

LEVEL 1 INSPECTION & TESTING

| Geotechnical | Environmental | Residential | Pavements | Investigations & Design |



A&Y ASSOCIATES
GEOTECHNICAL ENGINEERING CONSULTANTS

Site: Taylors Quarter - Stage 1 to Stage 3

Project No: 1120 0167-1



Prepared for:
BMD Urban
September 2020

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Revision Chart

Version	Description	Author	Reviewer	Release Approval	Release Date	Client Copy
0	Level 1 Inspection & Testing Report	YZ	AT	AT	23/09/2020	Soft copy (email)

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1. Introduction

This report presents the results of the Level 1 Inspection and Testing for the construction of the fill platforms located in Taylors Quarter Stage 1 to Stage 3, Taylors Lakes.

2. Project Summary

It is understood that BMD Urban require the fill platforms within Taylors Quarter Stage 1 to Stage 3 to be constructed under Level 1 Inspection and Testing undertaken by a Geotechnical Inspection and Testing Authority (GITA).

Level 1 Inspection and Testing, as defined in AS3798-2007 "Guidelines on Earthworks for Commercial and Residential Development," provides for full time inspection of the construction of controlled fill and field and laboratory testing in accordance with AS1289 "Methods of Testing Soils for Engineering Purposes".

The Level 1 Inspection was undertaken by a Geotechnician from A&Y Associates over a period of 40 working days.

March 2020	31
April 2020	1, 7, 8, 9, 15, 16, 17, 18, 20, 21, 22, 23, 24, 27, 28, 29
May 2020	4, 5, 6, 7, 8, 11, 12, 14, 15, 16, 18, 19
June 2020	4, 5, 9, 10, 11, 17, 18, 19
July 2020	1, 17, 18

This report is applicable for fill placed by BMD Urban for the proposed locations below in Taylors Quarter Stage 1 to Stage 3, Taylors Lakes as shown in Appendix A - Site Plan.

- Lot 101 to Lot 149
- Lot 201 to Lot 254
- Lot 301 to Lot 368

3. Project Specifications

A project specification is provided in drawing no. 31-33682-C100, 31-33682-C200 and drawing no. 31-33682-C300 for the construction works in Taylors Quarter Stage 1 to Stage 3, Taylors Lakes. The supervision and inspections were performed based on AS3798. A short summary of the requirements outlined in AS3798 is provided below:

- All filling in excess of 300mm depth within the building envelope of allotments shall be undertaken to specifications satisfying the requirements of AS3798.
- Material to be used for fill construction shall satisfy the requirements of AS3798-2007 "Guidelines on Earthworks for Commercial and residential Developments". Material used shall be free of:
 - Organic soils, such as topsoils, severely root affected subsoil and peat;
 - Contaminated soils;
 - Materials which undergo volume change or loss of strength when disturbed and exposed to moisture;
 - Silts, or materials that have deleterious engineering properties of silt;
 - Fill that contains wood, metal, plastic, boulders or other deleterious material, in sufficient proportions to affect the required performance of fill;
 - The maximum particle size of any rocks or other lump, within the layer, has not exceeded two-thirds (2/3) of the compacted layer thickness.
- Compaction to achieve a compaction ratio of at least 98% Standard, as per the specification provided in drawing no. 31-33682-C100, 31-33682-C200 and drawing no. 31-33682-C300.

4. Subgrade Assessment

The subgrade was assessed by A&Y Associates following the topsoil removal and before any fill was placed. The subgrade assessment was undertaken on 30th March 2020 for Stage 1 & 2 and 4th May 2020 for Stage 3 as mentioned in report *1120 0167-1 (SSI)*.

The exposed subgrade material comprised of CLAY. No wet or soft patches were found during the inspection. No evidence of deleterious material was found during the inspection.

5. Earthworks

The earthworks for this project included stripping of topsoil, removing of tree roots, proof rolling the subgrade and placement and compaction of fill to construct engineered platforms.

Based on design plans and site inspection, it appears that the average fill thickness placed is as follows:

- Approximately 300mm to 1200mm

6. Fill Material

The fill material used for the platform consisted of on-site boxed out material. The fill material was predominantly comprising of Clay.

7. Testing

Field density testing was undertaken on the compacted fill at a frequency of a minimum of 3 tests per lot (AS3798 Table 8.1).

Test were performed using Nuclear Density Gauge for field density determination as per AS 1289.5.8.1. Testing was completed at a minimum rate of 3 field density test per day's production based on the minimum requirements of AS 3798-2007 and taken from each layer of fill placed.

A total of 120 field density tests were performed during the earthworks. All of the test results met the specified compaction requirement of 98% Standard Compaction.

The locations of the 120 field density tests are shown in Appendix B - Test Locations. A summary of the test results obtained from the field density testing is presented in Appendix C – Test Results Summary. The laboratory test reports of the field density tests are presented in Appendix D – NATA Test Results.

8. Exclusion

Trenches were excavated and backfilled on site for the installation of underground services such as sewers, electrical conduits, water mains etc. Footpaths in front of the lots were also observed to be excavated and filled during and after the Level 1 supervision conducted by A & Y Associates. Uncontrolled fill and topsoil may have been placed as part of the landscaping of the site following the completion of the engineered fill construction.

A & Y Associates was not involved in monitoring and testing these works and as such are not included in the Level 1 report.

9. Conclusion

On the completion of the earthworks and after analysing the materials used, it has been concluded that the filling procedure conducted by BMD Urban appears to be consistent with the requirements of AS 3798 in regards to the placement of fill materials on a project under Level 1 Supervision and in accordance with the project specification as provided to A & Y Associates.

This report has been prepared for the benefit of our client with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement. No responsibility for this report will be taken by A & Y Associates if it is altered in any way, or not reproduced in full.

Appendix A – Site Plan



Area Inspected



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
23/09/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1

SITE PLAN SKETCH—NOT TO SCALE



Appendix B – Test Locations



Indicative Test Location



PROJECT:

Taylors Quarter—Level 1

CLIENT:

BMD Urban

DATE:

23/09/2020

LOCATION:

Taylors Lakes

PROJECT NO:

1120 0167-1

SITE PLAN SKETCH—NOT TO SCALE



A&Y ASSOCIATES
GEOTECHNICAL ENGINEERING CONSULTANTS


Appendix C – Test Results Summary


Project No		1120 0167-1			Client	BMD Urban				
Project Name		Taylors Quarter - Level 1			Specification			Density Ratio \geq 98% of Peak Wet Density		
Location		Taylors Lakes								
Test No	Retest of Test	Date	Location	Layer	Oversize	Density Ratio	Moisture Ratio	Moisture Variation	Pass / Fail	Retest
#	#		Lot #	#	%	%	%	%		Pass / Fail
1	-	31/03/2020	-	1	0.0	101.5	98.0	-0.5	Pass	-
2	-	31/03/2020	-	1	0.0	100.0	109.5	1.5	Pass	-
3	-	31/03/2020	-	1	0.0	98.5	98.5	-0.5	Pass	-
4	-	1/04/2020	-	2	0.0	98.0	100.5	0.0	Pass	-
5	-	1/04/2020	-	2	0.0	98.0	100.0	0.0	Pass	-
6	-	1/04/2020	-	2	0.0	98.0	98.0	-0.5	Pass	-
7	-	7/04/2020	-	1	0.0	101.0	100.0	0.0	Pass	-
8	-	7/04/2020	-	1	0.0	98.0	99.5	0.0	Pass	-
9	-	7/04/2020	-	1	0.0	98.5	97.5	-0.5	Pass	-
10	-	8/04/2020	-	2	0.0	99.0	101.0	0.0	Pass	-
11	-	8/04/2020	-	2	0.0	101.5	101.0	0.0	Pass	-
12	-	8/04/2020	-	2	0.0	103.5	96.0	-0.5	Pass	-
13	-	9/04/2020	-	1	0.0	99.0	98.5	-0.5	Pass	-
14	-	9/04/2020	-	2	0.0	101.0	98.5	-0.5	Pass	-
15	-	9/04/2020	-	3	0.0	101.5	96.0	-0.5	Pass	-
16	-	15/04/2020	-	1	0.0	101.0	101.5	0.0	Pass	-
17	-	15/04/2020	-	2	0.0	102.5	99.0	-0.5	Pass	-
18	-	15/04/2020	-	3	0.0	100.0	97.5	-0.5	Pass	-
19	-	16/04/2020	-	1	0.0	102.5	97.0	-1.0	Pass	-
20	-	16/04/2020	-	2	0.0	98.5	97.0	-0.5	Pass	-
21	-	16/04/2020	-	3	0.0	98.5	98.5	-0.5	Pass	-
22	-	17/04/2020	-	1	0.0	100.5	96.0	-1.0	Pass	-
23	-	17/04/2020	-	2	0.0	99.0	96.5	-0.5	Pass	-


