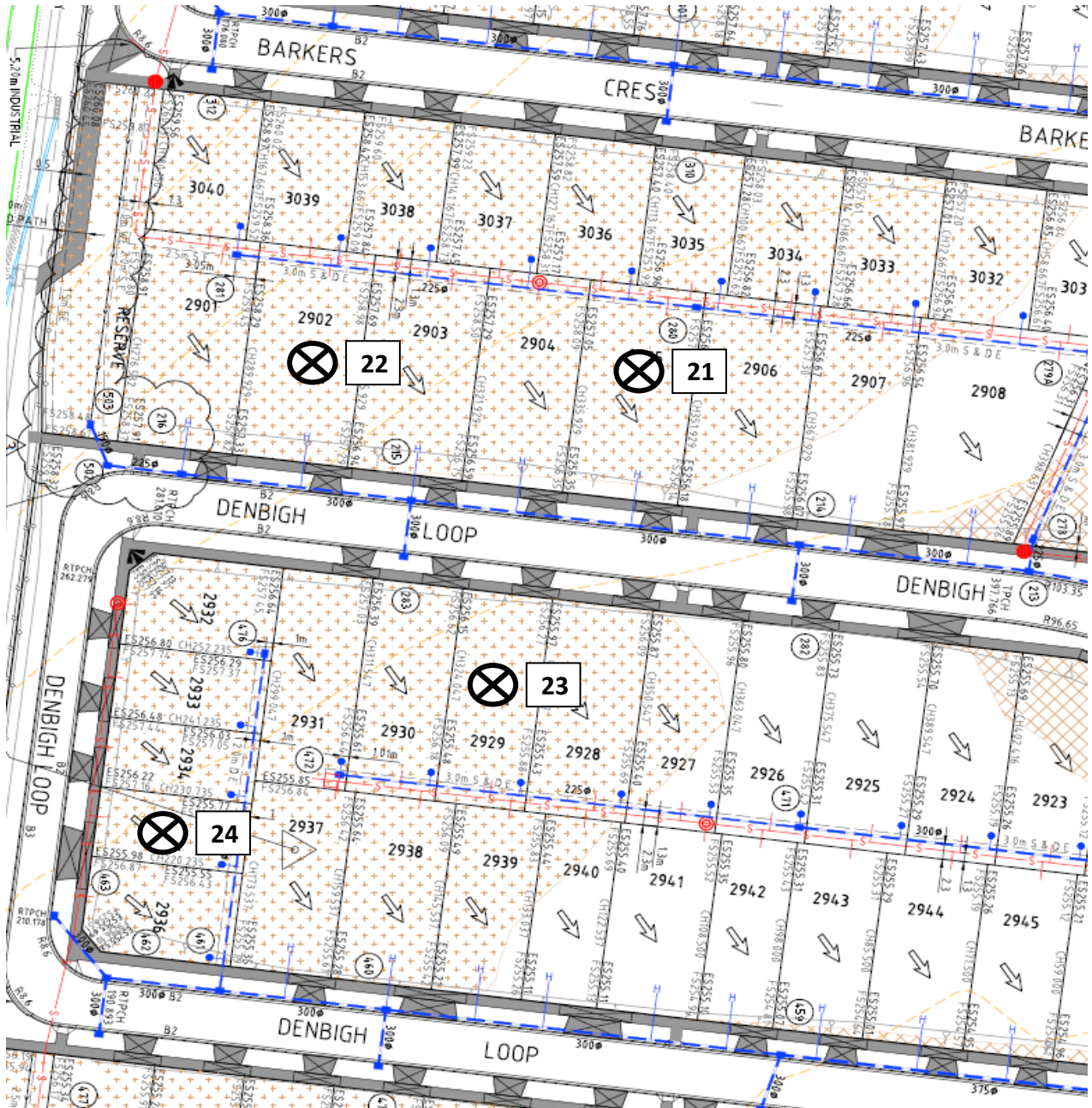
Job No. 14874/P/621

Test Request No. T-32363

Date Tested: 15/01/2018

Test site locations only

NOT TO SCALE



Site Location Sketch

MELBOURNE

Figure No. 5

Client: BMD

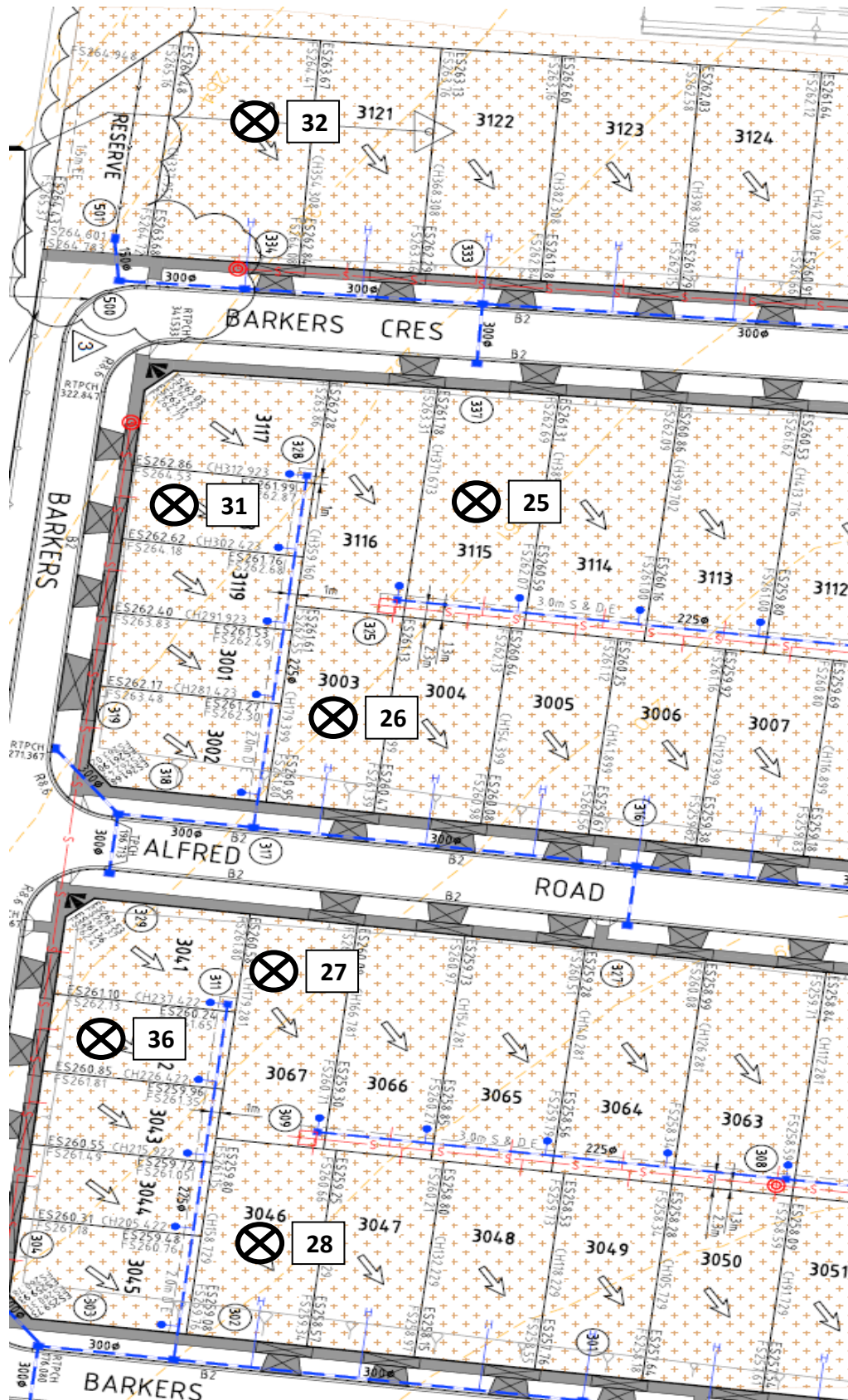
Job No. 14874/P/621

Test Request No. T-32363

Date Tested: 15/01/2018

Test site locations only

NOT TO SCALE



MELBOURNE

Figure No. 6

Client: BMD

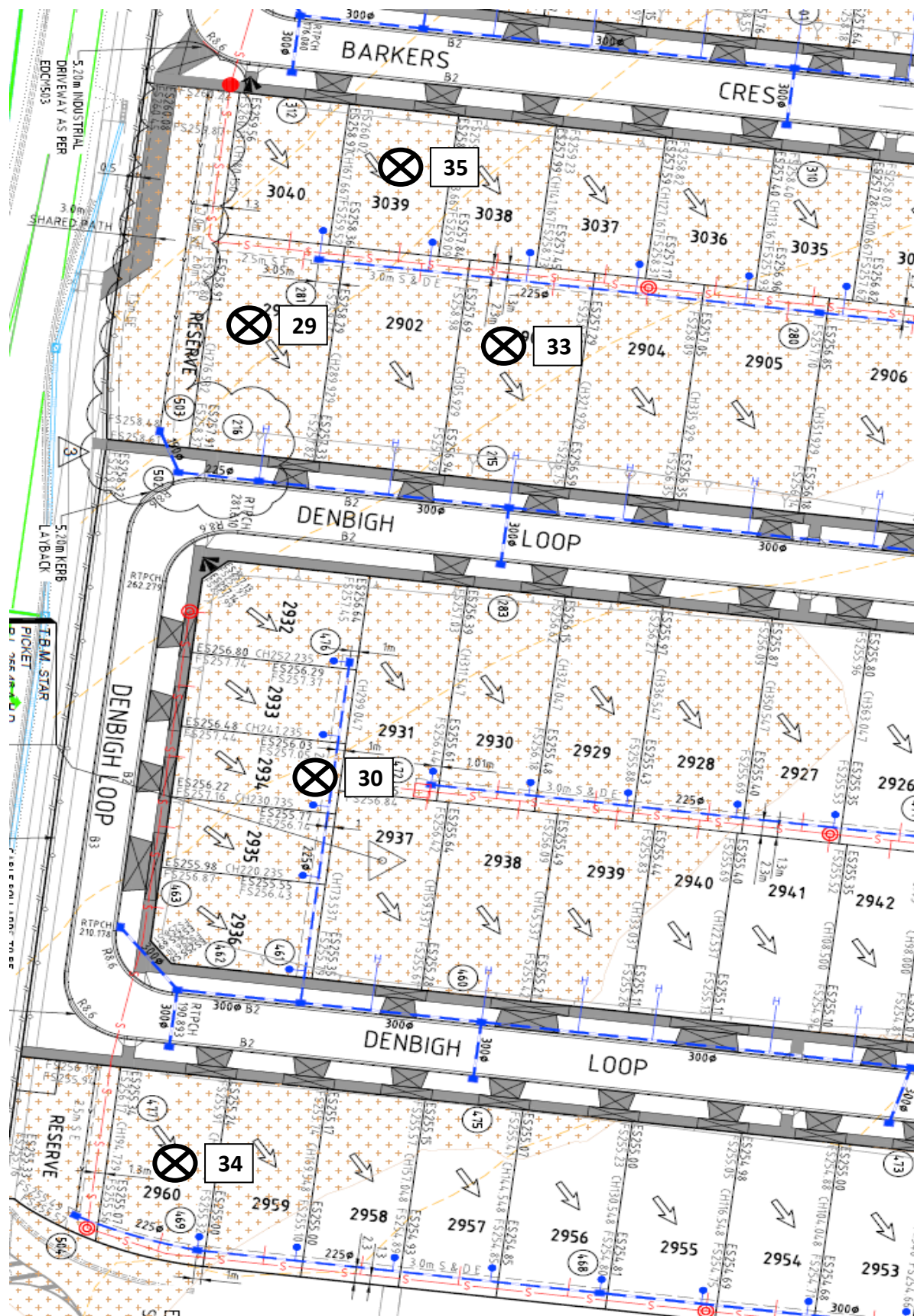
Job No. 14874/P/621

Test Request No. T-32363

Date Tested: 15/01/2018

Test site locations only

NOT TO SCALE



Site Location Sketch

MELBOURNE

Figure No. 7

Client: BMD

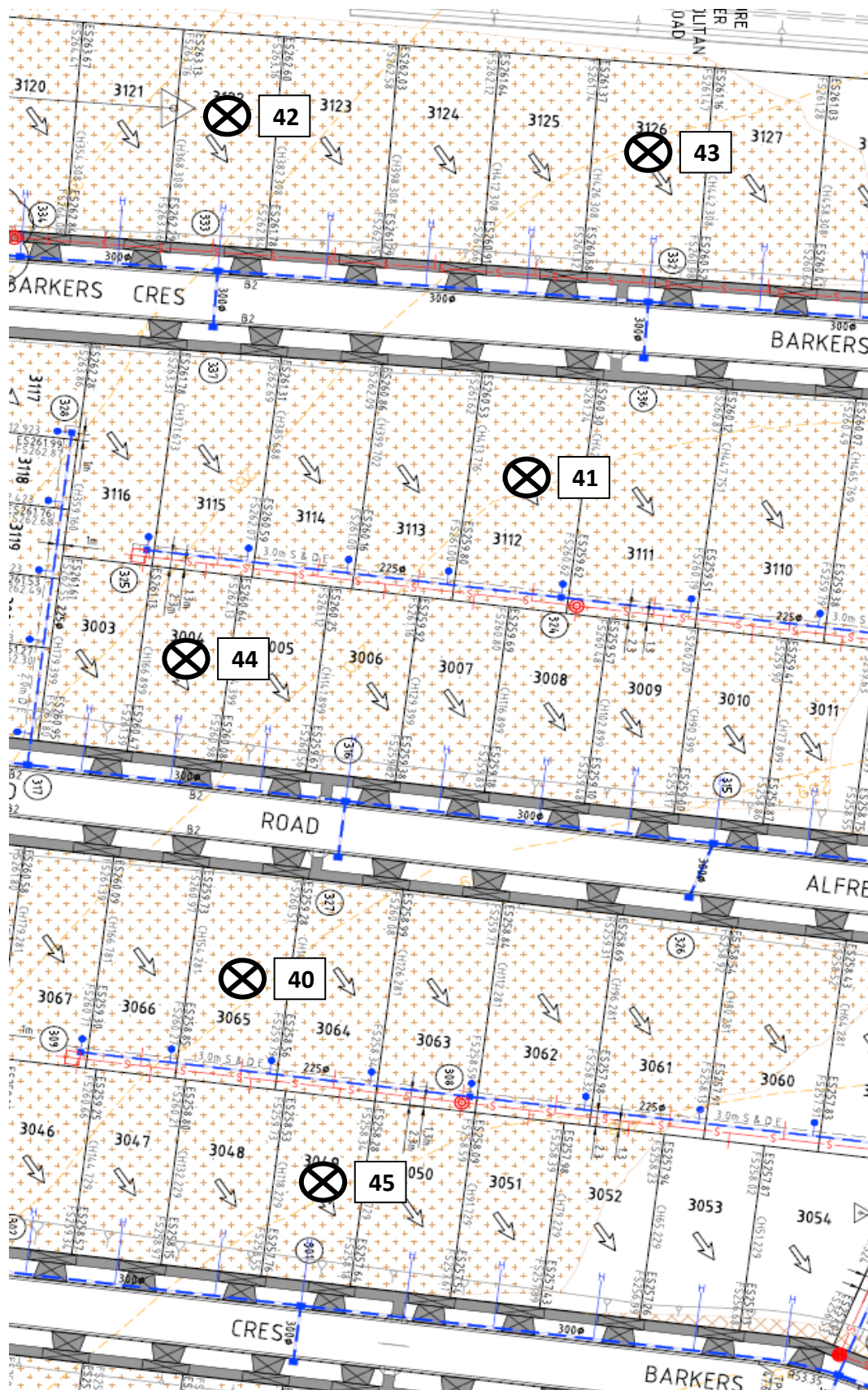
Job No. 14874/P/621

Test Request No. T-32363

Date Tested: 15/01/2018

Test site locations only

NOT TO SCALE



Site Location Sketch

MELBOURNE

Figure No. 8

Client: BMD

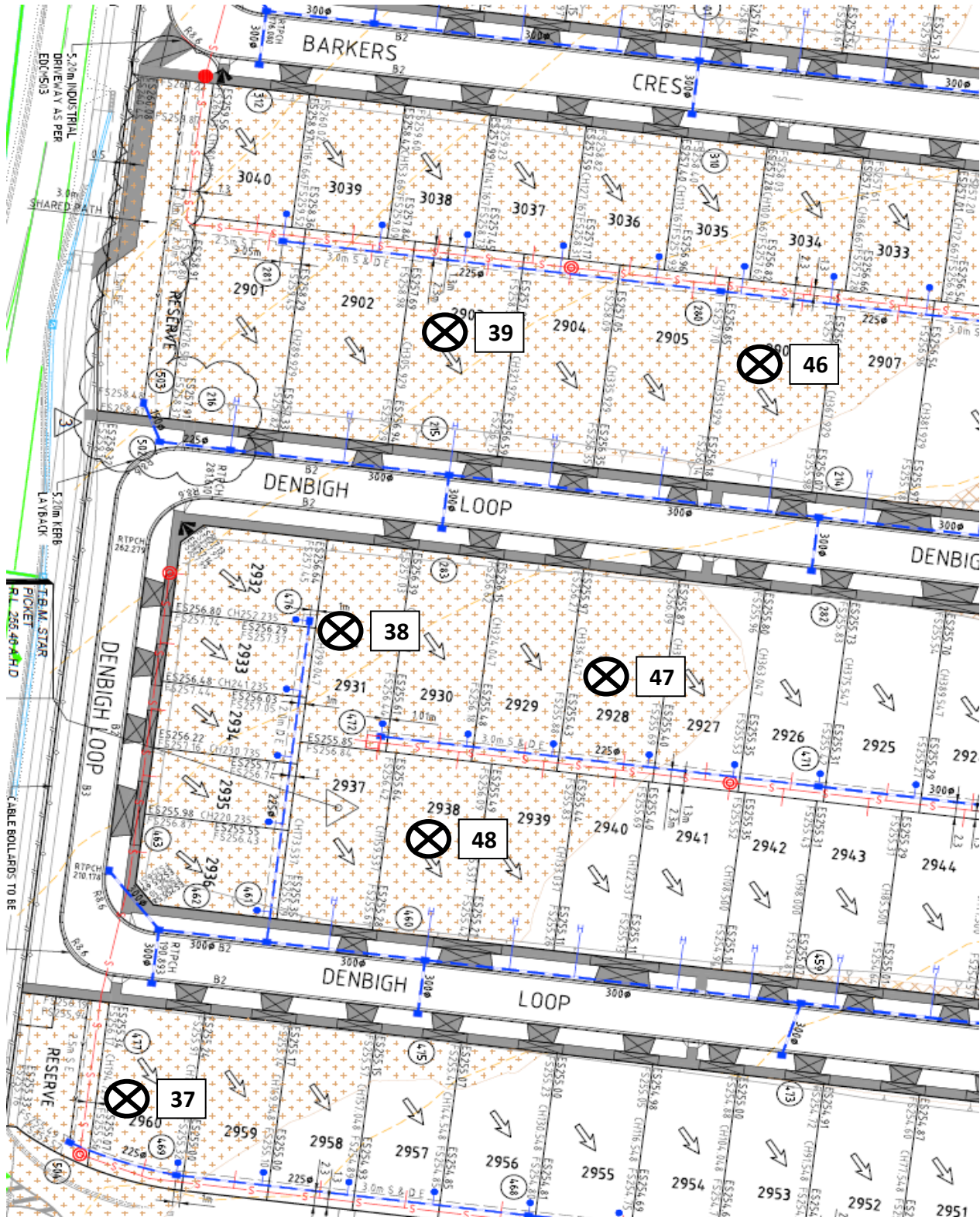
Job No. 14874/P/621

Test Request No. T-32363

Date Tested: 15/01/2018

Test site locations only

NOT TO SCALE



Site Location Sketch

MELBOURNE

Figure No. 9

Client: BMD

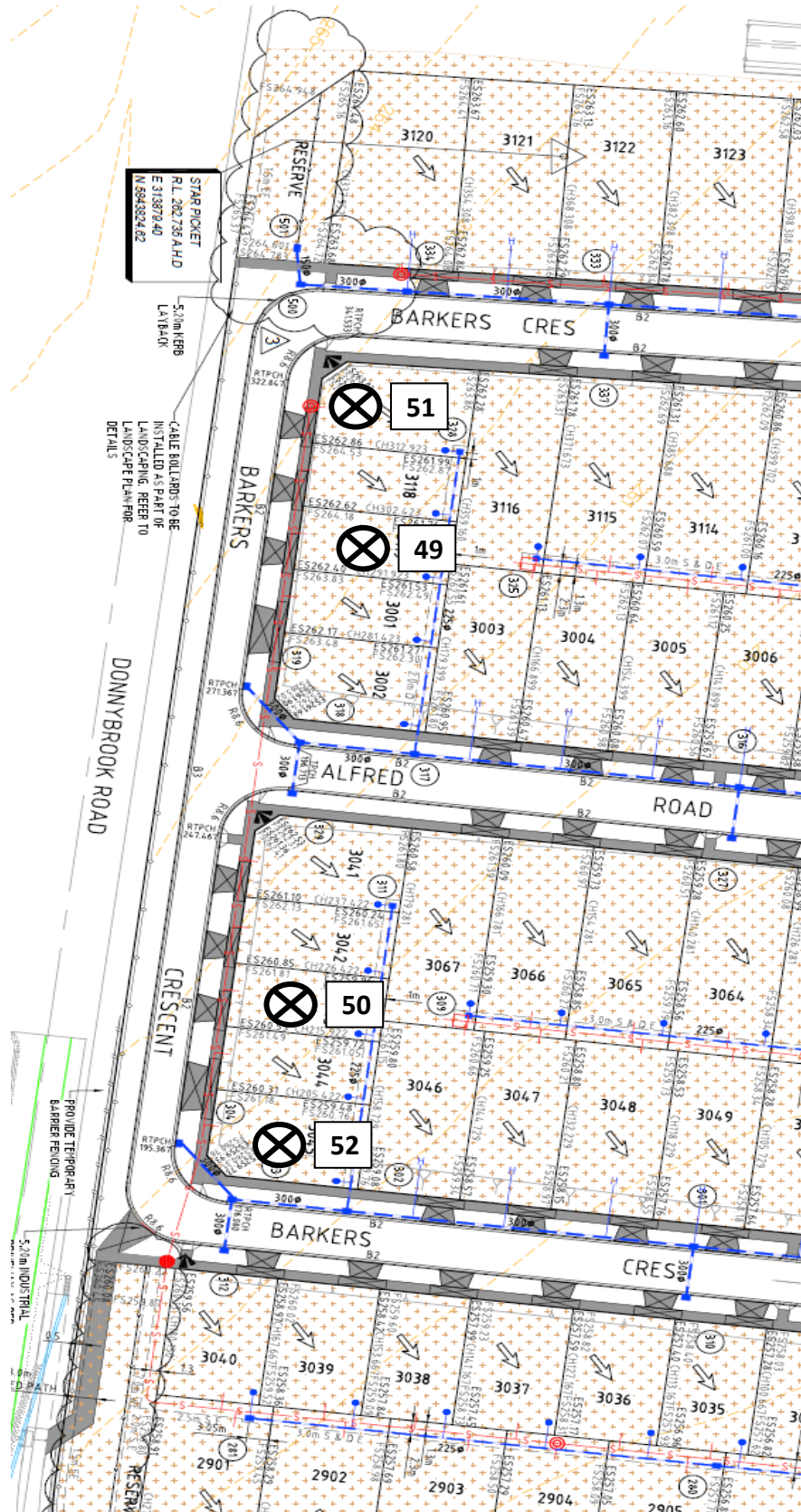
Job No. 14874/P/621

Test Request No. T-32363

Date Tested: 15/01/2018

Test site locations only