** Negative (-) value indicates that the field moisture content is drier than the optimum moisture content (OMC)

** Positive (+) value indicates that the field moisture content is wetter than the optimum moisture content (OMC)



Test No	Retest of Test	Date	Location	Layer	Oversize	Density Ratio	Moisture Ratio	Moisture Variation	Pass / Fail	Retest
#	#		Lot #	#	%	%	%	%		Pass / Fail
24	-	17/04/2020	-	3	0.0	100.5	98.5	-0.5	Pass	-
25	-	18/04/2020	-	1	0.0	99.0	96.5	-1.0	Pass	-
26	-	18/04/2020	-	2	0.0	101.0	98.0	-0.5	Pass	-
27	-	18/04/2020	-	3	0.0	98.5	98.5	-0.5	Pass	-
28	-	20/04/2020	-	1	0.0	99.0	97.0	-0.5	Pass	-
29	-	20/04/2020	-	1	0.0	98.5	86.5	-3.0	Pass	-
30	-	20/04/2020	-	2	0.0	102.5	99.0	-0.5	Pass	-
31	-	21/04/2020	-	1	0.0	101.0	98.0	-0.5	Pass	-
32	-	21/04/2020	-	2	0.0	99.0	96.5	-0.5	Pass	-
33	-	21/04/2020	-	2	0.0	99.5	98.5	-0.5	Pass	-
34	-	22/04/2020	-	1	0.0	101.5	99.0	-0.5	Pass	-
35	-	22/04/2020	-	2	0.0	99.5	96.5	-1.0	Pass	-
36	-	22/04/2020	-	2	0.0	99.0	86.5	-3.0	Pass	-
37	-	23/04/2020	-	1	0.0	101.0	98.5	-0.5	Pass	-
38	-	23/04/2020	-	1	0.0	99.0	97.0	-0.5	Pass	-
39	-	23/04/2020	-	1	0.0	103.5	98.5	-0.5	Pass	-
40	-	24/04/2020	-	1	0.0	98.0	89.0	-2.5	Pass	-
41	-	24/04/2020	-	1	0.0	98.0	87.5	-3.0	Pass	-
42	-	24/04/2020	-	2	0.0	98.0	98.0	-0.5	Pass	-
43	-	27/04/2020	-	3	0.0	98.5	78.0	-3.0	Pass	-
44	-	27/04/2020	-	3	0.0	102.5	88.0	-3.0	Pass	-
45	-	27/04/2020	-	3	0.0	98.0	96.0	-1.0	Pass	-
46	-	28/04/2020	-	3	0.0	98.0	98.5	-0.5	Pass	-
47	-	28/04/2020	-	3	0.0	98.0	97.5	-0.5	Pass	-
48	-	28/04/2020	-	3	0.0	98.0	95.5	-1.5	Pass	-
49	-	29/04/2020	-	3	0.0	103.0	97.5	-0.5	Pass	-
** Negative (-) value indicates that the field moisture content is drier than the optimum moisture content (OMC)										
** Positive (+) value indicates that the field moisture content is wetter than the optimum moisture content (OMC)										

Test No	Retest of Test	Date	Location	Layer	Oversize	Density Ratio	Moisture Ratio	Moisture Variation	Pass / Fail	Retest
#	#		Lot #	#	%	%	%	%		Pass / Fail
50	-	29/04/2020	-	3	0.0	98.0	97.5	-0.5	Pass	-
51	-	29/04/2020	-	3	0.0	99.0	98.5	-0.5	Pass	-
52	-	4/05/2020	-	3	0.0	103.5	98.0	-0.5	Pass	-
53	-	4/05/2020	-	3	0.0	98.0	96.5	-0.5	Pass	-
54	-	4/05/2020	-	3	0.0	99.0	98.0	-0.5	Pass	-
55	-	5/05/2020	-	4	0.0	107.0	98.5	-0.5	Pass	-
56	-	5/05/2020	-	4	0.0	102.0	99.0	-0.5	Pass	-
57	-	5/05/2020	-	4	0.0	101.5	98.0	-0.5	Pass	-
58	-	6/05/2020	-	Subgrade	0.0	98.5	99.0	-0.5	Pass	-
59	-	6/05/2020	-	Subgrade	0.0	98.0	98.5	0.0	Pass	-
60	-	6/05/2020	-	Subgrade	0.0	98.5	99.5	-0.5	Pass	-
61	-	7/05/2020	-	1	0.0	101.0	99.0	-0.5	Pass	-
62	-	7/05/2020	-	1	0.0	102.5	100.0	0.0	Pass	-
63	-	7/05/2020	-	1	0.0	100.5	97.5	-0.5	Pass	-
64	-	8/05/2020	-	1	0.0	101.0	100.0	0.0	Pass	-
65	-	8/05/2020	-	1	0.0	98.0	97.5	-0.5	Pass	-
66	-	8/05/2020	-	1	0.0	98.0	98.5	-0.5	Pass	-
67	-	11/05/2020	-	2	0.0	99.5	99.0	0.0	Pass	-
68	-	11/05/2020	-	2	0.0	102.5	98.0	-0.5	Pass	-
69	-	11/05/2020	-	2	0.0	101.5	98.0	-0.5	Pass	-
70	-	12/05/2020	-	2	0.0	98.0	97.0	-0.5	Pass	-
71	-	12/05/2020	-	2	0.0	98.0	96.5	-1.0	Pass	-
72	-	12/05/2020	-	2	0.0	98.0	99.0	0.0	Pass	-
73	-	14/05/2020	-	1	0.0	102.0	97.5	-0.5	Pass	-
74	-	14/05/2020	-	1	0.0	100.0	98.5	0.0	Pass	-
75	-	14/05/2020	-	1	0.0	100.0	99.5	0.0	Pass	-
** Negative (-) value indicates that the field moisture content is drier than the optimum moisture content (OMC)										
** Positive (+) value indicates that the field moisture content is wetter than the optimum moisture content (OMC)										

Test No	Retest of Test	Date	Location	Layer	Oversize	Density Ratio	Moisture Ratio	Moisture Variation	Pass / Fail	Retest
#	#		Lot #	#	%	%	%	%		Pass / Fail
76	-	15/05/2020	-	1	0.0	99.0	98.0	0.0	Pass	-
77	-	15/05/2020	-	1	0.0	99.0	97.0	-0.5	Pass	-
78	-	15/05/2020	-	1	0.0	99.0	98.5	-0.5	Pass	-
79	-	16/05/2020	-	1	0.0	99.5	97.5	-0.5	Pass	-
80	-	16/05/2020	-	1	0.0	98.0	97.0	-0.5	Pass	-
81	-	16/05/2020	-	1	0.0	98.5	97.5	-0.5	Pass	-
82	-	18/05/2020	-	2	0.0	99.0	98.0	-0.5	Pass	-
83	-	18/05/2020	-	2	0.0	99.0	98.0	-0.5	Pass	-
84	-	18/05/2020	-	2	0.0	99.0	99.5	0.0	Pass	-
85	-	19/05/2020	-	3	0.0	102.0	98.0	-0.5	Pass	-
86	-	19/05/2020	-	3	0.0	101.0	98.5	-0.5	Pass	-
87	-	19/05/2020	-	3	0.0	98.5	98.5	-0.5	Pass	-
88	-	4/06/2020	-	1	0.0	99.5	97.5	-0.5	Pass	-
89	-	4/06/2020	-	1	0.0	99.5	97.0	-0.5	Pass	-
90	-	4/06/2020	-	3	0.0	101.5	97.0	-0.5	Pass	-
91	-	5/06/2020	-	1	0.0	100.5	98.0	-0.5	Pass	-
92	-	5/06/2020	-	1	0.0	98.5	99.5	0.0	Pass	-
93	-	5/06/2020	-	1	0.0	100.0	98.5	-0.5	Pass	-
94	-	9/06/2020	-	1	12.5	98.0	97.0	-0.5	Pass	-
95	-	9/06/2020	-	1	0.0	99.5	99.0	0.0	Pass	-
96	-	9/06/2020	-	1	16.7	98.0	96.5	-0.5	Pass	-
97	-	10/06/2020	-	1	15.4	98.0	98.0	-0.5	Pass	-
98	-	10/06/2020	-	1	0.0	101.5	96.0	-1.0	Pass	-
99	-	10/06/2020	-	1	12.0	98.0	97.5	-0.5	Pass	-
100	-	11/06/2020	-	1	11.4	101.0	98.5	0.0	Pass	-
101	-	11/06/2020	-	1	8.8	101.5	95.5	-0.5	Pass	-
** Negative (-) value indicates that the field moisture content is drier than the optimum moisture content (OMC)										
** Positive (+) value indicates that the field moisture content is wetter than the optimum moisture content (OMC)										

Test No	Retest of Test	Date	Location	Layer	Oversize	Density Ratio	Moisture Ratio	Moisture Variation	Pass / Fail	Retest
#	#		Lot #	#	%	%	%	%		Pass / Fail
102	-	11/06/2020	-	1	0.0	107.0	97.5	-0.5	Pass	-
103	-	17/06/2020	-	1	10.8	100.5	96.5	-0.5	Pass	-
104	-	17/06/2020	-	1	7.5	108.0	98.0	0.0	Pass	-
105	-	17/06/2020	-	1	13.3	103.5	96.5	-0.5	Pass	-
106	-	18/06/2020	-	1	11.4	98.0	96.0	-0.5	Pass	-
107	-	18/06/2020	-	2	11.2	101.5	98.0	-0.5	Pass	-
108	-	18/06/2020	-	2	17.4	98.5	97.5	-0.5	Pass	-
109	-	19/06/2020	-	1	13.1	98.5	99.0	-0.5	Pass	-
110	-	19/06/2020	-	2	12.8	103.5	101.0	0.5	Pass	-
111	-	19/06/2020	-	2	0.0	105.5	97.0	-0.5	Pass	-
112	-	1/07/2020	-	1	16.9	98.5	99.0	-0.5	Pass	-
113	-	1/07/2020	-	2	17.3	98.0	96.5	-0.5	Pass	-
114	-	1/07/2020	-	3	16.0	98.5	97.0	-0.5	Pass	-
115	-	17/07/2020	-	1	18.9	98.5	96.5	-0.5	Pass	-
116	-	17/07/2020	-	1	18.5	99.5	97.0	-0.5	Pass	-
117	-	17/07/2020	-	2	0.0	103.0	99.0	-0.5	Pass	-
118	-	18/07/2020	-	1	8.9	100.5	97.5	-0.5	Pass	-
119	-	18/07/2020	-	1	18.8	98.0	96.0	-1.0	Pass	-
120	-	18/07/2020	-	1	16.9	98.5	98.5	0.0	Pass	-