NOT TO SCALE



LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/57175-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/32363
Component:		Client Reference/s:	Stg 29 Level 1
Area Description:		Report Date / Page:	24/01/2018 Page 1 of 14

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	14874/S/139363	14874/S/139364	14874/S/139365	14874/S/139366
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	15/01/2018	15/01/2018	15/01/2018	15/01/2018
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Clay	Clay	Clay	Clay
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250
Standard or Modified	Standard	Standard	Standard	Standard
Layer Number	1	1	1	1
Location Number	1	2	3	4
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	14874/S/139363	14874/S/139364	14874/S/139365	14874/S/139366
Sample Description	Clay	Clay	Clay	Clay
Moisture Test Results:				
Field Moisture Content (%)	18.6	19.9	17.5	17.4
Adjusted / Moisture Variation (%)	0.0	0.0	0.0	0.0
Optimum Moisture Content (%)	18.5	20.0	17.5	17.5
Moisture Variation from OMC	(at OMC)	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	100.0	99.0	99.5	99.5
Density Test Results:				
Field Wet Density (t/m³)	1.98	1.98	1.98	1.97
Adj/Peak Conv Wet Density (t/m³)	2.00	1.99	2.00	2.01
Density Ratio Required (%)	95	95	95	95
Hill Density Ratio (%)	99.0	99.5	98.5	98.0

Remarks



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Accreditation Number: 1986
Corporate Site Number: 14874



Approved Signatory: Daniel Boyd
Form ID: W5ASRepSum Rev 4

LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/57175-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/32363
Component:		Client Reference/s:	Stg 29 Level 1
Area Description:		Report Date / Page:	24/01/2018 Page 2 of 14

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	14874/S/139367	14874/S/139368	14874/S/139369	14874/S/139370
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	15/01/2018	15/01/2018	15/01/2018	15/01/2018
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Clay	Clay	Clay	Clay
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250
Standard or Modified	Standard	Standard	Standard	Standard
Layer Number	1	1	1	1
Location Number	5	6	7	8
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	14874/S/139367	14874/S/139368	14874/S/139369	14874/S/139370
Sample Description	Clay	Clay	Clay	Clay