** Negative (-) value indicates that the field moisture content is drier than the optimum moisture content (OMC)

** Positive (+) value indicates that the field moisture content is wetter than the optimum moisture content (OMC)



Appendix D – NATA Test Results

Field Density Test Results

AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	1
Location:	Taylor's Lakes		

Sample No	1	2	3			
Date Tested	31/03/2020	31/03/2020	31/03/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan Stage 1	Refer to Plan Stage 1	Refer to Plan Stage 1			
Level/Layer	1	1	1			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.957	t/m ³ 1.888	t/m ³ 1.942			
Field Moisture Content	% 21.1	% 18.6	% 22.2			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			


Oversize Material	WET, %	0.0	0.0	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.93	1.88	1.98		
Optimum Moisture Content	%	21.5	17	22.5		

Moisture Ratio	%	98	109.5	98.5		
Moisture Variation from OMC	%	-0.5 Drier	1.5 Wetter	-0.5 Drier		
Density Ratio	%	101.5	100.0	98.5		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI01)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)



NATA Accredited Laboratory No. 20172
Accreditation for compliance with ISO/IEC 17025 - Testing
The results of tests, calibrations and/or measurements included in this document, are traceable to Australian / National Standards

Approved Signatory: 
David Burns
Date: 30/04/2020



Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
31/03/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI01)

SITE PLAN SKETCH—NOT TO SCALE



Field Density Test Results AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	2
Location:	Taylor's Lakes		



Sample No	4	5	6			
Date Tested	1/04/2020	1/04/2020	1/04/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan Stage 1	Refer to Plan Stage 1	Refer to Plan Stage 1			
Level/Layer	2	2	2			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.851	t/m ³ 1.892	t/m ³ 1.911			
Field Moisture Content	% 21.1	% 18.5	% 18.1			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, %	0.0	0.0	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.89	1.93	1.95		
Optimum Moisture Content	%	21	18.5	18.5		

Moisture Ratio	%	100.5	100	98		
Moisture Variation from OMC	%	0.0	0.0	-0.5		
Density Ratio	%	98.0	98.0	98.0		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI02)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
01/04/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI02)

SITE PLAN SKETCH—NOT TO SCALE



Field Density Test Results AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	3
Location:	Taylor's Lakes		



Sample No	7	8	9			
Date Tested	7/04/2020	7/04/2020	7/04/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan Stage 2	Refer to Plan Stage 2	Refer to Plan Stage 1			
Level/Layer	1	1	1			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.983	t/m ³ 1.918	t/m ³ 1.873			
Field Moisture Content	% 18.5	% 22.3	% 18.5			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, %	0.0	0.0	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.96	1.96	1.90		
Optimum Moisture Content	%	18.5	22.5	19		

Moisture Ratio	%	100	99.5	97.5		
Moisture Variation from OMC	%	0.0	0.0	-0.5		
Density Ratio	%	101.0	98.0	98.5		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI03)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
07/04/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI03)

SITE PLAN SKETCH—NOT TO SCALE





Field Density Test Results
AS1289.5.7.1

Client:	BMD Urban			Job No:	BMD1082	
Project:	Taylors Quarter - Level 1			Report:	4	
Location:	Taylors Lakes					
Sample No	10	11	12			
Date Tested	8/04/2020	8/04/2020	8/04/2020			
Time Tested	PM	PM	PM			
Test Location	Refer to Plan Stage 2	Refer to Plan Stage 2	Refer to Plan Stage 1			
Level/Layer	2	2	2			
Layer Thickness	mm 300	300	300			
Test Depth	mm 275	275	275			
Field Wet Density	t/m ³ 1.934	1.984	1.965			
Field Moisture Content	% 19.2	21.3	17.8			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			
Oversize Material	WET, % 0.0	0.0	0.0			
Sieve Size	mm 19	19	19			
Peak Converted Wet Density	t/m ³ 1.96	1.96	1.90			
Optimum Moisture Content	% 19	21	18.5			
Moisture Ratio	% 101	101	96			
Moisture Variation from OMC	% 0.0 OMC	0.0 OMC	-0.5 Drier			
Density Ratio	% 99.0	101.5	103.5			
Specification:	98% STD			Test Selection:	N/A	
Notes:	Ref: 1120 0167-1 (SI04)					
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			Sampling Method:	AS 1289 1.2.1 6.4(b)	
	NATA Accredited Laboratory No. 20172			Approved Signatory:		
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The results of tests, calibrations and/or measurements included in this document, are traceable to Australian / National Standards			Date: 30/04/2020			



Indicative Test Location



PROJECT:

Taylors Quarter—Level 1

CLIENT:

BMD Urban

DATE:

08/04/2020

LOCATION:

Taylors Lakes

PROJECT NO:

1120 0167-1 (SI04)

SITE PLAN SKETCH—NOT TO SCALE



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Field Density Test Results AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	5
Location:	Taylor's Lakes		



Sample No	13	14	15			
Date Tested	9/04/2020	9/04/2020	9/04/2020			
Time Tested	AM	AM	AM			

Test Location	Refer to Plan Stage 1	Refer to Plan Stage 1	Refer to Plan Stage 1			
Level/Layer	1	2	3			
Layer Thickness	mm 300	300	300			
Test Depth	mm 275	275	275			
Field Wet Density	t/m ³ 1.979	1.99	1.883			
Field Moisture Content	% 22.2	21.2	21.1			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, % 0.0	0.0	0.0			
Sieve Size	mm 19	19	19			
Peak Converted Wet Density	t/m ³ 2.00	1.97	1.85			
Optimum Moisture Content	% 22.5	21.5	22			

Moisture Ratio	98.5	98.5	96			
Moisture Variation from OMC	% -0.5	-0.5	-0.5			
Density Ratio	% 99.0	101.0	101.5			

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI05)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
09/04/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI05)

SITE PLAN SKETCH—NOT TO SCALE



Field Density Test Results AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	6
Location:	Taylor's Lakes		



Sample No	16	17	18			
Date Tested	15/04/2020	15/04/2020	15/04/2020			
Time Tested	AM	AM	AM			

Test Location	Refer to Plan Stage 1	Refer to Plan Stage 1	Refer to Plan Stage 1			
Level/Layer	1	2	3			
Layer Thickness	mm 300	300	300			
Test Depth	mm 275	275	275			
Field Wet Density	t/m ³ 1.991	1.787	1.749			
Field Moisture Content	% 12.2	22.3	22.5			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, %	0.0	0.0	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.97	1.74	1.75		
Optimum Moisture Content	%	12	22.5	23		

Moisture Ratio	%	101.5	99	97.5		
Moisture Variation from OMC	%	0.0	-0.5	-0.5		
Density Ratio	%	101.0	102.5	100.0		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI06)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
15/04/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI06)

SITE PLAN SKETCH—NOT TO SCALE



Field Density Test Results AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	7
Location:	Taylor's Lakes		



Sample No	19	20	21			
Date Tested	16/04/2020	16/04/2020	16/04/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan Stage 1	Refer to Plan Stage 1	Refer to Plan Stage 1			
Level/Layer	1	2	3			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.9	t/m ³ 1.899	t/m ³ 1.916			
Field Moisture Content	% 25.2	% 22.3	% 21.2			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, % 0.0	0.0	0.0			
Sieve Size	mm 19	mm 19	mm 19			
Peak Converted Wet Density	t/m ³ 1.85	t/m ³ 1.93	t/m ³ 1.95			
Optimum Moisture Content	% 26	% 23	% 21.5			

Moisture Ratio	97	97	98.5			
Moisture Variation from OMC	% -1.0 Drier	% -0.5 Drier	% -0.5 Drier			
Density Ratio	% 102.5	% 98.5	% 98.5			

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI07)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
16/04/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI07)

SITE PLAN SKETCH—NOT TO SCALE





Field Density Test Results
AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	8
Location:	Taylor's Lakes		



Sample No	22	23	24			
Date Tested	17/04/2020	17/04/2020	17/04/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan Stage 1	Refer to Plan Stage 1	Refer to Plan Stage 1			
Level/Layer	1	2	3			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.779	t/m ³ 1.896	t/m ³ 1.774			
Field Moisture Content	% 25.5	% 24.1	% 24.1			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, % 0.0	0.0	0.0			
Sieve Size	mm 19	mm 19	mm 19			
Peak Converted Wet Density	t/m ³ 1.77	t/m ³ 1.91	t/m ³ 1.77			
Optimum Moisture Content	% 26.5	% 25	% 24.5			

Moisture Ratio	96	96.5	98.5			
Moisture Variation from OMC	% -1.0 Drier	% -0.5 Drier	% -0.5 Drier			
Density Ratio	% 100.5	% 99.0	% 100.5			

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI08)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:

Taylors Quarter—Level 1

CLIENT:

BMD Urban

DATE:

17/04/2020

LOCATION:

Taylors Lakes

PROJECT NO:

1120 0167-1 (SI08)

SITE PLAN SKETCH—NOT TO SCALE



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Field Density Test Results
AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	9
Location:	Taylor's Lakes		


Sample No	25	26	27			
Date Tested	18/04/2020	18/04/2020	18/04/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan Stage 1	Refer to Plan Stage 1	Refer to Plan Stage 1			
Level/Layer	1	2	3			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.772	t/m ³ 1.885	t/m ³ 1.849			
Field Moisture Content	% 25.5	% 24.1	% 21.2			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, % 0.0	0.0	0.0			
Sieve Size	mm 19	mm 19	mm 19			
Peak Converted Wet Density	t/m ³ 1.79	t/m ³ 1.87	t/m ³ 1.88			
Optimum Moisture Content	% 26.5	% 24.5	% 21.5			

Moisture Ratio	96.5	98	98.5			
Moisture Variation from OMC	% -1.0 Drier	% -0.5 Drier	% -0.5 Drier			
Density Ratio	% 99.0	% 101.0	% 98.5			

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI09)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)




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Approved Signatory:



David Burns

Date: 30/04/2020



Indicative Test Location



PROJECT:

Taylors Quarter—Level 1

CLIENT:

BMD Urban

DATE:

18/04/2020

LOCATION:

Taylors Lakes

PROJECT NO:

1120 0167-1 (SI09)

SITE PLAN SKETCH—NOT TO SCALE



A&Y ASSOCIATES
GEOTECHNICAL ENGINEERING CONSULTANTS



Field Density Test Results
AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	10
Location:	Taylor's Lakes		



Sample No	28	29	30			
Date Tested	20/04/2020	20/04/2020	20/04/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan Stage 1	Refer to Plan Stage 1	Refer to Plan Stage 1			
Level/Layer	1	1	2			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.798	t/m ³ 1.767	t/m ³ 1.899			
Field Moisture Content	% 22.3	% 21.2	% 22.3			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, % 0.0	0.0	0.0			
Sieve Size	mm 19	mm 19	mm 19			
Peak Converted Wet Density	t/m ³ 1.81	t/m ³ 1.80	t/m ³ 1.85			
Optimum Moisture Content	% 23	% 24.5	% 22.5			

Moisture Ratio	97	86.5	99			
Moisture Variation from OMC	% -0.5 Drier	% -3.0 Drier	% -0.5 Drier			
Density Ratio	% 99.0	% 98.5	% 102.5			

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI10)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
20/04/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI10)

SITE PLAN SKETCH—NOT TO SCALE



Field Density Test Results AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	11
Location:	Taylor's Lakes		



Sample No	31	32	33			
Date Tested	21/04/2020	21/04/2020	21/04/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan Stage 1	Refer to Plan Stage 1	Refer to Plan Stage 1			
Level/Layer	1	2	2			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.874	t/m ³ 1.896	t/m ³ 1.899			
Field Moisture Content	% 25.4	% 22.2	% 25.2			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, %	0.0	0.0	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.85	1.92	1.91		
Optimum Moisture Content	%	26	23	25.5		

Moisture Ratio	%	98	96.5	98.5		
Moisture Variation from OMC	%	-0.5 Drier	-0.5 Drier	-0.5 Drier		
Density Ratio	%	101.0	99.0	99.5		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI11)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
21/04/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI11)

SITE PLAN SKETCH—NOT TO SCALE



Field Density Test Results AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	12
Location:	Taylor's Lakes		



Sample No	34	35	36			
Date Tested	22/04/2020	22/04/2020	22/04/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan Stage 1	Refer to Plan Stage 1	Refer to Plan Stage 1			
Level/Layer	1	2	2			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.874	t/m ³ 1.925	t/m ³ 1.95			
Field Moisture Content	% 22.3	% 24.1	% 19.5			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, %	0.0	0.0	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.85	1.93	1.97		
Optimum Moisture Content	%	22.5	25	22.5		

Moisture Ratio	%	99	96.5	86.5		
Moisture Variation from OMC	%	-0.5 Drier	-1.0 Drier	-3.0 Drier		
Density Ratio	%	101.5	99.5	99.0		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI12)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:

Taylors Quarter—Level 1

CLIENT:

BMD Urban

DATE:

22/04/2020

LOCATION:

Taylors Lakes

PROJECT NO:

1120 0167-1 (SI12)

SITE PLAN SKETCH—NOT TO SCALE



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Field Density Test Results
AS1289.5.7.1

Client:	BMD Urban			Job No:	BMD1082	
Project:	Taylors Quarter - Level 1			Report:	13	
Location:	Taylors Lakes					
Sample No	37	38	39			
Date Tested	23/04/2020	23/04/2020	23/04/2020			
Time Tested	PM	PM	PM			
Test Location	Refer to Plan Stage 1	Refer to Plan Stage 1	Refer to Plan Stage 1			
Level/Layer	1	1	1			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.899	t/m ³ 1.901	t/m ³ 1.883			
Field Moisture Content	% 24.1	% 25.2	% 24.1			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			
Oversize Material	WET, % 0.0	WET, % 0.0	WET, % 0.0			
Sieve Size	mm 19	mm 19	mm 19			
Peak Converted Wet Density	t/m ³ 1.88	t/m ³ 1.92	t/m ³ 1.82			
Optimum Moisture Content	% 24.5	% 26	% 24.5			
Moisture Ratio	% 98.5	% 97	% 98.5			
Moisture Variation from OMC	% -0.5 Drier	% -0.5 Drier	% -0.5 Drier			
Density Ratio	% 101.0	% 99.0	% 103.5			
Specification:	98% STD			Test Selection:	N/A	
Notes:	Ref: 1120 0167-1 (SI13)					
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			Sampling Method:	AS 1289 1.2.1 6.4(b)	
	NATA Accredited Laboratory No. 20172			Approved Signatory:		
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Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
23/04/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI13)

SITE PLAN SKETCH—NOT TO SCALE



Field Density Test Results

AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	14
Location:	Taylor's Lakes		

Sample No	40	41	42			
Date Tested	24/04/2020	24/04/2020	24/04/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan Stage 1	Refer to Plan Stage 1	Refer to Plan Stage 1			
Level/Layer	1	1	2			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.826	t/m ³ 1.842	t/m ³ 1.796			
Field Moisture Content	% 23.1	% 21.5	% 26.0			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, %	0.0	0.0	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.86	1.88	1.83		
Optimum Moisture Content	%	26	24.5	26.5		

Moisture Ratio	%	89	87.5	98		
Moisture Variation from OMC	%	-2.5	-3.0	-0.5		
Density Ratio	%	98.0	98.0	98.0		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI14)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)



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Approved Signatory:



David Burns

Date: 1/05/2020



Indicative Test Location



PROJECT:

Taylors Quarter—Level 1

CLIENT:

BMD Urban

DATE:

24/04/2020

LOCATION:

Taylors Lakes

PROJECT NO:

1120 0167-1 (SI14)

SITE PLAN SKETCH—NOT TO SCALE



A&Y ASSOCIATES
GEOTECHNICAL ENGINEERING CONSULTANTS

Field Density Test Results AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	15
Location:	Taylor's Lakes		



Sample No	43	44	45			
Date Tested	27/04/2020	27/04/2020	27/04/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan Stage 1	Refer to Plan Stage 1	Refer to Plan Stage 1			
Level/Layer	3	3	3			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 2.075	t/m ³ 1.982	t/m ³ 1.942			
Field Moisture Content	% 10.5	% 23.3	% 24.5			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, %	0.0	0.0	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	2.11	1.93	1.98		
Optimum Moisture Content	%	13.5	26.5	25.5		

Moisture Ratio	%	78	88	96		
Moisture Variation from OMC	%	-3.0 Drier	-3.0 Drier	-1.0 Drier		
Density Ratio	%	98.5	102.5	98.0		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI15)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
27/04/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI15)

SITE PLAN SKETCH—NOT TO SCALE



Field Density Test Results

AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	16
Location:	Taylor's Lakes		

Sample No	46	47	48			
Date Tested	28/04/2020	28/04/2020	28/04/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan Stage 1	Refer to Plan Stage 1	Refer to Plan Stage 1			
Level/Layer	3	3	3			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.905	t/m ³ 1.934	t/m ³ 1.878			
Field Moisture Content	% 28.6	% 27.2	% 29.1			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			


Oversize Material	WET, %	0.0	0.0	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.95	1.97	1.92		
Optimum Moisture Content	%	29	28	30.5		

Moisture Ratio	%	98.5	97.5	95.5		
Moisture Variation from OMC	%	-0.5	-0.5	-1.5		
Density Ratio	%	98.0	98.0	98.0		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI16)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)



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David Burns
Date: 1/05/2020



Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
28/04/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI16)

SITE PLAN SKETCH—NOT TO SCALE



Field Density Test Results

AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	17
Location:	Taylor's Lakes		