Moisture Test Results:				
Field Moisture Content (%)	17.2	16.9	17.7	17.4
Adjusted / Moisture Variation (%)	0.0	0.0	0.0	0.0
Optimum Moisture Content (%)	17.5	17.0	18.0	17.5
Moisture Variation from OMC	(Drier than OMC)	(at OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	99.0	100.0	99.5	99.5
Density Test Results:				
Field Wet Density (t/m³)	1.98	1.98	1.98	1.97
Adj/Peak Conv Wet Density (t/m³)	2.02	2.00	2.02	1.99
Density Ratio Required (%)	95	95	95	95
Hill Density Ratio (%)	98.5	99.0	98.0	99.0

Remarks

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	Accreditation Number:	1986	
	Corporate Site Number:	14874	
	Approved Signatory: Daniel Boyd		
	Form ID: W5ASRepSum Rev 4		

LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/57175-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/32363
Component:		Client Reference/s:	Stg 29 Level 1
Area Description:		Report Date / Page:	24/01/2018 Page 3 of 14

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	14874/S/139371	14874/S/139372	14874/S/139373	14874/S/139374
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	15/01/2018	15/01/2018	15/01/2018	15/01/2018
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Clay	Clay	Clay	Clay
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250
Standard or Modified	Standard	Standard	Standard	Standard
Layer Number	1	1	1	1
Location Number	9	10	11	12
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	14874/S/139371	14874/S/139372	14874/S/139373	14874/S/139374
Sample Description	Clay	Clay	Clay	Clay
Moisture Test Results:				
Field Moisture Content (%)	18.5	17.1	17.5	18.2
Adjusted / Moisture Variation (%)	0.0	0.0	0.0	0.0
Optimum Moisture Content (%)	18.5	17.0	17.5	18.5
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	99.0	99.5	99.5	99.0
Density Test Results:				
Field Wet Density (t/m ³)	1.98	1.98	1.98	1.98
Adj/Peak Conv Wet Density (t/m ³)	2.00	2.02	2.03	2.03
Density Ratio Required (%)	95	95	95	95
Hill Density Ratio (%)	99.0	98.0	97.5	97.5

Remarks

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	Corporate Site Number:	14874	
	Approved Signatory: Daniel Boyd		
	Form ID: W5ASRepSum Rev 4		

LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/57175-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/32363
Component:		Client Reference/s:	Stg 29 Level 1
Area Description:		Report Date / Page:	24/01/2018 Page 4 of 14

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	14874/S/139375	14874/S/139376	14874/S/139377	14874/S/139378
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	15/01/2018	15/01/2018	15/01/2018	15/01/2018
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Clay	Clay	Clay	Clay
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250
Standard or Modified	Standard	Standard	Standard	Standard
Layer Number	2	2	2	2
Location Number	13	14	15	16
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	14874/S/139375	14874/S/139376	14874/S/139377	14874/S/139378
Sample Description	Clay	Clay	Clay	Clay
Moisture Test Results:				
Field Moisture Content (%)	19.4	17.9	19.4	17.2
Adjusted / Moisture Variation (%)	0.0	0.0	0.0	0.0
Optimum Moisture Content (%)	19.5	18.0	19.5	17.5
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	99.0	99.0	99.0	99.5
Density Test Results:				
Field Wet Density (t/m³)	1.98	1.99	1.97	1.99
Adj/Peak Conv Wet Density (t/m³)	2.02	2.02	2.02	2.03
Density Ratio Required (%)	95	95	95	95
Hill Density Ratio (%)	98.0	98.5	97.5	98.0

Remarks



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Accreditation Number: 1986
Corporate Site Number: 14874



Approved Signatory: Daniel Boyd
Form ID: W5ASRepSum Rev 4

LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/57175-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/32363
Component:		Client Reference/s:	Stg 29 Level 1
Area Description:		Report Date / Page:	24/01/2018 Page 5 of 14

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	14874/S/139379	14874/S/139380	14874/S/139381	14874/S/139382
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	15/01/2018	15/01/2018	15/01/2018	15/01/2018
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Clay	Clay	Clay	Clay
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250
Standard or Modified	Standard	Standard	Standard	Standard
Layer Number	2	2	2	2
Location Number	17	18	19	20
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	14874/S/139379	14874/S/139380	14874/S/139381	14874/S/139382
Sample Description	Clay	Clay	Clay	Clay
Moisture Test Results:				
Field Moisture Content (%)	17.9	19.5	19.0	18.1
Adjusted / Moisture Variation (%)	0.0	0.0	0.0	0.5
Optimum Moisture Content (%)	18.0	19.5	19.0	18.5
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	99.0	99.5	99.0	98.0
Density Test Results:				
Field Wet Density (t/m ³)	1.99	1.98	1.99	1.98
Adj/Peak Conv Wet Density (t/m ³)	2.00	2.01	2.02	2.03
Density Ratio Required (%)	95	95	95	95
Half Density Ratio (%)	99.5	98.5	98.0	97.5

Remarks

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	Accreditation Number:	1986	
	Corporate Site Number:	14874	
	Approved Signatory: Daniel Boyd		Form ID: W5ASRepSum Rev 4

LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/57175-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/32363
Component:		Client Reference/s:	Stg 29 Level 1
Area Description:		Report Date / Page:	24/01/2018 Page 6 of 14

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	14874/S/139383	14874/S/139384	14874/S/139385	14874/S/139386
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	15/01/2018	15/01/2018	15/01/2018	15/01/2018
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Clay	Clay	Clay	Clay
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250
Standard or Modified	Standard	Standard	Standard	Standard
Layer Number	2	2	2	2
Location Number	21	22	23	24
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	14874/S/139383	14874/S/139384	14874/S/139385	14874/S/139386
Sample Description	Clay	Clay	Clay	Clay
Moisture Test Results:				
Field Moisture Content (%)	16.9	19.4	19.2	17.9
Adjusted / Moisture Variation (%)	0.5	0.0	0.0	0.0
Optimum Moisture Content (%)	17.5	19.5	19.5	18.0
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	97.5	99.5	99.5	99.5
Density Test Results:				
Field Wet Density (t/m ³)	1.98	1.97	1.96	1.98
Adj/Peak Conv Wet Density (t/m ³)	2.03	2.02	2.03	2.01
Density Ratio Required (%)	95	95	95	95
Hill Density Ratio (%)	97.5	97.5	96.5	98.0

Remarks



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Accreditation Number: 1986
Corporate Site Number: 14874



Approved Signatory: Daniel Boyd
Form ID: W5ASRepSum Rev 4

LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/57175-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/32363
Component:		Client Reference/s:	Stg 29 Level 1
Area Description:		Report Date / Page:	24/01/2018 Page 7 of 14

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	14874/S/139387	14874/S/139388	14874/S/139389	14874/S/139390
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	15/01/2018	15/01/2018	15/01/2018	15/01/2018
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Clay	Clay	Clay	Clay
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250
Standard or Modified	Standard	Standard	Standard	Standard
Layer Number	3	3	3	3
Location Number	25	26	27	28
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	14874/S/139387	14874/S/139388	14874/S/139389	14874/S/139390
Sample Description	Clay	Clay	Clay	Clay
Moisture Test Results:				
Field Moisture Content (%)	17.5	18.8	17.4	17.1
Adjusted / Moisture Variation (%)	0.0	0.0	0.0	0.0
Optimum Moisture Content (%)	17.5	19.0	17.5	17.5
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	99.0	99.0	99.5	99.0
Density Test Results:				
Field Wet Density (t/m³)	1.98	1.98	1.99	1.99
Adj/Peak Conv Wet Density (t/m³)	2.03	2.03	2.02	2.03
Density Ratio Required (%)	95	95	95	95
Hill Density Ratio (%)	97.5	97.5	98.5	97.5

Remarks

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LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/57175-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/32363
Component:		Client Reference/s:	Stg 29 Level 1
Area Description:		Report Date / Page:	24/01/2018 Page 8 of 14