Sample No	49	50	51			
Date Tested	29/04/2020	29/04/2020	29/04/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan Stage 1	Refer to Plan Stage 1	Refer to Plan Stage 1			
Level/Layer	3	3	3			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 2.01	t/m ³ 1.956	t/m ³ 1.984			
Field Moisture Content	% 24.9	% 23.4	% 24.6			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, %	0.0	0.0	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.95	2.00	2.01		
Optimum Moisture Content	%	25.5	24	25		

Moisture Ratio	%	97.5	97.5	98.5		
Moisture Variation from OMC	%	-0.5	-0.5	-0.5		
Density Ratio	%	103.0	98.0	99.0		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI17)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)



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David Burns

Date: 14/05/2020



Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
29/04/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI17)

SITE PLAN SKETCH—NOT TO SCALE



Field Density Test Results

AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	18
Location:	Taylor's Lakes		

Sample No	52	53	54			
Date Tested	4/05/2020	4/05/2020	4/05/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan Stage 2	Refer to Plan Stage 2	Refer to Plan Stage 2			
Level/Layer	3	3	3			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 2.041	t/m ³ 1.924	t/m ³ 1.986			
Field Moisture Content	% 22.1	% 20.3	% 24.5			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			


Oversize Material	WET, % 0.0	0.0	0.0			
Sieve Size	mm 19	mm 19	mm 19			
Peak Converted Wet Density	t/m ³ 1.97	t/m ³ 1.96	t/m ³ 2.01			
Optimum Moisture Content	% 22.5	% 21	% 25			

Moisture Ratio	%	98	96.5	98		
Moisture Variation from OMC	%	-0.5	-0.5	-0.5		
Density Ratio	%	103.5	98.0	99.0		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI18)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)



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Date: 14/05/2020



Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
4/05/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI18)

SITE PLAN SKETCH—NOT TO SCALE



Field Density Test Results AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	19
Location:	Taylor's Lakes		



Sample No	55	56	57			
Date Tested	5/05/2020	5/05/2020	5/05/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan Stage 2	Refer to Plan Stage 2	Refer to Plan Stage 2			
Level/Layer	4	4	4			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 2.086	t/m ³ 2.01	t/m ³ 2.034			
Field Moisture Content	% 24.1	% 24.7	% 25.4			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, %	0.0	0.0	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.95	1.97	2.01		
Optimum Moisture Content	%	24.5	25	26		

Moisture Ratio	%	98.5	99	98		
Moisture Variation from OMC	%	-0.5 Drier	-0.5 Drier	-0.5 Drier		
Density Ratio	%	107.0	102.0	101.5		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI19)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:

Taylors Quarter—Level 1

CLIENT:

BMD Urban

DATE:

5/05/2020

LOCATION:

Taylors Lakes

PROJECT NO:

1120 0167-1 (SI19)

SITE PLAN SKETCH—NOT TO SCALE



A&Y ASSOCIATES
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Field Density Test Results

AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	20
Location:	Taylor's Lakes		

Sample No	58	59	60			
Date Tested	6/05/2020	6/05/2020	6/05/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan Stage 3	Refer to Plan Stage 3	Refer to Plan Stage 3			
Level/Layer	Subgrade	Subgrade	Subgrade			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.906	t/m ³ 1.92	t/m ³ 1.934			
Field Moisture Content	% 24.3	% 23.2	% 22.4			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, % 0.0	0.0	0.0			
Sieve Size	mm 19	mm 19	mm 19			
Peak Converted Wet Density	t/m ³ 1.94	t/m ³ 1.96	t/m ³ 1.97			
Optimum Moisture Content	% 24.5	% 23.5	% 22.5			

Moisture Ratio	%	99	98.5	99.5		
Moisture Variation from OMC	%	-0.5 Drier	0.0 OMC	-0.5 Drier		
Density Ratio	%	98.5	98.0	98.5		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI20)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)



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David Burns

Date: 14/05/2020



Indicative Test Location



PROJECT:

Taylors Quarter—Level 1

CLIENT:

BMD Urban

DATE:

6/05/2020

LOCATION:

Taylors Lakes

PROJECT NO:

1120 0167-1 (SI20)

SITE PLAN SKETCH—NOT TO SCALE



A&Y ASSOCIATES
GEOTECHNICAL ENGINEERING CONSULTANTS

Field Density Test Results AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	21
Location:	Taylor's Lakes		



Sample No	61	62	63			
Date Tested	7/05/2020	7/05/2020	7/05/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan Stage 3	Refer to Plan Stage 3	Refer to Plan Stage 3			
Level/Layer	1	1	1			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.988	t/m ³ 2.016	t/m ³ 2.042			
Field Moisture Content	% 23.8	% 22.5	% 22.9			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, %	0.0	0.0	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.97	1.97	2.03		
Optimum Moisture Content	%	24	22.5	23.5		

Moisture Ratio	%	99	100	97.5		
Moisture Variation from OMC	%	-0.5 Drier	0.0 OMC	-0.5 Drier		
Density Ratio	%	101.0	102.5	100.5		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI21)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:

Taylors Quarter—Level 1

CLIENT:

BMD Urban

DATE:

7/05/2020

LOCATION:

Taylors Lakes

PROJECT NO.:

1120 0167-1 (SI21)

SITE PLAN SKETCH—NOT TO SCALE



A&Y ASSOCIATES
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Field Density Test Results

AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	22
Location:	Taylor's Lakes		

Sample No	64	65	66			
Date Tested	8/05/2020	8/05/2020	8/05/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan Stage 3	Refer to Plan Stage 3	Refer to Plan Stage 3			
Level/Layer	1	1	1			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 2.024	t/m ³ 1.977	t/m ³ 2.01			
Field Moisture Content	% 24.0	% 22.9	% 23.6			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, %	0.0	0.0	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	2.00	2.01	2.05		
Optimum Moisture Content	%	24	23.5	24		

Moisture Ratio	%	100	97.5	98.5		
Moisture Variation from OMC	%	0.0	-0.5	-0.5		
Density Ratio	%	101.0	98.0	98.0		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI22)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)



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David Burns

Date: 14/05/2020



Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
8/05/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI22)

SITE PLAN SKETCH—NOT TO SCALE



Field Density Test Results

AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	23
Location:	Taylor's Lakes		

Sample No	67	68	69			
Date Tested	11/05/2020	11/05/2020	11/05/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan	Refer to Plan	Refer to Plan			
Level/Layer	2	2	2			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 2	t/m ³ 2.1	t/m ³ 2.134			
Field Moisture Content	% 22.3	% 22.1	% 20.1			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, % 0.0	0.0	0.0			
Sieve Size	mm 19	mm 19	mm 19			
Peak Converted Wet Density	t/m ³ 2.01	t/m ³ 2.05	t/m ³ 2.10			
Optimum Moisture Content	% 22.5	% 22.5	% 20.5			

Moisture Ratio	%	99	98	98		
Moisture Variation from OMC	%	0.0	-0.5	-0.5		
Density Ratio	%	99.5	102.5	101.5		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI23)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)



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Approved Signatory:



David Burns

Date: 14/05/2020



Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
11/05/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI23)

SITE PLAN SKETCH—NOT TO SCALE



Field Density Test Results

AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	24
Location:	Taylor's Lakes		

Sample No	70	71	72			
Date Tested	12/05/2020	12/05/2020	12/05/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan	Refer to Plan	Refer to Plan			
Level/Layer	2	2	2			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.931	t/m ³ 1.999	t/m ³ 2.004			
Field Moisture Content	% 22.3	% 21.3	% 23.3			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, %	0.0	0.0	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.97	2.04	2.05		
Optimum Moisture Content	%	23	22	23.5		

Moisture Ratio	%	97	96.5	99		
Moisture Variation from OMC	%	-0.5 Drier	-1.0 Drier	0.0 OMC		
Density Ratio	%	98.0	98.0	98.0		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI24)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)



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Approved Signatory:

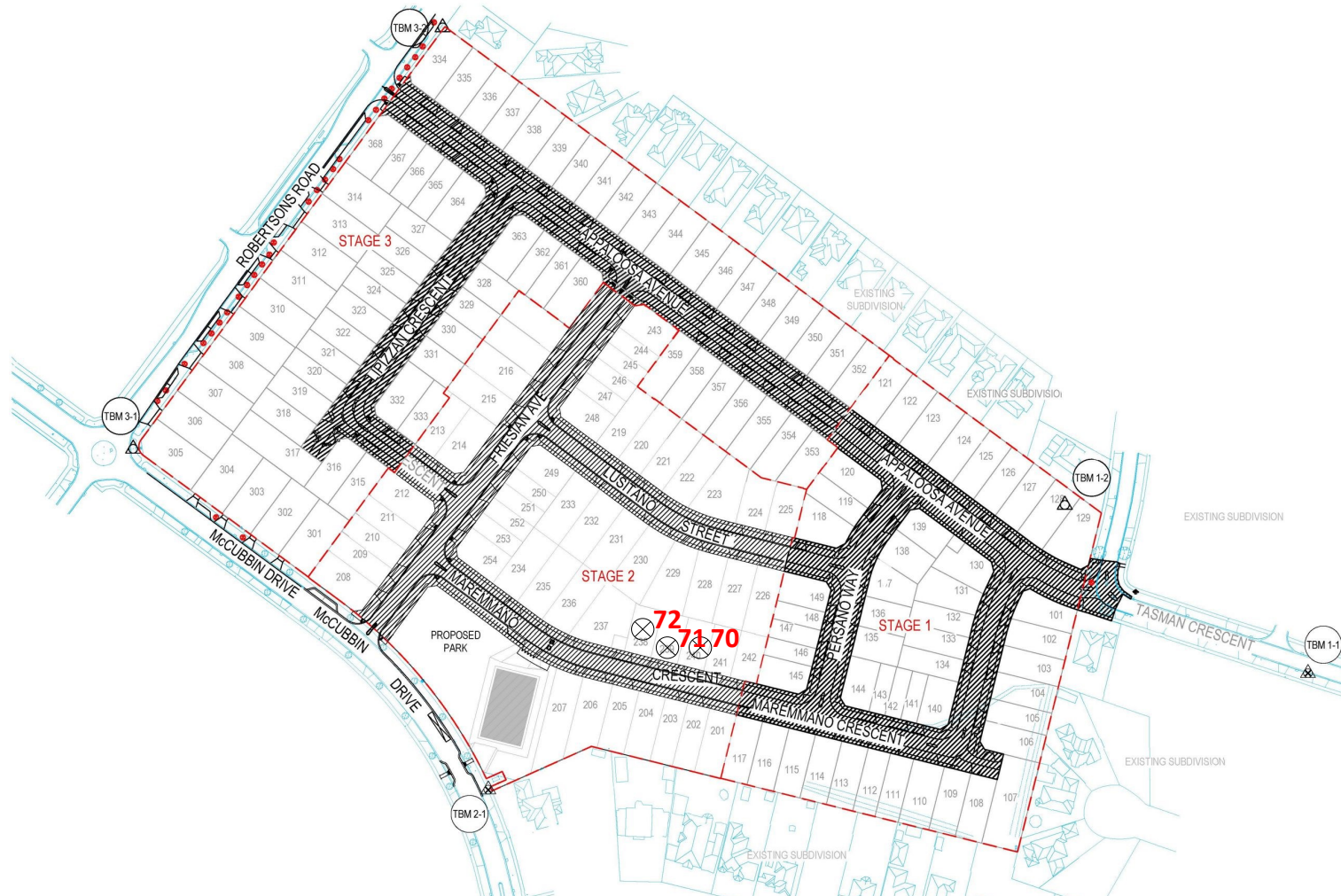


David Burns

Date: 14/05/2020



Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
12/05/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI24)

SITE PLAN SKETCH—NOT TO SCALE



Field Density Test Results

AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	25
Location:	Taylor's Lakes		

Sample No	73	74	75			
Date Tested	14/05/2020	14/05/2020	14/05/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan	Refer to Plan	Refer to Plan			
Level/Layer	1	1	1			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.78	t/m ³ 1.8	t/m ³ 1.845			
Field Moisture Content	% 16.1	% 16.7	% 16.9			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, %	0.0	0.0	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.75	1.80	1.84		
Optimum Moisture Content	%	16.5	17	17		

Moisture Ratio	%	97.5	98.5	99.5		
Moisture Variation from OMC	%	-0.5	0.0	0.0		
Density Ratio	%	102.0	100.0	100.0		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI25)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)



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Approved Signatory:



David Burns

Date: 15/05/2020



Indicative Test Location



PROJECT:

Taylors Quarter—Level 1

CLIENT:

BMD Urban

DATE:

14/05/2020

LOCATION:

Taylors Lakes

PROJECT NO:

1120 0167-1 (SI25)

SITE PLAN SKETCH—NOT TO SCALE



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Field Density Test Results AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	26
Location:	Taylor's Lakes		



Sample No	76	77	78			
Date Tested	15/05/2020	15/05/2020	15/05/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan	Refer to Plan	Refer to Plan			
Level/Layer	1	1	1			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.851	t/m ³ 1.891	t/m ³ 1.793			
Field Moisture Content	% 21.1	% 22.3	% 22.2			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, %	0.0	0.0	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.87	1.91	1.81		
Optimum Moisture Content	%	21.5	23	22.5		

Moisture Ratio	%	98	97	98.5		
Moisture Variation from OMC	%	0.0	-0.5	-0.5		
Density Ratio	%	99.0	99.0	99.0		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI26)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
15/05/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI26)

SITE PLAN SKETCH—NOT TO SCALE





Field Density Test Results
AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	27
Location:	Taylor's Lakes		



Sample No	79	80	81			
Date Tested	16/05/2020	16/05/2020	16/05/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan	Refer to Plan	Refer to Plan			
Level/Layer	1	1	1			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.81	t/m ³ 1.8	t/m ³ 1.901			
Field Moisture Content	% 19.5	% 19.9	% 18.5			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, % 0.0	0.0	0.0			
Sieve Size	mm 19	mm 19	mm 19			
Peak Converted Wet Density	t/m ³ 1.82	t/m ³ 1.83	t/m ³ 1.93			
Optimum Moisture Content	% 20	% 20.5	% 19			

Moisture Ratio	97.5	97	97.5			
Moisture Variation from OMC	% -0.5 Drier	% -0.5 Drier	% -0.5 Drier			
Density Ratio	% 99.5	% 98.0	% 98.5			

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI27)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
16/05/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI27)

SITE PLAN SKETCH—NOT TO SCALE





Field Density Test Results
AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	28
Location:	Taylor's Lakes		



Sample No	82	83	84			
Date Tested	18/05/2020	18/05/2020	18/05/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan	Refer to Plan	Refer to Plan			
Level/Layer	2	2	2			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.789	t/m ³ 1.813	t/m ³ 1.85			
Field Moisture Content	% 21.1	% 25.5	% 23.3			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, % 0.0	0.0	0.0			
Sieve Size	mm 19	mm 19	mm 19			
Peak Converted Wet Density	t/m ³ 1.81	t/m ³ 1.83	t/m ³ 1.87			
Optimum Moisture Content	% 21.5	% 26	% 23.5			

Moisture Ratio	98	98	99.5			
Moisture Variation from OMC	% -0.5 Drier	% -0.5 Drier	% 0.0 OMC			
Density Ratio	% 99.0	% 99.0	% 99.0			

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI28)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:

Taylors Quarter—Level 1

CLIENT:

BMD Urban

DATE:

18/05/2020

LOCATION:

Taylors Lakes

PROJECT NO:

1120 0167-1 (SI28)

SITE PLAN SKETCH—NOT TO SCALE



A&Y ASSOCIATES
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Field Density Test Results
AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	29
Location:	Taylor's Lakes		



Sample No	85	86	87			
Date Tested	19/05/2020	19/05/2020	19/05/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan	Refer to Plan	Refer to Plan			
Level/Layer	3	3	3			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.855	t/m ³ 1.909	t/m ³ 1.835			
Field Moisture Content	% 20.1	% 24.1	% 21.2			
Material:	In-Situ Clay	In-Situ Clay	In-Situ Clay			

Oversize Material	WET, % 0.0	0.0	0.0			
Sieve Size	mm 19	mm 19	mm 19			
Peak Converted Wet Density	t/m ³ 1.82	t/m ³ 1.89	t/m ³ 1.87			
Optimum Moisture Content	% 20.5	% 24.5	% 21.5			

Moisture Ratio	98	98.5	98.5			
Moisture Variation from OMC	% -0.5 Drier	% -0.5 Drier	% -0.5 Drier			
Density Ratio	% 102.0	% 101.0	% 98.5			

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI29)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:

Taylors Quarter—Level 1

CLIENT:

BMD Urban

DATE:

19/05/2020

LOCATION:

Taylors Lakes

PROJECT NO:

1120 0167-1 (SI29)

SITE PLAN SKETCH—NOT TO SCALE



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Field Density Test Results AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	30
Location:	Taylor's Lakes		



Sample No	88	89	90			
Date Tested	4/06/2020	4/06/2020	4/06/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan	Refer to Plan	Refer to Plan			
Level/Layer	1	1	3			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.996	t/m ³ 2.013	t/m ³ 1.989			
Field Moisture Content	% 22.0	% 21.8	% 19.9			
Material:	Site Derived Clay Fill	Site Derived Clay Fill	Site Derived Clay Fill			

Oversize Material	WET, %	0.0	0.0	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	2.00	2.03	1.96		
Optimum Moisture Content	%	22.5	22.5	20.5		