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	14874/S/139391	14874/S/139392	14874/S/139393	14874/S/139394
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	15/01/2018	15/01/2018	15/01/2018	15/01/2018
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Clay	Clay	Clay	Clay
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250
Standard or Modified	Standard	Standard	Standard	Standard
Layer Number	3	3	4	4
Location Number	29	30	31	32
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	14874/S/139391	14874/S/139392	14874/S/139393	14874/S/139394
Sample Description	Clay	Clay	Clay	Clay
Moisture Test Results:				
Field Moisture Content (%)	17.5	17.7	19.3	18.2
Adjusted / Moisture Variation (%)	0.0	0.5	0.0	0.0
Optimum Moisture Content (%)	17.5	18.0	19.5	18.5
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	99.0	98.0	99.5	99.0
Density Test Results:				
Field Wet Density (t/m ³)	1.98	1.99	1.98	1.98
Adj/Peak Conv Wet Density (t/m ³)	2.02	2.03	2.02	2.03
Density Ratio Required (%)	95	95	95	95
Hill Density Ratio (%)	98.0	98.0	98.0	97.5

Remarks

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	Accreditation Number:	1986	
	Corporate Site Number:	14874	
	Approved Signatory: Daniel Boyd		Form ID: W5ASRepSum Rev 4

LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/57175-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/32363
Component:		Client Reference/s:	Stg 29 Level 1
Area Description:		Report Date / Page:	24/01/2018 Page 9 of 14

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	14874/S/139395	14874/S/139396	14874/S/139397	14874/S/139398
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	15/01/2018	15/01/2018	15/01/2018	15/01/2018
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Clay	Clay	Clay	Clay
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250
Standard or Modified	Standard	Standard	Standard	Standard
Layer Number	4	4	4	4
Location Number	33	34	35	36
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	14874/S/139395	14874/S/139396	14874/S/139397	14874/S/139398
Sample Description	Clay	Clay	Clay	Clay
Moisture Test Results:				
Field Moisture Content (%)	18.7	18.4	18.2	18.5
Adjusted / Moisture Variation (%)	0.0	0.0	0.0	0.5
Optimum Moisture Content (%)	19.0	18.5	18.5	19.0
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	99.5	99.0	99.5	98.0
Density Test Results:				
Field Wet Density (t/m ³)	1.98	1.98	1.98	1.99
Adj/Peak Conv Wet Density (t/m ³)	2.01	2.02	2.02	2.02
Density Ratio Required (%)	95	95	95	95
Hill Density Ratio (%)	98.5	98.0	98.0	98.0

Remarks



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Accreditation Number: 1986
Corporate Site Number: 14874



Approved Signatory: Daniel Boyd
Form ID: W5ASRepSum Rev 4

LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/57175-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/32363
Component:		Client Reference/s:	Stg 29 Level 1
Area Description:		Report Date / Page:	24/01/2018 Page 10 of 14

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	14874/S/139399	14874/S/139400	14874/S/139401	14874/S/139402
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	15/01/2018	15/01/2018	15/01/2018	15/01/2018
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Clay	Clay	Clay	Clay
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250
Standard or Modified	Standard	Standard	Standard	Standard
Layer Number	3	3	3	3
Location Number	37	38	39	40
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	14874/S/139399	14874/S/139400	14874/S/139401	14874/S/139402
Sample Description	Clay	Clay	Clay	Clay
Moisture Test Results:				
Field Moisture Content (%)	18.9	17.5	17.6	18.5
Adjusted / Moisture Variation (%)	0.0	0.5	0.0	0.0
Optimum Moisture Content (%)	19.0	18.0	18.0	18.5
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	99.0	98.0	99.0	99.0
Density Test Results:				
Field Wet Density (t/m ³)	1.97	1.98	1.99	1.98
Adj/Peak Conv Wet Density (t/m ³)	2.02	2.03	2.02	2.02
Density Ratio Required (%)	95	95	95	95
Hill Density Ratio (%)	97.5	97.5	98.5	98.0

Remarks



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LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/57175-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/32363
Component:		Client Reference/s:	Stg 29 Level 1
Area Description:		Report Date / Page:	24/01/2018 Page 11 of 14

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	14874/S/139403	14874/S/139404	14874/S/139405	14874/S/139406
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	15/01/2018	15/01/2018	15/01/2018	15/01/2018
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Clay	Clay	Clay	Clay
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250
Standard or Modified	Standard	Standard	Standard	Standard
Layer Number	3	3	2	2
Location Number	41	42	43	44
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	14874/S/139403	14874/S/139404	14874/S/139405	14874/S/139406
Sample Description	Clay	Clay	Clay	Clay
Moisture Test Results:				
Field Moisture Content (%)	15.5	18.1	17.3	18.0
Adjusted / Moisture Variation (%)	0.5	0.0	0.5	0.0
Optimum Moisture Content (%)	16.0	18.5	18.0	18.0
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	98.0	99.0	97.0	99.0
Density Test Results:				
Field Wet Density (t/m³)	1.98	1.99	1.98	1.99
Adj/Peak Conv Wet Density (t/m³)	2.02	2.02	2.02	2.03
Density Ratio Required (%)	95	95	95	95
Half Density Ratio (%)	98.5	98.0	98.0	97.5

Remarks

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LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/57175-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/32363
Component:		Client Reference/s:	Stg 29 Level 1
Area Description:		Report Date / Page:	24/01/2018 Page 12 of 14

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	14874/S/139407	14874/S/139408	14874/S/139409	14874/S/139410
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	15/01/2018	15/01/2018	15/01/2018	15/01/2018
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Clay	Clay	Clay	Clay
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250
Standard or Modified	Standard	Standard	Standard	Standard
Layer Number	2	2	2	2
Location Number	45	46	47	48
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	14874/S/139407	14874/S/139408	14874/S/139409	14874/S/139410
Sample Description	Clay	Clay	Clay	Clay
Moisture Test Results:				
Field Moisture Content (%)	17.5	18.1	17.5	18.1
Adjusted / Moisture Variation (%)	0.0	0.5	0.0	0.5
Optimum Moisture Content (%)	17.5	18.5	17.5	18.5
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	99.0	98.0	99.0	98.0
Density Test Results:				
Field Wet Density (t/m³)	1.98	1.98	1.98	1.98
Adj/Peak Conv Wet Density (t/m³)	2.03	2.02	2.02	2.03
Density Ratio Required (%)	95	95	95	95
Half Density Ratio (%)	97.5	98.0	98.0	97.0