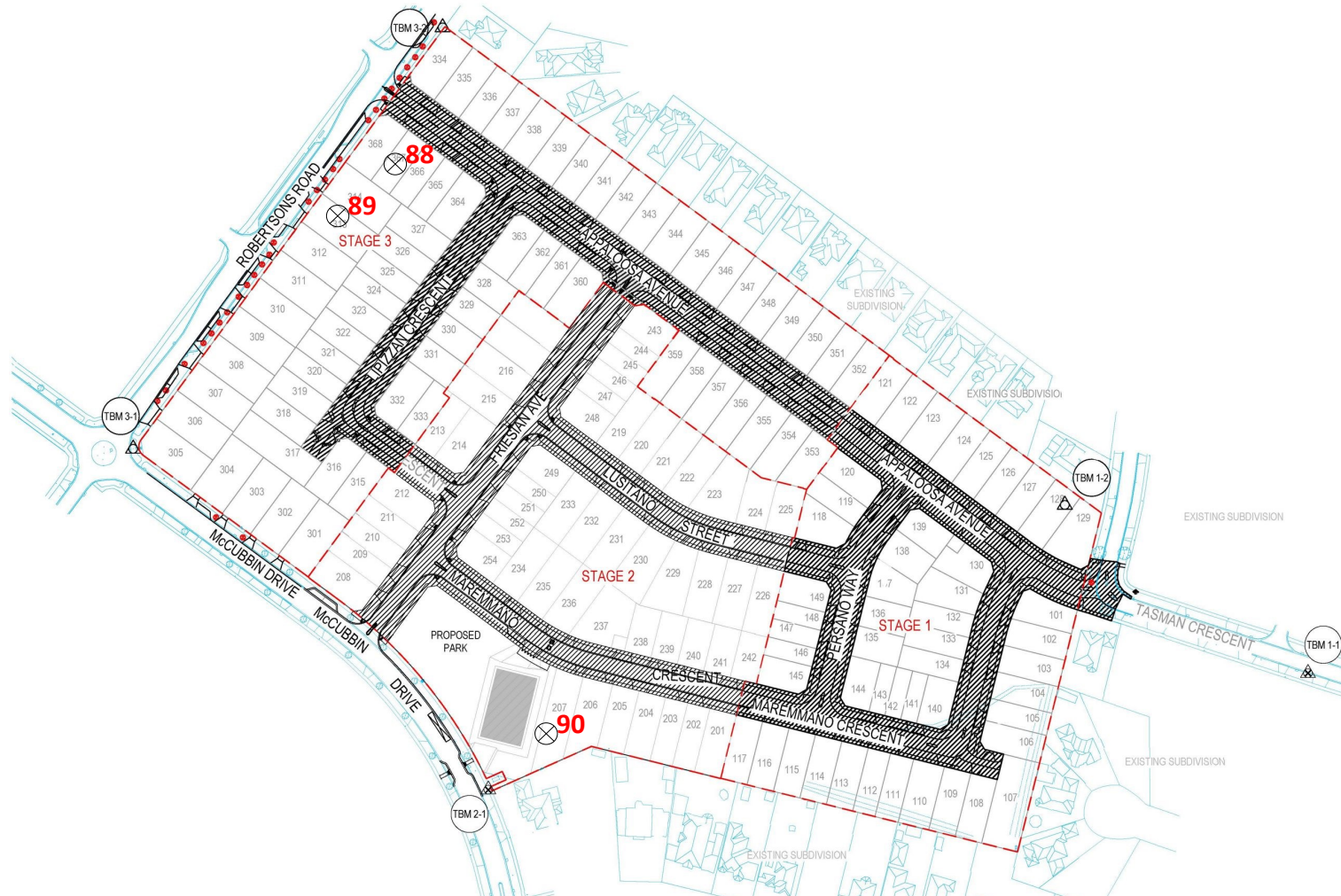
Moisture Ratio	%	97.5	97	97		
Moisture Variation from OMC	%	-0.5 Drier	-0.5 Drier	-0.5 Drier		
Density Ratio	%	99.5	99.5	101.5		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI30)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
4/06/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI30)

SITE PLAN SKETCH—NOT TO SCALE



Field Density Test Results AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	31
Location:	Taylor's Lakes		



Sample No	91	92	93			
Date Tested	5/06/2020	5/06/2020	5/06/2020			
Time Tested	AM	AM	AM			

Test Location	Refer to Plan	Refer to Plan	Refer to Plan			
Level/Layer	1	1	1			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 2.039	t/m ³ 2.003	t/m ³ 2.017			
Field Moisture Content	% 20.6	% 20.4	% 20.7			
Material:	Site Derived Clay Fill	Site Derived Clay Fill	Site Derived Clay Fill			

Oversize Material	WET, %	0.0	0.0	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	2.03	2.04	2.02		
Optimum Moisture Content	%	21	20.5	21		

Moisture Ratio	%	98	99.5	98.5		
Moisture Variation from OMC	%	-0.5 Drier	0.0 OMC	-0.5 Drier		
Density Ratio	%	100.5	98.5	100.0		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI31)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:

Taylor's Quarter—Level 1

CLIENT:

BMD Urban

DATE:

5/06/2020

LOCATION:

Taylor's Lakes

PROJECT NO:

1120 0167-1 (SI31)

SITE PLAN SKETCH—NOT TO SCALE



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Field Density Test Results AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	32
Location:	Taylor's Lakes		



Sample No	94	95	96			
Date Tested	9/06/2020	9/06/2020	9/06/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan	Refer to Plan	Refer to Plan			
Level/Layer	1	1	1			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.989	t/m ³ 2.023	t/m ³ 2.006			
Field Moisture Content	% 20.4	% 20.8	% 19.8			
Material:	Site Derived Clay Fill	Site Derived Clay Fill	Site Derived Clay Fill			

Oversize Material	WET, %	12.5	0.0	16.7		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	2.03	2.04	2.01		
Optimum Moisture Content	%	21	21	20.5		

Moisture Ratio	%	97	99	96.5		
Moisture Variation from OMC	%	-0.5 Drier	0.0 OMC	-0.5 Drier		
Density Ratio	%	98.0	99.5	98.0		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI32)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:

Taylors Quarter—Level 1

CLIENT:

BMD Urban

DATE:

9/06/2020

LOCATION:

Taylors Lakes

PROJECT NO:

1120 0167-1 (SI32)

SITE PLAN SKETCH—NOT TO SCALE



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Field Density Test Results AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	33
Location:	Taylor's Lakes		



Sample No	97	98	99			
Date Tested	10/06/2020	10/06/2020	10/06/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan	Refer to Plan	Refer to Plan			
Level/Layer	1	1	1			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.934	t/m ³ 2.028	t/m ³ 1.989			
Field Moisture Content	% 22.5	% 21.6	% 21.9			
Material:	Site Derived Clay Fill	Site Derived Clay Fill	Site Derived Clay Fill			

Oversize Material	WET, %	15.4	0.0	12.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.95	2.00	2.03		
Optimum Moisture Content	%	23	22.5	22.5		

Moisture Ratio	%	98	96	97.5		
Moisture Variation from OMC	%	-0.5 Drier	-1.0 Drier	-0.5 Drier		
Density Ratio	%	98.0	101.5	98.0		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI33)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:

Taylors Quarter—Level 1

CLIENT:

BMD Urban

DATE:

10/06/2020

LOCATION:

Taylors Lakes

PROJECT NO:

1120 0167-1 (SI33)

SITE PLAN SKETCH—NOT TO SCALE



A&Y ASSOCIATES
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Field Density Test Results AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	34
Location:	Taylor's Lakes		



Sample No	100	101	102			
Date Tested	11/06/2020	11/06/2020	11/06/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan	Refer to Plan	Refer to Plan			
Level/Layer	1	1	1			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.897	t/m ³ 1.977	t/m ³ 1.928			
Field Moisture Content	% 19.7	% 21.0	% 20.0			
Material:	Site Derived Clay Fill	Site Derived Clay Fill	Site Derived Clay Fill			

Oversize Material	WET, %	11.4	8.8	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.85	1.91	1.80		
Optimum Moisture Content	%	20	22	20.5		

Moisture Ratio	%	98.5	95.5	97.5		
Moisture Variation from OMC	%	0.0	-0.5	-0.5		
	OMC		Drier	Drier		
Density Ratio	%	101.0	101.5	107.0		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI34)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
11/06/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI34)

SITE PLAN SKETCH—NOT TO SCALE



Field Density Test Results AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	35
Location:	Taylor's Lakes		



Sample No	103	104	105			
Date Tested	17/06/2020	17/06/2020	17/06/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan	Refer to Plan	Refer to Plan			
Level/Layer	1	1	2			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.997	t/m ³ 1.973	t/m ³ 1.977			
Field Moisture Content	% 19.8	% 20.1	% 21.2			
Material:	Site Derived Clay Fill	Site Derived Clay Fill	Site Derived Clay Fill			

Oversize Material	WET, %	10.8	7.5	13.3		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.99	1.91	1.84		
Optimum Moisture Content	%	20.5	20.5	22		

Moisture Ratio	%	96.5	98	96.5		
Moisture Variation from OMC	%	-0.5 Drier	0.0 OMC	-0.5 Drier		
Density Ratio	%	100.5	108.0	103.5		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI35)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
17/06/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI35)

SITE PLAN SKETCH—NOT TO SCALE



Field Density Test Results AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	36
Location:	Taylor's Lakes		



Sample No	106	107	108			
Date Tested	18/06/2020	18/06/2020	18/06/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan	Refer to Plan	Refer to Plan			
Level/Layer	1	2	2			
Layer Thickness	mm 300	300	300			
Test Depth	mm 275	275	275			
Field Wet Density	t/m ³ 1.949	1.966	1.924			
Field Moisture Content	% 19.7	19.6	19.5			
Material:	Site Derived Clay Fill	Site Derived Clay Fill	Site Derived Clay Fill			

Oversize Material	WET, %	11.4	11.2	17.4		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.99	1.91	1.96		
Optimum Moisture Content	%	20.5	20	20		

Moisture Ratio	%	96	98	97.5		
Moisture Variation from OMC	%	-0.5 Drier	-0.5 Drier	-0.5 Drier		
Density Ratio	%	98.0	101.5	98.5		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI36)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:

Taylors Quarter—Level 1

CLIENT:

BMD Urban

DATE:

18/06/2020

LOCATION:

Taylors Lakes

PROJECT NO:

1120 0167-1 (SI36)

SITE PLAN SKETCH—NOT TO SCALE



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Field Density Test Results
AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	37
Location:	Taylor's Lakes		


Sample No	109	110	111			
Date Tested	19/06/2020	19/06/2020	19/06/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan	Refer to Plan	Refer to Plan			
Level/Layer	1	2	2			
Layer Thickness	mm 300	300	300			
Test Depth	mm 275	275	275			
Field Wet Density	t/m ³ 1.963	1.971	1.899			
Field Moisture Content	% 19.8	19.2	20.4			
Material:	Site Derived Clay Fill	Site Derived Clay Fill	Site Derived Clay Fill			

Oversize Material	WET, %	13.1	12.8	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.97	1.87	1.80		
Optimum Moisture Content	%	20	19	21		

Moisture Ratio	%	99	101	97		
Moisture Variation from OMC	%	-0.5 Drier	0.5 Wetter	-0.5 Drier		
Density Ratio	%	98.5	103.5	105.5		


Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI37)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)



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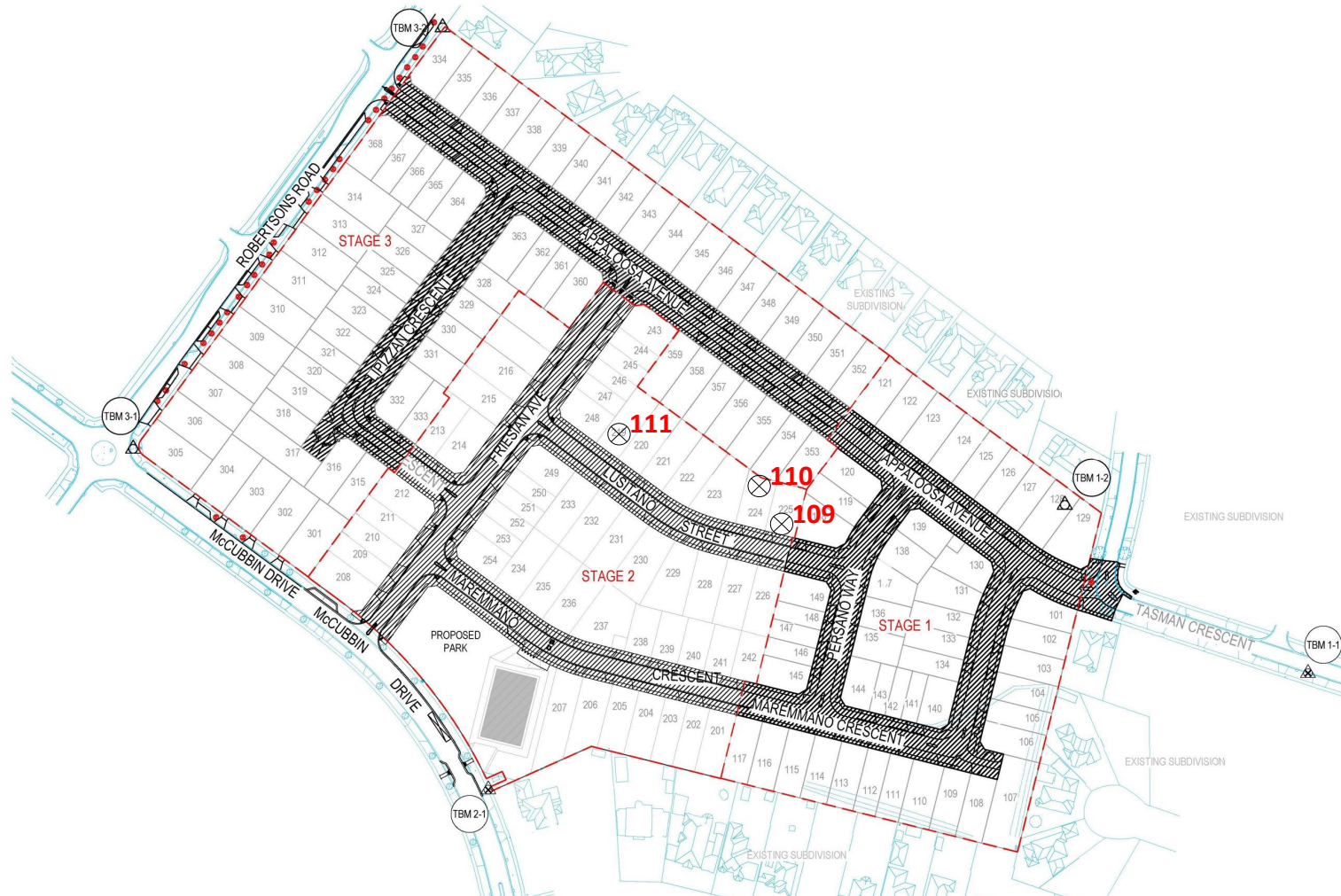
Approved Signatory:



David Burns
Date: 22/06/2020



Indicative Test Location



PROJECT:

Taylors Quarter—Level 1

CLIENT:

BMD Urban

DATE:

19/06/2020

LOCATION:

Taylors Lakes

PROJECT NO:

1120 0167-1 (SI37)

SITE PLAN SKETCH—NOT TO SCALE



A&Y ASSOCIATES
GEOTECHNICAL ENGINEERING CONSULTANTS



Field Density Test Results
AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	38
Location:	Taylor's Lakes		



Sample No	112	113	114			
Date Tested	1/07/2020	1/07/2020	1/07/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan	Refer to Plan	Refer to Plan			
Level/Layer	1	2	3			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.986	t/m ³ 2.001	t/m ³ 1.979			
Field Moisture Content	% 21.8	% 23.2	% 21.3			
Material:	Site Derived Clay Fill	Site Derived Clay Fill	Site Derived Clay Fill			

Oversize Material	WET, % 16.9	17.3	16.0			
Sieve Size	mm 19	mm 19	mm 19			
Peak Converted Wet Density	t/m ³ 1.97	t/m ³ 1.95	t/m ³ 1.98			
Optimum Moisture Content	% 22	% 24	% 22			

Moisture Ratio	99	96.5	97			
Moisture Variation from OMC	% -0.5 Drier	% -0.5 Drier	% -0.5 Drier			
Density Ratio	% 98.5	% 98.0	% 98.5			

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI38)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
1/07/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI38)

SITE PLAN SKETCH—NOT TO SCALE



Field Density Test Results AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	39
Location:	Taylor's Lakes		



Sample No	115	116	117			
Date Tested	17/07/2020	17/07/2020	17/07/2020			
Time Tested	PM	PM	PM			

Test Location	Refer to Plan	Refer to Plan	Refer to Plan			
Level/Layer	1	1	2			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 1.991	t/m ³ 1.981	t/m ³ 2.054			
Field Moisture Content	% 25.6	% 23.8	% 23.3			
Material:	Site Derived Clay Fill	Site Derived Clay Fill	Site Derived Clay Fill			

Oversize Material	WET, %	18.9	18.5	0.0		
Sieve Size	mm	19	19	19		
Peak Converted Wet Density	t/m ³	1.95	1.95	1.99		
Optimum Moisture Content	%	26.5	24.5	23.5		

Moisture Ratio	%	96.5	97	99		
Moisture Variation from OMC	%	-0.5 Drier	-0.5 Drier	-0.5 Drier		
Density Ratio	%	98.5	99.5	103.0		

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI39)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:

Taylors Quarter—Level 1

CLIENT:

BMD Urban

DATE:

17/07/2020

LOCATION:

Taylors Lakes

PROJECT NO:

1120 0167-1 (SI39)

SITE PLAN SKETCH—NOT TO SCALE



A&Y ASSOCIATES
GEOTECHNICAL ENGINEERING CONSULTANTS



Field Density Test Results
AS1289.5.7.1

Client:	BMD Urban	Job No:	BMD1082
Project:	Taylor's Quarter - Level 1	Report:	40
Location:	Taylor's Lakes		



Sample No	118	119	120			
Date Tested	18/07/2020	18/07/2020	18/07/2020			
Time Tested	AM	AM	AM			

Test Location	Refer to Plan	Refer to Plan	Refer to Plan			
Level/Layer	1	1	1			
Layer Thickness	mm 300	mm 300	mm 300			
Test Depth	mm 275	mm 275	mm 275			
Field Wet Density	t/m ³ 2.046	t/m ³ 2.013	t/m ³ 1.999			
Field Moisture Content	% 25.8	% 25.4	% 25.1			
Material:	Site Derived Clay Fill	Site Derived Clay Fill	Site Derived Clay Fill			

Oversize Material	WET, % 8.9	18.8	16.9			
Sieve Size	mm 19	mm 19	mm 19			
Peak Converted Wet Density	t/m ³ 2.02	t/m ³ 1.99	t/m ³ 2.01			
Optimum Moisture Content	% 26.5	% 26.5	% 25.5			

Moisture Ratio	97.5	96	98.5			
Moisture Variation from OMC	% -0.5 Drier	% -1.0 Drier	% 0.0 OMC			
Density Ratio	% 100.5	% 98.0	% 98.5			

Specification:	98% STD	Test Selection:	N/A
Notes:	Ref: 1120 0167-1 (SI40)		
Test Method	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1	Sampling Method:	AS 1289 1.2.1 6.4(b)

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Indicative Test Location



PROJECT:
Taylors Quarter—Level 1

CLIENT:
BMD Urban

DATE:
18/07/2020

LOCATION:
Taylors Lakes

PROJECT NO:
1120 0167-1 (SI40)

SITE PLAN SKETCH—NOT TO SCALE