Remarks

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	Corporate Site Number:	14874	
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LOT REPORT - WET DENSITY RATIO

Client:	BMD Urban Pty Ltd	Report Number:	14874/R/57175-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/32363
Component:		Client Reference/s:	Stg 29 Level 1
Area Description:		Report Date / Page:	24/01/2018 Page 13 of 14

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
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Sample Number	14874/S/139411	14874/S/139412	14874/S/139413	14874/S/139414
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	15/01/2018	15/01/2018	15/01/2018	15/01/2018
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Clay	Clay	Clay	Clay
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250	225 / 250 / 250
Standard or Modified	Standard	Standard	Standard	Standard
Layer Number	5	5	5	5
Location Number	49	50	51	52
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	14874/S/139411	14874/S/139412	14874/S/139413	14874/S/139414
Sample Description	Clay	Clay	Clay	Clay
Moisture Test Results:				
Field Moisture Content (%)	16.9	17.2	18.6	17.4
Adjusted / Moisture Variation (%)	0.5	0.0	0.0	0.5
Optimum Moisture Content (%)	17.5	17.5	19.0	18.0
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	97.5	99.5	99.0	97.0
Density Test Results:				
Field Wet Density (t/m ³)	1.99	1.98	1.99	1.98
Adj/Peak Conv Wet Density (t/m ³)	2.03	2.03	2.03	2.03
Density Ratio Required (%)	95	95	95	95
Hill Density Ratio (%)	97.5	98.0	98.0	97.5

Remarks

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LOT REPORT - WET DENSITY RATIO

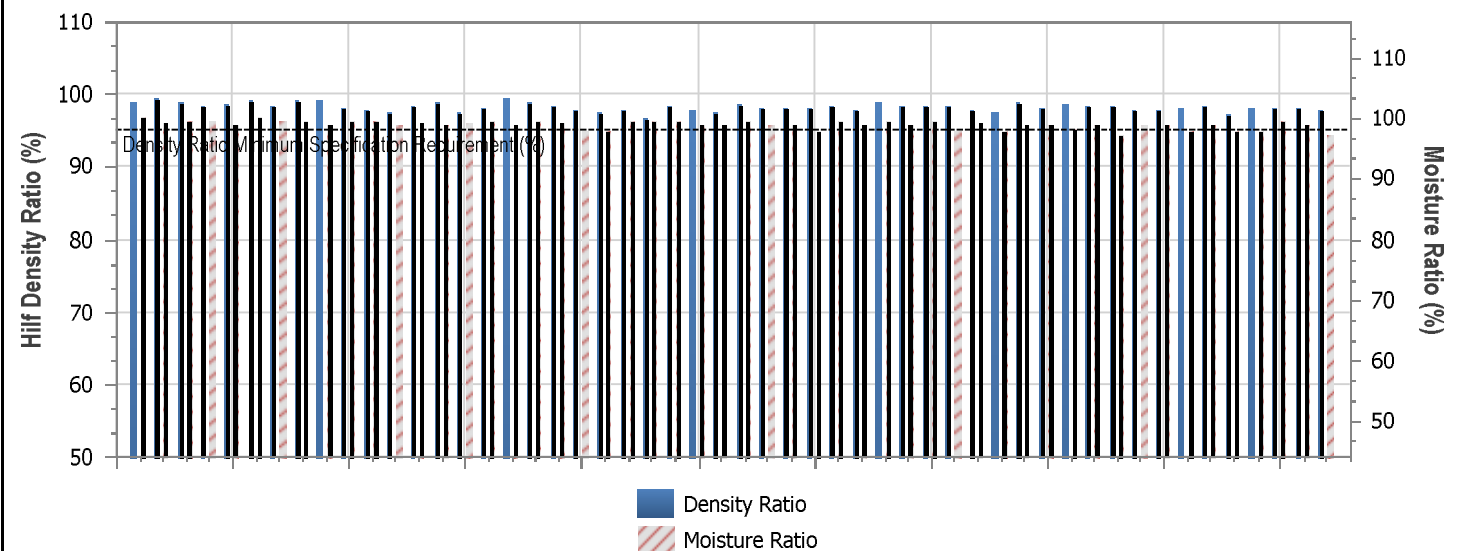
Client:	BMD Urban Pty Ltd	Report Number:	14874/R/57175-1
Client Address:	PO BOX 1128, CAMBERWELL	Project Number:	14874/P/621
Project:	Merrifield Estate - Stage 29	Lot Number:	
Location:	Merrifield	Internal Test Request:	14874/T/32363
Component:		Client Reference/s:	Stg 29 Level 1
Area Description:		Report Date / Page:	24/01/2018 Page 14 of 14

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
Statistical Analysis Test Method:	Lot Average (Lot average calculations are not covered by NATA endorsement)

Nuclear Gauge Calibration Details

Calibration Number	-	Material Source	-
Calibration Last Updated	-	Material Type	-
Nominated Calibration Layer Depth (mm)	-		

LOT TEST RESULT SUMMARY



Tests in Lot = 52	Lot Minimum	Lot Maximum	Lot Mean	Standard Deviation
Moisture Ratio (%)	97.2	100.0	98.9	0.679
Half Density Ratio (%)	96.5	99.3	98.0	0.573

Lot Number: -
 Mean Density Ratio (%): 98.0
 Mean Moisture Ratio (%): 98.9

Remarks



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